FINAL REPORT

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

FINAL REPORT DATE: 16 DECEMBER 2002

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ARGUS STUDY NUMBER: 418-018
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ARGUS RESEARCH.PROTOCOL NUMBER: 418-018
SPONSOR'S STUDY NUMBER: T-6295.25

I. SUMMARY AND CONCLUSION

The purposes of this study were to determine whether the co-administration of mevalonic acid or cholesterol could prevent or antagonize the adverse maternal and fetal effects (reduced maternal body weight gain, increased incidence of stillborn, decreased birth weight and decreased pup survival) observed in a previous study with PFOS (Argus Research Protocol 418-008, 3M Study Number T-6295.9) and to better define the no-observed-effect-level (NOEL).

A. Methods[a]

Female Crl:CD®(SD) IGS BR VAF/Plus® rats were used for the study. The rats were received in two shipments designated as Replicate 1 and 2, respectively. The rats were randomly assigned to 13 dosage groups (Groups 1 through 13), 14 rats per group per replicate for Groups 1, 2, 4 through 7, 12 and 13, 14 rats for Group 3 replicate 1, 15 rats for Group 3, replicate 2, and 10 rats per group per replicate for Groups 8 through 11. The first eight female rats per dosage group in Groups 1 to 7, 12 and 13 of Replicate 1 with a confirmed date of mating were assigned to Caesarean-sectioning on day 21 of gestation (DG 21). The remaining female rats were permitted to naturally deliver litters. The test article was perfluorooctane sulfonic acid potassium salt (PFOS) and the control articles were mevalonic acid and cholesterol. The vehicles were 0.5% Tween® 80 and reverse osmosis membrane processed deionized water (RODI H_2O).

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a. Detailed descriptions of all procedures used in the conduct of this study are provided in the appropriate sections of this report and in APPENDIX C (PROTOCOL AND AMENDMENTS).

The dosage groups and dosing schedule were as follows:

Dosage Groups and Dosing Schedule				
Dosage Groups		Dosing Schedule		
Number	Identification	1st dosage	2nd dosage 1/2 hour ± 10 minutes after 1st dosage	3rd dosage 5 hr ± 30 minutes after 2nd dosage
1	Vehicle Control	RODI H_2O	0.5% Tween® 80	RODI H_2O
2	Mevalonic Acid Control	500 mg/kg Mevalonic Acid	0.5% Tween® 80	500 mg/kg Mevalonic Acid
3	1.6 mg/kg PFOS + Mevalonic Acid	500 mg/kg Mevalonic Acid	1.6 mg/kg PFOS	500 mg/kg Mevalonic Acid
4	2 mg/kg PFOS + Mevalonic Acid	500 mg/kg Mevalonic Acid	2 mg/kg PFOS	500 mg/kg Mevalonic Acid
5	Cholesterol Control	500 mg/kg Cholesterol	0.5% Tween® 80	Not applicable
6	1.6 mg/kg PFOS + Cholesterol	500 mg/kg Cholesterol	1.6 mg/kg PFOS	Not applicable
7	2 mg/kg PFOS + Cholesterol	500 mg/kg Cholesterol	2 mg/kg PFOS	Not applicable
8	0.4 mg/kg PFOS	Not applicable	0.4 mg/kg PFOS	Not applicable
9	0.8 mg/kg PFOS	Not applicable	0.8 mg/kg PFOS	Not applicable
10	1 mg/kg PFOS	Not applicable	1 mg/kg PFOS	Not applicable
11	1.2 mg/kg PFOS	Not applicable	1.2 mg/kg PFOS	Not applicable
12	1.6 mg/kg PFOS	Not applicable	1.6 mg/kg PFOS	Not applicable
13	2 mg/kg PFOS	Not applicable	2 mg/kg PFOS	Not applicable

The dosages, concentrations and dosage volumes were as follows:

Compound Identification	Dosage (mg/kg)	Concentration (mg/mL)	Dosage Volume (mL/kg)
RODI H_2O	0	0	5
0.5% Tween® 80	0	0	5
Mevalonic Acid	1000	100	5*
Cholesterol	500	100	5
PFOS	0.4	0.08	5
PFOS	0.8	0.16	5
PFOS	1	0.20	5
PFOS	1.2	0.24	5
PFOS	1.6	0.32	5
PFOS	2	0.40	5

* Mevalonic acid was dosed twice daily.

Dosages were adjusted for the most recently recorded body weight and given at approximately the same times each day.

The rats were given the test article, control article and/or vehicle daily beginning 42 days before cohabitation (maximum of 14 days) and continuing through DG 20 (rats assigned to Caesarean-sectioning), DG 24 (rats assigned to natural delivery that did not deliver a litter) or day 4 of lactation (DL 4, rats that delivered a litter). F1 generation pups were not directly given the test article, control article and/or vehicle, but were possibly exposed to the test article or control articles during maternal gestation or via maternal milk during the lactation period.

Rats were observed for viability at least twice each day of the study. Observations for clinical signs of effects of the test article and deaths were made daily prior to dosage administration, approximately one hour after the second dosage and at the end of the working day. These observations were also recorded on the day of sacrifice.

Body weights were recorded weekly to cohabitation, daily during presumed gestation, on DL 1 (rats assigned to natural delivery) and at sacrifice. Feed consumption values were recorded weekly to cohabitation, on DGs 0, 7, 14, 21 and 25 (if necessary) and DLs 1 and 5 (rats assigned to natural delivery).

Mating was evaluated daily during the cohabitation period and confirmed by observation of spermatozoa in a smear of the vaginal contents and/or a copulatory plug observed *in situ*.

The rats assigned to natural delivery were observed for adverse clinical signs during parturition, duration of gestation and pup viability at birth. The rats were also observed for fertility index, gestation index, number of offspring per litter, number of implantation sites, general condition of the dam and litter during the postpartum period and viability index. Maternal behavior was recorded on DLs 1 and 5.

Litters were examined after delivery to identify the number and sex of pups, stillborns, live births and gross external alterations. Each litter was evaluated for viability at least twice each day of the 5-day postpartum period. F1 generation pups in each litter were counted once daily. Physical signs were recorded each day. Pooled litter weights were recorded on DLs 1 (birth, liveborn pups), 2, 3, 4 and 5.

Eight rats from dosage groups 1 to 7, 12 and 13 (Replicate 1) were sacrificed on DG 21. Blood and liver samples were collected from these rats. The rats were Caesarean-sectioned and a gross necropsy of the thoracic, abdominal and pelvic viscera was performed. The number of corpora lutea in each ovary was recorded. The uterus of each rat was excised and examined for pregnancy, number and distribution of implantation sites, live and dead fetuses and early and late resorptions. Placentae were examined for size, color and shape.

Blood samples were collected from the rats assigned to Caesarean-sectioning. Following collection of blood samples, the liver of each rat was excised and the liver weight was recorded. A portion of each liver sample (right lateral lobe) was flash frozen and

maintained frozen. The median liver lobe was frozen. A section from the remaining portion of the liver was fixed in gluteraldehyde. The remaining portion of the liver was frozen.

Fetuses were pooled by litter and litter body weights were recorded. Blood samples were collected from each fetus. The liver from each fetus was collected. One fetal liver from each litter was removed and fixed in gluteraldehyde. The remaining fetal livers in each litter were divided into three samples of equal number. Two of the samples were frozen. The remaining samples were flash frozen in liquid nitrogen and maintained frozen.

On DL 5 the rats assigned to natural delivery were sacrificed and a gross necropsy of the thoracic, abdominal and pelvic viscera was performed. Blood, milk, heart and liver samples were collected from maternal rats on DL 5. Following collection of milk and blood samples, the heart and liver of each dam were collected. The liver weight was recorded. A portion of each liver sample (right lateral lobe) was flash frozen and maintained frozen. The median liver lobe was stored frozen. The heart and a section from the remaining portion of the liver were fixed in gluteraldehyde. The remaining portion of the liver was frozen.

On DL 5, pups were sacrificed and examined for gross lesions. Necropsy included a single cross-section of the head at the level of the frontal-parietal suture and examination of the cross-sectioned brain for apparent hydrocephaly. Blood samples were collected from each pup.

For Replicate 1, blood samples were pooled per litter, samples from male and female pups combined. For Replicate 2, blood samples were pooled (two litters per sample within each dosage group). The liver from each pup was collected, pooled (by sex per litter) and the pooled weight recorded. One liver from each litter pool was removed and fixed in gluteraldehyde. The remaining livers in each litter pool were divided into three samples of equal number. Two of the samples were stored frozen. The remaining sample was flash frozen and maintained frozen. The hearts were collected from the first two male and two female pups from each litter (pooled by sex per litter) and were fixed in gluteraldehyde. Thyroids were excised from each pup, pooled (by sex per litter) and retained.

Microscopic examination was made of the heart and thyroid from one male and one female F1 generation pup from dams of each of the vehicle control (Group 1) and 2 mg/kg/day PFOS groups (Group 13).

B. Results

No deaths were attributable to the test or control articles. One rat in each of Groups 2 (mevalonic acid control), 3 (1.6 mg/kg PFOS + mevalonic acid) and 5 (cholesterol control) died as the result of intubation accidents or natural causes. All other rats survived to scheduled sacrifice.

The numbers of rats with excess salivation, a perioral substance and chromorhinorrhea during gestation were significantly increased in Group 5 (mevalonic acid control) as compared to Group 1 (vehicle control). These increases were attributed to an aversion to the taste of mevalonic acid; the incidence of these observations was comparable among the three mevalonic acid groups (Groups 2, 3 and 4). All other clinical observations during the precohabitation, gestation and lactation periods were considered unrelated to the test or control articles. All necropsy observations were considered unrelated to the test or control articles.

Terminal body weights of rats Caesarean-sectioned on DG 21 were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The weight of the liver was significantly increased in Group 7. As a result of the reduced terminal weights in Groups 6 and 7 and the increased liver weight in Group 7, the ratios of the liver weight to the terminal body weight were significantly increased in these two groups. All other terminal body weights, liver weights and relative liver weights of rats Caesarean-sectioned on DG 21 were unaffected by PFOS or mevalonic acid.

Terminal body weights of naturally delivered rats were significantly reduced in Group 13 (2 mg/kg PFOS alone) and in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The ratios of the liver weights to the terminal body weights were significantly increased in Groups 9, 11 and 13 (0.8, 1.2 and 2 mg/kg PFOS alone, respectively), reflecting slight reductions in terminal body weights and/or slight increases in liver weights in these groups. The liver weight was significantly increased in Group 3 (1.6 mg/kg PFOS + mevalonic acid). The ratios of the liver weight to the terminal body weight were significantly increased in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) and in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively).

Body weight gains for the entire precohabitation period were significantly reduced in Group 13 (2 mg/kg PFOS alone) and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). During this period, gains were significantly reduced in Groups 6 and 7 on DSs 22 to 29 and 29 to 36; and in Group 13 on DSs 29 to 36. Additionally, body weight gains for Group 12 (1.6 mg/kg PFOS alone) were significantly reduced on DSs 29 to 36 and body weight loss occurred in this group on DSs 36 to 42. As a result of these changes, body weights were significantly reduced in Groups 6 and 7 on DSs 29, 36 and 42. Body weight gains for the entire precohabitation period in Group 5 (cholesterol control) were significantly increased. Premating body weights and body weight gains were unaffected by mevalonic acid and dosages of PFOS as high as 1.2 mg/kg.

Body weight gains for the entire gestation period were significantly reduced only in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) and Groups 9, 11, 12 and 13 (0.8, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively) had significantly reduced body weight gains for the first week of the gestation period. There were no significant differences among any of these dosage groups during the second week of gestation. Group 13 had a significant

increase in body weight gain during the third week of gestation. Body weights were significantly reduced in Group 12 (1.6 mg/kg PFOS alone) on DGs 2 through 16, and in Group 13 (2 mg/kg PFOS alone) on DGs 0 through 19. When PFOS was administered along with mevalonic acid, the effect on body weight was less severe and appeared over a shorter period than PFOS administered alone. Body weights were significantly reduced in Group 3 (1.6 mg/kg PFOS + mevalonic acid) on DGs 4 through 13, and in Group 4 (2 mg/kg PFOS + mevalonic acid) on DGs 7 through 10. The effect on body weight was more severe and appeared over a longer period when PFOS was administered along with cholesterol. Body weights were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DGs 0 through 21. Gestation body weights were significantly increased in the cholesterol control group (Group 5) on DGs 5, 8 through 17 and 21. Despite this effect of cholesterol alone, body weights in the groups administered PFOS with cholesterol (Groups 6 and 7) had significant reductions in gestation body weights.

Body weight gains during the first five days of the lactation period were significantly reduced in Groups 9, 10, 12 and 13 (0.8, 1, 1.6 and 2 mg/kg PFOS alone, respectively). The average body weight on DL 5 was significantly reduced in Group 13. When PFOS was administered along with mevalonic acid, the effect on body weight was less severe than PFOS administered alone. Body weight gains were significantly reduced on DLs 1 to 5 in Group 3, but average body weights on DLs 1 and 5 were comparable among Groups 2, 3 and 4 (mevalonic acid control, 1.6 and 2 mg/kg PFOS + mevalonic acid, respectively). When PFOS was administered along with cholesterol, the effect on body weight was more severe. Body weights on DLs 1 and 5 were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) and a significant body weight loss occurred on DLs 1 to 5 in Group 7.

Absolute and relative feed consumption values were significantly reduced in Group 13 (2 mg/kg PFOS alone) for the entire premating period and within this period on DSs 8 to 15 (relative only), 22 to 29, 29 to 36 and 36 to 42. Absolute and relative feed consumption values were also significantly reduced in Group 12 (1.6 mg/kg PFOS alone) during the last week of the premating period. Absolute feed consumption values were significantly reduced in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DSs 22 to 29 and 36 to 42. Relative feed consumption values were significantly reduced in Groups 3 and 4 on DSs 8 to 15, 15 to 22, 22 to 29 and 36 to 42 (Group 4 only). This effect of PFOS and mevalonic acid was reflected in the significantly reduced absolute and relative feed consumption values for the entire premating period in both groups. When PFOS was administered along with cholesterol, the effect on feed consumption values was more severe. Absolute and relative feed consumption values were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DSs 22 to 29, 29 to 36 and 36 to 42. This effect of PFOS and cholesterol was reflected in the significantly reduced absolute and relative feed consumption values for the entire premating period in both groups. Relative feed consumption values on DSs 8 to 15, 15 to 22, 22 to 29 and 1 to 42 were significantly increased in the mevalonic acid control group (Group 2). Absolute and relative feed consumption values were significantly increased on DSs 29 to 36 and absolute feed

consumption was significantly increased on DSs 36 to 42 in the cholesterol control group (Group 5).

Absolute and relative feed consumption values were significantly reduced during the first week of gestation in Groups 9 through 12 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively). Absolute feed consumption continued to be significantly reduced in Group 13 on DGs 7 to 14, and relative feed consumption was significantly increased in Group 12 on DGs 14 to 21. Absolute feed consumption values for the entire gestation period (DGs 0 to 21) were significantly reduced in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively). When PFOS was administered along with mevalonic acid, effects on feed consumption values were comparable to the effects of administration of PFOS alone. Absolute feed consumption values were significantly reduced in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DGs 0 to 7, 7 to 14 and 0 to 21. Relative feed consumption values were significantly reduced in Groups 3 and 4 on DGs 0 to 7 and 7 to 14. When PFOS was administered along with cholesterol, effects on feed consumption values were also comparable to the effects of administration of PFOS alone. Absolute feed consumption values were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DGs 0 to 7, 7 to 14, and 0 to 21. Relative feed consumption values were significantly reduced in Groups 6 and 7 on DGs 0 to 7 and significantly increased in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DGs 14 to 21.

Absolute feed consumption values during the first five days of the lactation period were significantly reduced in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively). Relative feed consumption values for the same period were reduced in Groups 9 through 13, reaching statistical significance in Groups 9, 10, 11 and 12 (0.8, 1, 1.2 and 1.6 mg/kg PFOS alone, respectively) values. When PFOS was administered along with mevalonic acid, effects on feed consumption values were also comparable to the effects of administration of PFOS alone. Absolute and relative feed consumption values were significantly reduced in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DLs 1 to 5. When PFOS was administered along with cholesterol, effects on feed consumption values were comparable to the effects of administration of PFOS alone. Absolute and relative feed consumption values were significantly reduced in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DLs 1 to 5.

The number of days in cohabitation, the fertility and pregnancy indices and the number of rats with confirmed mating dates during the first and second week of cohabitation were comparable in the thirteen dosage groups. Caesarean-sectioning observations on DG 21 were based on eight pregnant dams in each of Groups 1 through 7, 12 and 13.
No Caesarean-sectioning or litter parameters were affected by dosages up to 2 mg/kg PFOS alone or administered with either cholesterol or mevalonic acid.

Totals of 17 to 20 rats were pregnant and delivered litters in each of the 13 dosage groups. The duration of gestation was significantly reduced in Groups 9 through 13 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The number of dams with all pups dying on DLs 1 to 5 was

increased in Groups 13, 3, 4, 6 and 7; the increase was significant in Groups 13, 4 and 7. The pup viability index was significantly reduced in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The numbers of pups that died or were presumed cannibalized on DL 1 and DLs 2 to 5 was significantly increased in Groups 12, 13, 4, 6 and 7. The numbers of surviving pups per litter were significantly reduced on DLs 2, 3, 4 and 5 in Groups 12, 13, 3, 4, 6 and 7.

A dosage-dependent pattern of reduced pup body weight was evident on DLs 1, 2, 3, 4, 5 and/or 1 to 5 in each group administered the test article. Groups 11, 12 and 13 (1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) had significantly reduced pup body weights on most weighing days. When average pup weight was normalized for litter size, Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) and Groups 8, 9, 10, 11, 12 and 13 (0.4, 0.8, 1, 1.2, 1.6 and 2 mg/kg/day PFOS, respectively) were also significantly reduced from Group 2 (mevalonic acid control, Group 5 (cholesterol control) and Group 1 (Vehicle Control), respectively, over the same days of lactation.

Adverse clinical and necropsy observations associated with reduced pup viability and potential reduction in maternal care occurred in Groups 11, 12 and 13 (1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol). Increased numbers of litters with pups that were cold to touch occurred in Groups 11, 12, 13, 4, 6 and 7. The number of litters with pups not nursing was increased in Groups 12, 13, 3, 4, 6 and 7; the increase was significant in Group 7. Necropsy observations in pups that were stillborn or found dead included increases in the numbers of pups with no milk in the stomach in Groups 9, 10, 11, 12 and 13 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The incidence of this observation was significantly increased in Group 6. All other clinical and necropsy observations in the F1 generation pups were considered unrelated to the test article.

Clinical chemistry parameters were generally unaffected in the DG 21 dams that were treated with or without cholesterol and 1.6 or 2 mg/kg PFOS. Total and free T_3 and T_4 in dams administered 1.6 or 2 mg/kg PFOS with or without mevalonic acid or cholesterol were significantly reduced. The LDL was significantly increased in the dams that were administered mevalonic acid and PFOS. Liver cholesterol levels were significantly reduced in DG 21 dams administered 1.6 or 2 mg/kg PFOS and in DG 21 dams coadministered mevalonic acid and 1.6 or 2 mg/kg PFOS. Liver triglyceride levels were significantly reduced in DG 21 dams coadministered mevalonic acid or cholesterol and 1.6 or 2 mg/kg PFOS. Liver LDL and HDL levels were increased or significantly increased in dams coadministered cholesterol or mevalonic acid and 1.6 or 2 mg/kg PFOS.

Cholesterol and LDL were significantly increased in the fetuses from dams that were treated with 1.6 or 2 mg/kg PFOS. Free T_4 was significantly reduced in the fetuses from dams that were treated with or without cholesterol or mevalonic acid and 1.6 or 2 mg/kg PFOS. Cholesterol and LDL were significantly increased and triglycerides were significantly decreased in the fetuses from dams that were treated with mevalonic acid and 1.6 and/or 2 mg/kg PFOS. The clinical chemistry parameters of cholesterol, LDL and HDL were significantly increased in the fetuses from dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS. Liver cholesterol and triglyceride levels were increased or significantly increased in DG 21 fetuses from dams coadministered mevalonic acid or cholesterol and 1.6 or 2 mg/kg PFOS. Liver HDL levels were significantly increased in DG 21 fetuses from dams administered 1.6 or 2 mg/kg PFOS alone or coadministered mevalonic acid and 1.6 or 2 mg/kg PFOS.

Serum cholesterol was significantly decreased in the lactating dams that were treated with 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS. The glucose was significantly increased in the DL 5 dams that were treated with 2 mg/kg PFOS alone and triglycerides were significantly decreased in lactating dams treated with 1.6 or 2 mg/kg PFOS alone. Total and free T_4 levels in lactating dams administered 0.4 (free T_4 only), 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced and total and free T_3 levels in lactating dams administered 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced. Serum cholesterol was significantly decreased in the lactating dams that were treated with mevalonic acid and 1.6 or 2 mg/kg PFOS and cholesterol in the milk was significantly increased in the lactating dams that were treated with mevalonic acid and 2 mg/kg PFOS. Total and free T_4 were significantly reduced in the lactating dams that were treated with mevalonic acid or cholesterol and 1.6 or 2 mg/kg PFOS. Cholesterol in the blood and triglycerides were significantly decreased in lactating dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS and glucose was significantly increased in lactating dams that were treated with cholesterol and 2 mg/kg PFOS. Liver triglyceride levels were increased or significantly increased in DL 5 dams administered 1.6 or 2 mg/kg PFOS alone and in DL 5 dams coadministered mevalonic acid or cholesterol and 1.6 or 2 mg/kg PFOS.

Clinical chemistry parameters were not significantly different in the DL 5 pups from lactating dams that were treated with 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS. Free T_4 levels in the F1 generation pups from lactating dams administered 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced. Free T_3 levels in pups from lactating dams administered 0.4, 0.8 or 1 mg/kg PFOS were significantly reduced, however, levels were significantly increased, in pups from lactating dams administered 1.6 mg/kg PFOS. Total T_4 levels in pups from lactating dams administered 0.4, 0.8 or 1 mg/kg PFOS were significantly reduced. TSH was significantly increased at 1 mg/kg PFOS. Liver triglyceride levels were reduced or significantly reduced in DL 5 male and female pups from dams administered 1, 1.2, 1.6 and 2 mg/kg PFOS alone and in DL 5 male pups from dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS.

Cholesterol, LDL and triglycerides in the blood were significantly increased in pups from lactating dams that were treated with mevalonic acid and 1.6 mg/kg PFOS. Total T_4 were significantly decreased in pups from lactating dams that were treated with mevalonic acid and 1.6 mg/kg PFOS. LDL and HDL were significantly increased in the pups from

lactating dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS and triglycerides were significantly decreased in the pups from dams that were treated with cholesterol and 2 mg/kg PFOS. Total T_3 and free T_4 were significantly decreased in pups from lactating dams that were treated with cholesterol and 1.6 and/or 2 mg/kg PFOS.

No microscopic changes were seen in the heart or thyroid of the male and female pups whose dam was exposed to 2 mg/kg/day PFOS (Group 13).

C. Conclusion

On the basis of these data, it does not appear that coadministration of mevalonic acid or cholesterol can prevent or antagonize the adverse maternal or fetal effects observed in a previous study with PFOS (Argus Research protocol 418-008; 3M study number T-6295.9).

The maternal no-observable-effect-level (NOEL) for this study is 0.4 mg/kg PFOS (the 0.8 mg/kg and higher dosages of PFOS caused an increased liver weight to terminal body weight ratio, decreased body weight gain during gestation and lactation and decreased absolute and relative feed consumption during gestation and lactation on days).

The reproductive NOEL in the dams is also 0.4 mg/kg (the 0.8 mg/kg dosage decreased the duration of gestation).

The NOEL for viability and growth in the offspring is less than 0.4 mg/kg (dosages of 0.4 mg/kg and higher caused decreased pup body weights when normalized for litter size).

16 Dec 02

George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

16 DEC 2002

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director

II. DESCRIPTION OF TEST PROCEDURES

A. Conduct of Study

A.1. Sponsor

3M Corporate Toxicology, 3M Center, Building 220-2E-02, St. Paul, Minnesota 55144-1000

A.2. Testing Facility

Argus Research, 905 Sheehy Drive, Building A, Horsham, Pennsylvania 19044-1297

A.3. Study Number

418-018

A.4. Sponsor's Study Number

T-6295.25

A.5. Purpose of the Study

The purposes of this study were: 1) to determine whether or not co-administration of mevalonic acid or cholesterol can prevent or antagonize the adverse maternal and fetal effects (reduced maternal body weight gain, increased percent stillborn, decreased birth weight and decreased pup survival) observed in a previous study (Argus Research Protocol 418-008, 3M study number T-6295.9); and 2) to better define the no observed effect level (NOEL).

A.6. Study Design

The requirements of the U.S. Food and Drug Administration (FDA)[1] were used as the basis for the study design.

A.7. Regulatory Compliance

The requirements of the U.S. Food and Drug Administration (FDA)[1] were used as the basis for the study design.

The study was conducted in compliance with Good Laboratory Practice (GLP) regulations of the U.S. Food and Drug Administration (FDA)[2], the Japanese Ministry of Health and Welfare (MHW)[3] and the European Economic Community (EEC)[4]. There were no deviations from the GLP regulations that affected the quality or integrity of the study. Quality Assurance Unit findings derived from the inspections during the conduct of this study are documented and have been provided to the Study Director and the Testing Facility Management.

A.8. Ownership of the Study

The Sponsor owns the study. All raw data, analyses, reports and preserved tissues are the property of the Sponsor.

A.9. Study Monitor

Deanna J. Luebker, M.S.

A.10. Alternate Study Monitor

John Butenhoff, Ph.D., DABT, CIH

A.11. Study Director

Raymond G. York, Ph.D., DABT

A.12. Technical Performance

John F. Barnett, B.S. (Director of Laboratory Operations)
Todd J. Killino, B.S. (Research Associate)
Alaine L. Casey, A.S. (Laboratory Technician)
Brian K. Kelsch (Necropsy Laboratory Technician)
Christopher K. Ruppert, B.S. (Formulation Laboratory Technician)

A.13. Report Preparation

Raymond G. York, Ph.D., DABT
Jo Ann Frazee, M.S. (Study Coordinator)
Pamela J. Shufelt, B.S. (Data Management Team Leader)
Cristina Petrescu (Report Administrator)

A.14. Report Review

Valerie A. Sharper, M.S. (Director of Study Management)

A.15. Date Protocol Signed

21 August 2000

A.16. Dates of Technical Performance

A.16.a. Replicate 1

Rat Arrival	22 AUG 00
Dosage Period	
Rats Assigned to Caesarean-Sectioning (42 days before cohabitation and continuing through DG[a] 20)	29 AUG 00 - 02 NOV 00
Rats Assigned to Natural Delivery [42 days before cohabitation and continuing through DG 24 (rats that did not deliver a litter) or DL[b] 4 (rats that delivered a litter)]	29 AUG 00 - 18 NOV 00
Cohabitation Period	
Male 1 (7 days maximum)	09 OCT 00 PM - 16 OCT 00 AM
Male 2 (7 days maximum)	16 OCT 00 PM - 23 OCT 00 AM
Scheduled Sacrifice (DG 21 Caesarean-sectioning)	31 OCT 00 - 03 NOV 00
DG 25 Sacrifice	05 NOV 00 - 09 NOV 00
No Confirmed Date of Mating Sacrifice	17 NOV 00
Delivery Period (DL 1)	31 OCT 00 - 15 NOV 00
Scheduled Sacrifice (DL 5)	04 NOV 00 - 19 NOV 00

A.16.b. Replicate 2

Rat Arrival	05 SEP 00
Dosage Period	
Rats Assigned to Natural Delivery [42 days before cohabitation and continuing through DG 24 (rats that did not deliver a litter) or DL 4 (rats that delivered a litter)]	14 SEP 00 - 02 DEC 00
Cohabitation Period	
Male 1 (7 days maximum)	25 OCT 00 PM - 01 NOV 00 AM
Male 2 (6 days maximum)	01 NOV 00 PM - 07 NOV 00 AM
DG 25 Sacrifice	20 NOV 00 - 23 NOV 00
Delivery Period (DL 1)	16 NOV 00 - 29 NOV 00
Scheduled Sacrifice (DL 5)	20 NOV 00 - 03 DEC 00

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a. DG is an abbreviation for day of (presumed) gestation.
b. DL is an abbreviation for day of lactation/postpartum.

A.17. Records Maintained

The original report, raw data and reserve samples of each lot of the control article and vehicle components are retained in the archives of Argus Research. Any preserved tissues are retained in the archives of the Testing Facility for one year after mailing the draft final report, after which time the Sponsor will decide their final disposition. All unused prepared formulations were discarded at the Testing Facility. Unused bulk test article was returned to the Sponsor.

B. Test Article Information

B.1. Description

Perfluorooctane Sulfonic Acid Potassium Salt (PFOS) - light-colored powder

B.2. Lot Number

217

B.3. Date Received and Storage Conditions

The test article was received on 25 August 2000, and stored at room temperature.

B.4. Special Handling Instructions

Standard safety precautions (use of protective clothing, gloves, dust-mist/HEPA-filtered mask and safety goggles or safety glasses and a face-shield) were taken when handling the test article.

B.5. Analysis of Activity

Information regarding the identity, composition, strength, and purity of the test article is on file with the Sponsor. The purity is 98.9%. A Certificate of Analysis is available in APPENDIX E.

C. Control Articles Information

C.1. Descriptions

Mevalonic Acid - white with a yellow cast, semisolid
Cholesterol - white powder

C.2. Lot Numbers

Mevalonic Acid - 070K26603 and 080K2618
Cholesterol - 119H0218

C.3. Dates Received and Storage Conditions

The mevalonic acid was received from Sigma Chemical Company, St. Louis, Missouri, on 1 August 2000 (lot 070K26603) and 21 September 2000 (lot 080K2618), and stored frozen. The cholesterol was received from Sigma Chemical Company, St. Louis, Missouri, on 20 July 2000, and stored at room temperature.

C.4. Special Handling Instructions

Standard safety precautions (use of protective clothing, gloves, dust-mist/HEPA-filtered mask and safety goggles or safety glasses and a face-shield) were taken when handling the control articles.

C.5. Analysis of Purity

Neither the Sponsor nor the Study Director was aware of any potential contaminants likely to have been present in the control articles that would have interfered with the results of this study. The purity of the mevalonic acid is approximately 97%. The purity of the cholesterol is 95%. The expiration dates for the mevalonic acid are August 2004 (lot 070K26603) and September 2004 (lot 080K2618). The expiration date for the cholesterol is July 2004.

D. Vehicle Information

D.1. Description

0.5% Tween® 80 prepared using Tween® 80, a yellow liquid, and reverse osmosis membrane processed deionized water (RODI H_2O).
Reverse osmosis membrane processed deionized water (RODI H_2O).

D.2. Lot Number

N32477

D.3. Dates Received and Storage Conditions

The Tween® 80 was received from J.T. Baker, Phillipsburg, New Jersey, on 7 March 2000, and stored at room temperature. Reverse osmosis membrane processed deionized water is available from a continuous source at the Testing Facility and is maintained at room temperature.

D.4. Special Handling Instructions

Standard safety precautions (use of protective clothing, gloves, dust-mist/HEPA-filtered mask and safety goggles or safety glasses and a face-shield) were taken when handling the vehicles.

D.5. Analysis of Purity

Neither the Sponsor nor the Study Director was aware of any potential contaminants likely to have been present in the vehicles that would have interfered with the results of this study. The expiration date for the Tween® 80 is March 2004.

E. Test Article Preparation and Storage Conditions

PFOS suspensions and the 0.5% Tween® 80 were prepared weekly at the Testing Facility. Mevalonic acid was prepared twice daily in reverse osmosis membrane processed deionized water. Cholesterol was prepared as a suspension once daily in 0.5% Tween® 80. The prepared vehicle (0.5% Tween® 80) was stored at room temperature. The prepared test article formulations were stored frozen (-20°C).

E.1. Sample Information

Sample Type	Size	Date Retained	Storage/Shipping Conditions	Shipped To	Date Shipped
Homogeneity[a]	5 mL	28 AUG 00 27 SEP 00[b]	Frozen (-20°C)	Sponsor	29 AUG 00 27 SEP 00
Concentration[c]	5 mL	18 SEP 00 01 NOV 00 15 NOV 00	Frozen (-20°C)	Sponsor	18 SEP 00 01 NOV 00 15 NOV 00
Control Articles Reserve					
Mevalonic Acid					
Lot 070K26603	1 g	01 SEP 00	Frozen	Testing	13 SEP 00
Lot 080K2618	1 g	30 OCT 00	Frozen	Facility	08 NOV 00
Cholesterol	1 g	01 SEP 00	Room temperature	Archives	13 SEP 00
Vehicle Component Reserves					
Tween® 80	5 mL	01 SEP 00	Room temperature	Testing Facility	13 SEP 00
RODI H_2O	5 mL	01 SEP 00	Room temperature	Archives	13 SEP 00

a. A syringe was used to withdraw samples from the top, middle and bottom of the highest PFOS concentration on the first day of preparation. Each sample was divided into two aliquots and placed into glass containers, one of 2 mL and one of 3 mL. One aliquot (2 mL) was shipped for analysis; the other aliquot (3 mL) was retained at the Testing Facility as a backup sample.

b. A larger preparation size was required for dosing; therefore, according to the Standard Operating Procedures of the Testing Facility, if preparation is 30% larger or smaller, homogeneity must be reanalyzed.

c. A syringe was used to withdraw samples from each PFOS concentration once during each of the following periods of study: premating, gestation and postnatal. Each sample was divided into two aliquots, one of 2 mL and one of 3 mL, and placed into glass containers. One aliquot (2 mL) was shipped for analysis; the other aliquot (3 mL) was retained at the Testing Facility as a backup sample.

E.2. Analytical Results

Samples were sent to Exygen Research, State College, Pennsylvania, for analysis. PFOS levels in the Day 0 and 10 stability and concentration samples bracketing the range of concentrations and conditions of this study were determined. Analysis of samples on 14 February 2002 to 15 February 2002 showed an average percent recovery ± standard deviation for PFOS in the dosing solutions as 93% ± 7% and ranged from 83% to 105%, when compared to the assigned concentration, which was not considered to be significant. Results of the stability and concentration analyses are available in APPENDIX F.

F. Test System

F.1. Species

Rat

F.2. Strain

Crl:CD®(SD) IGS BR VAF/Plus®

F.3. Supplier (Source

Charles River Laboratories, Inc., Raleigh, North Carolina

F.4. Sex

Female (Note: Male rats were used only for the purpose of breeding and are not considered part of the Test System).

F.5. Rationale for Test System

The Crl:CD®(SD) IGS BR VAF/Plus® rat was selected as the Test System because: 1) this strain of rat has been demonstrated to be sensitive to reproductive and developmental toxins and has been widely used throughout industry for reproductive and developmental toxicity evaluations; 2) historical data and experience exist at the Testing Facility[5-7]; 3) the test article is pharmacologically active in the species and strain; and 4) this strain has been used in previous reproduction studies of PFOS.

F.6. Test System Data

	Replicate 1	Replicate 2
Number of Rats	180	179
Approximate Date of Birth	27 JUN 00	10 JUL 00
Approximate Age at Arrival	57 days	58 days
Weight (g) the Day after Arrival[a]	167 - 204	170 - 228
Weight (g) at Study Assignment	196 - 224	199 - 247

F.7. Breeder Male Rat Data

	Shipment 1	Shipment 2
Number of Rats	150	150
Approximate Date of Birth	29 FEB 00	20 MAR 00
Approximate Age at Arrival	71 days	72 days
Weight (g) the Day after Arrival	245 - 339	286 - 344
Weight (g) at Cohabitation - Replicate 1	473 - 767	537 - 748
Weight (g) at Cohabitation - Replicate 2	452 - 773	593 - 791

F.8. Method of Randomization

Female rats were received in two shipments, separated by two weeks. The first shipment was designated as Replicate 1 and the second shipment was designated as Replicate 2. Upon arrival, the male and female rats were assigned to individual housing on the basis of computer-generated random units. After acclimation, female rats were selected for study on the basis of physical appearance and body weights recorded during acclimation. The rats were assigned to 13 dosage groups (Groups 1 through 13). There were 14 rats per group per replicate for Groups 1, 2, 4 through 7, 12 and 13, 14 rats for Group 3, replicate 1, 15 rats for Group 3, replicate 2, and 10 rats per group per replicate for Groups 8 through 11. Computer-generated (weight-ordered) randomization procedures were used to assign rats to groups. The first eight female rats per dosage group in Groups 1 to 7, 12 and 13 of Replicate 1 with a confirmed date of mating were assigned to Caesarean-sectioning on DG 21. The remaining female rats (including those with no confirmed mating date) were permitted to naturally deliver litters.

F.9. System of Identification

Male rats were given unique permanent identification numbers upon assignment to the Testing Facility's breeder male rat population. Female rats were assigned temporary numbers at receipt and given unique permanent identification numbers when assigned to the study. Each rat was individually identified with a Monel® self-piercing ear tag (Gey Band and Tag Co., Inc., No. MSPT 20101) inscribed with the rat's designated

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a. See APPENDIX D (DEVIATIONS FROM THE PROTOCOL AND THE STANDARD OPERATING PROCEDURES OF THE TESTING FACILITY), item 1.

unique permanent number. Cage tags were marked with the study number, permanent rat number, sex, test article identification and dosage level.

Pups were not individually identified during lactation, all parameters were evaluated in terms of the litter.

G. Husbandry

G.1. Research Facility Registration

USDA Registration No. 23-R-099 under the Animal Welfare Act, 7 U.S.C. 2131 *et seq.*

G.2. Study Rooms

The study rooms were maintained under conditions of positive airflow relative to a hallway and independently supplied with a minimum of ten changes per hour of 100% fresh air that had been passed through 99.97% HEPA filters. Room temperature and humidity were monitored constantly throughout the study. Room temperature was targeted at 64°F to 79°F (18°C to 26°C); relative humidity was targeted at 30% to 70%[a].

G.3. Housing

Rats were individually housed in stainless steel, wire-bottomed cages, except during cohabitation and postpartum periods. During cohabitation, each pair of rats was housed in the male rat's cage. Beginning no later than DG 20, Fo generation female rats assigned to natural delivery were individually housed in nesting boxes. Each dam and delivered litter was housed in a common nesting box during the postpartum period. All cage sizes and housing conditions were in compliance with the *Guide for the Care and Use of Laboratory Animals*[(8)].

G.4. Lighting

An automatically-controlled fluorescent light cycle was maintained at 12-hours light: 12-hours dark, with each dark period beginning at 1900 hours EST.

G.5. Sanitization

Cage pan liners were changed approximately three times each week. Cages were changed approximately every other week. Bedding was changed as often as necessary to keep the rats clean and dry.

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a. See APPENDIX G (TEMPERATURE AND RELATIVE HUMIDITY REPORTS).

G.6. Feed

Rats were given *ad libitum* access to Certified Rodent Diet® #5002 (PMI Nutrition International, St. Louis, Missouri) in individual feeders.

G.7. Feed Analysis

Analyses were routinely performed by the feed supplier. No contaminants at levels exceeding the maximum concentration for certified feed or deviations from expected nutritional requirements were detected by these analyses. Copies of the results of the feed analyses are available in the raw data.

Neither the Sponsor nor the Study Director was aware of any potential contaminants likely to have been present in the feed that would have interfered with the results of this study.

G.8. Water

Local water that had been processed by passage through a reverse osmosis membrane (R.O. water) was available to the rats *ad libitum* from an automatic watering system and/or individual water bottles attached to the cages. Chlorine was added to the processed water as a bacteriostat.

G.9. Water Analysis

The processed water is analyzed twice annually for possible chemical contamination (Lancaster Laboratories, Lancaster, Pennsylvania) and monthly for possible bacterial contamination (Analytical Laboratories, Inc., Chalfont, Pennsylvania). Copies of the results of the water analyses are available in the raw data.

Neither the Sponsor nor the Study Director was aware of any potential contaminants likely to have been present in the water that would have interfered with the results of this study.

G.10. Nesting Material

Bed-o'cobs® bedding (The Andersons Industrial Products Group, Maumee, Ohio) was used as the nesting material.

G.11. Bedding Analysis

Analyses for possible contamination are conducted semi-annually. Copies of the results of the bedding analyses are available in the raw data.

Neither the Sponsor nor the Study Director was aware of any potential contaminants likely to have been present in the bedding that would have interfered with the results of this study.

H. Methods

H.1. Dosage Administration

The dosage groups and dosing schedule were as follows[a].

Dosage Groups and Dosing Schedule				
Dosage Groups		Dosing Schedule		
Number	Identification	1st dosage	2nd dosage 1/2 hour ± 10 minutes after 1st dosage	3rd dosage 5 hours ± 30 minutes after 2nd dosage
1	Vehicle Control	RODI H_2O	0.5% Tween® 80	RODI H_2O
2	Mevalonic Acid Control	500 mg/kg Mevalonic Acid	0.5% Tween® 80	500 mg/kg Mevalonic Acid
3	1.6 mg/kg PFOS + Mevalonic Acid	500 mg/kg Mevalonic Acid	1.6 mg/kg PFOS	500 mg/kg Mevalonic Acid
4	2 mg/kg PFOS + Mevalonic Acid	500 mg/kg Mevalonic Acid	2 mg/kg PFOS	500 mg/kg Mevalonic Acid
5	Cholesterol Control	500 mg/kg Cholesterol	0.5% Tween® 80	Not Applicable
6	1.6 mg/kg PFOS + Cholesterol	500 mg/kg Cholesterol	1.6 mg/kg PFOS	Not Applicable
7	2 mg/kg PFOS + Cholesterol	500 mg/kg Cholesterol	2 mg/kg PFOS	Not Applicable
8	0.4 mg/kg PFOS	Not Applicable	0.4 mg/kg PFOS	Not Applicable
9	0.8 mg/kg PFOS	Not Applicable	0.8 mg/kg PFOS	Not Applicable
10	1 mg/kg PFOS	Not Applicable	1 mg/kg PFOS	Not Applicable
11	1.2 mg/kg PFOS	Not Applicable	1.2 mg/kg PFOS	Not Applicable
12	1.6 mg/kg PFOS	Not Applicable	1.6 mg/kg PFOS	Not Applicable
13	2 mg/kg PFOS	Not Applicable	2 mg/kg PFOS	Not Applicable

a. See APPENDIX D, items 2 through 4.

The dosages, concentrations and dosage volumes were as follows[a]:

Compound Identification	Dosage (mg/kg/day)	Concentration (mg/mL)	Dosage Volume (mL/kg)
RODI H_2O	0	0	5
0.5% Tween® 80	0	0	5
Mevalonic Acid	1000	100	5*
Cholesterol	500	100	5
PFOS	0.4	0.08	5
PFOS	0.8	0.16	5
PFOS	1	0.20	5
PFOS	1.2	0.24	5
PFOS	1.6	0.32	5
PFOS	2	0.40	5

The test and control articles were considered 100% pure for the purpose of dosage calculations.
* Mevalonic acid was dosed twice daily.

The rats were assigned to groups as follows:

Dosage Group	Identification	Number of Rats	Assigned Rat Numbers		
			Replicate 1 Caesarean-sectioning	Replicate 1 Natural Delivery	Replicate 2 Natural Delivery
1	Vehicle Control	28	10901 - 10905, 10907, 10908, 10910, 10912	10906, 10909, 10911, 10913, 10914	11501 - 11514
2	Mevalonic Acid Control	28	10915 - 10920, 10925, 10928	10921 - 10924, 10926, 10927	11515 - 11528
3	1.6 mg/kg PFOS + Mevalonic Acid	29	10930-10935, 10937, 10940	10929, 10936, 10938, 10939, 10941, 10942	11529 - 11543
4	2 mg/kg PFOS + Mevalonic Acid	28	10945 -10947, 10949 - 10951, 10953, 10954	10943, 10944, 10948, 10952, 10955, 10956	11544 - 11557
5	Cholesterol Control	28	10958 - 10965	10957, 10966 - 10970	11558 - 11571
6	1.6 mg/kg PFOS + Cholesterol	28	10972, 10974 - 10976, 10978, 10980 - 10982	10971, 10973, 10977, 10979, 10983, 10984	11572 - 11585
7	2 mg/kg PFOS + Cholesterol	28	10985, 10987 - 10993	10986, 10994 - 10998	11586 - 11599
8	0.4 mg/kg PFOS	20	Not applicable	10999 - 11008	11600 - 11609
9	0.8 mg/kg PFOS	20	Not applicable	11009 - 11018	11610 - 11619
10	1 mg/kg PFOS	20	Not applicable	11019 - 11028	11620 - 11629
11	1.2 mg/kg PFOS	20	Not applicable	11029 - 11038	11630 - 11639
12	1.6 mg/kg PFOS	28	11040, 11044 - 11047, 11050 - 11052	11039, 11041 - 11043, 11048, 11049	11640 - 11653
13	2 mg/kg PFOS	28	11053, 11054, 11056, 11058, 11060, 11062, 11063, 11066	11055, 11057, 11059, 11061, 11064, 11065	11654 - 11667

a. See APPENDIX D, items 5 through 7.

H.2. Rationale for Dosage Selection

Dosages were selected by the Sponsor on the basis of previous studies conducted with the test article.

H.3. Route and Rationale for Route of Administration

The oral (gavage) route was selected for use because: 1) in comparison with the dietary route, the exact dosage can be accurately administered; 2) it is one of the possible routes of human exposure; and 3) it is the route used in previous reproduction studies on PFOS.

H.4. Method and Frequency of Administration

Dosages were adjusted for the most recently recorded body weight and given at approximately the same times each day. Dosages were administered according to the previous table. The mevalonic acid dosing needle was wiped clean before administration for each rat.

Female rats were given the test article, control article and/or vehicle daily beginning 42 days before cohabitation (maximum of 14 days) and continuing through DG 20 (rats assigned to Caesarean-sectioning), DG 24 (rats assigned to natural delivery that did not deliver a litter) or DL 4 (rats that delivered a litter). Rats in the process of delivering were not given test/control article; such rats may not have received any or all of their daily dosage(s) on the day of parturition.

F1 generation pups were not directly given the test article, control article and/or vehicle, but were possibly exposed to the test article during maternal gestation (*in utero* exposure) or via maternal milk during the lactation period.

H.5. Method of Study Performance

H.5.a. Fo Generation Rats

Within each dosage group, consecutive order was used to assign rats to cohabitation, one male rat per female rat. The cohabitation period consisted of a maximum of 14 days. Female rats with spermatozoa observed in a smear of the vaginal contents and/or a copulatory plug observed *in situ* were considered to be at DG 0 and assigned to individual housing. Female rats not mated within the first seven days of cohabitation were assigned alternate male rats that had mated and remained in cohabitation for a maximum of seven additional days.

Rats were observed for viability at least twice each day of the study. Rats were examined for clinical observations and general appearance at least once during the acclimation period[a]. Observations for clinical signs of effects of the test article and deaths were made

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a. See APPENDIX D, items 8 and 9.

daily prior to dosage administration, approximately one hour after the second dosage and at the end of the working day (approximately one hour after the third dosage)[a]. These observations were also recorded on the day of sacrifice.

Body weights were recorded at least once during the acclimation period, weekly to cohabitation, daily during presumed gestation, on DL 1 (rats assigned to natural delivery) and at sacrifice[a]. Feed consumption values were recorded weekly to cohabitation, on DGs 0, 7, 14, 21 and 25 (if necessary) and DLs 1 and 5 (rats assigned to natural delivery)[b]. During cohabitation when two rats occupied the same cage with one feed jar, replenishment of feed jars was documented, but individual values were not recorded or tabulated.

Mating was evaluated daily during the cohabitation period and confirmed by observation of spermatozoa in a smear of the vaginal contents and/or a copulatory plug observed *in situ*.

The rats assigned to natural delivery were observed for adverse clinical signs during parturition, duration of gestation (DG 0 to the day the first pup was observed) and pup viability at birth. The rats were also observed for fertility index (percentage of matings that result in pregnancy), gestation index (percentage of pregnancies that result in birth of live litters), number of offspring per litter (live and dead pups), number of implantation sites, general condition of the dam and litter during the postpartum period and viability index (percentage of pups born that survived five days). Maternal behavior was recorded on DLs 1 and 5[c]. Deviations from expected maternal behavior were recorded, when and if observed, on all other days of the postpartum period.

H.5.b. F1 Generation Pups

Litters were examined after delivery to identify the number and sex of pups, stillborns, live births and gross external alterations. Day 1 of lactation (postpartum) was defined as the day of birth and was also the first day on which all pups in a litter were weighed (pup body weights were recorded after all pups in a litter were delivered and groomed by the dam).

Each litter was evaluated for viability at least twice each day of the 5-day postpartum period. Dead pups observed at these times were removed from the nesting box. F1 generation pups in each litter were counted once daily. Physical signs (including variations from expected lactation behavior and gross external alterations) were recorded each day. Pooled litter weights were recorded on DLs 1 (birth, liveborn pups), 2, 3, 4 and 5.

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a. See APPENDIX D, items 8 and 9.
b. See APPENDIX D, item 10.
c. See APPENDIX D, item 11.

H.6. Gross Necropsy[a]

H.6.a. Fo Generation Rats Assigned to Caesarean-Sectioning

Eight rats from Groups 1 to 7, 12 and 13 (Replicate 1) were sacrificed by carbon dioxide asphyxiation on DG 21. Blood and liver samples were collected from these rats[b]. The rats were Caesarean-sectioned and a gross necropsy of the thoracic, abdominal and pelvic viscera was performed. Gross lesions were retained in neutral buffered 10% formalin for possible future evaluation. Representative photographs of gross lesions are available in the raw data. Uteri of apparently nonpregnant rats were stained with 10% ammonium sulfide to confirm the absence of implantation sites[(9)] and retained in neutral buffered 10% formalin for possible future evaluation.

The number of corpora lutea in each ovary was recorded. The uterus of each rat was excised and examined for pregnancy, number and distribution of implantation sites, live and dead fetuses and early and late resorptions. An early resorption was defined as one in which organogenesis was not grossly evident. A late resorption was defined as one in which the occurrence of organogenesis was grossly evident. A live fetus was defined as a term fetus that responded to stimuli. Nonresponding fetuses were considered to be dead. Dead fetuses and late resorptions were differentiated by the degree of autolysis present; marked to extreme autolysis indicated that the fetus was a late resorption. Placentae were examined for size, color and shape.

Blood samples (at least 4 mL each) were collected from the rats assigned to Caesarean-sectioning via the inferior vena cava and separated into two approximately equal aliquots. The first aliquot was placed into EDTA-coated tubes and the second aliquot was transferred into serum separator tubes. The samples were spun in a centrifuge and the resulting serum (divided into two aliquots) and plasma (one aliquot) were transferred into labeled polypropylene tubes. All samples were immediately frozen on dry ice and maintained frozen (≤-20 °C).

Following collection of blood samples, the liver of each rat was excised and the liver weight was recorded[c]. A portion of each liver sample (right lateral lobe) was flash frozen in liquid nitrogen and maintained frozen (≤-70°C). The median liver lobe was stored frozen (≤-20°C). A section (approximately 0.3 to 0.5 cm wide) from the remaining portion of the liver was fixed in gluteraldehyde for possible electron microscopy. The remaining portion of the liver was stored frozen (≤-20°C).

Fetuses were pooled by litter and litter weights were recorded[d].

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a. A table of random units was used to select one control group rat assigned to Caesarean-sectioning from which all tissues examined at necropsy were retained, in order to provide control tissues for any possible histopathological evaluations of gross lesions.
b. See APPENDIX D, item 12.
c. See APPENDIX D, item 13
d. See APPENDIX D, item 14.

Caps and labeled tubes were weighed (combined weight, to the nearest .001 gram) before (empty) and after retention of pooled fetus samples for subsequent use in pharmacokinetic analyses. Sample tubes were labeled with the study number, litter identification, date of collection, study day, sample identification and collection timepoint.

Blood samples were collected from each fetus via decapitation. Blood from approximately one-half of the fetuses in each litter was placed into EDTA-coated tubes and the remaining fetal blood was transferred into serum separator tubes. The samples were spun in a centrifuge and the resulting serum (divided into two aliquots) and plasma (one aliquot) were transferred into labeled polypropylene tubes. All samples were immediately frozen on dry ice and maintained frozen (≤-20°C).

The liver from each fetus was collected. One fetal liver from each litter was removed and fixed in gluteraldehyde for possible electron microscopy. The remaining fetal livers in each litter were divided into three samples of equal number (when possible). Two of the samples were stored frozen (≤-20°C). The remaining samples were flash frozen in liquid nitrogen and maintained frozen (≤-70°C). Fetal carcasses were discarded without further evaluation.

H.6.b. Fo Generation Rats Assigned to Natural Delivery

On DL 5 the rats were sacrificed by carbon dioxide asphyxiation and a gross necropsy of the thoracic, abdominal and pelvic viscera was performed. Blood, milk, heart and liver samples were collected from maternal rats on DL 5[a]. Gross lesions were retained in neutral buffered 10% formalin for possible future evaluation. Representative photographs of gross lesions are available in the raw data.

On DL 5, each dam was removed from the nesting box and individually housed for approximately four hours. The dam was injected intravenously with one unit of oxytocin approximately five minutes before milk samples (at least 100 µL per sample) were collected. The samples were immediately frozen on dry ice and maintained frozen (≤-20°C).

Following milk sample collection, blood samples (at least 4 mL each) were collected from the rats via the inferior vena cava and separated into two approximately equal aliquots. The first aliquot was placed into EDTA-coated tubes and the second aliquot was transferred into serum separator tubes. The samples were spun in a centrifuge and the resulting serum (divided into two aliquots) and plasma (one aliquot) were transferred into labeled polypropylene tubes. All samples were immediately frozen on dry ice and maintained frozen (≤-20°C).

Following collection of milk and blood samples, the heart and liver of each dam were collected. The liver weight was recorded. A portion of each liver sample (right lateral lobe) was flash frozen in liquid nitrogen and maintained frozen (≤-70°C). The median

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a. See APPENDIX D, item 12.

liver lobe was stored frozen (≤-20°C). The heart was excised and two cuts were made to allow proper fixation. The first cut started to the right of the ventral midline surface at the apex and extended anteriorly and ventrally to the pulmonary artery. The second cut was made starting to the left of the ventral midline surface at the apex and extended through the left ventricle to the ascending aorta. The cut heart and a section (approximately 0.3 to 0.5 cm wide) from the remaining portion of the liver were fixed in gluteraldehyde. The remaining portion of the liver was stored frozen (≤-20°C).

Rats that did not deliver a litter were sacrificed on DG 25 and examined for gross lesions. Blood and tissue samples were not collected. Uteri were stained with 10% ammonium sulfide to confirm the absence of implantation sites[9] and retained in neutral buffered 10% formalin for possible future evaluation.

Dams with no surviving pups were sacrificed after the last pup was found dead, missing or presumed cannibalized. Blood and tissue samples (serum, plasma, heart and liver) were collected as previously described. A gross necropsy of the thoracic, abdominal and pelvic viscera was performed[a].

Rats that died or were sacrificed because of moribund condition were examined for the cause of death or moribund condition on the day the observation was made. The rats were examined for gross lesions. Representative photographs of gross lesions are available in the raw data. When possible (not precluded by autolysis), serum, plasma, heart and liver samples were retained as previously described for rats assigned to natural delivery. Pregnancy status and uterine contents of female rats were recorded.

H.6.c. F1 Generation Pups

Pups that died before examination of the litter for pup viability were evaluated for vital status at birth. The lungs were removed and immersed in water. Pups with lungs that sank were identified as stillborn; pups with lungs that floated were identified as liveborn, and to have died shortly after birth. Pups with gross lesions were preserved in Bouin's solution for possible future evaluation. When postmortem autolysis precluded these evaluations, it was noted on the litter observation data sheets.

Pups found dead or sacrificed due to moribund condition on DLs 2 to 5 were examined for gross lesions and for the cause of the moribund condition or death. When postmortem autolysis precluded these evaluations it was noted on the litter observation data sheets.

On DL 5, pups were sacrificed and examined for gross lesions. Gross lesions were preserved in neutral buffered 10% formalin. Necropsy included a single cross-section of the head at the level of the frontal-parietal suture and examination of the cross-sectioned brain for apparent hydrocephaly.

Caps and labeled tubes were weighed (combined weight, to the nearest .001 gram) before (empty) and after retention of samples for subsequent use in pharmacokinetic analyses.

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a. See APPENDIX D, item 15.

Sample tubes were labeled with the study number, rat identification, date of collection, study day, sample identification and collection timepoint.

Blood samples were collected via cardiac puncture from each pup. For Replicate 1, blood samples were pooled per litter, samples from male and female pups combined. Approximately 1 mL of blood was transferred into serum separator tubes; any remaining blood was transferred into EDTA-coated tubes. The samples were spun in a centrifuge and the resulting serum was divided into two aliquots of approximately 200 mL and approximately 300 mL of serum, and stored frozen (≤-70°C). Any resulting plasma was transferred into one aliquot and stored frozen (≤-70°C).

For Replicate 2, blood samples were pooled (two litters per sample within each dosage group). Approximately 0.3 mL of blood was transferred into EDTA-coated tubes. The remaining blood was transferred into serum separator tubes. The samples were spun in a centrifuge and the resulting serum was divided into two aliquots and stored frozen (≤-70°C). Resulting plasma was transferred into one aliquot and stored frozen (≤-70°C).

The liver from each pup was collected, pooled (by sex per litter) and the pooled weight recorded[a]. One liver from each litter pool was removed and fixed in gluteraldehyde for possible electron microscopy. The remaining livers in each litter pool were divided into three samples of equal number (when possible). Two of the samples were stored frozen (≤-20°C). The remaining sample was flash frozen in liquid nitrogen and maintained frozen (≤-70°C). The hearts were collected from the first two male and two female pups from each litter (pooled by sex per litter) and were fixed in gluteraldehyde. Thyroids were excised from each pup, pooled (by sex per litter). Thyroids were retained in neutral buffered 10% formalin. The remaining carcasses were discarded without further evaluation

a. See APPENDIX D, item 16.

H.6.d. Sample Shipment and Analyses

Sample	Storage/Shipping Conditions	Recipient	Analysis
Dams Assigned to Caesarean-Sectioning			
Serum - aliquot 1	≤-20°C	Sponsor	PFOS
Serum - aliquot 2	≤-20°C	AniLytics	Total cholesterol, glucose, total & free T_3, T_4, TSH (Groups 1, 11, 12, 13), LDL, HDL, triglycerides[a]
Plasma	≤-20°C	Primedica Worcester	Mevalonic acid (Groups 1, 2, 3, 4, 11, 12 and 13)
Liver - right lateral lobe	≤-70°C	Sponsor	Possible biochemical
Liver - median lobe	≤-20°C	Sponsor	PFOS
Liver - section	Gluteraldehyde	Sponsor	Possible EM
Liver - remainder	≤-20°C	AniLytics	LDL, HDL, total cholesterol, triglycerides
Fetuses			
Pooled serum - aliquot 1	≤-20°C	Sponsor	PFOS
Pooled serum - aliquot 2	≤-20°C	AniLytics	Total cholesterol, glucose, total & free T_3, T_4, TSH (Groups 1, 11, 12, 13), LDL, HDL, triglycerides[a]
Pooled Plasma	≤-20°C	Primedica Worcester	Mevalonic acid (Groups 1, 2, 3, 4, 11, 12 and 13)
Liver - 1 liver	Gluteraldehyde	Sponsor	Possible EM
Liver - 1/3 pooled livers	≤-70°C	Sponsor	Possible biochemical
Liver - 1/3 pooled livers	≤-20°C	Sponsor	PFOS
Liver - 1/3 pooled livers	≤-20°C	AniLytics	LDL, HDL, total cholesterol, triglycerides
Dams Assigned to Natural Delivery			
Milk	≤-20°C	AniLytics	Total cholesterol
Serum - aliquot 1	≤-20°C	Sponsor	PFOS
Serum - aliquot 2	≤-20°C	AniLytics	Total cholesterol, glucose, total & free T_3, T_4, TSH (Groups 1, 11, 12, 13), LDL, HDL, triglycerides[a]
Plasma	≤-20°C	Primedica Worcester	Mevalonic acid (Groups 1, 2, 3, 4, 11, 12 and 13)
Liver - right lateral lobe	≤-70°C	Sponsor	Possible biochemical
Liver - median lobe	≤-20°C	Sponsor	PFOS
Liver - section	Gluteraldehyde	Sponsor	Possible EM
Liver - remainder	≤-20°C	AniLytics	LDL, HDL, total cholesterol, triglycerides
Heart	Gluteraldehyde	Sponsor	Possible EM and light microscopy

a. The first priority was analysis for total cholesterol and glucose. The second priority was for total and free T_3, T_4 and TSH levels. The third priority was analysis for LDL, HDL and triglycerides.

Sample	Storage/Shipping Conditions	Recipient	Analysis
Pups - Replicate 1			
Serum - aliquot 1	≤-70°C	Sponsor	PFOS[a]
Serum - aliquot 2	≤-70°C	AniLytics	Total cholesterol, glucose, total & free T_3, T_4, TSH (Groups 1, 11, 12, 13), LDL, HDL, triglycerides[b]
Plasma	≤-70°C	Primedica Worcester	Mevalonic acid (Groups 1, 2, 3, 4, 11, 12 and 13)
Pups - Replicate 2			
Serum - aliquot 1	≤-70°C	Sponsor	PFOS[a]
Serum - aliquot 2	≤-70°C	AniLytics	Total cholesterol, glucose, total & free T_3, T_4, TSH (Groups 1, 11, 12, 13), LDL, HDL, triglycerides[b]
Plasma	≤-70°C	Primedica Worcester	Mevalonic acid (Groups 1, 2, 3, 4, 11, 12 and 13)
All Pups			
Liver - 1 liver per sex	Gluteraldehyde	Sponsor	Possible EM
Liver - 1/3 pooled livers	≤-70°C	Sponsor	Possible biochemical
Liver - 1/3 pooled livers	≤-20°C	Sponsor	PFOS
Liver - 1/3 pooled livers	≤-20°C	AniLytics	LDL, HDL, total cholesterol, triglycerides
Hearts - 2 males and 2 females per litter[c]	Gluteraldehyde	Sponsor	Possible EM and light microscopy
Pooled Thyroids[d]	10% neutral buffered formalin	Testing Facility	Possible histopathology

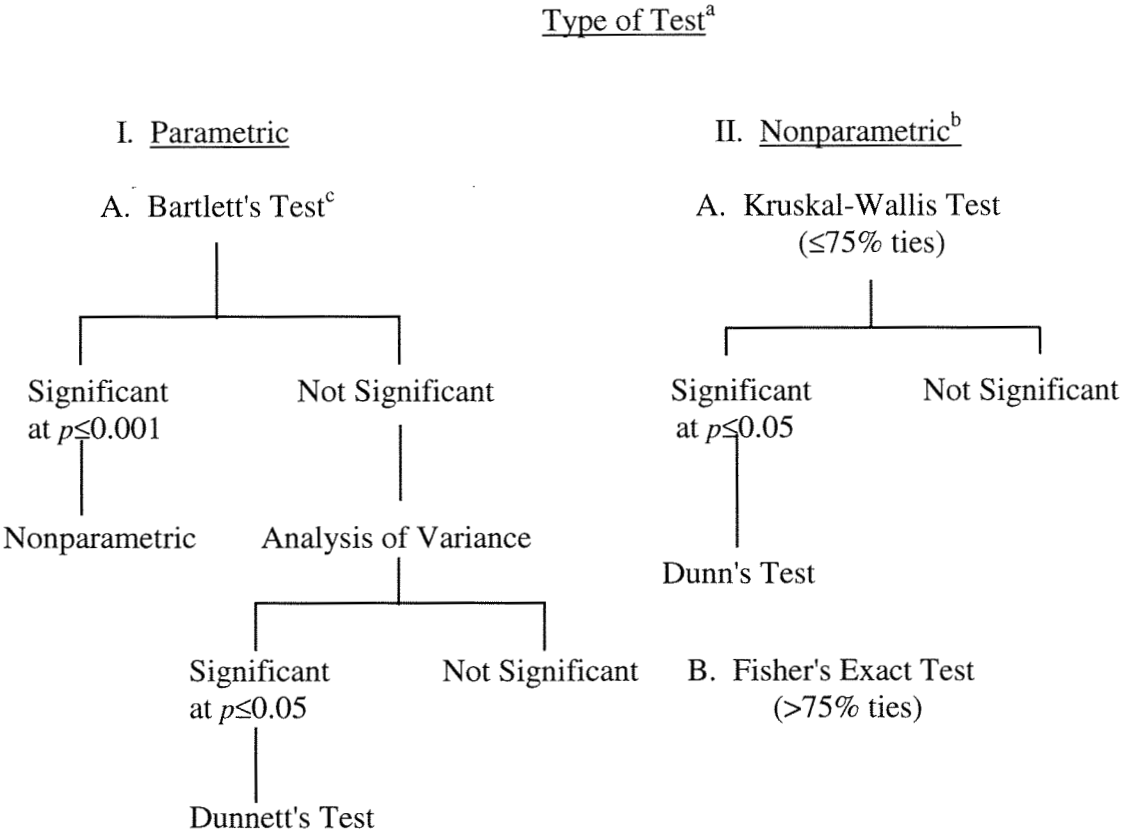
a. Analyses of serum were prioritized as follows: clinical chemistries first and then PFOS samples.
b. The first priority was analysis for total cholesterol and glucose. The second priority was for total and free T_3, T_4 and TSH levels. The third priority was analysis for LDL, HDL and triglycerides.
c. Histopathology was performed by Research Pathology Services, Inc. on the heart of one male and one female F1 generation pup from each of four litters from the Vehicle Control group (Group 1) and 2 mg/kg PFOS group (Group 13).
d. Histopathology was performed by Research Pathology Services, Inc. on the thyroid of one male and one female F1 generation pup from each of four litters from the Vehicle Control group (Group 1) and 2 mg/kg PFOS group (Group 13).

Results of these analyses are available in APPENDICES H and I.

H.7. Data Collection and Statistical Analyses

Data generated during the course of this study were recorded either by hand or using the *Primedica Argus Automated Data Collection and Management System* and the *Vivarium Temperature and Relative Humidity Monitoring System.* All data were tabulated, summarized and/or statistically analyzed using the *Primedica Argus Automated Data Collection and Management System*, the *Vivarium Temperature and Relative Humidity Monitoring System, Microsoft Excel* [part of Microsoft Office 97 (version SR-2)] and/or *The SAS System* (version 6.12).

The following schematic represents the statistical analyses of the data:



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a. Statistically significant probabilities are reported as either $p \leq 0.05$ or $p \leq 0.01$.
b. Proportion data are not included in this category.
c. Test for homogeneity of variance.

Group 1 (vehicle control) data were first statistically compared to Group 2 (mevalonic acid control) and Group 5 (cholesterol control) data. Group 1 (vehicle control) data were then compared to Groups 8, 9, 10, 11, 12 and 13 (0.4, 0.8, 1.0, 1.2, 1.6 and 2.0 mg/kg PFOS alone). Group 2 (mevalonic acid control) data were compared to Groups 3 and 4 (1.6 and 2.0 mg/kg PFOS + mevalonic acid) and Group 5 (cholesterol control) data were compared to Groups 6 and 7 (1.6 and 2.0 mg/kg PFOS + cholesterol, respectively).

Clinical observations and other proportion data were analyzed using the Variance Test for Homogeneity of the Binomial Distribution[10]. Continuous data (e.g., maternal body weights, body weight changes, feed consumption values, litter averages for percent male pups, pup body weights, pup mortality data) were analyzed using Bartlett's Test of Homogeneity of Variances[11] and the Analysis of Variance[12], when appropriate [i.e., Bartlett's Test was not significant ($p>0.001$)]. If the Analysis of Variance was significant ($p\leq0.05$), Dunnett's Test[13] was used to identify the statistical significance of the individual groups. If the Analysis of Variance was not appropriate [i.e., Bartlett's Test was significant ($p\leq0.001$)], the Kruskal-Wallis Test[14] was used, when less than or equal to 75% ties were present. In cases where the Kruskal-Wallis Test was statistically significant ($p\leq0.05$), Dunn's Method of Multiple Comparisons[15] was used to identify the statistical significance of the individual groups. If there were greater than 75% ties, Fisher's Exact Test[16] was used to analyze the data.

Count data obtained at Caesarean-sectioning of the dams were evaluated using the procedures described above for the Kruskal-Wallis Test[14].

III. RESULTS

A. Mortality (Summary - Table 1; Individual Data - Table 23)

No deaths were attributable to the test or control articles. One rat in each of Groups 2 (mevalonic acid control), 3 (1.6 mg/kg PFOS + mevalonic acid) and 5 (cholesterol control) died as the result of intubation accidents or natural causes. Observations in these rats are described below. All other rats survived to scheduled sacrifice.

Dam 10926 in Group 2 (mevalonic acid control) was moribund sacrificed on gestation day 12 (DG 12). Adverse clinical observations included excess salivation and soft or liquid feces on DG 11, and decreased motor activity, chromorhinorrhea, chromodacryorrhea and a red perioral substance on DG 12. This rat lost weight after DG 11. Feed consumption values were unremarkable. Necropsy revealed a perforation in the esophagus and tan discoloration of the left axillary area; all other tissues appeared normal. The litter consisted of 14 live embryos that appeared normal for their developmental ages. The death was attributed to an intubation accident.

Rat 10936 in Group 3 (1.6 mg/kg PFOS + mevalonic acid) was found dead on DS 2. There were no adverse clinical observations before death. Necropsy revealed a dark red clotted material in the thoracic cavity; all other tissues appeared normal. The death was attributed to an intubation accident.

Rat 11562 in Group 5 (cholesterol control) was moribund sacrificed on DS 16. Adverse clinical observations included decreased motor activity, pale appearance and coldness to touch on DS 16. Body weight was reduced on DS 15 compared to other rats in this dosage group. Feed consumption values were unremarkable. Necropsy revealed the small intestines were twisted and constricted at the jejunum and the jejunum contained a dark red fluid; all other tissues appeared normal. The death was attributed to natural causes.

B. Clinical Observations (Summary - Table 1; Individual Data - Table 23)

The numbers of rats with excess salivation, a perioral substance and chromorhinorrhea during gestation were significantly increased ($p \leq 0.01$) in Group 5 (mevalonic acid control) as compared to Group 1 (vehicle control). These increases were attributed to an aversion to the taste of mevalonic acid; the incidence of these observations was comparable among the three mevalonic acid groups (Groups 2, 3 and 4).

All other clinical observations during the precohabitation, gestation and lactation periods were considered unrelated to the test or control articles because: 1) the incidences were not dosage-dependent; and/or 2) the observation occurred in one to four rats in a group. These observations included localized alopecia, dental problems (missing, broken or misaligned incisors), chromodacryorrhea, scabs on paws and limbs, bent tail, missing or swollen digit, swollen snout, red perivaginal substance, lacrimation, scab on mouth, tip of tail missing, ptosis, soft or liquid feces, rales, red substance in cage, labored breathing, scant feces, swollen ear, dehydration, emaciation, decreased motor activity, pale in appearance, cold to touch, and ulceration or scab on chest or limb. The significant increase

($p \leq 0.01$) in the incidence of localized alopecia on the back during the gestation period in Group 11 (1.2 mg/kg PFOS alone) as compared to Group 1, was considered unrelated to the test article because it was not dosage dependent.

C. Necropsy Observations (Summary - Table 2; Individual Data – Table 24)

All necropsy observations were considered unrelated to the test or control articles because: 1) the incidences were not dosage-dependent; and 2) the observation occurred in only one rat in a group. These observations included misshapen kidneys, slight dilation of the pelvis of both kidneys, a calculus in the bladder and thickened bladder walls in one Group 2 (mevalonic acid control) rat and pup tissue in the stomach of one Group 7 (2 mg/kg PFOS + cholesterol) rat that was sacrificed because it had no surviving pups on day 2 of lactation (DL 2). Necropsy observations in rats that were found dead were described previously.

D. Terminal Body Weights and Organ Weights and Ratios of Organ Weights to Terminal Body Weights (Summary - Table 3; Individual Data - Table 25)

D.1. Caesarean-Sectioned Rats

Terminal body weights of rats Caesarean-sectioned on DG 21 were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) as compared to Group 5 values (cholesterol control). The weight of the liver was significantly increased ($p \leq 0.05$) in Group 7. As a result of the reduced terminal weights in Groups 6 and 7 and the increased liver weight in Group 7, the ratios of the liver weight to the terminal body weight were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in these two groups, as compared to the cholesterol control.

All other terminal body weights, liver weights and relative liver weights of rats Caesarean-sectioned on DG 21 were unaffected by PFOS or mevalonic acid. The ratio of liver weight to terminal body weight was significantly increased ($p \leq 0.05$) in Group 3 (1.6 mg/kg PFOS + mevalonic acid) as compared to the Group 2 value (mevalonic acid control), but was considered unrelated to the test or control articles because the increase was not dosage dependent.

D.2. Naturally Delivered Rats

Terminal body weights of naturally delivered rats were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Group 13 (2 mg/kg PFOS alone) as compared to Group 1 (vehicle control), and in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) as compared to Group 5 values (cholesterol control).

The ratios of the liver weights to the terminal body weights were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in Groups 9, 11 and 13 (0.8,1.2 and 2 mg/kg PFOS alone, respectively), compared to Group 1 (vehicle control), reflecting slight reductions in terminal body weights and/or slight increases in liver weights in these groups as compared to the Group 1 values. The liver weight was significantly increased ($p \leq 0.01$) in Group 3 (1.6 mg/kg PFOS

+ mevalonic acid) as compared to Group 2 (mevalonic acid control). The ratios of the liver weight to the terminal body weight were significantly increased ($p \leq 0.05$ or $p \leq 0.01$), in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) as compared to Group 2 (mevalonic acid control), and in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively), as compared to Group 5 (cholesterol control).

E. Body Weights and Body Weight Changes (Figures 1 through 3; Summaries - Tables 4 through 9; Individual Data - Tables 26 through 28)

E.1. Precohabitation

Body weight gains for the entire precohabitation period (DSs 1 to 42) were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Group 13 (2 mg/kg PFOS alone) as compared to Group 1 (vehicle control), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively), as compared to Group 5 (cholesterol control). During this period, gains were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 6 and 7 on DSs 22 to 29 and 29 to 36; and in Group 13 on DSs 29 to 36, as compared with the corresponding control group value. Additionally, body weight gains for Group 12 (1.6 mg/kg PFOS alone) were significantly reduced ($p \leq 0.05$) on DSs 29 to 36 and body weight loss occurred in this group on DSs 36 to 42. As a result of these changes, body weights were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 on DSs 29, 36 and 42, as compared with Group 5.

Body weight gains for the entire precohabitation period (DSs 1 to 42) in Group 5 (cholesterol control) were significantly increased ($p \leq 0.05$) as compared to Group 1 (vehicle control).

Premating body weights and body weight gains were unaffected by mevalonic acid and dosages of PFOS as high as 1.2 mg/kg. Significant increases or reductions ($p \leq 0.05$ or $p \leq 0.01$) in body weight gains in Group 8 (0.4 mg/kg PFOS alone) on DSs 1 to 8 and 1 to 42, Group 12 (1.6 mg/kg PFOS alone) on DSs 1 to 8, Group 3 (1.6 mg/kg PFOS + mevalonic acid) on DSs 22 to 29 and 29 to 36, and Group 4 (2 mg/kg PFOS + mevalonic acid) on DSs 1 to 8 and 29 to 36 were not considered an effect of the test or control articles because they were not dosage-dependent and did not persist.

E.2. Gestation

Body weight gains for the entire gestation period (DGs 0 to 21) were significantly reduced ($p \leq 0.05$) only in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol).

Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) and Groups 9, 11, 12 and 13 (0.8, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively) had significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) body weight gains, compared to their corresponding control groups, for the first week of the gestation period (DGs 0 to 7). There were no significant differences among any of these dosage groups during the second week of gestation (DGs 7 to 14). Group 13 had a

significant increase ($p \leq 0.05$) in body weight gain during the third week of gestation (DGs 14 to 21).

Body weights were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Group 12 (1.6 mg/kg PFOS alone) on DGs 2 through 16, and in Group 13 (2 mg/kg PFOS alone) on DGs 0 through 19, compared to Group 1 (vehicle control). When PFOS was administered along with mevalonic acid, the effect on body weight was less severe and appeared over a shorter period than PFOS administered alone. Body weights were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Group 3 (1.6 mg/kg PFOS + mevalonic acid) on DGs 4 through 13, and in Group 4 (2 mg/kg PFOS + mevalonic acid) on DGs 7 through 10, compared to Group 2 (mevalonic acid control). The effect on body weight was more severe and appeared over a longer period when PFOS was administered along with cholesterol. Body weights were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DGs 0 through 21, compared to Group 5 (cholesterol control).

Gestation body weights were significantly increased ($p \leq 0.05$) in the cholesterol control group (Group 5) on DGs 5, 8 through 17 and 21, as compared to the vehicle control group (Group 1). Despite this effect of cholesterol alone, body weights in the groups administered PFOS with cholesterol (Groups 6 and 7) had significant reductions in gestation body weights.

E.3. Lactation

Body weight gains during the first five days of the lactation period (DLs 1 to 5) were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 9, 10, 12 and 13 (0.8, 1, 1.6 and 2 mg/kg PFOS alone, respectively). The average body weight on DL 5 was significantly reduced ($p \leq 0.05$) in Group 13, compared to the vehicle control group value.

When PFOS was administered along with mevalonic acid, the effect on body weight was less severe than PFOS administered alone. Body weight gains were significantly reduced ($p \leq 0.05$) on DLs 1 to 5 in Group 3, but average body weights on DLs 1 and 5 were comparable among Groups 2, 3 and 4 (mevalonic acid control, 1.6 and 2 mg/kg PFOS + mevalonic acid, respectively).

When PFOS was administered along with cholesterol, the effect on body weight was more severe. Body weights on DLs 1 and 5 were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively), compared to Group 5 (cholesterol control), and a significant ($p \leq 0.05$) body weight loss occurred on DLs 1 to 5 in Group 7.

F. Absolute (g/day) and Relative (g/kg/day) Feed Consumption Values (Summaries - Tables 10 through 15; Individual Data - Tables 29 through 31)

F.1. Precohabitation

Absolute and relative feed consumption values were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Group 13 (2 mg/kg PFOS alone) for the entire premating period (DSs 1 to 42) and within this period on DSs 8 to 15 (relative only), 22 to 29, 29 to 36 and 36 to 42, compared to the vehicle control group. Absolute and relative feed consumption values were also significantly reduced ($p \leq 0.05$) in Group 12 (1.6 mg/kg PFOS alone) during the last week of the premating period (DSs 36 to 42).

Absolute and relative feed consumption values were unaffected by dosages of PFOS alone as high as 1.2 mg/kg. Absolute feed consumption was significantly increased ($p \leq 0.05$) in Group 8 (0.4 mg/kg PFOS alone) on DSs 29 to 36; and absolute and relative feed consumption values were significantly increased ($p \leq 0.05$) in Group 10 (1 mg/kg PFOS alone) on DSs 15 to 22. These increases in feed consumption values were not considered related to treatment because they were not dosage dependent and did not persist.

When PFOS was administered along with mevalonic acid, the effect on feed consumption values was comparable to that of PFOS alone. Absolute feed consumption values were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DSs 22 to 29 and 36 to 42, compared to Group 2 (mevalonic acid control). Relative feed consumption values were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 3 and 4 on DSs 8 to 15, 15 to 22, 22 to 29 and 36 to 42 (Group 4 only). This effect of PFOS and mevalonic acid was reflected in the significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) absolute and relative feed consumption values for the entire premating period (DSs 1 to 42) in both groups.

When PFOS was administered along with cholesterol, the effect on feed consumption values was more severe. Absolute and relative feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DSs 22 to 29, 29 to 36 and 36 to 42, as compared to Group 5 (cholesterol control). This effect of PFOS and cholesterol was reflected in the significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) absolute and relative feed consumption values for the entire premating period (DSs 1 to 42) in both groups.

Relative feed consumption values on DSs 8 to 15, 15 to 22, 22 to 29 and 1 to 42 were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in the mevalonic acid control group (Group 2), as compared to the vehicle control group (Group 1). Absolute and relative feed consumption values were significantly increased ($p \leq 0.01$) on DSs 29 to 36 and absolute feed consumption was significantly increased ($p \leq 0.05$) on DSs 36 to 42 in the cholesterol control group (Group 5) as compared to the vehicle control group (Group 1).

F.2. Gestation

Absolute and relative feed consumption values were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) during the first week of gestation (DGs 0 to 7) in Groups 9 through 12 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively). Absolute feed consumption continued to be significantly decreased ($p \leq 0.05$) in Group 13 on DGs 7 to 14, and relative feed consumption was significantly increased ($p \leq 0.05$) in Group 12 on DGs 14 to 21, compared to the vehicle control group values. Absolute feed consumption values for the entire gestation period (DGs 0 to 21) were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively), compared to the vehicle control group.

When PFOS was administered along with mevalonic acid, effects on feed consumption values were comparable to the effects of administration of PFOS alone. Absolute feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DGs 0 to 7, 7 to 14 and 0 to 21, compared to Group 2 (mevalonic acid control). Relative feed consumption values were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 3 and 4 on DGs 0 to 7 and 14 to 21.

When PFOS was administered along with cholesterol, effects on feed consumption values were also comparable to the effects of administration of PFOS alone. Absolute feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DGs 0 to 7, 7 to 14, and 0 to 21, compared to Group 5 (cholesterol control). Relative feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 on DGs 0 to 7 and significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in Groups 6 and 7 on DGs 14 to 21.

F.3. Lactation

Absolute feed consumption values during the first five days of the lactation period (DLs 1 to 5) were significantly reduced ($p \leq 0.01$) in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively). Relative feed consumption values for the same period were reduced in Groups 9 through 13, reaching statistical significance ($p \leq 0.05$ or $p \leq 0.01$) in Groups 9, 10, 11 and 12 (0.8, 1, 1.2 and 1.6 mg/kg PFOS alone, respectively), compared to Group 1 (vehicle control) values.

When PFOS was administered along with mevalonic acid, effects on feed consumption values were also comparable to the effects of administration of PFOS alone. Absolute and relative feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) on DLs 1 to 5, compared to the Group 2 (mevalonic acid control) value.

When PFOS was administered along with cholesterol, effects on feed consumption values were comparable to the effects of administration of PFOS alone. Absolute and relative feed consumption values were significantly reduced ($p \leq 0.01$) in Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) on DLs 1 to 5, as compared to Group 5 (cholesterol control).

G. Mating and Fertility (Summary - Table 16; Individual Data - Table 32)

The number of days in cohabitation, the fertility and pregnancy indices (number of pregnancies per number of rats that mated and rats in cohabitation, respectively), and the number of rats with confirmed mating dates during the first and second week of cohabitation were comparable in the thirteen dosage groups.

The number of days in cohabitation was significantly reduced ($p \leq 0.01$) for Group 6 (1.6 mg/kg PFOS + cholesterol), as compared to Group 5 (cholesterol control). This finding was not considered treatment-related because it was not dosage-dependent.

H. Caesarean-Sectioning and Litter Observations (Summaries - Tables 17 and 18; Individual Data - Tables 33 through 35)

Caesarean-sectioning observations on DG 21 were based on eight pregnant dams in each of Groups 1 through 7, 12 and 13.

No Caesarean-sectioning or litter parameters were affected by dosages up to 2 mg/kg PFOS alone or administered with either cholesterol or mevalonic acid. There were no biologically important differences in the litter averages for corpora lutea, implantations, live and dead fetuses, early and late resorptions, percent dead or resorbed conceptuses, percent live male fetuses or pooled fetal body weights. No dam had a litter in which there were no live fetuses and all placentae appeared normal.

The average number of resorptions (total and early), the number of dams with any resorptions and the percentage of dead or resorbed conceptuses per litter were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) for Group 13 (2 mg/kg PFOS alone), compared to Group 1 (vehicle control) values. These findings were not considered treatment-related because an increase, rather than a decrease, in the incidence of resorption is the expected effect of a toxicant. The percentage of dead or resorbed conceptuses per litter was significantly increased ($p \leq 0.05$) in Group 7 (2 mg/kg PFOS + cholesterol); although this value is above the range observed historically at this Testing Facility[a], the value is comparable to the concurrent vehicle control group (Group 1) and reflects the low value in the cholesterol control group.

I. Natural Delivery and Litter Observations (Summaries - Tables 19 and 20; Individual Data - Tables 36 through 38)

Totals of 17 to 20 rats were pregnant and delivered litters in each of the 13 dosage groups.

The duration of gestation was significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 9 through 13 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively), as compared to the corresponding control

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a. See APPENDIX K (HISTORICAL CONTROL DATA).

values. The number of dams with all pups dying on DLs 1 to 5 was increased in Groups 13, 3, 4, 6 and 7; the increase was significant at $p \leq 0.01$ in Groups 13, 4 and 7.

The pup viability index (number of live pups on DL 5 per number of liveborn pups on DL 1) was significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in Groups 12 and 13 (1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively). The numbers of pups that died or were presumed cannibalized on DL 1 and DLs 2 to 5 was significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in Groups 12, 13, 4, 6 and 7. The numbers of surviving pups per litter were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) on DLs 2, 3, 4 and 5 in Groups 12, 13, 3, 4, 6 and 7.

A dosage-dependent pattern of reduced pup body weight was evident on DLs 1, 2, 3, 4, 5 and/or 1 to 5 in each group administered the test article. Groups 11, 12 and 13 (1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively) and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) had significantly reduced ($p \leq 0.01$) pup body weights on most weighing days (DLs 1 through 5). When average pup weight was normalized for litter size, Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol, respectively) and Groups 8, 9, 10, 11, 12 and 13 (0.4, 0.8, 1, 1.2, 1.6 and 2 mg/kg/day PFOS alone, respectively) were also significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) from Group 2 (mevalonic acid control), Group 5 (cholesterol control) and Group 1 (Vehicle Control), respectively, over the same days of lactation.

All other natural delivery and litter parameters were unaffected by dosages of PFOS as high as 2 mg/kg administered alone or in combination with mevalonic acid or cholesterol. The average number of implantation sites, the gestation index and the numbers of liveborn and stillborn pups were comparable across all 13 dosage groups. The number of dams with stillborn pups was significantly increased ($p \leq 0.01$) in Group 8 (0.8 mg/kg PFOS alone) and significantly reduced ($p \leq 0.05$) in Groups 10, 11, 12 and 13 (1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively). These significant differences were not considered treatment-related because they were not dosage-dependent. The significant reduction ($p \leq 0.01$) in the percentage of male pups on DL 3 in Group 4 was related to the increased pup mortality in this dosage group and not a direct effect of PFOS with mevalonic acid.

J. Clinical Observations from Birth to Day 5 Postpartum and Necropsy Observations (Summaries - Tables 21 and 22; Individual Data - Tables 39 and 40)

Adverse clinical and necropsy observations associated with reduced pup viability and potential reduction in maternal care occurred in Groups 11, 12 and 13 (1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol). Increased numbers of litters with pups that were cold to touch occurred in Groups 11, 12, 13, 4, 6 and 7. The number of litters with pups not nursing was increased in Groups 12, 13, 3, 4, 6 and 7; the increase was significant at $p \leq 0.01$ in Group 7.

Necropsy observations in pups that were stillborn or found dead included increases in the numbers of pups with no milk in the stomach in Groups 9, 10, 11, 12 and 13 (0.8, 1, 1.2, 1.6 and 2 mg/kg PFOS alone, respectively), Groups 3 and 4 (1.6 and 2 mg/kg PFOS + mevalonic acid, respectively), and Groups 6 and 7 (1.6 and 2 mg/kg PFOS + cholesterol). The incidence of this observation was significantly increased ($p \leq 0.01$) in Group 6, as compared with Group 5 (cholesterol control).

All other clinical and necropsy observations in the F1 generation pups were considered unrelated to the test article because: 1) the incidences were not dosage-dependent; or 2) the observation occurred in only one litter. Clinical observations included decreased motor activity, gasping, labored breathing, not nesting, exophthalmos, swollen limb, tail problems (missing, portion missing and tip black) and no milk in stomach. The necropsy observation of protruding tongue was significantly reduced ($p \leq 0.01$) in Groups 8, 9, 10, 11, 12 and 13, reflecting the single occurrence of this observation in the vehicle control group (Group 1). A single pup in the mevalonic acid control group (Group 2) had no oral opening, no eyes and displaced ears; as a result, the incidence of this observation was significantly reduced ($p \leq 0.01$) in Groups 3 and 4. One pup in Group 8 (0.4 mg/kg PFOS alone) had a tan area on the median lobe of the liver at necropsy on DL 5. All other pups appeared normal at necropsy on DL 5.

K. Blood and Tissue Analyses (See APPENDICES H, I, J and K)

No significant difference between control groups (Groups 1, 2 and 5) for any of the parameters.

K.1. Gestation Day 21

K.1.a. Dams

Clinical chemistry parameters were generally unaffected in the DG 21 dams that were treated with 1.6 or 2 mg/kg PFOS alone.

Clinical Chemistry Values (mg/dL) of PFOS alone

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 1 (Vehicle)	84.3 ± 13.3 (8)	98.9 ± 11.7 (8)	7.1 ± 5.0 (8)	43.3 ± 19.0 (8)	313.5 ± 233.6 (8)	47.7 ± 63.8 (8)
Group 12 1.6 mg/kg	78.1 ± 10.5 (8)	104.9 ± 7.8 (8)	10.8 ± 4.4 (8)	43.5 ± 11.2 (8)	194.3± 65.2 (8)	20.6 ± 5.7 (8)
Group 13 2 mg/kg	72.3 ± 6.3 (8)	96.3 ± 18.0 (8)	11.3 ± 3.6 (8)	41.0 ± 11.7 (8)	201.0 ± 87.5 (8)	86.2 ± 177.0 (8)

The total and free thyroid hormones levels for T_3 and T_4 in dams administered 1.6 or 2 mg/kg PFOS alone were significantly reduced ($p \leq 0.01$), compared to the vehicle control group.

Thyroid Hormone Values of PFOS alone

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 1 (Vehicle)	0.584 ± 0.482 (8)	73.979 ± 21.234 (8)	0.579 ± 0.209 (8)	1.815 ± 0.794 (8)	0.299 ± 0.092 (8)
Group 12 1.6 mg/kg	0.000 ± 0.000** (8)	47.503 ±10.268** (8)	0.140 ± 0.117** (7)	2.346 ± 1.263 (7)	0.066 ± 0.038** (8)
Group 13 2 mg/kg	0.000 ± 0.000** (8)	42.440 ± 8.271** (8)	0.157 ± 0.161** (7)	1.514 ± 0.973 (7)	0.055 ± 0.023** (8)

Liver cholesterol levels were significantly decreased ($p \leq 0.05$ or $p \leq 0.01$) in DG 21 dams administered 1.6 or 2 mg/kg PFOS, respectively, compared to the vehicle control group. Other liver clinical chemistry parameters were generally unaffected in the dams that were treated with 1.6 or 2 mg/kg PFOS alone.

Liver Clinical Chemistry Values (mg/gm) of PFOS alone

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 1 (Vehicle)	3.0 ± 0.38 (8)	0.5 ± 0.27 (8)	0.5 ± 0.12 (8)	8.0 ± 1.66 (8)
Group 12 1.6 mg/kg	2.6 ± 0.22* (8)	0.7 ± 0.24 (8)	0.6 ± 0.10 (8)	7.7 ± 0.71 (8)
Group 13 2 mg/kg	2.4 ± 0.26** (8)	0.6 ± 0.12 (8)	0.5 ± 0.06 (8)	6.6 ± 0.82 (8)

The clinical chemistry parameter of low density lipoprotein (LDL) was significantly increased ($p \leq 0.05$ or $p \leq 0.01$), albeit not dosage-dependent, in the DG 21 dams that were coadministered mevalonic acid and PFOS.

Clinical Chemistry Values (mg/dL) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 2 (Mevalonic)	92.5 ± 14.6 (8)	108.5 ± 11.9 (8)	2.9 ± 3.6 (8)	32.4 ± 20.0 (8)	453.9 ± 307.8 (8)	1663.8 ± 415.6 (8)
Group 3 1.6 mg/kg	91.0 ± 21.4 (8)	108.1 ± 15.4 (8)	11.8 ± 9.0** (8)	35.1 ± 12.1 (8)	305.9 ± 85.1 (8)	1369.8 ± 240.1 (8)
Group 4 2 mg/kg	88.9 ± 23.1 (8)	106.0 ± 14.0 (8)	9.6 ± 5.0* (8)	47.8 ± 16.2 (8)	243.6 ± 270.8 (8)	1482.5 ± 521.9 (8)

The total and free thyroid hormones levels for T_3 and T_4 in DG 21 dams coadministered mevalonic acid and 1.6 or 2 mg/kg PFOS were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$), compared to the vehicle control group.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Thyroid Hormone Values of PFOS plus Mevalonic Acid

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 2 (Mevalonic)	0.414 ± 0.510 (8)	73.571 ± 14.314 (8)	0.514 ± 0.203 (7)	2.627 ± 1.177 (6)	0.296 ± 0.098 (8)
Group 3 1.6 mg/kg	0.003 ± 0.007* (8)	54.043 ± 6.670** (8)	0.313 ± 0.146* (8)	1.889 ± 0.391 (7)	0.069 ± 0.044** (8)
Group 4 2 mg/kg	0.000 ± 0.000** (8)	46.408 ± 8.895** (8)	0.184 ± 0.170** (8)	2.375 ± 1.086 (8)	0.073 ± 0.035** (8)

Liver cholesterol and triglyceride levels were significantly reduced ($p \leq 0.01$) in dams coadministered mevalonic acid and 1.6 or 2 mg/kg PFOS. Liver LDL and HDL levels were significantly increased in dams coadministered mevalonic acid and 1.6 or 2 mg/kg PFOS.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 2 (Mevalonic)	3.0 ± 0.34 (8)	0.5 ± 0.24 (8)	0.5 ± 0.08 (8)	9.8 ± 1.45 (8)
Group 3 1.6 mg/kg	2.5 ± 0.12** (8)	0.8 ± 0.08** (8)	0.6 ± 0.03** (8)	7.5 ± 0.55** (8)
Group 4 2 mg/kg	2.4 ± 0.30** (8)	0.8 ± 0.12** (8)	0.6 ± 0.05 (8)	7.0 ± 1.35** (8)

Clinical chemistry parameters were generally unaffected in the DG 21 dams that were treated with cholesterol and PFOS.

Clinical Chemistry Values (mg/dL) of PFOS plus Cholesterol

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	89.6 ± 19.6 (8)	100.4 ± 20.2 (8)	8.5 ± 5.2 (8)	28.0 ± 11.5 (8)	348.8 ± 218.6 (8)
Group 6 1.6 mg/kg	79.3 ± 9.4 (8)	98.5 ± 18.5 (8)	9.9 ± 3.9 (8)	41.0 ± 13.6 (8)	191.9 ± 79.3 (8)
Group 7 2 mg/kg	77.9 ± 11.5 (8)	106.4 ± 17.9 (8)	12.0 ± 8.6 (8)	46.6 ± 18.4 (8)	200.9 ± 190.1 (8)

The total and free thyroid hormones levels for T_3 and T_4 in DG 21 dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS were significantly reduced ($p \leq 0.01$), compared to the vehicle control group.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Thyroid Hormone Values of PFOS plus Cholesterol

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 5 (Cholesterol)	0.540 ± 0.529 (8)	76.900 ± 21.899 (8)	0.694 ± 0.256 (7)	2.544 ± 0.759 (5)	0.281 ± 0.125 (7)
Group 6 1.6 mg/kg	0.013 ± 0.035** (8)	52.031 ± 9.331** (8)	0.235 ± 0.123** (8)	1.452 ± 0.691 (6)	0.134 ± 0.086** (8)
Group 7 2 mg/kg	0.000 ± 0.000** (8)	49.020 ± 8.527** (8)	0.246 ± 0.180** (8)	2.013 ± 0.854 (6)	0.110 ± 0.082** (8)

Liver triglyceride levels were significantly reduced ($p \leq 0.01$) in DG 21 dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS. Liver LDL and HDL levels were increased or significantly increased in dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS. Liver cholesterol parameters were generally unaffected in the dams that were treated with 1.6 or 2 mg/kg PFOS plus Cholesterol.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Cholesterol

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	3.0 ± 0.30 (8)	0.3 ± 0.28 (8)	0.5 ± 0.13 (8)	9.6 ± 1.00 (8)
Group 6 1.6 mg/kg	2.7 ± 0.29 (8)	0.8 ± 0.23** (8)	0.6 ± 0.10 (8)	7.7 ± 0.72** (8)
Group 7 2 mg/kg	2.7 ± 0.21 (8)	0.8 ± 0.18** (8)	0.6 ± 0.09 (8)	7.5 ± 0.70** (8)

PFOS concentrations were significantly increased ($p \leq 0.05$) in the sera of DG 21 dams administered 1.6 or 2 mg/kg PFOS and in dams coadministered Cholesterol or Mevalonic acid and 1.6 or 2 mg/kg PFOS. PFOS concentrations were significantly increased ($p \leq 0.05$) in the livers of dams administered 1.6 or 2 mg/kg PFOS.

** Significantly different from control group; $p \leq 0.01$.

PFOS Levels in DG 21 Dam Sera and Liver

Parameter	Sera[a] (ug/mL)	Liver[a] (ppm)
Group 1 (Vehicle)	0.0 ± 0.00 (6)	N.A.
Group 2 (Mevalonic)	0.0 ± 0.02 (6)	N.A.
Group 3 1.6 mg/kg	55.8 ± 8.88* (6)	N.A.
Group 4 2 mg/kg	82.4 ± 22.55* (6)	N.A.
Group 5 (Cholesterol)	0.0 ± 0.00* (6)	N.A.
Group 6 1.6 mg/kg	79.9 ± 15.48* (6)	N.A.
Group 7 2 mg/kg	370.8 ± 214.36* (6)	N.A.
Group 8 0.4 mg/kg	N.A.	N.A.
Group 9 0.8 mg/kg	N.A.	N.A.
Group 10 1 mg/kg	N.A.	N.A.
Group 11 1.2 mg/kg	N.A.	N.A.
Group 12 1.6 mg/kg	142.2 ± 24.24* (6)	N.A.
Group 13 2 mg/kg	124.7 ± 19.71* (6)	N.A.

N.A. = Not Analyzed
a = Sponsor selected the subsets to be analyzed.

K.1.b. DG 21 Fetuses

The clinical chemistry parameters of cholesterol and low density lipoprotein (LDL) were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in the DG 21 fetuses from dams that were treated with 1.6 or 2 mg/kg PFOS alone.

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* Significantly different from control group; $p \leq 0.05$.

Clinical Chemistry Values (mg/dL) of PFOS alone

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 1 (Vehicle)	50.8 ± 8.0 (8)	63.8 ± 5.9 (8)	27.3 ± 8.0 (8)	13.0 ± 1.9 (8)	34.4 ± 5.3 (8)	54.5 ± 40.5 (7)
Group 12 1.6 mg/kg	61.3 ± 8.5* (8)	76.1 ± 11.8 (8)	44.9 ± 7.5** (8)	14.5 ± 1.5 (8)	27.9 ± 8.2 (8)	67.0 ± 53.0 (8)
Group 13 2 mg/kg	61.5 ± 8.0* (8)	73.9 ± 15.5 (8)	45.4 ± 9.8** (8)	14.0 ± 1.2 (8)	27.0 ± 9.8 (8)	104.8 ± 73.9 (8)

The level of free T_4 was significantly reduced ($p \leq 0.01$) in the DG 21 fetuses from dams that were treated with 1.6 or 2 mg/kg PFOS alone.

Thyroid Hormone Values of PFOS alone

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 1 (Vehicle)	0.000 ± 0.000 (7)	0.423 ± 0.845 (4)	0.000 ± 0.000 (0)	0.000 ± 0.000 (0)	0.050 ± 0.000 (1)
Group 12 1.6 mg/kg	0.000 ± 0.000 (8)	0.000 ± 0.000 (8)	0.000 ± 0.000 (1)	0.000 ± 0.000 (0)	0.000 ± 0.000** (3)
Group 13 2 mg/kg	0.000 ± 0.000 (8)	0.925 ± 1.147 (6)	0.000 ± 0.000 (0)	1.160 ± 0.000 (1)	0.000 ± 0.000** (5)

Liver HDL clinical chemistry parameters were significantly increased ($p \leq 0.01$) in DG 21 fetuses from dams administered 1.6 or 2 mg/kg PFOS alone. Other liver clinical chemistry levels were generally unaffected in the fetuses of dams that were treated with 1.6 or 2 mg/kg PFOS alone.

Liver Clinical Chemistry Values (mg/gm) of PFOS alone

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 1 (Vehicle)	3.4 ± 0.38 (8)	0.000± 0.0000 (8)	0.01 ± 0.009 (8)	4.9 ± 0.63 (8)
Group 12 1.6 mg/kg	3.4 ± 0.38 (8)	0.000± 0.0000 (8)	0.02 ± 0.006* (8)	5.9 ± 0.93 (8)
Group 13 2 mg/kg	3.2 ± 0.34 (8)	0.000 ± 0.0000 (8)	0.02 ± 0.015* (8)	5.6 ± 0.91 (8)

The clinical chemistry parameters of cholesterol and low density lipoprotein (LDL) were significantly increased ($p \leq 0.01$) and triglycerides were significantly decreased ($p \leq 0.01$) in the DG 21 fetuses from dams that were treated with mevalonic acid and 1.6 and/or 2 mg/kg PFOS.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Clinical Chemistry Values (mg/dL) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 2 (Mevalonic)	53.1 ± 5.5 (8)	63.4 ± 15.0 (8)	29.4 ± 5.3 (8)	13.9 ± 1.2 (8)	36.4 ± 8.7 (8)	18971.4 ± 5681.5 (7)
Group 3 1.6 mg/kg	68.3 ± 13.4** (8)	69.6 ± 6.2 (8)	48.3 ± 8.1** (8)	16.1 ± 3.0 (8)	31.8 ± 7.1 (8)	16562.5 ± 7160.4 (8)
Group 4 2 mg/kg	63.1 ± 11.7 (8)	74.5 ± 12.3 (8)	46.9 ± 9.4** (8)	15.5 ± 1.9 (8)	25.1 ± 8.1** (8)	20175.0 ± 2830.8 (8)

The level of free T_4 was significantly reduced ($p \leq 0.01$) in the DG 21 fetuses from dams that were treated with mevalonic acid and 1.6 or 2 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Mevalonic Acid

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 2 (Mevalonic)	0.000 ± 0.000 (7)	2.810 ± 4.867 (3)	(0)	(0)	0.070 ± 0.000 (1)
Group 3 1.6 mg/kg	0.000 ± 0.000 (8)	1.096 ± 1.379 (7)	0.000 ± 0.000 (1)	(0)	0.000 ± 0.000** (2)
Group 4 2 mg/kg	0.000 ± 0.000 (8)	2.928 ± 2.747 (6)	0.000 ± 0.000 (2)	(0)	0.000 ± 0.000** (4)

Liver cholesterol, HDL and triglyceride levels were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in the DG 21 fetuses of dams that were treated with 1.6 or 2 mg/kg PFOS plus Mevalonic Acid.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 2 (Mevalonic)	3.6 ± 0.49 (8)	0.000± 0.0000 (8)	0.01 ± 0.009 (8)	5.4 ± 1.25 (8)
Group 3 1.6 mg/kg	4.5 ± 0.48** (8)	0.000± 0.0000 (8)	0.04 ± 0.019** (8)	8.0 ± 1.16** (8)
Group 4 2 mg/kg	5.1 ± 0.82** (8)	0.000 ± 0.0000 (8)	0.03 ± 0.018* (8)	9.6 ± 2.39** (8)

The clinical chemistry parameters of cholesterol, low density lipoprotein (LDL) and high density lipoprotein (HDL) were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in the DG 21 fetuses from dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS.

** Significantly different from control group; $p \leq 0.01$.

Clinical Chemistry Values (mg/dL) of PFOS plus Cholesterol

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	45.1 ± 4.3 (8)	70.4 ± 7.9 (8)	24.1 ± 5.1 (8)	12.4 ± 0.9 (8)	31.8 ± 7.6 (8)
Group 6 1.6 mg/kg	59.1 ± 11.8** (8)	77.4 ± 19.8 (8)	43.9 ± 5.4** (8)	14.4 ± 1.6* (8)	25.4 ± 13.6 (8)
Group 7 2 mg/kg	64.0 ± 10.3** (8)	70.3 ± 10.3 (8)	45.6 ± 8.0** (8)	14.4 ± 1.7* (8)	30.0 ± 5.7 (8)

The level of free T_4 was significantly reduced ($p \leq 0.01$) in the DG 21 fetuses from dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Cholesterol

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 5 (Cholesterol)	0.000 ± 0.000 (8)	1.143 ± 1.306 (6)	0.000 ± 0.000 (2)	0.000 ± 0.000 (0)	0.037 ± 0.015 (3)
Group 6 1.6 mg/kg	0.000 ± 0.000 (7)	0.760 ± 1.389 (5)	0.000 ± 0.000 (2)	0.040 ± 0.000 (1)	0.000 ± 0.000** (4)
Group 7 2 mg/kg	0.000 ± 0.000 (6)	0.653 ± 1.132 (3)	0.000 ± 0.000 (1)	0.000 ± 0.000 (0)	0.000 ± 0.000** (2)

Liver cholesterol and triglyceride levels were increased or significantly increased ($p \leq 0.01$) in the DG 21 fetuses from dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS.

Liver LDL and HDL levels were generally unaffected in the fetuses of dams that were treated with 1.6 or 2 mg/kg PFOS plus Cholesterol.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Cholesterol

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	3.6 ± 0.29 (8)	0.000± 0.0000 (8)	0.02 ± 0.019 (8)	5.5 ± 0.73 (8)
Group 6 1.6 mg/kg	4.4 ± 0.40** (8)	0.000± 0.0000 (8)	0.03 ± 0.010 (8)	7.8 ± 1.23** (8)
Group 7 2 mg/kg	4.0 ± 0.68 (8)	0.000 ± 0.0000 (8)	0.04 ± 0.023 (8)	7.1 ± 1.15** (8)

PFOS concentrations were significantly increased ($p \leq 0.01$) in the pooled sera of DG 21 fetuses administered 1.6 or 2 mg/kg PFOS and in fetuses coadministered Cholesterol or Mevalonic acid and 1.6 or 2 mg/kg PFOS. PFOS concentrations were significantly increased ($p \leq 0.05$) in the livers of fetuses administered 1.6 or 2 mg/kg PFOS.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

PFOS Levels in Pooled DG 21 Fetal Sera and Livers

Parameter	Sera[a] (ug/mL)	Liver[a] (ppm)
Group 1 (Vehicle)	0.0 ± 0.00 (6)	N.A.
Group 2 (Mevalonic)	0.1 ± 0.08 (6)	N.A.
Group 3 1.6 mg/kg	207.2 ± 25.76** (6)	N.A.
Group 4 2 mg/kg	251.0 ± 55.86** (6)	N.A.
Group 5 (Cholesterol)	0.1 ± 0.03 (6)	N.A.
Group 6 1.6 mg/kg	154.5 ± 32.43** (6)	N.A.
Group 7 2 mg/kg	165.7 ± 50.13** (6)	N.A.
Group 8 0.4 mg/kg	N.A.	N.A.
Group 9 0.8 mg/kg	N.A.	N.A.
Group 10 1 mg/kg	N.A.	N.A.
Group 11 1.2 mg/kg	N.A.	N.A.
Group 12 1.6 mg/kg	141.8 ± 33.10** (6)	N.A.
Group 13 2 mg/kg	169.8 ± 37.91** (6)	N.A.

N.A. = Not Analyzed
a = Sponsor selected subsets to be analyzed.

K.2. Lactation Day 5

K.2.a. Dams

The clinical chemistry parameter of serum cholesterol was significantly decreased ($p \leq 0.01$) in the lactating dams that were treated with 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS alone, compared to the vehicle control group. The clinical chemistry parameter of glucose was significantly increased ($p \leq 0.01$) in lactating dams treated with 2 mg/kg PFOS alone and the clinical chemistry parameter of triglycerides was significantly decreased ($p \leq 0.05$ or $p \leq 0.01$) in lactating dams treated with 1.6 or 2 mg/kg PFOS alone, compared to the vehicle control group.

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* Significantly different from control group; $p \leq 0.05$.
** Significantly different from control group; $p \leq 0.01$.

Clinical Chemistry Values (mg/dL) of PFOS alone

Parameter	Cholesterol [Blood]	Cholesterol [Milk]	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 1 (Vehicle)	77.6 ± 15.2 (19)	96.7 ± 53.9 (19)	166.1 ± 28.4 (19)	4.0 ± 3.0 (19)	58.2 ± 20.1 (19)	152.4 ± 97.6 (19)	31.0 ± 19.8 (18)
Group 8 0.4 mg/kg	65.0 ± 13.2** (20)	71.1 ± 62.8 (20)	169.6 ± 26.7 (20)	3.2 ± 2.3 (20)	51.2 ± 17.2 (20)	130.1 ± 78.3 (20)	Not Evaluated
Group 9 0.8 mg/kg	59.1 ± 13.3** (17)	68.2 ± 52.6 (17)	163.0 ± 17.3 (17)	3.2 ± 2.1 (17)	47.5 ± 14.6 (17)	127.7 ± 66.5 (17)	Not Evaluated
Group 10 1 mg/kg	58.5 ± 11.8** (19)	59.8 ± 51.2 (18)	171.9 ± 19.9 (19)	3.7 ± 1.9 (19)	49.0 ± 11.0 (19)	101.2 ± 52.7 (19)	Not Evaluated
Group 11 1.2 mg/kg	59.9 ± 11.7** (18)	46.8 ± 41.5 (18)	172.5 ± 17.7 (18)	2.8 ± 2.2 (18)	48.9 ± 16.2 (18)	141.1 ± 74.3 (18)	83.1 ± 178.8** (18)
Group 12 1.6 mg/kg	56.6 ± 14.0** (17)	64.6 ± 30.4 (13)	178.7 ± 19.0 (17)	3.6 ± 2.6 (17)	49.5 ± 10.3 (17)	92.2 ± 58.9* (17)	32.2 ± 20.9 (16)
Group 13 2 mg/kg	59.6 ± 10.2** (19)	74.0 ± 41.7 (5)	189.2 ± 32.2** (19)	4.6 ± 1.8 (19)	53.1 ± 9.4 (19)	85.5 ± 35.0** (19)	29.6 ± 14.4 (15)

The total and free T_4 levels in lactating dams administered 0.4 (free T_4 only), 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) and total and free T_3 levels in lactating dams administered 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$), compared to the vehicle control group.

Thyroid Hormone Values of PFOS alone

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 1 (Vehicle)	1.454 ± 0.660 (19)	74.674 ± 18.977 (19)	0.638 ± 0.297 (19)	1.633 ± 0.992 (18)	0.788 ± 0.219 (19)
Group 8 0.4 mg/kg	0.808 ± 0.414 (10)	72.912 ± 13.470 (10)	0.698 ± 0.246 (10)	1.142 ± 0.226 (9)	0.462 ± 0.114** (10)
Group 9 0.8 mg/kg	0.596 ± 0.443* (8)	63.780 ± 6.684 (8)	0.588 ± 0.152 (8)	1.437 ± 0.918 (7)	0.279 ± 0.060** (8)
Group 10 1 mg/kg	0.728 ± 0.243** (9)	62.348 ± 13.180 (9)	0.552 ± 0.230 (9)	1.110 ± 0.523 (8)	0.277 ± 0.095** (9)
Group 11 1.2 mg/kg	0.283 ± 0.320** (18)	52.869 ± 14.974** (18)	0.411 ± 0.265* (18)	1.447 ± 1.029 (17)	0.260 ± 0.122** (18)
Group 12 1.6 mg/kg	0.272 ± 0.172** (17)	47.032 ± 19.971** (17)	0.256 ± 0.230** (17)	1.665 ± 0.768 (17)	0.253 ± 0.067** (17)
Group 13 2 mg/kg	0.235 ± 0.147** (19)	53.275 ± 17.270** (19)	0.353 ± 0.236** (18)	1.533 ± 0.681 (18)	0.259 ± 0.078** (18)

Liver triglyceride levels were significantly increased ($p \leq 0.01$) in lactating dams that were treated with 1.6 or 2 mg/kg PFOS. All other liver clinical chemistry parameters were generally unaffected in the DL 5 dams that were treated with 1.6 or 2 mg/kg PFOS alone.

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* Significantly different from control group; $p \leq 0.05$.
** Significantly different from control group; $p \leq 0.01$.

Liver Clinical Chemistry Values (mg/gm) of PFOS alone

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 1 (Vehicle)	2.4 ± 1.29 (19)	0.00 ± 0.014 (19)	0.13 ± 0.094 (19)	7.7 ± 2.90 (19)
Group 8 0.4 mg/kg	2.6 ± 0.67 (20)	0.01 ± 0.034 (20)	0.22 ± 0.115 (20)	8.4 ± 1.70 (20)
Group 9 0.8 mg/kg	2.4 ± 0.59 (17)	0.05 ± 0.093 (17)	0.23 ± 0.130 (17)	8.6 ± 2.47 (17)
Group 10 1 mg/kg	2.5 ± 0.54 (19)	0.00 ± 0.004 (19)	0.20 ± 0.093 (19)	11.8 ± 12.02 (19)
Group 11 1.2 mg/kg	2.5 ± 0.83 (18)	0.05 ± 0.106 (18)	0.26 ± 0.135 (18)	9.7 ± 3.44 (18)
Group 12 1.6 mg/kg	2.6 ± 0.79 (17)	0.01 ± 0.038 (17)	0.21 ± 0.104 (17)	13.4 ± 7.20** (17)
Group 13 2 mg/kg	2.9 ± 1.08 (19)	0.03 ± 0.054 (19)	0.22 ± 0.117 (19)	16.0 ± 5.38** (19)

The clinical chemistry parameters of serum cholesterol was significantly decreased ($p \leq 0.01$) in the lactating dams that were treated with mevalonic acid and 1.6 or 2 mg/kg PFOS and cholesterol in the milk was significantly increased ($p \leq 0.05$) in the lactating dams that were treated with mevalonic acid and 2 mg/kg PFOS.

Clinical Chemistry Values (mg/dL) of PFOS plus Mevalonic Acid

Parameter	Cholesterol [Blood]	Cholesterol [Milk]	Glucose	LDL-Dir	HDL-Dir	Tri-glycerides	Mevalonic Acid
Group 2 (Mevalonic)	80.5 ± 15.6 (18)	81.4 ± 52.4 (17)	174.3 ± 39.2 (18)	3.7 ± 2.9 (18)	63.7 ± 18.1 (18)	135.6 ± 58.6 (18)	201.4 ± 135.9 (18)
Group 3 1.6 mg/kg	63.6 ± 14.6** (18)	70.5 ± 46.2 (12)	174.9 ± 24.1 (18)	3.4 ± 2.0 (18)	54.2 ± 12.1 (18)	103.3 ± 43.5 (18)	1123.0 ± 2000.2* (18)
Group 4 2 mg/kg	67.3 ± 11.2** (19)	188.0 ± 114.6* (2)	187.6 ± 30.9 (19)	3.7 ± 3.1 (19)	55.0 ± 10.1 (19)	118.7 ± 50.7 (19)	18662.4 ± 70304.8* (19)

The levels of total and free T_4 were significantly reduced ($p \leq 0.01$) in the lactating dams that were treated with mevalonic acid and 1.6 or 2 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Mevalonic Acid

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 2 (Mevalonic)	2.608 ± 1.083* (5)	88.864 ± 19.532 (5)	0.822 ± 0.295 (5)	1.962 ± 1.655 (5)	0.894 ± 0.248 (5)
Group 3 1.6 mg/kg	0.182 ± 0.243** (4)	65.752 ± 6.320 (4)	0.695 ± 0.131 (4)	1.228 ± 1.076 (4)	0.270 ± 0.067** (4)
Group 4 2 mg/kg	0.332 ± 0.245** (6)	76.158 ± 10.814 (6)	0.638 ± 0.208 (5)	1.366 ± 0.751 (5)	0.222 ± 0.076** (5)

Liver triglyceride levels were significantly increased ($p \leq 0.01$) in the lactating dams that were treated with 2 mg/kg PFOS plus Mevalonic Acid. All other liver clinical chemistry parameters were generally unaffected in the DL 5 dams that were treated with 1.6 or 2

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

mg/kg PFOS plus Mevalonic Acid.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 2 (Mevalonic)	2.3 ± 1.00 (18)	0.01 ± 0.041 (18)	0.16 ± 0.122 (18)	7.5 ± 2.05 (18)
Group 3 1.6 mg/kg	2.2 ± 0.65 (18)	0.02 ± 0.064 (18)	0.19 ± 0.134 (18)	10.3 ± 6.24 (18)
Group 4 2 mg/kg	2.7 ± 1.29 (19)	0.01 ± 0.031 (19)	0.18 ± 0.129 (19)	15.2 ± 5.49** (19)

Levels of cholesterol in the blood and triglycerides were significantly decreased ($p \leq 0.01$) in lactating dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS and the blood level of glucose was significantly increased ($p \leq 0.05$) in lactating dams that were treated with cholesterol and 2 mg/kg PFOS.

Clinical Chemistry Values (mg/dL) of PFOS plus Cholesterol

Parameter	Cholesterol [Blood]	Cholesterol [Milk]	Glucose	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	75.9 ± 17.5 (17)	80.2 ± 57.9 (17)	168.8 ± 29.2 (17)	3.8 ± 3.0 (17)	55.6 ± 19.1 (17)	146.1 ± 64.8 (17)
Group 6 1.6 mg/kg	56.2 ± 12.2** (20)	81.9 ± 52.5 (12)	170.2 ± 20.8 (20)	4.4 ± 2.8 (20)	48.6 ± 11.1 (20)	87.2 ± 32.1** (20)
Group 7 2 mg/kg	58.0 ± 15.2** (19)	57.8 ± 3.8 (4)	190.6 ± 28.5* (19)	4.9 ± 2.4 (19)	50.9 ± 13.3 (19)	85.0 ± 36.1** (19)

The level of total and free T_3 and T_4 were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in the lactating dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Cholesterol

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 5 (Cholesterol)	2.087 ± 0.758 (6)	91.763 ± 14.299 (6)	0.887 ± 0.151 (6)	0.810 ± 0.422 (6)	0.927 ± 0.294 (6)
Group 6 1.6 mg/kg	0.272 ± 0.304** (6)	65.235 ± 11.143** (6)	0.510 ± 0.150* (5)	1.280 ± 0.665 (5)	0.272 ± 0.039** (6)
Group 7 2 mg/kg	0.134 ± 0.195** (5)	65.714 ± 18.542* (5)	0.602 ± 0.306* (5)	1.884 ± 1.147 (5)	0.242 ± 0.074* (5)

Liver triglyceride levels were significantly increased ($p \leq 0.05$) in lactating dams coadministered cholesterol and 2 mg/kg PFOS. All other liver clinical chemistry parameters were generally unaffected in the DL 5 dams that were treated with 1.6 or 2 mg/kg PFOS plus Mevalonic Acid.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Liver Clinical Chemistry Values (mg/gm) of PFOS plus Cholesterol

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	2.1 ± 0.70 (17)	0.00 ± 0.005 (17)	0.16 ± 0.096 (17)	7.6 ± 1.68 (17)
Group 6 1.6 mg/kg	2.3 ± 0.69 (20)	0.01 ± 0.036 (20)	0.20 ± 0.115 (20)	10.1 ± 4.68 (20)
Group 7 2 mg/kg	2.3 ± 0.61 (19)	0.00 ± 0.000 (19)	0.19 ± 0.078 (19)	11.0 ± 4.83* (19)

PFOS Levels in DL 5[a] Dam Sera and Livers

Parameter	Sera[b] (ug/mL)	Liver[b] (ppm)
Group 1 (Vehicle)	0.0 ± 0.01 (6)	0.5 ± 0.87 (6)
Group 2 (Mevalonic)	12.7 ± 27.37 (6)	N.A.
Group 3 1.6 mg/kg	127.0 ± 24.41* (6)	N.A.
Group 4 2 mg/kg	189.2 ± 48.20* (6)	N.A.
Group 5 (Cholesterol)	0.7 ± 1.62 (6)	N.A.
Group 6 1.6 mg/kg	104.3 ± 14.57* (6)	N.A.
Group 7 2 mg/kg	144.8 ± 7.60* (6)	N.A.
Group 8 0.4 mg/kg	27.2 ± 18.72* (6)	47.9 ± 5.15* (4)
Group 9 0.8 mg/kg	42.6 ± 6.93* (6)	N.A.
Group 10 1 mg/kg	52.3 ± 26.02* (6)	N.A.
Group 11 1.2 mg/kg	86.0 ± 10.22* (6)	N.A.
Group 12 1.6 mg/kg	169.0 ± 32.12* (6)	110.2 ± 13.43* (5)
Group 13 2 mg/kg	134.0 ± 26.60* (6)	145.8 ± 20.18* (6)

N.A. = Not Analyzed

a = Some dams were sacrificed due to no surviving pups on various days.

b = Sponsor selected subsets to be analyzed.

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* Significantly different from control group; $p \leq 0.05$.

K.2.b. LD 5 F1 Generation Pups

The clinical chemistry parameters measured were not significantly different in the F1 generation pups from lactating dams that were treated with 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS alone, compared to the vehicle control group.

Clinical Chemistry Values (mg/dL) of PFOS alone

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 1 (Vehicle)	112.5 ± 10.6 (12)	255.8 ± 61.8 (12)	33.5 ± 8.7 (12)	29.8 ± 7.9 (12)	214.2 ± 51.8 (12)	22.6 ±5.3 (9)
Group 8 0.4 mg/kg	111.9 ± 11.3 (15)	244.5 ± 60.1 (15)	29.1 ± 7.4 (15)	32.7 ± 6.9 (15)	234.9 ± 95.0 (15)	Not Evaluated
Group 9 0.8 mg/kg	114.8 ± 11.1 (13)	220.3 ± 56.2 (13)	31.5 ± 7.6 (13)	38.1 ± 11.0 (13)	179.2 ± 66.5 (13)	Not Evaluated
Group 10 1 mg/kg	113.1 ± 16.8 (14)	210.0 ± 47.0 (14)	29.4 ± 5.3 (14)	36.3 ± 6.6 (14)	197.8 ± 64.4 (14)	Not Evaluated
Group 11 1.2 mg/kg	124.7 ± 23.4 (14)	217.2 ± 60.6 (14)	34.8 ± 15.0 (14)	31.9 ± 5.8 (14)	230.3 ± 78.5 (14)	18.7 ± 4.0 (8)
Group 12 1.6 mg/kg	132.3 ± 33.9 (6)	222.0 ± 20.8 (6)	40.3 ± 20.1 (6)	36.0 ± 7.0 (6)	231.8 ± 52.7 (6)	20.6 ± 4.0 (4)
Group 13 2 mg/kg	128.0 ± 38.3 (3)	229.3 ± 17.2 (3)	44.7 ± 31.6 (3)	34.3 ± 4.0 (3)	213.0 ± 56.3 (3)	(0)

The free and total T_4 levels in DL 5 pups from lactating dams administered 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS were significantly reduced ($p \leq 0.01$), compared to the vehicle control group. The thyroid stimulating hormone (TSH) was significantly increased ($p \leq 0.05$ or $p \leq 0.01$) at 1 and 1.6 mg/kg PFOS, but not in a dosage-dependent fashion.

Thyroid Hormone Values of PFOS alone

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 1 (Vehicle)	0.543 ± 0.221 (12)	54.383 ± 17.965 (12)	0.039 ± 0.086 (9)	1.018 ± 0.166 (8)	0.090 ± 0.024 (11)
Group 8 0.4 mg/kg	0.000 ± 0.000** (10)	55.777 ± 18.934 (9)	0.016 ± 0.036 (5)	(0)	0.018 ± 0.009** (8)
Group 9 0.8 mg/kg	0.000 ± 0.000** (8)	48.825 ± 17.720 (8)	0.000 ± 0.000 (5)	(0)	0.014 ± 0.018** (7)
Group 10 1 mg/kg	0.017 ± 0.050** (9)	47.710 ± 8.613 (7)	0.000 ± 0.000 (4)	2.360 ± 0.000** (1)	0.016 ± 0.010** (7)
Group 11 1.2 mg/kg	0.005 ± 0.014** (13)	44.715 ± 21.746 (11)	0.003 ± 0.009 (10)	1.010 ± 0.246 (5)	0.011 ± 0.009** (11)
Group 12 1.6 mg/kg	0.005 ± 0.012** (6)	32.708 ± 7.941 (6)	0.004 ± 0.009 (5)	1.450 ± 0.339* (5)	0.010 ± 0.006** (6)
Group 13 2 mg/kg	0.000 ± 0.000** (3)	32.777 ± 12.162 (3)	0.050 ± 0.087 (3)	1.500 ± 0.000 (1)	0.010 ± 0.010** (3)

Liver triglyceride and LDL levels were decreased or significantly decreased ($p \leq 0.05$ or $p \leq 0.01$) in DL 5 female pups from lactating dams administered 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS. All other liver clinical chemistry parameters were generally unaffected in the female pups of lactating dams that were treated with 0.4 to 2 mg/kg PFOS alone.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Female Pups Liver Clinical Chemistry Values (mg/gm) of PFOS alone

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 1 (Vehicle)	3.8 ± 0.66 (18)	0.012 ± 0.0264 (18)	0.10 ± 0.025 (18)	18.1 ± 7.94 (18)
Group 8 0.4 mg/kg	3.9 ± 0.48 (20)	0.000 ± 0.0022** (20)	0.09 ± 0.031 (20)	14.0 ± 6.18 (20)
Group 9 0.8 mg/kg	3.8 ± 0.30 (17)	0.000 ± 0.0000** (17)	0.09 ± 0.038 (17)	14.0 ± 4.67 (17)
Group 10 1 mg/kg	4.0 ± 0.83 (18)	0.000 ± 0.0000** (18)	0.08 ± 0.035 (18)	12.8 ± 4.56* (18)
Group 11 1.2 mg/kg	3.8 ± 0.62 (17)	0.000 ± 0.0000** (17)	0.09 ± 0.037 (17)	12.0 ± 6.85** (17)
Group 12 1.6 mg/kg	3.5 ± 0.32 (10)	0.003 ± 0.0095 (10)	0.11 ± 0.032 (10)	11.4 ± 3.11* (10)
Group 13 2 mg/kg	3.8 ± 0.62 (4)	0.000 ± 0.0000 (4)	0.09 ± 0.017 (4)	10.8 ± 2.04 (4)

Liver triglyceride levels were decreased or significantly decreased ($p \leq 0.05$ or $p \leq 0.01$) in DL 5 male pups from lactating dams administered 0.4, 0.8, 1, 1.2, 1.6 or 2 mg/kg PFOS. All other liver clinical chemistry parameters were generally unaffected in the male pups whose dams were treated with 0.4 to 2 mg/kg PFOS alone.

Male Pups Liver Clinical Chemistry Values (mg/gm) of PFOS alone

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 1 (Vehicle)	3.5 ± 0.49 (18)	0.003 ± 0.0118 (18)	0.08 ± 0.019 (18)	17.3 ± 8.05 (18)
Group 8 0.4 mg/kg	3.9 ± 0.83 (20)	0.000 ± 0.0000 (20)	0.08 ± 0.043 (20)	15.4 ± 6.76 (20)
Group 9 0.8 mg/kg	3.6 ± 0.56 (17)	0.000 ± 0.0000 (17)	0.08 ± 0.041 (17)	14.4 ± 6.46 (17)
Group 10 1 mg/kg	3.7 ± 0.76 (18)	0.003 ± 0.0097 (18)	0.10 ± 0.030 (18)	11.1 ± 3.21** (18)
Group 11 1.2 mg/kg	3.6 ± 0.55 (18)	0.000 ± 0.0000 (18)	0.10 ± 0.042 (18)	10.9 ± 4.80** (18)
Group 12 1.6 mg/kg	3.3 ± 0.52 (10)	0.003 ± 0.0067 (10)	0.09 ± 0.030 (10)	11.4 ± 7.55* (10)
Group 13 2 mg/kg	3.4 ± 0.26 (4)	0.005 ± 0.0100 (4)	0.09 ± 0.033 (4)	7.4 ± 1.54* (4)

Levels of cholesterol, low density lipoproteins (LDL) and triglycerides in the blood were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in DL 5 pups from lactating dams that were treated with mevalonic acid and 1.6 mg/kg PFOS.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

Clinical Chemistry Values (mg/dL) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides	Mevalonic Acid
Group 2 (Mevalonic)	115.4 ± 7.6 (12)	241.4 ± 88.4 (12)	35.3 ± 7.5 (12)	35.4 ± 9.0 (12)	193.2 ± 69.9 (12)	335.3 ± 229.2 (11)
Group 3 1.6 mg/kg	157.0 ± 23.7** (7)	273.3 ± 65.1 (7)	50.8 ± 20.0* (7)	33.0 ± 4.9 (7)	302.3 ± 62.7** (7)	270.8 ± 85.8 (7)
Group 4 2 mg/kg	0.00 ± 0.000 (0)	0.00 ± 0.000 (0)	0.00 ± 0.000 (0)	0.00 ± 0.000 (0)	0.00 ± 0.000 (0)	195.2 ± 203.4 (2)

Levels of total T_4 were significantly decreased ($p \leq 0.01$) in DL 5 pups from lactating dams that were treated with mevalonic acid and 1.6 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Mevalonic Acid

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 2 (Mevalonic)	0.486 ± 0.227 (5)	83.420 ± 31.720[a] (5)	0.497 ± 0.490 (3)	0.430 ± 0.212 (2)	0.090 ± 0.056 (5)
Group 3 1.6 mg/kg	0.000 ± 0.000** (3)	70.633 ± 24.823 (3)	0.00 ± 0.000 (0)	0.680 ± 0.000 (1)	0.005 ± 0.007 (2)
Group 4 2 mg/kg	NO VALUES FOR THIS GROUP				

Liver clinical chemistry parameters were generally unaffected in the DL 5 female pups of lactating dams that were treated with 1.6 PFOS plus Mevalonic Acid. There were no liver samples for female pups of lactating dams that were treated with 2 mg/kg PFOS plus Mevalonic Acid.

Female Pups Liver Clinical Chemistry Values (mg/gm) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 2 (Mevalonic)	3.8 ± 0.64 (18)	0.008 ± 0.0218 (18)	0.11 ± 0.039 (18)	18.4 ± 8.93 (18)
Group 3 1.6 mg/kg	3.3 ± 0.86 (9)	0.002 ± 0.0067 (9)	0.08 ± 0.030 (9)	14.1 ± 6.00 (9)
Group 4 2 mg/kg	NO VALUES FOR THIS GROUP			

Liver clinical chemistry parameters were generally unaffected in the DL 5 male pups of lactating dams that were treated with 1.6 PFOS plus Mevalonic Acid. There were no liver samples for male pups of lactating dams that were treated with 2 mg/kg PFOS plus Mevalonic Acid.

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* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

a. Group 2 significantly different from Group 1; $p \leq 0.01$.

Male Pups Liver Clinical Chemistry Values (mg/gm) of PFOS plus Mevalonic Acid

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 2 (Mevalonic)	3.6 ± 0.69 (18)	0.003 ± 0.0096 (18)	0.09 ± 0.026 (18)	13.0± 7.38 (18)
Group 3 1.6 mg/kg	3.3 ± 0.68 (10)	0.008 ± 0.0253 (10)	0.09 ± 0.037 (10)	13.6 ± 5.38 (10)
Group 4 2 mg/kg	NO VALUES FOR THIS GROUP			

Levels of low (LDL) and high (HDL) density lipoproteins were significantly increased ($p \leq 0.05$ or $p \leq 0.01$) in the pups from lactating dams that were treated with cholesterol and 1.6 or 2 mg/kg PFOS and the blood level of triglycerides was significantly decreased ($p \leq 0.05$) in the pups from dams that were treated with cholesterol and 2 mg/kg PFOS.

Clinical Chemistry Values (mg/dL) of PFOS plus Cholesterol

Parameter	Cholesterol	Glucose	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	117.8 ± 9.1 (12)	263.8 ± 56.4 (12)	26.8 ± 12.2 (12)	28.7 ± 7.7 (12)	321.3 ± 208.8 (12)
Group 6 1.6 mg/kg	130.0 ± 18.5 (8)	247.8 ± 48.9 (8)	41.0 ± 11.4* (8)	39.2 ± 3.6** (8)	232.9 ± 74.4 (8)
Group 7 2 mg/kg	134.8 ± 26.1 (5)	223.2 ± 20.2 (5)	55.2 ± 22.5** (5)	47.2 ± 12.8** (5)	120.4 ± 36.6* (5)

Levels of total T_3 and free T_4 were significantly decreased ($p \leq 0.05$ or $p \leq 0.01$) in pups from lactating dams that were treated with cholesterol and 1.6 and/or 2 mg/kg PFOS.

Thyroid Hormone Values of PFOS plus Cholesterol

Parameter	Total T_4 ug/dL	Total T_3 ng/dL	Free T_3 pg/mL	TSH ng/mL	Free T_4 ng/dL
Group 5 (Cholesterol)	0.323 ± 0.273[a] (6)	78.405 ± 17.178[a] (6)	0.270 ± 0.240 (2)	1.380 ± 0.000[a] (1)	0.064 ± 0.027 (5)
Group 6 1.6 mg/kg	0.000 ± 0.000 (3)	40.840 ± 4.072** (3)	0.000 ± 0.000 (1)	0.000 ± 0.000 (1)	0.000 ± 0.000* (2)
Group 7 2 mg/kg	0.000 ± 0.000 (1)	25.900 ± 0.000* (1)	0.000 ± 0.000 (0)	0.000 ± 0.000 (0)	0.000 ± 0.000 (0)

Liver clinical chemistry parameters were generally unaffected in the DL 5 female pups of lactating dams that were treated with 1.6 or 2 mg/kg PFOS plus Mevalonic Acid.

Female Pups Liver Clinical Chemistry Values (mg/gm) of PFOS plus Cholesterol

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	3.8 ± 0.56 (17)	0.011 ± 0.0271 (17)	0.09 ± 0.040 (17)	17.9 ± 7.29 (17)
Group 6 1.6 mg/kg	3.4 ± 0.54 (11)	0.000 ± 0.0000 (11)	0.08 ± 0.031 (11)	12.9 ± 4.36 (11)
Group 7 2 mg/kg	4.0 ± 0.14 (4)	0.000 ± 0.0000 (4)	0.10 ± 0.037 (4)	13.5 ± 5.16 (4)

* Significantly different from control group; $p \leq 0.05$.

** Significantly different from control group; $p \leq 0.01$.

a. Group 5 significantly different from Group 1; $p \leq 0.01$.

Liver triglyceride levels were significantly reduced ($p \leq 0.05$ or $p \leq 0.01$) in DL 5 male pups of dams coadministered cholesterol and 1.6 or 2 mg/kg PFOS. All other liver clinical chemistry parameters were generally unaffected in the male pups of lactating dams that were treated with 1.6 or 2 mg/kg PFOS plus Mevalonic Acid.

Male Pups Liver Clinical Chemistry Values (mg/gm) of PFOS plus Cholesterol

Parameter	Cholesterol	LDL-Dir	HDL-Dir	Triglycerides
Group 5 (Cholesterol)	3.7 ± 0.45 (17)	0.004 ± 0.0100 (17)	0.08 ± 0.029 (17)	18.3 ± 6.80 (17)
Group 6 1.6 mg/kg	3.4 ± 0.45 (8)	0.000 ± 0.0000 (8)	0.10 ± 0.031 (8)	10.5 ± 3.95** (8)
Group 7 2 mg/kg	4.1 ± 0.73 (3)	0.000 ± 0.0000 (3)	0.08 ± 0.035 (3)	10.6 ± 4.12* (3)

PFOS Levels in Pooled DL 5 Fetal Sera and Livers

Parameter	Sera[a] (ug/mL)	Liver[a] (ppm)
Group 1 (Vehicle)	0.0 ± 0.02 (6)	BQL (6)
Group 2 (Mevalonic)	2.8 ± 3.12 (6)	N.A.
Group 3 1.6 mg/kg	123.7 ± 18.58* (3)	N.A.
Group 4 2 mg/kg	N.A.	N.A.
Group 5 (Cholesterol)	0.2 ± 0.19 (6)	N.A.
Group 6 1.6 mg/kg	108.5 ± 7.78 (2)	N.A.
Group 7 2 mg/kg	155.0 ± 0.00 (1)	N.A.
Group 8 0.4 mg/kg	36.2 ± 3.84 (6)	73.4 ± 30.83 (6)
Group 9 0.8 mg/kg	53.1 ± 27.67 (6)	N.A.
Group 10 1 mg/kg	84.5 ± 17.52 (6)	N.A.
Group 11 1.2 mg/kg	146.7 ± 162.50** (6)	N.A.
Group 12 1.6 mg/kg	N.A.	274.0 ± 127.80** (5)
Group 13 2 mg/kg	138.0 ± 0.00 (1)	245.2 ± 93.36** (4)

N.A. = Not Analyzed
BQL = Below Quantitation Limit
a = Sponsor selected subsets to be analyzed.

* Significantly different from control group; $p \leq 0.05$.
** Significantly different from control group; $p \leq 0.01$.

L. Histopathology of Hearts and Thyroids of F1 Generation Pups (See APPENDIX J)

The type and incidence of the histomorphologic observations in the heart and thyroid of the male and female pups from dams of the vehicle control and 2 mg/kg/day dosage groups are shown below:

Dose Group	1	13	1	13
Sex	M	M	F	F
Dam No.	10909	11059	10909	11059
No. Pups	1	1	1	1
THYROID				
No. examined	1	1	1	1
No. Normal	1	1	1	1
HEART				
No. examined	1	1	1	1
No. Normal	1	1	1	1

No microscopic changes were observed; all sections examined were within normal histologic limits.

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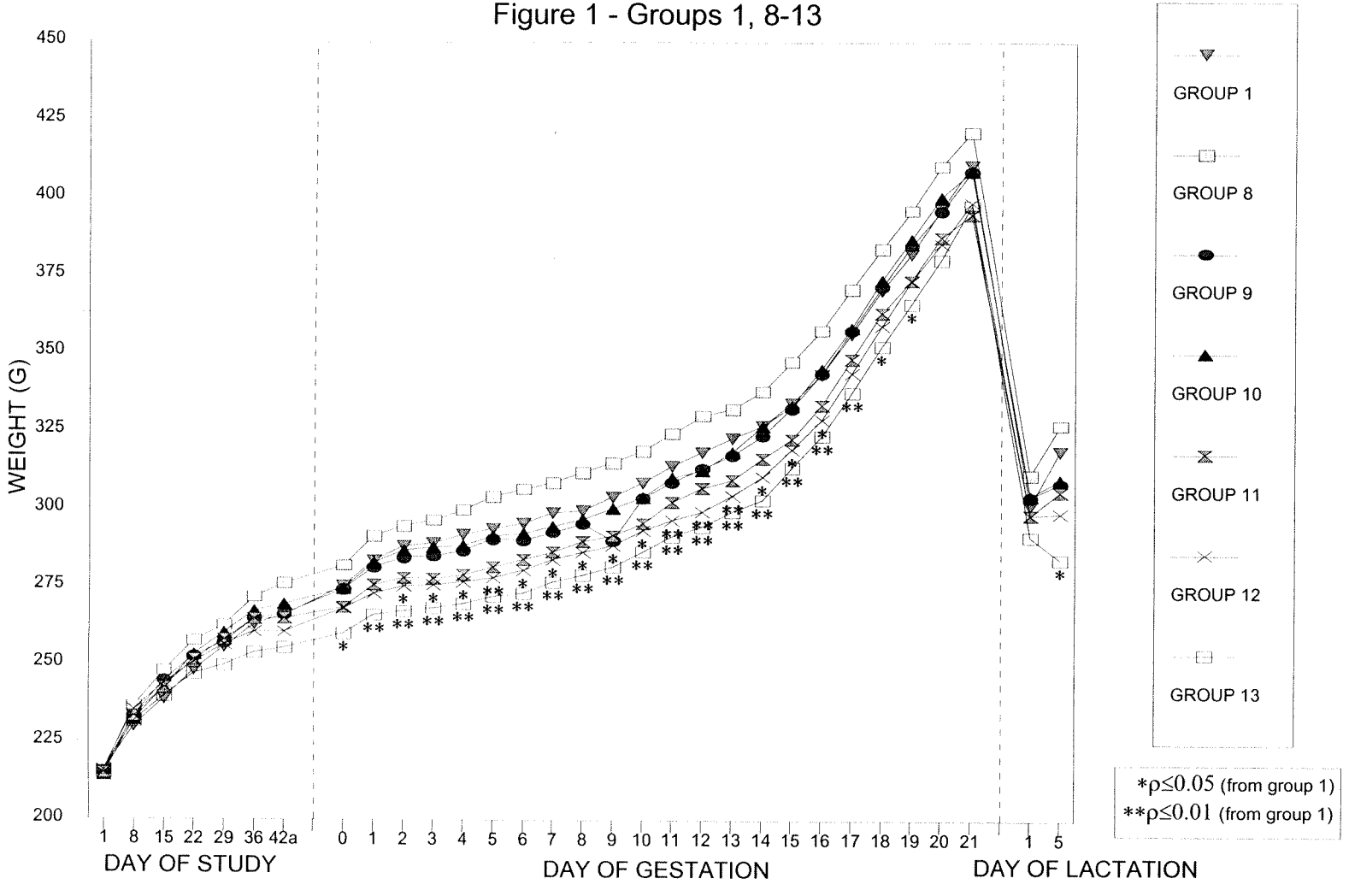
APPENDIX A

REPORT FIGURES

BODY WEIGHTS

Fo GENERATION FEMALE RATS

Figure 1 - Groups 1, 8-13



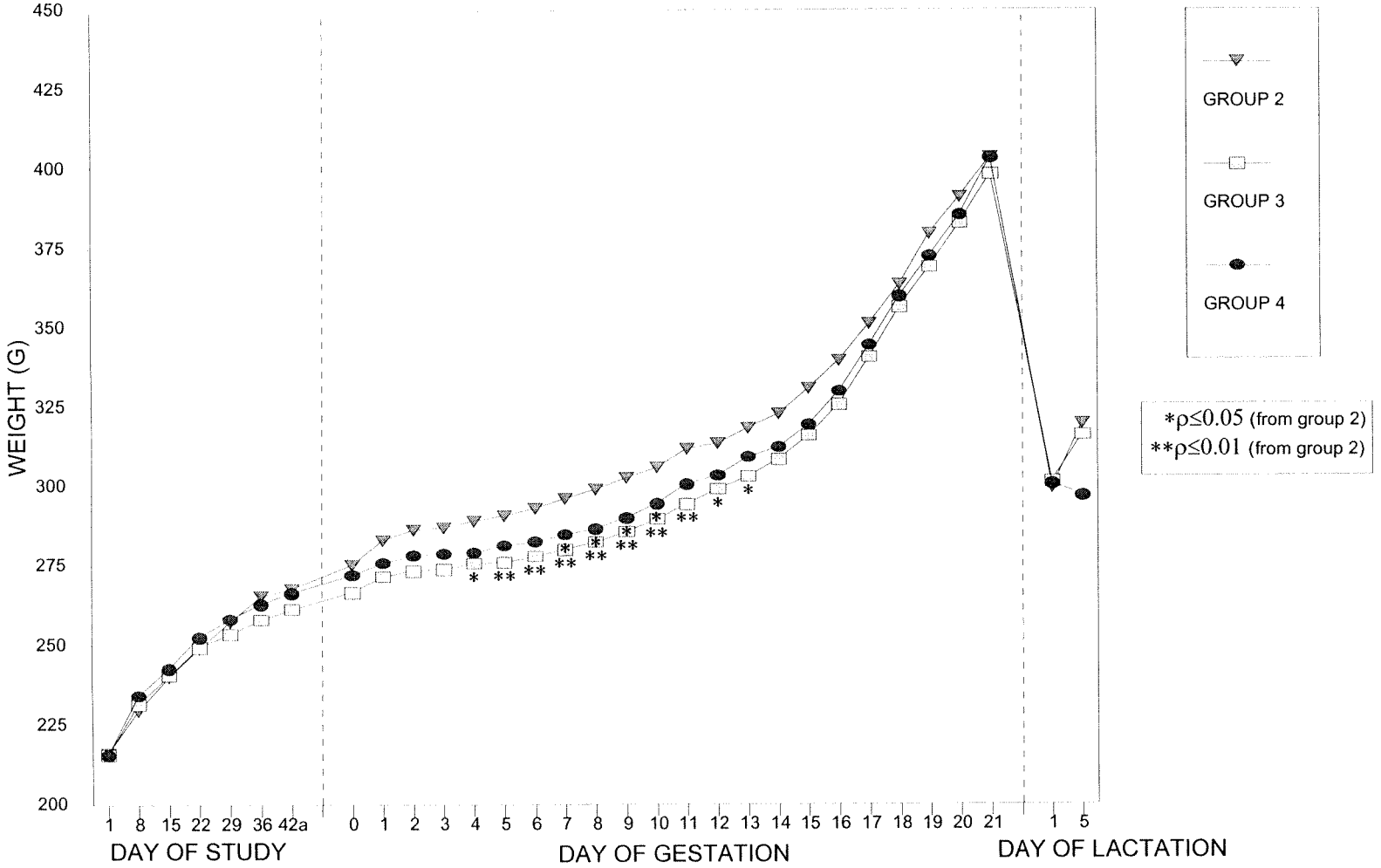
a. Last value recorded before cohabitaton.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

BODY WEIGHTS

Fo GENERATION FEMALE RATS

Figure 2 - Groups 2,3,4

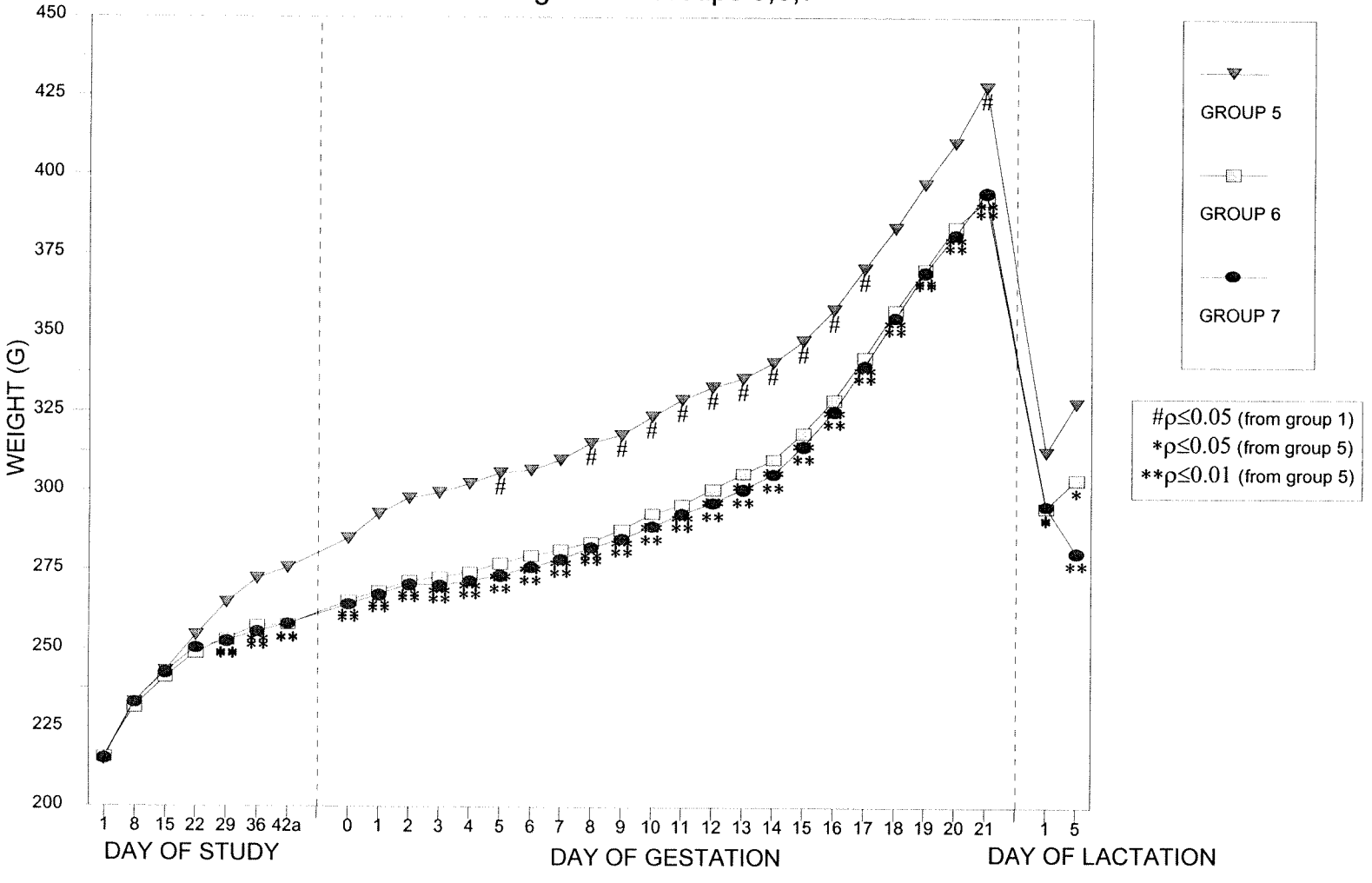


a. Last value recorded before cohabitaton.

BODY WEIGHTS

Fo GENERATION FEMALE RATS

Figure 3 - Groups 5,6,7



a. Last value recorded before cohabitaton.

APPENDIX B

REPORT TABLES

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 1): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP	1	8	9	10	11	12	13
DOSAGE MG/KG PFOS	VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
PRECOHABITATION (DAY 1 OF STUDY TO THE DAY OF COHABITATION):							
MAXIMUM POSSIBLE INCIDENCE	1176/ 28	840/ 20	840/ 20	840/ 20	840/ 20	1176/ 28	1176/ 28
MORTALITY	0	0	0	0	0	0	0
LOCALIZED ALOPECIA: TOTAL	61/ 4	29/ 2	0/ 0	14/ 2	26/ 1	32/ 1	26/ 1
UNDERSIDE	14/ 2	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
LIMBS	47/ 2	29/ 2	0/ 0	14/ 2	26/ 1	32/ 1	26/ 1
INCISORS: TOTAL	0/ 0	5/ 1	28/ 2	0/ 0	0/ 0	6/ 1	0/ 0
MISSING/BROKEN	0/ 0	0/ 0	3/ 1	0/ 0	0/ 0	6/ 1	0/ 0
MISALIGNED	0/ 0	5/ 1	25/ 1	0/ 0	0/ 0	0/ 0	0/ 0
CHROMODACRYORRHEA	0/ 0	8/ 1	19/ 1	0/ 0	0/ 0	0/ 0	0/ 0
FOREPAWS AND LEFT FORELIMB: SCABS	0/ 0	25/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
TAIL BENT	40/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
RIGHT FOREPAW: 2ND DIGIT MISSING	16/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
RIGHT FOREPAW: 2ND DIGIT SWOLLEN	13/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.

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TABLE 1 (PAGE 2): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP	1	8	9	10	11	12	13
DOSAGE MG/KG PFOS	VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
PRESUMED GESTATION:							
MAXIMUM POSSIBLE INCIDENCE	615/ 28	434/ 20	419/ 19	435/ 20	417/ 19	594/ 27	610/ 28
MORTALITY	0	0	0	0	0	0	0
LOCALIZED ALOPECIA: TOTAL	57/ 3	42/ 2	0/ 0	73/ 5	41/ 3	80/ 5	36/ 3
LIMBS	22/ 1	42/ 2	0/ 0	50/ 3	23/ 2	43/ 2	36/ 3
NECK	4/ 1	0/ 0	0/ 0	0/ 0	0/ 0	16/ 2	5/ 1
UNDERSIDE	31/ 2	0/ 0	0/ 0	23/ 2	10/ 1	27/ 2	0/ 0
BACK	0/ 0	0/ 0	0/ 0	0/ 0	12/ 2**	0/ 0	0/ 0
INCISORS: TOTAL	8/ 3	7/ 1	21/ 1	9/ 1	0/ 0	7/ 2	0/ 0
MISSING/BROKEN	8/ 3	7/ 1	7/ 1	9/ 1	0/ 0	7/ 2	0/ 0
MISALIGNED	0/ 0	0/ 0	21/ 1	0/ 0	0/ 0	0/ 0	0/ 0
SWOLLEN SNOUT	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
CHROMODACRYORRHEA	0/ 0	0/ 0	21/ 1	0/ 0	0/ 0	0/ 0	0/ 0
CHROMORHINORRHEA	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
TAIL BENT	22/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
RIGHT FOREPAW: 2ND DIGIT MISSING	22/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
RED PERIVAGINAL SUBSTANCE	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 3): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
LACTATION:								
MAXIMUM POSSIBLE INCIDENCE		95/ 19	100/ 20	85/ 17	93/ 19	90/ 18	76/ 17	61/ 19
LOCALIZED ALOPECIA:	TOTAL	15/ 3	10/ 2	0/ 0	17/ 4	13/ 3	15/ 3	9/ 3
	LIMBS	5/ 1	10/ 2	0/ 0	13/ 3	9/ 2	10/ 2	6/ 3
	NECK	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	5/ 1
	UNDERSIDE	10/ 2	0/ 0	0/ 0	4/ 1	4/ 1	5/ 1	0/ 0
	BACK	0/ 0	0/ 0	0/ 0	0/ 0	8/ 2	0/ 0	0/ 0
INCISORS:	TOTAL	4/ 1	1/ 1	5/ 1	0/ 0	0/ 0	0/ 0	0/ 0
	MISSING/BROKEN	4/ 1	1/ 1	4/ 1	0/ 0	0/ 0	0/ 0	0/ 0
	MISALIGNED	1/ 1	0/ 0	2/ 1	0/ 0	0/ 0	0/ 0	0/ 0
CHROMODACRYORRHEA		0/ 0	0/ 0	5/ 1	0/ 0	0/ 0	0/ 0	0/ 0
LACRIMATION		0/ 0	0/ 0	2/ 1	0/ 0	0/ 0	0/ 0	0/ 0
RIGHT FOREPAW:	2ND DIGIT MISSING	5/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
TAIL BENT		5/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
RED PERIVAGINAL SUBSTANCE		1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 4): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
PRECOHABITATION (DAY 1 OF STUDY TO THE DAY OF COHABITATION):			
MAXIMUM POSSIBLE INCIDENCE	1176/ 28	1178/ 29	1176/ 28
FOUND DEAD	0	1a	0
EXCESS SALIVATION	3/ 2	4/ 3	12/ 7
CHROMORHINORRHEA	2/ 2	0/ 0	3/ 3
INCISORS: TOTAL	7/ 2	15/ 4	17/ 2
MISSING/BROKEN	7/ 2	15/ 4	12/ 2
MISALIGNED	0/ 0	0/ 0	17/ 1
MOUTH: SCAB	0/ 0	8/ 2	7/ 1
SWOLLEN SNOUT	0/ 0	3/ 1	6/ 1
TIP OF TAIL MISSING	0/ 0	0/ 0	39/ 1
PTOSIS	0/ 0	0/ 0	2/ 1
SOFT OR LIQUID FECES	0/ 0	0/ 0	2/ 1
RALES	1/ 1	8/ 1	0/ 0
RED SUBSTANCE IN CAGE	0/ 0	1/ 1	0/ 0
LABORED BREATHING	0/ 0	1/ 1	0/ 0
SCANT FECES	0/ 0	1/ 1	0/ 0
LOCALIZED ALOPECIA: UNDERSIDE	8/ 1	0/ 0	0/ 0
RIGHT EAR SWOLLEN	2/ 1	0/ 0	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.
a. Rat 10936 was found dead on day 2 of study.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 5): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
PRESUMED GESTATION:				
MAXIMUM POSSIBLE INCIDENCE		609/ 28	616/ 28	609/ 28
MORIBUND SACRIFICED		1a	0	0
EXCESS SALIVATION		14/ 8##a	10/ 8	14/ 9
PERIORAL SUBSTANCE b		7/ 5##a	2/ 2	11/ 7
CHROMORHINORRHEA		3/ 3##a	2/ 2	5/ 2
INCISORS: MISSING/BROKEN		3/ 3	4/ 2	3/ 2
PTOSIS		0/ 0	0/ 0	30/ 2
LOCALIZED ALOPECIA:	TOTAL	33/ 3	22/ 3	5/ 1
	LIMBS	10/ 1	9/ 1	5/ 1
	UNDERSIDE	23/ 2	5/ 2	0/ 0
	NECK	0/ 0	12/ 1	0/ 0
CHROMODACRYORRHEA		1/ 1a	0/ 0	2/ 1
TIP OF TAIL MISSING		0/ 0	0/ 0	22/ 1
DEHYDRATION		0/ 0	0/ 0	5/ 1
RALES		0/ 0	0/ 0	5/ 1
EMACIATION		0/ 0	0/ 0	2/ 1
SCANT FECES		0/ 0	0/ 0	1/ 1
MOUTH: SCAB		3/ 1	4/ 1	0/ 0
SWOLLEN SNOUT		0/ 0	1/ 1	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.
a. Dam 10926 was moribund sacrificed on day 12 of gestation; death was attributed to an intubation accident.
b. Descriptions were (or were any combination of) red, dried, slight and moderate.
Significantly different from the Group 1 value ($p \leq 0.01$).

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TABLE 1 (PAGE 6): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
PRESUMED GESTATION: (CONT.)			
MAXIMUM POSSIBLE INCIDENCE	609/ 28	616/ 28	609/ 28
MORIBUND SACRIFICED	1a	0	0
RIGHT EAR SWOLLEN	3/ 1	0/ 0	0/ 0
RED PERIVAGINAL SUBSTANCE	1/ 1	0/ 0	0/ 0
DECREASED MOTOR ACTIVITY	1/ 1a	0/ 0	0/ 0
SOFT OR LIQUID FECES	1/ 1a	0/ 0	0/ 0
LACTATION:			
MAXIMUM POSSIBLE INCIDENCE	90/ 18	76/ 18	52/ 19
PTOSIS	0/ 0	0/ 0	5/ 1
LOCALIZED ALOPECIA: TOTAL	5/ 1	5/ 1	0/ 0
LIMBS	5/ 1	5/ 1	0/ 0
UNDERSIDE	0/ 0	5/ 1	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.
a. Dam 10926 was moribund sacrificed on day 12 of gestation; death was attributed to an intubation accident.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 7): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
PRECOHABITATION (DAY 1 OF STUDY TO THE DAY OF COHABITATION):				
MAXIMUM POSSIBLE INCIDENCE		1150/ 28	1176/ 28	1176/ 28
MORIBUND SACRIFICED		1a	0	0
LOCALIZED ALOPECIA:	TOTAL	47/ 6	13/ 2	12/ 1
	LIMBS	44/ 5	13/ 2	12/ 1
	NECK	11/ 2	0/ 0	0/ 0
	UNDERSIDE	3/ 1	0/ 0	0/ 0
INCISORS:	TOTAL	17/ 1	8/ 1	2/ 1
	MISSING/BROKEN	0/ 0	8/ 1	2/ 1
	MISALIGNED	17/ 1	0/ 0	0/ 0
CHROMORHINORRHEA		0/ 0	1/ 1	0/ 0
DECREASED MOTOR ACTIVITY		1/ 1a	0/ 0	0/ 0
PALE IN APPEARANCE		1/ 1a	0/ 0	0/ 0
COLD TO TOUCH		1/ 1a	0/ 0	0/ 0
SWOLLEN SNOUT		1/ 1	0/ 0	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.
a. Rat 11562 was moribund sacrificed on day 16 of study.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 1 (PAGE 8): CLINICAL OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
PRESUMED GESTATION:				
MAXIMUM POSSIBLE INCIDENCE		601/ 27	604/ 28	610/ 28
MORTALITY		0	0	0
LOCALIZED ALOPECIA:	TOTAL	77/ 5	52/ 5	54/ 5
	NECK	22/ 1	0/ 0	0/ 0
	LIMBS	59/ 4	41/ 4	40/ 4
	UNDERSIDE	14/ 1	28/ 2	22/ 1
	BACK	0/ 0	14/ 1	2/ 1
INCISORS:	TOTAL	32/ 2	17/ 2	9/ 2
	MISSING/BROKEN	0/ 0	16/ 2	9/ 2
	MISALIGNED	32/ 2	7/ 1	0/ 0
CHROMODACRYORRHEA		3/ 1	2/ 1	8/ 2
CHROMORHINORRHEA		0/ 0	0/ 0	2/ 2
CHEST OR LEFT FORELIMB: ULCERATION		0/ 0	11/ 1	0/ 0
CHEST: SCAB		0/ 0	4/ 1	0/ 0
LACTATION:				
MAXIMUM POSSIBLE INCIDENCE		85/ 17	86/ 20	65/ 19
LOCALIZED ALOPECIA:	TOTAL	16/ 4	7/ 2	18/ 5
	LIMBS	12/ 3	7/ 2	15/ 4
	UNDERSIDE	4/ 1	5/ 1	4/ 1
	BACK	0/ 0	2/ 1	3/ 1
RED PERIVAGINAL SUBSTANCE		2/ 2	1/ 1	0/ 0
INCISORS: MISALIGNED		4/ 1	4/ 1	0/ 0

STATISTICAL ANALYSES OF CLINICAL OBSERVATION DATA WERE RESTRICTED TO THE NUMBER OF RATS WITH OBSERVATIONS.
MAXIMUM POSSIBLE INCIDENCE = (DAYS x RATS)/NUMBER OF RATS EXAMINED PER GROUP.
N/N = TOTAL NUMBER OF OBSERVATIONS/NUMBER OF RATS WITH OBSERVATION.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 2 (PAGE 1): NECROPSY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS EXAMINED a	N	28	20	20	20	20	28	28
MORTALITY	N	0	0	0	0	0	0	0
APPEARED NORMAL	N	28	20	20	20	20	28	28

a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 2 (PAGE 2): NECROPSY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS EXAMINED a	N	28	29	27b
MORTALITY	N	1	1	0
MORIBUND SACRIFICED	N	1c	0	0
FOUND DEAD	N	0	1d	0
APPEARED NORMAL	N	26	28	27
ESOPHAGUS:				
PERFORATION	N	1c	0	0
LEFT AXILLARY AREA:				
TISSUE DISCOLORED TAN	N	1c	0	0
KIDNEYS:				
BILATERAL, MISSHAPEN	N	1	0	0
BILATERAL, PELVIS, SLIGHT DILATION	N	1	0	0
BLADDER:				
WALLS THICK; CONTAINED ONE CALCULUS	N	1	0	0
THORACIC CAVITY:				
CONTAINED DARK RED CLOTTED MATERIAL	N	0	1d	0

a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.
b. Excludes rat 11554, which did not have necropsy observations recorded.
c. Rat 10926 was moribund sacrificed on day 12 of gestation; death was attributed to an intubation accident.
d. Rat 10936 was found dead on day 2 of study.

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TABLE 2 (PAGE 3): NECROPSY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS EXAMINED a	N	28	28	28
MORIBUND SACRIFICED	N	1b	0	0
APPEARED NORMAL	N	27	28	27
SMALL INTESTINES: TWISTED AND CONSTRICTED AT JEJUNUM	N	1b	0	0
JEJUNUM: CONTAINED DARK RED FLUID	N	1b	0	0
STOMACH: CONTAINED PUP TISSUE	N	0	0	1

a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.
b. Rat 11562 was moribund sacrificed on day 16 of study.

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TABLE 3 (PAGE 1): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
CAESAREAN SECTIONED ON DAY 21 OF GESTATION:								
RATS TESTED	N	8					8	8
TERMINAL BODY WEIGHT	MEAN±S.D.	417.5 ± 18.3					399.8 ± 25.2	409.8 ± 31.5
LIVER	MEAN±S.D.	14.3 ± 0.7					14.9 ± 1.9	15.3 ± 1.2
LIVER (%)	MEAN±S.D.	3.4 ± 0.2					3.7 ± 0.5	3.7 ± 0.3
DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION:								
RATS TESTED	N	19	20	17	18	18	14	6
TERMINAL BODY WEIGHT	MEAN±S.D.	318.7 ± 28.5	326.7 ± 21.6	308.3 ± 42.0	309.5 ± 19.8	305.6 ± 23.2	298.6 ± 19.8	283.8 ± 7.5*
LIVER	MEAN±S.D.	13.2 ± 1.8	13.8 ± 1.5	13.6 ± 1.1	13.7 ± 1.4	14.5 ± 1.5	13.2 ± 1.2	13.1 ± 1.0
LIVER (%)	MEAN±S.D.	4.1 ± 0.5	4.2 ± 0.3	4.5 ± 0.5*	4.4 ± 0.5	4.8 ± 0.3**	4.4 ± 0.3	4.6 ± 0.3*

ALL WEIGHTS WERE RECORDED IN GRAMS (G). RATIOS (%) = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) x 100.

* Significantly different from the Group 1 value ($p \leq 0.05$).

** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 3 (PAGE 2): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
CAESAREAN SECTIONED ON DAY 21 OF GESTATION:				
RATS TESTED	N	8	7	8
TERMINAL BODY WEIGHT	MEAN±S.D.	416.6 ± 24.6	393.7 ± 30.4	393.1 ± 47.3
LIVER	MEAN±S.D.	15.3 ± 2.1	16.2 ± 2.3	15.8 ± 1.5
LIVER (%)	MEAN±S.D.	3.7 ± 0.4	4.1 ± 0.4*	4.0 ± 0.2
DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION:				
RATS TESTED	N	18	12	3
TERMINAL BODY WEIGHT	MEAN±S.D.	319.5 ± 18.5	315.8 ± 23.4	297.0 ± 14.1
LIVER	MEAN±S.D.	13.3 ± 1.2	14.8 ± 1.2**	13.8 ± 1.6
LIVER (%)	MEAN±S.D.	4.2 ± 0.3	4.7 ± 0.3**	4.6 ± 0.4*

ALL WEIGHTS WERE RECORDED IN GRAMS (G). RATIOS (%) = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) x 100.

* Significantly different from the Group 2 value ($p \leq 0.05$).

** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 3 (PAGE 3): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
CAESAREAN SECTIONED ON DAY 21 OF GESTATION:				
RATS TESTED	N	8	8	8
TERMINAL BODY WEIGHT	MEAN±S.D.	441.0 ± 30.6	403.0 ± 38.3*	387.5 ± 31.3**
LIVER	MEAN±S.D.	14.1 ± 1.3	14.3 ± 0.8	15.3 ± 0.7*
LIVER (%)	MEAN±S.D.	3.2 ± 0.2	3.6 ± 0.4*	4.0 ± 0.3**
DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION:				
RATS TESTED	N	17	13	7
TERMINAL BODY WEIGHT	MEAN±S.D.	328.0 ± 31.9	303.9 ± 19.0*	280.8 ± 15.6**
LIVER	MEAN±S.D.	13.4 ± 1.4	14.3 ± 1.7	12.6 ± 0.9
LIVER (%)	MEAN±S.D.	4.1 ± 0.3	4.7 ± 0.5**	4.5 ± 0.2*

ALL WEIGHTS WERE RECORDED IN GRAMS (G). RATIOS (%) = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) x 100.

* Significantly different from the Group 5 value ($p \leq 0.05$).

** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 4 (PAGE 1): BODY WEIGHTS - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
BODY WEIGHT (G)								
DAY 1	MEAN±S.D.	215.4 ± 10.8	215.0 ± 12.7	215.2 ± 11.2	214.2 ± 10.8	214.8 ± 11.3	215.6 ± 10.0	215.9 ± 10.0
DAY 8	MEAN±S.D.	229.8 ± 12.1	236.2 ± 11.0	233.0 ± 11.0	231.9 ± 14.3	233.1 ± 12.9	235.1 ± 11.7	231.3 ± 8.9
DAY 15	MEAN±S.D.	238.5 ± 14.8	247.5 ± 13.8	244.5 ± 12.2	242.0 ± 14.9	242.2 ± 14.1	243.5 ± 12.6	239.5 ± 12.4
DAY 22	MEAN±S.D.	247.9 ± 17.6	257.4 ± 12.9	252.3 ± 15.1	252.8 ± 15.6	251.2 ± 14.1	250.5 ± 15.2	246.6 ± 14.8
DAY 29	MEAN±S.D.	255.3 ± 17.5	262.4 ± 15.0	256.8 ± 17.3	260.0 ± 15.9	257.6 ± 14.1	256.1 ± 15.6	249.4 ± 14.6
DAY 36	MEAN±S.D.	262.6 ± 18.5	271.4 ± 16.3	264.4 ± 17.9	267.0 ± 18.7	264.4 ± 14.4	260.2 ± 15.2	253.6 ± 14.6
DAY 42a	MEAN±S.D.	265.6 ± 21.0	276.0 ± 16.8	266.0 ± 19.5	269.2 ± 21.2	264.6 ± 16.7	260.2 ± 15.5	255.1 ± 17.5

DAY = DAY OF STUDY
a. Last value recorded before cohabitation.

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TABLE 4 (PAGE 2): BODY WEIGHTS - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	29	28
BODY WEIGHT (G)				
DAY 1	MEAN±S.D.	216.2 ± 11.3	215.6 ± 12.1	215.6 ± 11.6
DAY 8	MEAN±S.D.	229.6 ± 11.0	231.6 ± 13.3 [28]a	234.2 ± 11.5
DAY 15	MEAN±S.D.	240.2 ± 14.1	240.5 ± 17.5 [28]a	242.9 ± 11.8
DAY 22	MEAN±S.D.	249.1 ± 13.6	249.5 ± 18.7 [28]a	252.6 ± 13.4
DAY 29	MEAN±S.D.	257.4 ± 14.6	253.5 ± 19.7 [28]a	258.2 ± 14.2
DAY 36	MEAN±S.D.	265.4 ± 17.1	258.1 ± 19.5 [28]a	263.1 ± 15.6
DAY 42b	MEAN±S.D.	267.6 ± 17.4	261.3 ± 23.1 [28]a	266.4 ± 16.9

DAY = DAY OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for rat 10936, which was found dead on day 2 of study.
b. Last value recorded before cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 4 (PAGE 3): BODY WEIGHTS - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	28	28	28
BODY WEIGHT (G)				
DAY 1	MEAN±S.D.	214.8 ± 10.1	215.7 ± 10.5	215.4 ± 10.9
DAY 8	MEAN±S.D.	232.8 ± 11.4	231.5 ± 10.8	233.0 ± 10.8
DAY 15	MEAN±S.D.	242.8 ± 14.3	240.8 ± 12.4	242.5 ± 12.3
DAY 22	MEAN±S.D.	254.2 ± 15.4 [27]a	248.8 ± 14.5	250.2 ± 12.3
DAY 29	MEAN±S.D.	264.5 ± 17.9 [27]a	253.1 ± 13.8**	252.5 ± 14.3**
DAY 36	MEAN±S.D.	272.1 ± 17.1 [27]a	257.4 ± 15.7**	255.5 ± 15.0**
DAY 42b	MEAN±S.D.	275.5 ± 19.7 [27]a	257.6 ± 16.4**	257.9 ± 14.9**

DAY = DAY OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for rat 11562, which was moribund sacrificed on day 16 of study.
b. Last value recorded before cohabitation.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 5 (PAGE 1): BODY WEIGHT CHANGES - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
BODY WEIGHT CHANGE (G)								
DAYS 1 - 8	MEAN±S.D.	+14.5 ± 8.6	+21.2 ± 6.6**	+17.7 ± 6.4	+17.7 ± 8.7	+18.3 ± 9.1	+19.5 ± 6.9*	+15.4 ± 6.6
DAYS 8 - 15	MEAN±S.D.	+8.7 ± 5.2	+11.2 ± 7.5	+11.6 ± 5.2	+10.1 ± 6.1	+9.0 ± 6.4	+8.4 ± 5.5	+8.2 ± 6.6
DAYS 15 - 22	MEAN±S.D.	+9.4 ± 6.9	+10.0 ± 6.8	+7.8 ± 4.9	+10.8 ± 5.1	+9.0 ± 5.0	+7.0 ± 4.2	+7.1 ± 6.6
DAYS 22 - 29	MEAN±S.D.	+7.4 ± 5.9	+4.9 ± 5.9	+4.6 ± 6.8	+7.2 ± 5.4	+6.5 ± 6.3	+5.6 ± 5.0	+2.8 ± 4.9
DAYS 29 - 36	MEAN±S.D.	+7.3 ± 4.7	+9.0 ± 5.7	+7.6 ± 5.2	+7.0 ± 4.4	+6.7 ± 4.0	+4.2 ± 4.9*	+4.2 ± 4.2*
DAYS 36 - 42a	MEAN±S.D.	+3.0 ± 8.4	+4.7 ± 7.6	+1.6 ± 9.1	+2.3 ± 8.2	+0.2 ± 8.5	-0.1 ± 6.0	+1.5 ± 6.8
DAYS 1 - 42a	MEAN±S.D.	+50.2 ± 17.3	+61.0 ± 15.0*	+50.8 ± 15.5	+55.0 ± 17.9	+49.8 ± 14.1	+44.5 ± 10.4	+39.2 ± 16.4*

DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 5 (PAGE 2): BODY WEIGHT CHANGES - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	29	28
INCLUDED IN ANALYSES	N	28	28a	28
BODY WEIGHT CHANGE (G)				
DAYS 1 - 8	MEAN±S.D.	+13.4 ± 8.0	+15.9 ± 7.6	+18.6 ± 5.2**
DAYS 8 - 15	MEAN±S.D.	+10.6 ± 5.7	+8.8 ± 6.6	+8.7 ± 4.3
DAYS 15 - 22	MEAN±S.D.	+8.9 ± 5.5	+9.0 ± 5.4	+9.7 ± 5.2
DAYS 22 - 29	MEAN±S.D.	+8.3 ± 6.5	+4.1 ± 4.7**	+5.6 ± 4.8
DAYS 29 - 36	MEAN±S.D.	+8.0 ± 5.9	+4.5 ± 4.2**	+4.8 ± 3.7*
DAYS 36 - 42b	MEAN±S.D.	+2.1 ± 6.9	+3.2 ± 6.5	+3.3 ± 5.0
DAYS 1 - 42b	MEAN±S.D.	+51.4 ± 13.7	+45.6 ± 16.6	+50.8 ± 10.6

DAYS = DAYS OF STUDY
a. Excludes values for rat 10936, which was found dead on day 2 of study.
b. Last value recorded before cohabitation.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 5 (PAGE 3): BODY WEIGHT CHANGES - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	28	28	28
BODY WEIGHT CHANGE (G)				
DAYS 1 - 8	MEAN±S.D.	+18.0 ± 7.5	+15.8 ± 5.8	+17.6 ± 7.2
DAYS 8 - 15	MEAN±S.D.	+10.0 ± 6.9	+9.3 ± 5.3	+9.5 ± 6.2
DAYS 15 - 22	MEAN±S.D.	+10.7 ± 4.8 [27]a	+8.1 ± 6.1	+7.7 ± 5.2
DAYS 22 - 29	MEAN±S.D.	+10.3 ± 7.0 [27]a	+4.3 ± 4.4**	+2.2 ± 5.6**
DAYS 29 - 36	MEAN±S.D.	+7.7 ± 7.8 [27]a	+4.3 ± 5.6*	+3.0 ± 4.6**
DAYS 36 - 42b	MEAN±S.D.	+3.4 ± 7.4 [27]a	+0.1 ± 3.4	+2.4 ± 6.0
DAYS 1 - 42b	MEAN±S.D.	+60.7 ± 16.8# [27]a	+41.9 ± 11.0**	+42.5 ± 14.0**

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for rat 11562, which was moribund sacrificed on day 16 of study.
b. Last value recorded before cohabitation.
\# Significantly different from the Group 1 value ($p \leq 0.05$).
* Significantly different from the Group 5 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 1): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP			1	8	9	10	11	12	13
DOSAGE MG/KG PFOS			VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED		N	28	20	20	20	20	28	28
PREGNANT		N	27	20	17	19	18	25	27
MATERNAL BODY WEIGHT (G)									
DAY	0	MEAN±S.D.	275.0 ± 21.6	281.6 ± 17.0	274.0 ± 22.1	274.2 ± 19.9	268.2 ± 18.6	267.8 ± 15.8	259.7 ± 19.0*
DAY	1	MEAN±S.D.	283.3 ± 20.4	291.2 ± 18.5	281.1 ± 23.3	282.6 ± 21.1	275.4 ± 17.5	272.6 ± 16.8	265.7 ± 19.9**
DAY	2	MEAN±S.D.	287.9 ± 20.9	294.6 ± 19.7	284.4 ± 23.2	286.6 ± 22.0	277.6 ± 17.8	275.0 ± 16.2*	267.0 ± 17.9**
DAY	3	MEAN±S.D.	289.0 ± 20.2	296.2 ± 18.6	284.7 ± 22.6	287.6 ± 19.8	277.5 ± 19.4	275.4 ± 16.1*	268.0 ± 17.1**
DAY	4	MEAN±S.D.	291.7 ± 19.5	299.6 ± 19.7	286.6 ± 22.9	288.2 ± 18.1	278.6 ± 18.6	276.5 ± 16.5*	269.4 ± 17.0**
DAY	5	MEAN±S.D.	293.6 ± 19.9	304.0 ± 19.8	290.4 ± 23.7	291.2 ± 18.6	281.3 ± 16.8	277.9 ± 17.0**	271.8 ± 17.0**
DAY	6	MEAN±S.D.	295.4 ± 20.2	306.2 ± 20.1	289.8 ± 22.0	292.1 ± 18.5	283.6 ± 18.0	280.2 ± 16.9*	272.9 ± 17.1**
DAY	7	MEAN±S.D.	298.9 ± 20.0	308.4 ± 19.2	292.5 ± 21.7	294.3 ± 19.9	286.1 ± 19.2	283.6 ± 16.6*	276.5 ± 17.6**
DAY	8	MEAN±S.D.	299.6 ± 21.8	311.8 ± 19.1	295.2 ± 21.8	296.8 ± 16.5	289.5 ± 19.9	286.1 ± 15.9*	278.7 ± 18.3**
DAY	9	MEAN±S.D.	304.0 ± 21.9	314.8 ± 19.3	289.9 ± 22.3	300.2 ± 16.9	291.4 ± 19.3	288.4 ± 19.0*	281.5 ± 17.4**
DAY	10	MEAN±S.D.	308.4 ± 21.9	318.7 ± 19.5	303.5 ± 23.0	303.9 ± 17.0	295.3 ± 20.3	293.1 ± 17.8*	286.2 ± 17.8**

DAY = DAY OF GESTATION
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 2): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
PREGNANT	N	27	20	17	19	18	25	27
MATERNAL BODY WEIGHT (G)								
DAY 11	MEAN±S.D.	313.8 ± 21.1	324.2 ± 19.5	308.6 ± 23.2	310.0 ± 17.9	302.2 ± 19.9	296.4 ± 18.4**	291.2 ± 19.4**
DAY 12	MEAN±S.D.	318.2 ± 22.3	329.8 ± 19.2	312.9 ± 24.7	312.4 ± 18.5	306.8 ± 22.5	299.1 ± 19.2**	294.4 ± 18.8**
DAY 13	MEAN±S.D.	322.8 ± 22.4	332.0 ± 20.2	317.2 ± 25.4	318.3 ± 17.2	309.3 ± 19.7	304.3 ± 19.4**	299.2 ± 18.4**
DAY 14	MEAN±S.D.	326.8 ± 22.6	337.6 ± 21.2	323.4 ± 27.3	326.6 ± 17.9	316.2 ± 19.4	310.4 ± 18.2*	302.9 ± 19.0**
DAY 15	MEAN±S.D.	333.9 ± 23.0	347.1 ± 20.9	332.4 ± 25.3	333.1 ± 18.3	322.4 ± 21.2	319.1 ± 19.0*	313.3 ± 19.4**
DAY 16	MEAN±S.D.	343.1 ± 24.1	357.0 ± 22.6	343.3 ± 26.0	344.8 ± 16.8	333.3 ± 21.3	328.7 ± 19.6*	323.4 ± 19.3**
DAY 17	MEAN±S.D.	356.0 ± 26.6	370.4 ± 23.0	357.0 ± 26.4	357.9 ± 18.1	347.9 ± 22.5	343.4 ± 20.6	337.3 ± 20.0**
DAY 18	MEAN±S.D.	370.1 ± 28.6	383.6 ± 23.9	371.2 ± 26.1	373.4 ± 18.7	362.7 ± 23.7	358.5 ± 20.3	352.1 ± 21.0*
DAY 19	MEAN±S.D.	381.9 ± 29.9	395.8 ± 24.4	384.6 ± 28.0	386.7 ± 17.1	373.2 ± 25.3	373.0 ± 21.8	365.6 ± 21.5*
DAY 20	MEAN±S.D.	396.2 ± 31.3	410.3 ± 26.0	395.6 ± 26.2	400.2 ± 20.1	387.1 ± 27.0	385.1 ± 25.0	380.0 ± 23.3
DAY 21	MEAN±S.D.	410.6 ± 31.1	421.2 ± 28.9 [18]a	408.5 ± 25.3 [12]a	408.6 ± 22.2 [12]a	394.5 ± 31.7 [15]a	398.3 ± 26.1 [20]a	397.5 ± 30.2 [21]a

DAY = DAY OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for dams that delivered.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 3): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS			2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED		N	28	28a	28
PREGNANT		N	27	26	27
MATERNAL BODY WEIGHT (G)					
DAY	0	MEAN±S.D.	275.3 ± 19.0	266.6 ± 22.9	272.0 ± 16.9
DAY	1	MEAN±S.D.	283.0 ± 18.8	271.5 ± 22.3	275.7 ± 17.5
DAY	2	MEAN±S.D.	286.3 ± 18.9	273.4 ± 22.4	278.1 ± 18.5
DAY	3	MEAN±S.D.	287.0 ± 18.9	273.8 ± 23.1	278.6 ± 19.0
DAY	4	MEAN±S.D.	289.0 ± 18.9	275.6 ± 22.2*	279.1 ± 18.4
DAY	5	MEAN±S.D.	290.8 ± 19.3	275.9 ± 22.1**	281.3 ± 18.5
DAY	6	MEAN±S.D.	292.9 ± 19.0	277.9 ± 23.3**	282.4 ± 18.9
DAY	7	MEAN±S.D.	296.0 ± 17.9	280.0 ± 22.3**	284.7 ± 19.9*
DAY	8	MEAN±S.D.	299.0 ± 18.2	282.3 ± 22.9**	286.6 ± 18.9*
DAY	9	MEAN±S.D.	302.6 ± 19.4	285.6 ± 23.1**	290.0 ± 20.5*
DAY	10	MEAN±S.D.	305.9 ± 19.0	289.5 ± 23.4**	294.6 ± 19.7*

DAY = DAY OF GESTATION
a. Excludes rat 10936, which was found dead prior to gestation.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 4): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS			2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED		N	28	28a	28
PREGNANT		N	27	26	27
MATERNAL BODY WEIGHT (G)					
DAY 11		MEAN±S.D.	311.7 ± 18.5	294.4 ± 24.9**	300.7 ± 20.5
DAY 12		MEAN±S.D.	313.5 ± 18.3	299.0 ± 25.2*	303.3 ± 21.0
DAY 13		MEAN±S.D.	318.3 ± 18.6 [26]b	302.9 ± 25.9*	309.1 ± 20.5
DAY 14		MEAN±S.D.	322.8 ± 18.8 [26]b	308.4 ± 26.9	312.2 ± 21.6
DAY 15		MEAN±S.D.	330.6 ± 18.8 [26]b	315.9 ± 25.8	319.4 ± 24.0
DAY 16		MEAN±S.D.	339.4 ± 18.8 [26]b	325.7 ± 27.2	329.9 ± 25.6
DAY 17		MEAN±S.D.	351.0 ± 20.7 [26]b	340.5 ± 27.6	344.2 ± 25.8
DAY 18		MEAN±S.D.	363.4 ± 20.8 [26]b	356.4 ± 28.9	359.8 ± 27.1
DAY 19		MEAN±S.D.	379.4 ± 24.9 [26]b	368.9 ± 29.9	372.4 ± 26.8
DAY 20		MEAN±S.D.	390.9 ± 24.7 [26]b	382.7 ± 32.6	385.3 ± 28.4
DAY 21		MEAN±S.D.	403.5 ± 24.8 [25]b,c	398.2 ± 34.1 [25]c	403.4 ± 35.1 [19]c

DAY = DAY OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 10936, which was found dead prior to gestation.
b. Excludes values for dam 10926, which was moribund sacrificed on day 12 of gestation (death was attributed to an intubation accident).
c. Excludes values for dams that delivered.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 5): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS			5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED		N	27a	28	28
PREGNANT		N	25	28	27
MATERNAL BODY WEIGHT (G)					
DAY	0	MEAN±S.D.	284.8 ± 22.3	265.1 ± 17.9**	264.0 ± 17.9**
DAY	1	MEAN±S.D.	292.6 ± 22.7	268.2 ± 19.4**	267.1 ± 18.3**
DAY	2	MEAN±S.D.	297.6 ± 21.7	271.5 ± 18.7**	270.4 ± 17.7**
DAY	3	MEAN±S.D.	299.4 ± 22.6	272.6 ± 18.5**	270.1 ± 15.4**
DAY	4	MEAN±S.D.	302.3 ± 21.4	274.2 ± 18.3**	271.4 ± 17.3**
DAY	5	MEAN±S.D.	305.7 ± 22.4#	277.2 ± 19.5**	273.4 ± 16.7**
DAY	6	MEAN±S.D.	306.6 ± 25.2	279.6 ± 19.5**	276.0 ± 16.4**
DAY	7	MEAN±S.D.	309.8 ± 24.0	281.5 ± 20.5**	278.4 ± 17.7**
DAY	8	MEAN±S.D.	315.1 ± 25.0#	283.8 ± 21.0**	282.2 ± 17.5**
DAY	9	MEAN±S.D.	317.7 ± 24.6#	287.8 ± 19.6**	284.9 ± 17.2**
DAY	10	MEAN±S.D.	323.6 ± 24.4#	292.8 ± 20.5**	288.8 ± 19.2**

DAY = DAY OF GESTATION
a. Excludes rat 11562, which was moribund sacrificed prior to gestation.
\# Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 6 (PAGE 6): MATERNAL BODY WEIGHTS - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	27a	28	28
PREGNANT	N	25	28	27
MATERNAL BODY WEIGHT (G)				
DAY 11	MEAN±S.D.	329.0 ± 24.2#	295.8 ± 21.4**	292.8 ± 18.7**
DAY 12	MEAN±S.D.	332.9 ± 25.1#	300.8 ± 22.6**	296.3 ± 20.4**
DAY 13	MEAN±S.D.	335.7 ± 26.0#	305.6 ± 22.1**	300.8 ± 21.5**
DAY 14	MEAN±S.D.	340.7 ± 25.1#	310.1 ± 23.8**	305.4 ± 21.0**
DAY 15	MEAN±S.D.	347.6 ± 24.4#	318.4 ± 24.9**	314.4 ± 21.9**
DAY 16	MEAN±S.D.	357.3 ± 26.8#	329.0 ± 26.4**	325.4 ± 23.2**
DAY 17	MEAN±S.D.	370.2 ± 26.2#	342.4 ± 26.8**	339.7 ± 24.1**
DAY 18	MEAN±S.D.	383.2 ± 27.0	357.2 ± 29.2**	354.8 ± 24.9**
DAY 19	MEAN±S.D.	397.1 ± 28.6	370.1 ± 31.7**	369.3 ± 26.2**
DAY 20	MEAN±S.D.	410.3 ± 29.6	383.6 ± 32.6**	380.9 ± 28.1**
DAY 21	MEAN±S.D.	428.0 ± 31.1# [24]b	392.0 ± 31.6** [23]b	394.5 ± 29.0** [19]b

DAY = DAY OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 11562, which was moribund sacrificed prior to gestation.
b. Excludes values for dams that delivered.
Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 7 (PAGE 1): MATERNAL BODY WEIGHT CHANGES - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
PREGNANT	N	27	20	17	19	18	25	27
MATERNAL BODY WEIGHT CHANGE (G)								
DAYS 0 - 7	MEAN±S.D.	+23.8 ± 7.0	+26.8 ± 7.5	+18.5 ± 8.6*	+20.0 ± 7.0	+17.9 ± 6.2*	+15.8 ± 5.3**	+16.8 ± 6.0**
DAYS 7 - 14	MEAN±S.D.	+27.9 ± 6.1	+29.2 ± 8.7	+30.9 ± 8.5	+32.3 ± 7.5	+30.1 ± 6.9	+26.7 ± 6.4	+26.4 ± 6.5
DAYS 14 - 21	MEAN±S.D.	+83.8 ± 13.3	+84.3 ± 13.6 [18]a	+86.2 ± 7.6 [12]a	+78.4 ± 25.6 [12]a	+79.9 ± 16.6 [15]a	+87.2 ± 15.3 [20]a	+96.8 ± 20.0* [21]a
DAYS 0 - 21	MEAN±S.D.	+135.5 ± 15.6	+139.7 ± 17.5 [18]a	+133.4 ± 13.7 [12]a	+132.6 ± 29.6 [12]a	+128.3 ± 23.5 [15]a	+129.6 ± 16.7 [20]a	+138.9 ± 20.3 [21]a

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for dams that delivered.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 7 (PAGE 2): MATERNAL BODY WEIGHT CHANGES - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	28a	28
PREGNANT	N	27	26	27
MATERNAL BODY WEIGHT CHANGE (G)				
DAYS 0 - 7	MEAN±S.D.	+20.7 ± 6.1	+13.4 ± 7.4**	+12.7 ± 7.8**
DAYS 7 - 14	MEAN±S.D.	+27.3 ± 7.2 [26]b	+28.4 ± 6.5	+27.6 ± 8.2
DAYS 14 - 21	MEAN±S.D.	+81.8 ± 14.5 [25]b,c	+90.4 ± 15.5 [25]c	+88.8 ± 23.8 [19]c
DAYS 0 - 21	MEAN±S.D.	+130.1 ± 17.8 [25]b,c	+132.2 ± 18.3 [25]c	+130.1 ± 30.1 [19]c

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 10936, which was found dead prior to gestation.
b. Excludes values for dam 10926, which was moribund sacrificed on day 12 of gestation (death was attributed to an intubation accident).
c. Excludes values for dams that delivered.
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 7 (PAGE 3): MATERNAL BODY WEIGHT CHANGES - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	27a	28	28
PREGNANT	N	25	28	27
MATERNAL BODY WEIGHT CHANGE (G)				
DAYS 0 - 7	MEAN±S.D.	+25.0 ± 10.4	+16.4 ± 8.9**	+14.4 ± 6.1**
DAYS 7 - 14	MEAN±S.D.	+30.9 ± 6.9	+28.6 ± 8.2	+26.9 ± 7.0
DAYS 14 - 21	MEAN±S.D.	+86.5 ± 14.9 [24]b	+86.4 ± 18.5 [23]b	+89.6 ± 18.7 [19]b
DAYS 0 - 21	MEAN±S.D.	+142.8 ± 19.8 [24]b	+129.7 ± 22.8* [23]b	+128.5 ± 15.4* [19]b

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 11562, which was moribund sacrificed prior to gestation.
b. Excludes values for dams that delivered.
* Significantly different from the Group 5 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 8 (PAGE 1): BODY WEIGHTS - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	19	20	20	20	20	20	20
PREGNANT	N	19	20	17	19	18	17	19
DELIVERED A LITTER	N	19	20	17	19	18	17	19
BODY WEIGHT (G)								
DAY 1	MEAN±S.D.	301.3 ± 26.0	311.0 ± 19.9	304.0 ± 24.6	304.4 ± 15.5	298.1 ± 20.1	298.2 ± 20.0	291.0 ± 21.2
DAY 5	MEAN±S.D.	318.7 ± 28.5	326.7 ± 21.6	308.3 ± 42.0	309.5 ± 19.8 [18]a	305.6 ± 23.2	298.6 ± 19.8 [14]a	283.8 ± 7.5* [6]a

DAY = DAY OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
* Significantly different from the Group 1 value ($p \leq 0.05$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 8 (PAGE 2): BODY WEIGHTS - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS			2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED		N	19a	20a	20
PREGNANT		N	18	18	19
DELIVERED A LITTER		N	18	18	19
INCLUDED IN ANALYSES		N	18	18	18b
BODY WEIGHT (G)					
DAY	1	MEAN±S.D.	299.3 ± 24.8	301.4 ± 28.6	300.8 ± 20.0
DAY	5	MEAN±S.D.	319.5 ± 18.5	315.8 ± 23.4 [12]b	297.0 ± 14.1 [3]b

DAY = DAY OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rats that died or were moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 8 (PAGE 3): BODY WEIGHTS - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	19a	20	20
PREGNANT	N	17	20	19
DELIVERED A LITTER	N	17	20	19
BODY WEIGHT (G)				
DAY 1	MEAN±S.D.	312.4 ± 24.3	294.8 ± 24.8*	295.4 ± 22.6*
DAY 5	MEAN±S.D.	328.0 ± 31.9	303.9 ± 19.0* [13]b	280.8 ± 15.6** [7]b

DAY = DAY OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 11562, which was moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
* Significantly different from the Group 5 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 9 (PAGE 1): BODY WEIGHT CHANGES - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	19	20	20	20	20	20	20
PREGNANT	N	19	20	17	19	18	17	19
DELIVERED A LITTER	N	19	20	17	19	18	17	19
INCLUDED IN ANALYSES	N	19	20	17	18a	18	14a	6a
BODY WEIGHT CHANGE (G)								
DAYS 1 - 5	MEAN±S.D.	+17.4 ± 11.1	+15.7 ± 15.4	+4.3 ± 25.8*	+4.0 ± 10.5*	+7.5 ± 11.6	+1.1 ± 12.7**	-3.5 ± 16.8*

DAYS = DAYS OF LACTATION
a. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 9 (PAGE 2): BODY WEIGHT CHANGES - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	19a	20a	20
PREGNANT	N	18	18	19
DELIVERED A LITTER	N	18	18	19
INCLUDED IN ANALYSES	N	18	12b	3b
BODY WEIGHT CHANGE (G)				
DAYS 1 - 5	MEAN±S.D.	+20.2 ± 15.3	+7.7 ± 15.5*	+1.7 ± 11.2

DAYS = DAYS OF LACTATION
a. Excludes rats that died or were moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
* Significantly different from the Group 2 value ($p \leq 0.05$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 9 (PAGE 3): BODY WEIGHT CHANGES - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	19a	20	20
PREGNANT	N	17	20	19
DELIVERED A LITTER	N	17	20	19
INCLUDED IN ANALYSES	N	17	13b	7b
BODY WEIGHT CHANGE (G)				
DAYS 1 - 5	MEAN±S.D.	+15.7 ± 19.8	+7.6 ± 18.4	-5.0 ± 9.8*

DAYS = DAYS OF LACTATION
a. Excludes rat 11562, which was moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
* Significantly different from the Group 5 value ($p \leq 0.05$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 10 (PAGE 1): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
FEED CONSUMPTION (G/DAY)								
DAYS 1 - 8	MEAN±S.D.	19.6 ± 3.0 [26]a	19.6 ± 1.9 [19]a	19.1 ± 1.9 [19]a	18.9 ± 2.2	19.2 ± 1.5	19.9 ± 2.0	19.0 ± 1.8 [27]a
DAYS 8 - 15	MEAN±S.D.	19.0 ± 1.8	19.0 ± 3.6	18.9 ± 1.5 [19]a	19.4 ± 2.9 [19]a	18.7 ± 1.8	18.9 ± 1.9	18.0 ± 1.5
DAYS 15 - 22	MEAN±S.D.	18.9 ± 2.3	19.4 ± 1.8 [19]a	19.2 ± 1.6 [18]a	20.4 ± 2.2*	19.1 ± 1.4 [17]a	19.1 ± 2.1 [27]a	18.2 ± 1.6 [27]a
DAYS 22 - 29	MEAN±S.D.	18.8 ± 2.0	19.4 ± 2.0	19.0 ± 2.5 [19]a	19.8 ± 1.8	18.8 ± 1.7 [19]a	18.5 ± 1.6 [27]a	17.6 ± 1.7*
DAYS 29 - 36	MEAN±S.D.	18.8 ± 2.1	20.2 ± 2.2* [17]a	18.3 ± 2.1 [18]a	19.7 ± 2.2 [19]a	18.3 ± 1.7 [19]a	18.3 ± 2.2	17.0 ± 1.5** [26]a
DAYS 36 - 42b	MEAN±S.D.	18.3 ± 2.1	19.4 ± 2.1	18.2 ± 2.6	18.3 ± 2.0 [19]a	17.4 ± 2.2 [19]a	17.0 ± 1.6*	16.3 ± 1.6** [27]a
DAYS 1 - 42b	MEAN±S.D.	18.9 ± 1.8	19.6 ± 1.8	19.0 ± 1.8	19.4 ± 1.8 [19]a	18.6 ± 1.3 [19]a	18.7 ± 1.6	17.8 ± 1.3* [27]a

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were associated with spillage.
b. Last value recorded before cohabitation.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 10 (PAGE 2): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	29	28
INCLUDED IN ANALYSES	N	28	28a	28
FEED CONSUMPTION (G/DAY)				
DAYS 1 - 8	MEAN±S.D.	19.9 ± 1.4 [26]b	19.2 ± 1.9	19.5 ± 1.4 [27]b
DAYS 8 - 15	MEAN±S.D.	20.1 ± 2.2	19.0 ± 3.4	18.8 ± 2.1
DAYS 15 - 22	MEAN±S.D.	20.1 ± 2.2 [27]b	18.8 ± 2.5 [27]b	19.0 ± 1.9 [27]b
DAYS 22 - 29	MEAN±S.D.	20.0 ± 1.9	18.0 ± 2.4** [27]b	18.4 ± 1.7** [26]b
DAYS 29 - 36	MEAN±S.D.	19.4 ± 2.2 [26]b	18.4 ± 2.2	18.3 ± 2.5 [26]b
DAYS 36 - 42c	MEAN±S.D.	18.8 ± 2.1	17.5 ± 2.3* [27]b	17.4 ± 2.3*
DAYS 1 - 42c	MEAN±S.D.	19.8 ± 1.7	18.5 ± 2.0** [27]b	18.7 ± 1.5*

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for rat 10936, which was found dead on day 2 of study.
b. Excludes values that were not recorded or were associated with spillage.
c. Last value recorded before cohabitation.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 10 (PAGE 3): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	28	28	28
FEED CONSUMPTION (G/DAY)				
DAYS 1 - 8	MEAN±S.D.	19.1 ± 1.5	18.7 ± 1.6	19.0 ± 1.5
DAYS 8 - 15	MEAN±S.D.	19.2 ± 1.8 [27]a	18.6 ± 1.3	18.9 ± 1.9
DAYS 15 - 22	MEAN±S.D.	20.0 ± 2.0 [27]b	18.8 ± 2.1	18.9 ± 2.1 [27]a
DAYS 22 - 29	MEAN±S.D.	19.8 ± 2.0 [27]b	17.9 ± 1.5**	17.7 ± 1.9**
DAYS 29 - 36	MEAN±S.D.	20.9 ± 2.5## [25]a,b	18.3 ± 1.4** [23]a	18.2 ± 2.4** [25]a
DAYS 36 - 42c	MEAN±S.D.	19.7 ± 2.1# [27]b	17.3 ± 1.5**	17.3 ± 1.6**
DAYS 1 - 42c	MEAN±S.D.	19.7 ± 1.7 [27]b	18.3 ± 1.2**	18.4 ± 1.6**

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were associated with spillage.
b. Excludes values for rat 11562, which was moribund sacrificed on day 16 of study.
c. Last value recorded before cohabitation.
\# Significantly different from the Group 1 value ($p \leq 0.05$).
Significantly different from the Group 1 value ($p \leq 0.01$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 11 (PAGE 1): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
FEED CONSUMPTION (G/KG/DAY)								
DAYS 1 - 8	MEAN±S.D.	88.2 ± 14.0 [26]a	87.0 ± 8.3 [19]a	85.3 ± 7.8 [19]a	84.8 ± 8.9	85.8 ± 6.6	88.4 ± 7.7	85.0 ± 7.0 [27]a
DAYS 8 - 15	MEAN±S.D.	80.9 ± 4.9	78.4 ± 14.4	79.4 ± 4.9 [19]a	81.6 ± 10.5 [19]a	78.6 ± 4.9	78.9 ± 5.6	76.6 ± 4.7*
DAYS 15 - 22	MEAN±S.D.	77.7 ± 6.3	77.1 ± 6.8 [19]a	77.4 ± 3.8 [18]a	82.7 ± 8.8*	77.9 ± 3.4 [17]a	77.3 ± 5.3 [27]a	75.0 ± 5.2 [27]a
DAYS 22 - 29	MEAN±S.D.	74.9 ± 5.3	74.6 ± 6.2	74.5 ± 7.4 [19]a	77.4 ± 6.9	74.1 ± 6.5 [19]a	73.2 ± 4.4 [27]a	71.1 ± 6.0*
DAYS 29 - 36	MEAN±S.D.	72.6 ± 6.4	76.6 ± 6.9 [17]a	70.6 ± 5.2 [18]a	75.1 ± 7.8 [19]a	70.2 ± 5.9 [19]a	70.8 ± 6.8	68.2 ± 4.9* [26]a
DAYS 36 - 42b	MEAN±S.D.	69.1 ± 5.4	70.7 ± 5.3	68.6 ± 7.6	68.8 ± 6.7 [19]a	65.8 ± 6.7 [19]a	65.2 ± 4.4*	63.9 ± 4.3** [27]a
DAYS 1 - 42b	MEAN±S.D.	77.2 ± 4.6	77.6 ± 5.8	76.7 ± 5.3	78.8 ± 6.3 [19]a	75.4 ± 4.0 [19]a	75.8 ± 4.2	73.4 ± 3.8* [27]a

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were associated with spillage.
b. Last value recorded before cohabitation.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 11 (PAGE 2): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	29	28
INCLUDED IN ANALYSES	N	28	28a	28
FEED CONSUMPTION (G/KG/DAY)				
DAYS 1 - 8	MEAN±S.D.	89.5 ± 6.9 [26]b	85.8 ± 7.8	86.8 ± 5.6 [27]b
DAYS 8 - 15	MEAN±S.D.	85.6 ± 6.6##	80.4 ± 12.4*	78.9 ± 7.7**
DAYS 15 - 22	MEAN±S.D.	82.4 ± 7.0# [27]b	76.9 ± 7.9** [27]b	76.9 ± 7.5** [27]b
DAYS 22 - 29	MEAN±S.D.	78.8 ± 6.2#	71.6 ± 6.2** [27]b	71.8 ± 5.6** [26]b
DAYS 29 - 36	MEAN±S.D.	74.6 ± 6.5 [26]b	71.9 ± 6.3	70.9 ± 10.4 [26]b
DAYS 36 - 42c	MEAN±S.D.	70.4 ± 6.8	67.3 ± 5.6 [27]b	65.6 ± 6.5**
DAYS 1 - 42c	MEAN±S.D.	80.3 ± 4.5#	75.7 ± 5.3** [27]b	75.4 ± 4.7**

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for rat 10936, which was found dead on day 2 of study.
b. Excludes values that were not recorded or were associated with spillage.
c. Last value recorded before cohabitation.
\# Significantly different from the Group 1 value ($p \leq 0.05$).
\## Significantly different from the Group 1 value ($p \leq 0.01$).
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 11 (PAGE 3): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - PREMATING - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	28	28	28
FEED CONSUMPTION (G/KG/DAY)				
DAYS 1 - 8	MEAN±S.D.	85.2 ± 5.1	83.6 ± 6.0	84.6 ± 6.3
DAYS 8 - 15	MEAN±S.D.	80.8 ± 5.2 [27]a	79.0 ± 4.0	79.4 ± 7.2
DAYS 15 - 22	MEAN±S.D.	80.2 ± 6.9 [27]b	76.7 ± 6.9	76.9 ± 8.8 [27]a
DAYS 22 - 29	MEAN±S.D.	76.2 ± 6.3 [27]b	71.4 ± 3.9**	70.3 ± 6.6**
DAYS 29 - 36	MEAN±S.D.	77.9 ± 8.0## [25]a,b	71.5 ± 3.6** [23]a	71.4 ± 7.7** [25]a
DAYS 36 - 42c	MEAN±S.D.	71.9 ± 6.5 [27]b	67.2 ± 4.5**	67.6 ± 6.5**
DAYS 1 - 42c	MEAN±S.D.	78.6 ± 4.7 [27]b	75.1 ± 2.8**	75.5 ± 5.7*

DAYS = DAYS OF STUDY
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were associated with spillage.
b. Excludes values for rat 11562, which was moribund sacrificed on day 16 of study.
c. Last value recorded before cohabitation.
Significantly different from the Group 1 value ($p \leq 0.01$).
* Significantly different from the Group 5 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 12 (PAGE 1): MATERNAL ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
PREGNANT	N	27	20	17	19	18	25	27
MATERNAL FEED CONSUMPTION (G/DAY)								
DAYS 0 - 7	MEAN±S.D.	22.3 ± 2.2	22.7 ± 2.3	20.6 ± 2.4*	20.7 ± 2.0*	19.6 ± 1.9**	19.0 ± 2.1**	18.6 ± 2.2** [26]a
DAYS 7 - 14	MEAN±S.D.	22.9 ± 2.2	23.2 ± 1.6 [19]a	22.7 ± 2.5	21.7 ± 2.7	22.0 ± 2.1	21.2 ± 2.7	21.0 ± 4.0*
DAYS 14 - 21	MEAN±S.D.	24.3 ± 2.2	24.5 ± 2.5	25.1 ± 2.2 [13]a,b	25.0 ± 2.5	24.7 ± 2.6	25.2 ± 2.3 [23]b	24.4 ± 2.8 [26]a
DAYS 0 - 21	MEAN±S.D.	23.2 ± 1.9	23.6 ± 1.8	22.8 ± 2.2 [13]a,b	22.5 ± 1.8	22.1 ± 1.9	21.8 ± 2.1* [23]b	21.4 ± 2.0** [26]a

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were not recorded as well as those associated with spillage.
b. Excludes values for dams that delivered.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 12 (PAGE 2): MATERNAL ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	28a	28
PREGNANT	N	27	26	27
MATERNAL FEED CONSUMPTION (G/DAY)				
DAYS 0 - 7	MEAN±S.D.	21.6 ± 1.8	18.2 ± 2.3**	19.1 ± 2.7**
DAYS 7 - 14	MEAN±S.D.	23.2 ± 2.1 [24]b,c	20.9 ± 1.9**	20.8 ± 2.0** [25]c
DAYS 14 - 21	MEAN±S.D.	24.4 ± 2.5 [26]b	25.0 ± 2.4 [22]d	23.8 ± 3.6 [24]d
DAYS 0 - 21	MEAN±S.D.	23.0 ± 1.8 [26]b	21.5 ± 2.0** [22]d	21.5 ± 2.2** [24]d

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 10936, which was found dead prior to gestation.
b. Excludes values for dam 10926, which was moribund sacrificed on day 12 of gestation (death was attributed to an intubation accident).
c. Excludes values that were associated with spillage.
d. Excludes values for dams that delivered.
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 12 (PAGE 3): MATERNAL ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	27a	28	28
PREGNANT	N	25	28	27
MATERNAL FEED CONSUMPTION (G/DAY)				
DAYS 0 - 7	MEAN±S.D.	22.9 ± 2.9 [23]b	18.9 ± 2.2**	18.3 ± 2.0**
DAYS 7 - 14	MEAN±S.D.	24.3 ± 2.7 [24]b	21.2 ± 2.1** [27]b	20.8 ± 1.8** [26]b
DAYS 14 - 21	MEAN±S.D.	25.4 ± 2.9 [23]c	24.6 ± 2.1 [26]c	25.0 ± 2.3 [26]c
DAYS 0 - 21	MEAN±S.D.	24.3 ± 2.6 [23]c	21.5 ± 1.8** [26]c	21.5 ± 1.8** [26]c

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 11562, which was moribund sacrificed prior to gestation.
b. Excludes values that were associated with spillage.
c. Excludes values for dams that delivered.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 13 (PAGE 1): MATERNAL RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	28	20	20	20	20	28	28
PREGNANT	N	27	20	17	19	18	25	27
MATERNAL FEED CONSUMPTION (G/KG/DAY)								
DAYS 0 - 7	MEAN±S.D.	77.2 ± 5.7	76.3 ± 5.0	72.2 ± 5.4*	72.3 ± 7.2*	70.3 ± 5.2**	68.6 ± 5.4**	69.0 ± 6.6** [26]a
DAYS 7 - 14	MEAN±S.D.	73.4 ± 4.2	72.2 ± 4.1 [19]a	74.0 ± 4.2	70.6 ± 8.3	73.7 ± 6.8	71.8 ± 6.3	72.7 ± 11.4
DAYS 14 - 21	MEAN±S.D.	66.8 ± 5.4	65.1 ± 6.8 [18]b	68.8 ± 4.3 [11]a,b	68.1 ± 9.0 [12]b	68.9 ± 5.8 [15]b	72.1 ± 5.8* [20]b	70.7 ± 7.5 [20]a,b
DAYS 0 - 21	MEAN±S.D.	71.9 ± 4.0	70.8 ± 4.0 [18]b	70.5 ± 3.9 [11]a,b	71.2 ± 6.9 [12]b	70.4 ± 4.5 [15]b	70.8 ± 3.6 [20]b	71.0 ± 5.6 [20]a,b

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values that were not recorded as well as those associated with spillage.
b. Excludes values for dams that delivered.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 13 (PAGE 2): MATERNAL RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	28	28a	28
PREGNANT	N	27	26	27
MATERNAL FEED CONSUMPTION (G/KG/DAY)				
DAYS 0 - 7	MEAN±S.D.	75.4 ± 6.1	66.3 ± 6.4**	68.4 ± 8.2**
DAYS 7 - 14	MEAN±S.D.	74.9 ± 6.0 [24]b,c	71.5 ± 3.4*	70.1 ± 6.4** [25]c
DAYS 14 - 21	MEAN±S.D.	67.9 ± 4.8 [25]b,c	71.8 ± 5.9 [21]d	68.6 ± 8.4 [19]d
DAYS 0 - 21	MEAN±S.D.	72.5 ± 4.0 [25]b,c	70.2 ± 4.2 [21]d	70.0 ± 5.9 [19]d

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 10936, which was found dead prior to gestation.
b. Excludes values for rat 10926, which was moribund sacrificed on day 12 of gestation (death was attributed to an intubation accident).
c. Excludes values that were associated with spillage.
d. Excludes values for dams that delivered.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 13 (PAGE 3): MATERNAL RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - GESTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	27a	28	28
PREGNANT	N	25	28	27
MATERNAL FEED CONSUMPTION (G/KG/DAY)				
DAYS 0 - 7	MEAN±S.D.	76.7 ± 7.8 [23]b	69.1 ± 6.0**	67.5 ± 7.2**
DAYS 7 - 14	MEAN±S.D.	74.8 ± 6.7 [24]b	71.8 ± 5.1 [27]b	71.8 ± 5.3 [26]b
DAYS 14 - 21	MEAN±S.D.	66.9 ± 6.4 [23]c	71.2 ± 4.4* [23]c	72.6 ± 6.0** [19]c
DAYS 0 - 21	MEAN±S.D.	72.2 ± 5.7 [23]c	70.6 ± 3.5 [23]c	70.4 ± 5.3 [19]c

DAYS = DAYS OF GESTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rat 11562, which was moribund sacrificed prior to gestation.
b. Excludes values that were associated with spillage.
c. Excludes values for dams that delivered.
* Significantly different from the Group 5 value ($p \leq 0.05$).
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 14 (PAGE 1): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	19	20	20	20	20	20	20
PREGNANT	N	19	20	17	19	18	17	19
DELIVERED A LITTER	N	19	20	17	19	18	17	19
INCLUDED IN ANALYSES	N	19	20	17	18a	18	14a	6a
FEED CONSUMPTION (G/DAY)								
DAYS 1 - 5	MEAN±S.D.	28.8 ± 4.7 [18]b	29.3 ± 9.7	24.0 ± 6.1	25.5 ± 8.7	23.7 ± 5.2	19.4 ± 5.8**	17.2 ± 7.3**

DAYS = DAYS OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
b. Excludes values that were associated with spillage.
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 14 (PAGE 2): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	19a	20a	20
PREGNANT	N	18	18	19
DELIVERED A LITTER	N	18	18	19
INCLUDED IN ANALYSES	N	18	12b	3b
FEED CONSUMPTION (G/DAY)				
DAYS 1 - 5	MEAN±S.D.	28.4 ± 5.3	20.2 ± 5.6** [11]c	13.9 ± 2.2**

DAYS = DAYS OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rats that died or were moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
c. Excludes values that were associated with spillage.
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 14 (PAGE 3): ABSOLUTE FEED CONSUMPTION VALUES (G/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	19a	20	20
PREGNANT	N	17	20	19
DELIVERED A LITTER	N	17	20	19
INCLUDED IN ANALYSES	N	17	13b	7b
FEED CONSUMPTION (G/DAY)				
DAYS 1 - 5	MEAN±S.D.	31.6 ± 5.1	19.9 ± 6.1**	14.6 ± 3.5**

DAYS = DAYS OF LACTATION
a. Excludes rat 11562, which was moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 15 (PAGE 1): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS TESTED	N	19	20	20	20	20	20	20
PREGNANT	N	19	20	17	19	18	17	19
DELIVERED A LITTER	N	19	20	17	19	18	17	19
INCLUDED IN ANALYSES	N	19	20	17	18a	18	14a	6a
FEED CONSUMPTION (G/KG/DAY)								
DAYS 1 - 5	MEAN±S.D.	92.8 ± 13.7 [18]b	92.3 ± 32.1	77.5 ± 15.0*	83.0 ± 29.6*	78.5 ± 15.3*	65.1 ± 18.9**	60.7 ± 26.6

DAYS = DAYS OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
b. Excludes values that were associated with spillage.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 15 (PAGE 2): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	19a	20a	20
PREGNANT	N	18	18	19
DELIVERED A LITTER	N	18	18	19
INCLUDED IN ANALYSES	N	18	12b	3b
FEED CONSUMPTION (G/KG/DAY)				
DAYS 1 - 5	MEAN±S.D.	92.6 ± 19.5	65.3 ± 19.1** [11]c	46.9 ± 6.2**

DAYS = DAYS OF LACTATION
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes rats that died or were moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
c. Excludes values that were associated with spillage.
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 15 (PAGE 3): RELATIVE FEED CONSUMPTION VALUES (G/KG/DAY) - LACTATION - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	19a	20	20
PREGNANT	N	17	20	19
DELIVERED A LITTER	N	17	20	19
INCLUDED IN ANALYSES	N	17	13b	7b
FEED CONSUMPTION (G/KG/DAY)				
DAYS 1 - 5	MEAN±S.D.	98.4 ± 11.5	66.5 ± 20.1**	52.0 ± 14.7**

DAYS = DAYS OF LACTATION
a. Excludes rat 11562, which was moribund sacrificed prior to lactation.
b. Excludes values for dams that were sacrificed due to no surviving pups prior to day 5 of lactation.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 16 (PAGE 1): MATING AND FERTILITY - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS IN COHABITATION	N	28	20	20	20	20	28	28
DAYS IN COHABITATION a	MEAN±S.D.	2.6 ± 2.4	2.7 ± 1.0	3.2 ± 2.9	3.0 ± 3.0	2.5 ± 2.9	3.1 ± 3.2	2.6 ± 2.1
RATS THAT MATED	N(%)	28(100.0)	20(100.0)	19(95.0)	20(100.0)	19(95.0)	27(96.4)	28(100.0)
FERTILITY INDEX b	N/N	27/ 28	20/ 20	17/ 19	19/ 20	18/ 19	25/ 27	27/ 28
	(%)	(96.4)	(100.0)	(89.5)	(95.0)	(94.7)	(92.6)	(96.4)
RATS WITH CONFIRMED MATING DATES	N	28	20	19	20	19	27	28
MATED BY FIRST MALE c								
DAYS 1-7	N(%)	27(96.4)	20(100.0)	19(100.0)	19(95.0)	19(100.0)	26(96.3)	27(96.4)
MATED BY SECOND MALE c								
DAYS 8-14	N(%)	1(3.6)	0(00.0)	0(00.0)	1(5.0)	0(00.0)	1(3.7)	1(3.6)
RATS PREGNANT/RATS IN COHABITATION	N/N	27/ 28	20/ 20	17/ 20	19/ 20	18/ 20	25/ 28	27/ 28
	(%)	(96.4)	(100.0)	(85.0)	(95.0)	(90.0)	(89.3)	(96.4)

a. Restricted to rats with a confirmed mating date and rats that did not mate.
b. Number of pregnancies/number of rats that mated.
c. Restricted to rats with a confirmed mating date.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 16 (PAGE 2): MATING AND FERTILITY - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS IN COHABITATION	N	28	28a	28
DAYS IN COHABITATION b	MEAN±S.D.	2.8 ± 2.2	2.0 ± 1.1	2.8 ± 2.2
RATS THAT MATED	N(%)	28(100.0)	28(100.0)	28(100.0)
FERTILITY INDEX c	N/N (%)	27/ 28 (96.4)	26/ 28 (92.8)	27/ 28 (96.4)
RATS WITH CONFIRMED MATING DATES	N	28	28	28
MATED BY FIRST MALE d DAYS 1-7	N(%)	27(96.4)	28(100.0)	27(96.4)
MATED BY SECOND MALE d DAYS 8-14	N(%)	1(3.6)	0(00.0)	1(3.6)
RATS PREGNANT/RATS IN COHABITATION	N/N (%)	27/ 28 (96.4)	26/ 28 (92.8)	27/ 28 (96.4)

a. Excludes rat 10936, which was found dead on day 2 of study.
b. Restricted to rats with a confirmed mating date and rats that did not mate.
c. Number of pregnancies/number of rats that mated.
d. Restricted to rats with a confirmed mating date.

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TABLE 16 (PAGE 3): MATING AND FERTILITY - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS IN COHABITATION	N	27a	28	28
DAYS IN COHABITATION b	MEAN±S.D.	3.2 ± 2.3	2.0 ± 1.2**	2.7 ± 2.3
RATS THAT MATED	N(%)	27(100.0)	28(100.0)	28(100.0)
FERTILITY INDEX c	N/N (%)	25/ 27 (92.6)	28/ 28 (100.0)	27/ 28 (96.4)
RATS WITH CONFIRMED MATING DATES	N	27	28	28
MATED BY FIRST MALE d DAYS 1-7	N(%)	26(96.3)	28(100.0)	27(96.4)
MATED BY SECOND MALE d DAYS 8-14	N(%)	1(3.7)	0(00.0)	1(3.6)
RATS PREGNANT/RATS IN COHABITATION	N/N (%)	25/ 27 (92.6)	28/ 28 (100.0)	27/ 28 (96.4)

a. Excludes rat 11562, which was moribund sacrificed on day 16 of study.
b. Restricted to rats with a confirmed mating date and rats that did not mate.
c. Number of pregnancies/number of rats that mated.
d. Restricted to rats with a confirmed mating date.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 17 (PAGE 1): CAESAREAN-SECTIONING OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	1.6	2
RATS TESTED	N	9	8	8
PREGNANT	N(%)	8(88.9)	8(100.0)	8(100.0)
RATS PREGNANT AND CAESAREAN-SECTIONED ON DAY 21 OF GESTATION	N	8	8	8
CORPORA LUTEA	MEAN±S.D.	16.1 ± 1.6	15.4 ± 2.7	18.9 ± 5.1
IMPLANTATIONS	MEAN±S.D.	14.9 ± 1.2	14.0 ± 2.9	15.2 ± 1.8
LITTER SIZES	MEAN±S.D.	13.5 ± 1.3	13.0 ± 2.8	14.9 ± 1.7
LIVE FETUSES	N	108	103	119
	MEAN±S.D.	13.5 ± 1.3	12.9 ± 2.7	14.9 ± 1.7
DEAD FETUSES	N	0	1	0
	MEAN±S.D.	0.0 ± 0.0	0.1 ± 0.4	0.0 ± 0.0
RESORPTIONS	MEAN±S.D.	1.4 ± 1.1	1.0 ± 0.9	0.4 ± 0.5*
EARLY RESORPTIONS	N	11	7	3
	MEAN±S.D.	1.4 ± 1.1	0.9 ± 1.0	0.4 ± 0.5*
LATE RESORPTIONS	N	0	1	0
	MEAN±S.D.	0.0 ± 0.0	0.1 ± 0.4	0.0 ± 0.0
DAMS WITH ANY RESORPTIONS	N(%)	8(100.0)	6(75.0)	3(37.5)**
DAMS WITH ALL CONCEPTUSES DEAD OR RESORBED	N(%)	0(0.0)	0(0.0)	0(0.0)
DAMS WITH VIABLE FETUSES	N(%)	8(100.0)	8(100.0)	8(100.0)
PLACENTAE APPEARED NORMAL	N(%)	8(100.0)	8(100.0)	8(100.0)

* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

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TABLE 17 (PAGE 2): CAESAREAN-SECTIONING OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS TESTED	N	8	8	8
PREGNANT	N(%)	8(100.0)	8(100.0)	8(100.0)
RATS PREGNANT AND CAESAREAN-SECTIONED ON DAY 21 OF GESTATION	N	8	8	8
CORPORA LUTEA	MEAN±S.D.	19.1 ± 3.3	17.5 ± 4.1	18.2 ± 2.6
IMPLANTATIONS	MEAN±S.D.	15.4 ± 1.1	15.5 ± 2.4	16.1 ± 1.0
LITTER SIZES	MEAN±S.D.	13.6 ± 2.7	13.5 ± 3.1	13.6 ± 2.4
LIVE FETUSES	N	109	108	109
	MEAN±S.D.	13.6 ± 2.7	13.5 ± 3.1	13.6 ± 2.4
DEAD FETUSES	N	0	0	0
RESORPTIONS	MEAN±S.D.	1.8 ± 2.2	2.0 ± 2.6	2.5 ± 3.0
EARLY RESORPTIONS	N	14	15	19
	MEAN±S.D.	1.8 ± 2.2	1.9 ± 2.6	2.4 ± 3.0
LATE RESORPTIONS	N	0	1	1
	MEAN±S.D.	0.0 ± 0.0	0.1 ± 0.4	0.1 ± 0.4
DAMS WITH ANY RESORPTIONS	N(%)	5(62.5)	6(75.0)	6(75.0)
DAMS WITH ALL CONCEPTUSES DEAD OR RESORBED	N(%)	0(0.0)	0(0.0)	0(0.0)
DAMS WITH VIABLE FETUSES	N(%)	8(100.0)	8(100.0)	8(100.0)
PLACENTAE APPEARED NORMAL	N(%)	8(100.0)	8(100.0)	8(100.0)

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 17 (PAGE 3): CAESAREAN-SECTIONING OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS TESTED	N	8	8	8
PREGNANT	N(%)	8(100.0)	8(100.0)	8(100.0)
RATS PREGNANT AND CAESAREAN-SECTIONED ON DAY 21 OF GESTATION	N	8	8	8
CORPORA LUTEA	MEAN±S.D.	17.8 ± 2.7	17.6 ± 3.7	18.1 ± 6.8
IMPLANTATIONS	MEAN±S.D.	15.9 ± 2.2	14.6 ± 4.2	13.2 ± 4.4
LITTER SIZES	MEAN±S.D.	15.2 ± 2.3	14.0 ± 4.2	11.5 ± 3.9
LIVE FETUSES	N	122	112	92
	MEAN±S.D.	15.2 ± 2.3	14.0 ± 4.2	11.5 ± 3.9
DEAD FETUSES	N	0	0	0
RESORPTIONS	MEAN±S.D.	0.6 ± 0.5	0.6 ± 1.1	1.8 ± 1.4
EARLY RESORPTIONS	N	5	5	14
	MEAN±S.D.	0.6 ± 0.5	0.6 ± 1.1	1.8 ± 1.4
LATE RESORPTIONS	N	0	0	0
DAMS WITH ANY RESORPTIONS	N(%)	5(62.5)	3(37.5)	6(75.0)
DAMS WITH ALL CONCEPTUSES DEAD OR RESORBED	N(%)	0(0.0)	0(0.0)	0(0.0)
DAMS WITH VIABLE FETUSES	N(%)	8(100.0)	8(100.0)	8(100.0)
PLACENTAE APPEARED NORMAL	N(%)	8(100.0)	8(100.0)	8(100.0)

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 18 (PAGE 1): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	1.6	2
LITTERS WITH ONE OR MORE LIVE FETUSES	N	8	8	8
IMPLANTATIONS	MEAN±S.D.	14.9 ± 1.2	14.0 ± 2.9	15.2 ± 1.8
LIVE FETUSES	N	108	103	119
	MEAN±S.D.	13.5 ± 1.3	12.9 ± 2.7	14.9 ± 1.7
POOLED FETAL BODY WEIGHTS (GRAMS)/LITTER	MEAN±S.D.	70.3 ± 4.7	65.9 ± 15.5	74.8 ± 8.8
% DEAD OR RESORBED CONCEPTUSES/LITTER	MEAN±S.D.	9.1 ± 6.4	8.0 ± 5.0	2.4 ± 3.4*

* Significantly different from the Group 1 value ($p \leq 0.05$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 18 (PAGE 2): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
LITTERS WITH ONE OR MORE LIVE FETUSES	N	8	8	8
IMPLANTATIONS	MEAN±S.D.	15.4 ± 1.1	15.5 ± 2.4	16.1 ± 1.0
LIVE FETUSES	N	109	108	109
	MEAN±S.D.	13.6 ± 2.7	13.5 ± 3.1	13.6 ± 2.4
POOLED FETAL BODY WEIGHTS (GRAMS)/LITTER	MEAN±S.D.	70.9 ± 15.0	66.4 ± 14.7	69.3 ± 16.7
% DEAD OR RESORBED CONCEPTUSES/LITTER	MEAN±S.D.	11.6 ± 14.9	12.5 ± 15.0	14.9 ± 17.3

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 18 (PAGE 3): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
LITTERS WITH ONE OR MORE LIVE FETUSES	N	8	8	8
IMPLANTATIONS	MEAN±S.D.	15.9 ± 2.2	14.6 ± 4.2	13.2 ± 4.4
LIVE FETUSES	N	122	112	92
	MEAN±S.D.	15.2 ± 2.3	14.0 ± 4.2	11.5 ± 3.9
POOLED FETAL BODY WEIGHTS (GRAMS)/LITTER	MEAN±S.D.	79.4 ± 11.8	70.6 ± 22.9	56.2 ± 18.3
% DEAD OR RESORBED CONCEPTUSES/LITTER	MEAN±S.D.	4.0 ± 3.4	4.1 ± 7.4	12.0 ± 10.0*

* Significantly different from the Group 5 value ($p \leq 0.05$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 19 (PAGE 1): NATURAL DELIVERY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
RATS ASSIGNED TO NATURAL DELIVERY	N	19	20	20	20	20	20	20
PREGNANT	N(%)	19(100.0)	20(100.0)	17(85.0)	19(95.0)	18(90.0)	17(85.0)	19(95.0)
DELIVERED LITTERS	N(%)	19(100.0)	20(100.0)	17(100.0)	19(100.0)	18(100.0)	17(100.0)	19(100.0)
DURATION OF GESTATION a	MEAN±S.D.	22.9 ± 0.3	22.6 ± 0.5	22.5 ± 0.5*	22.4 ± 0.6**	22.3 ± 0.5**	22.0 ± 0.0**	22.2 ± 0.4**
IMPLANTATION SITES	N	279	232	257	303	275	243	274
PER DELIVERED LITTER	MEAN±S.D.	14.7 ± 2.3	16.2 ± 1.8	15.1 ± 2.2	15.9 ± 2.0	15.3 ± 2.5	14.3 ± 2.1	14.4 ± 1.9
DAMS WITH STILLBORN PUPS	N(%)	4(21.0)	8(40.0)**	2(11.8)	1(5.3)*	1(5.6)*	1(5.9)*	1(5.3)*
DAMS WITH NO LIVEBORN PUPS	N(%)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
GESTATION INDEX b	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N/N	19/ 19	20/ 20	17/ 17	19/ 19	18/ 18	17/ 17	19/ 19
DAMS WITH ALL PUPS DYING DAYS 1-5 POSTPARTUM	N(%)	0(0.0)	0(0.0)	0(0.0)	1(5.3)	0(0.0)	4(23.5)	14(73.7)**

a. Calculated as the time (in days) elapsed between confirmed mating (arbitrarily defined as 0 hour) and the time (in days) the first pup was delivered.
b. Number of rats with live offspring/number of pregnant rats.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 19 (PAGE 2): NATURAL DELIVERY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
RATS ASSIGNED TO NATURAL DELIVERY	N	19a	20a	20
PREGNANT	N(%)	18(94.7)	18(90.0)	19(95.0)
DELIVERED LITTERS	N(%)	18(100.0)	18(100.0)	19(100.0)
DURATION OF GESTATION b	MEAN±S.D.	22.7 ± 0.5	22.2 ± 0.4*	22.0 ± 0.4**
IMPLANTATION SITES	N	263	251	289
PER DELIVERED LITTER	MEAN±S.D.	14.6 ± 2.0	13.9 ± 2.2	15.2 ± 1.4
DAMS WITH STILLBORN PUPS	N(%)	2(11.1)	4(22.2)	2(10.5)
DAMS WITH NO LIVEBORN PUPS	N(%)	0(0.0)	0(0.0)	0(0.0)
GESTATION INDEX c	%	100.0	100.0	100.0
	N/N	18/ 18	18/ 18	19/ 19
DAMS WITH ALL PUPS DYING DAYS 1-5 POSTPARTUM	N(%)	0(0.0)	6(33.3)	17(89.5)**

a. Excludes values for rats that died or were moribund sacrificed prior to lactation.
b. Calculated as the time (in days) elapsed between confirmed mating (arbitrarily defined as 0 hour) and the time (in days) the first pup was delivered.
c. Number of rats with live offspring/number of pregnant rats.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 19 (PAGE 3): NATURAL DELIVERY OBSERVATIONS - SUMMARY - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
RATS ASSIGNED TO NATURAL DELIVERY	N	19a	20	20
PREGNANT	N(%)	17(89.5)	20(100.0)	19(95.0)
DELIVERED LITTERS	N(%)	17(100.0)	20(100.0)	19(100.0)
DURATION OF GESTATION b	MEAN±S.D.	22.8 ± 0.4	22.0 ± 0.4**	22.3 ± 0.4**
IMPLANTATION SITES	N	241c	288	291
PER DELIVERED LITTER	MEAN±S.D.	15.1 ± 1.4 [16]c	14.4 ± 1.7	15.3 ± 2.0
DAMS WITH STILLBORN PUPS	N(%)	2(11.8)	2(10.0)	2(10.5)
DAMS WITH NO LIVEBORN PUPS	N(%)	0(0.0)	0(0.0)	1(5.3)
GESTATION INDEX d	% N/N	100.0 17/ 17	100.0 20/ 20	94.7 18/ 19
DAMS WITH ALL PUPS DYING DAYS 1-5 POSTPARTUM	N(%)	0(0.0)	8(40.0)	14(73.7)**

a. Excludes rat 11562, which was moribund sacrificed prior to lactation.
b. Calculated as the time (in days) elapsed between confirmed mating (arbitrarily defined as 0 hour) and the time (in days) the first pup was delivered.
c. Excludes a value for dam 10969, which appeared incorrectly recorded.
d. Number of rats with live offspring/number of pregnant rats.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 1): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	19	20	17	19	18	17	19
PUPS DELIVERED (TOTAL)	N	265	300	247	287	253	231	252
	MEAN±S.D.	13.9 ± 2.6	15.0 ± 2.3	14.5 ± 2.3	15.1 ± 2.3	14.0 ± 2.9	13.6 ± 2.8	13.3 ± 2.5
LIVEBORN	MEAN±S.D.	13.7 ± 2.7	14.6 ± 2.4	14.4 ± 2.4	15.0 ± 2.3	14.0 ± 2.9	13.4 ± 2.9	13.2 ± 2.5
	N(%)	260(98.1)	291(97.0)	245(99.2)	285(99.3)	252(99.6)	227(98.3)	251(99.6)
STILLBORN	MEAN±S.D.	0.3 ± 0.6	0.4 ± 0.6	0.1 ± 0.3	0.1 ± 0.4	0.0 ± 0.2	0.2 ± 1.0	0.0 ± 0.2
	N(%)	5(1.9)	9(3.0)	2(0.8)	2(0.7)	1(0.4)	4(1.7)	1(0.4)
UNKNOWN VITAL STATUS	N	0	0	0	0	0	0	0
PUPS FOUND DEAD OR PRESUMED CANNIBALIZED								
DAY 1	N/N(%)	1/260(0.4)	3/291(1.0)	1/245(0.4)	4/285(1.4)	6/252(2.4)	13/227(5.7)	56/251(22.3)**
DAYS 2- 5	N/N(%)	6/259(2.3)	4/288(1.4)	16/244(6.6)	28/281(10.0)	40/246(16.3)	102/214(47.7)**	152/195(77.9)**
VIABILITY INDEX a	%	97.3	97.6	93.1	88.8	81.7	49.3	17.1
	N/N	253/260	284/291	228/245	253/285	206/252	112/227**	43/251**

DAY(S) = DAY(S) POSTPARTUM

a. Number of live pups on day 5 postpartum/number of liveborn pups on day 1 postpartum.

** Significantly different from the Group 1 value ($p \leq 0.01$).

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TABLE 20 (PAGE 2): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	19	20	17	19	18	17	19
SURVIVING PUPS/LITTER a								
DAY 1b	MEAN±S.D.	13.7 ± 2.7	14.6 ± 2.4	14.4 ± 2.4	15.0 ± 2.3	14.0 ± 2.9	13.4 ± 2.9	13.2 ± 2.5
DAY 2	MEAN±S.D.	13.5 ± 2.5	14.4 ± 2.4	13.9 ± 2.2	13.8 ± 3.0	12.9 ± 3.2	8.0 ± 5.7*	3.4 ± 4.4**
DAY 3	MEAN±S.D.	13.4 ± 2.5	14.3 ± 2.4	13.6 ± 1.8	13.5 ± 4.0	12.1 ± 3.3	7.1 ± 5.5**	2.5 ± 4.5**
DAY 4	MEAN±S.D.	13.4 ± 2.4	14.2 ± 2.4	13.5 ± 2.0	13.5 ± 4.0	11.6 ± 3.4	6.8 ± 5.5**	2.4 ± 4.4**
DAY 5	MEAN±S.D.	13.3 ± 2.4	14.2 ± 2.4	13.4 ± 2.1	13.3 ± 4.0	11.4 ± 3.5	6.6 ± 5.6**	2.3 ± 4.4**
PERCENT MALE PUPS PER NUMBER OF PUPS SEXED								
DAY 1b	MEAN±S.D.	50.0 ± 17.4	46.4 ± 14.1	53.9 ± 11.3	46.9 ± 15.9	50.0 ± 14.1	45.8 ± 9.6	50.1 ± 14.0
DAY 2	MEAN±S.D.	50.3 ± 17.1	46.0 ± 13.8	54.0 ± 11.6	48.5 ± 17.0	49.6 ± 14.6	46.0 ± 21.3 [14]c	59.4 ± 25.1 [11]c
DAY 3	MEAN±S.D.	50.4 ± 17.0	46.2 ± 13.7	54.5 ± 11.0	46.6 ± 15.2 [18]c	48.5 ± 15.0	46.1 ± 27.4 [14]c	51.1 ± 33.1 [7]c
DAY 4	MEAN±S.D.	50.6 ± 17.0	46.1 ± 13.8	54.7 ± 11.1	46.3 ± 15.1 [18]c	48.5 ± 14.6	46.1 ± 26.7 [14]c	43.5 ± 27.3 [6]c
DAY 5	MEAN±S.D.	50.7 ± 16.9	46.1 ± 13.8	54.9 ± 10.7	46.5 ± 15.3 [18]c	47.7 ± 15.9	39.1 ± 25.1 [13]c	42.2 ± 30.3 [5]c

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Average number of live pups per litter, including litters with no surviving pups.
b. Includes pups born alive, found dead day 1 postpartum.
c. Excludes values for litters with no surviving pups.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 3): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	19	20	17	19	18	17	19
POOLED PUP WEIGHTS/LITTER (GRAMS)								
DAY 1	MEAN±S.D.	86.9 ± 15.4	85.2 ± 15.1	84.2 ± 10.4	85.8 ± 14.3	77.2 ± 16.2	67.0 ± 15.9**	58.5 ± 25.6**
							[18]a	
DAY 2	MEAN±S.D.	94.4 ± 15.1	92.0 ± 14.7	87.8 ± 12.1	84.2 ± 20.2	74.5 ± 20.2**	52.8 ± 26.0**	33.5 ± 28.7**
							[14]a	[11]a
DAY 3	MEAN±S.D.	103.8 ± 16.1	99.5 ± 17.4	94.0 ± 13.8	95.1 ± 15.7	76.0 ± 25.4**	51.5 ± 30.5**	44.4 ± 36.3**
					[18]a		[14]a	[7]a
DAY 4	MEAN±S.D.	116.6 ± 18.2	109.5 ± 19.7	104.2 ± 17.9	105.1 ± 17.6	79.2 ± 28.2**	55.0 ± 34.8**	54.1 ± 38.7**
			[18]b		[18]a		[14]a	[6]a
DAY 5	MEAN±S.D.	129.4 ± 19.8	121.5 ± 21.2	112.6 ± 20.8	113.0 ± 19.1	85.2 ± 32.2**	63.5 ± 37.4**	68.3 ± 38.8**
					[18]a		[13]a	[5]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+42.5 ± 12.4	+36.3 ± 12.7	+28.5 ± 17.5	+25.9 ± 11.8**	+7.9 ± 26.5**	-3.2 ± 33.0**	-9.1 ± 35.7*
					[18]a		[13]a	[5]a
AVERAGE PUP WEIGHT (GRAMS)								
DAY 1	MEAN±S.D.	6.4 ± 0.4	5.9 ± 0.6*	5.9 ± 0.6*	5.8 ± 0.8**	5.7 ± 0.6**	5.4 ± 0.5**	5.3 ± 0.5**
								[18]a
DAY 2	MEAN±S.D.	7.1 ± 0.6	6.4 ± 0.5*	6.4 ± 0.8**	6.1 ± 0.8**	5.8 ± 0.7**	5.4 ± 0.5**	5.2 ± 0.8**
							[14]a	[11]a
DAY 3	MEAN±S.D.	7.8 ± 0.7	7.0 ± 0.7**	6.9 ± 1.0**	6.7 ± 0.9**	6.2 ± 1.0**	5.8 ± 0.8**	5.9 ± 1.1**
					[18]a		[14]a	[7]a
DAY 4	MEAN±S.D.	8.8 ± 0.9	7.8 ± 0.9*	7.8 ± 1.2*	7.5 ± 1.1**	6.8 ± 1.1**	6.3 ± 1.0**	6.5 ± 1.4**
			[18]b		[18]a		[14]a	[6]a
DAY 5	MEAN±S.D.	9.8 ± 1.1	8.6 ± 1.0**	8.5 ± 1.4**	8.1 ± 1.3**	7.4 ± 1.4**	7.1 ± 1.1**	7.4 ± 1.5**
					[18]a		[13]a	[5]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+3.4 ± 0.9	+2.7 ± 0.7*	+2.5 ± 0.9*	+2.2 ± 0.8**	+1.7 ± 1.2**	+1.7 ± 1.0**	+1.5 ± 1.2**
					[18]a		[13]a	[5]a

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for litters with no surviving pups.
b. Excludes values that were not recorded.
* Significantly different from the Group 1 value ($p \leq 0.05$).
** Significantly different from the Group 1 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 4): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	18	18	19
PUPS DELIVERED (TOTAL)	N	237	233	270
	MEAN±S.D.	13.2 ± 2.2	12.9 ± 2.3	14.2 ± 1.4
LIVEBORN	MEAN±S.D.	13.0 ± 2.2	12.6 ± 2.1	14.1 ± 1.4
	N(%)	234(98.7)	227(97.4)	268(99.2)
STILLBORN	MEAN±S.D.	0.2 ± 0.5	0.3 ± 0.7	0.1 ± 0.3
	N(%)	3(1.3)	6(2.6)	2(0.7)
UNKNOWN VITAL STATUS	N	0	0	0
PUPS FOUND DEAD OR PRESUMED CANNIBALIZED				
DAY 1	N/N(%)	1/234(0.4)	22/227(9.7)	93/268(34.7)**
DAYS 2- 5	N/N(%)	2/233(0.8)	111/205(54.1)	172/175(98.3)**
VIABILITY INDEX a	%	98.7	41.4	1.1
	N/N	231/234	94/227*	3/268**

DAY(S) = DAY(S) POSTPARTUM
a. Number of live pups on day 5 postpartum/number of liveborn pups on day 1 postpartum.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 5): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	18	18	19
SURVIVING PUPS/LITTER a				
DAY 1b	MEAN±S.D.	13.0 ± 2.2	12.6 ± 2.1	14.1 ± 1.4
DAY 2	MEAN±S.D.	12.9 ± 2.2	6.2 ± 4.6**	1.4 ± 2.0**
DAY 3	MEAN±S.D.	12.8 ± 2.3	5.6 ± 4.8**	0.5 ± 1.1**
DAY 4	MEAN±S.D.	12.8 ± 2.3	5.2 ± 4.8**	0.3 ± 0.8**
DAY 5	MEAN±S.D.	12.8 ± 2.3	5.2 ± 4.8**	0.2 ± 0.5**
PERCENT MALE PUPS PER NUMBER OF PUPS SEXED				
DAY 1b	MEAN±S.D.	56.2 ± 12.4	49.9 ± 10.8	48.0 ± 15.6
DAY 2	MEAN±S.D.	56.4 ± 12.2	55.0 ± 18.0 [15]c	54.6 ± 41.1 [9]c
DAY 3	MEAN±S.D.	55.8 ± 12.3	49.8 ± 12.4 [13]c	23.3 ± 32.5** [5]c
DAY 4	MEAN±S.D.	55.8 ± 12.3	52.2 ± 10.4 [12]c	55.6 ± 50.9 [3]c
DAY 5	MEAN±S.D.	55.8 ± 12.3	52.2 ± 10.4 [12]c	50.0 ± 70.7 [2]c

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Average number of live pups per litter, including litters with no surviving pups.
b. Includes pups born alive, found dead day 1 postpartum.
c. Excludes values for litters with no surviving pups.
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 6): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	18	18	19
POOLED PUP WEIGHTS/LITTER (GRAMS)				
DAY 1	MEAN±S.D.	83.0 ± 11.5	63.1 ± 18.7**	57.1 ± 22.2** [16]a
DAY 2	MEAN±S.D.	90.6 ± 11.6	43.6 ± 25.9** [15]a	17.5 ± 9.8** [8]a,b
DAY 3	MEAN±S.D.	99.7 ± 14.4	50.1 ± 28.6** [13]a	11.0 ± 9.1** [5]a
DAY 4	MEAN±S.D.	112.1 ± 15.5	60.6 ± 35.9** [12]a	12.1 ± 7.1** [3]a
DAY 5	MEAN±S.D.	123.9 ± 17.1	63.8 ± 33.4** [12]a	11.0 ± 8.9** [2]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+40.9 ± 8.2	-5.6 ± 32.5** [12]a	-39.7 ± 33.5 [2]a
AVERAGE PUP WEIGHT (GRAMS)				
DAY 1	MEAN±S.D.	6.4 ± 0.5	5.6 ± 0.5**	5.2 ± 0.3** [16]a
DAY 2	MEAN±S.D.	7.1 ± 0.6	5.6 ± 0.8** [15]a	6.8 ± 5.4** [8]a,b
DAY 3	MEAN±S.D.	7.8 ± 0.7	6.1 ± 1.2** [13]a	5.1 ± 1.1** [5]a
DAY 4	MEAN±S.D.	8.8 ± 0.8	7.2 ± 1.7** [12]a	5.8 ± 2.2** [3]a
DAY 5	MEAN±S.D.	9.8 ± 1.0	7.7 ± 1.8** [12]a	6.7 ± 2.8** [2]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+3.3 ± 0.8	+2.0 ± 1.4** [12]a	+1.3 ± 2.6* [2]a

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for litters with no surviving pups.
b. Excludes a value that was not recorded.
* Significantly different from the Group 2 value ($p \leq 0.05$).
** Significantly different from the Group 2 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 7): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	17	20	18
PUPS DELIVERED (TOTAL)	N	247	271	261
	MEAN±S.D.	14.5 ± 2.2	13.6 ± 2.1	14.5 ± 1.7
LIVEBORN	MEAN±S.D.	14.4 ± 2.2	13.4 ± 2.3	14.4 ± 1.8
	N(%)	245(99.2)	269(99.3)	259(99.2)
STILLBORN	MEAN±S.D.	0.1 ± 0.3	0.1 ± 0.3	0.1 ± 0.3
	N(%)	2(0.8)	2(0.7)	2(0.8)
UNKNOWN VITAL STATUS	N	0	0	1
PUPS FOUND DEAD OR PRESUMED CANNIBALIZED				
DAY 1	N/N(%)	0/245(0.0)	18/269(6.7)*	27/258(10.5)**
DAYS 2- 5	N/N(%)	5/245(2.0)	138/251(55.0)*	194/231(84.0)**
VIABILITY INDEX a	%	98.0	42.0	14.3
	N/N	240/245	113/269*	37/258**

DAY(S) = DAY(S) POSTPARTUM

a. Number of live pups on day 5 postpartum/number of liveborn pups on day 1 postpartum.

* Significantly different from the Group 5 value ($p \leq 0.05$).

** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 8): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	17	20	18
SURVIVING PUPS/LITTER a				
DAY 1b	MEAN±S.D.	14.4 ± 2.2	13.4 ± 2.3	14.4 ± 1.8
DAY 2	MEAN±S.D.	14.3 ± 2.2	8.4 ± 4.6**	4.0 ± 4.4**
DAY 3	MEAN±S.D.	14.2 ± 2.1	6.0 ± 5.5**	2.2 ± 4.0**
DAY 4	MEAN±S.D.	14.2 ± 2.1	5.8 ± 5.4**	2.2 ± 3.9**
DAY 5	MEAN±S.D.	14.1 ± 2.0	5.6 ± 5.5**	2.0 ± 4.0**
PERCENT MALE PUPS PER NUMBER OF PUPS SEXED				
DAY 1b	MEAN±S.D.	48.3 ± 14.5	47.3 ± 16.8	56.1 ± 11.9
DAY 2	MEAN±S.D.	48.2 ± 14.9	50.0 ± 24.0 [19]c	59.8 ± 32.2 [14]c
DAY 3	MEAN±S.D.	48.2 ± 14.8	41.1 ± 26.8 [14]c	49.6 ± 33.9 [7]c
DAY 4	MEAN±S.D.	48.2 ± 14.8	44.4 ± 25.0 [13]c	48.6 ± 33.8 [7]c
DAY 5	MEAN±S.D.	48.4 ± 14.9	43.9 ± 26.0 [12]c	48.0 ± 21.4 [5]c

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Average number of live pups per litter, including litters with no surviving pups.
b. Includes pups born alive, found dead day 1 postpartum.
c. Excludes values for litters with no surviving pups.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 20 (PAGE 9): LITTER OBSERVATIONS (NATURALLY DELIVERED PUPS) - SUMMARY - F1 GENERATION LITTERS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
DELIVERED LITTERS WITH ONE OR MORE LIVEBORN PUPS	N	17	20	18
POOLED PUP WEIGHTS/LITTER (GRAMS)				
DAY 1	MEAN±S.D.	90.9 ± 12.5	67.7 ± 14.1**	68.6 ± 20.2**
DAY 2	MEAN±S.D.	100.7 ± 18.9	47.8 ± 25.5** [19]a	26.7 ± 22.8** [14]a
DAY 3	MEAN±S.D.	108.7 ± 16.8	53.2 ± 30.6** [14]a	32.6 ± 27.1** [7]a
DAY 4	MEAN±S.D.	123.4 ± 17.7	62.5 ± 32.4** [13]a	33.9 ± 29.3** [7]a
DAY 5	MEAN±S.D.	134.4 ± 20.3 [16]b	73.1 ± 32.0** [12]a	47.9 ± 26.2** [5]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+44.4 ± 11.8 [16]b	+3.3 ± 31.1** [12]a	-24.3 ± 24.1** [5]a
AVERAGE PUP WEIGHT (GRAMS)				
DAY 1	MEAN±S.D.	6.3 ± 0.5	5.4 ± 0.4**	5.3 ± 0.4**
DAY 2	MEAN±S.D.	7.1 ± 0.8	5.2 ± 0.6** [19]a	4.9 ± 0.5** [14]a
DAY 3	MEAN±S.D.	7.7 ± 0.8	5.8 ± 0.9** [14]a	5.6 ± 0.6** [7]a
DAY 4	MEAN±S.D.	8.8 ± 0.9	6.7 ± 1.1** [13]a	5.8 ± 0.8** [7]a
DAY 5	MEAN±S.D.	9.6 ± 1.1 [16]b	7.5 ± 1.1** [12]a	6.6 ± 0.6** [5]a
DAYS 1 - 5 (BODY WEIGHT CHANGE)	MEAN±S.D.	+3.3 ± 0.7 [16]b	+2.0 ± 0.9** [12]a	+1.0 ± 0.2** [5]a

DAY = DAY POSTPARTUM
[ ] = NUMBER OF VALUES AVERAGED
a. Excludes values for litters with no surviving pups.
b. Excludes values that were not recorded.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 21 (PAGE 1): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - SUMMARY - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
LITTERS EXAMINED (N)		19	20	17	19	18	17	19
TRANSIENT CLINICAL OBSERVATIONS: a		TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS						
COLD TO TOUCH	N/N	1/1	1/1	16/1	14/1	48/3	3/3	4/3
NOT NURSING	N/N	0/0	1/1	1/1	0/0	1/1	2/2	5/3
DECREASED MOTOR ACTIVITY	N/N	0/0	2/2	0/0	1/1	0/0	1/1	0/0
GASPING	N/N	0/0	1/1	0/0	0/0	0/0	0/0	0/0
LABORED BREATHING	N/N	0/0	1/1	0/0	0/0	0/0	0/0	0/0
NOT NESTING	N/N	0/0	1/1	0/0	0/0	0/0	0/0	0/0
PERSISTENT CLINICAL OBSERVATIONS: a								
TAIL MISSING FROM BASE	N/N	0/0	0/0	0/0	0/0	5/1	0/0	0/0
TIP OF TAIL MISSING	N/N	0/0	0/0	0/0	4/1	0/0	0/0	0/0
TIP OF TAIL BLACK	N/N	2/1	0/0	2/1	0/0	0/0	0/0	0/0

STATISTICAL ANALYSES WERE RESTRICTED TO THE NUMBER OF LITTERS WITH OBSERVATIONS.
N/N = TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS
a. Tabulation restricted to adverse observations; all other pups appeared normal.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 21 (PAGE 2): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - SUMMARY - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP DOSAGE MG/KG PFOS LITTERS EXAMINED (N)		2 MEVALONIC ACID CONTROL 18	3 1.6 + MEVALONIC ACID 18	4 2 + MEVALONIC ACID 19
TRANSIENT CLINICAL OBSERVATIONS: a		TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS		
NOT NURSING	N/N	0/0	19/3	35/5
COLD TO TOUCH	N/N	0/0	3/1	12/4
DECREASED MOTOR ACTIVITY	N/N	0/0	1/1	0/0
NO MILK IN STOMACH	N/N	0/0	1/1	0/0
PERSISTENT CLINICAL OBSERVATIONS: a				
DISTAL PORTION OF TAIL MISSING	N/N	0/0	0/0	1/1

STATISTICAL ANALYSES WERE RESTRICTED TO THE NUMBER OF LITTERS WITH OBSERVATIONS.
N/N = TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS
a. Tabulation restricted to adverse observations; all other pups appeared normal.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 21 (PAGE 3): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - SUMMARY - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP		5	6	7
DOSAGE MG/KG PFOS		CHOLESTEROL CONTROL	1.6 + CHOLESTEROL	2 + CHOLESTEROL
LITTERS EXAMINED (N)		17	20	19
TRANSIENT CLINICAL OBSERVATIONS: a		TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS		
NOT NURSING	N/N	0/0	6/3	49/8**
COLD TO TOUCH	N/N	1/1	49/5	27/6
NOT NESTING	N/N	0/0	0/0	4/2
DECREASED MOTOR ACTIVITY	N/N	0/0	2/1	13/2
RIGHT EYE, EXOPHTHALMOS	N/N	4/2	0/0	0/0
SWOLLEN b	N/N	1/1	0/0	0/0
PERSISTENT CLINICAL OBSERVATIONS: a				
TAIL MISSING	N/N	0/0	0/0	4/1
DISTAL PORTION OF TAIL MISSING	N/N	0/0	5/1	0/0
TIP OF TAIL BLACK	N/N	3/1	0/0	0/0
TIP OF TAIL MISSING	N/N	2/1	0/0	0/0

STATISTICAL ANALYSES WERE RESTRICTED TO THE NUMBER OF LITTERS WITH OBSERVATIONS.
N/N = TOTAL FREQUENCY (DAYS X PUPS)/LITTERS WITH OBSERVATIONS
a. Tabulation restricted to adverse observations; all other pups appeared normal.
b. Located on the right forelimb and right forepaw.
** Significantly different from the Group 5 value ($p \leq 0.01$).

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TABLE 22 (PAGE 1): NECROPSY OBSERVATIONS - SUMMARY - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP		1	8	9	10	11	12	13
DOSAGE MG/KG PFOS		VEHICLE CONTROL	0.4	0.8	1	1.2	1.6	2
LITTERS EXAMINED	N	19	20	17	19	18	17	19
TOTAL UNSCHEDULED NECROPSIES a	N	5	12	8	13	17	43	91
STILLBORN	N	4	8	2	2	1	4	3
FOUND DEAD	N	1	4	6	11	16	39	88
NO MILK IN STOMACH b	N(%)	1(100.0)	1(25.0)	3(50.0)	7(63.6)	5(31.2)	26(66.7)	37(42.0)
TONGUE PROTRUDED	N(%)	2(40.0)	0(0.0)**	0(0.0)**	0(0.0)**	0(0.0)**	0(0.0)**	0(0.0)**
SCHEDULED PUP NECROPSIES ON DAY 5 POSTPARTUM								
LITTERS EVALUATED	N	19	20	17	18	18	13	5
PUPS EVALUATED	N	253	274	228	253	206	112	43
APPEARED NORMAL								
LITTER INCIDENCE	N(%)	19(100.0)	19(95.0)	17(100.0)	18(100.0)	18(100.0)	13(100.0)	5(100.0)
PUP INCIDENCE	N(%)	253(100.0)	273(99.6)	228(100.0)	253(100.0)	206(100.0)	112(100.0)	43(100.0)
LIVER, MEDIAN LOBE, TAN AREAS								
LITTER INCIDENCE	N(%)	0(0.0)	1(5.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
PUP INCIDENCE	N(%)	0(0.0)	1(0.4)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)

a. Restricted to pups in which complete necropsies were performed. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation.
b. Analysis restricted to pups found dead and necropsied.
** Significantly different from the Group 1 value ($p \leq 0.01$).

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TABLE 22 (PAGE 2): NECROPSY OBSERVATIONS - SUMMARY - F1 GENERATION PUPS

DOSAGE GROUP DOSAGE MG/KG PFOS		2 MEVALONIC ACID CONTROL	3 1.6 + MEVALONIC ACID	4 2 + MEVALONIC ACID
LITTERS EXAMINED	N	18	18	19
TOTAL UNSCHEDULED NECROPSIES a	N	4	60	157
STILLBORN	N	2	6	2
FOUND DEAD	N	2	54	155
NO MILK IN STOMACH b	N(%)	1(50.0)	35(64.8)	86(55.5)
NO ORAL OPENING, NO EYES EARS DISPLACED	N(%)	1(25.0)	0(0.0)**	0(0.0)**
SCHEDULED PUP NECROPSIES ON DAY 5 POSTPARTUM				
LITTERS EVALUATED	N	18	12	2
PUPS EVALUATED	N	231	94	3
APPEARED NORMAL				
LITTER INCIDENCE	N(%)	18(100.0)	12(100.0)	2(100.0)
PUP INCIDENCE	N(%)	231(100.0)	94(100.0)	3(100.0)

a. Restricted to pups in which complete necropsies were performed. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation.
b. Analysis restricted to pups found dead and necropsied.
** Significantly different from the Group 2 value ($p \leq 0.01$).

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TABLE 22 (PAGE 3): NECROPSY OBSERVATIONS - SUMMARY - F1 GENERATION PUPS

DOSAGE GROUP DOSAGE MG/KG PFOS		5 CHOLESTEROL CONTROL	6 1.6 + CHOLESTEROL	7 2 + CHOLESTEROL
LITTERS EXAMINED	N	17	20	19
TOTAL UNSCHEDULED NECROPSIES a	N	6	48	83
STILLBORN	N	2	2	2
FOUND DEAD	N	4	46	81
NO MILK IN STOMACH b	N(%)	1(25.0)	33(71.7)**	32(39.5)
SCHEDULED PUP NECROPSIES ON DAY 5 POSTPARTUM				
LITTERS EVALUATED	N	17	12	5
PUPS EVALUATED	N	240	113	36
APPEARED NORMAL				
LITTER INCIDENCE	N(%)	17(100.0)	12(100.0)	5(100.0)
PUP INCIDENCE	N(%)	240(100.0)	113(100.0)	36(100.0)

a. Restricted to pups in which complete necropsies were performed. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation.
b. Analysis restricted to pups found dead and necropsied.
** Significantly different from the Group 5 value ($p \leq 0.01$).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 1): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 1		VEHICLE CONTROL
RAT #		DESCRIPTION
10901	DG(21)	INCISORS: MISSING/BROKEN a
10902	DG(0)	RED PERIVAGINAL SUBSTANCE
10903		NO ADVERSE FINDINGS
10904	DG(0- 5)	INCISORS: MISSING/BROKEN
10905		NO ADVERSE FINDINGS
10906		NO ADVERSE FINDINGS
10907		NO ADVERSE FINDINGS
10908		NO ADVERSE FINDINGS
10909	DG(12)	INCISORS: MISSING/BROKEN
10910		NO ADVERSE FINDINGS
10911		NO ADVERSE FINDINGS
10912		NO ADVERSE FINDINGS
10913		NO ADVERSE FINDINGS
10914	DL(2- 5)	INCISORS: MISSING/BROKEN a
	DL(3)	INCISORS: MISALIGNED
11501	DS(32- 43)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(0- 2)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(5- 8)	LOCALIZED ALOPECIA: NECK
	DG(16- 21)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 5)	LOCALIZED ALOPECIA: UNDERSIDE a
11502	DS(9- 18)	LOCALIZED ALOPECIA: LIMBS
	DS(28- 34)	LOCALIZED ALOPECIA: LIMBS
11503		NO ADVERSE FINDINGS
11504		NO ADVERSE FINDINGS
11505		NO ADVERSE FINDINGS
11506		NO ADVERSE FINDINGS
11507		NO ADVERSE FINDINGS
11508		NO ADVERSE FINDINGS
11509	DS(27- 39)	RIGHT FOREPAW: 2ND DIGIT SWOLLEN
	DS(27- 42)	RIGHT FOREPAW: 2ND DIGIT MISSING
	DG(0- 21)	RIGHT FOREPAW: 2ND DIGIT MISSING
	DL(1- 5)	RIGHT FOREPAW: 2ND DIGIT MISSING a
	DL(2)	RED PERIVAGINAL SUBSTANCE
11510	DS(5- 14)	LOCALIZED ALOPECIA: LIMBS
	DS(23- 42)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 2): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 1		VEHICLE CONTROL
RAT #		DESCRIPTION
11511		NO ADVERSE FINDINGS
11512		NO ADVERSE FINDINGS
11513	DS(3- 42)	TAIL BENT
	DS(40- 42)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(0- 21)	TAIL BENT
	DG(0- 21)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 5)	TAIL BENT a
	DL(1- 5)	LOCALIZED ALOPECIA: UNDERSIDE a
11514		NO ADVERSE FINDINGS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 3): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 2		MEVALONIC ACID CONTROL
RAT #		DESCRIPTION
10915		NO ADVERSE FINDINGS
10916	DG(1)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(4- 9)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(13- 21)	LOCALIZED ALOPECIA: UNDERSIDE a
10917	DG(10- 12)	MOUTH: SCAB (0.1 CM IN DIAMETER)
	DG(17)	CHROMORHINORRHEA
10918	DS(10)	EXCESS SALIVATION
	DS(34)	EXCESS SALIVATION
	DS(41- 45)	RIGHT EAR SWOLLEN
	DG(0- 2)	RIGHT EAR SWOLLEN
	DG(4- 5)	EXCESS SALIVATION
	DG(10)	EXCESS SALIVATION
	DG(13)	EXCESS SALIVATION
	DG(15)	RED, DRIED PERIORAL SUBSTANCE
	DG(17)	EXCESS SALIVATION
	DG(17)	MODERATE PERIORAL SUBSTANCE
	DG(19)	RED, MODERATE PERIORAL SUBSTANCE
10919	DG(17)	EXCESS SALIVATION
	DG(19)	CHROMORHINORRHEA
10920	DG(15)	RED PERIVAGINAL SUBSTANCE
	DG(18)	RED, SLIGHT PERIORAL SUBSTANCE
10921	DS(37- 40)	INCISORS: MISSING/BROKEN
	DS(43- 44)	INCISORS: MISSING/BROKEN
	DG(0)	INCISORS: MISSING/BROKEN
10922	DS(45)	EXCESS SALIVATION
	DG(5)	EXCESS SALIVATION
	DG(18)	EXCESS SALIVATION
10923		NO ADVERSE FINDINGS
10924		NO ADVERSE FINDINGS
10925	DS(30)	CHROMORHINORRHEA
10926	DG(11)	EXCESS SALIVATION
	DG(11)	SOFT OR LIQUID FECES
	DG(12)	DECREASED MOTOR ACTIVITY
	DG(12)	CHROMORHINORRHEA a
	DG(12)	CHROMODACRYORRHEA a
	DG(12)	RED PERIORAL SUBSTANCE a
	DG(12)	MORIBUND SACRIFICED; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT
10927		NO ADVERSE FINDINGS
10928	DG(1)	INCISORS: MISSING/BROKEN

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 4): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 2		MEVALONIC ACID CONTROL
RAT #		DESCRIPTION
11515	DG(16)	EXCESS SALIVATION
11516		NO ADVERSE FINDINGS
11517	DS(33- 35)	INCISORS: MISSING/BROKEN
11518	DG(17)	EXCESS SALIVATION
11519	DS(6)	RALES
	DS(13)	CHROMORHINORRHEA
11520	DS(28- 32)	LOCALIZED ALOPECIA: UNDERSIDE
	DS(40- 44)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(0- 2)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(14- 17)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(15)	INCISORS: MISSING/BROKEN
11521		NO ADVERSE FINDINGS
11522	DG(17)	RED PERIORAL SUBSTANCE
11523	DG(11)	EXCESS SALIVATION
	DG(18)	EXCESS SALIVATION
	DG(18)	RED, SLIGHT, DRIED PERIORAL SUBSTANCE
11524		NO ADVERSE FINDINGS
11525	DG(12- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11526	DG(20)	EXCESS SALIVATION
11527		NO ADVERSE FINDINGS
11528	DS(6)	EXCESS SALIVATION

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 5): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 3		1.6 MG/KG PFOS + MEVALONIC ACID
RAT #		DESCRIPTION
10929		NO ADVERSE FINDINGS
10930	DS(40- 42)	SWOLLEN SNOUT
	DS(40- 44)	MOUTH: SCAB (0.1 CM IN DIAMETER)
	DG(0- 3)	MOUTH: SCAB (0.1 CM IN DIAMETER)
	DG(7)	CHROMORHINORRHEA
	DG(7)	SWOLLEN SNOUT
	DG(9)	EXCESS SALIVATION
	DG(13)	EXCESS SALIVATION
	DG(15)	EXCESS SALIVATION
10931		NO ADVERSE FINDINGS
10932		NO ADVERSE FINDINGS
10933	DG(9- 20)	LOCALIZED ALOPECIA: NECK
10934	DG(17)	EXCESS SALIVATION
10935	DS(1)	EXCESS SALIVATION
	DG(17)	EXCESS SALIVATION
10936	DS(2)	FOUND DEAD
10937		NO ADVERSE FINDINGS
10938	DG(13)	EXCESS SALIVATION
10939		NO ADVERSE FINDINGS
10940	DG(19)	RED, SLIGHT PERIORAL SUBSTANCE
	DG(19- 21)	INCISORS: MISSING/BROKEN a
10941	DL(4)	SACRIFICED DUE TO NO SURVIVING PUPS
10942	DG(13- 21)	LOCALIZED ALOPECIA: LIMBS
	DG(18- 21)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
	DL(1- 5)	LOCALIZED ALOPECIA: UNDERSIDE a
11529	DS(6)	EXCESS SALIVATION
	DS(33- 35)	INCISORS: MISSING/BROKEN
11530		NO ADVERSE FINDINGS
11531	DG(21)	LOCALIZED ALOPECIA: UNDERSIDE
11532	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11533	DG(5)	EXCESS SALIVATION
	DG(16)	CHROMORHINORRHEA
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 6): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 3		1.6 MG/KG PFOS + MEVALONIC ACID
RAT #		DESCRIPTION
11534		NO ADVERSE FINDINGS
11535	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11536	DS(28- 32)	INCISORS: MISSING/BROKEN
11537		NO ADVERSE FINDINGS
11538	DS(14- 18)	INCISORS: MISSING/BROKEN
	DS(19- 23)	MOUTH: SCAB (0.1 CM IN DIAMETER)
	DG(12)	EXCESS SALIVATION
11539	DS(4)	EXCESS SALIVATION
	DS(4)	LABORED BREATHING
	DS(4- 6)	RALES
	DS(8- 12)	RALES
	DS(12)	RED SUBSTANCE IN CAGE
	DS(12)	EXCESS SALIVATION
	DS(12)	SCANT FECES
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11540		NO ADVERSE FINDINGS
11541	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11542	DG(13)	EXCESS SALIVATION
	DG(16)	RED, SLIGHT, DRIED PERIORAL SUBSTANCE
11543	DS(41- 44)	INCISORS: MISSING/BROKEN
	DG(0)	INCISORS: MISSING/BROKEN
	DG(15)	EXCESS SALIVATION

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 7): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 4		2 MG/KG PFOS + MEVALONIC ACID
RAT #		DESCRIPTION
10943	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
10944	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS
10945	DS(32)	EXCESS SALIVATION
	DS(34- 35)	EXCESS SALIVATION
	DS(38- 39)	EXCESS SALIVATION
	DS(41)	EXCESS SALIVATION
	DG(0- 1)	EXCESS SALIVATION
10946		NO ADVERSE FINDINGS
10947	DG(17- 21)	LOCALIZED ALOPECIA: LIMBS a
10948	DS(34)	EXCESS SALIVATION
	DL(4)	SACRIFICED DUE TO NO SURVIVING PUPS
10949	DS(4- 44)	TIP OF TAIL MISSING
	DS(37)	CHROMORHINORRHEA
	DG(0- 21)	TIP OF TAIL MISSING a
	DG(14- 15)	CHROMODACRYORRHEA
	DG(14- 16)	CHROMORHINORRHEA
	DG(14- 18)	RALES
	DG(14- 21)	PTOSIS
	DG(15- 18)	RED, SLIGHT OR MODERATE PERIORAL SUBSTANCE
	DG(15- 19)	DEHYDRATION
	DG(17)	SCANT FECES
	DG(17- 18)	EMACIATION
10950		NO ADVERSE FINDINGS
10951	DS(38)	CHROMORHINORRHEA
	DG(14)	EXCESS SALIVATION
10952	DG(8)	EXCESS SALIVATION
	DG(16)	EXCESS SALIVATION
	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
10953	DS(34)	EXCESS SALIVATION
	DG(20- 21)	INCISORS: MISSING/BROKEN a
10954	DS(12)	SOFT OR LIQUID FECES
	DS(14)	CHROMORHINORRHEA
	DS(15- 17)	INCISORS: MISSING/BROKEN
	DS(16)	SOFT OR LIQUID FECES
	DG(21)	INCISORS: MISSING/BROKEN a

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 8): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 4		2 MG/KG PFOS + MEVALONIC ACID
RAT #		DESCRIPTION
10955	DG(15)	EXCESS SALIVATION
	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
10956	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11544	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11545	DS(11)	EXCESS SALIVATION
	DS(22- 27)	SWOLLEN SNOUT
	DS(22- 28)	MOUTH: SCAB (0.2 CM IN DIAMETER)
	DS(22- 38)	INCISORS: MISALIGNED
	DS(28- 36)	INCISORS: MISSING/BROKEN
	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11546	DL(1)	SACRIFICED DUE TO NO SURVIVING PUPS
11547	DS(18)	EXCESS SALIVATION
	DG(1)	RED, SLIGHT PERIORAL SUBSTANCE
	DG(2)	EXCESS SALIVATION
	DG(10)	EXCESS SALIVATION
11548		NO ADVERSE FINDINGS
11549	DG(17)	RED, SLIGHT, DRIED PERIORAL SUBSTANCE
	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11550	DG(10)	EXCESS SALIVATION
	DL(4)	SACRIFICED DUE TO NO SURVIVING PUPS
11551	DG(1)	RED, SLIGHT PERIORAL SUBSTANCE
	DG(12)	CHROMORHINORRHEA
	DG(16)	CHROMORHINORRHEA
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11552	DS(18)	EXCESS SALIVATION
	DS(41- 42)	PTOSIS
	DG(0- 21)	PTOSIS
	DG(13)	EXCESS SALIVATION
	DG(16)	RED, MODERATE PERIORAL SUBSTANCE
	DL(1- 5)	PTOSIS
11553	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11554	DS(18)	EXCESS SALIVATION
	DG(16- 17)	RED, SLIGHT PERIORAL SUBSTANCE
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11555	DG(4)	RED, SLIGHT PERIORAL SUBSTANCE
	DG(13)	EXCESS SALIVATION
	DG(18)	EXCESS SALIVATION
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 9): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 4			2 MG/KG PFOS + MEVALONIC ACID
RAT #			DESCRIPTION
11556	DL(	1)	SACRIFICED DUE TO NO SURVIVING PUPS
11557	DG(	10)	EXCESS SALIVATION
	DG(	20)	EXCESS SALIVATION
	DL(	1)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 10): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 5		CHOLESTEROL CONTROL
RAT #		DESCRIPTION
10957	DG(6- 15)	INCISORS: MISALIGNED
10958		NO ADVERSE FINDINGS
10959		NO ADVERSE FINDINGS
10960	DG(19- 21)	CHROMODACRYORRHEA a
10961		NO ADVERSE FINDINGS
10962	DS(35- 44)	LOCALIZED ALOPECIA: NECK
	DS(37- 44)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 6)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 21)	LOCALIZED ALOPECIA: NECK a
	DG(11- 21)	LOCALIZED ALOPECIA: LIMBS a
10963		NO ADVERSE FINDINGS
10964		NO ADVERSE FINDINGS
10965		NO ADVERSE FINDINGS
10966		NO ADVERSE FINDINGS
10967		NO ADVERSE FINDINGS
10968		NO ADVERSE FINDINGS
10969	DS(39)	LOCALIZED ALOPECIA: LIMBS
	DG(9- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
10970	DL(4- 5)	LOCALIZED ALOPECIA: LIMBS
11558		NO ADVERSE FINDINGS
11559		NO ADVERSE FINDINGS
11560	DS(22- 32)	LOCALIZED ALOPECIA: LIMBS
11561		NO ADVERSE FINDINGS
11562	DS(16)	DECREASED MOTOR ACTIVITY
	DS(16)	PALE IN APPEARANCE
	DS(16)	COLD TO TOUCH
	DS(16)	MORIBUND SACRIFICED
11563	DL(2)	RED PERIVAGINAL SUBSTANCE
11564	DS(23- 32)	LOCALIZED ALOPECIA: LIMBS
	DG(19- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11565		NO ADVERSE FINDINGS
11566	DS(27- 45)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 25)	LOCALIZED ALOPECIA: LIMBS a
11567		NO ADVERSE FINDINGS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 11): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 5		CHOLESTEROL CONTROL
RAT #		DESCRIPTION
11568	DS(25)	*SWOLLEN SNOUT*
	DS(25- 40)	INCISORS: MISALIGNED
	DS(42- 44)	INCISORS: MISALIGNED
	DG(0- 21)	INCISORS: MISALIGNED
	DL(1- 4)	INCISORS: MISALIGNED
11569	DL(2)	RED PERIVAGINAL SUBSTANCE
11570	DS(40- 43)	LOCALIZED ALOPECIA: NECK
	DS(40- 45)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(0- 1)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(10- 21)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 4)	LOCALIZED ALOPECIA: UNDERSIDE
11571		NO ADVERSE FINDINGS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 12): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 6		1.6 MG/KG PFOS + CHOLESTEROL
RAT #		DESCRIPTION
10971	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
10972		NO ADVERSE FINDINGS
10973	DS(35- 42)	INCISORS: MISSING/BROKEN
	DG(0- 2)	INCISORS: MISSING/BROKEN
	DG(14- 19)	INCISORS: MISSING/BROKEN
	DG(14- 20)	INCISORS: MISALIGNED
	DL(1- 4)	INCISORS: MISALIGNED
	DL(2)	RED PERIVAGINAL SUBSTANCE
	DL(4)	SACRIFICED DUE TO NO SURVIVING PUPS
10974	DS(9)	CHROMORHINORRHEA
10975		NO ADVERSE FINDINGS
10976	DS(44)	CHROMORHINORRHEA
	DG(11- 17)	CHEST: ULCERATION (DID NOT EXCEED 2.0 CM X 1.0 CM)
	DG(18- 21)	CHEST: SCAB (2.0 CM X 0.5 CM)a
	DG(16- 21)	LEFT FORELIMB: ULCERATION (0.5 CM X 0.2 CM)a
10977		NO ADVERSE FINDINGS
10978	DS(40- 44)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 7)	LOCALIZED ALOPECIA: LIMBS
10979		NO ADVERSE FINDINGS
10980		NO ADVERSE FINDINGS
10981	DG(1- 5)	INCISORS: MISSING/BROKEN
	DG(7- 8)	INCISORS: MISSING/BROKEN
10982		NO ADVERSE FINDINGS
10983	DS(33- 45)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DG(4- 20)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(7- 20)	LOCALIZED ALOPECIA: BACK
	DL(1- 2)	LOCALIZED ALOPECIA: BACK
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
	DL(1- 5)	LOCALIZED ALOPECIA: UNDERSIDE a
10984	DG(8- 18)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 13): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 6		1.6 MG/KG PFOS + CHOLESTEROL
RAT #		DESCRIPTION
11572	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11573	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11574		NO ADVERSE FINDINGS
11575	DG(1- 2)	CHROMODACRYORRHEA
11576		NO ADVERSE FINDINGS
11577	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11578		NO ADVERSE FINDINGS
11579		NO ADVERSE FINDINGS
11580		NO ADVERSE FINDINGS
11581	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11582		NO ADVERSE FINDINGS
11583		NO ADVERSE FINDINGS
11584	DG(18- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 2)	LOCALIZED ALOPECIA: LIMBS
11585	DG(12- 19)	LOCALIZED ALOPECIA: LIMBS
	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS

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PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 14): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 7		2 MG/KG PFOS + CHOLESTEROL
RAT #		DESCRIPTION
10985		NO ADVERSE FINDINGS
10986	DG(2- 3)	LOCALIZED ALOPECIA: LIMBS
	DG(18- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 3)	LOCALIZED ALOPECIA: LIMBS a
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
10987		NO ADVERSE FINDINGS
10988		NO ADVERSE FINDINGS
10989		NO ADVERSE FINDINGS
10990		NO ADVERSE FINDINGS
10991		NO ADVERSE FINDINGS
10992	DG(16)	CHROMORHINORRHEA
10993	DG(1- 4)	CHROMODACRYORRHEA
	DG(20- 21)	INCISORS: MISSING/BROKEN a
10994	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
10995		NO ADVERSE FINDINGS
10996	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
10997	DG(18)	CHROMORHINORRHEA
10998		NO ADVERSE FINDINGS
11586	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11587	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11588	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11589	DG(10- 16)	INCISORS: MISSING/BROKEN
	DG(12- 15)	CHROMODACRYORRHEA
	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS
11590	DG(15- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 3)	LOCALIZED ALOPECIA: LIMBS a
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11591	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11592		NO ADVERSE FINDINGS
11593		NO ADVERSE FINDINGS
11594	DS(23- 34)	LOCALIZED ALOPECIA: LIMBS
	DG(2- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 15): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 7		2 MG/KG PFOS + CHOLESTEROL
RAT #		DESCRIPTION
11595	DL(1)	SACRIFICED DUE TO NO SURVIVING PUPS
11596	DG(19- 20)	LOCALIZED ALOPECIA: BACK
	DL(1- 3)	LOCALIZED ALOPECIA: BACK a
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11597	DG(1- 22)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(13- 22)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 4)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 4)	LOCALIZED ALOPECIA: UNDERSIDE
11598	DS(37- 38)	INCISORS: MISSING/BROKEN
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11599	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS

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a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 16): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 8		0.4 MG/KG PFOS
RAT #		DESCRIPTION
10999		NO ADVERSE FINDINGS
11000		NO ADVERSE FINDINGS
11001		NO ADVERSE FINDINGS
11002		NO ADVERSE FINDINGS
11003		NO ADVERSE FINDINGS
11004	DS(14- 38)	FOREPAWS AND LEFT FORELIMB: SCABS (EACH 0.1 CM IN DIAMETER)
	DS(39- 44)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11005		NO ADVERSE FINDINGS
11006		NO ADVERSE FINDINGS
11007		NO ADVERSE FINDINGS
11008	DG(15)	CHROMORHINORRHEA
11600		NO ADVERSE FINDINGS
11601	DG(15- 21)	INCISORS: MISSING/BROKEN
	DL(1)	INCISORS: MISSING/BROKEN
11602		NO ADVERSE FINDINGS
11603		NO ADVERSE FINDINGS
11604		NO ADVERSE FINDINGS
11605		NO ADVERSE FINDINGS
11606	DS(20- 27)	CHROMODACRYORRHEA
	DS(23- 27)	INCISORS: MISALIGNED
11607		NO ADVERSE FINDINGS
11608		NO ADVERSE FINDINGS
11609	DS(18- 42)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 17): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 9		0.8 MG/KG PFOS
RAT #		DESCRIPTION
11009		NO ADVERSE FINDINGS
11010		NO ADVERSE FINDINGS
11011		NO ADVERSE FINDINGS
11012		NO ADVERSE FINDINGS
11013		NO ADVERSE FINDINGS
11014	DS(32- 34)	INCISORS: MISSING/BROKEN
11015		NO ADVERSE FINDINGS
11016		NO ADVERSE FINDINGS
11017		NO ADVERSE FINDINGS
11018		NO ADVERSE FINDINGS
11610		NO ADVERSE FINDINGS
11611		NO ADVERSE FINDINGS
11612		NO ADVERSE FINDINGS
11613		NO ADVERSE FINDINGS
11614		NO ADVERSE FINDINGS
11615		NO ADVERSE FINDINGS
11616		NO ADVERSE FINDINGS
11617		NO ADVERSE FINDINGS
11618		NO ADVERSE FINDINGS
11619	DS(18- 20)	CHROMODACRYORRHEA
	DS(18- 42)	INCISORS: MISALIGNED
	DS(27- 42)	CHROMODACRYORRHEA
	DG(0- 20)	CHROMODACRYORRHEA
	DG(0- 20)	INCISORS: MISALIGNED
	DG(13- 19)	INCISORS: MISSING/BROKEN
	DL(1- 2)	INCISORS: MISALIGNED
	DL(1- 5)	CHROMODACRYORRHEA a
	DL(2- 3)	LACRIMATION
	DL(2- 5)	INCISORS: MISSING/BROKEN a

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 18): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 10		1 MG/KG PFOS
RAT #		DESCRIPTION
11019	DG(14- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 4)	LOCALIZED ALOPECIA: LIMBS
11020		NO ADVERSE FINDINGS
11021		NO ADVERSE FINDINGS
11022		NO ADVERSE FINDINGS
11023	DG(13- 18)	LOCALIZED ALOPECIA: UNDERSIDE
11024	DS(38- 42)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 4)	LOCALIZED ALOPECIA: LIMBS
11025		NO ADVERSE FINDINGS
11026		NO ADVERSE FINDINGS
11027		NO ADVERSE FINDINGS
11028	DS(34- 44)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11620		NO ADVERSE FINDINGS
11621		NO ADVERSE FINDINGS
11622		NO ADVERSE FINDINGS
11623b		NO ADVERSE FINDINGS
11624		NO ADVERSE FINDINGS
11625		NO ADVERSE FINDINGS
11626	DG(5- 21)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 4)	LOCALIZED ALOPECIA: UNDERSIDE
11627	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11628	DG(2)	SWOLLEN SNOUT
	DG(2- 10)	INCISORS: MISSING/BROKEN
11629		NO ADVERSE FINDINGS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION

a. Observation confirmed at necropsy.

b. Rat 11623 was missing and found on day 19 of study.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 23 (PAGE 19): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 11		1.2 MG/KG PFOS
RAT #		DESCRIPTION
11029		NO ADVERSE FINDINGS
11030		NO ADVERSE FINDINGS
11031		NO ADVERSE FINDINGS
11032		NO ADVERSE FINDINGS
11033		NO ADVERSE FINDINGS
11034		NO ADVERSE FINDINGS
11035		NO ADVERSE FINDINGS
11036		NO ADVERSE FINDINGS
11037		NO ADVERSE FINDINGS
11038		NO ADVERSE FINDINGS
11630		NO ADVERSE FINDINGS
11631		NO ADVERSE FINDINGS
11632		NO ADVERSE FINDINGS
11633	DS(17- 43)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11634		NO ADVERSE FINDINGS
11635	DG(11- 20)	LOCALIZED ALOPECIA: BACK
	DL(1- 4)	LOCALIZED ALOPECIA: BACK
11636		NO ADVERSE FINDINGS
11637		NO ADVERSE FINDINGS
11638		NO ADVERSE FINDINGS
11639	DG(11- 20)	LOCALIZED ALOPECIA: UNDERSIDE
	DG(19- 20)	LOCALIZED ALOPECIA: LIMBS
	DG(19- 20)	LOCALIZED ALOPECIA: BACK
	DL(1- 4)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 4)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 4)	LOCALIZED ALOPECIA: BACK

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

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TABLE 23 (PAGE 20): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 12		1.6 MG/KG PFOS
RAT #		DESCRIPTION
11039		NO ADVERSE FINDINGS
11040		NO ADVERSE FINDINGS
11041		NO ADVERSE FINDINGS
11042	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11043		NO ADVERSE FINDINGS
11044	DG(5- 21)	LOCALIZED ALOPECIA: UNDERSIDE a
11045		NO ADVERSE FINDINGS
11046	DS(37- 44)	INCISORS: MISSING/BROKEN
	DG(0- 3)	INCISORS: MISSING/BROKEN
11047		NO ADVERSE FINDINGS
11048	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11049		NO ADVERSE FINDINGS
11050		NO ADVERSE FINDINGS
11051	DG(10- 19)	LOCALIZED ALOPECIA: NECK
11052		NO ADVERSE FINDINGS
11640		NO ADVERSE FINDINGS
11641	DS(11- 44)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
11642		NO ADVERSE FINDINGS
11643	DG(11- 20)	LOCALIZED ALOPECIA: UNDERSIDE
	DL(1- 5)	LOCALIZED ALOPECIA: UNDERSIDE a
11644	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DG(12- 17)	LOCALIZED ALOPECIA: NECK
	DL(1- 5)	LOCALIZED ALOPECIA: LIMBS a
	DL(5)	LOCALIZED ALOPECIA: NECK a
11645	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11646		NO ADVERSE FINDINGS
11647		NO ADVERSE FINDINGS
11648		NO ADVERSE FINDINGS
11649	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS
11650		NO ADVERSE FINDINGS
11651		NO ADVERSE FINDINGS
11652	DG(11- 13)	INCISORS: MISSING/BROKEN
11653		NO ADVERSE FINDINGS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

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TABLE 23 (PAGE 21): CLINICAL OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 13		2 MG/KG PFOS
RAT #		DESCRIPTION
11053		NO ADVERSE FINDINGS
11054		NO ADVERSE FINDINGS
11055	DL(4)	SACRIFICED DUE TO NO SURVIVING PUPS
11056		NO ADVERSE FINDINGS
11057	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11058		NO ADVERSE FINDINGS
11059		NO ADVERSE FINDINGS
11060		NO ADVERSE FINDINGS
11061	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11062		NO ADVERSE FINDINGS
11063		NO ADVERSE FINDINGS
11064	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11065	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11066		NO ADVERSE FINDINGS
11654		NO ADVERSE FINDINGS
11655	DG(17- 21)	LOCALIZED ALOPECIA: LIMBS
	DG(17- 21)	LOCALIZED ALOPECIA: NECK
	DL(1- 2)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 5)	LOCALIZED ALOPECIA: NECK a
11656		NO ADVERSE FINDINGS
11657	DS(17- 43)	LOCALIZED ALOPECIA: LIMBS
	DG(0- 20)	LOCALIZED ALOPECIA: LIMBS
	DL(1- 3)	LOCALIZED ALOPECIA: LIMBS a
	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11658	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11659	DG(12- 21)	LOCALIZED ALOPECIA: LIMBS
	DL(1)	LOCALIZED ALOPECIA: LIMBS a
	DL(1)	SACRIFICED DUE TO NO SURVIVING PUPS
11660	DL(3)	SACRIFICED DUE TO NO SURVIVING PUPS
11661	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11662		NO ADVERSE FINDINGS
11663	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11664	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS
11665	DL(5)	SACRIFICED DUE TO NO SURVIVING PUPS
11666		NO ADVERSE FINDINGS
11667	DL(2)	SACRIFICED DUE TO NO SURVIVING PUPS

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
a. Observation confirmed at necropsy.

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TABLE 24 (PAGE 1): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
1 VEHICLE CONTROL	10901	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10902	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10903	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10904	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10905	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10906	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10907	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10908	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10909	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10910	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10911	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10912	DG 21	NP	ALL TISSUES APPEARED NORMAL.
	10913	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10914	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11501	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11502	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11503	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11504	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11505	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11506	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11507	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11508	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11509	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11510	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11511	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11512	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11513	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11514	DL 5	P	ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 2): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
2				
MEVALONIC ACID CONTROL	10915	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10916	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10917	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10918	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10919	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10920	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10921	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10922	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10923	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10924	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10925	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10926	DG 12	P	MORIBUND SACRIFICED ON DAY 12 OF GESTATION (DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT). ESOPHAGUS: PERFORATION (0.2 CM X 0.3 CM). LEFT AXILLARY AREA: TISSUE DISCOLORED TAN. UTERINE CONTENTS: 14 IMPLANTATION SITES (14 LIVE EMBRYOS).b ALL OTHER TISSUES APPEARED NORMAL.
	10927	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10928	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11515	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11516	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11517	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11518	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11519	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11520	DL 5	P	KIDNEYS: BILATERAL, MISSHAPEN; BILATERAL, PELVIS, SLIGHT DILATION. BLADDER: WALLS THICK; CONTAINED ONE CALCULUS (0.8 CM X 0.5 CM X 0.2 CM). ALL OTHER TISSUES APPEARED NORMAL.
	11521	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11522	DG 25	NP	ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.
b. Appeared normal for their developmental ages.

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TABLE 24 (PAGE 3): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
2 (CONT.)				
MEVALONIC ACID CONTROL	11523	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11524	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11525	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11526	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11527	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11528	DL 5	P	ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 24 (PAGE 4): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
3 1.6 + MEVALONIC ACID	10929	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10930	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10931	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10932	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10933	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10934	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10935	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10936	DS 2	-	FOUND DEAD ON DAY 2 OF STUDY (DEATH OCCURRED 58 MINUTES AFTER THE 2ND DOSAGE ADMINISTRATION). THORACIC CAVITY: CONTAINED DARK RED CLOTTED MATERIAL. ALL OTHER TISSUES APPEARED NORMAL.
	10937	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10938	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10939	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	10940	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10941	DL 4	P	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10942	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11529	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11530	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11531	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11532	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11533	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11534	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11535	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 5): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
3 (CONT.)				
1.6 + MEVALONIC ACID	11536	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11537	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11538	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11539	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11540	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11541	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11542	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11543	DL 5	P	ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 6): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
4 2 + MEVALONIC ACID	10943	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10944	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10945	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10946	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10947	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10948	DL 4	P	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10949	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10950	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10951	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10952	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10953	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10954	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10955	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10956	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11544	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11545	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11546	DL 1	P	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 7): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
4 (CONT.)				
2 + MEVALONIC ACID	11547	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11548	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11549	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11550	DL 4	P	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11551	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11552	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11553	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11554	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. NECROPSY OBSERVATIONS WERE NOT RECORDED.
	11555	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11556	DL 1	P	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11557	DL 1	P	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 8): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
5 CHOLESTEROL CONTROL	10957	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10958	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10959	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10960	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10961	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10962	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10963	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10964	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10965	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10966	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10967	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10968	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10969	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10970	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11558	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11559	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11560	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11561	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11562	DS 16	-	MORIBUND SACRIFICED ON DAY 16 OF STUDY. SMALL INTESTINES: TWISTED AND CONSTRICTED AT JEJUNUM. JEJUNUM: CONTAINED DARK RED FLUID. ALL OTHER TISSUES APPEARED NORMAL.
	11563	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11564	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11565	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11566	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11567	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11568	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11569	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11570	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11571	DL 5	P	ALL TISSUES APPEARED NORMAL.

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a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 9): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
6 1.6 + CHOLESTEROL	10971	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10972	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10973	DL 4	P	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10974	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10975	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10976	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10977	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10978	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10979	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10980	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10981	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10982	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10983	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10984	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11572	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11573	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11574	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11575	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11576	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11577	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 10): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
6 (CONT.)				
1.6 + CHOLESTEROL	11578	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11579	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11580	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11581	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11582	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11583	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11584	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11585	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 11): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
7 2 + CHOLESTEROL	10985	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10986	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10987	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10988	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10989	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10990	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10991	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10992	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10993	DG 21	P	ALL TISSUES APPEARED NORMAL.
	10994	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	10995	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10996	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. STOMACH: CONTAINED PUP TISSUE. ALL OTHER TISSUES APPEARED NORMAL.
	10997	DL 5	P	ALL TISSUES APPEARED NORMAL.
	10998	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11586	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11587	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11588	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11589	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 12): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
7 (CONT.) 2 + CHOLESTEROL	11590	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11591	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11592	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11593	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11594	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11595	DL 1	P	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11596	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11597	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11598	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11599	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 13): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
8				
0.4	10999	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11000	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11001	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11002	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11003	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11004	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11005	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11006	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11007	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11008	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11600	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11601	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11602	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11603	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11604	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11605	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11606	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11607	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11608	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11609	DL 5	P	ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 14): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
9				
0.8	11009	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11010	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11011	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11012	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11013	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11014	DS 81	NP	ALL TISSUES APPEARED NORMAL.
	11015	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11016	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11017	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11018	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11610	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11611	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11612	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11613	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11614	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11615	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11616	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11617	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11618	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11619	DL 5	P	ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 15): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
10				
1	11019	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11020	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11021	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11022	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11023	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11024	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11025	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11026	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11027	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11028	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11620	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11621	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11622	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11623	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11624	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11625	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11626	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11627	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11628	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11629	DL 5	P	ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 16): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
11				
1.2	11029	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11030	DS 81	NP	ALL TISSUES APPEARED NORMAL.
	11031	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11032	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11033	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11034	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11035	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11036	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11037	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11038	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11630	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11631	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11632	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11633	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11634	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11635	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11636	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11637	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11638	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11639	DL 5	P	ALL TISSUES APPEARED NORMAL.

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a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 17): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
12				
1.6	11039	DS 81	NP	ALL TISSUES APPEARED NORMAL.
	11040	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11041	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11042	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11043	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11044	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11045	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11046	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11047	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11048	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11049	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11050	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11051	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11052	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11640	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11641	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11642	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11643	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11644	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11645	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11646	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11647	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11648	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11649	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 18): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
12 (CONT.)				
1.6	11650	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11651	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11652	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11653	DL 5	P	ALL TISSUES APPEARED NORMAL.

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P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 19): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
13				
2	11053	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11054	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11055	DL 4	P	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11056	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11057	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11058	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11059	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11060	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11061	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11062	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11063	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11064	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11065	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11066	DG 21	P	ALL TISSUES APPEARED NORMAL.
	11654	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11655	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11656	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11657	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11658	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 24 (PAGE 20): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP DOSAGE MG/KG PFOS	RAT NUMBER	DAY OF NECROPSY	PREGNANCY STATUS	OBSERVATIONS a
13 (CONT.)				
2	11659	DL 1	P	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11660	DL 3	P	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11661	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11662	DL 5	P	ALL TISSUES APPEARED NORMAL.
	11663	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11664	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11665	DL 5	P	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.
	11666	DG 25	NP	ALL TISSUES APPEARED NORMAL.
	11667	DL 2	P	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS. ALL TISSUES APPEARED NORMAL.

DS = DAY OF STUDY DG = DAY OF PRESUMED GESTATION DL = DAY OF LACTATION
P = PREGNANT NP = NOT PREGNANT
a. Refer to the individual clinical observations table (Table 23) for external observations confirmed at necropsy.

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TABLE 25 (PAGE 1): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

				LIVER	
RAT NUMBER		TERMINAL BODY WEIGHT		ABS. WT.	REL. % TBW
DOSAGE GROUP 1					VEHICLE CONTROL
10901	P	405.	C	14.15	3.49
10902	P	389.	C	12.81	3.29
10903	P	436.	C	14.28	3.28
10904	P	420.	C	15.04	3.58
10905	P	401.	C	14.84	3.70
10906	P	344.	D	15.66	4.55
10907	P	430.	C	14.33	3.33
10908	P	417.	C	14.86	3.56
10909	P	294.	D	11.82	4.02
10910	P	442.	C	14.30	3.24
10911	P	300.	D	15.67	5.22
10912	NP	338.	C	12.49	3.70
10913	P	299.	D	11.40	3.81
10914	P	280.	D	11.76	4.20
11501	P	261.	D	12.19	4.67
11502	P	328.	D	13.38	4.08
11503	P	310.	D	12.63	4.07
11504	P	347.	D	14.39	4.15
11505	P	319.	D	11.40	3.57
11506	P	347.	D	17.55	5.06
11507	P	336.	D	14.81	4.41
11508	P	328.	D	12.54	3.82
11509	P	342.	D	13.93	4.07
11510	P	359.	D	14.09	3.92
11511	P	299.	D	12.10	4.05
11512	P	357.	D	11.77	3.30
11513	P	279.	D	11.45	4.10
11514	P	327.	D	12.20	3.73

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION

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TABLE 25 (PAGE 2): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 2				MEVALONIC ACID CONTROL	
10915	P	402.	C	12.81	3.19
10916	P	452.	C	14.86	3.29
10917	P	383.	C	12.74	3.33
10918	P	443.	C	16.58	3.74
10919	P	391.	C	14.34	3.67
10920	P	426.	C	19.20	4.51
10921	P	317.	D	13.24	4.18
10922	P	321.	D	13.04	4.06
10923	P	296.	D	12.43	4.20
10924	P	301.	D	12.51	4.16
10925	P	428.	C	16.03	3.74
10926a	P	---	-	10.04	----
10927	P	341.	D	13.36	3.92
10928	P	408.	C	16.03	3.93
11515	P	282.	D	11.82	4.19
11516	P	341.	D	13.94	4.09
11517	P	328.	D	14.98	4.57
11518	P	337.	D	13.14	3.90
11519	P	306.	D	11.82	3.86
11520	P	303.	D	13.49	4.45
11521	P	341.	D	13.05	3.83
11522	NP				
11523	P	313.	D	14.51	4.64
11524	P	305.	D	12.10	3.97
11525	P	333.	D	13.46	4.04
11526	P	314.	D	12.89	4.10
11527	P	348.	D	16.72	4.80
11528	P	324.	D	12.29	3.79

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam 10926 was moribund sacrificed on day 12 of gestation; values excluded from group averages and statistical analyses.

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TABLE 25 (PAGE 3): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 3				1.6 MG/KG PFOS + MEVALONIC ACID	
10929	P	284.	D	13.55	4.77
10930	P	386.	C	15.78	4.09
10931	P	382.	C	14.11	3.69
10932	P	---	C	a	----
10933	P	392.	C	16.00	4.08
10934	P	391.	C	19.10	4.88
10935	P	363.	C	12.81	3.53
10936b	-	---	-	10.59	----
10937	P	383.	C	17.21	4.49
10938	P	316.	D	15.82	5.01
10939	NP				
10940	P	459.	C	18.76	4.09
10941c	P	---	-	12.38	----
10942	P	311.	D	16.18	5.20
11529	P	280.	D	12.71	4.54
11530	P	355.	D	15.07	4.24
11531	NP				
11532c	P	---	-	17.59	----
11533c	P	---	-	12.63	----
11534	P	336.	D	15.30	4.55
11535c	P	---	-	15.27	----
11536	P	320.	D	15.63	4.88
11537	P	308.	D	15.01	4.87
11538	P	304.	D	13.25	4.36
11539c	P	---	-	10.86	----
11540	P	330.	D	16.51	5.00
11541c	P	---	-	13.76	----
11542	P	298.	D	13.73	4.61
11543	P	348.	D	15.20	4.37

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Value was not recorded.
b. Rat 10936 was found dead on day 2 of study; values excluded from group averages and statistical analyses.
c. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

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TABLE 25 (PAGE 4): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 4				2 MG/KG PFOS + MEVALONIC ACID	
10943a	P	---	-	14.51	----
10944	P	282.	D	11.92	4.23
10945	P	415.	C	16.51	3.98
10946	P	421.	C	17.22	4.09
10947	P	385.	C	14.26	3.70
10948a	P	---	-	18.07	----
10949	P	280.	C	12.70	4.54
10950	P	421.	C	16.49	3.92
10951	P	417.	C	16.95	4.06
10952a	P	---	-	14.33	----
10953	P	399.	C	16.16	4.05
10954	P	407.	C	16.04	3.94
10955a	P	---	-	16.30	----
10956a	P	---	-	16.88	----
11544a	P	---	-	13.74	----
11545a	P	---	-	18.81	----
11546a	P	---	-	14.56	----
11547	P	299.	D	14.89	4.98
11548	NP				
11549a	P	---	-	17.01	----
11550a	P	---	-	13.74	----
11551a	P	---	-	15.29	----
11552	P	310.	D	14.55	4.69
11553a	P	---	-	16.80	----
11554a	P	---	-	13.22	----
11555a	P	---	-	13.15	----
11556a	P	---	-	13.73	----
11557a	P	---	-	16.09	----

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

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TABLE 25 (PAGE 5): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER	TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 5				CHOLESTEROL CONTROL
10957	P 316.	D	12.06	3.82
10958	P 448.	C	14.99	3.34
10959	P 448.	C	14.08	3.14
10960	P 442.	C	15.88	3.59
10961	P 409.	C	12.03	2.94
10962	P 444.	C	12.78	2.88
10963	P 475.	C	14.61	3.08
10964	P 476.	C	14.81	3.11
10965	P 386.	C	13.47	3.49
10966	P 379.	D	15.15	4.00
10967	P 326.	D	12.17	3.73
10968	P 319.	D	12.62	3.96
10969	P 320.	D	11.57	3.62
10970	P 323.	D	15.17	4.70
11558	P 308.	D	13.95	4.53
11559	P 340.	D	15.26	4.49
11560	NP			
11561	P 359.	D	14.21	3.96
11562a	- ---	-	b	----
11563	P 325.	D	13.87	4.27
11564	P 306.	D	11.71	3.83
11565	P 321.	D	13.18	4.10
11566	NP			
11567	P 347.	D	14.07	4.05
11568	P 312.	D	14.46	4.63
11569	P 355.	D	13.75	3.87
11570	P 242.	D	10.88	4.50
11571	P 379.	D	14.48	3.82

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Rat 11562 was moribund sacrificed on day 16 of study; values excluded from group averages and statistical analyses.
b. Value was not recorded.

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TABLE 25 (PAGE 6): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 6				1.6 MG/KG PFOS + CHOLESTEROL	
10971a	P	---	-	12.35	----
10972	P	455.	C	13.58	2.98
10973a	P	---	-	11.43	----
10974	P	435.	C	13.67	3.14
10975	P	339.	C	14.34	4.23
10976	P	376.	C	13.80	3.67
10977	P	269.	D	13.75	5.11
10978	P	415.	C	14.48	3.49
10979	P	316.	D	15.66	4.96
10980	P	402.	C	15.36	3.82
10981	P	373.	C	13.37	3.58
10982	P	429.	C	15.56	3.63
10983	P	299.	D	17.08	5.71
10984a	P	---	-	14.82	----
11572a	P	---	-	10.33	----
11573a	P	---	-	13.88	----
11574	P	284.	D	12.14	4.27
11575	P	335.	D	14.93	4.46
11576	P	307.	D	12.96	4.22
11577a	P	---	-	15.41	----
11578	P	291.	D	12.51	4.30
11579	P	325.	D	13.83	4.26
11580	P	319.	D	17.42	5.46
11581a	P	---	-	17.70	----
11582	P	298.	D	12.69	4.26
11583	P	317.	D	15.15	4.78
11584	P	309.	D	14.66	4.74
11585	P	282.	D	12.93	4.58

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

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TABLE 25 (PAGE 7): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 7				2 MG/KG PFOS + CHOLESTEROL	
10985	P	402.	C	15.39	3.83
10986a	P	---	-	15.35	----
10987	P	394.	C	15.90	4.04
10988	P	397.	C	14.96	3.77
10989	P	323.	C	13.91	4.31
10990	P	403.	C	15.27	3.79
10991	P	379.	C	15.47	4.08
10992	P	372.	C	16.30	4.38
10993	P	430.	C	15.14	3.52
10994a	P	---	-	15.64	----
10995	P	282.	D	13.99	4.96
10996a	P	---	-	16.60	----
10997	P	261.	D	11.28	4.32
10998	NP				
11586a	P	---	-	12.74	----
11587a	P	---	-	14.88	----
11588a	P	---	-	12.53	----
11589	P	290.	D	12.24	4.22
11590a	P	---	-	14.76	----
11591a	P	---	-	17.35	----
11592	P	297.	D	13.14	4.42
11593	P	262.	D	12.43	4.74
11594	P	299.	D	13.24	4.43
11595a	P	---	-	16.06	----
11596a	P	---	-	13.75	----
11597	P	275.	D	12.10	4.40
11598a	P	---	-	13.25	----
11599a	P	---	-	16.71	----

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

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TABLE 25 (PAGE 8): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER	TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 8			0.4 MG/KG PFOS	
10999	P 306.	D	12.95	4.23
11000	P 333.	D	11.72	3.52
11001	P 304.	D	13.06	4.30
11002	P 325.	D	14.78	4.55
11003	P 333.	D	13.93	4.18
11004	P 322.	D	14.31	4.44
11005	P 325.	D	14.76	4.54
11006	P 334.	D	14.91	4.46
11007	P 340.	D	16.47	4.84
11008	P 325.	D	14.96	4.60
11600	P 344.	D	15.30	4.45
11601	P 383.	D	16.13	4.21
11602	P 281.	D	10.83	3.85
11603	P 333.	D	13.32	4.00
11604	P 297.	D	11.89	4.00
11605	P 337.	D	12.79	3.80
11606	P 312.	D	12.46	3.99
11607	P 312.	D	13.39	4.29
11608	P 345.	D	14.17	4.11
11609	P 343.	D	14.65	4.27

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION

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TABLE 25 (PAGE 9): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 9				0.8 MG/KG PFOS	
11009	P	208.	D	12.16	5.85
11010	P	346.	D	15.03	4.34
11011	P	335.	D	14.14	4.22
11012	P	283.	D	13.00	4.59
11013	P	290.	D	13.78	4.75
11014	NP				
11015	P	298.	D	13.64	4.58
11016	P	279.	D	11.15	4.00
11017	NP				
11018	P	324.	D	14.81	4.57
11610	NP				
11611	P	356.	D	14.16	3.98
11612	P	296.	D	13.88	4.69
11613	P	364.	D	14.51	3.99
11614	P	326.	D	14.95	4.58
11615	P	355.	D	14.09	3.97
11616	P	278.	D	13.27	4.77
11617	P	326.	D	13.45	4.12
11618	P	332.	D	13.79	4.15
11619	P	245.	D	12.04	4.91

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION

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TABLE 25 (PAGE 10): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 10					1 MG/KG PFOS
11019	P	306.	D	14.75	4.82
11020	P	336.	D	15.26	4.54
11021	P	282.	D	15.71	5.57
11022	NP				
11023	P	281.	D	14.01	4.98
11024	P	337.	D	15.93	4.73
11025	P	314.	D	13.15	4.19
11026	P	308.	D	13.34	4.33
11027	P	277.	D	11.86	4.28
11028	P	300.	D	15.70	5.23
11620	P	275.	D	12.79	4.65
11621	P	317.	D	12.48	3.94
11622	P	322.	D	12.46	3.87
11623	P	305.	D	12.68	4.16
11624	P	323.	D	14.63	4.53
11625	P	323.	D	14.49	4.49
11626	P	310.	D	11.80	3.81
11627a	P	---	-	13.73	----
11628	P	324.	D	12.33	3.80
11629	P	331.	D	13.14	3.97

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 25 (PAGE 11): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 11				1.2 MG/KG PFOS	
11029	P	304.	D	16.91	5.56
11030	NP				
11031	P	302.	D	13.38	4.43
11032	P	321.	D	14.72	4.58
11033	P	273.	D	13.08	4.79
11034	P	296.	D	14.24	4.81
11035	P	274.	D	13.19	4.81
11036	P	338.	D	17.69	5.23
11037	P	280.	D	14.23	5.08
11038	P	306.	D	15.44	5.04
11630	P	286.	D	13.22	4.62
11631	NP				
11632	P	287.	D	12.77	4.45
11633	P	347.	D	16.47	4.75
11634	P	329.	D	13.80	4.19
11635	P	333.	D	16.42	4.93
11636	P	314.	D	14.47	4.61
11637	P	310.	D	14.62	4.72
11638	P	276.	D	12.29	4.45
11639	P	325.	D	14.49	4.46

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 25 (PAGE 12): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 12				1.6 MG/KG PFOS	
11039	NP				
11040	P	374.	C	17.98	4.81
11041	P	292.	D	12.95	4.43
11042a	P	---	-	16.60	----
11043	NP				
11044	P	397.	C	14.06	3.54
11045	P	391.	C	13.30	3.40
11046	P	431.	C	15.09	3.50
11047	P	384.	C	16.38	4.26
11048a	P	---	-	15.53	----
11049	P	304.	D	14.72	4.84
11050	P	400.	C	14.87	3.72
11051	P	377.	C	11.94	3.17
11052	P	444.	C	15.61	3.52
11640	P	293.	D	13.66	4.66
11641	P	316.	D	14.02	4.44
11642	P	290.	D	13.57	4.68
11643	P	281.	D	12.41	4.42
11644	P	288.	D	13.88	4.82
11645a	P	---	-	16.08	----
11646	P	316.	D	13.89	4.40
11647	P	300.	D	12.62	4.21
11648	P	279.	D	12.08	4.33
11649	P	305.	D	13.96	4.58
11650	P	289.	D	11.67	4.04
11651	P	352.	D	14.44	4.10
11652	NP				
11653	P	276.	D	10.57	3.83

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 25 (PAGE 13): TERMINAL BODY WEIGHTS AND ORGAN WEIGHTS AND RATIOS (%) OF ORGAN WEIGHT TO TERMINAL BODY WEIGHT - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

RAT NUMBER		TERMINAL BODY WEIGHT		LIVER ABS. WT.	LIVER REL. % TBW
DOSAGE GROUP 13				2 MG/KG PFOS	
11053	P	386.	C	14.13	3.66
11054	P	447.	C	14.45	3.23
11055a	P	---	-	13.29	----
11056	P	352.	C	13.63	3.87
11057a	P	---	-	15.41	----
11058	P	421.	C	16.58	3.94
11059	P	286.	D	14.27	4.99
11060	P	425.	C	16.11	3.79
11061a	P	---	-	14.26	----
11062	P	390.	C	16.15	4.14
11063	P	418.	C	14.55	3.48
11064a	P	---	-	14.37	----
11065a	P	---	-	12.88	----
11066	P	439.	C	16.63	3.79
11654	P	272.	D	11.74	4.32
11655	P	293.	D	14.24	4.86
11656	P	279.	D	12.88	4.62
11657a	P	---	-	14.86	----
11658a	P	---	-	12.91	----
11659a	P	---	-	14.87	----
11660a	P	---	-	14.02	----
11661a	P	---	-	13.80	----
11662	P	284.	D	12.13	4.27
11663a	P	---	-	15.31	----
11664a	P	---	-	12.32	----
11665	P	289.	D	13.16	4.55
11666	NP				
11667a	P	---	-	17.32	----

ALL WEIGHTS WERE RECORDED IN GRAMS (G). ABS. WT. = ORGAN WEIGHT. REL. % TBW = (ORGAN WEIGHT/TERMINAL BODY WEIGHT) X 100.
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
C = CAESAREAN SECTIONED ON DAY 21 OF PRESUMED GESTATION D = DELIVERED A LITTER AND SACRIFICED ON DAY 5 OF LACTATION
a. Dam was sacrificed due to no surviving pups prior to day 5 of lactation; values excluded from group averages and statistical analyses.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 1): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 1					VEHICLE CONTROL							
10901	206.	214.	231.	242.	248.	252.	268.						
10902	227.	224.	232.	240.	242.	236.	248.						
10903	205.	237.	248.	257.	264.	269.	279.						
10904	219.	230.	230.	243.	260.	267.	265.						
10905	198.	211.	217.	228.	251.	258.	240.						
10906	214.	238.	250.	262.	266.	277.	285.						
10907	211.	233.	244.	247.	262.	277.	266.						
10908	217.	232.	234.	247.	259.	261.	263.						
10909	197.	219.	232.	243.	251.	260.	258.						
10910	212.	241.	252.	263.	266.	278.	288.						
10911	201.	227.	234.	244.	244.	252.	263.						
10912	217.	242.	250.	257.	269.	283.	284.						
10913	204.	219.	224.	227.	242.	251.	239.	282.					
10914	213.	224.	231.	227.	231.	240.	233.						
11501	203.	203.	207.	207.	213.	216.	226.						
11502	229.	244.	263.	280.	284.	294.	297.						
11503	219.	221.	237.	234.	244.	253.	251.						
11504	228.	236.	243.	253.	262.	268.	269.						
11505	208.	222.	224.	240.	243.	251.	261.						
11506	234.	249.	265.	278.	278.	282.	292.						
11507	222.	234.	236.	244.	250.	262.	262.						
11508	221.	242.	260.	261.	260.	270.	277.						
11509	208.	219.	226.	248.	252.	259.	266.						
11510	232.	249.	260.	267.	278.	279.	294.						
11511	216.	218.	221.	233.	234.	237.	237.						
11512	234.	246.	256.	281.	288.	298.	306.						
11513	210.	222.	228.	228.	231.	246.	241.						
11514	225.	239.	244.	260.	276.	277.	279.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 2): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 2					MEVALONIC ACID CONTROL							
10915	205.	218.	218.	234.	249.	259.	263.						
10916	224.	250.	266.	270.	287.	295.	290.						
10917	209.	228.	239.	245.	248.	257.	260.						
10918	214.	234.	241.	247.	262.	268.	254.						
10919	204.	223.	229.	231.	243.	252.	244.						
10920	220.	240.	253.	257.	266.	284.	287.						
10921	205.	223.	237.	255.	257.	268.	273.						
10922	230.	224.	244.	255.	261.	261.	271.						
10923	191.	209.	219.	232.	248.	256.	254.						
10924	215.	241.	247.	255.	263.	274.	261.						
10925	209.	229.	240.	249.	261.	258.	263.						
10926	220.	233.	241.	260.	271.	277.	280.						
10927	211.	229.	242.	247.	266.	282.	277.	322.					
10928	199.	223.	218.	233.	237.	237.	242.						
11515	206.	205.	214.	220.	222.	223.	228.						
11516	240.	254.	273.	280.	274.	283.	294.						
11517	215.	229.	239.	246.	247.	262.	264.						
11518	229.	238.	258.	271.	281.	296.	304.						
11519	206.	214.	226.	247.	263.	277.	282.						
11520	227.	227.	237.	237.	238.	249.	258.						
11521	224.	240.	254.	264.	275.	275.	291.						
11522	231.	234.	252.	256.	267.	279.	280.						
11523	210.	223.	235.	249.	249.	250.	252.						
11524	216.	224.	235.	236.	239.	239.	250.						
11525	226.	238.	253.	261.	262.	278.	276.						
11526	224.	232.	237.	241.	256.	264.	262.						
11527	214.	230.	236.	244.	248.	259.	261.						
11528	230.	236.	242.	252.	267.	270.	271.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

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TABLE 26 (PAGE 3): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 3					1.6 MG/KG PFOS + MEVALONIC ACID							
10929	202.	214.	216.	220.	228.	236.	235.						
10930	217.	236.	247.	259.	266.	270.	276.						
10931	202.	222.	226.	233.	235.	241.	238.						
10932	207.	222.	234.	245.	254.	257.	243.						
10933	193.	208.	218.	230.	238.	235.	234.						
10934	217.	243.	255.	259.	261.	261.	267.						
10935	212.	221.	214.	226.	232.	235.	233.						
10936	213.	FOUND DEAD ON DAY 2 OF STUDY											
10937	204.	227.	237.	244.	249.	259.	263.						
10938	212.	246.	249.	268.	273.	285.	281.						
10939	202.	220.	227.	231.	227.	236.	233.						
10940	214.	234.	244.	253.	263.	264.	280.						
10941	204.	219.	223.	231.	232.	240.	239.						
10942	211.	235.	244.	258.	259.	268.	266.						
11529	202.	217.	229.	230.	236.	243.	242.						
11530	247.	259.	275.	290.	298.	297.	312.						
11531	231.	237.	254.	256.	254.	251.	259.						
11532	222.	238.	246.	260.	263.	264.	268.						
11533	209.	223.	241.	244.	246.	251.	257.						
11534	232.	255.	275.	276.	283.	286.	294.						
11535	217.	230.	232.	248.	259.	255.	265.						
11536	221.	238.	258.	261.	262.	267.	273.						
11537	214.	228.	234.	244.	250.	257.	254.						
11538	236.	245.	262.	268.	258.	266.	267.						
11539	217.	210.	210.	212.	211.	216.	221.						
11540	227.	247.	258.	269.	280.	288.	297.						
11541	214.	226.	229.	244.	248.	249.	254.						
11542	229.	238.	238.	248.	250.	258.	264.						
11543	225.	248.	259.	278.	284.	291.	302.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

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TABLE 26 (PAGE 4): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 4					2 MG/KG PFOS + MEVALONIC ACID							
10943	195.	214.	220.	234.	246.	249.	247.						
10944	222.	242.	250.	250.	258.	258.	256.						
10945	214.	238.	242.	263.	270.	274.	278.						
10946	207.	233.	242.	251.	263.	266.	262.						
10947	204.	221.	231.	236.	239.	238.	243.						
10948	217.	240.	247.	255.	267.	274.	273.						
10949	210.	226.	241.	248.	256.	255.	259.						
10950	212.	236.	246.	254.	256.	263.	265.						
10951	200.	228.	238.	251.	257.	261.	267.						
10952	219.	232.	242.	250.	256.	262.	264.	287.					
10953	205.	224.	228.	236.	241.	241.	251.						
10954	212.	228.	237.	249.	263.	266.	266.						
10955	200.	220.	231.	240.	237.	246.	252.						
10956	214.	238.	235.	254.	270.	275.	268.						
11544	204.	220.	237.	243.	248.	256.	259.						
11545	243.	257.	265.	284.	292.	304.	320.						
11546	218.	234.	237.	254.	260.	257.	264.						
11547	218.	239.	249.	262.	262.	273.	277.						
11548	207.	218.	230.	236.	240.	245.	246.						
11549	231.	244.	252.	260.	266.	271.	280.						
11550	212.	228.	231.	232.	234.	241.	244.						
11551	231.	250.	254.	266.	269.	275.	284.						
11552	214.	238.	251.	263.	269.	275.	272.						
11553	232.	244.	257.	261.	262.	263.	267.						
11554	221.	229.	243.	254.	248.	254.	261.						
11555	234.	252.	262.	273.	279.	284.	293.						
11556	213.	228.	234.	237.	242.	250.	252.						
11557	229.	257.	270.	278.	281.	291.	290.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 5): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 5					CHOLESTEROL CONTROL							
10957	198.	220.	233.	243.	250.	262.	266.						
10958	226.	235.	257.	273.	285.	294.	306.						
10959	212.	234.	236.	250.	263.	263.	271.						
10960	208.	222.	219.	237.	258.	257.	265.						
10961	199.	212.	218.	226.	236.	254.	250.						
10962	220.	237.	251.	266.	290.	291.	308.						
10963	202.	233.	243.	256.	263.	283.	289.						
10964	208.	238.	256.	268.	270.	288.	296.						
10965	208.	218.	224.	241.	252.	255.	255.						
10966	229.	247.	253.	270.	284.	296.	286.						
10967	205.	226.	236.	249.	263.	280.	276.	308.					
10968	212.	222.	235.	238.	249.	263.	256.						
10969	208.	232.	240.	245.	260.	267.	256.						
10970	207.	247.	260.	269.	296.	290.	295.						
11558	206.	220.	238.	244.	247.	251.	259.						
11559	230.	254.	252.	265.	272.	284.	280.						
11560	226.	238.	258.	267.	278.	290.	292.						
11561	220.	245.	257.	277.	292.	285.	294.						
11562	215.	227.	225.	MORIBUND SACRIFICED ON DAY 16 OF STUDY									
11563	231.	246.	264.	274.	286.	284.	292.						
11564	212.	232.	247.	247.	258.	257.	270.						
11565	218.	230.	230.	240.	244.	244.	252.						
11566	210.	224.	232.	241.	248.	260.	253.						
11567	230.	246.	256.	262.	254.	271.	273.						
11568	214.	221.	225.	234.	236.	244.	247.						
11569	230.	249.	266.	280.	290.	296.	310.						
11570	207.	220.	232.	238.	247.	253.	253.						
11571	224.	244.	255.	263.	270.	286.	289.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 6): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 6					1.6 MG/KG PFOS + CHOLESTEROL							
10971	195.	211.	218.	225.	227.	232.	231.						
10972	219.	244.	256.	259.	264.	274.	270.						
10973	208.	223.	226.	238.	241.	242.	238.						
10974	214.	228.	234.	248.	258.	264.	261.						
10975	206.	223.	238.	258.	258.	255.	263.						
10976	215.	241.	252.	258.	261.	266.	263.						
10977	206.	232.	236.	242.	242.	243.	244.						
10978	216.	233.	247.	255.	263.	260.	266.						
10979	200.	221.	238.	250.	254.	264.	262.						
10980	211.	228.	228.	240.	241.	251.	255.						
10981	209.	228.	234.	249.	252.	248.	245.						
10982	212.	230.	228.	244.	249.	248.	246.						
10983	207.	224.	237.	235.	242.	243.	239.						
10984	218.	236.	248.	250.	256.	268.	262.						
11572	196.	195.	202.	196.	208.	210.	208.						
11573	234.	244.	249.	254.	264.	273.	276.						
11574	222.	234.	244.	246.	249.	253.	255.						
11575	224.	236.	250.	265.	267.	272.	276.						
11576	215.	237.	246.	260.	255.	265.	263.						
11577	233.	246.	254.	261.	266.	276.	274.						
11578	222.	232.	242.	244.	245.	246.	250.						
11579	233.	241.	263.	274.	271.	288.	291.						
11580	214.	229.	243.	247.	260.	258.	258.						
11581	232.	244.	250.	262.	274.	272.	272.						
11582	215.	236.	242.	248.	249.	258.	260.						
11583	222.	238.	244.	256.	260.	257.	259.						
11584	215.	230.	246.	258.	261.	269.	271.						
11585	226.	237.	246.	246.	251.	253.	254.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 7): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 7					2 MG/KG PFOS + CHOLESTEROL							
10985	198.	219.	232.	240.	246.	250.	256.						
10986	221.	249.	264.	272.	270.	275.	277.						
10987	205.	230.	249.	254.	250.	260.	268.						
10988	209.	240.	253.	261.	263.	261.	264.						
10989	200.	220.	226.	230.	231.	245.	235.						
10990	222.	235.	251.	261.	278.	280.	274.						
10991	210.	222.	234.	246.	243.	246.	254.						
10992	211.	232.	236.	239.	244.	253.	239.						
10993	210.	224.	242.	257.	264.	261.	275.						
10994	212.	242.	255.	266.	260.	265.	263.						
10995	207.	222.	233.	247.	246.	246.	248.						
10996	214.	226.	239.	245.	242.	251.	252.						
10997	197.	218.	225.	227.	232.	229.	234.						
10998	206.	230.	249.	258.	262.	268.	268.						
11586	206.	219.	221.	240.	246.	248.	249.						
11587	241.	259.	270.	275.	279.	287.	291.						
11588	217.	242.	253.	256.	260.	260.	260.						
11589	222.	239.	251.	256.	259.	263.	263.						
11590	215.	222.	234.	243.	242.	241.	254.						
11591	240.	248.	246.	265.	276.	281.	281.						
11592	214.	236.	250.	247.	256.	255.	258.	285.					
11593	224.	224.	222.	227.	224.	225.	228.						
11594	214.	235.	242.	254.	265.	266.	270.						
11595	228.	241.	253.	252.	252.	256.	255.						
11596	222.	231.	230.	238.	234.	231.	239.						
11597	226.	246.	247.	252.	254.	248.	257.						
11598	215.	231.	237.	247.	243.	249.	256.						
11599	225.	242.	246.	251.	248.	254.	254.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 8): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 8					0.4 MG/KG PFOS							
10999	192.	210.	223.	237.	235.	242.	246.						
11000	229.	251.	264.	270.	274.	282.	281.						
11001	207.	225.	238.	249.	255.	256.	263.						
11002	209.	226.	239.	243.	256.	263.	252.						
11003	197.	223.	238.	249.	249.	264.	269.						
11004	212.	240.	254.	260.	270.	279.	287.						
11005	207.	236.	253.	262.	263.	283.	286.						
11006	211.	238.	246.	257.	270.	282.	277.						
11007	208.	237.	240.	268.	275.	286.	288.						
11008	210.	232.	241.	260.	275.	292.	280.						
11600	213.	237.	261.	262.	264.	279.	288.						
11601	247.	262.	280.	284.	290.	288.	305.						
11602	216.	238.	226.	233.	234.	237.	240.						
11603	229.	238.	253.	257.	258.	265.	275.						
11604	206.	238.	242.	244.	257.	268.	277.						
11605	228.	252.	268.	275.	284.	294.	299.						
11606	219.	235.	240.	258.	254.	258.	269.						
11607	221.	232.	240.	249.	249.	253.	264.						
11608	211.	235.	251.	260.	256.	272.	287.						
11609	229.	240.	253.	272.	279.	284.	288.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 9): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 9					0.8 MG/KG PFOS							
11009	195.	213.	222.	225.	228.	236.	235.						
11010	216.	240.	250.	253.	268.	280.	258.						
11011	217.	237.	253.	267.	275.	277.	288.						
11012	203.	222.	233.	236.	234.	242.	242.						
11013	199.	218.	225.	228.	232.	240.	240.						
11014	222.	235.	254.	265.	267.	281.	287.	319.	322.	326.	316.	317.	322.
11015	220.	239.	252.	259.	269.	274.	277.						
11016	212.	223.	229.	236.	240.	247.	234.						
11017	199.	225.	248.	256.	260.	275.	278.						
11018	217.	243.	256.	258.	276.	278.	264.						
11610	205.	234.	248.	254.	243.	254.	255.						
11611	232.	256.	265.	288.	290.	296.	298.						
11612	219.	229.	230.	239.	244.	251.	255.						
11613	228.	242.	260.	269.	276.	279.	289.						
11614	210.	219.	234.	242.	248.	254.	266.						
11615	233.	244.	253.	260.	270.	280.	282.						
11616	218.	226.	240.	246.	242.	238.	252.						
11617	226.	238.	244.	254.	262.	266.	276.						
11618	208.	230.	240.	253.	261.	280.	285.						
11619	226.	246.	254.	258.	252.	261.	259.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 10): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 10					1 MG/KG PFOS							
11019	196.	219.	228.	235.	243.	252.	239.	277.					
11020	213.	256.	267.	278.	281.	292.	296.						
11021	208.	224.	230.	247.	258.	260.	258.						
11022	214.	231.	241.	251.	270.	278.	276.						
11023	208.	222.	231.	240.	242.	250.	251.						
11024	210.	232.	240.	264.	275.	285.	288.						
11025	211.	230.	233.	244.	249.	251.	249.						
11026	211.	215.	240.	249.	267.	281.	265.						
11027	198.	209.	216.	226.	234.	238.	229.						
11028	217.	244.	259.	270.	272.	281.	288.						
11620	206.	212.	221.	230.	237.	237.	250.						
11621	244.	258.	264.	269.	273.	273.	274.						
11622	223.	235.	232.	239.	244.	250.	256.						
11623	221.	239.	247.	246.	253.	258.	264.						
11624	211.	224.	232.	247.	249.	251.	265.						
11625	231.	249.	258.	270.	272.	288.	293.						
11626	216.	225.	243.	255.	256.	262.	267.						
11627	220.	248.	266.	277.	292.	303.	311.						
11628	206.	223.	240.	249.	260.	268.	269.						
11629	220.	243.	252.	269.	272.	281.	297.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 11): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 11						1.2 MG/KG PFOS						
11029	203.	228.	227.	230.	248.	262.	238.						
11030	214.	251.	264.	275.	272.	282.	286.	316.	322.	318.	306.	305.	308.
11031	206.	233.	247.	257.	273.	284.	272.						
11032	216.	231.	250.	260.	265.	265.	280.						
11033	206.	223.	235.	246.	254.	260.	263.						
11034	212.	231.	241.	261.	268.	278.	274.						
11035	209.	223.	233.	237.	249.	253.	254.						
11036	213.	249.	255.	267.	267.	276.	281.						
11037	195.	214.	219.	234.	236.	248.	237.						
11038	212.	238.	247.	254.	258.	263.	260.						
11630	202.	210.	224.	232.	231.	241.	248.						
11631	237.	245.	263.	267.	271.	275.	276.						
11632	221.	222.	239.	248.	252.	258.	255.						
11633	223.	243.	255.	272.	275.	281.	290.						
11634	210.	228.	243.	251.	269.	269.	275.						
11635	239.	254.	257.	257.	273.	278.	279.						
11636	219.	231.	231.	241.	249.	255.	262.						
11637	223.	236.	239.	248.	250.	256.	256.						
11638	208.	219.	217.	228.	231.	231.	233.						
11639	228.	253.	257.	258.	262.	272.	272.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 12): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 12						1.6 MG/KG PFOS						
11039	201.	229.	239.	239.	252.	260.	250.	283.	288.	281.	277.	275.	272.
11040	230.	241.	250.	258.	271.	269.	265.						
11041	211.	239.	249.	256.	255.	264.	265.						
11042	222.	241.	252.	266.	273.	270.	273.						
11043	201.	224.	232.	234.	243.	250.	244.						
11044	215.	232.	242.	252.	252.	259.	255.						
11045	212.	230.	237.	245.	256.	259.	252.						
11046	210.	241.	254.	261.	263.	272.	261.						
11047	207.	223.	238.	242.	253.	255.	259.						
11048	212.	230.	232.	238.	248.	260.	247.						
11049	207.	231.	240.	248.	259.	260.	254.						
11050	209.	245.	249.	256.	268.	274.	270.						
11051	208.	230.	233.	241.	241.	243.	246.						
11052	219.	231.	251.	261.	269.	268.	267.						
11640	206.	212.	232.	234.	240.	245.	252.						
11641	232.	262.	273.	280.	280.	285.	291.						
11642	221.	241.	243.	253.	255.	254.	262.						
11643	218.	233.	238.	244.	247.	244.	245.						
11644	209.	220.	225.	229.	230.	232.	237.						
11645	233.	252.	260.	276.	278.	288.	290.						
11646	209.	230.	230.	236.	238.	246.	256.						
11647	225.	243.	249.	256.	259.	262.	265.						
11648	205.	218.	219.	225.	222.	237.	238.						
11649	236.	259.	263.	279.	287.	284.	292.						
11650	213.	228.	232.	229.	239.	237.	239.	261.					
11651	229.	250.	265.	272.	273.	282.	280.						
11652	213.	232.	249.	254.	266.	273.	274.						
11653	225.	236.	241.	250.	253.	255.	256.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 26 (PAGE 13): BODY WEIGHTS - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	8	15	22	29	36	42a	49	56b	63	70	77	81
RAT #	DOSAGE GROUP 13					2 MG/KG PFOS							
11053	199.	213.	218.	226.	229.	233.	230.						
11054	224.	246.	262.	280.	286.	284.	298.						
11055	210.	228.	234.	238.	242.	245.	247.						
11056	213.	225.	217.	221.	224.	232.	214.						
11057	198.	215.	213.	220.	230.	231.	228.						
11058	216.	241.	245.	262.	256.	259.	263.						
11059	207.	228.	233.	231.	240.	253.	243.						
11060	213.	232.	231.	253.	259.	262.	252.						
11061	200.	228.	241.	254.	257.	266.	266.						
11062	220.	230.	230.	240.	246.	247.	250.						
11063	208.	232.	245.	256.	260.	261.	261.						
11064	212.	235.	243.	250.	257.	264.	263.	295.					
11065	211.	221.	235.	249.	254.	256.	258.						
11066	221.	237.	249.	254.	250.	260.	253.						
11654	207.	220.	226.	224.	233.	237.	242.						
11655	241.	243.	247.	243.	233.	237.	247.						
11656	221.	232.	244.	241.	238.	245.	250.						
11657	226.	244.	262.	269.	276.	276.	282.						
11658	211.	218.	237.	239.	245.	245.	250.						
11659	233.	235.	246.	256.	256.	256.	259.						
11660	217.	227.	240.	242.	239.	246.	252.						
11661	218.	227.	232.	240.	243.	246.	256.						
11662	213.	235.	243.	257.	261.	265.	273.						
11663	228.	243.	251.	260.	266.	272.	272.						
11664	217.	228.	237.	242.	241.	239.	242.						
11665	227.	239.	243.	252.	251.	254.	253.						
11666	211.	232.	239.	237.	245.	248.	253.						
11667	224.	242.	262.	268.	267.	282.	287.						

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 1): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 1					VEHICLE CONTROL							
10901 P	263.	264.	275.	277.	282.	284.	288.	289.	289.	294.	300.	304.	310.
10902 P	250.	258.	265.	262.	267.	268.	270.	277.	276.	277.	283.	294.	290.
10903 P	284.	293.	302.	298.	299.	300.	306.	308.	315.	316.	321.	323.	325.
10904 P	274.	283.	290.	296.	300.	295.	290.	299.	294.	304.	303.	316.	320.
10905 P	244.	264.	266.	269.	273.	279.	279.	288.	291.	293.	299.	303.	305.
10906 P	299.	305.	308.	303.	312.	313.	318.	320.	327.	324.	338.	332.	344.
10907 P	291.	298.	286.	306.	306.	310.	311.	314.	314.	326.	332.	339.	346.
10908 P	264.	276.	288.	283.	282.	290.	287.	290.	296.	304.	300.	311.	313.
10909 P	262.	273.	281.	285.	288.	291.	292.	294.	290.	293.	295.	302.	308.
10910 P	300.	312.	310.	317.	317.	318.	322.	323.	327.	331.	336.	341.	341.
10911 P	279.	279.	289.	293.	294.	296.	297.	302.	297.	301.	303.	307.	312.
10912 NP	289.	295.	302.	310.	310.	318.	321.	327.	338.	337.	344.	340.	330.
10913 P	279.	285.	290.	277.	281.	280.	292.	290.	297.	292.	302.	307.	308.
10914 P	250.	255.	261.	264.	266.	267.	268.	270.	267.	271.	278.	283.	285.
11501 P	232.	248.	242.	246.	252.	248.	250.	255.	251.	256.	260.	269.	271.
11502 P	306.	320.	330.	328.	324.	326.	325.	329.	331.	333.	337.	343.	348.
11503 P	274.	288.	289.	296.	295.	304.	305.	305.	305.	309.	315.	323.	327.
11504 P	286.	287.	293.	295.	295.	294.	300.	302.	307.	316.	318.	325.	328.
11505 P	274.	276.	279.	289.	287.	290.	289.	296.	292.	297.	305.	303.	316.
11506 P	302.	308.	316.	315.	322.	320.	322.	328.	329.	330.	338.	343.	353.
11507 P	266.	284.	290.	290.	292.	297.	296.	301.	305.	312.	311.	314.	323.
11508 P	287.	294.	294.	293.	297.	296.	299.	304.	307.	313.	319.	323.	325.
11509 P	272.	284.	294.	293.	294.	297.	298.	295.	299.	300.	303.	312.	319.
11510 P	310.	302.	306.	299.	307.	309.	315.	317.	316.	322.	320.	320.	328.
11511 P	248.	255.	256.	261.	267.	272.	268.	272.	269.	278.	285.	289.	292.
11512 P	306.	317.	319.	317.	320.	324.	328.	333.	335.	343.	344.	352.	353.
11513 P	243.	251.	256.	254.	257.	256.	261.	263.	261.	263.	267.	273.	275.
11514 P	281.	291.	298.	296.	301.	303.	300.	306.	303.	311.	315.	321.	326.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 2): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 1					VEHICLE CONTROL							
10901 P	312.	319.	324.	334.	340.	352.	370.	378.	405.				
10902 P	299.	302.	312.	319.	320.	337.	352.	358.	389.				
10903 P	330.	340.	347.	359.	367.	388.	399.	410.	436.				
10904 P	323.	323.	338.	343.	357.	385.	390.	401.	420.				
10905 P	312.	321.	326.	337.	350.	362.	373.	383.	401.				
10906 P	342.	351.	351.	369.	380.	394.	402.	423.	441.				
10907 P	342.	342.	356.	361.	377.	379.	401.	415.	430.				
10908 P	314.	317.	329.	336.	348.	363.	377.	400.	417.				
10909 P	309.	308.	319.	321.	331.	349.	351.	369.	386.				
10910 P	346.	348.	354.	358.	373.	388.	399.	412.	442.				
10911 P	312.	320.	330.	341.	358.	374.	383.	398.	411.				
10912 NP	335.	342.	341.	332.	339.	340.	334.	332.	338.				
10913 P	320.	320.	328.	336.	354.	370.	377.	396.	418.				
10914 P	287.	290.	291.	302.	308.	312.	317.	329.	339.				
11501 P	276.	281.	282.	295.	302.	320.	330.	336.	348.				
11502 P	348.	355.	367.	381.	388.	411.	425.	445.	439.				
11503 P	331.	341.	337.	344.	365.	366.	376.	390.	406.				
11504 P	339.	338.	345.	358.	371.	385.	396.	414.	432.				
11505 P	313.	319.	324.	332.	345.	355.	369.	385.	403.				
11506 P	356.	366.	372.	382.	400.	421.	442.	452.	471.				
11507 P	333.	333.	339.	348.	369.	374.	393.	408.	407.				
11508 P	331.	340.	348.	358.	371.	391.	398.	412.	424.				
11509 P	326.	332.	331.	337.	352.	361.	368.	377.	389.				
11510 P	340.	340.	350.	365.	375.	400.	408.	426.	436.				
11511 P	291.	298.	307.	312.	321.	331.	350.	366.	376.	381.			
11512 P	364.	362.	369.	377.	396.	408.	426.	442.	447.				
11513 P	283.	283.	294.	299.	312.	323.	335.	353.	356.				
11514 P	336.	334.	346.	359.	381.	393.	404.	420.	416.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 3): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 2					MEVALONIC ACID CONTROL							
10915 P	267.	273.	275.	276.	278.	281.	286.	286.	295.	295.	302.	305.	309.
10916 P	297.	299.	303.	303.	304.	309.	314.	313.	313.	318.	323.	330.	333.
10917 P	269.	275.	279.	276.	278.	279.	280.	285.	289.	290.	295.	299.	304.
10918 P	281.	293.	291.	291.	290.	291.	295.	300.	305.	312.	320.	321.	328.
10919 P	259.	268.	276.	273.	279.	280.	286.	289.	294.	301.	307.	309.	314.
10920 P	288.	293.	291.	300.	306.	303.	304.	307.	315.	318.	320.	328.	330.
10921 P	283.	288.	287.	284.	291.	296.	300.	309.	313.	314.	318.	316.	319.
10922 P	288.	290.	298.	294.	295.	299.	301.	302.	308.	313.	310.	320.	310.
10923 P	274.	272.	272.	274.	275.	276.	282.	286.	288.	292.	298.	303.	306.
10924 P	274.	278.	284.	289.	287.	292.	296.	296.	303.	302.	314.	319.	321.
10925 P	271.	273.	278.	282.	285.	289.	290.	296.	295.	296.	303.	309.	317.
10926 P	280.	295.	301.	301.	305.	304.	308.	308.	313.	315.	320.	321.	300.
10927 P	319.	326.	328.	328.	332.	334.	334.	337.	336.	339.	338.	340.	341.
10928 P	246.	257.	261.	264.	268.	274.	272.	279.	281.	285.	286.	293.	298.
11515 P	228.	241.	241.	242.	243.	241.	244.	243.	250.	250.	252.	260.	260.
11516 P	296.	311.	315.	311.	312.	308.	310.	310.	321.	321.	328.	332.	331.
11517 P	271.	277.	281.	282.	286.	287.	289.	292.	296.	297.	302.	309.	312.
11518 P	308.	315.	323.	322.	323.	324.	322.	324.	324.	333.	330.	339.	339.
11519 P	283.	288.	290.	290.	292.	294.	297.	296.	300.	308.	306.	313.	315.
11520 P	268.	276.	275.	274.	275.	272.	276.	289.	283.	283.	288.	292.	295.
11521 P	292.	306.	306.	308.	306.	314.	313.	310.	321.	323.	323.	333.	336.
11522 NP	293.	290.	298.	305.	297.	295.	297.	302.	304.	304.	299.	305.	305.
11523 P	260.	268.	268.	266.	270.	274.	272.	277.	278.	276.	282.	293.	294.
11524 P	248.	256.	264.	263.	264.	264.	266.	270.	273.	273.	275.	283.	288.
11525 P	274.	287.	291.	297.	300.	301.	310.	307.	302.	316.	321.	330.	333.
11526 P	275.	276.	284.	287.	285.	288.	284.	291.	289.	291.	299.	306.	308.
11527 P	262.	274.	282.	278.	277.	277.	282.	292.	286.	298.	290.	296.	301.
11528 P	272.	287.	287.	294.	296.	300.	296.	297.	303.	310.	309.	318.	323.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 4): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 2						MEVALONIC ACID CONTROL						
10915 P	314.	316.	328.	335.	335.	355.	370.	377.	402.				
10916 P	340.	344.	352.	365.	376.	388.	411.	426.	452.				
10917 P	305.	308.	311.	322.	331.	346.	358.	366.	383.				
10918 P	334.	343.	350.	362.	378.	386.	393.	420.	443.				
10919 P	316.	320.	327.	335.	348.	345.	362.	375.	391.				
10920 P	338.	342.	347.	364.	365.	379.	394.	412.	426.				
10921 P	318.	318.	336.	344.	358.	372.	388.	398.	422.				
10922 P	321.	330.	328.	335.	344.	356.	370.	385.	393.				
10923 P	306.	308.	316.	325.	334.	340.	349.	362.	385.				
10924 P	317.	325.	332.	341.	351.	359.	375.	381.	400.				
10925 P	314.	323.	334.	341.	360.	376.	390.	405.	428.				
10926 P	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT												
10927 P	348.	353.	363.	364.	385.	398.	412.	433.					
10928 P	301.	300.	309.	318.	331.	351.	367.	386.	408.				
11515 P	265.	273.	279.	286.	293.	304.	317.	332.	340.				
11516 P	334.	350.	349.	358.	375.	390.	407.	427.	436.				
11517 P	319.	321.	331.	339.	352.	368.	374.	386.	393.				
11518 P	343.	342.	354.	354.	373.	380.	404.	413.	422.				
11519 P	319.	324.	329.	343.	354.	371.	387.	405.	406.				
11520 P	309.	309.	322.	330.	348.	358.	366.	372.	386.				
11521 P	336.	340.	341.	354.	357.	361.	375.	378.	387.				
11522 NP	309.	306.	303.	305.	304.	306.	298.	295.	302.	304.	304.	302.	307.
11523 P	303.	306.	311.	324.	331.	340.	355.	376.	382.				
11524 P	286.	294.	304.	311.	320.	339.	346.	355.	369.				
11525 P	341.	341.	354.	360.	373.	388.	402.	418.	421.				
11526 P	312.	318.	327.	334.	345.	358.	433.	384.	403.				
11527 P	312.	316.	322.	332.	347.	363.	370.	384.	393.				
11528 P	326.	330.	339.	349.	362.	377.	390.	408.	416.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 5): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 3					1.6 MG/KG PFOS + MEVALONIC ACID							
10929 P	237.	241.	249.	250.	254.	255.	256.	264.	263.	266.	274.	275.	282.
10930 P	275.	281.	282.	284.	285.	280.	280.	285.	293.	289.	295.	298.	304.
10931 P	246.	253.	253.	252.	254.	257.	255.	260.	262.	267.	274.	274.	281.
10932 P	251.	254.	261.	262.	260.	266.	270.	269.	276.	282.	283.	287.	290.
10933 P	234.	241.	241.	242.	247.	246.	250.	249.	251.	252.	250.	261.	262.
10934 P	265.	272.	276.	279.	282.	281.	286.	287.	290.	296.	293.	296.	301.
10935 P	239.	240.	246.	246.	245.	245.	251.	247.	249.	255.	258.	260.	267.
10936	FOUND DEAD ON DAY 2 OF STUDY												
10937 P	266.	271.	275.	272.	274.	274.	274.	278.	283.	284.	289.	292.	300.
10938 P	294.	290.	287.	285.	289.	287.	295.	290.	299.	307.	306.	312.	320.
10939 NP	250.	252.	254.	258.	257.	258.	260.	257.	253.	249.	254.	258.	252.
10940 P	284.	291.	294.	297.	297.	296.	302.	301.	308.	308.	313.	325.	319.
10941 P	244.	250.	247.	250.	253.	252.	252.	256.	261.	260.	266.	268.	269.
10942 P	282.	280.	279.	280.	280.	277.	281.	287.	286.	291.	288.	296.	299.
11529 P	252.	254.	249.	249.	250.	254.	250.	258.	260.	265.	273.	273.	275.
11530 P	313.	316.	319.	324.	320.	320.	327.	322.	324.	328.	332.	341.	344.
11531 NP	266.	251.	260.	260.	255.	252.	263.	260.	257.	256.	261.	261.	260.
11532 P	282.	283.	281.	284.	287.	293.	289.	292.	297.	294.	303.	309.	312.
11533 P	255.	264.	264.	259.	271.	269.	276.	271.	268.	272.	279.	278.	284.
11534 P	305.	306.	306.	303.	307.	308.	309.	311.	310.	314.	328.	331.	336.
11535 P	268.	269.	274.	274.	275.	278.	278.	280.	280.	290.	289.	294.	302.
11536 P	268.	275.	283.	289.	286.	285.	280.	288.	293.	290.	293.	300.	310.
11537 P	262.	265.	270.	270.	272.	270.	267.	272.	271.	275.	281.	290.	290.
11538 P	267.	274.	271.	271.	271.	271.	274.	281.	279.	281.	283.	285.	297.
11539 P	223.	232.	232.	235.	237.	235.	236.	236.	239.	241.	244.	248.	247.
11540 P	298.	301.	306.	308.	307.	308.	315.	313.	313.	320.	323.	329.	340.
11541 P	255.	265.	271.	261.	263.	263.	267.	273.	269.	272.	277.	282.	289.
11542 P	282.	284.	283.	280.	286.	292.	288.	291.	291.	299.	304.	311.	313.
11543 P	286.	307.	310.	313.	313.	312.	318.	320.	325.	328.	330.	340.	341.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 6): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 3					1.6 MG/KG PFOS + MEVALONIC ACID							
10929 P	282.	289.	300.	310.	308.	327.	342.	359.	381.				
10930 P	308.	307.	321.	320.	338.	356.	365.	370.	386.				
10931 P	280.	285.	288.	302.	315.	332.	347.	357.	382.				
10932 P	292.	290.	308.	308.	324.	338.	356.	369.	401.				
10933 P	264.	273.	289.	300.	318.	337.	350.	362.	392.				
10934 P	304.	310.	316.	322.	332.	352.	360.	370.	391.				
10935 P	273.	271.	287.	291.	301.	310.	332.	344.	363.				
10936	FOUND DEAD ON DAY 2 OF STUDY												
10937 P	294.	304.	309.	319.	330.	348.	350.	364.	383.				
10938 P	320.	326.	343.	357.	367.	387.	401.	416.	436.				
10939 NP	249.	253.	254.	258.	250.	255.	254.	258.	253.	254.	259.	256.	256.
10940 P	317.	331.	341.	351.	364.	387.	407.	441.	459.				
10941 P	277.	278.	280.	298.	314.	333.	334.	343.	356.				
10942 P	299.	309.	310.	329.	346.	359.	370.	382.	399.				
11529 P	280.	291.	296.	302.	323.	335.	347.	354.	375.				
11530 P	355.	359.	367.	375.	391.	416.	422.	443.	453.				
11531 NP	262.	267.	267.	268.	268.	274.	270.	270.	263.	266.	268.	267.	267.
11532 P	323.	324.	331.	344.	358.	377.	390.	414.					
11533 P	290.	298.	301.	315.	328.	345.	351.	370.	378.				
11534 P	346.	357.	353.	366.	384.	400.	416.	427.	440.				
11535 P	307.	310.	316.	327.	350.	361.	385.	397.	400.				
11536 P	310.	320.	316.	328.	343.	356.	360.	374.	393.				
11537 P	296.	297.	310.	320.	339.	354.	366.	379.	391.				
11538 P	301.	318.	319.	321.	336.	347.	362.	370.	389.				
11539 P	254.	258.	268.	269.	288.	301.	311.	325.	320.				
11540 P	345.	347.	354.	368.	389.	400.	418.	433.	451.				
11541 P	294.	292.	300.	309.	328.	338.	350.	363.	369.				
11542 P	321.	322.	326.	344.	355.	368.	385.	399.	415.				
11543 P	343.	353.	364.	373.	385.	402.	414.	426.	452.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 7): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 4					2 MG/KG PFOS + MEVALONIC ACID							
10943 P	246.	245.	255.	256.	256.	259.	262.	264.	262.	266.	274.	281.	284.
10944 P	275.	273.	271.	267.	265.	264.	267.	276.	272.	275.	279.	283.	284.
10945 P	283.	294.	295.	294.	292.	294.	294.	296.	298.	301.	306.	313.	316.
10946 P	276.	279.	273.	283.	278.	275.	282.	280.	283.	293.	290.	300.	304.
10947 P	251.	251.	253.	254.	255.	258.	258.	259.	267.	264.	270.	278.	273.
10948 P	287.	285.	291.	296.	297.	297.	302.	302.	313.	314.	322.	328.	325.
10949 P	262.	255.	254.	256.	262.	266.	266.	267.	265.	274.	276.	288.	290.
10950 P	268.	269.	275.	278.	282.	288.	288.	293.	297.	298.	306.	310.	312.
10951 P	284.	280.	282.	275.	269.	280.	279.	284.	283.	286.	295.	296.	298.
10952 P	285.	287.	288.	287.	290.	288.	292.	294.	295.	293.	289.	299.	300.
10953 P	249.	258.	254.	246.	252.	252.	253.	254.	255.	262.	268.	271.	275.
10954 P	270.	272.	276.	278.	279.	283.	280.	284.	285.	288.	290.	299.	293.
10955 P	251.	254.	257.	259.	254.	258.	260.	258.	266.	264.	273.	272.	274.
10956 P	276.	291.	282.	284.	281.	285.	288.	290.	298.	301.	306.	310.	309.
11544 P	261.	265.	267.	271.	268.	269.	269.	268.	269.	269.	274.	279.	287.
11545 P	312.	321.	331.	337.	336.	341.	342.	344.	339.	348.	349.	357.	362.
11546 P	260.	267.	274.	270.	272.	273.	277.	270.	276.	280.	288.	288.	292.
11547 P	284.	288.	290.	291.	291.	290.	292.	299.	297.	309.	308.	319.	326.
11548 NP	254.	257.	255.	261.	261.	269.	265.	270.	269.	261.	260.	260.	259.
11549 P	277.	281.	288.	288.	287.	293.	291.	297.	296.	301.	308.	313.	313.
11550 P	250.	258.	260.	262.	263.	265.	267.	265.	269.	268.	277.	281.	285.
11551 P	280.	287.	291.	292.	292.	291.	294.	304.	301.	304.	312.	318.	321.
11552 P	276.	280.	283.	282.	282.	285.	287.	287.	292.	291.	298.	300.	307.
11553 P	278.	280.	282.	281.	282.	287.	285.	281.	287.	291.	293.	299.	304.
11554 P	260.	264.	263.	264.	274.	277.	266.	277.	277.	275.	277.	287.	292.
11555 P	293.	292.	302.	301.	299.	299.	300.	308.	307.	316.	316.	322.	332.
11556 P	250.	262.	266.	269.	273.	274.	275.	274.	279.	281.	286.	294.	298.
11557 P	300.	305.	307.	300.	304.	305.	310.	311.	310.	317.	324.	333.	334.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 8): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 4					2 MG/KG PFOS + MEVALONIC ACID							
10943 P	292.	296.	300.	312.	330.	346.	360.	371.	382.				
10944 P	294.	297.	301.	314.	327.	347.	354.	370.					
10945 P	323.	325.	332.	344.	363.	376.	396.	401.	415.				
10946 P	303.	303.	313.	325.	341.	360.	385.	401.	421.				
10947 P	280.	284.	292.	302.	312.	332.	349.	360.	385.				
10948 P	331.	338.	341.	358.	367.	391.	405.	423.	437.				
10949 P	295.	269.	253.	249.	260.	267.	276.	278.	280.				
10950 P	313.	319.	324.	334.	349.	368.	380.	398.	421.				
10951 P	303.	308.	322.	335.	344.	364.	376.	385.	417.				
10952 P	304.	304.	316.	326.	339.	356.	363.	374.					
10953 P	277.	284.	296.	307.	326.	340.	347.	364.	399.				
10954 P	308.	303.	315.	319.	333.	350.	369.	384.	407.				
10955 P	286.	292.	298.	308.	327.	341.	358.	376.					
10956 P	319.	324.	329.	339.	355.	368.	379.	394.					
11544 P	296.	304.	310.	322.	335.	356.	372.	391.	399.				
11545 P	370.	372.	378.	386.	400.	414.	423.	438.	449.				
11546 P	302.	305.	309.	320.	337.	347.	356.	373.	380.				
11547 P	328.	340.	339.	351.	367.	380.	387.	400.	418.				
11548 NP	261.	261.	260.	256.	258.	254.	258.	262.	259.	258.	262.	263.	272.
11549 P	316.	322.	332.	344.	358.	373.	386.	401.					
11550 P	290.	298.	304.	310.	324.	330.	349.	369.					
11551 P	329.	331.	344.	359.	377.	388.	403.	412.	423.				
11552 P	312.	314.	318.	331.	346.	359.	371.	392.	403.				
11553 P	308.	316.	323.	339.	355.	374.	386.	392.					
11554 P	293.	301.	311.	324.	343.	353.	371.	372.					
11555 P	336.	336.	344.	351.	360.	385.	397.	415.	431.				
11556 P	301.	308.	320.	337.	343.	361.	378.	383.	401.				
11557 P	336.	338.	359.	362.	376.	388.	378.	386.	396.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 9): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 5					CHOLESTEROL CONTROL							
10957 P	266.	265.	274.	276.	283.	281.	250.	263.	267.	272.	282.	286.	296.
10958 P	317.	323.	330.	324.	322.	327.	330.	334.	340.	338.	337.	344.	347.
10959 P	280.	294.	296.	298.	304.	302.	307.	311.	316.	315.	326.	334.	329.
10960 P	276.	285.	292.	299.	298.	304.	306.	311.	314.	320.	324.	329.	334.
10961 P	248.	257.	267.	265.	274.	276.	276.	280.	286.	290.	299.	300.	301.
10962 P	323.	332.	333.	332.	328.	336.	337.	333.	337.	341.	342.	352.	353.
10963 P	298.	307.	306.	312.	319.	326.	328.	332.	342.	345.	345.	354.	355.
10964 P	311.	317.	316.	321.	319.	322.	325.	324.	330.	336.	341.	348.	354.
10965 P	264.	265.	271.	274.	278.	280.	282.	282.	288.	289.	290.	291.	296.
10966 P	303.	308.	316.	318.	320.	328.	330.	331.	336.	341.	344.	353.	358.
10967 P	307.	310.	314.	314.	320.	325.	328.	326.	330.	332.	341.	343.	345.
10968 P	274.	280.	284.	285.	285.	289.	292.	294.	299.	303.	305.	313.	314.
10969 P	276.	282.	288.	289.	291.	297.	297.	298.	301.	309.	315.	314.	318.
10970 P	304.	314.	318.	308.	319.	314.	323.	323.	327.	334.	338.	336.	341.
11558 P	257.	263.	272.	263.	264.	270.	268.	275.	278.	277.	282.	290.	295.
11559 P	292.	301.	309.	319.	318.	319.	325.	327.	330.	336.	344.	349.	360.
11560 NP	310.	304.	306.	308.	303.	303.	303.	307.	306.	304.	305.	306.	306.
11561 P	304.	313.	314.	317.	321.	326.	329.	338.	343.	344.	352.	354.	352.
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY												
11563 P	295.	311.	314.	320.	320.	328.	327.	329.	339.	339.	341.	351.	354.
11564 P	276.	282.	296.	296.	299.	298.	300.	300.	308.	306.	315.	318.	326.
11565 P	260.	271.	272.	275.	280.	285.	287.	292.	294.	300.	305.	313.	313.
11566 NP	284.	289.	286.	292.	296.	302.	306.	305.	308.	311.	306.	299.	297.
11567 P	276.	289.	295.	299.	301.	303.	310.	316.	320.	324.	326.	337.	345.
11568 P	252.	261.	262.	269.	270.	272.	277.	277.	284.	285.	290.	301.	301.
11569 P	313.	315.	317.	324.	331.	332.	333.	336.	344.	345.	353.	357.	370.
11570 P	254.	262.	266.	263.	270.	271.	269.	276.	277.	279.	291.	298.	298.
11571 P	294.	309.	318.	326.	323.	331.	329.	338.	348.	342.	362.	359.	368.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 10): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 5					CHOLESTEROL CONTROL							
10957 P	302.	303.	312.	314.	328.	340.	349.	361.	378.				
10958 P	352.	351.	361.	368.	381.	398.	415.	426.	448.				
10959 P	335.	337.	332.	358.	370.	394.	412.	427.	448.				
10960 P	338.	345.	356.	368.	380.	390.	407.	417.	442.				
10961 P	300.	298.	312.	318.	341.	359.	373.	385.	409.				
10962 P	360.	358.	369.	383.	393.	403.	419.	422.	444.				
10963 P	358.	366.	375.	394.	406.	420.	436.	456.	475.				
10964 P	357.	356.	366.	382.	401.	410.	435.	452.	476.				
10965 P	294.	303.	316.	325.	337.	344.	353.	369.	386.				
10966 P	359.	364.	372.	376.	387.	392.	407.	424.	434.				
10967 P	347.	353.	357.	364.	377.	394.	405.	419.	430.	436.			
10968 P	316.	323.	334.	340.	353.	366.	381.	399.					
10969 P	319.	324.	328.	338.	348.	364.	384.	397.	413.				
10970 P	349.	348.	358.	368.	378.	388.	398.	413.	429.				
11558 P	295.	308.	315.	322.	343.	351.	366.	371.	383.				
11559 P	359.	367.	376.	388.	405.	419.	433.	456.	462.				
11560 NP	304.	311.	309.	308.	307.	309.	306.	312.	312.	314.	314.	312.	318.
11561 P	353.	363.	366.	370.	386.	405.	402.	415.	434.				
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY												
11563 P	365.	368.	365.	375.	379.	397.	413.	425.	448.				
11564 P	325.	339.	342.	346.	355.	371.	381.	395.	405.	405.			
11565 P	321.	325.	336.	349.	360.	370.	381.	397.	402.				
11566 NP	299.	299.	294.	290.	297.	292.	287.	290.	291.	296.	294.	293.	302.
11567 P	343.	351.	355.	369.	378.	389.	408.	415.	438.				
11568 P	304.	315.	321.	322.	339.	352.	366.	373.	393.				
11569 P	368.	372.	377.	393.	409.	425.	441.	445.	466.				
11570 P	298.	303.	305.	312.	320.	329.	339.	355.	372.				
11571 P	375.	378.	383.	391.	400.	410.	423.	444.	457.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 11): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 6					1.6 MG/KG PFOS + CHOLESTEROL							
10971 P	231.	232.	236.	242.	245.	248.	248.	251.	248.	256.	261.	268.	271.
10972 P	287.	294.	293.	299.	300.	306.	306.	308.	319.	318.	320.	330.	333.
10973 P	239.	246.	249.	250.	255.	258.	258.	261.	263.	267.	273.	272.	278.
10974 P	267.	278.	280.	279.	282.	286.	291.	293.	301.	300.	311.	310.	315.
10975 P	267.	256.	269.	273.	269.	274.	279.	280.	282.	283.	285.	281.	282.
10976 P	272.	277.	280.	276.	274.	274.	274.	277.	279.	279.	289.	283.	283.
10977 P	254.	256.	256.	260.	257.	260.	263.	263.	267.	265.	271.	274.	284.
10978 P	274.	287.	284.	279.	283.	278.	290.	282.	287.	292.	296.	300.	301.
10979 P	270.	274.	282.	284.	291.	290.	294.	297.	297.	305.	310.	314.	320.
10980 P	260.	264.	265.	263.	265.	270.	272.	274.	266.	280.	282.	286.	290.
10981 P	250.	248.	251.	247.	253.	253.	253.	255.	257.	263.	267.	261.	266.
10982 P	266.	251.	259.	260.	264.	266.	268.	268.	272.	274.	281.	281.	286.
10983 P	263.	272.	272.	266.	272.	273.	278.	278.	282.	285.	296.	297.	303.
10984 P	278.	281.	287.	284.	289.	293.	294.	294.	297.	305.	306.	315.	316.
11572 P	210.	219.	223.	223.	226.	221.	228.	232.	231.	239.	242.	246.	246.
11573 P	278.	281.	287.	287.	289.	294.	293.	300.	297.	296.	306.	308.	318.
11574 P	263.	268.	266.	266.	268.	273.	272.	279.	279.	280.	285.	288.	293.
11575 P	274.	268.	269.	285.	291.	292.	294.	302.	304.	308.	313.	316.	327.
11576 P	276.	273.	272.	277.	273.	277.	282.	274.	289.	291.	293.	295.	298.
11577 P	286.	291.	297.	294.	295.	297.	306.	314.	309.	312.	321.	326.	329.
11578 P	248.	256.	262.	262.	264.	268.	270.	271.	272.	281.	285.	288.	294.
11579 P	298.	314.	314.	311.	314.	319.	320.	323.	323.	327.	336.	338.	348.
11580 P	275.	275.	282.	283.	283.	289.	292.	299.	304.	302.	309.	312.	327.
11581 P	278.	280.	284.	291.	288.	291.	292.	296.	297.	301.	302.	310.	306.
11582 P	262.	269.	275.	273.	276.	280.	286.	289.	286.	292.	293.	305.	306.
11583 P	266.	264.	268.	269.	268.	281.	278.	274.	279.	292.	295.	296.	301.
11584 P	274.	282.	282.	286.	284.	289.	287.	291.	296.	292.	300.	300.	311.
11585 P	257.	254.	259.	264.	260.	262.	262.	258.	265.	274.	270.	284.	290.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 12): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 6					1.6 MG/KG PFOS + CHOLESTEROL							
10971 P	270.	274.	274.	280.	297.	304.	309.	321.	341.				
10972 P	337.	342.	352.	364.	375.	400.	417.	433.	455.				
10973 P	282.	287.	287.	296.	311.	322.	332.	343.	372.				
10974 P	325.	330.	342.	357.	374.	388.	407.	422.	435.				
10975 P	291.	291.	297.	302.	304.	319.	326.	333.	339.				
10976 P	288.	290.	299.	306.	322.	333.	348.	364.	376.				
10977 P	293.	292.	296.	304.	319.	335.	352.	360.	379.				
10978 P	303.	306.	323.	327.	336.	360.	367.	392.	415.				
10979 P	321.	327.	338.	344.	350.	370.	386.	400.	399.				
10980 P	292.	296.	313.	330.	348.	345.	355.	374.	402.				
10981 P	275.	274.	288.	292.	307.	316.	326.	344.	373.				
10982 P	289.	298.	310.	324.	343.	362.	376.	392.	429.				
10983 P	302.	304.	313.	331.	338.	358.	376.	391.					
10984 P	320.	325.	334.	346.	358.	366.	383.	400.					
11572 P	252.	254.	262.	270.	282.	294.	298.	312.	322.				
11573 P	322.	325.	339.	342.	357.	375.	385.	399.	396.				
11574 P	296.	304.	312.	327.	344.	352.	370.	374.	389.				
11575 P	331.	336.	349.	353.	368.	387.	400.	411.	412.				
11576 P	303.	312.	319.	324.	335.	352.	356.	373.	384.				
11577 P	335.	347.	356.	370.	387.	414.	424.	434.					
11578 P	297.	305.	306.	322.	337.	361.	375.	386.	396.				
11579 P	342.	357.	359.	376.	392.	401.	413.	430.					
11580 P	334.	335.	346.	360.	373.	387.	409.	423.	436.				
11581 P	315.	319.	321.	334.	350.	364.	377.	395.	398.				
11582 P	318.	322.	329.	341.	344.	365.	372.	376.	397.				
11583 P	315.	322.	323.	332.	354.	363.	381.	404.					
11584 P	314.	312.	328.	341.	347.	362.	377.	383.	389.				
11585 P	295.	298.	301.	318.	336.	346.	367.	373.	382.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 13): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 7					2 MG/KG PFOS + CHOLESTEROL							
10985 P	257.	269.	269.	271.	272.	272.	273.	270.	278.	279.	284.	288.	288.
10986 P	280.	277.	283.	278.	276.	282.	291.	292.	294.	299.	301.	305.	308.
10987 P	272.	283.	278.	278.	283.	279.	286.	286.	286.	289.	293.	296.	304.
10988 P	271.	280.	278.	273.	275.	279.	279.	277.	281.	280.	291.	288.	290.
10989 P	226.	230.	240.	248.	243.	252.	255.	253.	263.	264.	258.	262.	266.
10990 P	288.	289.	292.	290.	291.	298.	302.	303.	306.	309.	313.	320.	322.
10991 P	262.	265.	264.	264.	266.	271.	269.	271.	269.	270.	275.	278.	289.
10992 P	249.	246.	248.	255.	253.	251.	253.	261.	264.	260.	266.	274.	270.
10993 P	282.	266.	267.	283.	280.	285.	288.	293.	301.	300.	309.	316.	324.
10994 P	280.	274.	278.	276.	284.	281.	284.	283.	284.	290.	293.	295.	297.
10995 P	260.	269.	269.	268.	273.	271.	273.	280.	282.	286.	291.	289.	292.
10996 P	258.	268.	267.	267.	266.	268.	266.	273.	278.	275.	279.	282.	284.
10997 P	242.	244.	249.	247.	246.	252.	251.	252.	258.	262.	260.	272.	273.
10998 NP	280.	275.	272.	278.	277.	279.	269.	279.	279.	270.	265.	272.	271.
11586 P	246.	249.	255.	252.	253.	254.	260.	270.	268.	276.	279.	283.	284.
11587 P	298.	296.	310.	304.	304.	312.	310.	317.	316.	326.	330.	331.	340.
11588 P	259.	259.	266.	267.	267.	275.	277.	271.	275.	279.	284.	296.	300.
11589 P	269.	274.	284.	275.	279.	277.	283.	288.	303.	300.	310.	308.	312.
11590 P	250.	258.	264.	263.	261.	264.	271.	275.	273.	280.	280.	294.	293.
11591 P	293.	301.	301.	296.	308.	307.	309.	316.	322.	324.	331.	334.	346.
11592 P	288.	296.	292.	293.	298.	296.	290.	299.	302.	297.	297.	305.	305.
11593 P	235.	228.	234.	242.	240.	244.	248.	245.	249.	260.	261.	260.	262.
11594 P	271.	277.	286.	284.	285.	275.	282.	287.	286.	290.	302.	303.	302.
11595 P	256.	262.	268.	269.	271.	275.	276.	273.	280.	284.	289.	292.	296.
11596 P	252.	258.	257.	255.	256.	259.	263.	263.	271.	271.	277.	274.	277.
11597 P	253.	257.	258.	258.	260.	261.	261.	263.	267.	276.	266.	274.	281.
11598 P	256.	261.	270.	270.	269.	272.	278.	276.	280.	282.	288.	292.	295.
11599 P	276.	276.	275.	268.	269.	270.	274.	281.	284.	284.	290.	296.	300.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 14): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 7					2 MG/KG PFOS + CHOLESTEROL							
10985 P	290.	298.	304.	314.	331.	338.	359.	366.	402.				
10986 P	311.	316.	324.	348.	364.	371.	396.	416.	431.				
10987 P	302.	308.	309.	324.	331.	351.	366.	373.	394.				
10988 P	293.	307.	318.	325.	332.	355.	368.	374.	397.				
10989 P	270.	274.	272.	278.	282.	294.	308.	312.	323.				
10990 P	323.	328.	340.	345.	359.	366.	378.	387.	403.				
10991 P	284.	289.	295.	302.	321.	334.	347.	361.	379.				
10992 P	270.	286.	292.	302.	316.	325.	347.	360.	372.				
10993 P	328.	328.	337.	345.	362.	372.	394.	404.	430.				
10994 P	303.	298.	317.	330.	344.	364.	382.	394.	424.				
10995 P	301.	309.	314.	323.	340.	366.	379.	386.	396.				
10996 P	284.	290.	307.	314.	324.	347.	354.	365.					
10997 P	273.	274.	290.	297.	314.	330.	346.	348.	364.				
10998 NP	271.	262.	264.	269.	269.	269.	266.	265.	272.	277.	275.	274.	283.
11586 P	293.	296.	311.	320.	333.	349.	361.	368.	375.				
11587 P	348.	353.	366.	376.	394.	404.	423.	432.	423.				
11588 P	301.	305.	314.	319.	337.	352.	359.	375.					
11589 P	315.	323.	329.	346.	364.	380.	397.	410.	418.				
11590 P	306.	312.	318.	336.	345.	363.	377.	389.					
11591 P	356.	360.	368.	377.	389.	411.	425.	446.					
11592 P	307.	314.	324.	336.	348.	366.	381.	401.	421.				
11593 P	274.	275.	284.	288.	311.	322.	337.	354.					
11594 P	321.	317.	328.	341.	360.	378.	396.	408.					
11595 P	305.	298.	303.	314.	323.	332.	342.	357.	360.				
11596 P	286.	293.	306.	320.	338.	355.	364.	375.					
11597 P	284.	288.	290.	303.	316.	331.	341.	355.	368.	366.			
11598 P	295.	299.	313.	328.	343.	359.	365.	376.					
11599 P	300.	307.	317.	334.	350.	364.	379.	392.	416.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 15): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY	0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #		DOSAGE GROUP 8					0.4 MG/KG PFOS							
10999	P	250.	259.	265.	267.	267.	276.	280.	282.	288.	291.	297.	303.	307.
11000	P	298.	300.	302.	306.	308.	316.	317.	323.	328.	334.	331.	338.	344.
11001	P	273.	279.	280.	280.	281.	282.	283.	281.	292.	296.	298.	303.	304.
11002	P	281.	281.	283.	288.	287.	296.	295.	304.	303.	304.	314.	307.	314.
11003	P	284.	294.	296.	300.	301.	306.	304.	304.	310.	312.	307.	312.	323.
11004	P	281.	292.	299.	300.	307.	314.	315.	316.	315.	313.	324.	337.	340.
11005	P	291.	298.	301.	307.	307.	313.	318.	318.	325.	328.	327.	330.	337.
11006	P	273.	290.	290.	291.	300.	306.	302.	308.	312.	313.	319.	321.	325.
11007	P	298.	305.	319.	320.	330.	330.	334.	336.	339.	343.	348.	352.	357.
11008	P	301.	317.	315.	315.	318.	316.	323.	322.	316.	317.	328.	332.	333.
11600	P	284.	297.	306.	303.	304.	310.	319.	315.	319.	320.	328.	334.	341.
11601	P	300.	325.	324.	327.	328.	336.	336.	331.	336.	344.	350.	355.	363.
11602	P	242.	254.	252.	259.	262.	264.	267.	268.	273.	279.	281.	285.	292.
11603	P	282.	291.	298.	299.	301.	305.	309.	314.	314.	318.	322.	329.	332.
11604	P	278.	278.	276.	283.	285.	288.	290.	294.	299.	295.	301.	306.	320.
11605	P	305.	314.	319.	317.	323.	330.	329.	330.	337.	344.	341.	346.	352.
11606	P	274.	279.	280.	279.	285.	288.	291.	293.	295.	300.	298.	309.	312.
11607	P	256.	267.	270.	270.	272.	275.	275.	283.	280.	289.	292.	303.	310.
11608	P	291.	305.	314.	306.	315.	316.	322.	324.	327.	326.	330.	342.	344.
11609	P	289.	300.	303.	308.	311.	314.	316.	322.	327.	331.	338.	339.	345.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 16): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 8					0.4 MG/KG PFOS							
10999 P	310.	316.	327.	331.	339.	359.	368.	379.	389.				
11000 P	351.	351.	361.	367.	380.	397.	399.	422.	428.				
11001 P	306.	312.	323.	336.	349.	368.	384.	392.	401.				
11002 P	316.	327.	337.	349.	361.	369.	386.	403.	414.				
11003 P	322.	320.	348.	372.	380.	398.	402.	416.	434.				
11004 P	345.	347.	358.	365.	375.	390.	406.	422.					
11005 P	338.	338.	343.	349.	364.	376.	385.	397.	412.				
11006 P	330.	343.	348.	354.	368.	379.	395.	417.	430.				
11007 P	355.	360.	377.	392.	405.	427.	428.	444.	459.				
11008 P	331.	329.	341.	356.	373.	378.	401.	403.	423.				
11600 P	343.	349.	357.	367.	381.	397.	403.	423.	438.				
11601 P	366.	376.	385.	400.	412.	424.	435.	449.	469.				
11602 P	294.	296.	303.	307.	325.	332.	336.	352.	350.				
11603 P	338.	339.	351.	362.	374.	388.	409.	430.					
11604 P	313.	321.	326.	333.	345.	363.	374.	386.	399.				
11605 P	357.	364.	370.	379.	393.	405.	426.	442.	457.				
11606 P	321.	321.	325.	332.	345.	352.	366.	380.	395.				
11607 P	306.	318.	330.	346.	354.	370.	380.	386.	409.				
11608 P	348.	363.	363.	364.	387.	390.	405.	419.	429.				
11609 P	350.	361.	369.	379.	398.	411.	428.	444.	446.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 17): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 9					0.8 MG/KG PFOS							
11009 P	238.	252.	258.	255.	254.	253.	258.	259.	267.	268.	268.	272.	272.
11010 P	288.	296.	299.	307.	305.	303.	306.	311.	309.	321.	333.	336.	345.
11011 P	293.	296.	310.	308.	312.	313.	310.	313.	322.	319.	307.	332.	338.
11012 P	252.	258.	265.	266.	262.	262.	265.	269.	271.	279.	279.	288.	291.
11013 P	251.	251.	256.	259.	264.	266.	269.	271.	270.	277.	283.	282.	289.
11014 NP	MATING NOT CONFIRMED												
11015 P	296.	296.	298.	301.	293.	326.	290.	294.	301.	304.	306.	314.	312.
11016 P	236.	252.	253.	253.	256.	261.	268.	267.	266.	268.	271.	282.	282.
11017 NP	284.	290.	298.	296.	307.	308.	303.	307.	316.	319.	319.	320.	321.
11018 P	296.	308.	312.	307.	309.	308.	313.	310.	311.	319.	318.	322.	326.
11610 NP	248.	248.	251.	256.	260.	283.	272.	279.	279.	280.	284.	290.	289.
11611 P	304.	325.	318.	316.	323.	326.	324.	329.	327.	332.	344.	347.	349.
11612 P	258.	264.	269.	276.	270.	274.	278.	283.	283.	286.	289.	295.	301.
11613 P	283.	295.	303.	303.	306.	309.	315.	315.	327.	324.	333.	334.	341.
11614 P	277.	278.	277.	285.	286.	293.	285.	283.	296.	294.	304.	305.	309.
11615 P	293.	300.	301.	300.	304.	296.	304.	304.	306.	312.	316.	322.	329.
11616 P	254.	258.	256.	252.	261.	271.	263.	268.	274.	273.	286.	285.	287.
11617 P	275.	280.	281.	279.	286.	285.	285.	293.	297.	306.	310.	310.	314.
11618 P	296.	305.	312.	306.	310.	314.	319.	321.	316.	322.	326.	331.	340.
11619 P	268.	265.	267.	267.	271.	277.	275.	282.	275.	277.	286.	290.	295.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 18): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 9					0.8 MG/KG PFOS							
11009 P	274.	273.	284.	301.	309.	328.	330.	339.	363.				
11010 P	346.	353.	361.	377.	393.	403.	417.	422.					
11011 P	342.	349.	356.	370.	384.	398.	426.	412.	437.				
11012 P	293.	295.	312.	320.	335.	344.	366.	378.	391.				
11013 P	289.	291.	302.	313.	325.	337.	349.	363.	378.				
11014 NP	MATING NOT CONFIRMED												
11015 P	316.	326.	333.	342.	356.	371.	388.	406.	418.				
11016 P	286.	288.	296.	302.	322.	339.	349.	364.					
11017 NP	310.	309.	307.	303.	297.	302.	298.	288.	288.	289.	296.	294.	298.
11018 P	332.	338.	347.	356.	358.	368.	377.	394.	411.	339.			
11610 NP	278.	280.	283.	293.	298.	300.	299.	299.	306.	306.	312.	308.	297.
11611 P	362.	364.	371.	378.	399.	416.	424.	435.					
11612 P	304.	310.	316.	328.	335.	354.	367.	376.	397.				
11613 P	344.	357.	364.	377.	388.	403.	416.	430.	449.				
11614 P	315.	330.	338.	350.	366.	388.	403.	409.	414.				
11615 P	333.	340.	339.	357.	365.	383.	395.	408.	433.				
11616 P	301.	301.	324.	330.	348.	359.	370.	380.					
11617 P	321.	325.	334.	346.	365.	379.	396.	418.					
11618 P	340.	348.	356.	365.	378.	385.	392.	405.	420.				
11619 P	295.	310.	318.	324.	344.	356.	374.	387.	391.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 19): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 10					1 MG/KG PFOS							
11019 P	277.	278.	279.	282.	283.	284.	287.	291.	285.	292.	297.	298.	301.
11020 P	296.	309.	315.	311.	308.	309.	313.	314.	319.	319.	320.	328.	333.
11021 P	254.	265.	269.	273.	278.	280.	280.	288.	289.	292.	293.	302.	301.
11022 NP	304.	304.	304.	308.	312.	316.	312.	318.	318.	316.	318.	317.	310.
11023 P	259.	268.	270.	268.	274.	273.	278.	277.	282.	284.	290.	294.	296.
11024 P	285.	300.	317.	314.	297.	323.	317.	322.	308.	320.	321.	328.	329.
11025 P	260.	265.	269.	273.	276.	277.	282.	281.	285.	289.	295.	298.	295.
11026 P	289.	295.	296.	301.	300.	302.	302.	301.	303.	310.	314.	319.	320.
11027 P	236.	245.	249.	253.	257.	261.	260.	253.	272.	272.	274.	282.	286.
11028 P	289.	302.	305.	303.	304.	304.	297.	307.	306.	307.	311.	319.	323.
11620 P	252.	259.	259.	263.	267.	266.	264.	266.	269.	269.	271.	275.	280.
11621 P	280.	290.	298.	300.	300.	299.	301.	305.	305.	307.	317.	323.	321.
11622 P	254.	261.	267.	269.	274.	275.	278.	282.	284.	290.	291.	299.	297.
11623 P	275.	276.	280.	278.	271.	284.	290.	292.	291.	295.	305.	302.	306.
11624 P	262.	272.	277.	280.	282.	285.	278.	279.	287.	288.	297.	313.	316.
11625 P	289.	306.	306.	307.	317.	311.	314.	314.	322.	322.	322.	328.	343.
11626 P	275.	275.	276.	279.	280.	285.	284.	287.	293.	298.	300.	310.	311.
11627 P	320.	326.	333.	324.	323.	327.	329.	334.	326.	331.	339.	346.	347.
11628 P	266.	275.	282.	282.	280.	282.	287.	289.	298.	304.	302.	301.	305.
11629 P	292.	303.	299.	304.	305.	305.	309.	309.	315.	314.	316.	326.	325.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 20): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 10					1 MG/KG PFOS							
11019 P	310.	313.	320.	331.	346.	365.	380.	398.					
11020 P	334.	333.	347.	357.	366.	384.	396.	419.	433.				
11021 P	308.	316.	322.	338.	358.	372.	387.	402.	412.				
11022 NP	307.	309.	306.	302.	299.	299.	300.	303.	304.	310.	307.	311.	309.
11023 P	302.	310.	324.	336.	352.	370.	378.	386.					
11024 P	338.	344.	354.	358.	373.	379.	388.	404.	420.				
11025 P	306.	310.	310.	330.	333.	349.	364.	381.	399.	403.			
11026 P	324.	332.	332.	345.	358.	374.	386.	402.	411.				
11027 P	290.	300.	306.	316.	331.	343.	360.	377.	381.				
11028 P	332.	339.	351.	361.	378.	400.	414.	436.					
11620 P	286.	293.	304.	317.	319.	342.	355.	369.					
11621 P	328.	334.	341.	350.	369.	385.	405.	421.					
11622 P	308.	317.	327.	334.	349.	364.	382.	396.	402.				
11623 P	316.	324.	323.	344.	359.	364.	385.	393.					
11624 P	315.	325.	330.	341.	354.	369.	390.	404.	412.				
11625 P	343.	352.	360.	374.	388.	408.	423.	444.	454.				
11626 P	310.	326.	328.	339.	353.	364.	372.	377.	395.				
11627 P	350.	366.	372.	380.	389.	408.	391.	381.	370.				
11628 P	319.	330.	333.	346.	366.	376.	397.	414.					
11629 P	329.	341.	345.	354.	360.	378.	394.	400.	414.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 21): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY	0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #		DOSAGE GROUP 11					1.2 MG/KG PFOS							
11029	P	262.	274.	270.	253.	259.	277.	275.	276.	276.	282.	283.	301.	293.
11030	NP	MATING NOT CONFIRMED												
11031	P	291.	295.	296.	302.	298.	304.	310.	311.	314.	314.	316.	326.	328.
11032	P	277.	283.	288.	288.	290.	291.	293.	294.	297.	297.	305.	309.	313.
11033	P	272.	272.	280.	274.	278.	275.	279.	280.	286.	285.	286.	292.	299.
11034	P	281.	286.	287.	286.	283.	284.	288.	292.	293.	296.	301.	302.	309.
11035	P	259.	268.	262.	266.	270.	278.	278.	276.	280.	272.	275.	286.	291.
11036	P	296.	296.	298.	297.	295.	303.	305.	314.	315.	319.	323.	328.	335.
11037	P	233.	243.	249.	247.	248.	250.	256.	255.	260.	266.	269.	276.	278.
11038	P	268.	277.	276.	280.	284.	282.	288.	295.	297.	292.	297.	310.	305.
11630	P	253.	260.	258.	261.	258.	261.	263.	262.	268.	266.	273.	274.	279.
11631	NP	287.	279.	273.	262.	273.	278.	284.	287.	294.	307.	305.	301.	314.
11632	P	254.	259.	260.	256.	267.	267.	267.	268.	265.	276.	276.	284.	291.
11633	P	301.	303.	305.	310.	311.	307.	315.	315.	328.	322.	327.	336.	337.
11634	P	276.	292.	293.	294.	294.	292.	299.	299.	304.	312.	318.	326.	325.
11635	P	282.	295.	300.	299.	304.	300.	302.	308.	313.	313.	321.	321.	356.
11636	P	256.	267.	278.	277.	276.	280.	278.	287.	285.	292.	300.	306.	307.
11637	P	258.	268.	270.	273.	271.	276.	275.	275.	280.	285.	284.	291.	294.
11638	P	237.	243.	245.	247.	246.	252.	253.	255.	261.	259.	262.	270.	273.
11639	P	272.	277.	282.	285.	283.	285.	280.	288.	289.	297.	300.	302.	309.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 22): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 11					1.2 MG/KG PFOS							
11029 P	301.	300.	307.	324.	348.	361.	380.	392.					
11030 NP	MATING NOT CONFIRMED												
11031 P	324.	331.	339.	344.	357.	366.	362.	380.	410.				
11032 P	315.	322.	329.	343.	367.	371.	379.	389.	409.				
11033 P	304.	308.	314.	329.	335.	354.	370.	383.	394.				
11034 P	312.	319.	327.	333.	349.	366.	371.	389.	401.				
11035 P	298.	294.	311.	311.	324.	344.	354.	368.	366.				
11036 P	342.	345.	362.	368.	385.	404.	410.	432.	446.				
11037 P	282.	291.	302.	308.	329.	348.	352.	367.	374.				
11038 P	313.	315.	329.	338.	352.	372.	378.	402.	408.				
11630 P	276.	286.	287.	297.	304.	313.	324.	328.	327.				
11631 NP	302.	305.	297.	303.	290.	292.	292.	286.	287.	290.	288.	291.	300.
11632 P	296.	303.	304.	316.	324.	332.	344.	353.	361.				
11633 P	341.	346.	356.	373.	384.	406.	420.	428.					
11634 P	328.	337.	340.	353.	361.	375.	389.	401.	401.				
11635 P	328.	339.	344.	353.	368.	378.	396.	412.	431.				
11636 P	319.	328.	317.	340.	366.	382.	407.	415.	433.				
11637 P	298.	312.	312.	324.	340.	358.	361.	381.	394.				
11638 P	277.	290.	290.	304.	318.	332.	343.	352.	363.				
11639 P	314.	326.	334.	342.	352.	366.	377.	396.					

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 23): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 12					1.6 MG/KG PFOS							
11039 NP	MATING NOT CONFIRMED												
11040 P	271.	280.	276.	273.	266.	264.	278.	282.	287.	285.	290.	281.	285.
11041 P	275.	277.	282.	282.	284.	279.	286.	295.	293.	294.	298.	300.	303.
11042 P	280.	282.	287.	283.	281.	286.	285.	291.	293.	292.	299.	303.	303.
11043 NP	251.	246.	244.	252.	252.	245.	240.	243.	243.	238.	240.	238.	245.
11044 P	269.	273.	276.	273.	269.	273.	274.	274.	275.	277.	285.	294.	297.
11045 P	260.	266.	271.	270.	271.	273.	274.	276.	278.	281.	282.	281.	286.
11046 P	274.	279.	279.	283.	282.	282.	290.	291.	296.	300.	313.	308.	310.
11047 P	261.	269.	269.	268.	273.	275.	280.	279.	276.	280.	287.	292.	293.
11048 P	260.	269.	271.	270.	270.	276.	278.	278.	281.	287.	294.	296.	299.
11049 P	267.	270.	283.	281.	285.	281.	286.	291.	291.	293.	296.	304.	306.
11050 P	268.	268.	275.	278.	276.	278.	282.	282.	286.	287.	290.	297.	293.
11051 P	245.	248.	246.	250.	256.	255.	256.	256.	264.	263.	270.	271.	273.
11052 P	277.	288.	287.	288.	294.	300.	295.	294.	303.	308.	311.	316.	320.
11640 P	259.	267.	266.	264.	264.	260.	266.	272.	266.	268.	273.	279.	281.
11641 P	294.	303.	303.	303.	293.	298.	299.	306.	310.	313.	319.	323.	323.
11642 P	265.	269.	271.	268.	275.	276.	273.	279.	280.	284.	287.	284.	288.
11643 P	257.	250.	257.	257.	261.	261.	271.	270.	278.	284.	282.	285.	292.
11644 P	236.	243.	248.	253.	249.	251.	252.	263.	264.	263.	273.	276.	278.
11645 P	297.	300.	301.	303.	311.	316.	318.	319.	320.	327.	334.	337.	343.
11646 P	252.	261.	264.	262.	265.	267.	267.	275.	279.	275.	283.	287.	287.
11647 P	266.	278.	274.	275.	284.	284.	273.	281.	287.	293.	295.	293.	300.
11648 P	252.	249.	252.	255.	250.	257.	258.	263.	265.	269.	272.	272.	270.
11649 P	294.	298.	302.	298.	302.	304.	308.	306.	308.	313.	315.	319.	328.
11650 P	261.	263.	267.	268.	268.	268.	271.	273.	275.	263.	274.	284.	290.
11651 P	297.	303.	303.	312.	310.	310.	315.	322.	317.	333.	327.	336.	340.
11652 NP	290.	300.	300.	305.	309.	308.	317.	312.	323.	308.	303.	306.	303.
11653 P	258.	262.	265.	267.	274.	274.	271.	273.	281.	278.	278.	292.	289.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 24): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 12					1.6 MG/KG PFOS							
11039 NP	MATING NOT CONFIRMED												
11040 P	288.	297.	296.	312.	326.	340.	350.	361.	374.				
11041 P	313.	313.	331.	340.	358.	370.	391.	416.					
11042 P	313.	310.	319.	330.	346.	359.	375.	394.					
11043 NP	251.	245.	240.	245.	250.	249.	244.	233.	244.	242.	244.	243.	249.
11044 P	300.	298.	308.	317.	335.	357.	368.	380.	397.				
11045 P	290.	296.	312.	324.	340.	356.	370.	376.	391.				
11046 P	323.	324.	336.	346.	364.	364.	388.	404.	431.				
11047 P	293.	292.	310.	318.	326.	344.	356.	365.	384.				
11048 P	303.	314.	321.	327.	333.	340.	354.	368.	379.				
11049 P	304.	312.	319.	330.	330.	344.	353.	353.	358.				
11050 P	302.	305.	317.	323.	337.	355.	375.	382.	400.				
11051 P	276.	285.	292.	302.	308.	325.	345.	350.	377.				
11052 P	320.	325.	340.	346.	364.	386.	400.	421.	444.				
11640 P	294.	304.	302.	308.	328.	346.	360.	368.	396.				
11641 P	332.	334.	345.	349.	369.	384.	393.	409.	421.				
11642 P	296.	305.	314.	326.	342.	366.	382.	386.					
11643 P	295.	300.	305.	313.	328.	348.	353.	373.	383.				
11644 P	282.	290.	297.	307.	318.	340.	355.	366.					
11645 P	347.	354.	364.	386.	398.	410.	428.	441.	450.				
11646 P	290.	306.	311.	323.	341.	352.	369.	380.	384.				
11647 P	310.	318.	321.	332.	347.	363.	368.	383.					
11648 P	278.	294.	303.	317.	339.	342.	353.	357.	375.				
11649 P	333.	334.	343.	353.	375.	391.	407.	423.	428.				
11650 P	291.	297.	305.	310.	329.	342.	356.	374.	385.				
11651 P	342.	352.	357.	362.	371.	390.	410.	425.	429.				
11652 NP	302.	303.	307.	304.	306.	302.	300.	304.	304.	308.	310.	308.	313.
11653 P	293.	300.	310.	316.	333.	348.	367.	373.	380.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 25): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 0	1	2	3	4	5	6	7	8	9	10	11	12
RAT #	DOSAGE GROUP 13					2 MG/KG PFOS							
11053 P	237.	249.	238.	239.	240.	248.	247.	248.	249.	255.	256.	265.	263.
11054 P	303.	298.	308.	305.	308.	306.	315.	316.	322.	323.	331.	338.	337.
11055 P	256.	262.	266.	266.	267.	269.	271.	277.	277.	275.	283.	290.	290.
11056 P	222.	219.	232.	234.	236.	237.	245.	246.	244.	246.	249.	255.	259.
11057 P	230.	235.	240.	246.	245.	256.	250.	256.	258.	261.	264.	264.	270.
11058 P	265.	267.	268.	271.	270.	272.	275.	278.	274.	286.	282.	291.	291.
11059 P	251.	251.	257.	256.	258.	255.	263.	261.	259.	268.	272.	277.	282.
11060 P	266.	269.	272.	270.	270.	269.	271.	273.	284.	284.	288.	291.	292.
11061 P	267.	276.	276.	273.	282.	282.	272.	282.	288.	290.	294.	299.	307.
11062 P	249.	248.	257.	262.	260.	266.	261.	268.	268.	273.	275.	277.	282.
11063 P	268.	278.	277.	274.	273.	277.	276.	281.	282.	282.	285.	292.	296.
11064 P	285.	286.	291.	295.	296.	302.	299.	302.	304.	308.	309.	315.	315.
11065 P	261.	271.	270.	267.	273.	274.	273.	275.	280.	280.	285.	286.	288.
11066 P	261.	262.	268.	274.	275.	271.	278.	278.	280.	285.	289.	302.	303.
11654 P	244.	248.	248.	253.	250.	253.	254.	263.	262.	269.	281.	284.	288.
11655 P	246.	260.	264.	264.	264.	268.	270.	277.	278.	277.	282.	291.	292.
11656 P	247.	256.	259.	262.	265.	265.	270.	269.	276.	276.	282.	283.	290.
11657 P	284.	294.	294.	295.	290.	299.	296.	302.	308.	313.	314.	330.	331.
11658 P	251.	256.	261.	264.	264.	268.	271.	269.	276.	272.	281.	282.	285.
11659 P	259.	308.	267.	263.	265.	269.	271.	273.	273.	275.	279.	282.	291.
11660 P	263.	259.	262.	267.	263.	271.	261.	269.	271.	275.	282.	287.	289.
11661 P	256.	258.	262.	263.	270.	268.	271.	271.	282.	279.	287.	290.	293.
11662 P	272.	280.	278.	278.	282.	285.	286.	294.	284.	290.	295.	297.	303.
11663 P	268.	275.	279.	282.	286.	280.	289.	295.	299.	298.	306.	308.	316.
11664 P	238.	248.	248.	249.	255.	250.	254.	254.	257.	266.	270.	267.	272.
11665 P	262.	266.	269.	265.	270.	276.	274.	278.	283.	287.	293.	298.	300.
11666 NP	265.	264.	264.	268.	272.	274.	278.	284.	275.	271.	271.	268.	266.
11667 P	301.	294.	299.	299.	296.	303.	305.	310.	308.	308.	315.	321.	325.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 27 (PAGE 26): MATERNAL BODY WEIGHTS - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAY 13	14	15	16	17	18	19	20	21	22	23	24	25
RAT #	DOSAGE GROUP 13					2 MG/KG PFOS							
11053 P	271.	276.	285.	299.	316.	329.	344.	366.	386.				
11054 P	343.	335.	355.	356.	370.	384.	404.	425.	447.				
11055 P	299.	300.	314.	325.	342.	365.	376.	388.	425.				
11056 P	265.	259.	275.	280.	295.	306.	327.	336.	352.				
11057 P	278.	276.	285.	298.	312.	328.	334.	345.	357.				
11058 P	300.	299.	313.	328.	346.	369.	371.	389.	421.				
11059 P	285.	290.	301.	310.	325.	342.	349.	370.	384.				
11060 P	301.	305.	317.	327.	352.	363.	374.	392.	425.				
11061 P	305.	315.	324.	336.	358.	365.	383.	394.	431.				
11062 P	286.	291.	301.	313.	317.	333.	349.	366.	390.				
11063 P	301.	301.	314.	324.	341.	358.	378.	389.	418.				
11064 P	321.	322.	332.	337.	346.	361.	373.	385.	408.				
11065 P	295.	301.	311.	321.	327.	324.	346.	359.	382.				
11066 P	308.	318.	333.	342.	354.	374.	383.	408.	439.				
11654 P	288.	285.	299.	307.	323.	335.	354.	375.	377.				
11655 P	304.	304.	315.	328.	349.	360.	346.	371.	394.				
11656 P	294.	300.	312.	326.	328.	343.	366.	370.	353.				
11657 P	332.	333.	349.	360.	368.	384.	406.	418.					
11658 P	292.	292.	296.	303.	312.	328.	344.	352.	362.				
11659 P	286.	294.	299.	302.	316.	340.	355.	358.	362.				
11660 P	296.	306.	314.	324.	342.	366.	365.	379.					
11661 P	294.	305.	314.	327.	336.	350.	368.	377.					
11662 P	308.	315.	321.	332.	345.	358.	366.	382.					
11663 P	318.	325.	329.	343.	356.	373.	395.	409.					
11664 P	274.	280.	287.	299.	312.	323.	337.	344.					
11665 P	308.	314.	325.	336.	352.	364.	380.	397.	405.				
11666 NP	263.	267.	270.	265.	263.	267.	266.	261.	266.	266.	264.	266.	274.
11667 P	328.	337.	340.	350.	367.	381.	398.	416.	430.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAY = DAY OF PRESUMED GESTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 1): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 1	VEHICLE CONTROL
10906	332.	344.
10909	277.	294.
10911	286.	300.
10913	288.	299.
10914	261.	280.
11501	250.	261.
11502	319.	328.
11503	308.	310.
11504	307.	347.
11505	298.	319.
11506	339.	347.
11507	316.	336.
11508	319.	328.
11509	312.	342.
11510	318.	359.
11511	270.	299.
11512	342.	357.
11513	277.	279.
11514	306.	327.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 2): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 2	MEVALONIC ACID CONTROL
10921	306.	317.
10922	295.	321.
10923	277.	296.
10924	310.	301.
10926	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT	
10927	327.	341.
11515	247.	282.
11516	311.	341.
11517	282.	328.
11518	337.	337.
11519	306.	306.
11520	265.	303.
11521	333.	341.
11522	NOT PREGNANT	
11523	274.	313.
11524	275.	305.
11525	322.	333.
11526	302.	314.
11527	317.	348.
11528	301.	324.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 3): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 3	1.6 MG/KG PFOS + MEVALONIC ACID
10929	275.	284.
10936	FOUND DEAD ON DAY 2 OF STUDY	
10938	314.	316.
10939	NOT PREGNANT	
10941	261.	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS
10942	290.	311.
11529	265.	280.
11530	330.	355.
11531	NOT PREGNANT	
11532	320.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11533	292.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11534	343.	336.
11535	310.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11536	307.	320.
11537	284.	308.
11538	288.	304.
11539	255.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11540	354.	330.
11541	290.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11542	312.	298.
11543	336.	348.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 4): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 4	2 MG/KG PFOS + MEVALONIC ACID
10943	279.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
10944	290.	282. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
10948	322.	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS
10952	299.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
10955	272.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
10956	302.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11544	305.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11545	348.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11546	281.	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS
11547	300.	299.
11548	NOT PREGNANT	
11549	310.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11550	290.	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS
11551	326.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11552	296.	310.
11553	291.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11554	272.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11555	322.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11556	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	
11557	310.	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 5): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 5	CHOLESTEROL CONTROL
10957	288.	316.
10966	330.	379.
10967	312.	326.
10968	297.	319.
10969	297.	320.
10970	318.	323.
11558	276.	308.
11559	325.	340.
11560	NOT PREGNANT	
11561	327.	359.
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY	
11563	333.	325.
11564	309.	306.
11565	291.	321.
11566	NOT PREGNANT	
11567	330.	347.
11568	289.	312.
11569	340.	355.
11570	282.	242.
11571	366.	379.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 6): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 6	1.6 MG/KG PFOS + CHOLESTEROL
10971	273.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
10973	271.	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS
10977	262.	269.
10979	285.	316.
10983	289.	299.
10984	309.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11572	246.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11573	316.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11574	280.	284.
11575	308.	335.
11576	287.	307.
11577	322.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11578	280.	291.
11579	352.	325.
11580	324.	319.
11581	306.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11582	312.	298.
11583	304.	317.
11584	275.	309.
11585	294.	282. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 7): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 7	2 MG/KG PFOS + CHOLESTEROL
10986	309.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
10994	317.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
10995	277.	282.
10996	291.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
10997	250.	261.
10998	NOT PREGNANT	
11586	279.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11587	340.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11588	312.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11589	303.	290. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11590	290.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11591	336.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11592	312.	297.
11593	272.	262.
11594	309.	299. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11595	291.	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS
11596	282.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11597	278.	275.
11598	287.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11599	278.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 8): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	5
RAT #	DOSAGE GROUP 8	0.4 MG/KG PFOS
10999	266.	306.
11000	334.	333.
11001	295.	304.
11002	300.	325.
11003	306.	333.
11004	325.	322.
11005	312.	325.
11006	297.	334.
11007	337.	340.
11008	318.	325.
11600	316.	344.
11601	343.	383.
11602	282.	281.
11603	328.	333.
11604	304.	297.
11605	333.	337.
11606	306.	312.
11607	286.	312.
11608	311.	345.
11609	321.	343.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 9): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 9	0.8 MG/KG PFOS
11009	259.	208.
11010	316.	346.
11011	325.	335.
11012	269.	283.
11013	277.	290.
11014	NOT PREGNANT	
11015	298.	298.
11016	283.	279.
11017	NOT PREGNANT	
11018	325.	324.
11610	NOT PREGNANT	
11611	341.	356.
11612	288.	296.
11613	340.	364.
11614	287.	326.
11615	327.	355.
11616	296.	278.
11617	313.	326.
11618	322.	332.
11619	302.	245.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 10): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 10	1 MG/KG PFOS
11019	307.	306.
11020	322.	336.
11021	287.	282.
11022	NOT PREGNANT	
11023	294.	281.
11024	327.	337.
11025	285.	314.
11026	302.	308.
11027	276.	277.
11028	310.	300.
11620	285.	275.
11621	315.	317.
11622	309.	322.
11623	308.	305.
11624	307.	323.
11625	322.	323.
11626	301.	310.
11627	284.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11628	317.	324.
11629	325.	331.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 11): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 11	1.2 MG/KG PFOS
11029	295.	304.
11030	NOT PREGNANT	
11031	306.	302.
11032	325.	321.
11033	282.	273.
11034	299.	296.
11035	282.	274.
11036	307.	338.
11037	270.	280.
11038	307.	306.
11630	270.	286.
11631	NOT PREGNANT	
11632	282.	287.
11633	320.	347.
11634	308.	329.
11635	331.	333.
11636	308.	314.
11637	295.	310.
11638	261.	276.
11639	318.	325.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 12): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	DAY 1	5
RAT #	DOSAGE GROUP 12	1.6 MG/KG PFOS
11039	NOT PREGNANT	
11041	297.	292.
11042	295.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11043	NOT PREGNANT	
11048	277.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11049	296.	304.
11640	278.	293.
11641	304.	316.
11642	297.	290.
11643	294.	281.
11644	263.	288.
11645	332.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11646	303.	316.
11647	310.	300.
11648	274.	279.
11649	314.	305. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11650	302.	289.
11651	343.	352.
11652	NOT PREGNANT	
11653	290.	276.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAY = DAY OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 28 (PAGE 13): MATERNAL BODY WEIGHTS - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY	1	5
RAT #	DOSAGE GROUP 13	2 MG/KG PFOS
11055	301.	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS
11057	267.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11059	275.	286.
11061	313.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11064	334.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11065	285.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11654	271.	272.
11655	282.	293.
11656	278.	279.
11657	313.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11658	259.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11659	275.	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS
11660	298.	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS
11661	274.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11662	317.	284.
11663	313.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11664	268.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS
11665	301.	289. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11666	NOT PREGNANT	
11667	306.	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 1): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 1					VEHICLE CONTROL			
10901	141.	128.	123.	117.	123.	102.			
10902	122.	120.	125.	123.	108.	100.			
10903	137.	130.	131.	135.	129.	107.			
10904	c	142.	144.	137.	143.	109.			
10905	116.	117.	130.	136.	129.	96.			
10906	141.	138.	136.	135.	140.	109.			
10907	137.	129.	127.	130.	127.	102.			
10908	117.	118.	117.	122.	107.	104.			
10909	148.	136.	133.	131.	131.	100.			
10910	163.	146.	150.	149.	147.	127.			
10911	144.	134.	128.	116.	123.	105.			
10912	c	138.	128.	141.	155.	121.			
10913	211.	117.	127.	121.	119.	94.			
10914	130.	123.	115.	119.	122.	93.			
11501	100.	105.	95.	117.	115.	103.			
11502	142.	153.	155.	153.	141.	126.			
11503	137.	127.	130.	120.	136.	97.			
11504	157.	149.	150.	168.	176.	129.			
11505	137.	135.	129.	139.	135.	124.			
11506	136.	142.	140.	134.	135.	117.			
11507	126.	128.	125.	126.	129.	103.			
11508	146.	146.	145.	130.	140.	111.			
11509	123.	125.	133.	124.	130.	119.			
11510	143.	147.	156.	143.	137.	129.			
11511	108.	123.	123.	115.	105.	97.			
11512	156.	161.	170.	158.	147.	139.			
11513	116.	121.	101.	117.	124.	92.			
11514	132.	143.	148.	141.	134.	111.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 2): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 2					MEVALONIC ACID CONTROL			
10915	151.	135.	123.	123.	120.	104.			
10916	c	179.	c	157.	154.	98.			
10917	147.	131.	149.	127.	129.	99.			
10918	141.	136.	130.	145.	130.	106.			
10919	140.	125.	120.	136.	128.	97.			
10920	c	138.	158.	135.	143.	112.			
10921	152.	139.	144.	141.	143.	107.			
10922	149.	137.	136.	135.	131.	119.			
10923	139.	124.	145.	159.	148.	119.			
10924	146.	131.	130.	139.	132.	94.			
10925	142.	138.	129.	131.	117.	104.			
10926	146.	159.	147.	145.	141.	122.			
10927	154.	137.	134.	141.	137.	111.			
10928	127.	124.	124.	128.	124.	105.			
11515	116.	115.	119.	123.	115.	99.			
11516	155.	184.	184.	158.	c	129.			
11517	130.	124.	119.	118.	123.	102.			
11518	140.	162.	157.	157.	166.	136.			
11519	137.	145.	160.	166.	168.	148.			
11520	141.	152.	134.	132.	134.	120.			
11521	146.	148.	146.	143.	138.	124.			
11522	121.	136.	137.	133.	140.	110.			
11523	126.	134.	144.	123.	118.	103.			
11524	135.	141.	142.	135.	133.	113.			
11525	138.	153.	168.	151.	c	124.			
11526	127.	135.	153.	143.	135.	110.			
11527	130.	142.	128.	128.	123.	108.			
11528	141.	146.	141.	163.	174.	127.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 3): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 3					1.6 MG/KG PFOS + MEVALONIC ACID			
10929	122.	113.	119.	121.	117.	102.			
10930	131.	132.	137.	134.	129.	103.			
10931	130.	115.	110.	111.	104.	89.			
10932	138.	121.	122.	124.	128.	91.			
10933	119.	127.	121.	118.	112.	103.			
10934	149.	130.	124.	122.	117.	97.			
10935	120.	99.	105.	106.	100.	82.			
10936	FOUND DEAD ON DAY 2 OF STUDY								
10937	139.	130.	116.	121.	122.	99.			
10938	143.	129.	130.	124.	135.	102.			
10939	148.	125.	118.	111.	113.	87.			
10940	132.	135.	138.	c	148.	c			
10941	133.	121.	123.	111.	115.	92.			
10942	134.	128.	131.	120.	123.	98.			
11529	120.	121.	120.	119.	112.	95.			
11530	144.	150.	153.	154.	134.	126.			
11531	154.	139.	c	116.	149.	102.			
11532	130.	132.	143.	135.	146.	115.			
11533	149.	147.	136.	142.	145.	108.			
11534	146.	151.	135.	155.	155.	121.			
11535	143.	115.	130.	134.	129.	110.			
11536	141.	151.	154.	154.	147.	123.			
11537	126.	141.	138.	125.	129.	105.			
11538	136.	138.	135.	107.	119.	108.			
11539	94.	90.	119.	92.	115.	84.			
11540	129.	142.	135.	138.	140.	117.			
11541	129.	122.	115.	134.	133.	109.			
11542	123.	223.	180.	125.	136.	121.			
11543	162.	165.	170.	160.	156.	140.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 4): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 4					2 MG/KG PFOS + MEVALONIC ACID				
10943	129.	124.	129.	120.	118.	95.				
10944	154.	123.	110.	114.	109.	89.				
10945	144.	136.	136.	130.	124.	99.				
10946	153.	139.	129.	136.	174.	104.				
10947	130.	126.	118.	113.	107.	93.				
10948	130.	128.	124.	128.	120.	96.				
10949	152.	138.	142.	131.	126.	94.				
10950	135.	131.	123.	123.	119.	95.				
10951	141.	161.	c	127.	119.	100.				
10952	128.	128.	132.	125.	125.	99.				
10953	126.	123.	117.	115.	106.	96.				
10954	123.	124.	124.	123.	124.	102.				
10955	126.	122.	114.	110.	112.	93.				
10956	132.	121.	130.	134.	118.	94.				
11544	133.	133.	140.	129.	127.	103.				
11545	149.	154.	155.	156.	c	155.				
11546	136.	90.	136.	131.	120.	107.				
11547	127.	131.	125.	126.	141.	102.				
11548	126.	131.	165.	124.	120.	102.				
11549	131.	125.	142.	133.	123.	106.				
11550	128.	116.	148.	c	177.	112.				
11551	141.	137.	139.	130.	136.	115.				
11552	150.	149.	142.	146.	144.	101.				
11553	d	134.	136.	115.	135.	108.				
11554	133.	137.	132.	127.	123.	106.				
11555	145.	163.	155.	c	c	142.				
11556	136.	121.	118.	155.	153.	108.				
11557	144.	146.	142.	143.	134.	106.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.
d. Value was not recorded.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 5): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 5					CHOLESTEROL CONTROL				
10957	122.	120.	122.	121.	135.	94.				
10958	134.	140.	142.	144.	157.	129.				
10959	131.	125.	129.	124.	127.	113.				
10960	135.	125.	150.	146.	150.	142.				
10961	114.	131.	140.	149.	163.	116.				
10962	133.	138.	143.	158.	143.	127.				
10963	135.	128.	133.	129.	151.	125.				
10964	143.	139.	141.	136.	160.	127.				
10965	124.	126.	128.	122.	122.	109.				
10966	147.	142.	174.	152.	173.	137.				
10967	125.	125.	129.	136.	136.	114.				
10968	130.	125.	135.	136.	134.	113.				
10969	129.	127.	122.	126.	127.	104.				
10970	150.	148.	159.	155.	163.	124.				
11558	125.	129.	126.	131.	133.	105.				
11559	143.	c	151.	144.	c	121.				
11560	134.	146.	136.	149.	152.	121.				
11561	137.	145.	163.	159.	147.	115.				
11562	152.	144.	MORIBUND SACRIFICED ON DAY 16 OF STUDY							
11563	149.	169.	166.	165.	173.	138.				
11564	128.	131.	130.	126.	134.	115.				
11565	129.	117.	117.	126.	123.	106.				
11566	130.	133.	146.	151.	c	133.				
11567	153.	154.	141.	128.	176.	124.				
11568	110.	109.	141.	105.	113.	94.				
11569	133.	146.	137.	142.	155.	120.				
11570	127.	129.	126.	133.	158.	101.				
11571	143.	140.	147.	143.	161.	119.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 6): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 6					1.6 MG/KG PFOS + CHOLESTEROL				
10971	120.	117.	113.	105.	106.	88.				
10972	144.	150.	135.	135.	142.	114.				
10973	124.	129.	127.	122.	127.	103.				
10974	124.	141.	127.	120.	134.	103.				
10975	130.	136.	134.	127.	126.	107.				
10976	155.	137.	136.	121.	126.	93.				
10977	132.	123.	117.	116.	118.	89.				
10978	126.	122.	123.	122.	123.	103.				
10979	125.	130.	165.	140.	c	111.				
10980	133.	123.	127.	113.	124.	118.				
10981	126.	121.	121.	116.	112.	90.				
10982	122.	123.	131.	115.	119.	98.				
10983	153.	134.	114.	120.	125.	96.				
10984	117.	127.	126.	127.	130.	107.				
11572	103.	104.	105.	106.	c	90.				
11573	131.	129.	131.	132.	144.	115.				
11574	127.	136.	148.	121.	129.	97.				
11575	129.	137.	157.	133.	137.	112.				
11576	141.	132.	164.	133.	130.	115.				
11577	142.	129.	128.	131.	128.	109.				
11578	140.	138.	124.	130.	134.	113.				
11579	136.	147.	139.	136.	149.	115.				
11580	119.	132.	126.	130.	128.	102.				
11581	145.	133.	150.	154.	c	97.				
11582	134.	128.	135.	127.	131.	107.				
11583	131.	126.	120.	127.	c	104.				
11584	133.	133.	133.	136.	132.	108.				
11585	126.	142.	127.	122.	c	100.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 7): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 7					2 MG/KG PFOS + CHOLESTEROL				
10985	135.	130.	c	132.	133.	112.				
10986	154.	145.	134.	127.	130.	99.				
10987	140.	139.	137.	126.	130.	103.				
10988	149.	146.	136.	125.	c	99.				
10989	120.	118.	117.	111.	116.	89.				
10990	118.	118.	122.	129.	118.	94.				
10991	123.	121.	123.	112.	122.	102.				
10992	123.	118.	118.	112.	116.	85.				
10993	137.	137.	146.	131.	134.	116.				
10994	142.	132.	126.	116.	129.	96.				
10995	129.	129.	119.	109.	112.	100.				
10996	131.	133.	118.	113.	118.	95.				
10997	109.	113.	109.	106.	106.	94.				
10998	139.	149.	142.	138.	143.	121.				
11586	125.	125.	147.	131.	136.	108.				
11587	142.	143.	129.	140.	159.	111.				
11588	138.	147.	131.	135.	125.	96.				
11589	146.	156.	161.	134.	178.	113.				
11590	138.	162.	164.	156.	c	108.				
11591	124.	128.	131.	124.	133.	114.				
11592	133.	133.	130.	143.	130.	107.				
11593	119.	110.	115.	98.	101.	96.				
11594	133.	133.	140.	130.	131.	106.				
11595	150.	148.	141.	129.	129.	111.				
11596	123.	123.	162.	117.	c	114.				
11597	138.	134.	140.	126.	126.	106.				
11598	130.	117.	128.	108.	137.	125.				
11599	132.	118.	118.	110.	102.	92.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 8): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 8					0.4 MG/KG PFOS			
10999	121.	121.	117.	122.	124.	94.			
11000	138.	135.	131.	129.	130.	109.			
11001	122.	127.	124.	116.	116.	107.			
11002	127.	131.	125.	124.	131.	98.			
11003	132.	134.	142.	150.	151.	117.			
11004	143.	148.	140.	142.	155.	128.			
11005	165.	169.	135.	135.	c	136.			
11006	156.	141.	c	142.	167.	131.			
11007	158.	137.	159.	165.	156.	142.			
11008	c	153.	157.	152.	153.	116.			
11600	147.	159.	139.	150.	171.	123.			
11601	148.	149.	122.	134.	148.	123.			
11602	119.	108.	122.	116.	140.	100.			
11603	138.	43.	147.	122.	136.	109.			
11604	132.	140.	143.	138.	146.	121.			
11605	150.	146.	147.	153.	c	120.			
11606	138.	127.	133.	128.	130.	115.			
11607	125.	122.	130.	123.	123.	101.			
11608	126.	132.	125.	127.	135.	116.			
11609	129.	135.	150.	150.	c	120.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 9): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 9					0.8 MG/KG PFOS				
11009	132.	112.	113.	116.	113.	94.				
11010	c	151.	135.	158.	c	96.				
11011	139.	135.	139.	141.	131.	112.				
11012	120.	123.	117.	116.	120.	92.				
11013	121.	122.	127.	124.	117.	104.				
11014	137.	133.	138.	133.	133.	114.	146.	97.	103.	69.
11015	141.	137.	141.	140.	131.	119.				
11016	117.	112.	122.	118.	112.	87.				
11017	157.	150.	c	c	c	159.				
11018	140.	139.	141.	153.	140.	103.				
11610	142.	135.	143.	125.	125.	106.				
11611	149.	142.	157.	146.	146.	116.				
11612	113.	122.	128.	115.	115.	99.				
11613	151.	c	c	160.	154.	118.				
11614	124.	138.	138.	136.	129.	112.				
11615	124.	129.	144.	144.	124.	105.				
11616	122.	132.	121.	101.	106.	101.				
11617	131.	138.	145.	148.	131.	117.				
11618	128.	131.	135.	148.	161.	124.				
11619	153.	136.	131.	107.	125.	107.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 10): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 10					1 MG/KG PFOS			
11019	122.	115.	125.	124.	118.	90.			
11020	147.	148.	146.	143.	151.	c			
11021	172.	c	171.	161.	168.	117.			
11022	120.	120.	135.	139.	132.	100.			
11023	126.	130.	139.	137.	126.	102.			
11024	148.	148.	186.	160.	c	135.			
11025	144.	121.	136.	139.	135.	114.			
11026	113.	128.	137.	138.	142.	91.			
11027	110.	115.	121.	120.	119.	95.			
11028	136.	134.	140.	140.	143.	111.			
11620	121.	125.	130.	149.	121.	104.			
11621	140.	140.	129.	124.	127.	101.			
11622	127.	128.	141.	126.	170.	121.			
11623	127.	206.	165.	145.	130.	102.			
11624	125.	122.	137.	130.	133.	121.			
11625	145.	136.	150.	133.	145.	120.			
11626	117.	134.	137.	128.	126.	111.			
11627	149.	150.	153.	165.	160.	122.			
11628	127.	138.	137.	142.	136.	112.			
11629	133.	144.	146.	130.	139.	121.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 11): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 11					1.2 MG/KG PFOS				
11029	140.	128.	125.	148.	133.	83.				
11030	147.	137.	143.	131.	126.	108.	132.	101.	133.	64.
11031	133.	138.	143.	147.	144.	101.				
11032	137.	136.	143.	141.	131.	121.				
11033	133.	136.	c	140.	139.	118.				
11034	123.	114.	125.	124.	117.	93.				
11035	130.	120.	120.	117.	124.	90.				
11036	155.	142.	c	124.	115.	104.				
11037	121.	116.	128.	136.	141.	101.				
11038	134.	132.	131.	126.	123.	103.				
11630	147.	118.	128.	118.	118.	101.				
11631	140.	160.	c	c	c	c				
11632	125.	132.	132.	125.	119.	91.				
11633	136.	146.	155.	141.	148.	118.				
11634	140.	133.	142.	145.	132.	121.				
11635	142.	144.	145.	152.	145.	127.				
11636	128.	125.	128.	133.	130.	115.				
11637	125.	126.	132.	116.	108.	94.				
11638	109.	106.	119.	111.	108.	87.				
11639	142.	132.	136.	125.	130.	103.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

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TABLE 29 (PAGE 12): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a	56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 12					1.6 MG/KG PFOS				
11039	149.	143.	120.	135.	132.	101.	106.	94.	97.	59.
11040	130.	131.	137.	137.	120.	101.				
11041	144.	134.	140.	132.	132.	101.				
11042	143.	137.	141.	130.	127.	100.				
11043	126.	126.	127.	131.	135.	94.				
11044	138.	136.	139.	125.	128.	105.				
11045	147.	131.	139.	143.	119.	100.				
11046	136.	130.	c	c	131.	93.				
11047	122.	116.	116.	129.	116.	97.				
11048	116.	115.	120.	125.	117.	91.				
11049	125.	127.	138.	132.	126.	101.				
11050	143.	130.	128.	134.	116.	95.				
11051	133.	122.	122.	120.	109.	99.				
11052	137.	131.	138.	135.	121.	93.				
11640	155.	127.	124.	133.	127.	102.				
11641	156.	160.	163.	146.	148.	116.				
11642	142.	138.	153.	128.	121.	100.				
11643	148.	136.	140.	123.	132.	97.				
11644	128.	126.	117.	114.	133.	91.				
11645	173.	154.	160.	146.	179.	128.				
11646	137.	131.	128.	116.	118.	113.				
11647	144.	141.	135.	130.	140.	115.				
11648	103.	98.	104.	95.	108.	90.				
11649	149.	154.	162.	147.	133.	123.				
11650	129.	129.	119.	126.	105.	91.				
11651	149.	150.	141.	133.	149.	113.				
11652	148.	146.	141.	142.	151.	108.				
11653	158.	112.	121.	115.	116.	93.				

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 29 (PAGE 13): FEED CONSUMPTION VALUES - PREMATING - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAYS	1- 8	8- 15	15- 22	22- 29	29- 36	36- 42a 56b-63	63- 70	70- 77	77- 81
RAT #	DOSAGE GROUP 13					2 MG/KG PFOS			
11053	122.	114.	126.	121.	112.	90.			
11054	142.	134.	142.	143.	c	117.			
11055	122.	115.	112.	112.	111.	92.			
11056	126.	107.	101.	103.	105.	73.			
11057	120.	113.	115.	116.	109.	93.			
11058	139.	131.	139.	115.	110.	98.			
11059	138.	111.	127.	151.	122.	94.			
11060	120.	119.	124.	133.	113.	82.			
11061	132.	128.	135.	131.	127.	101.			
11062	139.	122.	128.	124.	124.	c			
11063	127.	126.	125.	118.	114.	92.			
11064	136.	137.	c	140.	c	99.			
11065	103.	109.	115.	116.	106.	100.			
11066	155.	132.	127.	121.	121.	98.			
11654	127.	121.	121.	121.	111.	100.			
11655	150.	134.	116.	107.	119.	95.			
11656	c	143.	149.	126.	135.	95.			
11657	143.	139.	136.	130.	137.	112.			
11658	129.	136.	119.	122.	117.	101.			
11659	128.	116.	132.	125.	123.	94.			
11660	135.	130.	125.	114.	111.	96.			
11661	166.	133.	129.	118.	126.	102.			
11662	133.	135.	140.	131.	127.	113.			
11663	148.	143.	152.	141.	144.	117.			
11664	122.	126.	119.	106.	113.	88.			
11665	124.	124.	130.	113.	108.	91.			
11666	136.	124.	130.	126.	129.	100.			
11667	136.	135.	134.	132.	131.	105.			

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF STUDY
a. Last value recorded before cohabitation.
b. First value recorded after cohabitation.
c. Spilled feed precluded the calculation of this value.

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TABLE 30 (PAGE 1): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 1			VEHICLE CONTROL
10901 P	144.	157.	156.	
10902 P	140.	147.	174.	
10903 P	157.	162.	189.	
10904 P	164.	178.	183.	
10905 P	170.	171.	201.	
10906 P	159.	159.	175.	
10907 P	162.	169.	179.	
10908 P	147.	161.	171.	
10909 P	169.	147.	150.	
10910 P	186.	186.	193.	
10911 P	167.	153.	164.	
10912 NP	173.	196.	150.	a
10913 P	131.	137.	156.	
10914 P	141.	139.	154.	
11501 P	143.	135.	154.	
11502 P	170.	169.	170.	
11503 P	176.	169.	144.	
11504 P	162.	176.	167.	
11505 P	162.	166.	153.	
11506 P	172.	165.	186.	
11507 P	153.	169.	192.	
11508 P	145.	162.	172.	
11509 P	165.	174.	185.	
11510 P	149.	164.	179.	
11511 P	132.	137.	149.	
11512 P	169.	185.	183.	
11513 P	123.	131.	155.	
11514 P	164.	163.	163.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Value was not recorded.

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TABLE 30 (PAGE 2): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	RAT #	DOSAGE GROUP 2			
DAYS 0 - 7		131.	155.	154.	
7 - 14		147.	168.	196.	
14 - 21		136.	155.	166.	
21 - 25		167.	187.	195.	
	10915 P	161.	183.	163.	
	10916 P	144.	186.	206.	
	10917 P	152.	162.	189.	
	10918 P	157.	164.	152.	
	10919 P	152.	159.	154.	
	10920 P	163.	173.	175.	
	10921 P	148.	165.	188.	
	10922 P	158.	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT		
	10923 P	146.	154.	163.	
	10924 P	151.	160.	185.	
	10925 P	130.	132.	138.	
	10926 P	166.	157.	173.	
	10927 P	148.	150.	152.	
	10928 P	156.	148.	184.	
	11515 P	167.	184.	180.	
	11516 P	150.	155.	155.	
	11517 P	172.	159.	166.	
	11518 P	139.	134.	106.	57.
	11519 P	135.	138.	154.	
	11520 P	156.	a	162.	
	11521 P	172.	188.	191.	
	11522 NP	142.	a	153.	
	11523 P	123.	155.	176.	
	11524 P	160.	166.	169.	
	11525 P				
	11526 P				
	11527 P				
	11528 P				

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

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TABLE 30 (PAGE 3): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 3		1.6 MG/KG PFOS + MEVALONIC ACID	
10929 P	127.	135.	172.	
10930 P	126.	142.	173.	
10931 P	119.	131.	168.	
10932 P	121.	158.	191.	
10933 P	116.	133.	190.	
10934 P	139.	151.	179.	
10935 P	105.	124.	152.	
10936	FOUND DEAD ON DAY 2 OF STUDY			
10937 P	113.	138.	162.	
10938 P	101.	156.		
10939 NP	130.	118.	a	a
10940 P	167.	160.	230.	
10941 P	115.	139.		
10942 P	114.	155.		
11529 P	114.	136.	161.	
11530 P	139.	159.	173.	
11531 NP	109.	120.	b	187.
11532 P	139.	153.	183.	
11533 P	125.	137.	165.	
11534 P	133.	171.	174.	
11535 P	124.	146.	174.	
11536 P	141.	169.	183.	
11537 P	123.	146.	179.	
11538 P	119.	140.	165.	
11539 P	118.	122.	144.	
11540 P	141.	152.	182.	
11541 P	141.	143.	167.	
11542 P	127.	148.		
11543 P	166.	168.	187.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Value was not recorded.
b. Spilled feed precluded the calculation of this value.

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TABLE 30 (PAGE 4): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 4		2 MG/KG PFOS + MEVALONIC ACID	
10943 P	117.	139.	165.	
10944 P	101.	131.		
10945 P	127.	165.	185.	
10946 P	194.	a	192.	
10947 P	123.	139.	168.	
10948 P	131.	117.	176.	
10949 P	142.	154.	84.	
10950 P	135.	174.	184.	
10951 P	118.	155.	188.	
10952 P	147.	119.	138.	
10953 P	104.	138.	178.	
10954 P	127.	140.	181.	
10955 P	117.	153.		
10956 P	142.	162.		
11544 P	119.	142.	166.	
11545 P	175.	171.	189.	
11546 P	130.	140.	161.	
11547 P	147.	156.	164.	
11548 NP	156.	116.	97.	61.
11549 P	134.	140.	164.	
11550 P	119.	132.	156.	
11551 P	140.	149.	183.	
11552 P	136.	146.	167.	
11553 P	133.	146.	149.	
11554 P	131.	137.	142.	
11555 P	145.	a	215.	
11556 P	144.	143.	168.	
11557 P	136.	151.	138.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

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TABLE 30 (PAGE 5): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 5			CHOLESTEROL CONTROL
10957 P	119.	153.	168.	
10958 P	152.	159.	184.	
10959 P	160.	165.	198.	
10960 P	185.	210.	215.	
10961 P	174.	171.	191.	
10962 P	153.	153.	172.	
10963 P	183.	178.	207.	
10964 P	161.	183.	203.	
10965 P	144.	142.	167.	
10966 P	a	a	174.	
10967 P	170.	165.	153.	
10968 P	160.	166.		
10969 P	152.	184.		
10970 P	164.	193.	178.	
11558 P	126.	142.	161.	
11559 P	191.	196.	176.	
11560 NP	140.	127.	149.	69.
11561 P	191.	177.	162.	
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY			
11563 P	a	203.	192.	
11564 P	159.	156.	156.	
11565 P	155.	156.	168.	
11566 NP	178.	153.	114.	74.
11567 P	176.	182.	207.	
11568 P	135.	148.	152.	
11569 P	161.	167.	167.	
11570 P	132.	146.	146.	
11571 P	186.	183.	203.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 6): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 6		1.6 MG/KG PFOS + CHOLESTEROL	
10971 P	127.	122.	149.	
10972 P	151.	170.	198.	
10973 P	122.	147.	160.	
10974 P	137.	157.	186.	
10975 P	132.	133.	174.	
10976 P	120.	128.	158.	
10977 P	117.	128.	139.	
10978 P	125.	134.	181.	
10979 P	155.	170.	179.	
10980 P	118.	130.	164.	
10981 P	94.	139.	166.	
10982 P	120.	138.	199.	
10983 P	133.	146.		
10984 P	147.	168.		
11572 P	116.	139.	151.	
11573 P	146.	156.	175.	
11574 P	126.	137.	176.	
11575 P	141.	168.	181.	
11576 P	127.	166.	175.	
11577 P	146.	158.	180.	
11578 P	147.	150.	178.	
11579 P	149.	153.	160.	
11580 P	137.	171.	191.	
11581 P	163.	144.	188.	
11582 P	146.	151.	172.	
11583 P	125.	156.	173.	
11584 P	135.	a	160.	
11585 P	113.	141.	164.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 7): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 7		2 MG/KG PFOS + CHOLESTEROL	
10985 P	134.	156.	182.	
10986 P	114.	136.	188.	
10987 P	131.	140.	197.	
10988 P	118.	138.	154.	
10989 P	116.	129.	161.	
10990 P	124.	146.	159.	
10991 P	117.	136.	154.	
10992 P	110.	135.	168.	
10993 P	116.	161.	188.	
10994 P	120.	135.	202.	
10995 P	127.	152.	181.	
10996 P	122.	131.	167.	
10997 P	112.	129.	155.	
10998 NP	135.	123.	127.	86.
11586 P	131.	152.	158.	
11587 P	146.	169.	195.	
11588 P	118.	141.		
11589 P	156.	a	202.	
11590 P	142.	158.	158.	
11591 P	143.	172.	194.	
11592 P	137.	138.	179.	
11593 P	118.	139.	154.	
11594 P	125.	150.	185.	
11595 P	148.	172.	184.	
11596 P	154.	150.	177.	
11597 P	138.	155.	177.	
11598 P	133.	138.	165.	
11599 P	108.	139.	164.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 8): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	RAT #	DOSAGE GROUP 8	0.4 MG/KG PFOS	
DAYS		0 - 7	7 - 14	14 - 21	21 - 25
	10999 P	142.	170.	141.
	11000 P	160.	168.	174.
	11001 P	132.	147.	174.
	11002 P	165.	163.	188.
	11003 P	160.	155.	212.
	11004 P	159.	180.	166.
	11005 P	167.	165.	140.
	11006 P	158.	177.	171.
	11007 P	205.	a	199.
	11008 P	169.	153.	179.
	11600 P	176.	170.	169.
	11601 P	169.	169.	173.
	11602 P	148.	148.	164.
	11603 P	159.	161.	183.
	11604 P	144.	151.	172.
	11605 P	164.	169.	150.
	11606 P	149.	153.	168.
	11607 P	133.	147.	162.
	11608 P	166.	155.	161.
	11609 P	161.	180.	193.

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 9): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 9		0.8 MG/KG PFOS	
11009 P	130.	132.	148.	
11010 P	162.	191.		
11011 P	133.	168.	188.	
11012 P	132.	137.	165.	
11013 P	141.	155.		
11014 NP	MATING NOT CONFIRMED			
11015 P	138.	164.	187.	
11016 P	128.	152.		
11017 NP	155.	166.	98.	66.
11018 P	158.	165.	182.	
11610 NP	129.	148.	139.	69.
11611 P	171.	183.	179.	
11612 P	137.	141.	168.	
11613 P	181.	190.	210.	
11614 P	146.	156.	181.	
11615 P	135.	155.	157.	
11616 P	122.	148.	173.	
11617 P	142.	163.	a	
11618 P	164.	164.	172.	
11619 P	137.	142.	177.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 10): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 10		1 MG/KG PFOS	
11019 P	136.	122.	171.	
11020 P	147.	152.	173.	
11021 P	162.	163.	195.	
11022 NP	155.	132.	107.	72.
11023 P	140.	153.	179.	
11024 P	169.	183.	207.	
11025 P	151.	143.	170.	
11026 P	140.	161.	166.	
11027 P	124.	162.	177.	
11028 P	133.	144.	190.	
11620 P	140.	95.	169.	
11621 P	170.	147.	170.	
11622 P	159.	169.	186.	
11623 P	135.	152.	167.	
11624 P	150.	168.	188.	
11625 P	164.	167.	185.	
11626 P	129.	147.	160.	
11627 P	145.	156.	119.	
11628 P	127.	159.	182.	
11629 P	136.	150.	173.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 30 (PAGE 11): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 11		1.2 MG/KG PFOS	
11029 P	135.	185.	204.	
11030 NP	MATING NOT CONFIRMED			
11031 P	144.	157.	169.	
11032 P	137.	164.	195.	
11033 P	134.	174.	197.	
11034 P	124.	134.	162.	
11035 P	128.	149.	166.	
11036 P	140.	151.	177.	
11037 P	117.	146.	166.	
11038 P	139.	144.	177.	
11630 P	137.	142.	147.	
11631 NP	153.	a	8.b	c
11632 P	114.	141.	150.	
11633 P	161.	165.	195.	
11634 P	153.	164.	153.	
11635 P	161.	167.	187.	
11636 P	151.	169.	193.	
11637 P	128.	134.	147.	
11638 P	136.	140.	164.	
11639 P	128.	154.	164.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Spilled feed precluded the calculation of this value.
b. Value appeared incorrectly recorded and was excluded from group averages and statistical analyses.
c. Value appeared incorrectly recorded and could not be calculated.

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TABLE 30 (PAGE 12): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	DAYS 0 - 7	7 - 14	14 - 21	21 - 25
RAT #	DOSAGE GROUP 12			1.6 MG/KG PFOS
11039 NP	MATING NOT CONFIRMED			
11040 P	103.	126.	188.	
11041 P	137.	152.		
11042 P	122.	149.		
11043 NP	95.	106.	103.	73.
11044 P	119.	147.	195.	
11045 P	139.	152.	180.	
11046 P	129.	152.	173.	
11047 P	124.	129.	181.	
11048 P	133.	160.	152.	
11049 P	141.	150.	186.	
11050 P	121.	134.	192.	
11051 P	117.	142.	154.	
11052 P	141.	153.	202.	
11640 P	128.	143.	169.	
11641 P	153.	168.	166.	
11642 P	122.	131.	167.	
11643 P	131.	145.	173.	
11644 P	124.	136.	165.	
11645 P	171.	208.	211.	
11646 P	141.	151.	186.	
11647 P	141.	176.	182.	
11648 P	113.	126.	150.	
11649 P	152.	158.	182.	
11650 P	133.	120.	171.	
11651 P	152.	175.	187.	
11652 NP	181.	132.	116.	73.
11653 P	133.	137.	157.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).

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TABLE 30 (PAGE 13): MATERNAL FEED CONSUMPTION VALUES - PRESUMED GESTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

PREGNANCY STATUS	RAT #	DOSAGE GROUP 13	DAYS 0 - 7	DAYS 7 - 14	DAYS 14 - 21	DAYS 21 - 25
		2 MG/KG PFOS				
P	11053		106.	128.	172.	
P	11054		127.	154.	191.	
P	11055		130.	152.	195.	
P	11056		114.	125.	154.	
P	11057		127.	139.	186.	
P	11058		123.	130.	189.	
P	11059		115.	135.	155.	
P	11060		115.	135.	195.	
P	11061		133.	162.	198.	
P	11062		125.	149.	a	
P	11063		122.	125.	177.	
P	11064		171.	271.	134.	
P	11065		114.	145.	159.	
P	11066		134.	170.	206.	
P	11654		128.	144.	166.	
P	11655		158.	145.	171.	
P	11656		b	153.	159.	
P	11657		140.	156.	180.	
P	11658		131.	137.	139.	
P	11659		120.	123.	141.	
P	11660		119.	133.	175.	
P	11661		133.	146.	161.	
P	11662		148.	140.	164.	
P	11663		153.	163.	184.	
P	11664		126.	124.	147.	
P	11665		123.	150.	171.	
NP	11666		149.	106.	99.	63.
P	11667		149.	146.	166.	

P = PREGNANT NP = NOT PREGNANT (VALUES EXCLUDED FROM AVERAGES)
DAYS = DAYS OF PRESUMED GESTATION
ALL WEIGHTS WERE RECORDED IN GRAMS (G).
a. Value was not recorded.
b. Spilled feed precluded the calculation of this value.

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TABLE 31 (PAGE 1): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 1	VEHICLE CONTROL
10906	121.	
10909	113.	
10911	116.	
10913	a	
10914	119.	
11501	86.	
11502	104.	
11503	98.	
11504	150.	
11505	148.	
11506	142.	
11507	114.	
11508	94.	
11509	118.	
11510	137.	
11511	107.	
11512	99.	
11513	93.	
11514	116.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION
a. Spilled feed precluded the calculation of this value.

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TABLE 31 (PAGE 2): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 2	MEVALONIC ACID CONTROL
10921	128.	
10922	138.	
10923	143.	
10924	106.	
10926	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT	
10927	122.	
11515	108.	
11516	130.	
11517	145.	
11518	86.	
11519	74.	
11520	118.	
11521	87.	
11522	NOT PREGNANT	
11523	130.	
11524	112.	
11525	86.	
11526	96.	
11527	121.	
11528	117.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 3): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 3	1.6 MG/KG PFOS + MEVALONIC ACID
10929	79.	
10936	FOUND DEAD ON DAY 2 OF STUDY	
10938	58.	
10939	NOT PREGNANT	
10941	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS	
10942	107.	
11529	88.	
11530	90.	
11531	NOT PREGNANT	
11532	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11533	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11534	65.	
11535	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11536	a	
11537	104.	
11538	76.	
11539	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11540	49.	
11541	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11542	56.	
11543	115.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION
a. Spilled feed precluded the calculation of this value.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 4): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 4	2 MG/KG PFOS + MEVALONIC ACID
10943	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
10944	47. SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS	
10948	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS	
10952	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
10955	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
10956	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11544	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11545	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11546	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	
11547	55.	
11548	NOT PREGNANT	
11549	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11550	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS	
11551	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11552	65.	
11553	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11554	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11555	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11556	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	
11557	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

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TABLE 31 (PAGE 5): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 5	CHOLESTEROL CONTROL
10957	121.	
10966	190.	
10967	127.	
10968	111.	
10969	123.	
10970	122.	
11558	112.	
11559	139.	
11560	NOT PREGNANT	
11561	140.	
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY	
11563	139.	
11564	99.	
11565	129.	
11566	NOT PREGNANT	
11567	124.	
11568	118.	
11569	124.	
11570	97.	
11571	131.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 6): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5

RAT #	DOSAGE GROUP 6	1.6 MG/KG PFOS + CHOLESTEROL
10971	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
10973	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS	
10977	66.	
10979	105.	
10983	99.	
10984	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11572	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11573	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11574	57.	
11575	119.	
11576	87.	
11577	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11578	89.	
11579	51.	
11580	70.	
11581	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11582	58.	
11583	83.	
11584	109.	
11585	42.	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 7): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5

RAT #	DOSAGE GROUP 7	2 MG/KG PFOS + CHOLESTEROL
10986	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
10994	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
10995	56.	
10996	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
10997	83.	
10998	NOT PREGNANT	
11586	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11587	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11588	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11589	53.	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11590	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11591	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11592	67.	
11593	39.	
11594	50.	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11595	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	
11596	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11597	61.	
11598	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11599	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 8): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 8	0.4 MG/KG PFOS
10999	141.	
11000	82.	
11001	105.	
11002	227.	
11003	134.	
11004	104.	
11005	97.	
11006	145.	
11007	103.	
11008	116.	
11600	114.	
11601	148.	
11602	69.	
11603	95.	
11604	79.	
11605	84.	
11606	81.	
11607	190.	
11608	117.	
11609	115.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 9): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5	
RAT #	DOSAGE GROUP 9 0.8 MG/KG PFOS
11009	56.
11010	103.
11011	112.
11012	91.
11013	95.
11014	NOT PREGNANT
11015	78.
11016	85.
11017	NOT PREGNANT
11018	97.
11610	NOT PREGNANT
11611	98.
11612	85.
11613	141.
11614	127.
11615	126.
11616	88.
11617	87.
11618	115.
11619	45.

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 10): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 10	1 MG/KG PFOS
11019	108.	
11020	126.	
11021	147.	
11022	NOT PREGNANT	
11023	77.	
11024	108.	
11025	217.	
11026	93.	
11027	92.	
11028	80.	
11620	60.	
11621	83.	
11622	84.	
11623	78.	
11624	109.	
11625	87.	
11626	91.	
11627	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11628	87.	
11629	107.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 11): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 11	1.2 MG/KG PFOS
11029	103.	
11030	NOT PREGNANT	
11031	98.	
11032	85.	
11033	86.	
11034	74.	
11035	69.	
11036	128.	
11037	84.	
11038	135.	
11630	85.	
11631	NOT PREGNANT	
11632	72.	
11633	131.	
11634	102.	
11635	65.	
11636	108.	
11637	87.	
11638	96.	
11639	101.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 12): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5		
RAT #	DOSAGE GROUP 12	1.6 MG/KG PFOS
11039	NOT PREGNANT	
11041	75.	
11042	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11043	NOT PREGNANT	
11048	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11049	75.	
11640	112.	
11641	97.	
11642	85.	
11643	45.	
11644	91.	
11645	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11646	100.	
11647	46.	
11648	68.	
11649	43.	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11650	87.	
11651	105.	
11652	NOT PREGNANT	
11653	57.	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 31 (PAGE 13): MATERNAL FEED CONSUMPTION VALUES - LACTATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DAY 1 - 5

RAT #	DOSAGE GROUP 13	2 MG/KG PFOS
11055	SACRIFICED ON DAY 4 OF LACTATION DUE TO NO SURVIVING PUPS	
11057	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11059	95.	
11061	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11064	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11065	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11654	55.	
11655	94.	
11656	95.	
11657	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11658	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11659	SACRIFICED ON DAY 1 OF LACTATION DUE TO NO SURVIVING PUPS	
11660	SACRIFICED ON DAY 3 OF LACTATION DUE TO NO SURVIVING PUPS	
11661	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11662	34.	
11663	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11664	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	
11665	39.	SACRIFICED ON DAY 5 OF LACTATION DUE TO NO SURVIVING PUPS
11666	NOT PREGNANT	
11667	SACRIFICED ON DAY 2 OF LACTATION DUE TO NO SURVIVING PUPS	

ALL WEIGHTS WERE RECORDED IN GRAMS (G).
DAYS = DAYS OF LACTATION

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 1): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 1 VEHICLE CONTROL

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10901	2	M	C	P
10902	2	M	C	P
10903	3	M	C	P
10904	1	M	C	P
10905	1	M	C	P
10906	3	M	C	P
10907	4	M	C	P
10908	1	M	C	P
10909	3	M	C	P
10910	3	M	C	P
10911	3	M	C	P
10912	1	M	C	NP
10913	13	M	C	P
10914	4	M	C	P
11501	2	M	C	P
11502	1	M	C	P
11503	4	M	C	P
11504	5	M	C	P
11505	5	M	C	P
11506	2	M	C	P
11507	1	M	C	P
11508	3	M	C	P
11509	1	M	C	P
11510	1	M	C	P
11511	1	M	C	P
11512	1	M	C	P
11513	1	M	C	P
11514	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 2): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 2 — MEVALONIC ACID CONTROL

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10915	1	M	C	P
10916	2	M	C	P
10917	3	M	C	P
10918	4	M	C	P
10919	4	M	C	P
10920	2	M	C	P
10921	3	M	C	P
10922	6	M	C	P
10923	4	M	C	P
10924	4	M	C	P
10925	2	M	C	P
10926	1	M	C	P
10927	12	M	C	P
10928	2	M	C	P
11515	2	M	C	P
11516	3	M	C	P
11517	3	M	C	P
11518	1	M	C	P
11519	1	M	C	P
11520	3	M	C	P
11521	2	M	C	P
11522	3	M	C	NP
11523	1	M	C	P
11524	2	M	C	P
11525	1	M	C	P
11526	4	M	C	P
11527	1	M	C	P
11528	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 3): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 3 — 1.6 MG/KG PFOS + MEVALONIC ACID

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10929	1	M	C	P
10930	3	M	C	P
10931	3	M	C	P
10932	1	M	C	P
10933	2	M	C	P
10934	3	M	C	P
10935	1	M	C	P
10936	FOUND DEAD ON DAY 2 OF STUDY			
10937	3	M	C	P
10938	3	M	C	P
10939	3	M	C	NP
10940	2	M	C	P
10941	3	M	C	P
10942	3	M	C	P
11529	4	M	C	P
11530	1	M	C	P
11531	1	M	C	NP
11532	1	M	C	P
11533	1	M	C	P
11534	4	M	C	P
11535	1	M	C	P
11536	1	M	C	P
11537	1	M	C	P
11538	2	M	C	P
11539	1	M	C	P
11540	1	M	C	P
11541	1	M	C	P
11542	4	M	C	P
11543	2	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 4): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 4 — 2 MG/KG PFOS + MEVALONIC ACID

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10943	1	M	C	P
10944	4	M	C	P
10945	3	M	C	P
10946	3	M	C	P
10947	2	M	C	P
10948	5	M	C	P
10949	3	M	C	P
10950	3	M	C	P
10951	3	M	C	P
10952	12	M	C	P
10953	3	M	C	P
10954	1	M	C	P
10955	3	M	C	P
10956	4	M	C	P
11544	1	M	C	P
11545	1	M	C	P
11546	1	M	C	P
11547	3	M	C	P
11548	4	M	C	NP
11549	2	M	C	P
11550	4	M	C	P
11551	1	M	C	P
11552	1	M	C	P
11553	2	M	C	P
11554	2	M	C	P
11555	1	M	C	P
11556	2	M	C	P
11557	4	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 5): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 5 — CHOLESTEROL CONTROL

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10957	3	M	C	P
10958	2	M	C	P
10959	3	M	C	P
10960	2	M	C	P
10961	3	M	C	P
10962	3	M	C	P
10963	3	M	C	P
10964	3	M	C	P
10965	1	M	C	P
10966	4	M	C	P
10967	14	M	C	P
10968	4	M	C	P
10969	4	M	C	P
10970	3	M	C	P
11558	2	M	C	P
11559	4	M	C	P
11560	3	M	C	NP
11561	3	M	C	P
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY			
11563	2	M	C	P
11564	2	M	C	P
11565	1	M	C	P
11566	4	M	C	NP
11567	2	M	C	P
11568	3	M	C	P
11569	2	M	C	P
11570	4	M	C	P
11571	4	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 6): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 6 — 1.6 MG/KG PFOS + CHOLESTEROL

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10971	3	M	C	P
10972	3	M	C	P
10973	1	M	C	P
10974	1	M	C	P
10975	1	M	C	P
10976	3	M	C	P
10977	3	M	C	P
10978	3	M	C	P
10979	3	M	C	P
10980	4	M	C	P
10981	1	M	C	P
10982	1	M	C	P
10983	4	M	C	P
10984	4	M	C	P
11572	1	M	C	P
11573	1	M	C	P
11574	2	M	C	P
11575	2	M	C	P
11576	1	M	C	P
11577	1	M	C	P
11578	2	M	C	P
11579	4	M	C	P
11580	1	M	C	P
11581	1	M	C	P
11582	1	M	C	P
11583	1	M	C	P
11584	2	M	C	P
11585	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 7): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 7 — 2 MG/KG PFOS + CHOLESTEROL

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10985	3	M	C	P
10986	3	M	C	P
10987	3	M	C	P
10988	3	M	C	P
10989	1	M	C	P
10990	4	M	C	P
10991	3	M	C	P
10992	4	M	C	P
10993	2	M	C	P
10994	3	M	C	P
10995	2	M	C	P
10996	3	M	C	P
10997	2	M	C	P
10998	2	M	C	NP
11586	1	M	C	P
11587	1	M	C	P
11588	5	M	C	P
11589	2	M	C	P
11590	2	M	C	P
11591	1	M	C	P
11592	13	M	C	P
11593	1	M	C	P
11594	1	M	C	P
11595	1	M	C	P
11596	1	M	C	P
11597	1	M	C	P
11598	3	M	C	P
11599	4	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 8): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 8 — 0.4 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
10999	3	M	C	P
11000	3	M	C	P
11001	2	M	C	P
11002	4	M	C	P
11003	3	M	C	P
11004	3	M	C	P
11005	3	M	C	P
11006	4	M	C	P
11007	3	M	C	P
11008	4	M	C	P
11600	3	M	C	P
11601	2	M	C	P
11602	1	M	C	P
11603	2	M	C	P
11604	2	M	C	P
11605	4	M	C	P
11606	1	M	C	P
11607	3	M	C	P
11608	3	M	C	P
11609	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 9): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 9 — 0.8 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
11009	3	M	C	P
11010	4	M	C	P
11011	2	M	C	P
11012	3	M	C	P
11013	4	M	C	P
11014	14	DID NOT MATE	-	-
11015	4	M	C	P
11016	1	M	C	P
11017	3	M	C	NP
11018	5	M	C	P
11610	1	M	C	NP
11611	1	M	C	P
11612	1	M	C	P
11613	2	M	C	P
11614	2	M	C	P
11615	4	M	C	P
11616	3	M	C	P
11617	1	M	C	P
11618	4	M	C	P
11619	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 10): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 10 — 1 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
11019	14	M	C	P
11020	3	M	C	P
11021	1	M	C	P
11022	6	M	C	NP
11023	3	M	C	P
11024	1	M	C	P
11025	5	M	C	P
11026	4	M	C	P
11027	1	M	C	P
11028	3	M	C	P
11620	2	M	C	P
11621	1	M	C	P
11622	1	M	C	P
11623	4	M	C	P
11624	2	M	C	P
11625	1	M	C	P
11626	2	M	C	P
11627	3	M	C	P
11628	1	M	C	P
11629	2	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 11): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 11 — 1.2 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
11029	4	M	C	P
11030	14	DID NOT MATE	-	-
11031	4	M	C	P
11032	2	M	C	P
11033	2	M	C	P
11034	1	M	C	P
11035	2	M	C	P
11036	3	M	C	P
11037	1	M	C	P
11038	3	M	C	P
11630	2	M	C	P
11631	2	M	C	NP
11632	1	M	C	P
11633	2	M	C	P
11634	1	M	C	P
11635	1	M	C	P
11636	1	M	C	P
11637	1	M	C	P
11638	2	M	C	P
11639	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 12): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 12 — 1.6 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
11039	14	DID NOT MATE	-	-
11040	1	M	C	P
11041	4	M	C	P
11042	4	M	C	P
11043	2	M	C	NP
11044	1	M	C	P
11045	1	M	C	P
11046	3	M	C	P
11047	3	M	C	P
11048	4	M	C	P
11049	5	M	C	P
11050	1	M	C	P
11051	3	M	C	P
11052	1	M	C	P
11640	3	M	C	P
11641	3	M	C	P
11642	2	M	C	P
11643	1	M	C	P
11644	2	M	C	P
11645	1	M	C	P
11646	1	M	C	P
11647	1	M	C	P
11648	4	M	C	P
11649	1	M	C	P
11650	13	M	C	P
11651	4	M	C	P
11652	3	M	C	NP
11653	1	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 32 (PAGE 13): MATING AND FERTILITY AND DAYS IN COHABITATION - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 13 — 2 MG/KG PFOS

RAT #	DAYS IN COHABITATION	MATING STATUS	MATING DATE	PREGNANCY STATUS
11053	4	M	C	P
11054	4	M	C	P
11055	3	M	C	P
11056	4	M	C	P
11057	1	M	C	P
11058	3	M	C	P
11059	4	M	C	P
11060	1	M	C	P
11061	3	M	C	P
11062	1	M	C	P
11063	2	M	C	P
11064	12	M	C	P
11065	1	M	C	P
11066	2	M	C	P
11654	1	M	C	P
11655	3	M	C	P
11656	2	M	C	P
11657	2	M	C	P
11658	3	M	C	P
11659	2	M	C	P
11660	3	M	C	P
11661	2	M	C	P
11662	1	M	C	P
11663	1	M	C	P
11664	2	M	C	P
11665	1	M	C	P
11666	3	M	C	NP
11667	3	M	C	P

M = MATED C = CONFIRMED P = PREGNANT NP = NOT PREGNANT

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TABLE 33 (PAGE 1): CAESAREAN-SECTIONING OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	VIABLE FETUSES			DEAD FETUSES			EARLY RESORPTIONS			LATE RESORPTIONS			IMPLANTATION SITES			CORPORA LUTEA		
RAT #	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT OVARY	LEFT OVARY	TOTAL
DOSAGE GROUP 1							VEHICLE CONTROL											
10901	6	7	13	0	0	0	1	0	1	0	0	0	7	7	14	8	7	15
10902	5	7	12	0	0	0	0	1	1	0	0	0	5	8	13	6	8	14
10903	10	4	14	0	0	0	1	0	1	0	0	0	11	4	15	12	4	16
10904	9	5	14	0	0	0	0	1	1	0	0	0	9	6	15	9	7	16
10905	5	8	13	0	0	0	1	0	1	0	0	0	6	8	14	8	8	16
10907	9	7	16	0	0	0	0	1	1	0	0	0	9	8	17	9	10	19
10908	8	6	14	0	0	0	1	0	1	0	0	0	9	6	15	9	6	15
10910	7	5	12	0	0	0	2	2	4	0	0	0	9	7	16	10	8	18
10912	NOT PREGNANT																	
DOSAGE GROUP 2							MEVALONIC ACID CONTROL											
10915	9	5	14	0	0	0	1	1	2	0	0	0	10	6	16	12	7	19
10916	7	9	16	0	0	0	0	1	1	0	0	0	7	10	17	7	11	18
10917	7	3	10	0	0	0	4	0	4	0	0	0	11	3	14	11	5	16
10918	5	9	14	0	0	0	0	0	0	0	0	0	5	9	14	8	11	19
10919	6	9	15	0	0	0	0	0	0	0	0	0	6	9	15	11	14	25
10920	6	3	9	0	0	0	5	1	6	0	0	0	11	4	15	14	9	23
10925	8	8	16	0	0	0	0	0	0	0	0	0	8	8	16	8	9	17
10928	7	8	15	0	0	0	1	0	1	0	0	0	8	8	16	8	8	16
DOSAGE GROUP 3							1.6 MG/KG PFOS + MEVALONIC ACID											
10930	8	5	13	0	0	0	0	1	1	0	1	1	8	7	15	11	8	19
10931	8	5	13	0	0	0	1	0	1	0	0	0	9	5	14	9	5	14
10932	7	8	15	0	0	0	0	1	1	0	0	0	7	9	16	11	11	22
10933	7	9	16	0	0	0	2	0	2	0	0	0	9	9	18	9	9	18
10934	5	4	9	0	0	0	5	3	8	0	0	0	10	7	17	13	10	23
10935	6	6	12	0	0	0	0	0	0	0	0	0	6	6	12	6	6	12
10937	7	4	11	0	0	0	2	0	2	0	0	0	9	4	13	9	4	13
10940	7	12	19	0	0	0	0	0	0	0	0	0	7	12	19	7	12	19

PLACENTAE APPEARED NORMAL UNLESS NOTED OTHERWISE.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 33 (PAGE 2): CAESAREAN-SECTIONING OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	VIABLE FETUSES			DEAD FETUSES			EARLY RESORPTIONS			LATE RESORPTIONS			IMPLANTATION SITES			CORPORA LUTEA		
RAT #	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT OVARY	LEFT OVARY	TOTAL
DOSAGE GROUP 4							2 MG/KG PFOS + MEVALONIC ACID											
10945	10	6	16	0	0	0	0	0	0	0	0	0	10	6	16	11	6	17
10946	11	4	15	0	0	0	1	0	1	0	0	0	12	4	16	12	6	18
10947	10	5	15	0	0	0	0	0	0	0	0	0	10	5	15	11	5	16
10949	7	1	8	0	0	0	2	7	9	0	0	0	9	8	17	11	10	21
10950	9	5	14	0	0	0	1	1	2	0	0	0	10	6	16	10	7	17
10951	5	9	14	0	0	0	3	1	4	0	0	0	8	10	18	10	13	23
10953	9	5	14	0	0	0	1	0	1	0	0	0	10	5	15	10	5	15
10954	7	6	13	0	0	0	1	1	2	1	0	1	9	7	16	9	10	19
DOSAGE GROUP 5							CHOLESTEROL CONTROL											
10958	7	7	14	0	0	0	0	0	0	0	0	0	7	7	14	8	7	15
10959	9	9	18	0	0	0	0	1	1	0	0	0	9	10	19	10	10	20
10960	7	7	14	0	0	0	0	1	1	0	0	0	7	8	15	11	8	19
10961	11	5	16	0	0	0	0	0	0	0	0	0	11	5	16	11	5	16
10962	5	8	13	0	0	0	1	0	1	0	0	0	6	8	14	8	12	20
10963	11	7	18	0	0	0	0	0	0	0	0	0	11	7	18	11	8	19
10964	7	10	17	0	0	0	1	0	1	0	0	0	8	10	18	10	10	20
10965	9	3	12	0	0	0	1	0	1	0	0	0	10	3	13	10	3	13
DOSAGE GROUP 6							1.6 MG/KG PFOS + CHOLESTEROL											
10972	7	10	17	0	0	0	1	0	1	0	0	0	8	10	18	11	12	23
10974	7	11	18	0	0	0	0	0	0	0	0	0	7	11	18	7	11	18
10975	5	1	6	0	0	0	0	0	0	0	0	0	5	1	6	6	6	12
10976	6	5	11	0	0	0	2	1	3	0	0	0	8	6	14	8	8	16
10978	10	7	17	0	0	0	0	0	0	0	0	0	10	7	17	11	8	19
10980	8	8	16	0	0	0	0	0	0	0	0	0	8	8	16	11	11	22
10981	6	5	11	0	0	0	0	0	0	0	0	0	6	5	11	7	7	14
10982	7	9	16	0	0	0	1	0	1	0	0	0	8	9	17	8	9	17

PLACENTAE APPEARED NORMAL UNLESS NOTED OTHERWISE.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 33 (PAGE 3): CAESAREAN-SECTIONING OBSERVATIONS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	VIABLE FETUSES			DEAD FETUSES			EARLY RESORPTIONS			LATE RESORPTIONS			IMPLANTATION SITES			CORPORA LUTEA	
RAT #	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT HORN	LEFT HORN	TOTAL	RIGHT OVARY	LEFT OVARY	TOTAL
DOSAGE GROUP 7							2 MG/KG PFOS + CHOLESTEROL											
10985	9	5	14	0	0	0	0	0	0	0	0	0	9	5	14	14	6	20
10987	3	8	11	0	0	0	1	3	4	0	0	0	4	11	15	5	11	16
10988	10	4	14	0	0	0	1	1	2	0	0	0	11	5	16	11	5	16
10989	1	2	3	0	0	0	0	0	0	0	0	0	1	2	3	1	3	4
10990	6	7	13	0	0	0	1	0	1	0	0	0	7	7	14	14	12	26
10991	5	9	14	0	0	0	1	1	2	0	0	0	6	10	16	8	11	19
10992	6	3	9	0	0	0	2	1	3	0	0	0	8	4	12	12	13	25
10993	5	9	14	0	0	0	2	0	2	0	0	0	7	9	16	8	11	19
DOSAGE GROUP 12							1.6 MG/KG PFOS											
11040	3	5	8	0	0	0	0	1	1	0	0	0	3	6	9	7	6	13
11044	9	5	14	0	0	0	0	0	0	0	0	0	9	5	14	9	10	19
11045	5	9	14	0	0	0	1	0	1	0	0	0	6	9	15	6	10	16
11046	6	8	14	0	0	0	2	1	3	0	0	0	8	9	17	8	9	17
11047	0	10	10	0	0	0	0	1	1	0	0	0	0	11	11	0	11	11
11050	6	7	13	0	0	0	0	1	1	0	0	0	6	8	14	7	8	15
11051	9	4	13	0	1	1	0	0	0	0	0	0	9	5	14	9	5	14
11052	6	11	17	0	0	0	0	0	0	0	1	1	6	12	18	6	12	18
DOSAGE GROUP 13							2 MG/KG PFOS											
11053	4	11	15	0	0	0	0	0	0	0	0	0	4	11	15	5	14	19
11054	9	7	16	0	0	0	0	0	0	0	0	0	9	7	16	13	17	30
11056	7	5	12	0	0	0	0	1	1	0	0	0	7	6	13	8	9	17
11058	8	10	18	0	0	0	1	0	1	0	0	0	9	10	19	9	13	22
11060	6	8	14	0	0	0	0	0	0	0	0	0	6	8	14	6	8	14
11062	10	5	15	0	0	0	0	0	0	0	0	0	10	5	15	10	7	17
11063	7	7	14	0	0	0	0	0	0	0	0	0	7	7	14	9	7	16
11066	6	9	15	0	0	0	0	1	1	0	0	0	6	10	16	6	10	16

PLACENTAE APPEARED NORMAL UNLESS NOTED OTHERWISE.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 34 (PAGE 1): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	NUMBER OF LIVE FETUSES	POOLED FETAL BODY WEIGHT (G)	---- CONCEPTUSES ------ DEAD OR RESORBED		
RAT #	TOTAL	TOTAL	N	N	%
DOSAGE GROUP 1			VEHICLE CONTROL		
10901	13	67.36	14	1	7.1
10902	12	62.03	13	1	7.7
10903	14	74.73	15	1	6.7
10904	14	71.12	15	1	6.7
10905	13	68.98	14	1	7.1
10907	16	77.14	17	1	5.9
10908	14	72.29	15	1	6.7
10910	12	68.52	16	4	25.0
10912	NOT PREGNANT				
DOSAGE GROUP 2			MEVALONIC ACID CONTROL		
10915	14	76.48	16	2	12.5
10916	16	89.44	17	1	5.9
10917	10	53.12	14	4	28.6
10918	14	84.41	14	0	0.0
10919	15	68.96	15	0	0.0
10920	9	45.39	15	6	40.0
10925	16	77.64	16	0	0.0
10928	15	71.56	16	1	6.2
DOSAGE GROUP 3			1.6 MG/KG PFOS + MEVALONIC ACID		
10930	13	62.00	15	2	13.3
10931	13	65.26	14	1	7.1
10932	15	74.42	16	1	6.2
10933	16	82.94	18	2	11.1
10934	9	40.86	17	8	47.0
10935	12	64.44	12	0	0.0
10937	11	55.49	13	2	15.4
10940	19	86.00	19	0	0.0

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TABLE 34 (PAGE 2): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	NUMBER OF LIVE FETUSES	POOLED FETAL BODY WEIGHT (G)	---- CONCEPTUSES ------ DEAD OR RESORBED		
RAT #	TOTAL	TOTAL	N	N	%
DOSAGE GROUP 4			2 MG/KG PFOS + MEVALONIC ACID		
10945	16	72.48	16	0	0.0
10946	15	82.52	16	1	6.2
10947	15	76.37	15	0	0.0
10949	8	29.06	17	9	52.9
10950	14	74.80	16	2	12.5
10951	14	73.68	18	4	22.2
10953	14	75.62	15	1	6.7
10954	13	69.92	16	3	18.8
DOSAGE GROUP 5			CHOLESTEROL CONTROL		
10958	14	74.35	14	0	0.0
10959	18	87.28	19	1	5.3
10960	14	66.68	15	1	6.7
10961	16	82.33	16	0	0.0
10962	13	73.21	14	1	7.1
10963	18	94.52	18	0	0.0
10964	17	93.22	18	1	5.6
10965	12	63.36	13	1	7.7
DOSAGE GROUP 6			1.6 MG/KG PFOS + CHOLESTEROL		
10972	17	89.27	18	1	5.6
10974	18	89.02	18	0	0.0
10975	6	23.23	6	0	0.0
10976	11	57.91	14	3	21.4
10978	17	80.99	17	0	0.0
10980	16	74.99	16	0	0.0
10981	11	60.24	11	0	0.0
10982	16	89.48	17	1	5.9

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TABLE 34 (PAGE 3): LITTER OBSERVATIONS (CAESAREAN-DELIVERED FETUSES) - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

	NUMBER OF LIVE FETUSES	POOLED FETAL BODY WEIGHT (G)	---- CONCEPTUSES ------ DEAD OR RESORBED		
RAT #	TOTAL	TOTAL	N	N	%
DOSAGE GROUP 7			2 MG/KG PFOS + CHOLESTEROL		
10985	14	70.04	14	0	0.0
10987	11	53.47	15	4	26.7
10988	14	67.85	16	2	12.5
10989	3	17.94	3	0	0.0
10990	13	68.09	14	1	7.1
10991	14	64.65	16	2	12.5
10992	9	41.10	12	3	25.0
10993	14	66.19	16	2	12.5
DOSAGE GROUP 12			1.6 MG/KG PFOS		
11040	8	40.71	9	1	11.1
11044	14	69.56	14	0	0.0
11045	14	76.36	15	1	6.7
11046	14	72.10	17	3	17.6
11047	10	47.25	11	1	9.1
11050	13	71.08	14	1	7.1
11051	13	61.99	14	1	7.1
11052	17	88.06	18	1	5.6
DOSAGE GROUP 13			2 MG/KG PFOS		
11053	15	78.30	15	0	0.0
11054	16	71.53	16	0	0.0
11056	12	55.25	13	1	7.7
11058	18	82.23	19	1	5.3
11060	14	76.60	14	0	0.0
11062	15	75.77	15	0	0.0
11063	14	74.99	14	0	0.0
11066	15	83.80	16	1	6.2

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TABLE 35 (PAGE 1): FETAL VITAL STATUS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

FETUS #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DOSAGE GROUP 1								VEHICLE CONTROL															
RAT # CLs																							
10901 8/ 7	A	A	A	E	A	A	A /	A	A	A	A	A	A	A									
10902 6/ 8	A	A	A	A	A /	A	A	A	A	E	A	A	A										
10903 12/ 4	A	A	A	A	A	A	A	A	A	A	E /	A	A	A	A								
10904 9/ 7	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	E								
10905 8/ 8	E	A	A	A	A	A /	A	A	A	A	A	A	A	A									
10907 9/10	A	A	A	A	A	A	A	A	A /	E	A	A	A	A	A	A	A						
10908 9/ 6	E	A	A	A	A	A	A	A	A /	A	A	A	A	A	A								
10910 10/ 8	A	E	A	A	A	A	A	E	A /	A	E	A	E	A	A	A							
10912	NOT PREGNANT																						
DOSAGE GROUP 2								MEVALONIC ACID CONTROL															
RAT # CLs																							
10915 12/ 7	E	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	E							
10916 7/11	A	A	A	A	A	A	A /	A	A	A	E	A	A	A	A	A	A						
10917 11/ 5	E	A	E	A	E	A	A	A	A	E	A /	A	A	A									
10918 8/11	A	A	A	A	A /	A	A	A	A	A	A	A	A	A									
10919 11/14	A	A	A	A	A	A /	A	A	A	A	A	A	A	A	A								
10920 14/ 9	A	E	A	A	E	E	A	E	A	E	A /	A	E	A	A								
10925 8/ 9	A	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	A							
10928 8/ 8	A	A	E	A	A	A	A	A /	A	A	A	A	A	A	A	A							
DOSAGE GROUP 3								1.6 MG/KG PFOS + MEVALONIC ACID															
RAT # CLs																							
10930 11/ 8	A	A	A	A	A	A	A	A /	L	E	A	A	A	A	A								
10931 9/ 5	A	A	A	E	A	A	A	A	A /	A	A	A	A	A									
10932 11/11	A	A	A	A	A	A	A /	E	A	A	A	A	A	A	A	A							
10933 9/ 9	A	A	A	E	A	A	E	A	A /	A	A	A	A	A	A	A	A						
10934 13/10	E	E	E	E	A	E	A	A	A	A /	E	E	A	E	A	A	A						
10935 6/ 6	A	A	A	A	A	A /	A	A	A	A	A	A											
10937 9/ 4	A	A	A	A	A	E	A	E	A /	A	A	A	A										
10940 7/12	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	A	A	A	A	A				

A = ALIVE D = DEAD E = EARLY RESORPTION L = LATE RESORPTION "/" DENOTES POSITION OF CERVIX CLs = CORPORA LUTEA/OVARY

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TABLE 35 (PAGE 2): FETAL VITAL STATUS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

FETUS #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DOSAGE GROUP 4								2 MG/KG PFOS + MEVALONIC ACID															
RAT # CLs																							
10945 11/ 6	A	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	A							
10946 12/ 6	A	A	E	A	A	A	A	A	A	A	A	A /	A	A	A	A							
10947 11/ 5	A	A	A	A	A	A	A	A	A	A /	A	A	A	A	A								
10949 11/10	E	E	A	A	A	A	A	A	A /	E	E	E	E	E	E	A	E						
10950 10/ 7	A	A	A	A	E	A	A	A	A	A /	A	A	A	A	A	E							
10951 10/13	A	E	A	E	A	A	A	E /	A	A	A	A	E	A	A	A	A	A					
10953 10/ 5	E	A	A	A	A	A	A	A	A	A /	A	A	A	A	A								
10954 9/10	L	A	A	E	A	A	A	A	A /	A	E	A	A	A	A	A							
DOSAGE GROUP 5								CHOLESTEROL CONTROL															
RAT # CLs																							
10958 8/ 7	A	A	A	A	A	A	A /	A	A	A	A	A	A	A									
10959 10/10	A	A	A	A	A	A	A	A	A /	E	A	A	A	A	A	A	A	A	A				
10960 11/ 8	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	E								
10961 11/ 5	A	A	A	A	A	A	A	A	A	A	A	A /	A	A	A	A							
10962 8/12	A	E	A	A	A	A /	A	A	A	A	A	A	A	A									
10963 11/ 8	A	A	A	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	A					
10964 10/10	A	A	A	E	A	A	A	A /	A	A	A	A	A	A	A	A	A	A					
10965 10/ 3	A	A	A	E	A	A	A	A	A	A /	A	A	A										
DOSAGE GROUP 6								1.6 MG/KG PFOS + CHOLESTEROL															
RAT # CLs																							
10972 11/12	A	E	A	A	A	A	A	A /	A	A	A	A	A	A	A	A	A	A					
10974 7/11	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	A	A	A	A					
10975 6/ 6	A	A	A	A	A /	A																	
10976 8/ 8	A	A	A	E	E	A	A	A /	A	E	A	A	A	A									
10978 11/ 8	A	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	A	A						
10980 11/11	A	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	A							
10981 7/ 7	A	A	A	A	A	A /	A	A	A	A	A												
10982 8/ 9	A	A	A	A	E	A	A	A /	A	A	A	A	A	A	A	A	A						

A = ALIVE D = DEAD E = EARLY RESORPTION L = LATE RESORPTION "/" DENOTES POSITION OF CERVIX CLs = CORPORA LUTEA/OVARY

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 35 (PAGE 3): FETAL VITAL STATUS - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

FETUS #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DOSAGE GROUP 7								2 MG/KG PFOS + CHOLESTEROL																
RAT # CLs																							
10985 14/ 6	A	A	A	A	A	A	A	A	A /	A	A	A	A	A									
10987 5/11	A	A	E	A /	A	A	A	A	A	A	A	A	E	E	E								
10988 11/ 5	A	A	A	A	E	A	A	A	A	A	A /	A	A	A	A	E							
10989 1/ 3	A /	A	A																				
10990 14/12	A	A	A	E	A	A	A /	A	A	A	A	A	A	A									
10991 8/11	A	A	A	E	A	A /	A	A	A	A	A	A	A	A	A	E							
10992 12/13	A	A	A	A	E	A	A	E /	E	A	A	A											
10993 8/11	E	A	A	E	A	A	A /	A	A	A	A	A	A	A	A	A							
DOSAGE GROUP 12								1.6 MG/KG PFOS															
RAT # CLs																							
11040 7/ 6	A	A	A /	E	A	A	A	A	A														
11044 9/10	A	A	A	A	A	A	A	A	A /	A	A	A	A	A									
11045 6/10	A	A	A	A	E	A /	A	A	A	A	A	A	A	A	A								
11046 8/ 9	E	A	A	A	A	A	E	A /	A	A	A	A	A	A	A	A	E						
11047 0/11 /	A	A	A	A	A	A	A	A	A	E	A												
11050 7/ 8	A	A	A	A	A	A /	A	A	A	A	A	A	A	E									
11051 9/ 5	A	A	A	A	A	A	A	A	A /	D	A	A	A	A									
11052 6/12	A	A	A	A	A	A /	A	A	A	L	A	A	A	A	A	A	A	A					
DOSAGE GROUP 13								2 MG/KG PFOS															
RAT # CLs																							
11053 5/14	A	A	A	A /	A	A	A	A	A	A	A	A	A	A	A								
11054 13/17	A	A	A	A	A	A	A	A	A /	A	A	A	A	A	A	A							
11056 8/ 9	A	A	A	A	A	A	A /	A	E	A	A	A	A										
11058 9/13	E	A	A	A	A	A	A	A	A /	A	A	A	A	A	A	A	A	A	A				
11060 6/ 8	A	A	A	A	A	A /	A	A	A	A	A	A	A	A									
11062 10/ 7	A	A	A	A	A	A	A	A	A	A /	A	A	A	A	A								
11063 9/ 7	A	A	A	A	A	A	A /	A	A	A	A	A	A	A									
11066 6/10	A	A	A	A	A	A /	A	A	E	A	A	A	A	A	A	A							

A = ALIVE D = DEAD E = EARLY RESORPTION L = LATE RESORPTION "/" DENOTES POSITION OF CERVIX CLs = CORPORA LUTEA/OVARY

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 1): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 1 VEHICLE CONTROL

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	LITTER DELIVERED STILL-BORN N	LITTER DELIVERED TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLANTATIONS N
10906	22	16	0	16	10	6	9	6	9	6	9	6	9	6	17
10909	23	14	1	15	6	8	6	8	6	8	6	8	6	8	15
10911	23	17	0	17	8	9	8	9	8	9	8	8	8	8	19
10913	23	17	0	17	6	11	6	10	6	10	6	10	6	9	17
10914	23	10	0	10	3	7	3	7	3	7	3	7	3	7	12
11501	23	11	1	12	7	4	7	4	7	4	7	4	7	4	12
11502	23	15	1	16	9	6	9	6	9	6	9	6	9	6	16
11503	23	15	0	15	6	9	6	9	6	9	6	9	6	9	15
11504	23	15	0	15	4	11	4	11	4	10	4	10	4	10	15
11505	22	17	0	17	9	8	9	7	9	7	9	7	9	7	17
11506	23	15	0	15	9	6	9	6	9	6	9	6	9	6	16
11507	23	10	0	10	9	1	9	1	9	1	9	1	9	1	10
11508	23	11	2	13	8	3	8	3	8	3	8	3	8	3	14
11509	23	8	0	8	2	6	2	6	2	6	2	6	2	6	12
11510	23	15	0	15	9	6	9	6	9	6	9	6	9	6	15
11511	23	14	0	14	7	7	7	7	7	7	7	7	7	7	16
11512	23	14(1)	0	14	4	9	4	9	4	9	4	9	4	9	14
11513	23	11	0	11	7	4	7	4	7	4	7	4	7	4	12
11514	23	15	0	15	6	9	6	9	6	9	6	9	6	9	15

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 2): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 2 — MEVALONIC ACID CONTROL

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
10921	22	14	0	14	9	5	9	5	9	5	9	5	9	5	16
10922	23	13	0	13	8	5	8	5	7	5	7	5	7	5	16
10923	23	14	0	14	11	3	11	3	11	3	11	3	11	3	14
10924	23	13	0	13	8	5	8	5	8	5	8	5	8	5	14
10926	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT														
10927	22	17	0	17	6	11	6	11	6	11	6	11	6	11	18
11515	22	12	0	12	7	5	7	5	7	5	7	5	7	5	12
11516	23	14	2	16	6	8	6	8	6	8	6	8	6	8	18
11517	22	15	0	15	6	9	6	9	6	9	6	9	6	9	16
11518	23	12	0	12	9	3	9	3	9	3	9	3	9	3	15
11519	22	14(1)	0	14	6	7	6	7	6	7	6	7	6	7	14
11520	23	13	0	13	6	7	6	7	6	7	6	7	6	7	15
11521	23	7	0	7	4	3	4	3	3	3	3	3	3	3	13
11522	NOT PREGNANT														
11523	22	16	0	16	8	8	8	8	8	8	8	8	8	8	17
11524	23	11	0	11	5	6	5	6	5	6	5	6	5	6	11
11525	23	13	0	13	9	4	9	4	9	4	9	4	9	4	15
11526	23	12	1	13	8	4	8	4	8	4	8	4	8	4	13
11527	23	11	0	11	7	4	7	4	7	4	7	4	7	4	12
11528	23	13	0	13	7	6	7	6	7	6	7	6	7	6	14

M = MALE F = FEMALE

( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 3): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 3 — 1.6 MG/KG PFOS + MEVALONIC ACID

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
10929	22	13	0	13	7	6	6	5	6	5	5	5	5	5	13
10936	FOUND DEAD ON DAY 2 OF STUDY														
10938	22	15(2)	0	15	7	6	4	2	4	2	4	2	4	2	15
10939	NOT PREGNANT														
10941	22	11(2)	0	11	5	4	1	3	1	2	-	-	-	-	14
10942	23	13	0	13	6	7	6	7	6	7	6	6	6	6	15
11529	22	16(1)	0	16	8	7	7	5	6	5	5	5	5	5	17
11530	23	13	2	15	6	7	5	5	5	5	5	5	5	5	15
11531	NOT PREGNANT														
11532	22	12(1)	2	14	6	5	-	-	-	-	-	-	-	-	14
11533	22	10(8)	0	10	2	-	1	-	-	-	-	-	-	-	10
11534	22	15(1)	1	16	5	9	5	3	4	3	4	3	4	3	17
11535	22	14	0	14	6	8	-	-	-	-	-	-	-	-	14
11536	23	9	0	9	4	5	3	4	3	4	3	4	3	4	11
11537	23	13	0	13	9	4	9	4	9	4	9	4	9	4	13
11538	22	12(6)	0	12	4	2	3	2	3	2	3	2	3	2	14
11539	22	9	0	9	4	5	2	1	-	-	-	-	-	-	9
11540	22	14	1	15	9	5	1	1	1	1	1	1	1	1	15
11541	22	12	0	12	7	5	-	-	-	-	-	-	-	-	13
11542	22	15	0	15	8	7	3	4	1	2	1	1	1	1	16
11543	22	11(1)	0	11	3	7	3	7	3	7	3	7	3	7	16

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 4): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 4 — 2 MG/KG PFOS + MEVALONIC ACID

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
10943	22	13(1)	0	13	8	4	1	-	-	-	-	-	-	-	15
10944	22	13	0	13	10	3	1	2	-	1	-	1	-	-	14
10948	22	13(10)	0	13	1	2	-	2	-	1	-	-	-	-	17
10952	22	14	0	14	7	7	-	-	-	-	-	-	-	-	15
10955	22	14(7)	1	15	2	5	-	-	-	-	-	-	-	-	15
10956	22	14	1	15	7	7	-	-	-	-	-	-	-	-	15
11544	22	14	0	14	8	6	-	-	-	-	-	-	-	-	14
11545	23	12(3)	0	12	4	5	-	-	-	-	-	-	-	-	13
11546	23	14(14)	0	14	-	-	-	-	-	-	-	-	-	-	15
11547	22	15(2)	0	15	5	8	2	4	2	2	2	1	-	1	15
11548	NOT PREGNANT														
11549	22	14(5)	0	14	6	3	-	-	-	-	-	-	-	-	14
11550	21	14(2)	0	14	4	8	3	3	-	1	-	-	-	-	16
11551	22	12(9)	0	12	2	1	1	-	-	-	-	-	-	-	13
11552	22	13(7)	0	13	4	2	3	1	2	1	2	-	2	-	14
11553	22	17	0	17	6	11	-	-	-	-	-	-	-	-	17
11554	22	17(2)	0	17	5	10	-	1	-	-	-	-	-	-	17
11555	22	14	0	14	12	2	2	-	-	-	-	-	-	-	17
11556	22	16(16)	0	16	-	-	-	-	-	-	-	-	-	-	16
11557	22	15(15)	0	15	-	-	-	-	-	-	-	-	-	-	17

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 5): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 5 CHOLESTEROL CONTROL

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS)	LITTER DELIVERED			NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM										TOTAL IMPLAN-TATIONS
		LIVE BORN	STILL-BORN	TOTAL BORN	1		2		3		4		5		
	N	N	N	N	M	F	M	F	M	F	M	F	M	F	N
10957	23	11	0	11	2	9	2	9	2	9	2	9	2	9	12
10966	22	15	0	15	7	8	7	8	7	8	7	8	7	8	15
10967	23	15	0	15	8	7	8	7	8	7	8	7	8	7	16
10968	22	15	0	15	8	7	8	7	8	7	8	7	8	7	15
10969	22	16	1	17	8	8	8	7	8	7	8	7	8	7	16a
10970	23	17	0	17	8	9	8	9	8	8	8	8	8	8	17
11558	23	14	0	14	10	4	10	4	10	4	10	4	10	4	14
11559	23	18	0	18	7	11	7	11	7	11	7	11	7	11	18
11560	NOT PREGNANT														
11561	23	16	0	16	12	4	12	4	12	4	12	4	12	4	16
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY														
11563	23	16	0	16	9	7	9	7	8	7	8	7	8	7	16
11564	23	15	0	15	5	10	4	10	4	10	4	10	4	10	15
11565	23	14	0	14	5	9	5	9	5	9	5	9	5	9	14
11566	NOT PREGNANT														
11567	23	10	1	11	5	5	5	5	5	5	5	5	5	5	14
11568	23	14	0	14	8	6	8	6	8	6	8	6	8	6	14
11569	23	16	0	16	8	8	8	8	8	8	8	8	8	7	16
11570	23	12	0	12	7	5	7	5	7	5	7	5	7	5	14
11571	23	11	0	11	3	8	3	8	3	8	3	8	3	8	15

M = MALE F = FEMALE

a. Value appeared incorrectly recorded and was excluded from group averages and statistical analyses.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 6): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 6 — 1.6 MG/KG PFOS + CHOLESTEROL

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS)	LITTER DELIVERED			NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM										TOTAL IMPLAN-TATIONS
		LIVE BORN	STILL-BORN	TOTAL BORN	1		2		3		4		5		
	N	N	N	N	M	F	M	F	M	F	M	F	M	F	N
10971	22	7	1	8	3	4	2	3	-	-	-	-	-	-	15
10973	22	13	0	13	7	6	5	4	-	1	-	-	-	-	14
10977	22	15(3)	0	15	7	5	4	1	4	1	4	1	4	1	15
10979	22	14(2)	0	14	8	4	8	4	8	4	7	4	7	4	16
10983	22	15	0	15	12	3	12	3	9	3	9	3	9	3	15
10984	22	16	0	16	7	9	6	7	-	-	-	-	-	-	16
11572	22	10	0	10	6	4	1	2	-	-	-	-	-	-	10
11573	22	13	0	13	4	9	3	1	-	-	-	-	-	-	13
11574	22	13(5)	0	13	2	6	2	6	2	4	2	4	2	4	14
11575	22	13(1)	0	13	8	4	8	4	8	4	8	4	8	4	13
11576	23	12	0	12	4	8	4	8	4	8	4	8	4	8	14
11577	22	16	0	16	8	8	1	-	-	-	-	-	-	-	16
11578	22	13(1)	0	13	6	6	6	6	6	6	6	6	6	6	13
11579	21	17(1)	0	17	9	7	1	3	-	2	-	2	-	2	17
11580	23	16(1)	0	16	9	6	7	6	6	4	6	4	6	4	17
11581	22	13(1)	0	13	6	6	-	-	-	-	-	-	-	-	15
11582	22	12	0	12	3	9	2	8	2	7	2	4	2	4	12
11583	22	14	0	14	3	11	3	10	3	10	3	10	3	10	15
11584	22	15(2)	0	15	2	11	2	11	2	11	1	11	1	11	15
11585	22	12(1)	1	13	6	5	3	2	1	1	1	1	-	-	13

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 7): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 7 — 2 MG/KG PFOS + CHOLESTEROL

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
10986	22	15	0	15	8	7	7	4	-	-	-	-	-	-	17
10994	22	15	0	15	7	8	1	-	-	-	-	-	-	-	15
10995	22	15	0	15	7	8	4	4	4	3	3	3	3	3	15
10996	22	13	0	13	5	8	-	-	-	-	-	-	-	-	15
10997	23	16	0	16	12	4	11	4	11	4	11	4	11	4	17
10998	NOT PREGNANT														
11586	23	13	1	14	7	6	1	4	-	-	-	-	-	-	14
11587	22	13	0	13	7	6	1	-	-	-	-	-	-	-	16
11588	22	13	1	14	7	6	-	-	-	-	-	-	-	-	15
11589	22	13(10)	0	13	3	-	2	-	1	-	1	-	-	-	13
11590	22	16(1)	0	16	10	5	2	3	-	-	-	-	-	-	17
11591	22	17(1)	0	17	8	8	-	-	-	-	-	-	-	-	17
11592	23	15	0	15	11	4	5	3	2	3	2	3	2	3	17
11593	22	13(1)	0	13	4	8	2	5	1	5	1	5	1	5	14
11594	22	16	0	16	9	7	-	1	-	1	-	1	-	-	16
11595	22	0	0	1[1]	-	-	-	-	-	-	-	-	-	-	9
11596	22	14	0	14	10	4	1	-	-	-	-	-	-	-	15
11597	23	10(2)	0	10	4	4	3	3	3	2	3	2	3	2	16
11598	22	15	0	15	11	4	1	1	-	-	-	-	-	-	15
11599	23	17(12)	0	17	4	1	-	-	-	-	-	-	-	-	18

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.
[ ] = NUMBER OF PUPS IN WHICH CANNIBALIZATION AND/OR AUTOLYSIS PRECLUDED THE DETERMINATION OF VIABILITY.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 8): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 8 — 0.4 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
10999	23	14	1	15	10	4	10	4	10	4	10	4	10	4	17
11000	22	14	0	14	4	10	4	10	4	10	4	10	4	10	14
11001	23	15	0	15	10	5	10	5	10	5	10	5	10	5	15
11002	22	14	0	14	7	7	7	7	7	7	7	7	7	7	16
11003	23	14(2)	2	16	7	5	7	5	7	5	7	5	7	5	18
11004	22	16	0	16	6	10	6	10	6	9	6	9	6	9	19
11005	23	13	1	14	5	8	5	8	5	8	5	8	5	8	15
11006	23	17	1	18	5	12	5	12	5	12	5	12	5	12	18
11007	23	17	0	17	6	11	6	11	6	11	6	11	6	11	17
11008	23	13	1	14	3	10	3	10	3	10	3	10	3	10	15
11600	23	14	1	15	7	7	7	7	7	7	7	7	7	7	16
11601	22	16	0	16	6	10	6	10	6	10	6	10	6	10	16
11602	22	10	0	10	6	4	6	4	6	4	6	4	6	4	13
11603	22	15	1	16	6	9	6	8	6	8	5	7	5	7	17
11604	22	13	0	13	8	5	8	5	8	5	8	5	8	5	15
11605	23	16	0	16	7	9	7	9	7	9	7	9	7	9	16
11606	23	9	1	10	4	5	4	5	4	5	4	5	4	5	13
11607	22	14	0	14	9	5	9	5	9	5	9	5	9	5	16
11608	23	18	0	18	8	10	8	10	8	10	8	10	8	10	18
11609	22	19(1)	0	19	6	12	6	12	6	12	6	12	6	12	19

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 9): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 9 — 0.8 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
11009	23	13	0	13	9	4	9	4	9	4	9	4	9	4	14
11010	22	19	0	19	9	10	9	10	9	7	9	7	9	7	20
11011	23	16	0	16	8	8	8	8	8	8	8	8	8	8	16
11012	23	16	0	16	9	7	8	6	8	6	8	6	8	6	16
11013	22	16(1)	0	16	8	7	8	6	8	6	8	6	8	6	16
11014	NOT PREGNANT														
11015	22	16	0	16	6	10	5	9	5	8	4	7	4	6	18
11016	22	11	1	12	6	5	6	5	6	5	6	5	6	5	13
11017	NOT PREGNANT														
11018	23	10	0	10	6	4	6	4	6	4	6	4	6	4	12
11610	NOT PREGNANT														
11611	22	15	0	15	9	6	9	6	9	6	9	6	9	6	15
11612	23	13	0	13	3	10	3	10	3	10	3	10	3	10	13
11613	22	14	0	14	8	6	8	6	8	6	8	6	8	6	15
11614	23	17	0	17	11	6	11	6	10	6	10	6	10	6	18
11615	23	13	0	13	9	4	9	4	9	4	9	4	9	4	13
11616	22	15	0	15	8	7	8	7	8	7	8	7	8	7	15
11617	22	17	0	17	10	7	9	6	9	6	9	6	9	6	17
11618	23	11	1	12	5	6	5	6	5	6	5	5	5	5	13
11619	22	13	0	13	7	6	7	6	7	6	7	6	7	6	13

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 10): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 10 — 1 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
11019	22	14	0	14	7	7	7	7	7	7	7	7	6	7	15
11020	23	15	0	15	8	7	8	7	8	7	8	7	8	7	15
11021	23	17	0	17	5	12	5	12	5	12	5	12	5	12	17
11022	NOT PREGNANT														
11023	22	16	0	16	6	10	6	7	6	7	6	7	6	7	16
11024	23	9	0	9	7	2	6	2	6	2	6	2	6	2	11
11025	24	17	0	17	5	12	5	12	5	12	5	12	5	12	18
11026	22	13	0	13	7	6	7	6	7	6	6	6	6	6	16
11027	22	16	0	16	10	6	10	6	10	6	10	6	10	6	17
11028	22	20(1)	0	20	9	10	8	9	8	9	8	9	8	9	20
11620	22	15	0	15	7	8	7	7	7	7	7	7	7	7	15
11621	22	15	0	15	5	10	5	10	5	10	5	10	5	10	16
11622	22	14	0	14	9	5	9	4	9	4	9	4	9	4	14
11623	22	15(1)	0	15	9	5	8	5	8	5	8	5	8	4	17
11624	23	14	2	16	3	11	3	11	3	11	3	11	3	11	17
11625	22	17	0	17	6	11	6	11	6	11	6	11	6	10	18
11626	23	14	0	14	4	10	4	10	4	10	4	10	4	10	15
11627	22	15(1)	0	15	10	4	5	1	-	-	-	-	-	-	16
11628	22	17	0	17	6	11	6	10	6	10	6	10	6	10	17
11629	22	12(1)	0	12	6	5	6	5	6	5	6	5	6	5	13

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 11): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 11 — 1.2 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
11029	22	16(1)	0	16	6	9	6	9	6	9	6	9	6	9	16
11030	NOT PREGNANT														
11031	23	13	0	13	9	4	9	4	9	4	8	4	8	4	17
11032	22	13	0	13	9	4	9	4	6	3	5	2	5	2	16
11033	23	14	1	15	4	10	4	9	4	9	4	8	4	8	16
11034	23	13	0	13	4	9	3	9	2	8	2	7	1	7	15
11035	22	11(1)	0	11	6	4	6	4	5	4	4	4	4	4	14
11036	23	17	0	17	12	5	12	5	12	5	10	5	10	5	18
11037	22	16(3)	0	16	3	10	3	10	3	10	3	10	3	10	17
11038	22	19	0	19	9	10	8	9	6	6	5	6	4	6	19
11630	22	7	0	7	3	4	3	4	3	4	3	4	3	4	7
11631	NOT PREGNANT														
11632	23	9	0	9	5	4	3	2	3	2	3	2	3	2	13
11633	22	16	0	16	9	7	9	7	9	7	9	7	9	7	16
11634	22	13	0	13	6	7	6	7	6	7	6	7	6	7	14
11635	22	14	0	14	10	4	6	4	5	4	5	3	5	3	15
11636	22	16	0	16	9	7	9	7	9	7	9	7	9	7	16
11637	22	15(1)	0	15	7	7	7	7	7	7	7	7	7	7	16
11638	23	14	0	14	5	9	5	9	4	9	4	9	4	9	14
11639	22	16	0	16	8	8	7	7	7	7	7	7	7	7	16

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 12): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 12 — 1.6 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
11039	NOT PREGNANT														
11041	22	17	0	17	6	11	6	10	-	7	-	5	-	5	17
11042	22	16(2)	0	16	7	7	-	-	-	-	-	-	-	-	16
11043	NOT PREGNANT														
11048	22	15(1)	0	15	7	7	-	-	-	-	-	-	-	-	15
11049	22	6(1)	0	6	3	2	2	1	2	1	2	1	2	1	10
11640	22	16	0	16	8	8	8	8	8	8	7	8	7	8	15
11641	22	15(2)	0	15	5	8	4	6	4	6	4	6	4	6	15
11642	22	16	0	16	8	8	8	8	8	8	8	8	8	8	17
11643	22	12	0	12	4	8	1	5	1	3	1	2	-	2	12
11644	22	14(1)	0	14	8	5	7	4	7	4	7	4	6	4	14
11645	22	10	4	14	6	4	-	-	-	-	-	-	-	-	15
11646	22	11	0	11	3	8	3	7	3	7	3	7	3	7	12
11647	22	11	0	11	4	7	-	2	-	1	-	1	-	1	13
11648	22	13(2)	0	13	5	6	4	6	4	6	4	6	4	6	15
11649	22	17(1)	0	17	8	8	3	1	2	-	2	-	-	-	18
11650	22	13	0	13	6	7	5	7	5	7	5	7	5	7	13
11651	22	11(3)	0	11	5	3	5	2	5	2	4	2	4	2	12
11652	NOT PREGNANT														
11653	22	14	0	14	9	5	8	5	8	4	8	4	8	4	14

M = MALE F = FEMALE
( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 36 (PAGE 13): NATURAL DELIVERY, IMPLANTATION SITES, AND PUP VIABILITY AND SEX - INDIVIDUAL DATA - Fo GENERATION FEMALE RATS

DOSAGE GROUP 13 — 2 MG/KG PFOS

RAT/ LITTER NUMBER	DURATION OF GESTATION (DAYS) N	LITTER DELIVERED LIVE BORN N	STILL-BORN N	TOTAL BORN N	NUMBER OF LIVE PUPS AT COMPLETION OF DAY POSTPARTUM 1 M	1 F	2 M	2 F	3 M	3 F	4 M	4 F	5 M	5 F	TOTAL IMPLAN-TATIONS N
11055	22	14(1)	0	14	5	8	2	2	2	-	-	-	-	-	15
11057	22	10(1)	0	10	4	5	-	-	-	-	-	-	-	-	11
11059	23	15	0	15	11	4	11	2	11	2	11	2	11	2	18
11061	22	16	0	16	7	9	2	2	-	-	-	-	-	-	16
11064	22	10	0	10	7	3	1	-	-	-	-	-	-	-	11
11065	22	14	0	14	6	8	-	-	-	-	-	-	-	-	14
11654	22	14	0	14	5	9	5	4	4	4	4	4	4	4	14
11655	23	14	0	14	4	10	4	8	4	8	4	7	4	7	15
11656	23	12(2)	0	12	4	6	4	6	4	6	4	6	4	6	12
11657	22	13(8)	0	13	3	2	1	-	-	-	-	-	-	-	16
11658	22	14(12)	0	14	-	2	-	-	-	-	-	-	-	-	15
11659	22	6(6)	0	6	-	-	-	-	-	-	-	-	-	-	14
11660	22	14	0	14	9	5	1	2	-	-	-	-	-	-	15
11661	22	15(12)	0	15	1	2	-	-	-	-	-	-	-	-	15
11662	22	13	0	13	9	4	2	1	-	1	-	1	-	1	13
11663	22	16(2)	0	16	8	6	-	-	-	-	-	-	-	-	16
11664	22	11(2)	0	11	6	3	-	-	-	-	-	-	-	-	12
11665	22	16	0	16	6	10	2	3	1	1	1	1	-	-	17
11666	NOT PREGNANT														
11667	22	14(10)	1	15	2	2	-	-	-	-	-	-	-	-	15

M = MALE F = FEMALE

( ) = NUMBER OF PUPS DYING PRIOR TO WEIGHING ON DAY 1 POSTPARTUM.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 37 (PAGE 1): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 1 VEHICLE CONTROL

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10906	94.8	93.2	106.5	121.1	136.0
10909	87.1	94.9	103.9	121.6	132.5
10911	108.0	111.2	117.8	123.1	131.7
10913	112.3	107.9	113.6	123.5	124.0
10914	61.4	65.4	73.2	80.5	92.7
11501	73.1	77.7	83.4	93.3	106.0
11502	96.6	107.6	121.3	133.5	148.9
11503	91.4	102.1	113.0	122.4	136.5
11504	97.7	106.8	115.0	135.6	155.9
11505	94.3	105.2	119.2	135.4	151.8
11506	103.1	113.4	127.8	148.0	166.6
11507	73.2	86.6	91.5	103.0	116.2
11508	79.7	86.8	99.5	112.4	127.1
11509	53.9	61.8	71.9	84.5	96.7
11510	92.0	97.3	107.1	119.7	134.0
11511	92.0	102.2	104.1	114.0	127.2
11512	77.6	87.1	96.4	108.5	117.5
11513	71.0	79.9	89.2	99.0	111.1
11514	92.7	106.8	118.9	135.5	146.5

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 37 (PAGE 2): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 2 MEVALONIC ACID CONTROL

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10921	84.2	92.0	99.6	115.9	122.0
10922	80.3	88.9	92.6	107.3	119.9
10923	89.9	96.5	107.3	119.5	132.7
10924	87.0	91.0	95.4	103.1	108.0
10926	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT				
10927	95.7	103.3	116.1	131.5	144.9
11515	74.0	82.2	93.2	107.1	120.6
11516	93.0	102.8	116.6	130.0	146.7
11517	90.3	96.7	108.7	121.8	134.7
11518	79.0	90.1	97.7	106.7	117.3
11519	73.8	80.5	89.5	101.4	110.8
11520	90.1	93.2	101.5	115.1	129.9
11521	47.0	54.4	53.6	63.0	71.8
11522	NOT PREGNANT				
11523	94.4	103.5	117.1	131.5	145.3
11524	79.2	88.2	97.8	110.6	119.7
11525	85.8	91.9	103.0	112.3	126.4
11526	80.7	87.3	94.6	107.0	123.6
11527	75.9	84.3	97.5	109.8	124.1
11528	93.6	104.9	112.2	123.9	132.5

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 37 (PAGE 3): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 3 — 1.6 MG/KG PFOS + MEVALONIC ACID

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10929	72.1	62.6	65.0	67.8	75.5
10936	FOUND DEAD ON DAY 2 OF STUDY				
10938	68.0	34.5	38.5	44.8	47.9
10939	NOT PREGNANT				
10941	46.7	20.5	14.2	NO SURVIVING PUPS	
10942	83.7	84.6	89.0	95.1	104.3
11529	74.0	59.9	62.0	64.5	71.6
11530	79.3	63.9	70.0	77.9	85.4
11531	NOT PREGNANT				
11532	60.8	NO SURVIVING PUPS			
11533	11.0	5.4	NO SURVIVING PUPS		
11534	71.8	40.1	37.1	42.4	47.8
11535	72.4	NO SURVIVING PUPS			
11536	61.1	49.2	55.5	63.0	71.5
11537	84.5	86.2	93.4	135.8	109.0
11538	32.1	28.1	31.2	35.2	40.5
11539	49.4	14.8	NO SURVIVING PUPS		
11540	70.7	9.9	9.6	10.5	11.2
11541	62.9	NO SURVIVING PUPS			
11542	77.2	31.2	12.0	7.8	7.1
11543	57.5	63.7	74.3	82.1	93.2

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 37 (PAGE 4): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 4 — 2 MG/KG PFOS + MEVALONIC ACID

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10943	64.3	20.2	NO SURVIVING PUPS		
10944	67.4	13.7	4.6	3.9	NO SURVIVING PUPS
10948	14.2	8.3	4.0	NO SURVIVING PUPS	
10952	68.4	NO SURVIVING PUPS			
10955	36.8	NO SURVIVING PUPS			
10956	69.9	NO SURVIVING PUPS			
11544	77.6	NO SURVIVING PUPS			
11545	46.4	NO SURVIVING PUPS			
11546	NO SURVIVING PUPS				
11547	68.1	31.1	21.3	15.8	4.7
11548	NOT PREGNANT				
11549	49.0	NO SURVIVING PUPS			
11550	63.9	29.1	4.6	NO SURVIVING PUPS	
11551	16.1	5.2	NO SURVIVING PUPS		
11552	33.3	23.1	20.7	16.6	17.3
11553	91.0	NO SURVIVING PUPS			
11554	69.1	a	NO SURVIVING PUPS		
11555	77.6	9.6	NO SURVIVING PUPS		
11556	NO SURVIVING PUPS				
11557	NO SURVIVING PUPS				

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.
a. Value was not recorded.

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TABLE 37 (PAGE 5): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 5 CHOLESTEROL CONTROL

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10957	71.9	75.5	82.9	97.9	106.1
10966	97.0	106.9	127.2	143.1	163.6
10967	100.0	105.8	115.8	136.7	142.1
10968	83.5	88.5	93.7	109.7	120.3
10969	90.2	88.6	95.1	110.2	117.5
10970	97.8	105.3	106.4	121.1	130.3
11558	90.6	101.6	111.9	124.6	137.4
11559	110.9	120.6	135.8	152.3	173.5
11560	NOT PREGNANT				
11561	95.1	105.0	123.6	140.6	157.2
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY				
11563	106.4	117.5	122.9	140.4	152.3
11564	89.2	96.5	105.0	113.4	127.0
11565	97.2	107.6	119.0	132.9	148.1
11566	NOT PREGNANT				
11567	64.9	73.4	83.5	98.3	107.6
11568	85.1	91.0	100.0	111.9	125.0
11569	106.6	153.0	134.6	147.7	a
11570	79.6	87.8	92.7	104.3	110.9
11571	79.9	87.0	98.3	113.7	131.0

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.
a. Value was not recorded.

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TABLE 37 (PAGE 6): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 6 — 1.6 MG/KG PFOS + CHOLESTEROL

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10971	35.2	22.3	NO SURVIVING PUPS		
10973	69.1	44.4	4.2	NO SURVIVING PUPS	
10977	59.9	26.8	29.7	36.4	39.8
10979	60.7	64.6	71.8	77.0	83.3
10983	82.9	75.9	68.6	78.0	85.2
10984	77.1	55.5	NO SURVIVING PUPS		
11572	55.5	14.6	NO SURVIVING PUPS		
11573	70.5	19.8	NO SURVIVING PUPS		
11574	40.1	39.9	33.1	36.5	40.0
11575	72.7	79.3	91.8	105.1	112.9
11576	72.6	74.6	81.6	94.0	102.2
11577	89.7	5.3	NO SURVIVING PUPS		
11578	69.1	72.8	81.8	92.4	99.6
11579	79.9	17.7	9.2	10.1	10.0
11580	89.1	76.1	60.2	65.6	72.2
11581	61.4	NO SURVIVING PUPS			
11582	64.9	49.4	46.0	38.4	44.5
11583	76.7	71.7	76.6	86.1	95.6
11584	69.0	72.4	79.8	83.2	91.5
11585	58.6	25.2	10.3	9.5	NO SURVIVING PUPS

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 7): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 7 — 2 MG/KG PFOS + CHOLESTEROL

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10986	79.9	52.1	NO SURVIVING PUPS		
10994	75.1	4.4	NO SURVIVING PUPS		
10995	74.8	40.4	38.6	33.6	34.1
10996	70.7	NO SURVIVING PUPS			
10997	86.0	81.2	85.9	92.5	94.6
10998	NOT PREGNANT				
11586	76.3	25.4	NO SURVIVING PUPS		
11587	69.7	4.3	NO SURVIVING PUPS		
11588	61.0	NO SURVIVING PUPS			
11589	16.6	11.0	5.8	5.2	NO SURVIVING PUPS
11590	79.6	22.7	NO SURVIVING PUPS		
11591	84.8	NO SURVIVING PUPS			
11592	87.6	41.9	27.4	30.3	34.9
11593	65.5	35.0	31.9	36.1	40.1
11594	77.5	4.8	4.7	4.5	NO SURVIVING PUPS
11595	NO SURVIVING PUPS				
11596	76.3	4.5	NO SURVIVING PUPS		
11597	47.0	36.8	33.8	35.1	35.7
11598	83.8	9.2	NO SURVIVING PUPS		
11599	23.6	NO SURVIVING PUPS			

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 8): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 8 — 0.4 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
10999	88.0	93.2	100.9	119.5	129.8
11000	80.9	85.5	92.8	106.8	118.1
11001	59.3	96.5	96.7	112.3	119.0
11002	81.6	87.7	101.1	113.1	124.6
11003	77.4	84.0	91.8	107.5	115.5
11004	86.1	82.1	77.5	85.0	92.0
11005	84.1	89.2	96.3	109.3	118.6
11006	105.6	110.8	119.5	129.2	146.4
11007	103.0	109.5	121.0	135.3	144.9
11008	80.7	87.5	97.1	a	120.6
11600	92.5	93.9	100.7	116.1	132.0
11601	107.6	115.8	131.1	147.0	161.4
11602	57.7	61.3	66.0	74.1	81.6
11603	85.1	84.4	85.6	82.2	94.2
11604	71.9	76.6	85.9	94.6	101.5
11605	92.4	100.7	109.5	118.3	126.5
11606	59.4	66.0	72.1	80.7	90.8
11607	87.7	98.3	109.9	122.5	136.2
11608	107.3	113.6	125.8	a	147.4
11609	96.6	102.4	109.0	117.5	129.7

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.
a. Value was not recorded.

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TABLE 37 (PAGE 9): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 9 0.8 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
11009	85.4	88.0	93.8	101.1	101.8
11010	94.1	95.0	84.7	94.4	101.6
11011	97.5	107.1	111.3	131.0	139.2
11012	98.0	90.0	99.5	115.0	121.8
11013	76.9	73.7	78.6	89.3	95.2
11014	NOT PREGNANT				
11015	79.8	72.4	69.5	64.4	62.5
11016	64.7	68.5	76.0	86.2	96.5
11017	NOT PREGNANT				
11018	70.7	78.3	87.8	100.1	113.4
11610	NOT PREGNANT				
11611	87.9	94.9	106.2	117.2	125.7
11612	85.4	94.0	102.2	111.6	120.9
11613	83.0	96.2	108.3	123.0	135.2
11614	102.1	111.5	119.5	132.2	147.9
11615	82.2	93.9	105.4	121.2	133.5
11616	80.3	84.6	94.1	103.5	112.3
11617	93.3	89.7	93.7	100.8	109.9
11618	74.2	73.5	81.1	86.3	99.6
11619	75.2	80.7	86.6	95.0	98.1

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 10): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 10 — 1 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
11019	79.8	82.5	91.9	104.1	107.8
11020	93.7	101.1	109.1	124.4	133.0
11021	119.4	110.7	117.2	131.2	140.5
11022	NOT PREGNANT				
11023	87.8	74.1	81.9	92.7	100.5
11024	70.8	61.3	68.8	80.5	90.1
11025	107.0	113.4	124.9	137.9	153.8
11026	76.6	81.8	91.9	90.1	96.2
11027	88.4	94.0	99.1	109.3	115.9
11028	101.1	91.2	96.1	108.4	116.3
11620	74.2	69.6	73.9	80.0	87.8
11621	86.2	92.0	103.0	114.2	122.4
11622	73.9	71.4	77.7	87.7	94.4
11623	75.9	72.2	73.9	78.5	81.0
11624	85.6	91.0	100.2	111.0	123.9
11625	101.6	107.0	113.0	121.8	125.4
11626	88.7	95.0	104.9	113.1	117.5
11627	62.4	25.6	NO SURVIVING PUPS		
11628	88.5	85.7	90.7	102.4	111.0
11629	68.9	80.4	93.1	105.0	116.3

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 11): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 11 1.2 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
11029	77.7	78.9	84.3	91.3	99.8
11030	NOT PREGNANT				
11031	79.4	84.6	93.2	93.7	100.8
11032	64.0	63.0	44.9	43.7	47.3
11033	89.6	86.5	83.9	87.7	90.1
11034	79.8	70.8	60.6	55.2	49.0
11035	50.0	49.3	45.1	39.7	40.6
11036	111.6	114.2	119.1	113.2	123.7
11037	74.7	73.5	80.8	88.1	97.0
11038	87.5	75.3	55.1	50.6	49.5
11630	40.2	48.4	56.0	63.6	72.6
11631	NOT PREGNANT				
11632	59.4	32.4	34.1	37.7	41.4
11633	90.7	97.2	111.0	119.2	131.1
11634	74.9	83.7	94.6	105.9	116.9
11635	80.4	52.3	45.6	43.9	46.8
11636	91.9	99.1	111.5	120.8	133.2
11637	79.8	76.6	81.6	87.0	90.5
11638	79.1	84.7	88.4	93.0	105.0
11639	79.4	70.2	78.0	90.6	97.6

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 12): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 12 1.6 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
11039	NOT PREGNANT				
11041	89.8	77.9	33.2	24.5	24.2
11042	67.5	NO SURVIVING PUPS			
11043	NOT PREGNANT				
11048	68.2	NO SURVIVING PUPS			
11049	27.6	17.3	18.7	21.1	23.4
11640	84.0	90.2	97.1	99.7	108.2
11641	67.0	54.1	60.1	64.3	69.7
11642	84.3	86.8	96.5	108.7	121.7
11643	68.2	30.2	19.5	15.5	12.9
11644	66.5	60.9	67.9	73.5	75.7
11645	52.9	NO SURVIVING PUPS			
11646	77.5	67.0	75.7	85.0	93.0
11647	57.5	8.6	4.7	5.2	5.5
11648	55.1	51.6	56.8	65.1	73.8
11649	82.6	20.3	10.1	9.7	NO SURVIVING PUPS
11650	70.4	66.8	72.0	82.6	90.1
11651	43.9	40.1	42.5	42.6	48.7
11652	NOT PREGNANT				
11653	75.6	68.0	66.5	72.6	78.7

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 37 (PAGE 13): PUP BODY WEIGHTS POOLED BY LITTER FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION LITTERS

MATERNAL DOSAGE GROUP 13 — 2 MG/KG PFOS

RAT/ LITTER NUMBER	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
11055	65.7	19.6	9.6	NO SURVIVING PUPS	
11057	49.5	NO SURVIVING PUPS			
11059	88.4	80.4	86.0	91.9	99.0
11061	79.6	17.5	NO SURVIVING PUPS		
11064	54.9	5.0	NO SURVIVING PUPS		
11065	71.4	NO SURVIVING PUPS			
11654	78.2	46.6	45.5	53.0	57.4
11655	83.8	72.9	78.5	82.3	91.7
11656	65.2	70.2	76.9	83.1	88.3
11657	23.8	4.4	NO SURVIVING PUPS		
11658	8.6	NO SURVIVING PUPS			
11659	NO SURVIVING PUPS				
11660	75.3	14.2	NO SURVIVING PUPS		
11661	14.4	NO SURVIVING PUPS			
11662	71.2	14.9	5.1	5.1	5.0
11663	72.5	NO SURVIVING PUPS			
11664	49.1	NO SURVIVING PUPS			
11665	82.1	22.4	9.5	9.1	NO SURVIVING PUPS
11666	NOT PREGNANT				
11667	19.4	NO SURVIVING PUPS			

DAY = DAY POSTPARTUM ALL WEIGHTS WERE RECORDED IN GRAMS (G). POOLED LITTER WEIGHTS INCLUDE ONLY WEIGHTS OF LIVE PUPS.

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TABLE 38 (PAGE 1): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 1																				VEHICLE CONTROL		
10906	M A	M A	M A	M A	M A	M A	M A	M A	M A	MM	2	F A	F A	F A	F A	F A	F A						
10909	M A	M A	M A	M A	M A	M A	M S	F A	F A	F A	F A	F A	F A	F A	F A	F A							
10911	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	FD 4						
10913	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FM 5	FD 2						
10914	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A													
11501	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F S											
11502	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F S							
11503	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11504	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 3								
11505	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FM 2						
11506	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A								
11507	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A													
11508	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F S	F S										
11509	M A	M A	F A	F A	F A	F A	F A	F A															
11510	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A								
11511	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A									
11512	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 1									
11513	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A												
11514	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A								

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
NUMBER FOLLOWING "SECOND LETTER" INDICATES THE DAY POSTPARTUM THE EVENT OCCURRED.

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TABLE 38 (PAGE 2): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 2																						MEVALONIC ACID CONTROL
10921	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	
10922	M	A	M	A	M	A	M	A	M	A	M	A	MM	3	F	A	F	A	F	A	F	A	
10923	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F A
10924	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	
10926	MORIBUND SACRIFICED ON DAY 12 OF GESTATION; DEATH WAS ATTRIBUTED TO AN INTUBATION ACCIDENT																						
10927	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	F A
11515	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A			
11516	M	A	M	A	M	A	M	A	M	A	M	A	M	S	F	A	F	A	F	A	F	A	F S
11517	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	F	A	
11518	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A			
11519	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	FD	1	
11520	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A			
11521	M	A	M	A	MM	3	F	A	F	A	F	A											
11522	NOT PREGNANT																						
11523	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F A
11524	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A							
11525	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	
11526	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	S	
11527	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A					
11528	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
NUMBER FOLLOWING "SECOND LETTER" INDICATES THE DAY POSTPARTUM THE EVENT OCCURRED.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 38 (PAGE 3): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 3																				1.6 MG/KG PFOS + MEVALONIC ACID		
10929	M	A	M	A	M	A	M	A	M	A	MD	4	MD	2	F	A	F	A	F	A	F	A	FD 2
10936	FOUND DEAD ON DAY 2 OF STUDY																						
10938	M	A	M	A	M	A	M	A	MM	2	MM	2	MD	2	MD	1	F	A	F	A	FM	2	FM 2	FM 2	FM 2	FD 1
10939	NOT PREGNANT																						
10941	MM	4	MM	2	MM	2	MM	2	MM	2	MD	1	MD	1	FM	4	FM	4	FM	3	FM	2	
10942	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	FM 4
11529	M	A	M	A	M	A	M	A	M	A	MM	4	MM	3	MD	2	F	A	F	A	F	A	F	A	F	A	FD 2	FM 2	FD 1
11530	M	A	M	A	M	A	M	A	M	A	MM	2	F	A	F	A	F	A	F	A	F	A	FD 2	FM 2	F	S	F	S
11531	NOT PREGNANT																						
11532	MM	2	MM	2	MM	2	MM	2	MD	2	MD	2	M	S	M	S	FD	2	FD	2	FD	2	FD 2	FM 2	FD 1
11533	MM	3	MM	2	MD	1	MD	1	FD	1	FD	1	FD	1	FD	1	FD	1	FD	1			
11534	M	A	M	A	M	A	M	A	MM	3	M	S	F	A	F	A	F	A	FD	2	FD	2	FD 2	FD 2	FD 2	FD 2	FD 1
11535	MD	2	MD	2	MD	2	MD	2	MD	2	MM	2	FD	2	FD	2	FD	2	FD	2	FD	2	FD 2	FD 2	FD 2		
11536	M	A	M	A	M	A	MM	2	F	A	F	A	F	A	F	A	FM	2					
11537	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	F	A	F	A	F	A	F	A		
11538	M	A	M	A	M	A	MD	2	MD	1	MD	1	MD	1	F	A	F	A	FD	1	FD	1	FD 1					
11539	MD	3	MD	3	MD	2	MD	2	FM	3	FD	2	FD	2	FD	2	FD	2					
11540	M	A	MD	2	MD	2	MD	2	MM	2	MM	2	MM	2	MM	2	MM	2	F	A	FD	2	FD 2	FM 2	FM 2	F	S	
11541	MD	2	MD	2	MD	2	MD	2	MD	2	MM	2	MM	2	FD	2	FD	2	FD	2	FD	2	FD 2					
11542	M	A	MM	3	MM	3	MD	2	MD	2	MD	2	MD	2	MD	2	F	A	FM	4	FD	3	FM 3	FD 2	FD 2	FD 2		
11543	M	A	M	A	M	A	F	A	F	A	F	A	F	A	F	A	F	A	F	A	FD 1							

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 4): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 4																					2 MG/KG PFOS + MEVALONIC ACID	
10943	MD 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 1									
10944	MD 2	MD 2	MD 2	MM 2	MM 2	MM 2	MM 2	MM 2	MM 2	MM 3	FM 2	FM 5	FM 3										
10948	MM 2	MD 1	MD 1	MD 1	MD 1	MD 1	FM 4	FM 3	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1									
10952	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2								
10955	MD 2	MD 2	MD 1	M S	FD 2	FD 2	FD 2	FD 2	FM 2	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1								
10956	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	M S	FM 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2							
11544	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2								
11545	MM 2	MM 2	MM 2	MM 2	MD 1	FM 2	FM 2	FM 2	FD 2	FD 2	FD 2	FD 1	FD 1										
11546	MD 1	MD 1	MD 1	MD 1	MD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1								
11547	MM 5	MM 5	MM 2	MM 2	MM 2	MD 1	F A	FM 4	FD 3	FM 3	FD 2	FD 2	FD 2	FM 2	FD 1								
11548	NOT PREGNANT																						
11549	MM 2	MM 2	MM 2	MM 2	MD 2	MD 2	FM 2	FD 2	FD 2	FD 1	FD 1	FD 1	FD 1	FD 1									
11550	MD 3	MD 3	MM 3	MD 2	MD 1	FM 4	FM 3	FM 3	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 1								
11551	MM 3	MM 2	MD 1	MD 1	MD 1	MD 1	FM 2	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1										
11552	M A	M A	MD 3	MM 2	MD 1	MD 1	MD 1	MD 1	FD 4	FM 2	FD 1	FD 1	FD 1	FD 1									
11553	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2				
11554	MD 2	MD 2	MD 2	MD 2	MM 2	FD 3	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 1	FD 1		
11555	MD 3	MD 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2								
11556	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1						
11557	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1						

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 5): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 5																						CHOLESTEROL CONTROL
10957	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A												
10966	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A								
10967	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A								
10968	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A								
10969	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FD 2	F S					
10970	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	FM 3					
11558	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A								
11559	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A			
11560	NOT PREGNANT																						
11561	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A							
11562	MORIBUND SACRIFICED ON DAY 16 OF STUDY																						
11563	M A	M A	M A	M A	M A	M A	M A	M A	MD 3	F A	F A	F A	F A	F A	F A	F A							
11564	M A	M A	M A	M A	MD 2	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11565	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11566	NOT PREGNANT																						
11567	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F S											
11568	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A								
11569	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	FD 5						
11570	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A										
11571	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A											

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 6): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 6																					1.6 MG/KG PFOS + CHOLESTEROL	
10971	MM 3	MM 3	MD 2	M S	FM 3	FM 3	FM 3	FD 2															
10973	MD 3	MM 3	MM 3	MM 3	MM 3	MD 2	MD 2	FM 4	FM 3	FM 3	FM 3	FD 2	FD 2										
10977	M A	M A	M A	M A	MM 2	MM 2	MD 2	MD 1	MD 1	F A	FM 2	FD 2	FD 2	FD 2	FD 1								
10979	M A	M A	M A	M A	M A	M A	M A	M A	MD 4	MD 1	F A	F A	F A	F A	FD 1								
10983	M A	M A	M A	M A	M A	M A	M A	M A	M A	MD 3	MM 3	MM 3	F A	F A	F A								
10984	MD 3	MD 3	MD 3	MD 3	MD 3	MD 3	MD 2	FD 3	FD 3	FD 3	FD 3	FD 3	FD 3	FD 3	FD 2	FD 2							
11572	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	FM 3	FM 3	FD 2	FD 2													
11573	MM 3	MM 3	MM 3	MD 2	FD 3	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2									
11574	M A	M A	MD 1	MD 1	F A	F A	F A	F A	FM 3	FM 3	FD 1	FD 1	FD 1										
11575	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	FD 1										
11576	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A											
11577	MD 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MM 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2							
11578	M A	M A	M A	M A	M A	M A	MD 1	F A	F A	F A	F A	F A	F A										
11579	MM 3	MD 2	MD 2	MM 2	MM 2	MM 2	MM 2	MM 2	MM 2	F A	F A	FM 3	FD 2	FD 2	FM 2	FM 2	FD 1						
11580	M A	M A	M A	M A	M A	M A	MM 3	MD 2	MM 2	F A	F A	F A	F A	FM 3	FM 3	FD 1							
11581	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 1	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2										
11582	M A	M A	MD 2	F A	F A	F A	F A	FD 4	FD 4	FD 4	FD 3	FD 2											
11583	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 2									
11584	M A	MD 4	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 1	FD 1								
11585	MD 5	MM 3	MM 3	MD 2	MM 2	MM 2	MD 1	M S	FD 5	FM 3	FD 2	FD 2	FD 2										

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 7): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 7															2 MG/KG PFOS + CHOLESTEROL							
10986	MD 3	MD 3	MD 3	MD 3	MD 3	MM 3	MM 3	MD 2	FD 3	FD 3	FD 3	FM 3	FD 2	FD 2	FD 2								
10994	MM 3	MD 2	MD 2	MM 2	MM 2	MM 2	MM 2	FD 2	FD 2	FM 2	FM 2	FM 2	FM 2	FM 2	FM 2								
10995	M A	M A	M A	MD 4	MD 2	MM 2	MM 2	F A	F A	F A	FM 3	FD 2	FM 2	FM 2	FM 2								
10996	MM 2	MD 2	MD 2	MD 2	MD 2	FM 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2									
10997	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	MM 2	F A	F A	F A	F A								
10998	NOT PREGNANT																						
11586	MM 3	MD 2	MD 2	MD 2	MD 2	MM 2	MM 2	M S	FM 3	FM 3	FM 3	FD 3	FD 2	FD 2									
11587	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2										
11588	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	F S									
11589	MD 5	MD 3	MD 2	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	FD 1	FD 1	FD 1	FD 1										
11590	MM 3	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FM 3	FM 3	FM 3	FD 2	FD 2	FD 1							
11591	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MM 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2	FD 1			
11592	M A	M A	MD 3	MM 3	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	F A	F A	F A	FD 2								
11593	M A	MD 3	MM 2	MM 2	MD 1	F A	F A	F A	F A	F A	FM 2	FM 2	FM 2										
11594	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 5	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2						
11595	M U																						
11596	MD 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MM 2	FD 2	FD 2	FD 2	FM 2									
11597	M A	M A	M A	MM 2	MD 1	F A	F A	FM 3	FD 2	FD 1													
11598	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FM 3	FD 2	FD 2	FD 2								
11599	MD 2	MD 2	MM 2	MM 2	MD 1	MD 1	MD 1	MD 1	FM 2	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1						

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 8): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 8															0.4 MG/KG PFOS							
10999	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F S							
11000	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11001	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A							
11002	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A								
11003	M A	M A	M A	M A	M A	M A	M A	MD 1	MD 1	M S	F A	F A	F A	F A	F A	F S							
11004	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 3							
11005	M A	M A	M A	M A	M A	M S	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11006	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F S					
11007	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A						
11008	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F S								
11600	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F S							
11601	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A						
11602	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A													
11603	M A	M A	M A	M A	M A	MD 4	F A	F A	F A	F A	F A	F A	F A	FD 4	FD 2	F S							
11604	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A										
11605	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A							
11606	M A	M A	M A	M A	F A	F A	F A	F A	F A	F S													
11607	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A									
11608	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A			
11609	M A	M A	M A	M A	M A	M A	MD 1	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
NUMBER FOLLOWING "SECOND LETTER" INDICATES THE DAY POSTPARTUM THE EVENT OCCURRED.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 38 (PAGE 9): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 9																					0.8 MG/KG PFOS	
11009	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A										
11010	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FM 3	FM 3	FM 3				
11011	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A						
11012	M A	M A	M A	M A	M A	M A	M A	MM 2	M A	F A	F A	F A	F A	F A	F A	F A	FD 2						
11013	M A	M A	M A	M A	M A	M A	M A	M A	MD 1	F A	F A	F A	F A	F A	F A	F A	FD 2						
11014	NOT PREGNANT																						
11015	M A	M A	M A	M A	MD 4	MM 2	F A	F A	F A	F A	F A	F A	F A	FD 5	FD 4	FD 3	FD 2						
11016	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F S										
11017	NOT PREGNANT																						
11018	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A												
11610	NOT PREGNANT																						
11611	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A								
11612	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A									
11613	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A									
11614	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	MM 3	F A	F A	F A	F A	F A	F A					
11615	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A										
11616	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A								
11617	M A	M A	M A	M A	M A	M A	M A	M A	M A	MD 2	F A	F A	F A	F A	F A	F A	FD 2						
11618	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	FD 4	F S											
11619	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A										

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 38 (PAGE 10): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 10																1 MG/KG PFOS						
11019	M A	M A	M A	M A	M A	M A	MD 5	F A	F A	F A	F A	F A	F A	F A									
11020	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A								
11021	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A						
11022	NOT PREGNANT																						
11023	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FM 2	FM 2	FM 2							
11024	M A	M A	M A	M A	M A	M A	MD 2	F A	F A														
11025	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A						
11026	M A	M A	M A	M A	M A	M A	MD 4	F A	F A	F A	F A	F A	F A										
11027	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A								
11028	M A	M A	M A	M A	M A	M A	M A	M A	MM 2	MD 1	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 2			
11620	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FM 2								
11621	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A								
11622	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	FD 2									
11623	M A	M A	M A	M A	M A	M A	M A	MM 2	MD 1	F A	F A	F A	F A	FM 5									
11624	M A	M A	M A	M S	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F S							
11625	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FM 5							
11626	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A									
11627	MD 3	MD 3	MM 3	MM 3	MM 3	MD 2	MD 2	MD 2	MM 2	MM 2	FD 3	FD 2	FD 2	FM 2	FD 1								
11628	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FM 2							
11629	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	FD 1												

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 38 (PAGE 11): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 11																				1.2 MG/KG PFOS		
11029	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 1							
11030	NOT PREGNANT																						
11031	M A	M A	M A	M A	M A	M A	M A	M A	M A	MM 4	F A	F A	F A	F A									
11032	M A	M A	M A	M A	M A	MM 4	MD 3	MM 3	MM 3	F A	F A	FM 4	FM 3										
11033	M A	M A	M A	M A	M S	F A	F A	F A	F A	F A	F A	F A	F A	FM 4	FM 2								
11034	M A	MD 5	MD 3	MD 2	F A	F A	F A	F A	F A	F A	F A	FD 4	FD 3										
11035	M A	M A	M A	M A	MM 4	MM 3	F A	F A	F A	F A	FD 1												
11036	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	MD 4	MD 4	F A	F A	F A	F A	F A						
11037	M A	M A	M A	MD 1	MD 1	F A	F A	F A	F A	F A	F A	F A	F A	F A	F A	FD 1							
11038	M A	M A	M A	M A	MD 5	MD 4	MM 3	MD 3	MD 2	F A	F A	F A	F A	F A	FM 3	FD 3	FD 3	FD 2					
11630	M A	M A	M A	F A	F A	F A	F A																
11631	NOT PREGNANT																						
11632	M A	M A	M A	MD 2	MD 2	F A	F A	FD 2	FD 2														
11633	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A						
11634	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A										
11635	M A	M A	M A	M A	M A	MD 3	MD 2	MD 2	MD 2	MD 2	F A	F A	F A	FM 4									
11636	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A							
11637	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FD 1								
11638	M A	M A	M A	M A	MD 3	F A	F A	F A	F A	F A	F A	F A	F A	F A									
11639	M A	M A	M A	M A	M A	M A	M A	MM 2	F A	F A	F A	F A	F A	F A	F A	FD 2							

FIRST LETTER -- M-MALE, F-FEMALE
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TABLE 38 (PAGE 12): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 12																				1.6 MG/KG PFOS		
11039	NOT PREGNANT																						
11041	MD 3	MD 3	MD 3	MM 3	MM 3	MM 3	F A	F A	F A	F A	F A	F A	FD 4	FD 4	FD 3	FD 3	FD 3	FD 2					
11042	MD 2	MD 2	MD 2	MD 2	MD 2	MM 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2	FM 2	FD 1	FD 1							
11043	NOT PREGNANT																						
11048	MD 2	MD 2	MD 2	MM 2	MM 2	MM 2	MM 2	FD 2	FD 2	FM 2	FM 2	FM 2	FM 2	FM 2	FD 1								
11049	M A	M A	MM 2	F A	FM 2	FD 1																	
11640	M A	M A	M A	M A	M A	M A	M A	MM 4	F A	F A	F A	F A	F A	F A	F A	F A							
11641	M A	M A	M A	M A	MD 2	MD 1	F A	F A	F A	F A	F A	F A	FM 2	FM 2	FD 1								
11642	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	F A							
11643	MD 5	MD 2	MD 2	MD 2	F A	F A	FD 4	FM 3	FD 3	FM 2	FD 2	FD 2											
11644	M A	M A	M A	M A	M A	M A	MD 5	MM 2	F A	F A	F A	F A	FM 2	FD 1									
11645	MM 2	MM 2	MM 2	MD 2	MD 2	MD 2	M S	M S	M S	FM 2	FD 2	FD 2	FD 2	F S									
11646	M A	M A	M A	F A	F A	F A	F A	F A	F A	FM 2													
11647	MM 2	MM 2	MM 2	MM 2	F A	FM 3	FD 2	FD 2	FM 2	FM 2	FM 2												
11648	M A	M A	M A	M A	MD 2	MD 1	F A	F A	F A	F A	F A	F A	FD 1										
11649	MM 5	MM 5	MM 3	MD 2	MD 2	MD 2	MM 2	MM 2	FM 3	FD 2	FD 2	FD 2	FD 2	FM 2	FM 2	FM 2	FD 1						
11650	M A	M A	M A	M A	M A	MD 2	F A	F A	F A	F A	F A	F A											
11651	M A	M A	M A	M A	MD 4	F A	F A	FD 2	FD 1	FD 1	FD 1												
11652	NOT PREGNANT																						
11653	M A	M A	M A	M A	M A	M A	M A	MD 2	M A	F A	F A	F A	F A	FD 3									

FIRST LETTER -- M-MALE, F-FEMALE
SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 38 (PAGE 13): PUP VITAL STATUS AND SEX FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

PUP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RAT/ LITTER #	MATERNAL DOSAGE GROUP 13																				2 MG/KG PFOS		
11055	MM 4	MM 4	MM 2	MD 2	MD 2	FM 3	FM 3	FM 2	FM 2	FM 2	FD 2	FD 2	FD 2	FD 1									
11057	MM 2	MM 2	MD 2	MD 2	FM 2	FM 2	FM 2	FD 2	FD 2	FD 1													
11059	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	M A	F A	F A	FM 2	FM 2								
11061	MM 3	MM 3	MD 2	MD 2	MD 2	MD 2	MD 2	FM 3	FM 3	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2						
11064	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MM 3	FD 2	FD 2	FD 2													
11065	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2								
11654	M A	M A	M A	M A	M A	MD 3	F A	F A	F A	F A	F A	FD 2	FM 2	FM 2	FM 2	FM 2							
11655	M A	M A	M A	M A	M A	F A	F A	F A	F A	F A	F A	F A	FD 4	FM 2	FM 2								
11656	M A	M A	M A	M A	M A	MD 1	MD 1	F A	F A	F A	F A	F A	F A										
11657	MD 3	MM 2	MD 2	MD 1	MD 1	MD 1	MD 1	MD 1	FM 2	FD 2	FD 1	FD 1	FD 1										
11658	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	FM 2	FM 2	FD 1	FD 1	FD 1	FD 1									
11659	MD 1	MD 1	FD 1	FD 1	FD 1	FD 1																	
11660	MD 3	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	FM 3	FM 3	FD 2	FD 2	FD 2									
11661	MD 2	MD 1	MD 1	MD 1	MD 1	MD 1	FD 2	FD 2	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1	FD 1								
11662	MD 3	MD 3	MD 2	MD 2	MD 2	MM 2	MM 2	MM 2	MM 2	F A	FM 2	FM 2	FM 2										
11663	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MD 1	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2	FD 1					
11664	MD 2	MD 2	MD 2	MD 2	MD 2	MD 2	MM 2	MD 1	FD 2	FD 2	FD 2	FD 1											
11665	MM 5	MM 3	MD 2	MM 2	MM 2	MM 2	FM 5	FD 3	FM 3	FD 2	FD 2	FD 2	FD 2	FD 2	FD 2	FM 2	FM 2						
11666	NOT PREGNANT																						
11667	MM 2	MM 2	MD 1	MD 1	MD 1	MD 1	MD 1	MD 1	M S	FM 2	FM 2	FD 1	FD 1	FD 1	FD 1	FD 1							

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SECOND LETTER -- A-ALIVE, S-STILLBORN, U-UNCERTAIN, D-DIED, M-MISSING (PRESUMED CANNIBALIZED)
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TABLE 39 (PAGE 1): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY (S) POSTPARTUM	OBSERVATIONS a	
1 VEHICLE CONTROL	10906	4- 5	1/15 PUPS:	TIP OF TAIL BLACK.b
	11504	2	1/15 PUPS:	COLD TO TOUCH.
2 MEVALONIC ACID CONTROL	-	-		-
3 1.6 MG/KG PFOS + MEVALONIC ACID	10929	3	1/11 PUPS:	NOT NURSING.
	10941	3	3/ 4 PUPS:	COLD TO TOUCH. NOT NURSING.
	11530	3	1/10 PUPS:	DECREASED MOTOR ACTIVITY.
	11532	2	1/11 PUPS:	NO MILK IN STOMACH.
	11542	1	15/15 PUPS:	NOT NURSING.
4 2 MG/KG PFOS + MEVALONIC ACID	10944	4	1/ 1 PUP:	NOT NURSING.
	11547	5	1/ 3 PUPS:	NOT NURSING.
	11549	1	1/14 PUPS:	DISTAL PORTION OF TAIL MISSING.
	11550	2	6/12 PUPS:	COLD TO TOUCH.
	11552	5	2/ 2 PUPS:	COLD TO TOUCH.
	11553	1	17/17 PUPS:	NOT NURSING.
		2	2/17 PUPS:	COLD TO TOUCH.
	11554	1	15/17 PUPS:	NOT NURSING.
	11555	1	1/14 PUPS:	NOT NURSING.
		2	2/14 PUPS:	COLD TO TOUCH.

a. Tabulation restricted to adverse observations; all other pups appeared normal.
b. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 39 (PAGE 2): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY (S) POSTPARTUM	OBSERVATIONS a
5 CHOLESTEROL CONTROL	10957	3- 5	1/11 PUPS: TIP OF TAIL BLACK.b
	10967	4- 5	1/15 PUPS: RIGHT EYE, EXOPHTHALMOS.b
	11559	4- 5	1/18 PUPS: RIGHT EYE, EXOPHTHALMOS.
	11563	4	1/15 PUPS: SWOLLEN 56,57. COLD TO TOUCH.
	11567	4- 5	1/10 PUPS: TIP OF TAIL MISSING.b
6 1.6 MG/KG PFOS + CHOLESTEROL	10984	1	1/16 PUPS: COLD TO TOUCH. NOT NURSING.
		2	13/16 PUPS: COLD TO TOUCH.
	11572	2	3/10 PUPS: COLD TO TOUCH.
	11573	2	4/13 PUPS: NOT NURSING.
	11574	2	8/ 8 PUPS: COLD TO TOUCH.
	11577	1	2/16 PUPS: DECREASED MOTOR ACTIVITY.
		2	1/16 PUPS: COLD TO TOUCH. NOT NURSING.
	11578	1	1/13 PUPS: DISTAL PORTION OF TAIL MISSING.
		2- 5	1/12 PUPS: DISTAL PORTION OF TAIL MISSING.b
	11580	2	13/15 PUPS: COLD TO TOUCH.
		3	10/13 PUPS: COLD TO TOUCH.

a. Tabulation restricted to adverse observations; all other pups appeared normal.
b. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 39 (PAGE 3): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY (S) POSTPARTUM	OBSERVATIONS a
7 2 MG/KG PFOS + CHOLESTEROL	10986	2	11/15 PUPS: COLD TO TOUCH. DECREASED MOTOR ACTIVITY.
	10994	1	2/15 PUPS: NOT NESTING. NOT NURSING. DECREASED MOTOR ACTIVITY.
	10995	5	6/ 6 PUPS: COLD TO TOUCH.
	10997	1	1/16 PUPS: COLD TO TOUCH. NOT NESTING.
		5	1/15 PUPS: COLD TO TOUCH. NOT NESTING. NOT NURSING.
	11587	2	1/13 PUPS: NOT NURSING.
	11588	1	13/14 PUPS: NOT NURSING.
	11589	4	1/ 1 PUP: NOT NURSING.
	11590	1	15/16 PUPS: NOT NURSING.
		2	5/15 PUPS: COLD TO TOUCH.
	11592	1	15/15 PUPS: NOT NURSING.
	11593	2	1/12 PUPS: TAIL MISSING.
		3	1/ 7 PUPS: TAIL MISSING.
		4- 5	1/ 6 PUPS: TAIL MISSING.b
	11596	2	1/14 PUPS: COLD TO TOUCH. NOT NURSING.
	11598	2	2/15 PUPS: COLD TO TOUCH.
8 0.4 MG/KG PFOS	11000	1	1/14 PUPS: DECREASED MOTOR ACTIVITY. GASPING. NOT NURSING. NOT NESTING.
	11603	3	1/14 PUPS: DECREASED MOTOR ACTIVITY. LABORED BREATHING. COLD TO TOUCH.

a. Tabulation restricted to adverse observations; all other pups appeared normal.
b. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 39 (PAGE 4): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY (S) POSTPARTUM	OBSERVATIONS a
9			
0.8 MG/KG PFOS	11009	4- 5	1/13 PUPS: TIP OF TAIL BLACK.b
	11015	1	16/16 PUPS: COLD TO TOUCH.
	11617	1	1/17 PUPS: NOT NURSING.
10			
1 MG/KG PFOS	11620	2	1/15 PUPS: TIP OF TAIL MISSING.
		3- 5	1/14 PUPS: TIP OF TAIL MISSING.b
	11624	1	14/16 PUPS: COLD TO TOUCH.
	11628	1	1/17 PUPS: DECREASED MOTOR ACTIVITY.
11			
1.2 MG/KG PFOS	11035	1	10/11 PUPS: COLD TO TOUCH.
		2	10/10 PUPS: COLD TO TOUCH.
	11038	3	12/17 PUPS: COLD TO TOUCH.
	11630	1- 5	1/ 7 PUPS: TAIL MISSING FROM BASE.b
	11633	2	16/16 PUPS: COLD TO TOUCH.
	11635	3	1/10 PUPS: NOT NURSING.
12			
1.6 MG/KG PFOS	11041	5	1/ 5 PUPS: DECREASED MOTOR ACTIVITY. COLD TO TOUCH.
	11643	4	1/ 4 PUPS: COLD TO TOUCH. NOT NURSING.
	11647	5	1/ 1 PUP: COLD TO TOUCH. NOT NURSING.

a. Tabulation restricted to adverse observations; all other pups appeared normal.
b. Observation confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 39 (PAGE 5): CLINICAL OBSERVATIONS FROM BIRTH TO DAY 5 POSTPARTUM - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY (S) POSTPARTUM	OBSERVATIONS a
13 2 MG/KG PFOS	11055	3	1/ 4 PUPS: COLD TO TOUCH. NOT NURSING. 1/ 4 PUPS: NOT NURSING.
	11065	2	2/14 PUPS: COLD TO TOUCH.
	11662	5	1/ 1 PUP: COLD TO TOUCH. NOT NURSING.
	11665	4	2/ 2 PUPS: NOT NURSING.

a. Tabulation restricted to adverse observations; all other pups appeared normal.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 1): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
1 VEHICLE CONTROL	10906	5	ALL PUPS APPEARED NORMAL.
	10909	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10911	4	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10913	2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	10914	5	ALL PUPS APPEARED NORMAL.
	11501	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11502	1	1 PUP: STILLBORN. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11503	5	ALL PUPS APPEARED NORMAL.
	11504	3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11505	5	ALL PUPS APPEARED NORMAL.
	11506	5	ALL PUPS APPEARED NORMAL.
	11507	5	ALL PUPS APPEARED NORMAL.
	11508	1	2 PUPS: STILLBORN. TONGUE PROTRUDED. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11509	5	ALL PUPS APPEARED NORMAL.
	11510	5	ALL PUPS APPEARED NORMAL.
	11511	5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 2): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
1 VEHICLE CONTROL (CONT.)	11512	1	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11513	5	ALL PUPS APPEARED NORMAL.
	11514	5	ALL PUPS APPEARED NORMAL.
2 MEVALONIC ACID CONTROL	10921	5	ALL PUPS APPEARED NORMAL.
	10922	5	ALL PUPS APPEARED NORMAL.
	10923	5	ALL PUPS APPEARED NORMAL.
	10924	5	ALL PUPS APPEARED NORMAL.
	10927	5	ALL PUPS APPEARED NORMAL.
	11515	5	ALL PUPS APPEARED NORMAL.
	11516	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11517	5	ALL PUPS APPEARED NORMAL.
	11518	5	ALL PUPS APPEARED NORMAL.
	11519	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11520	5	ALL PUPS APPEARED NORMAL.
	11521	5	ALL PUPS APPEARED NORMAL.
	11523	5	ALL PUPS APPEARED NORMAL.
	11524	5	ALL PUPS APPEARED NORMAL.
	11525	5	ALL PUPS APPEARED NORMAL.
	11526	1	1 PUP: STILLBORN. NO ORAL OPENING, NO EYES, EARS DISPLACED. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11527	5	ALL PUPS APPEARED NORMAL.
	11528	5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 3): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
3 1.6 MG/KG PFOS + MEVALONIC ACID	10929	2	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	10938	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	10941	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10942	5	ALL PUPS APPEARED NORMAL.
	11529	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11530	1	2 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11532	1	2 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	6 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 4): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
3 1.6 MG/KG PFOS + MEVALONIC ACID (CONT.)	11533	1	8 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11534	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
			1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	6 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11535	2	13 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11536	5	ALL PUPS APPEARED NORMAL.
	11537	5	ALL PUPS APPEARED NORMAL.
	11538	1	4 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
			2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11539	2	6 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11540	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	5 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11541	2	10 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 5): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
3 1.6 MG/KG PFOS + MEVALONIC ACID (CONT.)	11542	2	7 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
			1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11543	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
4 2 MG/KG PFOS + MEVALONIC ACID	10943	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	8 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
			3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10944	2	3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10948	1	10 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10952	2	14 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	10955	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
			7 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	6 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 6): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
4 2 MG/KG PFOS + MEVALONIC ACID (CONT.)	10956	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	13 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11544	2	14 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11545	1	3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11546	1	11 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
			3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11547	1	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		2	3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	PUP APPEARED NORMAL.
	11549	1	5 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11550	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
			4 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 7): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
4 2 MG/KG PFOS + MEVALONIC ACID (CONT.)	11551	1	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 7 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11552	1	7 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11553	2	15 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11554	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 10 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11555	2	12 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11556	1	16 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11557	1	10 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 8): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
5 CHOLESTEROL CONTROL	10957	5	ALL PUPS APPEARED NORMAL.
	10966	5	ALL PUPS APPEARED NORMAL.
	10967	5	ALL PUPS APPEARED NORMAL.
	10968	5	ALL PUPS APPEARED NORMAL.
	10969	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10970	5	ALL PUPS APPEARED NORMAL.
	11558	5	ALL PUPS APPEARED NORMAL.
	11559	5	ALL PUPS APPEARED NORMAL.
	11561	5	ALL PUPS APPEARED NORMAL.
	11563	3	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11564	2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11565	5	ALL PUPS APPEARED NORMAL.
	11567	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11568	5	ALL PUPS APPEARED NORMAL.
	11569	5	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. ALL OTHER PUPS APPEARED NORMAL.
	11570	5	ALL PUPS APPEARED NORMAL.
	11571	5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 9): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
6 1.6 MG/KG PFOS + CHOLESTEROL	10971	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	10973	2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. CANNIBALIZATION PRECLUDED FURTHER EVALUATION.
	10977	1	3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10979	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10983	3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	10984	2	3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	12 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
			1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11572	2	6 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
			1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 10): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
6 1.6 MG/KG PFOS + CHOLESTEROL (CONT.)	11573	2	9 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11574	1	5 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11575	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11576	5	ALL PUPS APPEARED NORMAL.
	11577	2	13 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11578	1	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11579	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	4 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11580	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 11): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
6 1.6 MG/KG PFOS + CHOLESTEROL (CONT.)	11581	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	12 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11582	2	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11583	2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11584	1	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11585	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	4 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 12): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
7 2 MG/KG PFOS + CHOLESTEROL	10986	2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	8 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10994	2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10995	2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		4	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	10996	2	11 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	10997	5	ALL PUPS APPEARED NORMAL.
	11586	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	6 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11587	2	12 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11588	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	13 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11589	1	9 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
			1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 13): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
7 2 MG/KG PFOS + CHOLESTEROL (CONT.)	11590	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	8 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11591	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	14 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11592	2	7 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11593	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11594	2	15 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11596	2	11 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11597	1	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 14): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
7 2 MG/KG PFOS + CHOLESTEROL (CONT.)	11598	2	13 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11599	1	11 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
8 0.4 MG/KG PFOS	10999	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11000	5	ALL PUPS APPEARED NORMAL.
	11001	5	ALL PUPS APPEARED NORMAL.
	11002	5	ALL PUPS APPEARED NORMAL.
	11003	1	2 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11004	3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11005	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11006	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11007	5	ALL PUPS APPEARED NORMAL.
	11008	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 15): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
8			
0.4 MG/KG PFOS (CONT.)	11600	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11601	5	ALL PUPS APPEARED NORMAL.
	11602	5	ALL PUPS APPEARED NORMAL.
	11603	1	1 PUP: STILLBORN. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		4	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11604	5	ALL PUPS APPEARED NORMAL.
	11605	5	1 PUP: LIVER, MEDIAN LOBE, TAN AREA (4.0 CM IN DIAMETER). ALL OTHER PUPS APPEARED NORMAL.b
	11606	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11607	5	ALL PUPS APPEARED NORMAL.
	11608	5	ALL PUPS APPEARED NORMAL.
	11609	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
9			
0.8 MG/KG PFOS	11009	5	ALL PUPS APPEARED NORMAL.
	11010	5	ALL PUPS APPEARED NORMAL.
	11011	5	ALL PUPS APPEARED NORMAL.
	11012	2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.
b. Necropsy observations were not recorded for ten of the sixteen pups.

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TABLE 40 (PAGE 16): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
9 0.8 MG/KG PFOS (CONT.)	11013	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11015	2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
			1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. ALL OTHER PUPS APPEARED NORMAL.
	11016	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11018	5	ALL PUPS APPEARED NORMAL.
	11611	5	ALL PUPS APPEARED NORMAL.
	11612	5	ALL PUPS APPEARED NORMAL.
	11613	5	ALL PUPS APPEARED NORMAL.
	11614	5	ALL PUPS APPEARED NORMAL.
	11615	5	ALL PUPS APPEARED NORMAL.
	11616	5	ALL PUPS APPEARED NORMAL.
	11617	2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11618	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11619	5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 17): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
10 1 MG/KG PFOS	11019	5	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. ALL OTHER PUPS APPEARED NORMAL.
	11020	5	ALL PUPS APPEARED NORMAL.
	11021	5	ALL PUPS APPEARED NORMAL.
	11023	5	ALL PUPS APPEARED NORMAL.
	11024	2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11025	5	ALL PUPS APPEARED NORMAL.
	11026	4	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11027	5	ALL PUPS APPEARED NORMAL.
	11028	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11620	5	ALL PUPS APPEARED NORMAL.
	11621	5	ALL PUPS APPEARED NORMAL.
	11622	2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11623	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11624	1	2 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 18): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
10			
1 MG/KG PFOS (CONT.)	11625	5	ALL PUPS APPEARED NORMAL.
	11626	5	ALL PUPS APPEARED NORMAL.
	11627	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
			4 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11628	5	ALL PUPS APPEARED NORMAL.
	11629	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
11			
1.2 MG/KG PFOS	11029	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11031	5	ALL PUPS APPEARED NORMAL.
	11032	3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11033	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11034	2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		4	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. ALL OTHER PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 19): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
11 1.2 MG/KG PFOS (CONT.)	11035	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11036	4	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11037	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11038	2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL. ALL OTHER PUPS APPEARED NORMAL.
	11630	5	ALL PUPS APPEARED NORMAL.
	11632	2	4 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11633	5	ALL PUPS APPEARED NORMAL.
	11634	5	ALL PUPS APPEARED NORMAL.
	11635	2	4 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 20): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
11 1.2 MG/KG PFOS (CONT.)	11636	5	ALL PUPS APPEARED NORMAL.
	11637	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11638	3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11639	2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
12 1.6 MG/KG PFOS	11041	2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		3	3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
			3 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11042	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	11 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11048	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	3 PUPS: FOUND DEAD. CANNIBALIZATION PRECLUDED FURTHER EVALUATION.
			2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11049	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 21): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
12 1.6 MG/KG PFOS (CONT.)	11640	5	ALL PUPS APPEARED NORMAL.
	11641	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11642	5	ALL PUPS APPEARED NORMAL.
	11643	2	5 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. ALL OTHER PUPS APPEARED NORMAL.
	11644	1	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. ALL OTHER PUPS APPEARED NORMAL.
	11645	1	4 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. CANNIBALIZATION PRECLUDED FURTHER EVALUATION. 2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11646	5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 22): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
12 1.6 MG/KG PFOS (CONT.)	11647	2	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	PUP APPEARED NORMAL.
	11648	1	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11649	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	7 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11650	2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11651	1	3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		2	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		4	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11653	2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

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TABLE 40 (PAGE 23): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
13 2 MG/KG PFOS	11055	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	5 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11057	1	1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	4 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11059	5	ALL PUPS APPEARED NORMAL.
	11061	2	12 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11064	2	7 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
			2 PUPS: FOUND DEAD. NO MILK IN STOMACH. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11065	2	11 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
			2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11654	2	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		5	ALL PUPS APPEARED NORMAL.
	11655	4	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.
	11656	1	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	ALL PUPS APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 24): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
13 2 MG/KG PFOS (CONT.)	11657	1	3 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 5 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	2 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11658	1	7 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 5 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
	11659	1	6 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
	11660	2	10 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 1 PUP: FOUND DEAD. ALL TISSUES APPEARED NORMAL.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11661	1	11 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11662	2	3 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	2 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		5	PUP APPEARED NORMAL.
	11663	1	2 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.
		2	13 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11664	1	2 PUPS: STILLBORN. ALL TISSUES APPEARED NORMAL.
		2	8 PUPS: FOUND DEAD. NO MILK IN STOMACH. ALL OTHER TISSUES APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS (SPONSOR'S STUDY NUMBER: T-6295.25)

TABLE 40 (PAGE 25): NECROPSY OBSERVATIONS - INDIVIDUAL DATA - F1 GENERATION PUPS

MATERNAL DOSAGE GROUP TEST SUBSTANCE	LITTER NUMBER	DAY POSTPARTUM	OBSERVATIONS a
13 2 MG/KG PFOS (CONT.)	11665	2	6 PUPS: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
		3	1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION.
	11667	1	1 PUP: STILLBORN. ALL TISSUES APPEARED NORMAL. 1 PUP: FOUND DEAD. AUTOLYSIS PRECLUDED FURTHER EVALUATION. 9 PUPS: FOUND DEAD. ALL TISSUES APPEARED NORMAL.

a. Complete necropsies were not performed on pups in which autolysis or cannibalization precluded evaluation. Refer to the individual pup clinical observations table (Table 39) for external clinical observations confirmed at necropsy.

APPENDIX C

PROTOCOL AND AMENDMENTS

PRIMEDICA

Argus Research Laboratories, Inc.
905 Sheehy Drive, Building A
Horsham, PA 19044
Telephone: (215) 443-8710
Telefax: (215) 443-8587

PROTOCOL 418-018

SPONSOR'S STUDY NUMBER: T-6295.25

STUDY TITLE: One Generation Reproduction Study of PFOS - Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats

PURPOSE: The purposes of this study are to determine whether or not co-administration of mevalonic acid or cholesterol can prevent or antagonize the adverse maternal and fetal effects (reduced maternal body weight gain, increased percent stillborn, decreased birth weight and decreased pup survival) observed in a previous study (Argus Research Protocol 418-008, 3M study number T-6295.9) and to better define the no observed effect level (NOEL).

TESTING FACILITY:
Argus Research Laboratories, Inc.
905 Sheehy Drive, Building A
Horsham, Pennsylvania 19044-1297
Telephone: (215) 443-8710
Telefax: (215) 443-8587

STUDY DIRECTOR:
Raymond G. York, Ph.D., DABT
Associate Director of Research
raymond.york@primedica.com

SPONSOR:
3M Corporate Toxicology
3M Center, Building 220-2E-02
St. Paul, Minnesota 55144-1000

STUDY MONITOR:
Deanna J. Luebker, M.S.
3M Corporate Toxicology
3M Medical Department
Telephone: (651) 737-1374
Telefax: (651) 733-1773

ALTERNATE STUDY MONITOR:
John Butenhoff, Ph.D., DABT, CIH
3M Corporate Toxicology
3M Medical Department
Telephone: (651) 737-1962
Telefax: (651) 733-1773

REGULATORY CITATIONS:

Study Design as Modification of: U.S. Food and Drug Administration (1994). International Conference on Harmonisation; Guideline on detection of toxicity to reproduction for medicinal products. *Federal Register*, September 22, 1994, Vol. 59, No. 183.

U.S. Food and Drug Administration. Good Laboratory Practice Regulations; Final Rule. 21 CFR Part 58.

Japanese Ministry of Health and Welfare (1997). *Good Laboratory Practice Standard for Safety Studies on Drugs*, MHW Ordinance Number 21, March 26, 1997.

European Economic Community (1989). *Council decision on 28 July 1989 on the acceptance by the European Economic Community of an OECD decision/recommendation on compliance with principles of good laboratory practice.* Official Journal of the European Communities: Legislation. 32 (No. L 315; 28 October): 1-17.

REGULATORY COMPLIANCE:

This study will be conducted in compliance with the Good Laboratory Practice (GLP) regulations cited above.

All changes or revisions of this protocol shall be documented, signed by the Study Director and the Sponsor, dated and maintained with the protocol.

The Testing Facility's Quality Assurance Unit (QAU) will audit the protocol, the raw data and the report, and will inspect critical phases of those portions of the study conducted at the Testing Facility in accordance with the Standard Operating Procedures of Argus Research Laboratories, Inc.

Should any portion of the study be conducted by a subcontractor or by the Sponsor, the QAU for that facility will conduct critical phase inspections and audit respective results and reports for that study portion according to the SOPs of that facility. Such critical phase inspection reports and report audits will be submitted by that facility to the Study Director. The dates of the inspections and report submissions will be incorporated into a QAU Statement generated by that facility and provided to the Testing Facility for inclusion in the final report.

The final report will include a compliance statement signed by the Study Director that the report accurately reflects the raw data obtained during the performance of the study and that all applicable GLP regulations were followed in the conduct of the study. Should significant deviations from GLP regulations occur, each will be described in detail, together with how the deviation might affect the quality or integrity of the study.

STUDY SCHEDULE:

See ATTACHMENT 1 to the protocol.

TEST ARTICLE AND VEHICLE:

Identification:

Test Article:

Name:	Perfluorooctane Sulfonic Acid Potassium Salt (PFOS).
Physical Description:	Light-colored powder.
Lot/Batch Number:	217
Specific Gravity:	0.6
Purity:	98.9%
Expiration Date:	NA

Information on the identity, composition, strength and purity of the test article is on file with the Sponsor.

Control Articles:

Name:	Mevalonic Acid.
Physical Description:	White with dark yellow cast, semisolid.
Lot Number:	070K2603
Specific Gravity:	NA
Purity:	Approximately 97%
Expiration Date:	August 2004

Name:	Cholesterol.
Physical Description:	White powder
Lot Number:	119HO218
Specific Gravity:	NA
Purity:	95%
Expiration Date:	July 2004

Information on the identity, composition, strength and purity of the control articles will be maintained in the raw data.

Vehicles:

0.5% Tween® 80 in reverse osmosis membrane processed deionized water (RODI H_20). Supplier and lot identification of Tween® 80 to be documented in the raw data.

Reverse Osmosis Membrane Processed Deionized Water (RODI H_20).

Neither the Sponsor nor the Study Director is aware of any potential contaminants likely to be present in the vehicles that would interfere with the results of this study. Therefore, no analyses other than those mentioned in this protocol will be conducted.

Safety Precautions:

Gloves, dust-mist/HEPA-filtered mask, appropriate eye protection and a uniform/lab coat are to be worn during formulation preparation and dosage administration. The Material Safety Data Sheet (MSDS) is attached to the protocol (ATTACHMENT 2).

Storage:

Bulk Test Article:	Room temperature.
Control Article Components:	Room temperature.
Vehicle Components:	Room temperature.
Prepared Vehicle (0.5% Tween® 80):	Room temperature.
Prepared Test Article Formulations:	Frozen (-20°C).

All test article shipments to the Testing Facility should be addressed to the attention of Julian Gulbinski, Manager of Formulations, at the previously cited address and telephone number.

Shipments should include information concerning storage conditions and shipping cartons should be labeled appropriately. The recipient should be notified in advance of shipment.

FORMULATION:

Frequency of Preparation:

Formulations of PFOS (suspensions) will be prepared weekly at the Testing Facility.

The vehicle (0.5% Tween® 80) will be prepared weekly.

Mevalonic acid will be prepared twice daily in reverse osmosis membrane processed deionized water.

Cholesterol will be prepared as a suspension once daily in 0.5% Tween® 80.

Detailed preparation procedures are attached to this protocol (ATTACHMENT 3) and documentation of formulation preparation will be maintained in the raw data.

Adjustment for Purity:

The test and control articles will be considered 100% pure for the purpose of dosage calculations.

Testing Facility Reserve Samples:

The Sponsor will reserve a sample (1 g) of each lot of the bulk test article used during the course of this study. The Testing Facility will reserve a sample (1 g or 5 mL) of each lot of the control article and vehicle components used during the course of this study. Samples will be stored under the previously cited conditions.

ANALYSES:

Samples additional to those described below may be taken if deemed necessary during the course of the study.

Bulk Test Article Sampling:

No analyses of the bulk test article will be conducted during the course of this study. Information on the stability of the bulk test article is on file with the Sponsor. The Certificate of Analysis is on file with the Sponsor and a copy will be included in the final report.

Analyses of Prepared Formulations:

Stability:

Stability data for prepared test article formulations bracketing the range of concentrations and conditions of this study are on file with the Sponsor and will not be determined during the conduct of this study. Test article suspensions will be prepared weekly at the Testing Facility.

Homogeneity Analyses:

Homogeneity of the test article in prepared suspensions will be verified during the course of this study. A syringe will be used to withdraw samples (5 mL each) from the top, middle and bottom of the highest concentration on the first day of preparation. Each sample (5 mL) will be divided into two aliquots and placed into glass containers, one of 2 mL and one of 3 mL. One aliquot (2 mL) will be shipped for analysis; the other aliquot (3 mL) will be retained at the Testing Facility as a backup sample. Backup samples will be stored under the previously cited conditions and discarded at the Testing Facility upon the request of the Sponsor.

Concentration Analyses:

Concentration of the prepared test article suspensions will be verified during the course of this study. A syringe will be used to withdraw samples (5 mL each) from each concentration once during each of the following periods of the study: premating, gestation and postnatal. Each sample (5 mL each) will be divided into two aliquots and placed into glass containers, one of 2 mL and one of 3 mL. One aliquot (2 mL) will be shipped for analysis; the other aliquot (3 mL) will be retained at the Testing Facility as a backup sample. Backup samples will be stored under the previously cited conditions and discarded at the Testing Facility upon the request of the Sponsor.

Shipping Instructions:

Samples to be analyzed will be shipped (frozen on dry ice) to:

Dave Ehresman
3M Corporate Toxicology
3M Center Building 236-0C-48
St. Paul, Minnesota 55144
Telephone: (651) 733-5070
Telefax: (651) 733-1773

Both the recipient and the Study Monitor will be notified in advance of sample shipment.

DISPOSITION:

Prepared formulations will be discarded at the Testing Facility. All remaining bulk test article will be returned to the Study Monitor at the previously cited address.

TEST SYSTEM:

Species/Strain and Reason for Selection:

The Crl:CD®(SD) IGS BR VAF/Plus® rat was selected as the Test System because: 1) this strain of rat has been demonstrated to be sensitive to reproductive and developmental toxins and has been widely used throughout industry for reproductive and developmental toxicity evaluations; 2) historical data and experience exist at the Testing Facility[1-3]; 3) the test article is pharmacologically active in the species and strain; and 4) this strain has been used in previous reproduction studies of PFOS.

Number:

Initial population acclimated:	360 virgin female rats (two shipments of 180 female rats each designated as Replicates 1 and 2).
Population selected for study:	332 female rats (28 in each of Groups 1 to 7, 12 and 13, and 20 in each of Groups 8 to 11).

Eight mated female rats in each of Groups 1 to 7, 12 and 13 (Replicate 1) will be assigned to Caesarean-sectioning on day 21 of presumed gestation; the remaining female rats will be permitted to deliver litters.

Body Weight and Age:

Female rats will be ordered to weigh from 175 g to 225 g each at receipt, at which time they will be expected to be at least 56 days of age. Actual body weights will be recorded the day after receipt and will be documented in the raw data. The weight ranges will be included in the final report.

Sex:

Female rats will be given the test article. Male rats of the same source and strain will be used only as breeders and are not considered part of the Test System.

Source:

Charles River Laboratories, Inc.

The rats will be shipped in filtered cartons by air freight and/or truck from Charles River Laboratories, Inc., to the Testing Facility.

Identification:

Fo Generation:

Rats are permanently identified using Monel® self-piercing ear tags (Gey Band and Tag Co., Inc., No. MSPT 20101). Male rats are given unique permanent identification numbers upon assignment to the Testing Facility's breeder male rat population. Female rats are assigned temporary numbers at receipt and given unique permanent identification numbers when assigned to the study on the basis of physical appearance and body weights recorded during acclimation.

F1 Generation:

Pups will not be individually identified during lactation; all parameters will be evaluated in terms of the litter.

ANIMAL HUSBANDRY:

All cage sizes and housing conditions are in compliance with the *Guide for the Care and Use of Laboratory Animals*[4].

Housing:

Fo Generation Rats/F1 Generation Litters:

Fo generation rats will be individually housed in stainless steel wire-bottomed cages except during the cohabitation and postpartum periods. During cohabitation, each pair of rats will be housed in the male rat's cage. Beginning no later than day 20 of presumed gestation, Fo generation female rats assigned to natural delivery will be individually housed in nesting boxes. Each dam and delivered litter will be housed in a common nesting box during the postpartum period.

Nesting Material:

Bedding material (bed-o'cobs®) will be supplied to female rats assigned to natural delivery.

Bedding will be changed as often as necessary to keep the animals dry and clean. Analyses for possible contamination are conducted semi-annually and documented in the raw data.

Room Air, Temperature and Humidity:

The animal room is independently supplied with at least ten changes per hour of 100% fresh air that has been passed through 99.97% HEPA filters. Room temperature will be maintained at 64°F (18°C) to 79°F (26°C) and monitored constantly. Room humidity will also be monitored constantly and maintained at 30% to 70%.

Light:

An automatically controlled 12-hour light:12-hour dark fluorescent light cycle will be maintained. Each dark period will begin at 1900 hours EST.

Diet:

Rats will be given Certified Rodent Diet® #5002 (PMI Nutrition International) available *ad libitum* from individual feeders.

Water:

Water will be available *ad libitum* from individual bottles attached to the cages or from an automatic watering access system. All water will be from a local source and passed through a reverse osmosis membrane before use. Chlorine will be added to the processed water as a bacteriostat; processed water is expected to contain no more than 1.2 ppm chlorine at the time of analysis. Water is analyzed monthly for possible bacterial contamination and twice annually for possible chemical contamination.

Contaminants:

Neither the Sponsor nor the Study Director is aware of any potential contaminants likely to be present in the drinking water or the nesting material at levels that would interfere with the results of this study. The Sponsor is aware of a potential contaminant present at extremely low levels in the certified diet. This low-level contamination will not interfere with the results of this study. Therefore, no analyses other than those routinely performed by the feed supplier or those mentioned in this protocol will be conducted.

RANDOMIZATION AND COHABITATION:

Fo Generation:

In order to facilitate scheduling, female rats will be received in two shipments (180 rats each) separated by two weeks. The first shipment will be designated as Replicate 1 and the second shipment will be designated as Replicate 2. Upon arrival, rats will be assigned to individual housing on the basis of computer-generated random units. After acclimation, female rats will be selected for study on the basis of physical appearance and body weights recorded during acclimation. The rats will be assigned to dosage groups based on computer-generated (weight-ordered) randomization procedures.

Within each dosage group, consecutive order will be used to assign rats to cohabitation, one male rat per female rat. The cohabitation period will consist of a maximum of 14 days. Female rats with spermatozoa observed in a smear of the vaginal contents and/or a copulatory plug observed *in situ* will be considered to be at day 0 of presumed gestation and assigned to individual housing. Female rats not mated within the first 7 days of cohabitation will be assigned alternate male rats that have mated and will remain in cohabitation for a maximum of seven additional days.

The first eight female rats per dosage group (groups 1 to 7, 12 and 13, Replicate 1) with a confirmed date of mating will be assigned to Caesarean-sectioning on day 21 of presumed gestation. The remaining female rats (including those with no confirmed mating date) will be permitted to naturally deliver litters.

F1 Generation Pups:

Day 1 of lactation (postpartum) is defined as the day of birth and is also the first day on which all pups in a litter are individually weighed (pup body weights will be recorded after all pups in a litter are delivered and groomed by the dam).

ADMINISTRATION:

Route and Reason for Choice:

The oral (gavage) route was selected for use because: 1) in comparison with the dietary route, the exact dosage can be accurately administered; 2) it is one of the possible routes of human exposure; and 3) it is the route used in previous reproduction studies on PFOS.

Method and Frequency:

Dosages will be adjusted for the most recently recorded body weight and given at approximately the same times each day. Dosages will be administered according to the table in the Dosage Levels, Concentrations and Volumes section of the protocol. The mevalonic acid dosing needle will be wiped clean before administration for each animal.

Fo Generation Female Rats:

Female rats will be given the test article daily beginning 42 days before cohabitation (maximum of 14 days) and continuing through day 20 of presumed gestation (rats assigned to Caesarean-sectioning), day 24 of presumed gestation (rats assigned to natural delivery that do not deliver a litter) or day 4 postpartum (rats that deliver a litter). Rats in the process of delivering will not be given test/control article; such animals may not receive any or all of their daily dosage(s) on the day of parturition.

F1 Generation:

F1 generation pups will not be directly given the test article, but will be possibly exposed to the test article during maternal gestation (*in utero* exposure) or via maternal milk during the lactation period.

Rationale for Dosage Selection:

Dosages were selected by the Sponsor on the basis of previous studies conducted with the test article.

Dosage Levels, Concentrations and Volumes:

Dosage Groups and Dosing Schedule					
Dosage Groups			Dosing Schedule		
Number	Identification	Number of Animals	1st dosage	2nd dosage ½ hour ± 10 minutes after 1st	3rd dosage 5 hr ± 30 minutes after 2nd
1	Vehicle Control	28	RODI H_2O	0.5% Tween 80	RODI H_2O
2	Mevalonic Acid Control	28	500 mg/kg Mevalonic Acid	0.5% Tween 80	500 mg/kg Mevalonic Acid
3	1.6 mg/kg PFOS + Mevalonic Acid	28	500 mg/kg Mevalonic Acid	1.6 mg/kg PFOS	500 mg/kg Mevalonic Acid
4	2 mg/kg PFOS + Mevalonic Acid	28	500 mg/kg Mevalonic Acid	2 mg/kg PFOS	500 mg/kg Mevalonic Acid
5	Cholesterol Control	28	500 mg/kg Cholesterol	0.5% Tween 80	NA
6	1.6 mg/kg PFOS + Cholesterol	28	500 mg/kg Cholesterol	1.6 mg/kg PFOS	NA
7	2 mg/kg PFOS + Cholesterol	28	500 mg/kg Cholesterol	2 mg/kg PFOS	NA
8	0.4 mg/kg PFOS	20	NA	0.4 mg/kg PFOS	NA
9	0.8 mg/kg PFOS	20	NA	0.8 mg/kg PFOS	NA
10	1 mg/kg PFOS	20	NA	1 mg/kg PFOS	NA
11	1.2 mg/kg PFOS	20	NA	1.2 mg/kg PFOS	NA
12	1.6 mg/kg PFOS	28	NA	1.6 mg/kg PFOS	NA
13	2 mg/kg PFOS	28	NA	2 mg/kg PFOS	NA

Compound Identification	Dosage (mg/kg/day)	Concentration (mg/mL)	Dosage Volume (mL/kg)	Argus Batch Number
RODI H_2O	0	0	5	B-418-018-A(Day.Month.Year)
0.5% Tween® 80	0	0	5	B-418-018-B(Day.Month.Year)
Mevalonic Acid	1000	100	5*	B-418-018-C(Day.Month.Year)
Cholesterol	500	100	5	B-418-018-D(Day.Month.Year)
PFOS	0.4	0.08	5	B-418-018-E(Day.Month.Year)
PFOS	0.8	0.16	5	B-418-018-F(Day.Month.Year)
PFOS	1	0.20	5	B-418-018-G(Day.Month.Year)
PFOS	1.2	0.24	5	B-418-018-H(Day.Month.Year)
PFOS	1.6	0.32	5	B-418-018-I(Day.Month.Year)
PFOS	2	0.40	5	B-418-018-J(Day.Month.Year)

The test and control articles will be considered 100% pure for the purpose of dosage calculations.
* Mevalonic acid will be dosed twice daily.

TESTS, ANALYSES AND MEASUREMENTS - Fo GENERATION:

Viability:

All Periods:	At least twice daily.

Clinical Observations and/or General Appearance:

Acclimation Period:	At least once.
Dosage Period:	Prior to dosage administration, approximately one hour after the second dosage and at the end of the working day (approximately one hour after the third dosage).
Day of Sacrifice:	Once.
Maternal Behavior:	Days 1 and 5 postpartum. Any observed abnormal behavior will be recorded daily.

Clinical observations may be recorded more frequently than cited above, if deemed appropriate by the Study Director and/or Study Monitor.

Body Weights:

Acclimation Period:	At least once.
Dosage Period:	Weekly to cohabitation. Daily during presumed gestation and on Day 1 postpartum (rats assigned to natural delivery).
Sacrifice:	Terminal weight.

Feed Consumption Values (recorded and tabulated):

Dosage Period:	Weekly to cohabitation. On days 0, 7, 14, 21 and 25 (if necessary) of presumed gestation and on days 1 and 5 postpartum (rats assigned to natural delivery).

Feed consumption values may be recorded more frequently than cited above if it is necessary to replenish the feed. During cohabitation, when two rats occupy the same cage with one feed jar, replenishment of the feed jars will be documented. Individual values will not be recorded or tabulated.

Mating Performance:

Mating will be evaluated daily during the cohabitation period and confirmed by observation of spermatozoa in a smear of the vaginal contents and/or a copulatory plug observed *in situ*.

Fertility Parameters:

Fertility Index (percentage of matings that result in pregnancies).

Gestation Index (percentage of pregnancies that result in birth of live litters).

Number of offspring per litter (live and dead pups).

Number of implantation sites.

General condition of dam and litter during the postpartum period.

Viability Indices (percentage of pups born that survive 5 days).

Caesarean-Sectioning Observations:

Eight rats from dosage groups 1 to 7, 12 and 13 (Replicate 1) will be Caesarean-sectioned on day 21 of presumed gestation. The fetuses will be removed from the uterus and pooled by litter for body weights. The rats will be examined for number and distribution of:

Corpora Lutea.

Implantation Sites.
[Placentae that appear abnormal (size, color or shape) will be noted in the raw data].

Live and Dead Fetuses.
(A live fetus is defined as one that responds to stimuli; a dead fetus is defined as a term fetus that does not respond to stimuli and that is not markedly autolyzed; dead fetuses demonstrating marked to extreme autolysis are considered to be late resorptions.)

Early and Late Resorptions.
(A conceptus is defined as a late resorption if it is grossly evident that organogenesis has occurred; if this is not the case, the conceptus is defined as an early resorption.)

Fetal Observations:

Body Weights:

Fetuses will be pooled by litter and litter body weights will be recorded. (Only body weights of live fetuses will be recorded.)

Blood and Tissue Samples (See ATTACHMENT 4 for tissue collection and processing):

Caps and labeled tubes will be weighed (combined weight, to the nearest .001 gram) before (empty) and after retention of pooled fetus samples for subsequent use in pharmacokinetic analyses. These weights will be documented in the raw data, and copies of these weights will be included with the packing list prior to shipment. Sample tubes will be labeled with the study number, litter identification, date of collection, study day, sample identification and collection timepoint.

Blood samples will be collected from each fetus via decapitation. Blood from approximately one-half of the fetuses in each litter will be placed into EDTA-coated tubes and the remaining fetal blood will be transferred into serum separator tubes. The samples will be spun in a centrifuge and the resulting serum (divided into two aliquots)/plasma (one aliquot) will be transferred into labeled polypropylene tubes. All samples will be immediately frozen on dry ice and maintained frozen (≤-20°C) until shipment for analysis.

The liver from each fetus will be collected. One fetal liver from each litter will be removed and fixed in gluteraldehyde for possible future analysis by electron microscopy. The remaining fetal livers in each litter will be divided into three samples of equal number (when possible). Two of the samples will be frozen and stored (≤-20°C) until shipment for analysis. The remaining sample will be flash frozen in liquid nitrogen and maintained frozen (≤-70°C) until shipment for possible analysis. Carcasses will be discarded without further evaluation.

Sample Analysis and Shipping Instructions:

Appropriate samples will be maintained frozen until shipment for analysis. Samples will be shipped frozen on dry ice via overnight mail.

One of each pair of serum samples, frozen liver samples, and liver samples fixed in gluteraldehyde will be sent to Dave Ehresman, at the previously cited address. The sample tube and liver weights and a packing list will be included with the samples sent to Dave Ehresman.

The remaining serum and liver samples will be analyzed for LDL, HDL, total cholesterol and triglycerides. These samples will be shipped to:

Dr. Saroj R. Das
Ani Lytics, Inc.
200 Gerard Street, Suite 200
Gaithersburg, Maryland 20877
Telephone: (301) 921-0168
Telefax: (301) 977-0433

Plasma mevalonic acid levels will be measured. These samples will be shipped to:

Jim Jersey
Primedica Worcester Laboratories
57 Union Street
Worcester, Massachusetts 01608
Telephone: (508) 890-0151
Telefax: (508) 753-1834

Both the recipients and the Study Monitor will be notified in advance of sample shipment.

Natural Delivery:

Female rats will be evaluated for:

Adverse Clinical Signs Observed During Parturition.

Duration of Gestation (day 0 of presumed gestation to the time the first pup is observed).

Litter Size (defined as all pups delivered).

Pup Viability at Birth.

METHOD OF SACRIFICE - Fo GENERATION:

Rats will be sacrificed by carbon dioxide asphyxiation. Fetuses will be sacrificed via decapitation. When possible, rats, pups and fetuses will be sacrificed and tissues collected at approximately the same time each day.

NECROPSY - Fo GENERATION:

Gross lesions will be retained in neutral buffered 10% formalin for possible future evaluation (a table of random units will be used to select one control group rat assigned to Caesarean-section from which all tissues examined at necropsy will be retained, in order to provide control tissues for any possible histopathological evaluations of gross lesions). Unless specifically cited below, all other tissues will be discarded.

Blood and Tissue Sample Collection (See ATTACHMENT 4 for tissue collection and processing):

Caps and labeled tubes will be weighed (combined weight, to the nearest .001 gram) before (empty) and after retention of samples for subsequent use in pharmacokinetic analyses. These weights will be documented in the raw data, and copies of these weights will be included with the packing list prior to shipment. Sample tubes will be labeled with the study number, animal identification, date of collection, study day, sample identification and collection timepoint.

Female Rats Assigned to Caesarean-Sectioning:

On day 21 of presumed gestation, blood and liver samples will be collected from the eight rats designated for Caesarean-section in dosage groups 1 to 7, 12 and 13. The time of sample collections will be recorded in the raw data.

Blood samples (at least 4 mL each) will be collected from the rats via the inferior vena cava and separated into two approximately equal aliquots. The first aliquot will be placed into EDTA-coated tubes and the second aliquot will be transferred into serum separator tubes. The samples will be spun in a centrifuge and the resulting serum (divided into two aliquots)/plasma (one aliquot) will be transferred into labeled polypropylene tubes. All samples will be immediately frozen on dry ice and maintained frozen ($\leq$-20°C) until shipment for analysis.

Following collection of blood samples, the liver of each rat will be excised and the liver weight will be recorded. A portion of each liver sample (right lateral lobe) will be flash frozen in liquid nitrogen and maintained frozen ($\leq$-70°C) until shipment for possible analysis. The median liver lobe will be frozen and stored ($\leq$-20°C) until shipment for analysis. A section (approximately 0.3 to 0.5 cm wide) from the remaining portion of the liver will be fixed in gluteraldehyde for possible future analysis by electron microscopy. The remaining portion of the liver will be frozen and stored ($\leq$-20°C) until shipment for analysis.

Female Rats Assigned to Natural Delivery:

Blood, milk, heart and liver samples will be collected from maternal rats on day 5 postpartum. Time of sample collections (blood and milk) will be recorded in the raw data.

On day 5 postpartum, each dam will be removed from the nesting box and individually housed for approximately four hours. The dam will be injected intravenously with one unit of oxytocin approximately five minutes before milk samples (at least 100 µL per sample) are collected. The samples will be immediately frozen on dry ice and maintained frozen (≤-20°C) until shipment for analysis.

Following milk sample collection, blood samples (at least 4 mL each) will be collected from the rats via the inferior vena cava and separated into two approximately equal aliquots. The first aliquot will be placed into EDTA-coated tubes and the second aliquot will be transferred into serum separator tubes. The samples will be spun in a centrifuge and the resulting serum (divided into two aliquots)/plasma (one aliquot) will be transferred into labeled polypropylene tubes. All samples will be immediately frozen on dry ice and maintained frozen (≤-20°C) until shipment for analysis.

Following collection of milk and blood samples, the heart and liver of each dam will be collected. The liver weight will be recorded. A portion of each liver sample (right lateral lobe) will be flash frozen in liquid nitrogen and maintained frozen (≤-70°C) until shipment for possible analysis. The median liver lobe will be frozen and stored (≤-20°C) until shipment for analysis. The heart will be excised and two cuts will be made to allow proper fixation. The first cut will start to the right of the ventral midline surface at the apex and extend anteriorly and ventrally to the pulmonary artery. The second cut will be made starting to the left of the ventral midline surface at the apex and extend through the left ventricle to the ascending aorta. The cut heart and a section (approximately 0.3 to 0.5 cm wide) from the remaining portion of the liver will be fixed in gluteraldehyde for possible future analysis by electron microscopy and/or light microscopy. The remaining portion of the liver will be frozen and stored (≤-20°C) until shipment for analysis.

Sample Analysis and Shipping Instructions:

Appropriate samples will be maintained frozen until shipment for analysis. Samples will be shipped frozen on dry ice via overnight mail.

One of each pair of serum samples, frozen maternal liver samples (right lateral and median lobes), and liver and heart samples fixed in gluteraldehyde will be sent to Dave Ehresman, at the previously cited address. The sample tube and liver weights and a packing list will be included with the samples sent to Dave Ehresman.

The remaining serum and liver samples will be analyzed for LDL, HDL, total cholesterol and triglycerides. Milk samples will be analyzed for total cholesterol. These samples will be shipped to:

Dr. Saroj R. Das
Ani Lytics, Inc.
200 Gerard Street, Suite 200
Gaithersburg, Maryland 20877
Telephone: (301) 921-0168
Telefax: (301) 977-0433

Plasma mevalonic acid levels will be measured. These samples will be shipped to:

Jim Jersey
Primedica Worcester Laboratories
57 Union Street
Worcester, Massachusetts 01608
Telephone: (508) 890-0151
Telefax: (508) 753-1834

Both the recipients and the Study Monitor will be notified in advance of sample shipment.

Scheduled Sacrifice - Female Rats Assigned to Caesarean-Sectioning:

On day 21 of presumed gestation, female rats will be sacrificed, Caesarean-sectioned, and a gross necropsy of the thoracic, abdominal and pelvic viscera will be performed. Blood and tissue samples (blood serum/plasma and liver) will be collected as previously described. Uteri of apparently nonpregnant rats will be stained with 10% ammonium sulfide to confirm the absence of implantation sites[5] and retained in neutral buffered 10% formalin for possible future evaluation.

Scheduled Sacrifice - Female Rats Assigned to Natural Delivery:

On day 5 of lactation, female rats will be sacrificed and a gross necropsy of the thoracic, abdominal and pelvic viscera will be performed. Blood and tissue samples (blood serum/plasma, heart and liver) will be collected as previously described.

Rats that do not deliver a litter will be sacrificed on day 25 of presumed gestation and examined for gross lesions. Blood and tissue samples will not be collected. Uteri will be stained with 10% ammonium sulfide to confirm the absence of implantation sites[5] and retained in neutral buffered 10% formalin for possible future evaluation.

Dams with No Surviving Pups:

Dams with no surviving pups will be sacrificed after the last pup is found dead, missing or presumed cannibalized. Blood and tissue samples (blood serum/plasma, heart and liver) will be collected as previously described. A gross necropsy of the thoracic, abdominal and pelvic viscera will be performed. Postpartum data for these dams will be excluded from summary tables.

Rats Found Dead or Moribund:

Rats that die or are sacrificed because of moribund condition or abortion will be examined for the cause of death or moribund condition on the day the observation is made. The rats will be examined for gross lesions. When possible (not precluded by autolysis), blood serum/plasma, heart and liver samples will be retained as previously described for rats assigned to natural delivery. Pregnancy status and uterine contents of female rats will be recorded. Aborted fetuses and/or delivered pups will be examined to the extent possible. Uteri of apparently nonpregnant rats will be stained with 10% ammonium sulfide to confirm the absence of implantation sites[5] and retained in neutral buffered 10% formalin for possible future evaluation.

TESTS, ANALYSES AND MEASUREMENTS - F1 GENERATION:

Viability:

Postpartum Period:	Litters will be observed for dead pups at least twice daily. The pups in each litter will be counted once daily.

Clinical Observations and/or General Appearance:

Postpartum Period:	Clinical observations and sex will be recorded once daily.

Clinical observations may be recorded more frequently than cited above, if deemed appropriate by the Study Director and/or the Study Monitor.

Body Weights:

Postpartum Period:	Days 1 (birth), 2, 3, 4 and 5 postpartum. Pooled litter weights will be recorded.

METHOD OF SACRIFICE - F1 GENERATION PUPS:

As previously cited for Fo generation rats. When possible, pups will be sacrificed and tissues collected at approximately the same time each day. The time of sample collection will be recorded.

F1 Generation Pups Found Dead on Day 1 Postpartum:

Pups that die before examination of the litter for pup viability will be evaluated for vital status at birth. The lungs will be removed and immersed in water. Pups with lungs that sink will be identified as stillborn; pups with lungs that float will be identified as liveborn, and to have died shortly after birth. Pups with gross lesions will be preserved in Bouin's solution for possible future evaluation. Should postmortem autolysis preclude these evaluations, it will be noted in the necropsy data.

F1 Generation Pups Found Dead or Moribund on Days 2 to 5 Postpartum:

Pups found dead or sacrificed due to moribund condition will be examined for gross lesions and for the cause of the moribund condition or death. Pups with gross lesions found on days 2 to 4 postpartum will be preserved in Bouin's solution for possible future evaluation; gross lesions of pups found on day 5 postpartum will be preserved in neutral buffered 10% formalin. Should postmortem autolysis preclude these evaluations it will be noted in the necropsy data.

Scheduled Sacrifice - F1 Generation Pups (See ATTACHMENT 4 for tissue collection and processing):

On day 5 postpartum, pups will be sacrificed and examined for gross lesions. Gross lesions will be preserved in neutral buffered 10% formalin. Necropsy will include a single cross-section of the head at the level of the frontal-parietal suture and examination of the cross-sectioned brain for apparent hydrocephaly.

Caps and labeled tubes will be weighed (combined weight, to the nearest .001 gram) before (empty) and after retention of samples for subsequent use in pharmacokinetic analyses. These weights will be documented in the raw data, and copies of these weights will be included with the packing list prior to shipment. Sample tubes will be labeled with the study number, animal identification, date of collection, study day, sample identification and collection timepoint.

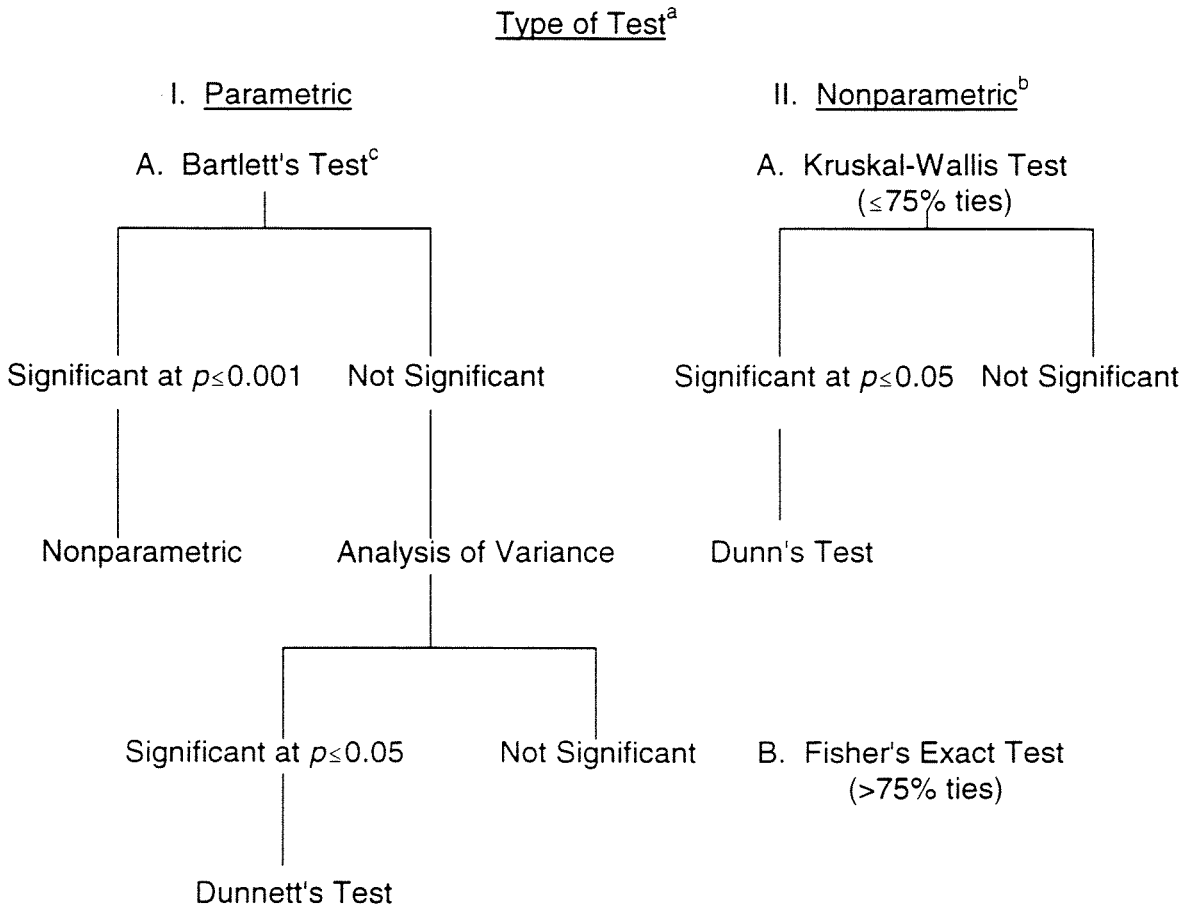
Blood samples will be collected via cardiac puncture from each pup, pooled (by sex per litter) and separated into four (two per sex) approximately equal aliquots. The first aliquot per sex will be placed into EDTA-coated tubes and the second aliquot per sex will be transferred into serum separator tubes. The samples will be spun in a centrifuge and the resulting serum (divided into two aliquots)/plasma (one aliquot) will be transferred into labeled polypropylene tubes. All samples will be immediately frozen on dry ice and maintained frozen ($\leq$-20°C) until shipment for analysis.

The liver from each pup will be collected, pooled (by sex per litter) and the pooled weight recorded. One liver from each litter pool will be removed and fixed in gluteraldehyde for possible future analysis by electron microscopy. The remaining livers in each litter pool will be divided into three samples of equal number (when possible). Two of the samples will be frozen and stored (≤-20°C) until shipment for analysis. The remaining sample will be flash frozen in liquid nitrogen and maintained frozen (≤-70°C) until shipment for possible analysis. The hearts will be collected from the first two male and two female pups from each litter (pooled by sex per litter) and will be fixed in gluteraldehyde for possible future analysis by electron microscopy and/or light microscopy. The remaining carcasses will be discarded without further evaluation

Samples will be shipped for analysis as previously described for dams and fetuses.

PROPOSED STATISTICAL METHODS[6-12]:

Averages and percentages will be calculated. Litter values will be used where appropriate. Additional procedures and/or analyses may be performed, if appropriate.



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a. Statistically significant probabilities are reported as either $p \leq 0.05$ or $p \leq 0.01$.
b. Proportion data are not included in this category.
c. Test for homogeneity of variance.

DATA ACQUISITION, VERIFICATION AND STORAGE:

Data generated during the course of this study will be recorded either by hand or using the *Primedica Argus Automated Data Collection and Management System* and the *Vivarium Temperature and Relative Humidity Monitoring System*. All data will be tabulated, summarized and/or statistically analyzed using the *Primedica Argus Automated Data Collection and Management System*, the *Vivarium Temperature and Relative Humidity Monitoring System, Microsoft Excel* [part of Microsoft Office 97 (version SR-2)] and/or *The SAS System* (version 6.12).

Records will be reviewed by the Study Director and/or appropriate management personnel within 21 days after generation. All original records will be stored in the archives of the Testing Facility. All original data will be bound and indexed. A copy of all raw data will be supplied to the Sponsor upon request. Preserved tissues will be stored at the Testing Facility at no charge for one year after mailing of the draft final report, after which time the Sponsor will be contacted to determine the disposition of these materials.

RECORDS TO BE MAINTAINED:

Protocol and Amendments.
Test and Control Article, Vehicle and/or Reagent Receipt, Preparation and Use.
Animal Acquisition.
Randomization Schedules.
Mating History.
Treatment (if prescribed by Staff Veterinarian).
General Comments.
Clinical Observations and/or General Appearance.
Pharmacokinetic Sample Collection, Processing and Shipment.
Body Weights.
Feed Consumption Values.
Caesarean-Sectioning Observations.
Natural Delivery Observations.
Litter Observations.
Gross Necropsy Observations.
Organ Weights.
Photographs (if required).
Study Maintenance (room and environmental records).
Feed, Water and Bedding Analyses.
Packing and/or Shipment Lists.

KEY PERSONNEL:

Executive Director of Research: Mildred S. Christian, Ph.D., Fellow, ATS
Director of Research: Alan M. Hoberman, Ph.D., DABT
Associate Director of Research and Study Director: Raymond G. York, Ph.D., DABT
Director of Operations and Compliance: Barbara J. Patterson, B.A.
Director of Laboratory Operations: John F. Barnett, B.S.
Director of Study Management: Valerie A. Sharper, M.S.
Manager of Animal Operations and Chairperson, Institutional Animal Care and Use Committee: Dena C. Lebo, V.M.D.
Consultant, Veterinary Pathology: W. Ray Brown, D.V.M., Ph.D., ACVP

FINAL REPORT:

A comprehensive draft final report will be prepared on completion of the study and will be finalized following consultation with the Sponsor. The report will include the following:

Summary and Conclusion.
Experimental Design and Method.
Evaluation of Test Results.
Appendices: Figures, Summary and Individual Tables Summarizing the Above Data, Protocol and Associated Amendments and Deviations, Study Director's GLP Compliance Statement, Reports of Supporting Data (if appropriate) and QAU Statement.

The Sponsor will receive one copy of the draft report and two copies of the final report.

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE STATEMENT:

The procedures described in this protocol have been reviewed by the Testing Facility's Institutional Animal Care and Use Committee. All procedures described in this protocol that involve study animals will be conducted in a manner to avoid or minimize discomfort, distress or pain to the animals.

The Sponsor's signature below documents the fact that information concerning the necessity for conducting this study and the fact that this is not an unnecessarily duplicative study may be obtained from the Sponsor. No alternative (*in vitro*) procedures were available for meeting the stated purposes of the study.

REFERENCES:

1. Christian, M.S. and Voytek, P.E. (1982). *In Vivo Reproductive and Mutagenicity Tests*. Environmental Protection Agency, Washington, D.C. National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

2. Christian, M.S. (1984). Reproductive toxicity and teratology evaluations of naltrexone (Proceedings of Naltrexone Symposium, New York Academy of Sciences, November 7, 1983), J. Clin. Psychiat. 45(9):7-10.

3. Lang, P.L. (1988). *Embryo and Fetal Developmental Toxicity (Teratology) Control Data in the Charles River Crl:CD®BR Rat*. Charles River Laboratories, Inc., Wilmington, MA 01887-0630. (Data base provided by Argus Research Laboratories, Inc.)

4. Institute of Laboratory Animal Resources (1996). *Guide for the Care and Use of Laboratory Animals*. National Academy Press, Washington, D.C.

5. Salewski, E. (1964). Färbemethode zum makroskopischen Nachweis von Implantationsstellen am Uterus der Ratte. Arch. Pathol. Exp. Pharmakol. 247:367.

6. Snedecor, G.W. and Cochran, W.G. (1967). Variance test for homogeneity of the binomial distribution. *Statistical Methods*, 6th Edition, Iowa State University Press, Ames, pp. 240-241.

7. Sokal, R.R. and Rohlf, F.J. (1969). Bartlett's test of homogeneity of variances. *Biometry*, W.H. Freeman and Co., San Francisco, pp. 370-371.

8. Snedecor, G.W. and Cochran, W.G. (1967). Analysis of Variance. *Statistical Methods*, 6th Edition, Iowa State University Press, Ames, pp. 258-275.

9. Dunnett, C.W. (1955). A multiple comparison procedure for comparing several treatments with a control. J. Amer. Stat. Assoc. 50:1096-1121.

10. Sokal, R.R. and Rohlf, F.J. (1969). Kruskal-Wallis Test. *Biometry*, W.H. Freeman and Co., San Francisco, pp. 388-389.

11. Dunn, O.J. (1964). Multiple comparisons using rank sums. Technometrics 6(3):241-252.

12. Siegel, S. (1956). *Nonparametric Statistics for the Behavioral Sciences*, McGraw-Hill, New York, pp. 96-104.

PROTOCOL APPROVAL:

FOR THE TESTING FACILITY

George E. Dearlove, Ph.D., DABT
Associate Director of Research

21-AUG 00
Date

Raymond G. York, Ph.D., DABT
Associate Director of Research
Study Director

21-AUG-00
Date

Dena C. Lebo, V.M.D.
Chairperson, Institutional Animal Care and Use Committee

21 Aug 00
Date

FOR THE SPONSOR

Deanna J. Luebker, M.S.
Study Monitor

8/22/2000
Date

John Butenhoff, Ph.D., DABT, CIH
Alternate Study Monitor

23-AUG-2000
Date

ATTACHMENT 1

STUDY SCHEDULE

SCHEDULE[a]

REPLICATE 1[b]

22 AUG 00	Animal Receipt - Acclimation Begins (Female Rats).
29 AUG 00 - 12 NOV 00	Dosage Period - Female Rats Assigned to Caesarean-Sectioning (42 days before cohabitation and continuing through day 20 of presumed gestation).
29 AUG 00 - 20 NOV 00	Dosage Period - Female Rats Assigned to Natural Delivery [42 days before cohabitation through day 24 of presumed gestation (rats that do not deliver a litter) or day 4 postpartum (rats that deliver a litter)].
	Cohabitation Period (Maximum of 14 days).
09 OCT 00 PM - 16 OCT 00 AM	Male 1 (07 days)
16 OCT 00 PM - 23 OCT 00 AM	Male 2 (07 days)
10 OCT 00	First Possible Day 0 of Presumed Gestation.
23 OCT 00	Last Possible Day 0 of Presumed Gestation.
31 OCT 00	First Possible Day 21 of Presumed Gestation Caesarean-sectioning.
13 NOV 00	Last Possible Day 21 of Presumed Gestation Caesarean-sectioning.
31 OCT 00	First Possible Delivery (Day 21 of presumed gestation).
17 NOV 00	Last Possible Delivery (Day 25 of presumed gestation).
04 NOV 00	First Possible Day 25 of Presumed Gestation Female Sacrifice.
17 NOV 00	Last Possible Day 25 of Presumed Gestation Female Sacrifice.

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a. The study initiation date is the day the Study Director signs the protocol.
b. Replicate 2 will be initiated two weeks after the start of Replicate 1 (see Page 2 of ATTACHMENT 1).

04 NOV 00	First Possible Day 5 Sacrifice (Dams and F1 generation pups).
21 NOV 00	Last Possible Day 5 Sacrifice.

REPLICATE 2

05 SEP 00	Animal Receipt - Acclimation Begins (Female Rats).
14 SEP 00 – 06 DEC 00	Dosage Period - Female Rats Assigned to Natural Delivery [42 days before cohabitation through day 24 of presumed gestation (rats that do not deliver a litter) or day 4 postpartum (rats that deliver a litter)].
	Cohabitation Period (Maximum of 14 days).
25 OCT 00 PM – 01 NOV 00 AM	Male 1 (07 days)
01 NOV 00 PM - 08 NOV 00 AM	Male 2 (07 days)
26 OCT 00	First Possible Day 0 of Presumed Gestation.
08 NOV 00	Last Possible Day 0 of Presumed Gestation.
16 NOV 00	First Possible Delivery (Day 21 of presumed gestation).
03 DEC 00	Last Possible Delivery (Day 25 of presumed gestation).
20 NOV 00	First Possible Day 25 of Presumed Gestation Female Sacrifice.
03 DEC 00	Last Possible Day 25 of Presumed Gestation Female Sacrifice.
20 NOV 00	First Possible Day 5 Sacrifice (Dams and F1 generation pups).
07 DEC 00	Last Possible Day 5 Sacrifice.
01 MAR 01	Draft Final Report.

ATTACHMENT 2

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET

3M
3M Center
St. Paul, Minnesota
55144-1000
1-800-364-3577 or (612) 737-6501 (24 hours)

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DIVISION: 3M CHEMICALS
TRADE NAME:
FC-95 FLUORAD Brand Fluorochemical Surfactant
ID NUMBER/U.P.C.:
98-0207-0103-7 00-51135-09054-1 98-0207-0104-5 00-51135-09055-8
98-0211-0888-5 00-51135-09362-7 98-0211-3916-1 00-51135-02311-2
ZF-0002-1044-1 - - -
ISSUED: January 29, 1998
SUPERSEDES: November 05, 1997
DOCUMENT: 10-3796-9

1. INGREDIENT

INGREDIENT	C.A.S. NO.	PERCENT
POTASSIUM PERFLUOROALKYL SULFONATE.....	2795-39-3	82 - 86
POTASSIUM PERFLUOROALKYL SULFONATE.....	3871-99-6	3 - 8
POTASSIUM PERFLUOROALKYL SULFONATE.....	29420-49-3	3 - 7
POTASSIUM PERFLUOROALKYL SULFONATE.....	60270-55-5	2 - 6
POTASSIUM PERFLUOROALKYL SULFONATE.....	3872-25-1	1 - 3

2. PHYSICAL DATA

BOILING POINT:..... N/A
VAPOR PRESSURE:..... N/A
VAPOR DENSITY:..... N/A
EVAPORATION RATE:..... N/A
SOLUBILITY IN WATER:..... slight
SPECIFIC GRAVITY:..... ca. 0.6 Water=1
(Bulk)
PERCENT VOLATILE:..... 0 %
pH:..... 7 - 8
(0.1% Aqueous)
VISCOSITY:..... N/D
MELTING POINT:..... N/D

APPEARANCE AND ODOR:
Light colored, free flowing powder.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... None
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... N/A
AUTOIGNITION TEMPERATURE:..... N/A

EXTINGUISHING MEDIA:
Water, Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
See Hazardous Decomposition section for products of combustion.

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
Not applicable.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide and Carbon Dioxide, Oxides of Sulfur, Hydrogen Fluoride, Toxic Vapors, Gases or Particulates.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:
Observe precautions from other sections. Vacuum, use wet sweeping compound or water to avoid dusting. CAUTION! A vacuum cleaner could be an ignition source. Clean up residue with water. Place in an approved metal container. Seal the container.

RECOMMENDED DISPOSAL:
Do not release to waterways or sewer. Do not use in products or processes that could result in aquatic concentrations greater than 1/10 of the lowest EC50 or LC50 concentration. Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HF. Disposal alternative: Dispose of waste product in a facility permitted to

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5. ENVIRONMENTAL INFORMATION (continued)

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accept chemical waste.

ENVIRONMENTAL DATA:
96-Hr. Aquatic Fish LC50, Fathead Minnow(Pimephales promelas)=38 mg/l, Bluegill Sunfish(Lepomis macrochirus)=68 mg/l, Rainbow Trout(Salmo gairdneri)=11 mg/l; 48-Hr. EC50, Daphnia Magna = 50 mg/l; COD=.004 g/g; BOD20 = Nil.

REGULATORY INFORMATION:
Volatile Organic Compounds: N/A.
VOC Less H2O & Exempt Solvents: N/A.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

This product complies with the chemical registration requirements of TSCA, EINECS, CDSL, AICS, MITI and Korea.

EPCRA HAZARD CLASS:
FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

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6. SUGGESTED FIRST AID

EYE CONTACT:
Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:
Immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation persists, call a physician. Wash contaminated clothing before reuse.

INHALATION:
If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:
Drink two glasses of water. Call a physician.

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7. PRECAUTIONARY INFORMATION

EYE PROTECTION:
Avoid eye contact. Wear vented goggles.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

7. PRECAUTIONARY INFORMATION (continued)

SKIN PROTECTION:
Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber. Use one or more of the following personal protection items as necessary to prevent skin contact: head covering, coveralls. Protective garments (other than gloves) should be made of either of the following materials: polyethylene/polyvinylidene chloride (Saranex).

RECOMMENDED VENTILATION:
Use with appropriate local exhaust ventilation. Use in a well-ventilated area. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:
Avoid breathing of dust. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask dust and mist respirator, half-mask supplied air respirator, full-face dust and mist respirator, full-face supplied air respirator.

PREVENTION OF ACCIDENTAL INGESTION:
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating.

RECOMMENDED STORAGE:
Keep container dry. Keep container closed when not in use.

FIRE AND EXPLOSION AVOIDANCE:
Nonflammable.

OTHER PRECAUTIONARY INFORMATION:
No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of the hazardous decomposition products mentioned in section 4 of this MSDS.

HMIS HAZARD RATINGS: HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0
PERSONAL PROTECTION: X (See precautions, section 7.)

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
POTASSIUM PERFLUOROALKYL SULFONATE...	0.1	MG/M3	TWA	3M	Y
POTASSIUM PERFLUOROALKYL SULFONATE...	0.1	MG/M3	TWA	3M	Y
POTASSIUM PERFLUOROALKYL SULFONATE...	0.1	MG/M3	TWA	3M	Y
POTASSIUM PERFLUOROALKYL SULFONATE...	0.1	MG/M3	TWA	3M	Y

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

EXPOSURE LIMITS (continued)

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
POTASSIUM PERFLUOROALKYL SULFONATE...	0.1	MG/M3	TWA	3M	Y

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:
- 3M: 3M Recommended Exposure Guidelines

8. HEALTH HAZARD DATA

EYE CONTACT:
Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

SKIN CONTACT:
Mild Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, and itching.

May be absorbed through the skin and persist in the body for an extended time.

INHALATION:
May be harmful if inhaled.

May be absorbed by inhalation and persist in the body for an extended time.

Single overexposure, above recommended guidelines, may cause:

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

IF SWALLOWED:
Ingestion is not a likely route of exposure to this product.

Illness may result from a single swallowing of a moderate quantity of this material.

May be harmful if swallowed.

MUTAGENICITY:
Mutagenicity assays indicate the product is not mutagenic.

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8. HEALTH HAZARD DATA (continued)

REPRODUCTIVE/DEVELOPMENTAL TOXINS:
Not teratogenic in the rat at oral doses below maternally toxic levels.

OTHER HEALTH HAZARD INFORMATION:
This product is not known to contain any substances regulated under California Proposition 65.

A Product Toxicity Summary Sheet is available.

SECTION CHANGE DATES

HEADING	SECTION CHANGED SINCE November 05, 1997 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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AMH JWF MC JG DLN JFB BJP

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PRODUCT #: C8503 NAME: CHOLESTEROL

MATERIAL SAFETY DATA SHEET, Valid 8/2000 - Printed 07/25/2000 15:03

SIGMA

Sigma-Aldrich
3050 Spruce Street
St. Louis, MO 63103, US
Technical Phone: 314 771 5765
Emergency Phone: 314 771 5765
Fax: 800 325 5052

AZZN Mark Coker

SECTION 1. - - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - - -
CATALOG #: C8503
NAME: CHOLESTEROL

SECTION 2. - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -
CAS #: 57-88-5
MF: C27H46O
EC NO: 200-353-2

SYNONYMS
CHOLEST-5-EN-3-OL (3-BETA)- (9CI) * CHOLEST-5-EN-3-BETA-OL * DELTA(SUP 5)-CHOLESTEN-3-BETA-OL * 5-CHOLESTEN-3-BETA-OL * 5:6-CHOLESTEN-3-OL * 5:6-CHOLESTEN-3-BETA-OL * CHOLESTERIN * CHOLESTERINE * CHOLESTRIN * (-)-CHOLESTEROL * CHOLESTERYL ALCOHOL * DYTHOL * 3-BETA-HYDROXYCHOLEST-5-ENE * PROVITAMIN D *

SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - - -
DATA NOT AVAILABLE

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -
EXTINGUISHING MEDIA
WATER SPRAY.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - - -
CHEMICAL SAFETY GOGGLES.
USE PROTECTIVE CLOTHING, GLOVES AND MASK.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -
REFER TO SECTION 8.

SECTION 8. - - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - -
CHEMICAL SAFETY GOGGLES.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
NIOSH/MSHA-APPROVED RESPIRATOR.

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PRODUCT #: C8503 NAME: CHOLESTEROL

MATERIAL SAFETY DATA SHEET, Valid 8/2000 - 10/2000

Printed 07/25/2000 15:03

SIGMA

SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
AVOID INHALATION.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

APPEARANCE AND ODOR
WHITE POWDER

PHYSICAL PROPERTIES
BOILING POINT: 360 C
MELTING POINT: 147 C TO 149 C
SPECIFIC GRAVITY: 1.067

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

STABILITY
STABLE.

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

ACUTE EFFECTS
MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.
MAY CAUSE IRRITATION.
TOXICOLOGICAL DATA INDICATE A LOW ORDER OF TOXICITY. GENERAL GOOD-HOUSEKEEPING PRACTICES SHOULD BE FOLLOWED.

RTECS #: FZ8400000
CHOLESTEROL

TARGET ORGAN DATA
KIDNEY, URETER, BLADDER (BLADDER TUMORS)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON FERTILITY (LITTER SIZE)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)
TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)
TUMORIGENIC (TUMORS AT SITE OF APPLICATION)
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - -

REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
IARC CANCER REVIEW:ANIMAL INADEQUATE EVIDENCE IMEMDT 10,99,1976

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PRODUCT #: C8503 NAME: CHOLESTEROL

SIGMA SAFETY DATA SHEET, Valid 8/2000 - Printed 07/25/2000 15:03

IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 31,95,1983
IARC CANCER REVIEW:GROUP 3 IMSUDL 7,161,1987
NOHS 1974: HZD 80865; NIS 8; TNF 1321; NOS 10; TNE 13980
NOES 1983: HZD 80865; NIS 5; TNF 4091; NOS 11; TNE 41411; TFE 30220
EPA GENETOX PROGRAM 1988, NEGATIVE: SHE-CLONAL ASSAY
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, DECEMBER 1999

SECTION 16. - - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

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Material Safety Data Sheet

Date Printed: 07/25/2000
Date Updated: 11/01/1999
Version 1.0

Section 1 - Product and Company Information

Product Name	DL-MEVALONIC ACID LACTONE		
Product Number	M4667		
Brand	Sigma Chemical		
Company	Sigma-Aldrich		
Street Address	3050 Spruce Street		
City, State, Zip, Country	St. Louis, MO, 63103, US		
Technical Phone:	314 771 5765	**Emergency Phone:**	414 273 3850 Ext.5996
Fax:	800 325 5052		

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
DL-MEVALONIC ACID LACTONE	674-26-0	No

Formula C6H10O3
Synonyms

Section 3 - Hazards Identification

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Flash Point: 235 °F 113 °C

Autoignition Temp: N/A **Flammability:** N/A

Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

NIOSH/MSHA-approved respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Color	Form
Faintly beige	Solidified mass or fragments

Molecular Weight: 130.15 AMU

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	145 - 150 °C	5 mmHg
MP/MP Range	24 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	

Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	235 °F
Flash Point °C	113 °C
Explosion Limits	N/A
Autoignition Temp	N/A
Refractive Index	1.473
Solubility	N/A

Section 10 - Stability and Reactivity

Stability

Conditions of Instability

Protect from moisture.

Conditions to Avoid

Protect from moisture.

Materials to Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

May cause skin irritation.

Eye Contact

May cause eye irritation.

Inhalation

Material may be irritating to mucous membranes and upper respiratory tract.

Multiple Routes

May be harmful by inhalation, ingestion, or skin absorption.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number:

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Proper Shipping Name: None
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

United States Regulatory Information
SARA 313 Listed: No

Section 16 - Other Information

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 1999 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

ATTACHMENT 3

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

ATTACHMENT 3

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

Test Article:	PFOS
Control Articles:	Cholesterol
	Mevalonic acid
Vehicle:	0.5% Tween® 80 in R.O. Deionized Water for PFOS and Cholesterol
	R.O. deionized water for Mevalonic Acid

A. Purpose: The purpose of this procedure is to provide a method for the preparation of dosage formulations of PFOS, mevalonic acid, cholesterol and the 0.5% Tween® 80 vehicle for oral administration to rats on Primedica Argus Research Laboratories, Inc. Study 418-018.

B. General Information:

1. All formulation containers will be labeled and color coded. Each label will specify the protocol number, test article identification, Argus batch number, concentration, dosage level, preparation date, expiration date and storage conditions.

2a. Suspensions of PFOS will be prepared:
___ Daily _X_ Weekly __ For___ days of use

2b. Formulations of the control articles will be prepared:
_X_ Once Daily (cholesterol) _X_ Twice daily (Mevalonic acid)

2c. The 0.5% Tween® 80 Vehicle will be prepared:
___ Daily _X_ Weekly __ For___ days of use

3. Suspensions will be prepared at a final dosage volume of 5 mL/kg.

4. Safety:
_X_ Gloves, lab coat, goggles or safety glasses and faceshield
_X_ Dust-Mist Respirator
___ Half-Face Respirator
___ Full-Face Respirator/Positive Pressure Hood
___ Tyvek Suit/Apron

5. Dosage formulations of the test article and control articles adjusted for Free base and % Purity.
___ Yes _X_ No (Calculations based on 100%)
___ Free Base ___ Purity

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

6. Sampling requirements: Cited in protocol.

7. Storage: Cited in protocol.

NOTE: The test article suspensions will be prepared as a serial dilution from the high dosage to the low dosage. Once the final volumes are achieved, stir bars are to be added to the containers; mixing should occur during preparation, aliquotting, sampling and/or dosage administration.

C. Preparation of the 0.5% Tween® 80 Vehicle:

1. Add 2985 mL of R.O. deionized water to an appropriately labeled container. Heat the water to 50°C ± 5°C, then add 15 mL of Tween® 80 and mix until uniform.

D. Test Article Suspension Preparation:

NOTE: Prior to preparation of the 0.40 mg/mL suspension, precalibrate an appropriately sized container to the desired volume with R.O. deionized water.

1. To prepare the 0.40 mg/mL suspension, weigh the required amount of test article (See TEST ARTICLE PREPARATION CALCULATIONS) into an appropriately sized, labeled, pre-calibrated container. QS ad to the required amount with 0.5% Tween® 80 and heat the mixture to 80°C ±5°C for approximately 30 minutes or until the TA/S dissolves.

2. Once the test article has dissolved, remove the suspension from the water bath, add a magnetic stir bar to the container, place on a magnetic stir plate and mix until the suspension equilibrates to room temperature. (Be sure there is a visible vortex, this will achieve the desired emulsion.) Be sure that the suspension is mixed prior to and during preparation of other dosage groups, aliquotting, dosage and/or sampling.

3. To prepare the 0.32 mg/mL suspension, remove the required amount of 0.40 mg/mL suspension (See TEST ARTICLE PREPARATION CALCULATIONS) and add it to an appropriately sized graduated cylinder. QS ad to the final required volume with 0.5% Tween® 80 (See TEST ARTICLE PREPARATION CALCULATIONS). Stopper the graduated cylinder and invert several times to ensure proper mixing. Transfer the suspension to an appropriately sized, labeled container. Add a magnetic

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

stir bar to the container, place on a magnetic stir plate and mix prior to and during preparation of other dosage groups, aliquotting, dosage and/or sampling.

4. To prepare the 0.24 mg/mL suspension, remove the required amount of 0.32 mg/mL suspension (See TEST ARTICLE PREPARATION CALCULATIONS) and add it to an appropriately sized graduated cylinder. QS ad to the final required volume with 0.5% Tween® 80 (See TEST ARTICLE PREPARATION CALCULATIONS). Stopper the graduated cylinder and invert several times to ensure proper mixing. Transfer the suspension to an appropriately sized, labeled container. Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during preparation of other dosage groups, aliquotting, dosage and/or sampling.

5. To prepare the 0.20 mg/mL suspension, remove the required amount of 0.24 mg/mL suspension (See TEST ARTICLE PREPARATION CALCULATIONS) and add it to an appropriately sized graduated cylinder. QS ad to the final required volume with 0.5% Tween® 80 (See TEST ARTICLE PREPARATION CALCULATIONS). Stopper the graduated cylinder and invert several times to ensure proper mixing. Transfer the suspension to an appropriately sized, labeled container. Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during preparation of other dosage groups, aliquotting, dosage and/or sampling.

6. To prepare the 0.16 mg/mL suspension, remove the required amount of 0.20 mg/mL suspension (See TEST ARTICLE PREPARATION CALCULATIONS) and add it to an appropriately sized graduated cylinder. QS ad to the final required volume with 0.5% Tween® 80 (See TEST ARTICLE PREPARATION CALCULATIONS). Stopper the graduated cylinder and invert several times to ensure proper mixing. Transfer the suspension to an appropriately sized, labeled container. Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during preparation of other dosage groups, aliquotting, dosage and/or sampling.

7. To prepare the 0.08 mg/mL suspension, remove the required amount of 0.16 mg/mL suspension (See TEST ARTICLE PREPARATION CALCULATIONS) and add it to an appropriately sized graduated cylinder. QS ad to the final required volume with 0.5% Tween® 80 (See TEST ARTICLE PREPARATION CALCULATIONS). Stopper the graduated

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

cylinder and invert several times to ensure proper mixing. Transfer the suspension to an appropriately sized, labeled container. Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during aliquotting, dosage and/or sampling.

8. To prepare the 0 mg/mL suspension, add the required amount of the appropriate vehicle (R.O. deionized water or 0.5% Tween® 80) to an appropriately sized, labeled container (See TEST ARTICLE PREPARATION CALCULATIONS). Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during aliquotting, dosage and/or sampling.

E. Preparation of Mevalonic Acid Solution:

1. Weigh the required amount of mevalonic acid into an appropriately labeled container (See TEST ARTICLE/VEHICLE PREPARATION CALCULATIONS).

2. Add approximately 80% of R.O. deionized water to the container. Add a stir bar to the container, place on a magnetic stir plate and agitate until the control article has dissolved completely.

3. Transfer solution to an appropriately sized graduated cylinder and Q.S. to the final desired volume with R.O. deionized water (See TEST ARTICLE/VEHICLE PREPARATION CALCULATIONS).

4. Cover the graduated cylinder with a glass stopper and mix by inversion. Return the solution to the original container. Add a magnetic stir bar to the container, place on a magnetic stir plate and mix prior to and during dosage.

F. Preparation of Cholesterol Suspension:

NOTE: Prior to preparation of the cholesterol suspension, precalibrate an appropriately sized container to the desired volume with R.O. deionized water.

1. Weigh the required amount of cholesterol into an appropriately sized, labeled container (see TEST ARTICLE/VEHICLE PREPARATION CALCULATIONS).

ATTACHMENT 3

TEST ARTICLE, CONTROL ARTICLE AND VEHICLE PREPARATION PROCEDURE

2. Add a small amount of 0.5% Tween® 80 to the container and wet the cholesterol by using a glass rod. QS ad with the 0.5% Tween® 80 to the final required volume (see TEST ARTICLE/VEHICLE PREPARATION CALCULATIONS).

3. Add a magnetic stir bar to the vessel, place on a magnetic stir plate and mix until uniform prior to and during dosage administration.

Written by: Patricia A. Kelly

Approved by: [signature] Date: 21-AUG00

Clarification: X No ___ Yes (See attached clarification form.)

Initials/Date : Christopher K. Pierpont 12/12/00

ATTACHMENT 4

TISSUE COLLECTION AND PROCESSING

ATTACHMENT 4

Tissue Collection and Processing

Sample Type	Units	Aliquots	Storage/Shipping Conditions	Shipped to	Analysis
Day 21 Gestation Fetuses					
Blood	Pooled/litter	1/2 plasma	≤-20	PWL	Mevalonic acid
		1/4 serum	≤-20	3M	PFOS
		1/4 serum	≤-20	AniLytics	LDL, HDL, tot chol, trigl
Liver	Pooled/litter	1 liver	Gluteraldehyde, RT	3M	Possible EM
		1/3 all livers	≤-20	3M	PFOS
		1/3 all livers	≤-20	AniLytics	LDL, HDL, tot chol, trigl
		1/3 all livers	Liquid nitrogen, ≤-70	3M	Possible Biochemical
Day 21 Gestation Dams					
Blood	4 mL/dam	1/2 plasma	≤-20	PWL	Mevalonic acid
		1/4 serum	≤-20	3M	PFOS
		1/4 serum	≤-20	AniLytics	LDL, HDL, tot chol, trigly
Liver	each dam	right lateral lobe	Liquid nitrogen, ≤-70	3M	Possible Biochemical
		median lobe	≤-20	3M	PFOS
		0.3-0.5 cm section	Gluteraldehyde, RT	3M	Possible EM
		remainder	≤-20	Ani Lytics	LDL, HDL, tot chol, trigly
Day 5 Lactation Dams					
Milk	100 µL/dam		≤-20	AniLytics	Total cholesterol
Blood	4 mL/dam	1/2 plasma	≤-20	PWL	Mevalonic acid
		1/4 serum	≤-20	3M	PFOS
		1/4 serum	≤-20	Ani Lytics	LDL, HDL, tot chol, trigl
Liver	each dam	right lateral lobe	Liquid nitrogen, ≤-70	3M	Possible Biochemical
		median lobe	≤-20	3M	PFOS
		0.3-0.5 cm section	Gluteraldehyde, RT	3M	Possible EM
		Remainder	≤-20	Ani Lytics	LDL, HDL, tot chol, trigly
Heart	each dam		Gluteraldehyde, RT	3M	Possible EM & light microscopy
Day 5 Postpartum Pups					
Blood	Pooled/sex/litter	1/2 plasma	≤-20	PWL	Mevalonic acid
		1/4 serum	≤-20	3M	PFOS
		1/4 serum	≤-20	AniLytics	LDL, HDL, tot chol, trigl
Liver	Pooled/sex/litter	1/3 all livers	≤-20	3M	PFOS
		1/3 all livers	≤-20	AniLytics	LDL, HDL, tot chol, trigl
		1/3 all livers	Liquid nitrogen, ≤-70	3M	Possible Biochemical
Hearts	2 male, 2 female, per sex per litter		Gluteraldehyde, RT	3M	Possible EM & light microscopy

PWL = Primedica Worcester Laboratories Tot chol = Total cholesterol trigl = Triglyceride
RT = Room Temperature EM = Electron Microscopy

PRIMEDICA

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PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 1 - 13 September 2000

1. Storage (page 4 of the protocol):

   The storage conditions for the Mevalonic Acid should be frozen, rather than room temperature.

   Reason for Change:

   This change was made at the request of the Sponsor.

2. Shipping Instructions (page 6 of the protocol):

   The correct address for Dave Ehresman is the following:

   Dave Ehresman
   3M Corporate Toxicology
   3M Center Building 236-0C-148
   St. Paul, Minnesota 55144
   Telephone: (651) 733-5070
   Telefax: (651) 737-4754

Any revisions made to this finalized amendment must be made by subsequent amendment.

Reason for Change:

This change corrects the protocol.

George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
Study Director

for Dena C. Lebo, V.M.D. Date
Chairperson, Institutional Animal Care
and Use Committee

Deanna J. Luebker, M.S. Date
Study Monitor

John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions made to this finalized amendment must be made by subsequent amendment.

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Telefax: (215) 443-8587

PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 2 - 22 November 2000

1. Alternate Study Monitor (page 1 of the protocol):

   The telephone number for John Butenhoff, Ph.D., DABT, CIH is (651) 733-1962, rather than (651) 737-1962.

   Reason for Change:

   This change corrects the protocol.

2. Sample Analysis and Shipping Instructions (page 14 of the protocol):

   The following paragraphs will replace the paragraph which states that serum and liver samples will be analyzed for LDL, HDL, total cholesterol and triglycerides:

   The remaining liver samples will be analyzed for LDL, HDL, total cholesterol and triglycerides.

   Serum samples collected from all dams and pups will be analyzed for total cholesterol, glucose, total and free T_3, T_4 and TSH levels, LDL, HDL and triglycerides. The first priority will be analysis for total cholesterol and glucose. The second priority will be analysis for total and free T_3, T_4 and TSH levels. The third priority will be analysis for LDL, HDL and triglycerides.

Any revisions to this finalized amendment must be made by subsequent amendment.

The liver and serum samples will be shipped to:

Dr. Saroj R. Das
Ani Lytics, Inc.
200 Gerard Street, Suite 2000
Gaithersburg, Maryland 20877
Telephone: (301) 921-0168
Telefax: (301) 977-0433

Reason for Change:

This change was made at the request of the Sponsor in order to include additional tissue samples and to prioritize the use of samples for analyses.

3. Scheduled Sacrifice - F1 Generation Pups (page 20 of the protocol):

[Effective Date: 3 November 2000] For Replicate 1, blood samples will be pooled per litter, samples from male and female pups combined, rather than pooled per sex. Samples will be aliquoted as follows, rather than as described in paragraph 3. Approximately 1 mL of blood will be transferred into serum separator tubes; any remaining blood will be transferred into EDTA-coated tubes. The samples will be spun in a centrifuge and the resulting serum will be divided into two aliquots. The first aliquot (approximately 200 µL) will be used for PFOS analysis. The second aliquot (approximately 300 µL of serum) will be used for analysis of total cholesterol, glucose, total and free T_3, T_4 and TSH levels and LDL, HDL and triglyceride levels, according to the priorities described in item 1, above. Any resulting plasma will be transferred into one aliquot. Resulting serum will be prioritized as follows: clinical chemistries first (according to the priorities described in item 2, above) and then PFOS samples. All samples will be immediately frozen on dry ice and maintained frozen (≤-70°C) until shipment for analysis.

Reason for Change:

This change was made at the request of the Sponsor in order to prioritize the use of samples for analyses.

4. Scheduled Sacrifice - F1 Generation Pups (page 20 of the protocol):

[Effective Date: 17 November 2000] For Replicate 2, blood samples will be pooled (two litters per sample within each dosage group). Samples will be aliquoted as follows, rather than as described in paragraph 3. Approximately 0.3 mL of blood will be transferred into EDTA-coated tubes. The remaining blood will be transferred into serum separator tubes. The samples will be spun in a centrifuge and the resulting serum will be divided into two aliquots. Resulting plasma will be transferred into one aliquot. The serum will be prioritized as follows: clinical chemistries first (according

to the priorities described in item 2, above) and then PFOS samples. All samples will be frozen on dry ice and maintained frozen (≤-70°C) until shipment for analysis.

Reason for Change:

This change was made at the request of the Sponsor in order to prioritize the use of samples for analyses.

5. Scheduled Sacrifice - F1 Generation Pups (page 21 of the protocol):

[Effective Date: 3 November 2000] Thyroids will be excised from each pup, pooled (by sex per litter). Thyroids will be retained in neutral buffered 10% formalin for possible future evaluation.

Reason for Change:

This change was made at the request of the Sponsor.

George E. Dearlove 22 Nov 00
George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York 22-Nov-00
Raymond G. York, Ph.D., DABT Date
Associate Director of Research
Study Director

per Dena C. Lebo 22 Nov 00
Dena C. Lebo, V.M.D. Date
Chairperson, Institutional Animal Care
and Use Committee

Deanna J. Luebker 11/30/00
Deanna J. Luebker, M.S. Date
Study Monitor

John J. Butenhoff 11/30/2000
John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions to this finalized amendment must be made by subsequent amendment.

PRIMEDICA

Argus Research Laboratories, Inc.
905 Sheehy Drive, Building A
Horsham, PA 19044
Telephone: (215) 443-8710
Telefax: (215) 443-8587

PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 3 - 11 January 2001

1. Control Articles (page 3 of the protocol):

   The lot number for mevalonic acid is lot number 070K26603, rather than 070K2603.

   Reason for Change:

   This change corrects a typographical error.

2. Control Articles (page 3 of the protocol):

   For mevalonic acid, lot number 080K2618, expiration date September 2004, was used in addition to lot number 070K26603.

   Reason for Change:

   Additional mevalonic acid was required for the preparation of the mevalonic acid control and PFOS plus mevalonic acid formulations.

3. Sample Analysis and Shipping Instructions (page 14 of the protocol):

   Plasma mevalonic acid levels will be measured for the following dosage groups: Vehicle Control (Group 1), Mevalonic Acid Control (Group 2), 1.6 mg/kg PFOS + Mevalonic Acid (Group 3), 2 mg/kg PFOS + Mevalonic Acid (Group 4), 1.2 mg/kg PFOS (Group 11), 1.6 mg/kg PFOS (Group 12) and 2 mg/kg PFOS (Group 13), rather than all dosage groups. Mevalonic acid levels may be measured in the lower PFOS dosage groups after evaluation of the results of the above analyses. Remaining samples will be retained at Primedica Worcester Laboratories or the Testing Facility until notification from the Sponsor for disposition.

Any revisions made to this finalized amendment must be made by subsequent amendment.

Reason for Change:

This change was made at the request of the Sponsor.

4. Sample Analysis and Shipping Instructions (page 1 of Amendment 2 to the protocol):

Total and free T_3, T_4 and TSH levels will be measured for the following dosage groups: Vehicle Control (Group 1), 1.2 mg/kg PFOS (Group 11), 1.6 mg/kg PFOS (Group 12) and 2 mg/kg PFOS (Group 13), rather than all dosage groups. Total and free T_3, T_4 and TSH levels may be measured in the lower PFOS dosage groups after evaluation of the results of the above analyses.

Reason for Change:

This change was made at the request of the Sponsor.

George E. Dearlove 11-JAN-01
George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York 11-JAN-01
Raymond G. York, Ph.D., DABT Date
Associate Director of Research and
Study Director

Dena C. Lebo 11 JAN 01
Dena C. Lebo, V.M.D. Date
Chairperson, Institutional Animal Care
and Use Committee

Deanna J. Luebker 1/15/01
Deanna J. Luebker, M.S. Date
Study Monitor

John Z. Butenhoff 15 JAN 01
John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions made to this finalized amendment must be made by subsequent amendment.

PRIMEDICA

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PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 4 - 18 April 2001

1. F1 Generation Pups (page 10 of the protocol):

   [Effective Date: 21 August 2000] Day 1 of lactation (postpartum) is defined as the day of birth and is also the first day on which all of the pups in a litter are weighed. The pups will not be individually weighed; pooled litter weights will be recorded.

   Reason for Change:

   This change was made to be consistent with Tests, Analyses and Measurements - F1 Generation, Body Weights.

2. Scheduled Sacrifice - F1 Generation Pups (page 20, 21, page 1 of ATTACHMENT 4 and item 5 of Amendment 2 to the protocol):

   Histopathology will be performed on the heart and thyroid of one male and one female F1 generation pup from each of four litters from the Vehicle Control group (Group 1) and 2 mg/kg PFOS group (Group 13). If any difference is found, histopathology will be performed on the heart and thyroid of one male and one female F1 generation pup from each of four litters, when possible, from the 0.4 and 1.6 mg/kg PFOS dosage groups (Groups 8 and 12, respectively). Tissues will be shipped (ambient conditions) for evaluation to:

   W. Ray Brown, D.V.M., Ph.D., ACVP
   Veterinary Pathologist
   Research Pathology Services, Inc.
   438 E. Butler Avenue
   New Britain, Pennsylvania 18901
   Telephone: (215) 345-7070
   Telefax: (215) 345-4326

Any revisions made to this finalized amendment must be made by subsequent amendment.

Reason for Change:

This change was made at the request of the Sponsor.

George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director

Theresa H. Woodard, D.V.M. Date
Chairperson, Institutional Animal Care
and Use Committee

Deanna J. Luebker, M.S. Date
Study Monitor

John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions made to this finalized amendment must be made by subsequent amendment.

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ARGUS RESEARCH
Charles River Laboratories
Discovery and Development Services

PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 5 - 4 February 2002

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1. Shipping Instructions (page 6 of the protocol):

[Effective Date: 29 January 2002] Homogeneity and concentration samples shipped to Dave Ehresman at 3M Corporate Toxicology for analysis will be reshipped (frozen on dry ice) to:

Emily R. Decker (Principal Investigator)
Exygen Research
3058 Research Drive
State College, Pennsylvania 16801
Telephone: (814) 272-1039
Telefax: (814) 272-1019
Email: edecker@centrelab.com

The analyses will be subcontracted to Exygen Research by the Sponsor and the Quality Assurance Unit for Exygen Research will conduct critical phase inspections and audit the respective results and reports according to the Standard Operating Procedures of that facility. Such critical phase inspection reports and audit reports will be submitted by that facility to the Study Director, Raymond G. York. The date of the inspections and report submissions will be incorporated into a QAU statement generated by Exygen Research for inclusion in the final report for protocol 418-018.

Any revisions to this finalized amendment must be made by subsequent amendment.

Reason for Change:

This change was made at the request of the Sponsor.

George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director

Theresa H. Woodard, D.V.M. Date
Chairperson, Institutional Animal Care
and Use Committee

Deanna J. Luebker, M.S. Date
Study Monitor

John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions to this finalized amendment must be made by subsequent amendment.

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ARGUS RESEARCH
Charles River Laboratories
Discovery and Development Services

PROTOCOL 418-018

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/ CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

Amendment 6 - 9 October 2002

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1. Shipping Instructions (page 6 of the protocol and Amendment 5, item 1):

   [Effective Date: 14 February 2002] The samples shipped to Exygen Research will be analyzed using the LC/MS/MS conditions found in the attached pages.

   Reason for Change:

   This change was made at the request of Exygen Research to clarify the analytical methodology to be used for the analysis of the samples.

2. Shipping Instructions (page 6 of the protocol and Amendment 5, item 1):

   [Effective Date: 16 September 2002] The e-mail address for Emily R. Decker is emily.decker@exygen.com.

Any revisions to this finalized amendment must be made by subsequent amendment.

Reason for Change:

This change was made because the e-mail address was changed.

George E. Dearlove, Ph.D., DABT Date
Associate Director of Research

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director

Dena C. Lebo, V.M.D. Date
Member, Institutional Animal Care
and Use Committee

Deanna J. Luebker, M.S. Date
Study Monitor

John Butenhoff, Ph.D., DABT, CIH Date
Alternate Study Monitor

Any revisions to this finalized amendment must be made by subsequent amendment.

LC/MS/MS System and Operating Conditions (TurboIonspray)

Mass Spec: PE SCIEX API 3000 Biomolecular Mass Analyzer

Interface: SCIEX TurboIon Spray Liquid Introduction Interface
Harvard infusion pump

Computer: Dell UltraScan P1110

Software: PE SciexAnalyst 1.1
Windows NT

HPLC: Hewlett Packard (HP) Series 1100
HP Quat Pump
HP Vacuum Degasser
HP Autosampler
HP Column Oven

HPLC Column:Genesis C_8 (Jones Chromatography), 2.1 mm x 50 mm, 4µ
Column Temp.: 35° C
Injection Vol.: 10 µL
Mobile Phase (A): 2 mM Ammonium Acetate in ASTM type I water
Mobile Phase (B): Methanol
Flow Rate: 0.3 mL/min.

Time	% A	% B
0	60	40
1.0	0	100
7.0	0	100
7.5	60	40
11.0	60	40

It may be necessary to adjust the HPLC gradient in order to optimize instrument performance. Columns with different dimensions (e.g., 2.1 mm x 30 mm) and columns from different manufacturers (Keystone Betasil C_{18} etc.) can be used, provided equivalent chromatography is obtained.

Ions monitored:

Analyte	Mode	Transition Monitored	Approximate Retention Time (min)
PFOS	negative	499 → 99	4.40

3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219
F: 814.272.1019
exygen.com

On a day-to-day basis, the retention times may vary slightly depending on the batch of mobile phase, etc.

Example Tune File Parameters

The following values are provided as an example. Actual values may vary from instrument to instrument. Also, these values may be changed from time to time in order to optimize for greatest sensitivity.

Once the instrument is tuned, the optimized parameters are saved as a "tune file". This tune file is then used during routine analysis. The tuning procedure may be repeated as necessary to ensure optimal sensitivity.

Tune File Parameters

Controls	Set
IS-Iospray	-4200.0
DP-Declustering Potential	-51.0
FP-Focusing Potential	-230.0
EP-Entrance Potential	10.0
CE-Collision Energy	-70
CXP-Collision Cell Exit Potential	-5
DF-Deflector	300.0
CEM-Channel Electron Multiplier	2800.0

Gas Flows	Set
Nebulizer Gas	12
Curtain Gas	13
Collision Gas	4
TIS Temperature	350°C

Calibration Procedures

a. Inject the same volume (between 10 to 20 µL) of each calibration standard (prepared in MeOH) into the LC/MS/MS.

b. Use linear, 1/x weighted standard curves for quantification. Linear standard curves are generated for each set by linear regression using the appropriate software system. Any calibration standards falling outside ± 30%, based on its calculated concentration, may be excluded from the calibration curve. However, the total number of calibration standards that may be excluded must not exceed 20% of the total number of standards injected.

c. The correlation coefficient (r) for calibration curves generated must be ≥0.9925 (r^2≥0.985). If calibration results fall outside these

limits, then appropriate steps should be taken to adjust instrument operation, and the relevant set of samples must be reanalyzed.

Sample Analysis

Inject the same volume used for the calibration standards (between 10 to 20 µL) of each sample, fortification, control, etc. into the LC/MS/MS. Each sample must be analyzed in duplicate.

a. Standards corresponding to at least six concentrations must be included in an analytical set.

b. Inject an entire set of standards (six) at the beginning of the run and inject standards interspersed about every 5-10 samples. All sample injections must be bracketed by standard injections.

c. The concentration of each sample, fortification, control, etc. is determined from the standard curve based on the peak area of the analyte in all standards injected during a set. The standard responses must bracket responses of the residue found in the sample set. If necessary, dilute the samples and re-analyze to give a response within the standard curve range.

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APPENDIX D

DEVIATIONS FROM THE PROTOCOL AND THE STANDARD OPERATING PROCEDURES OF THE TESTING FACILITY

DEVIATIONS FROM THE PROTOCOL AND THE STANDARD OPERATING PROCEDURES OF THE TESTING FACILITY

1. Rats were ordered to weigh 175 g to 200 g at receipt, rather than 175 g to 225 g at receipt. This deviation did not adversely affect the outcome or interpretation of the study because the rats were a sufficient weight to go on study.

2. The following dosage administrations were performed from two minutes early to 60 minutes late.

Dosage Group	Identification	Date	Day of Study[a]	Dosage Number Administered Early or Late	Rat Number
1	Vehicle Control	15 SEP 00	DS 2	2	11501 - 11514
		22 SEP 00	DS 9	3	11501 - 11514
		10 OCT 00	DS 43, DG 0	3	10901 - 10914
		14 OCT 00	DS 47, DGs 1 - 4	3	10901 - 10914
		14 OCT 00	DS 31	3	11501 - 11514
		20 OCT 00	DS 9	2	10901
		24 OCT 00	DGs 2, 11 - 14	2	10901 - 10914
		10 NOV 00	DG 19	2	10913
2	Mevalonic Acid Control	15 SEP 00	DS 2	2	11515, 11517
		22 SEP 00	DS 9	3	11515 - 11528
		28 SEP 00	DS 15	2	11526 - 11528
		10 OCT 00	DS 43, DG 0	3	10915 - 10928
		14 OCT 00	DS 47, DGs 1 - 4	3	10915 - 10928
		14 OCT 00	DS 31	3	11515 - 11528
		24 OCT 00	DGs 3, 9, 11 - 14	2	10915 - 10928
		10 NOV 00	DG 20	2	10927
3	1.6 mg/kg PFOS + Mevalonic Acid	16 SEP 00	DS 19	2	10930
		22 SEP 00	DS 9	3	11529 - 11543
		28 SEP 00	DS 15	2	11529 - 11543
		10 OCT 00	DS 43, DG 0	3	10929 - 10942
		14 OCT 00	DGs 2 - 4	3	10929 - 10942
		14 OCT 00	DS 31	3	11529 - 11543
		24 OCT 00	DGs 12, 14	2	10929 - 10932, 10934
4	2 mg/kg PFOS + Mevalonic Acid	16 SEP 00	DS 19	2	10943 - 10945
		22 SEP 00	DS 9	3	11544 - 11557
		28 SEP 00	DS 15	2	11544 - 11557
		10 OCT 00	DS 43, DG 0	3	10943 - 10956
		14 OCT 00	DS 47, DGs 0 - 4	3	10943 - 10956
		14 OCT 00	DS 31	3	11544 - 11557
		10 NOV 00	DG 20	2	10952
5	Cholesterol Control	28 SEP 00	DS 15	2	11558 - 11571
		10 NOV 00	DG 18	2	10967

a. DS is used as an abbreviation for day of study. DG is used as an abbreviation for day of (presumed) gestation. DL is used as an abbreviation for day of lactation.

Dosage Group	Identification	Date	Day of Study	Dosage Number Administered Early or Late	Rat Number
6	1.6 mg/kg PFOS + Cholesterol	21 SEP 00	DS 8	2	11583 - 11585
		28 SEP 00	DS 15	2	11572 - 11585
		07 OCT 00	DS 24	2	11572
		11 OCT 00	DS 44	2	10984
		21 OCT 00	DG 8	2	10983
		01 NOV 00	DG 20, DL 2	2	10972, 10973
		17 NOV 00	DG 21, DL 2	2	11584, 11585
7	2 mg/kg PFOS + Cholesterol	02 SEP 00	DS 5	2	10985
		28 SEP 00	DS 15	2	11586 - 11595
		11 OCT 00	DS 44, DG 0	2	10994 - 10998
		12 OCT 00	DS 45, DG 0	2	10990, 10992, 10994
		21 OCT 00	DGs 9, 11	2	10985 - 10989, 10991
		01 NOV 00	DG 21	2	10997, 10998
		01 NOV 00	DG 6	2	11591
		02 NOV 00	DS 50, DGs 4, 5, 7	2	11591 - 11599
		17 NOV 00	DL 1	2	11586

These deviations did not adversely affect the outcome or interpretation of the study because the time deviated was small and the deviation occurred on no more than four days of the approximately 60 to 80 day dosage period for any rat.

3. At least one event of dosage administration and/or postdosage observation was not recorded for the following rats.

Dosage Group	Identification	Date	Day of Study	Rat Number
1	Vehicle Control	28 SEP 00	DS 15	11502 - 11512
2	Mevalonic Acid Control	28 SEP 00	DS 15	11513 - 11524

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

4. Dosage administration was not performed for the following rats.

Dosage Group	Identification	Dosage Not Administered	Date	Day of Study	Rat Number
7	2 mg/kg PFOS + Cholesterol	Cholesterol	28 SEP 00	DS 15	11596
10	1 mg/kg PFOS	PFOS	01 OCT 00	DS 18	11623

These deviations did not adversely affect the outcome or interpretation of the study because it was a single occurrence for each rat.

5. On 1 October 2000, DS 18, the following rats in Group 3, 1.6 mg/kg PFOS + Mevalonic Acid, were administered the incorrect volume of test article.

Rat Number	Target Volume (mL)	Actual Volume (mL)
11532	1.2	1.3
11537	1.2	1.4
11539	1.0	1.3
11541	1.1	1.3

These deviations did not adversely affect the outcome or interpretation of the study because only four rats were affected and the additional volume was small (0.1 to 0.3 mL).

6. On 10 October 2000, DS 43 or DG 0, rats 10943 through 10956 in Group 4, 2 mg/kg PFOS + Mevalonic Acid, were administered the 0.32 mg/mL concentration of PFOS, rather than the 0.40 mg/mL at 5 mL/kg. Approximately 20 minutes later the rats were administered the 0.08 mg/mL concentration of PFOS at 5 mL/kg. These deviations did not adversely affect the outcome or interpretation of the study because the total correct dosage was administered to all of the rats.

7. On 20 November 2000, DL 3, rat 11589 in the 2 mg/kg PFOS + Cholesterol dosage group (Group 7) received 1.9 mL of test article rather than 1.5 mL. This deviation did not adversely affect the outcome or interpretation of the study because the amount of extra volume received was small and this was a single event.

8. Clinical observations, body weights and dosage administration were not recorded for the following rats.

Dosage Group	Identification	Date	Day of Study	Rat Number
12	1.6 mg/kg PFOS	01 NOV 00	DS 65	11039
			DG 19	11041
			DG 19	11042
			DG 21	11043
		07 NOV 00	DG 12	11647
			DG 9	11648
			DG 12	11649
			DG 0	11650
			DG 9	11651
			DG 10	11652
			DG 12	11653
13	2 mg/kg PFOS	07 NOV 00	DG 12	11654
			DG 10	11655
			DG 11	11656
			DG 11	11657
			DG 10	11658
			DG 11	11659
			DG 10	11660

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate these parameters.

9. Data for the following rats were not collected due to a computer filing error.

Dosage Group	Identification	Date	Day of Study	Rat Number
1	Vehicle Control	20 SEP 00	DS 7	11501 - 11512
3	1.6 mg/kg PFOS + Mevalonic Acid	20 SEP 00	DS 7	11538 - 11543
4	2 mg/kg PFOS + Mevalonic Acid	20 SEP 00	DS 7	11544 - 11548
5	Cholesterol Control	20 OCT 00	DG 10, 7	10965, 10966

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available for evaluation of this parameter.

10. The feed left and/or feed fed values were not recorded for the following rats.

Dosage Group	Identification	Date	Day of Study	Rat Number
3	1.6 mg/kg PFOS + Mevalonic Acid	02 NOV 00	DG 21	10939
4	2 mg/kg PFOS + Mevalonic Acid	21 SEP 00	DS 8	11553

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

11. Maternal behavior was not recorded for the following rats.

Dosage Group	Identification	Date	Day of Study	Rat Number
1	Vehicle Control	04 NOV 00	DL 1	10914
2	Mevalonic Acid Control	04 NOV 00	DL 1	10923, 10924
5	Cholesterol Control	19 NOV 00 22 NOV 00	DL 5 DL 5	10967 11567
6	1.6 mg/kg PFOS + Mevalonic Acid	03 NOV 00	DL 1	10977

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

12. The terminal blood collection data (time collected, volume collected, performed by and date) was not recorded for the following rats.

Dosage Group	Identification	Date	Day of Study	Rat Number
3	1.6 mg/kg PFOS + Mevalonic Acid	02 NOV 00	DG 21	10931
4	2 mg/kg PFOS + Mevalonic Acid	02 NOV 00	DG 21	10949
6	1.6 mg/kg PFOS + Cholesterol	03 NOV 00	DG 21	10980
8	0.4 mg/kg PFOS	22 NOV 00	DL 5	11601
10	1 mg/kg PFOS	22 NOV 00	DL 5	11629

These deviations did not adversely affect the outcome or interpretation of the study because the blood was collected and available for evaluation.

13. On 31 October 2000, DG 21, the maternal liver weight for rat 10932 in the 1.6 mg/kg PFOS + Mevalonic Acid dosage group (Group 3) was not recorded. This deviation did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

14. The pooled litter weights were not recorded for the pups of the following dams.

Dosage Group	Identification	Date	Day of Study	Rat Number
5	Cholesterol Control	22 NOV 00	DL 4	11608
8	0.4 mg/kg PFOS	22 NOV 00	DL 5	11569

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

15. On 19 November 2000, DL 3, the necropsy observations for rat 11554 in the 2 mg/kg/day PFOS + Mevalonic Acid dosage group (Group 4) were not recorded. This deviation did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

16. The weight of the pooled liver samples was not recorded for the male pups of the following dams.

Dosage Group	Identification	Date	Day of Study	Rat Number
1	Vehicle Control	25 NOV 00	DL 5	11504
4	2 mg/kg PFOS + Mevalonic Acid	25 NOV 00	DL 5	11547

These deviations did not adversely affect the outcome or interpretation of the study because sufficient data were available to evaluate this parameter.

All deviations are documented in the raw data.

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director

APPENDIX E

CERTIFICATE OF ANALYSIS

Certificate Of Analysis

FC-95, Lot 217

March 9, 2000

Richard M. Payfer

This sample was analyzed using LC/MS, ^{1}H-NMR, ^{19}F-NMR, and elemental analyses techniques. The results of these tests show the sample to contain the following weight percent composition:

$C_2F_5SO_3^-K^+$	0.04 %
$C_3F_7SO_3^-K^+$	0.83 %
$C_4F_9SO_3^-K^+$	1.38 %
$C_5F_{11}SO_3^-K^+$	1.30 %
$C_6F_{13}SO_3^-K^+$	3.71 %
$C_7F_{15}SO_3^-K^+$	1.19 %
$C_8F_{17}SO_3^-K^+$	90.49 %
$C_9F_{19}SO_3^-K^+$	0.49 %
$C_{10}F_{21}SO_3^-K^+$	0.13 %
$C_{11}F_{23}SO_3^-K^+$	0.04 %
CF_3-$CO_2^-K^+$	0.05 %
$SF_5C_8F_{16}SO_3^-K^+$	0.35 %

Additionally, the isomer distribution of the sample was determined using ^{19}F-NMR techniques and found to contain the following mole percent composition:

$CF_3(CF_2)_x$-$SO_3^-K^+$ (Normal chain, where x is mainly 7)	70.5%
$CF_3(CF_2)_x$-$CF(CF_3)$-$(CF_2)_y$- $SO_3^-K^+$ (Internal monomethyl branch, where x+y is mainly 5, and $x \neq 0$, $y \neq 0$)	17.1%
$(CF_3)_2CF$-$(CF_2)_x$- $SO_3^-K^+$ (Isopropyl branch, where x is mainly 5)	10.3%
C_xF_{2x+1}-$CF(CF_3)$- $SO_3^-K^+$ (Alpha branch, where x is mainly 6)	1.6%
$(CF_3)_3C$-$(CF_2)_x$- $SO_3^-K^+$ (t-butyl branch, where x is mainly 4)	0.2%
CF_3-$(CF_2)_x$-$C(CF_3)_2$-$(CF_2)_y$- $SO_3^-K^+$ (Internal gem-dimethyl branch, where x+y is mainly 4, and $x \neq 0$)	0.2%

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www.sigma-aldrich.com

CERTIFICATE OF ANALYSIS

DL-MEVALONIC ACID LACTONE
PRODUCT NO: M4667
LOT NO: 070K2603
FORMULA WEIGHT: 130.1
FORMULA: $C_6H_{10}O_3$
CAS NO: 674-26-0
STORE IN A FREEZER

TEST	SPECIFICATION	RESULTS
APPEARANCE	WHITE WITH A DARK YELLOW CAST SEMISOLID	CONFORMS
SOLUBILITY	CLEAR TO VERY SLIGHTLY HAZY FAINT YELLOW SOLUTION AT 400 MG PLUS 4 ML OF ETHANOL	CLEAR FAINT YELLOW
IDENTITY	CONSISTENT WITH STRUCTURE BY IR OR NMR	CONFORMS BY NMR
PURITY BY TITRATION	APPROX. 97%	99.2%

QC ACCEPTANCE DATE JULY 2000

DAVID FELDKER
MANAGER, ANALYTICAL SERVICES
191/200007#1/YXB1
DOCUMENT DATE: 07/26/00

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EXP.: 8/04

APPENDIX F

HOMOGENEITY AND CONCENTRATION ANALYSIS REPORT

STUDY TITLE

One Generation Reproduction Study of PFOS – Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats

DATA REQUIREMENTS

Analytical Method Requirements

STUDY DIRECTOR

Raymond G. York, Ph.D., DABT

ANALYTICAL PORTION COMPLETED ON

October 30, 2002

PERFORMING LABORATORY

Exygen Research
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039

STUDY SPONSOR

3M Corporate Toxicology
St. Paul, MN 55144-100

PROJECT

Study Protocol Number: 418-018
Exygen Study Number: 023-069

Total Pages: 21

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

Exygen Study Number 023-069, entitled "One Generation Reproduction Study of PFOS – Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats," conducted for 3M Corporate Toxicology, was performed in compliance with U.S. Food and Drug Administration Good Laboratory Practice Regulations by Exygen Research.

Emily R Decker — 10/30/02

Emily R. Decker
Principal Investigator
Exygen Research

Date

Raymond York — 14 NOV 02

Raymond G. York, Ph.D., DABT
Argus Research

Date

Deanna Luebker — 11/07/2002

Deanna J. Luebker, M.S.
Sponsor Representative
3M Corporate Toxicology

Date

QUALITY ASSURANCE STATEMENT

Exygen Research's Quality Assurance Unit reviewed Exygen Study Number 023-069, entitled, "One Generation Reproduction Study of PFOS – Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats." All reviewed phases were inspected for conduct according to Exygen Research's Standard Operating Procedures, the Study Protocol, and all applicable Good Laboratory Practice Standards. All findings were reported to the Study Director and to management.

Phase	Date Inspected	Date Reported to Exygen Management	Date Reported to Study Director and Sponsor Management
1. Protocol Review	2/14/02	2/25/02	4/11/02
2. Extraction, Fortification	2/15/02	2/25/02	4/11/02
3. Raw Data Review	4/3/02	8/1/02	8/8/02
4. Draft Report Review	9/9/02	9/13/02	9/18/02
5. Final Report Review	10/8/02	10/30/02	10/30/02

Angela Morgan
Quality Assurance Auditor

10/30/02
Date

CERTIFICATION OF AUTHENTICITY

This report, for Exygen Study Number 023-069, is a true and complete representation of the raw data for the study.

Submitted by: Exygen Research
3058 Research Drive
State College, PA 16801
(814) 272-1039

Principal Investigator, Exygen:

Emily R. Decker — 10/30/02
Emily R. Decker, Date
Scientist
Exygen Research

Exygen Research Facility Management:

Richard A. Grazzini, Ph.D. — 30-OCT-02
Richard A. Grazzini, Ph.D., Date
President
Exygen Research

Study Director, Argus Research:

Raymond G. York, Ph.D., DABT — 14-NOV-02
Raymond G. York, Ph.D., DABT, Date
Argus Research

Sponsor Representative, 3M:

Deanna J. Luebker — 11/07/02
Deanna J. Luebker, M.S., Date
3M Corporate Toxicology

STUDY IDENTIFICATION

One Generation Reproduction Study of PFOS – Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats

STUDY PROTOCOL NUMBER:	418-018
EXYGEN STUDY NUMBER:	023-069
TYPE OF STUDY:	Analytical
SAMPLE MATRIX:	Dosing Solutions
TEST SUBSTANCE:	Perfluorooctanesulfonate (PFOS)
SPONSOR:	3M Corporate Toxicology St. Paul, MN 55144-100
STUDY DIRECTOR:	Raymond G. York, Ph.D., DABT Argus Research 905 Sheehy Drive, Building A Horsham, PA 19044-1297
SPONSOR REPRESENTATIVE:	Deanna J. Luebker, M.S. 3M Corporate Toxicology 3M Center, Building 220-2E-02 St. Paul, MN 55144-1000
TESTING FACILITY:	Exygen Research 3058 Research Drive State College, PA 16801
ANALYTICAL PHASE TIMETABLE:	Study Initiation Date: 08/21/00 Analytical Start Date: 02/14/02 Analytical Termination Date: 02/15/02 Analytical Report Completion Date: xx/xx/xx

PROJECT PERSONNEL

The Study Director for this project was Raymond G. York, Ph.D., DABT at Argus Research. The following personnel from Exygen Research were associated with various phases of the study:

Name	Title
Emily Decker	Scientist/Principal Investigator
Karen Risha	Scientist/Principal Investigator
Rickey Keller	Sample Custodian

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1.0 SUMMARY

Exygen Research analyzed dosing solution samples for the determination of perfluorooctanesulfonate (PFOS) according to protocol 418-018 (Appendix A).

Recoveries for PFOS in the dosing solutions ranged from 83% to 105% when compared to the assigned concentration.

2.0 OBJECTIVE

The objective of this study was to determine levels of perfluorooctanesulfonate (PFOS), dosing solution samples using the analytical conditions described in Protocol Amendment #6.

3.0 INTRODUCTION

This report details the results of the analysis for the determination of PFOS in the dosing solution samples using the analytical conditions described in Protocol Amendment #6.

The study was initiated on August 21, 2000, when the study director signed protocol number 418-018. The analytical start date was February 14, 2002, and the analytical termination date was February 15, 2002.

4.0 TEST SYSTEM

Twenty-seven dosing solution samples were received frozen on dry ice at Exygen Research on January 31, 2002 and logged in by Exygen personnel and placed in frozen storage.

Sample log-in and chain of custody information can be found in the raw data package associated with this study. Storage records will be kept at Exygen Research and a true copy of the storage records is available upon request.

5.0 REFERENCE MATERIAL

The analytical standard PFOS was received at Exygen on May 17, 2000 from 3M Environmental Technology and Safety Services.

The available information for the reference material is listed below. The reference material PFOS was stored frozen.

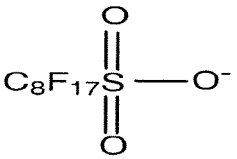
Compound	Exygen Control No.	TCR No.	Purity (%)	Expiration Date
PFOS	SP248	SD009	NA	01/01/10

The molecular structure of the reference material is given below.

PFOS

Chemical Name = Perfluorooctanesulfonate

Molecular weight = 499 ($C_8F_{17}SO_3^-$)



Note: The neutral molecule and standard form from which PFOS (anion) is derived, is potassium perfluorooctanesulfonate [$C_8F_{17}SO_3K$], molecular weight 538.

6.0 DESCRIPTION OF ANALYTICAL METHOD

6.1 Extraction Procedure

Each sample was diluted in methanol prior to analysis by LC/MS/MS electrospray.

6.2 Preparation of Standards and Fortification Solutions

Standard solutions of PFOS were prepared on January 10, 2002. An individual stock standard solution was prepared at a concentration of 100 µg/mL by dissolving 10 mg of the standard (corrected for purity and/or salt content) in methanol. From this solution, a 1.0 µg/mL fortification standard solution was prepared by taking 0.1 mL of the stock and bringing the volume up to 10 mL with methanol.

A 0.1 µg/mL fortification standard was prepared by taking 1.0 mL of the 1.0 µg/mL fortification standard and bringing the volume up to 10 mL with methanol. A 0.01 µg/mL standard was prepared by taking 0.1 mL of the 0.1 µg/mL standard and bringing to 10 mL with methanol.

A set of standards containing PFOS was prepared by dilution of the 0.1 µg/mL various calibration solutions in the following manner:

Initial Conc. (µg/mL)[1]	Volume (mL)	Diluted to (mL)	Final Conc. (µg/mL)
0.1	0.5	10	0.005
0.1	0.2	10	0.002
0.1	0.1	10	0.001
0.005	1.0	10	0.0005
0.002	1.0	10	0.0002
0.001	1.0	10	0.0001
0.001	0.5	10	0.00005

The stock standard solution and all fortification and calibration standard solutions were stored in a refrigerator (4° ± 2°C) when not in use. Documentation of standard preparation can be found in the raw data associated with this report.

6.3 Chromatography

Quantification of PFOS was accomplished by LC/MS/MS electrospray. The retention time of PFOS was ~ 4.4 min.

6.4 Instrument Sensitivity

The smallest standard amount injected during the chromatographic run had a concentration of 0.0001 µg/mL of PFOS.

6.5 Description of Instrument and Operating Conditions

Instrument: Micromass Quattro Ultima

Computer: Dell UltraScan P1110

Software: COMPAQ Professional Workstation AP200
Windows NT, version 4

HPLC: Hewlett Packard (HP) Series 1100
HP Quat Pump
HP Vacuum Degasser
HP Autosampler
HP Column Oven

HPLC Column:Genesis C_8 (Jones Chromatography), 2.1 mm x 50 mm, 4µ
Column Temp.: 35° C
Injection Vol.: 10 µL
Mobile Phase (A): 2 mM Ammonium Acetate in ASTM type I water
Mobile Phase (B): Methanol
Flow Rate: 0.3 mL/min.

Time	% A	% B
0	60	40
1.0	0	100
7.0	0	100
7.5	60	40
11.0	60	40

Ions monitored:

Analyte	Mode	Transition Monitored	Approximate Retention Time (min)
PFOS	negative	499 → 99	4.4

Tune File Parameters

Controls	Set
IS-Iospray	-4200.0
DP-Declustering Potential	-51.0
FP-Focusing Potential	-230.0
EP-Entrance Potential	10.0
CE-Collision Energy	-70
CXP-Collision Cell Exit Potential	-5
DF-Deflector	300.0
CEM-Channel Electron Multiplier	2800.0

Gas Flows	Set
Nebulizer Gas	12
Curtain Gas	13
Collision Gas	4
TIS Temperature	350°C

6.6 Quantitation and Example Calculation

Twenty microliters of sample or calibration standard were injected into the LC/MS/MS. The peak area was measured and the standard curve was generated (using 1/x fit weighted linear regression) by the Micromass software using six concentrations of standards. The concentration was determined from the equations below.

Equation 1 calculated the amount of analyte found (in ng/mL, based on peak area) using the standard curve (linear regression parameters) generated by the Micromass software program. Then Equation 2 calculated the amount of analyte found in µg/mL (the equations for serum are shown).

Equation 1:

$$\text{Analyte found (ng/mL)} = \frac{\text{(Peak area - intercept)}}{\text{slope}}$$

Equation 2:

$$\text{Analyte found (µg/mL)} = (\text{anal. found (ng/mL)} \times \text{DF}) \times \frac{1\ \mu g}{1000\ ng}$$

Where:
DF = Dilution Factor

Equation 3 calculated the percent recovery.

Equation 3:

$$\text{Recovery (\%)} = \frac{\text{(anal. found (µg/mL)} \times 100}{\text{sample conc. (µg/mL)}}$$

An example of a calculation using an actual sample follows:

Dosing solution sample Exygen ID 0200283 (Set 021402A), where:

peak area	=	1380
intercept	=	41.3545
slope	=	721.773
dilution factor	=	200,000
sample conc.	=	400 µg/mL

From equation 1:

$$\text{Analyte found (ng/mL)} = \frac{[1380 - 41.3545]}{721.773}$$

$$= 1.85\ \text{ng/mL}$$

From equation 2:

$$\text{Analyte found } (\mu g/mL) = (1.85 \text{ ng/mL} \times 200{,}000) \times \frac{1\ \mu g}{1000\ ng}$$

$$= 370\ \mu g/mL$$

From equation 3:

$$\% \text{ Recovery} = \frac{370\ \mu g/mL}{400\ \mu g/mL} \times 100$$

$$= 93\%$$

Note: This example calculation was done using rounded numbers, and therefore may be slightly different from the values shown in the RAW DATA.

7.0 EXPERIMENTAL DESIGN

The set of samples consisted of an instrument blank, a set of calibrations at the beginning and throughout the run and the 27 samples.

8.0 RESULTS

Individual recoveries for PFOS in the dosing solution samples are detailed in **Table I**. The average percent recovery ± standard deviation for PFOS in the dosing solutions was 93% ± 7%.

A typical calibration curve and representative chromatograms of a standard and sample are given in **Figures 1-3**.

9.0 CONCLUSIONS

The concentration and homogeneity of the dosing solutions were demonstrated by the results of this report.

10.0 RETENTION OF DATA AND SAMPLES

When the final report is complete, all original paper data generated by Exygen Research will be shipped to the sponsor. This does not include facility-specific raw data such as instrument logs. Exact copies of all raw data, as well as a signed copy of the final

analytical report and all original facility-specific raw data, will be retained in the Exygen Research archives for the period of time specified in 21 CFR Part 58. Retained samples of reference substances are archived by the sponsor.

TABLES

Table I. Summary of PFOS in Dosing Solution Samples

Exygen ID	Sponsor ID	DF	Peak Area	Analyte Found (ng/mL)	Analyte Found (µg/mL)	Sample Conc. (µg/mL)	Rec. (%)
0200283	1 of 6T (0.4 mg/mL) 28.AUG.00	200000	1380	1.85	371	400	93
0200284	3 of 6M (0.4 mg/mL) 28.AUG.00	200000	1522	2.05	410	400	103
0200285	5 of 6B (0.4 mg/mL) 28.AUG.00	200000	1551	2.09	418	400	105
0200286	1 of 2 (0 mg/mL) 18.SEP.00	20	ND	ND	ND	-	-
0200287	1 of 2 (0.08 mg/mL) 18.SEP.00	50000	995	1.32	66.1	80	83
0200288	1 of 2 (0.16 mg/mL) 18.SEP.00	50000	2156	2.93	146	160	92
0200289	1 of 2 (0.20 mg/mL) 18.SEP.00	200000	714	0.932	186	200	93
0200290	1 of 2 (0.24 mg/mL) 18.SEP.00	200000	867	1.14	229	240	95
0200291	1 of 2 (0.32 mg/mL) 18.SEP.00	200000	1079	1.44	288	320	90
0200292	1 of 2 (0.40 mg/mL) 18.SEP.00	200000	1385	1.86	372	400	93
0200293	1 of 6T (0.4 mg/mL) 27.SEP.00	200000	1495	2.01	403	400	101
0200294	3 of 6M (0.4 mg/mL) 27.SEP.00	200000	1423	1.91	383	400	96
0200295	5 of 6B (0.4 mg/mL) 27.SEP.00	200000	1313	1.76	352	400	88
0200296	1 of 2 (0 mg/mL) 01.NOV.00	20	91	NQ	NQ	-	-
0200297	1 of 2 (0.08 mg/mL) 01.NOV.00	50000	1002	1.33	66.5	80	83
0200298	1 of 2 (0.16 mg/mL) 01.NOV.00	50000	2046	2.78	139	160	87
0200299	1 of 2 (0.20 mg/mL) 01.NOV.00	200000	743	0.972	194	200	97
0200300	1 of 2 (0.24 mg/mL) 01.NOV.00	200000	863	1.14	228	240	95
0200301	1 of 2 (0.32 mg/mL) 01.NOV.00	200000	1054	1.40	281	320	88
0200302	1 of 2 (0.40 mg/mL) 01.NOV.00	200000	1332	1.79	358	400	89
0200303	1 of 2 (0 mg/mL) 15.NOV.00	20	98	NQ	NQ	-	-
0200304	1 of 2 (0.08 mg/mL) 15.NOV.00	50000	1001	1.33	66.5	80	83
0200305	1 of 2 (0.16 mg/mL) 15.NOV.00	50000	2082	2.83	141	160	88
0200306	1 of 2 (0.20 mg/mL) 15.NOV.00	200000	802	1.05	211	200	105
0200307	1 of 2 (0.24 mg/mL) 15.NOV.00	200000	826	1.09	217	240	91
0200308	1 of 2 (0.32 mg/mL) 15.NOV.00	200000	1145	1.53	306	320	96
0200309	1 of 2 (0.40 mg/mL) 15.NOV.00	200000	1481	1.99	399	400	100

ND = Not Detected
NQ = Not Quantifiable (A peak was detected at the corresponding analyte retention time but was less than the lowest concentration of the calibration standards (0.1 ng/mL))

FIGURES

Figure 1. Typical Calibration Curve for PFOS

Compound 1 name: PFOS
Coefficient of Determination: 0.999102
Calibration curve: 721.773 * x + 41.3545
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

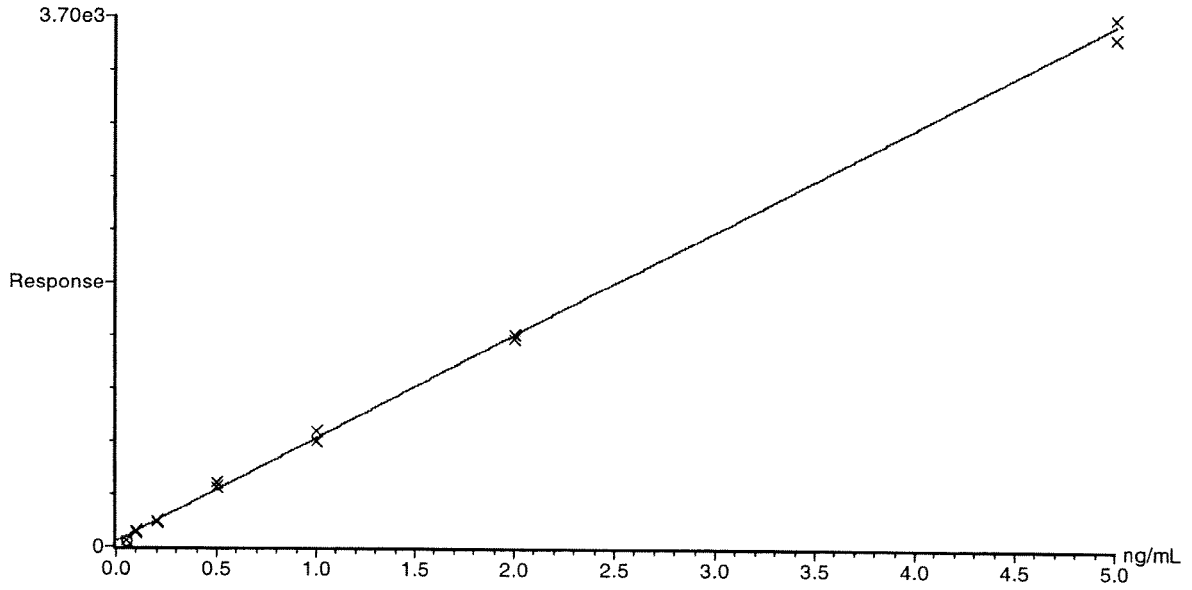


Figure 2. Chromatogram Representing a 0.5 ng/mL Calibration Standard for PFOS

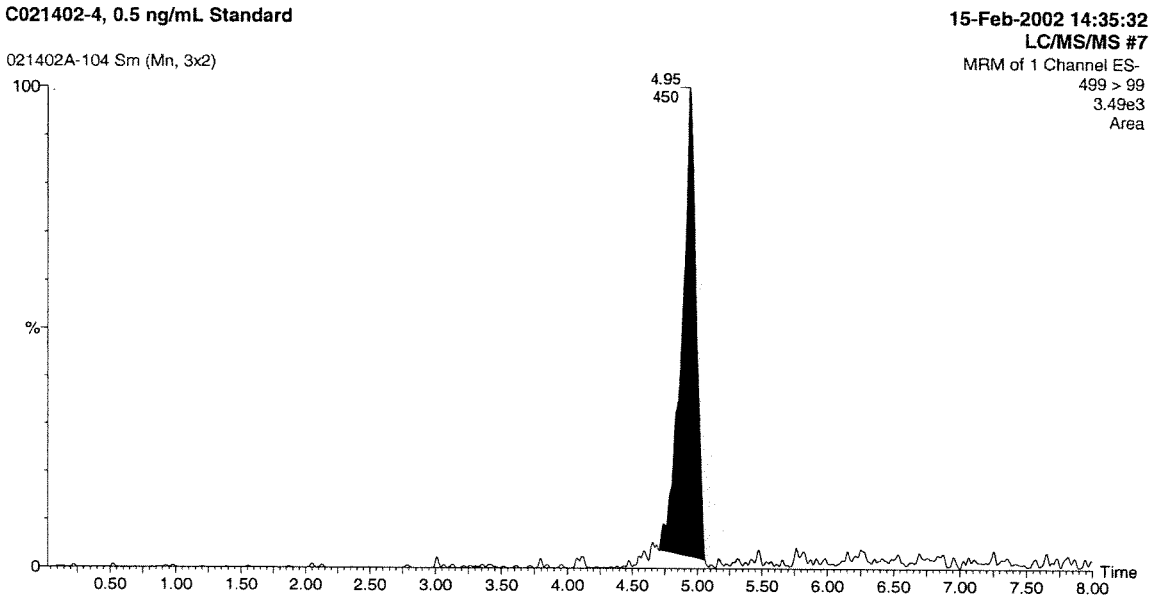
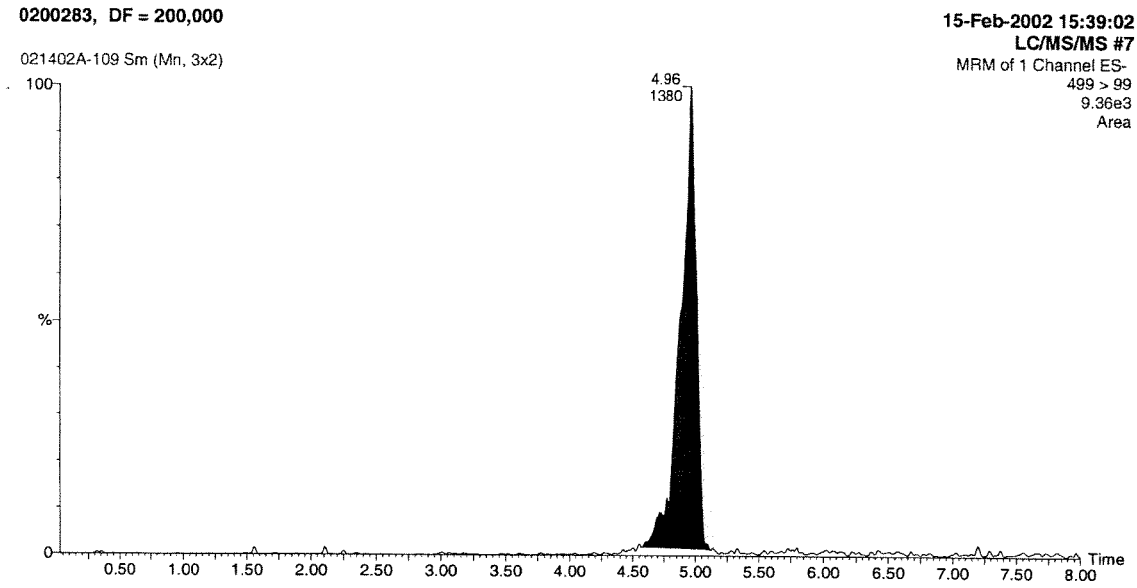


Figure 3. Chromatogram Representing Dosing Solution Sample (Exygen ID: 0200283, Set: 021402A)



APPENDIX G

TEMEPRATURE AND RELATIVE HUMIDITY REPORTS

ARGUS

Temperature and Relative Humidity Report
Location: Room 17

Protocol Number: 418018

Range of Dates: 22-Aug-2000 14:44 to 12-Nov-2000 08:59

	Temperature		Relative Humidity	
Target Range:	64°F to 79°F		30% to 70%	
Species: rat				
Total Number of Days:	83		83	
Total Number of Hours:	1962.0		1962.0	
Total Number of Data Points:	1956		1956	
Mean (± SD):	70.6	(± 1.3)	56.6	(± 4.8)
Maximum:	73.9		70.6	
Median:	71.0		57.0	
Minimum:	63.8		40.7	
Number of Points in Range (%):	1954	(99.9)	1955	(99.9)
Number of Points High (%):	0	(0.0)	1	(0.1)
Number of Points Low (%):	2	(0.1)	0	(0.0)

Report Generated: 30-Nov-2000 at 14:02

COMMENTS: _____

REVIEWED BY: _____ **DATE:** 3-28-01

ARGUS

Temperature Deviations Report
Location: Room 17

Protocol Number: 418018

Range of Dates: 22-Aug-2000 14:44 to 12-Nov-2000 08:59

Temperature Target Range: 64°F to 79°F
Species: rat

Date	Time	Temp.	Date	Time	Temp.
07-Sep-2000	06:00	63.8 L			
07-Sep-2000	07:00	63.8 L			

H = Value out of range - High L = Value out of range - Low
Temp. = Temperature °F

Report Generated: 30-Nov-2000 at 14:10

✓ These deviations did not adversely affect the outcome or interpretation of the study.

_____ The following deviation(s) impacted on the outcome of the study as described:

Study Director: Raymond Hoge Date: 30-MAR-01

ARGUS

Relative Humidity Deviations Report
Location: Room 17

Protocol Number: 418018

Range of Dates: 22-Aug-2000 14:44 to 12-Nov-2000 08:59

Humidity Target Range: 30% to 70%
Species: rat

Date	Time	R.H.	Date	Time	R.H.
04-Oct-2000	22:00	70.6 H			

H = Value out of range - High L = Value out of range - Low
R.H. = Relative Humidity (%)

Report Generated: 30-Nov-2000 at 14:18

✓ These deviations did not adversely affect the outcome or interpretation of the study.

_____ The following deviation(s) impacted on the outcome of the study as described:

Study Director: _____ Date: 30-NOV-01

ARGUS

Temperature and Relative Humidity Report
Location: Room 18

Protocol Number: 418-018

Range of Dates: 05-Sep-2000 14:00 to 03-Dec-2000 13:59

	Temperature		Relative Humidity	
Target Range:	64°F to 79°F		30% to 70%	
Species: rat				
Total Number of Days:	90		90	
Total Number of Hours:	2135.75		2135.75	
Total Number of Data Points:	2129		2129	
Mean (± SD):	69.2	(± 0.5)	53.6	(± 4.1)
Maximum:	70.8		70.2	
Median:	69.2		53.3	
Minimum:	67.6		42.3	
Number of Points in Range (%):	2129	(100.0)	2128	(100.0)
Number of Points High (%):	0	(0.0)	1	(0.0)
Number of Points Low (%):	0	(0.0)	0	(0.0)

Report Generated: 27-Mar-2001 at 18:18

COMMENTS: _____

REVIEWED BY: _____ **DATE:** 3·28·01

ARGUS

Relative Humidity Deviations Report
Location: Room 18

Protocol Number: 418-018

Range of Dates: 05-Sep-2000 08:00 to 03-Dec-2000 13:59

Humidity Target Range: 30% to 70%
Species: rat

Date	Time	R.H.	Date	Time	R.H.
05-Oct-2000	01:00	70.2 H			

H = Value out of range - High L = Value out of range - Low
R.H. = Relative Humidity (%)

Report Generated: 13-Dec-2001 at 14:57

✓ These deviations did not adversely affect the outcome or interpretation of the study.

____ The following deviation(s) impacted on the outcome of the study as described:

Study Director: [signature] Date: 13-DEC-01

APPENDIX H

BIOANALYTICAL REPORTS (ANILYTICS)

ANILYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 Fax: 301-977-0433

Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030145	10901	1	F		95	117	12	44	322
B 0030146	10902	1	F		79	116	10	61	151
B 0030147	10903	1	F		82	89	7	65	116
B 0030148	10904	1	F		77	87	7	51	176
B 0030149	10905	1	F		79	99	15	54	156
B 0030150	10907	1	F		97	90	1	13	771
B 0030151	10908	1	F		103	94	2	18	559
B 0030152	10910	1	F		62	99	3	40	257
	Mean				84.3	98.9	7.1	43.3	313.5
	S.D.				13.3	11.7	5	19	233.6
Group 1									
B 0030201	11040	12	F		88	103	3	58	240
B 0030202	11044	12	F		76	93	12	42	132
B 0030203	11045	12	F		84	111	14	50	171
B 0030204	11046	12	F		77	98	17	27	313
B 0030205	11047	12	F		75	119	13	53	127
B 0030206	11050	12	F		84	106	9	51	174
B 0030207	11051	12	F		55	104	7	33	153
B 0030208	11052	12	F		86	105	11	34	244
	Mean				78.1	104.9	10.8	43.5	194.3
	S.D.				10.5	7.8	4.4	11.2	65.2
Group 12									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
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Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030209	11053	13	F		64	78	9	43	158
B 0030210	11054	13	F		73	76	7	26	318
B 0030211	11056	13	F		83	79	15	44	152
B 0030212	11058	13	F		69	129	8	34	270
B 0030213	11060	13	F		70	103	9	59	79
B 0030214	11062	13	F		66	98	15	26	296
B 0030215	11063	13	F		75	103	11	45	216
B 0030216	11066	13	F		78	104	16	51	119
	Mean				72.3	96.3	11.3	41	201
	S.D.				6.3	18	3.6	11.7	87.5
Group 13									
B 0030153	10915	2	F		79	121	4	46	249
B 0030154	10916	2	F		76	108	6	62	85
B 0030155	10917	2	F		90	110	2	19	459
B 0030156	10918	2	F		88	111	10	55	203
B 0030157	10919	2	F		99	112	0	16	719
B 0030158	10920	2	F		83	121	1	35	337
B 0030159	10925	2	F		119	101	0	17	552
B 0030160	10928	2	F		106	84	0	9	1027
	Mean				92.5	108.5	2.9	32.4	453.9
	S.D.				14.6	11.9	3.6	20	307.8
Group 2									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030161	10930	3	F		76	118	10	49	228
B 0030162	10931	3	F		75	102	11	47	221
B 0030163	10932	3	F		131	113	31	26	439
B 0030164	10933	3	F		85	107	15	33	226
B 0030165	10934	3	F		90	93	1	23	407
B 0030166	10935	3	F		117	137	14	49	279
B 0030167	10937	3	F		74	87	6	35	294
B 0030168	10940	3	F		80	108	6	19	353
	Mean				91	108.1	11.8	35.1	305.9
	S.D.				21.4	15.4	9	12.1	85.1
Group 3									
B 0030169	10945	4	F		134	86	0	11	887
B 0030170	10946	4	F		74	88	9	56	115
B 0030171	10947	4	F		94	125	10	48	197
B 0030172	10949	4	F		53	110	6	50	42
B 0030173	10950	4	F		84	108	17	56	113
B 0030174	10951	4	F		87	102	13	61	93
B 0030175	10953	4	F		100	107	12	59	259
B 0030176	10954	4	F		85	122	10	41	243
	Mean				88.9	106	9.6	47.8	243.6
	S.D.				23.1	14	5	16.2	270.8
Group 4									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030177	10958	5	F		113	115	2	16	531
B 0030178	10959	5	F		114	91	9	16	583
B 0030179	10960	5	F		72	125	8	31	133
B 0030180	10961	5	F		68	99	11	33	213
B 0030181	10962	5	F		75	110	13	47	140
B 0030182	10963	5	F		75	58	10	36	220
B 0030183	10964	5	F		108	108	15	30	280
B 0030184	10965	5	F		92	97	0	15	690
	Mean				89.6	100.4	8.5	28	348.8
	S.D.				19.6	20.2	5.2	11.5	218.6
Group 5									
B 0030185	10972	6	F		82	90	14	33	122
B 0030186	10974	6	F		78	79	13	25	265
B 0030187	10975	6	F		77	140	4	54	161
B 0030188	10976	6	F		71	97	11	43	143
B 0030189	10978	6	F		76	103	9	44	175
B 0030190	10980	6	F		72	85	5	27	344
B 0030191	10981	6	F		77	96	9	37	214
B 0030192	10982	6	F		101	98	14	65	111
	Mean				79.3	98.5	9.9	41	191.9
	S.D.				9.4	18.5	3.9	13.6	79.3
Group 6									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Date Collected:
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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030193	10985	7	F		89	95	16	61	111
B 0030194	10987	7	F		79	109	7	61	95
B 0030195	10988	7	F		83	99	30	37	196
B 0030196	10989	7	F		81	145	12	69	48
B 0030197	10990	7	F		63	100	7	49	140
B 0030198	10991	7	F		72	109	10	34	294
B 0030199	10992	7	F		94	84	1	12	632
B 0030200	10993	7	F		62	110	13	50	91
	Mean				77.9	106.4	12	46.6	200.9
	S.D.				11.5	17.9	8.6	18.4	190.1
Group 7									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Date Collected:
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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030145	10901	1	F		1.45	86.51	0.74	3.22	0.39
B 0030146	10902	1	F		0.54	76.54	0.76	2.09	0.39
B 0030147	10903	1	F		0.12	62.42	0.41	1.63	0.28
B 0030148	10904	1	F		0.76	66.55	0.51	1.32	0.35
B 0030149	10905	1	F		0.95	62.61	0.73	1.87	0.38
B 0030150	10907	1	F		0.65	116.76	0.77	2.14	0.22
B 0030151	10908	1	F		0.20	75.48	0.52	1.84	0.23
B 0030152	10910	1	F		0.00	44.96	0.19	0.41	0.15
	Mean				.584	73.979	.579	1.815	.299
	S.D.				.482	21.234	.209	.794	.092
Group 1									
B 0030201	11040	12	F		0.00	65.52	0.19	3.79	0.15
B 0030202	11044	12	F		0.00	43.96			0.06
B 0030203	11045	12	F		0.00	42.05	0.06	1.11	0.06
B 0030204	11046	12	F		0.00	44.97	0.24	2.43	0.04
B 0030205	11047	12	F		0.00	39.63	0.06	1.47	0.05
B 0030206	11050	12	F		0.00	51.85	0.10	1.20	0.05
B 0030207	11051	12	F		0.00	34.20	0.00	2.12	0.03
B 0030208	11052	12	F		0.00	57.84	0.33	4.30	0.09
	Mean				0	47.503	.14	2.346	.066
	S.D.				0	10.268	.117	1.263	.038
Group 12									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030209	11053	13	F		0.00	33.47	0.02	1.52	0.04
B 0030210	11054	13	F		0.00	54.87	0.32	2.07	0.05
B 0030211	11056	13	F		0.00	42.95	0.16	1.37	0.04
B 0030212	11058	13	F		0.00	52.33	0.40	3.21	0.08
B 0030213	11060	13	F		0.00	35.61	0.00	1.22	0.10
B 0030214	11062	13	F		0.00	36.45			0.03
B 0030215	11063	13	F		0.00	47.52	0.20	1.21	0.05
B 0030216	11066	13	F		0.00	36.32	0.00	0.00	0.05
	Mean				0	42.44	.157	1.514	.055
	S.D.				0	8.271	.161	.973	.023
Group 13									
B 0030153	10915	2	F		0.69	73.81	0.34	1.78	0.42
B 0030154	10916	2	F		0.22	56.28	0.26	2.75	0.28
B 0030155	10917	2	F		1.58	104.24			0.45
B 0030156	10918	2	F		0.14	66.85	0.42	2.03	0.29
B 0030157	10919	2	F		0.23	70.56	0.78	3.88	0.26
B 0030158	10920	2	F		0.27	80.36	0.76	4.12	0.26
B 0030159	10925	2	F		0.16	72.56	0.60	1.20	0.27
B 0030160	10928	2	F		0.02	63.91	0.44		0.14
	Mean				.414	73.571	.514	2.627	.296
	S.D.				.51	14.314	.203	1.177	.098
Group 2									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030161	10930	3	F		0.00	48.86	0.06		0.03
B 0030162	10931	3	F		0.00	44.68	0.38	1.96	0.05
B 0030163	10932	3	F		0.00	55.32	0.12	2.40	0.04
B 0030164	10933	3	F		0.02	59.16	0.43	2.12	0.14
B 0030165	10934	3	F		0.00	62.09	0.43	2.05	0.09
B 0030166	10935	3	F		0.00	62.03	0.44	1.58	0.12
B 0030167	10937	3	F		0.00	52.27	0.31	1.91	0.06
B 0030168	10940	3	F		0.00	47.93	0.33	1.20	0.02
	Mean				.003	54.043	.313	1.889	.069
	S.D.				.007	6.67	.146	.391	.044
Group 3									
B 0030169	10945	4	F		0.00	65.48	0.55	4.56	0.04
B 0030170	10946	4	F		0.00	41.50	0.07	2.05	0.03
B 0030171	10947	4	F		0.00	46.55	0.25	1.79	0.08
B 0030172	10949	4	F		0.00	38.85	0.12	1.78	0.10
B 0030173	10950	4	F		0.00	36.70	0.00	0.94	0.07
B 0030174	10951	4	F		0.00	50.05	0.15	3.16	0.14
B 0030175	10953	4	F		0.00	45.31	0.09	2.42	0.06
B 0030176	10954	4	F		0.00	46.82	0.24	2.30	0.06
	Mean				0	46.408	.184	2.375	.073
	S.D.				0	8.895	.17	1.086	.035
Group 4									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030177	10958	5	F		1.29	91.13	0.85	3.72	0.30
B 0030178	10959	5	F		0.44	80.57	0.77	2.54	0.21
B 0030179	10960	5	F		0.00	27.60			
B 0030180	10961	5	F		1.27	81.69	0.86	2.64	0.36
B 0030181	10962	5	F		0.81	98.93	0.68	2.14	0.52
B 0030182	10963	5	F		0.12	86.18	0.63		0.16
B 0030183	10964	5	F		0.00	67.30	0.16	1.68	0.21
B 0030184	10965	5	F		0.39	81.80	0.91		0.21
	Mean				.54	76.9	.694	2.544	.281
	S.D.				.529	21.899	.256	.759	.125
Group 5									
B 0030185	10972	6	F		0.10	64.17	0.15	2.72	0.21
B 0030186	10974	6	F		0.00	49.59	0.26		0.04
B 0030187	10975	6	F		0.00	62.37	0.36		0.27
B 0030188	10976	6	F		0.00	61.84	0.27	0.94	0.17
B 0030189	10978	6	F		0.00	45.53	0.17	0.76	0.13
B 0030190	10980	6	F		0.00	41.40	0.30	1.28	0.02
B 0030191	10981	6	F		0.00	48.59	0.37	1.53	0.16
B 0030192	10982	6	F		0.00	42.76	0.00	1.48	0.07
	Mean				.013	52.031	.235	1.452	.134
	S.D.				.035	9.331	.123	.691	.086
Group 6									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 DAMS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030193	10985	7	F		0.00	51.27	0.08	2.61	0.10
B 0030194	10987	7	F		0.00	51.82	0.16	1.74	0.14
B 0030195	10988	7	F		0.00	32.73	0.13	1.12	0.04
B 0030196	10989	7	F		0.00	59.37	0.29	1.02	0.29
B 0030197	10990	7	F		0.00	43.11	0.27	2.47	0.09
B 0030198	10991	7	F		0.00	44.67	0.08		0.04
B 0030199	10992	7	F		0.00	56.54	0.62		0.05
B 0030200	10993	7	F		0.00	52.65	0.34	3.12	0.13
	Mean				0	49.02	.246	2.013	.11
	S.D.				0	8.527	.18	.854	.082
Group 7									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

Approved ---------- Date 1/16/01

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Date Collected:
Date Received: 12/12/2000
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030547	10906	1	F		63	152	0	28	246
B 0030548	10909	1	F		84	155	2	54	141
B 0030549	10911	1	F		82	110	0	21	512
B 0030550	10913	1	F		57	146	4	45	88
B 0030551	10914	1	F		80	148	0	27	177
B 0030630	10912	1	F		81	192	1	66	147
	Mean				74.5	150.5	1.2	40.2	218.5
	S.D.				11.5	26.1	1.6	17.7	152.8
Group 1									
B 0030589	11019	10	F		72	159	5	57	96
B 0030590	11021	10	F		56	187	5	44	67
B 0030591	11020	10	F		74	154	1	32	259
B 0030592	11023	10	F		41	183	3	33	98
B 0030593	11024	10	F		51	170	4	46	45
B 0030594	11025	10	F		58	230	4	49	70
B 0030595	11026	10	F		56	181	5	46	60
B 0030596	11027	10	F		49	153	6	39	60
B 0030597	11028	10	F		52	165	0	36	178
	Mean				56.6	175.8	3.7	42.4	103.7
	S.D.				10.6	23.9	2	8.2	70.2
Group 10									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/12/2000
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030598	11029	11	F		50	168	1	31	243
B 0030599	11031	11	F		58	172	4	46	115
B 0030600	11032	11	F		61	156	2	43	70
B 0030601	11033	11	F		53	174	4	40	87
B 0030602	11034	11	F		44	179	0	37	132
B 0030603	11035	11	F		44	183	0	31	186
B 0030604	11036	11	F		50	150	0	17	370
B 0030605	11037	11	F		58	150	0	36	195
B 0030606	11038	11	F		69	193	3	55	60
	Mean				54.1	169.4	1.6	37.3	162
	S.D.				8.2	15	1.7	10.7	99.4
Group 11									
B 0030607	11041	12	F		53	172	5	42	58
B 0030608	11049	12	F		38	195	6	37	39
B 0030622	11042	12	F		70	212	1	41	234
B 0030623	11048	12	F		80	175	8	61	87
	Mean				60.3	188.5	5	45.3	104.5
	S.D.				18.6	18.7	2.9	10.7	88.6
Group 12									
B 0030609	11059	13	F		49	158	2	42	104
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030624	11055	13	F		58	188	7	48	48
B 0030625	11057	13	F		63	156	7	46	67
B 0030626	11061	13	F		74	277	5	70	89
B 0030627	11064	13	F		72	193	6	64	72
B 0030628	11065	13	F		61	157	3	52	90
	Mean				62.8	188.2	5	53.7	78.3
	S.D.				9.2	46.5	2.1	11	20
Group 13									
B 0030552	10921	2	F		68	132	0	38	188
B 0030553	10922	2	F		49	171	0	30	202
B 0030554	10923	2	F		78	134	1	36	131
B 0030555	10924	2	F		70	144	11	47	52
B 0030556	10927	2	F		105	151	2	65	151
	Mean				74	146.4	2.8	43.2	144.8
	S.D.				20.3	15.8	4.7	13.6	59.1
Group 2									
B 0030557	10929	3	F		53	141	2	45	82
B 0030558	10938	3	F		51	149	2	37	96
B 0030559	10942	3	F		53	143	0	40	165
B 0030610	10941	3	F		44	161	3	34	90
	Mean				50.3	148.5	1.8	39	108.3
	S.D.				4.3	9	1.3	4.7	38.3
Group 3									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030611	10943	4	F		69	184	3	48	93
B 0030612	10948	4	F		56	179	0	46	192
B 0030613	10952	4	F		77	194	4	54	107
B 0030614	10955	4	F		66	138	3	50	141
B 0030615	10956	4	F		76	235	6	65	87
B 0030629	10944	4	F		65	158	13	48	43
	Mean				68.2	181.3	4.8	51.8	110.5
	S.D.				7.8	33.1	4.4	7	51
Group 4									
B 0030560	10957	5	F		59	152	1	27	230
B 0030561	10966	5	F		74	123	0	51	159
B 0030562	10967	5	F		66	163	6	45	49
B 0030563	10968	5	F		72	144	0	32	252
B 0030564	10969	5	F		72	161	2	45	143
B 0030565	10970	5	F		54	136	0	19	288
	Mean				66.2	146.5	1.5	36.5	186.8
	S.D.				8.1	15.4	2.3	12.4	87.2
Group 5									
B 0030566	10977	6	F		44	135	0	33	135
B 0030567	10979	6	F		45	142	3	34	102
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030568	10983	6	F		57	152	3	45	62
B 0030616	10971	6	F		81	176	12	53	96
B 0030617	10973	6	F		45	163	6	38	42
B 0030618	10984	6	F		69	209	3	57	84
	Mean				56.8	162.8	4.5	43.3	86.8
	S.D.				15.3	26.9	4.1	10.1	32.5
Group 6									
B 0030569	10995	7	F		41	192	4	33	78
B 0030570	10997	7	F		40	196	3	35	75
B 0030619	10986	7	F		77	176	9	59	72
B 0030620	10994	7	F		47	158	6	41	50
B 0030621	10996	7	F		68	147	3	54	116
	Mean				54.6	173.8	5	44.4	78.2
	S.D.				16.9	21.2	2.5	11.6	23.8
Group 7									
B 0030571	10999	8	F		77	127	1	52	240
B 0030572	11000	8	F		57	164	6	46	64
B 0030573	11001	8	F		51	216	2	35	119
B 0030574	11002	8	F		56	146	3	32	147
B 0030575	11003	8	F		69	153	1	32	286
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030576	11004	8	F		53	168	2	45	79
B 0030577	11005	8	F		64	150	0	32	260
B 0030578	11006	8	F		70	185	1	38	154
B 0030579	11007	8	F		56	133	0	37	243
B 0030580	11008	8	F		61	147	2	38	153
	Mean				61.4	158.9	1.8	38.7	174.5
	S.D.				8.4	26.2	1.8	6.8	78
Group 8									
B 0030581	11009	9	F		50	158	4	32	116
B 0030582	11010	9	F		56	135	0	43	167
B 0030583	11011	9	F		51	144	1	33	164
B 0030584	11012	9	F		74	144	6	42	100
B 0030585	11013	9	F		58	148	0	24	324
B 0030586	11015	9	F		47	179	1	35	195
B 0030587	11016	9	F		45	150	4	35	89
B 0030588	11018	9	F		63	183	4	52	85
	Mean				55.5	155.1	2.5	37	155
	S.D.				9.5	17.3	2.3	8.5	79.5
Group 9									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030547	10906	1	F		1.66	100.60	1.14	1.18	0.88
B 0030548	10909	1	F		2.25	99.04	0.97	3.92	0.84
B 0030549	10911	1	F		2.63	102.40	0.75	1.26	1.08
B 0030550	10913	1	F		1.71	80.08	0.90		0.57
B 0030551	10914	1	F		0.87	94.35	0.72	0.00	0.65
B 0030630	10912	1	F		2.44	91.84	0.97	1.66	0.82
	Mean				1.927	94.718	.908	1.604	.807
	S.D.				.648	8.185	.156	1.435	.18
Group 1									
B 0030589	11019	10	F		0.88	79.66	0.86		0.31
B 0030590	11021	10	F		1.15	77.77	0.85	1.22	0.47
B 0030591	11020	10	F		1.02	77.15	0.44	0.92	0.32
B 0030592	11023	10	F		0.71	50.76	0.27	2.22	0.21
B 0030593	11024	10	F		0.57	59.72	0.71	0.96	0.25
B 0030594	11025	10	F		0.45	65.05	0.31	0.80	0.35
B 0030595	11026	10	F		0.60	45.51	0.35	0.94	0.19
B 0030596	11027	10	F		0.70	49.83	0.49	0.46	0.19
B 0030597	11028	10	F		0.47	55.68	0.69	1.36	0.20
	Mean				.728	62.348	.552	1.11	.277
	S.D.				.243	13.181	.23	.523	.095
Group 10									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030598	11029	11	F		0.87	61.61	0.62	1.46	0.36
B 0030599	11031	11	F		0.00	44.85	0.00	1.56	0.08
B 0030600	11032	11	F		0.52	73.96	0.86	0.60	0.26
B 0030601	11033	11	F		0.42	58.43	0.61	1.76	0.18
B 0030602	11034	11	F		0.89	73.76	0.87	2.53	0.67
B 0030603	11035	11	F		0.35	53.37	0.55	0.50	0.23
B 0030604	11036	11	F		0.00	57.45	0.52		0.23
B 0030605	11037	11	F		0.26	61.84	0.45	0.82	0.18
B 0030606	11038	11	F		0.90	85.82	0.69	0.00	0.33
	Mean				.468	63.454	.574	1.154	.28
	S.D.				.358	12.409	.259	.819	.168
Group 11									
B 0030607	11041	12	F		0.14	67.01	0.49	1.49	0.22
B 0030608	11049	12	F		0.60	53.37	0.33	1.96	0.29
B 0030622	11042	12	F		0.46	100.62	0.72	1.16	0.32
B 0030623	11048	12	F		0.27	73.23	0.43	1.31	0.26
	Mean				.368	73.558	.493	1.48	.273
	S.D.				.203	19.857	.165	.347	.043
Group 12									
B 0030609	11059	13	F		0.24	48.45	0.16	0.97	0.15
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030624	11055	13	F		0.23	61.96	0.76	3.48	0.25
B 0030625	11057	13	F		0.00	72.68			
B 0030626	11061	13	F		0.33	76.74	0.64	0.82	0.17
B 0030627	11064	13	F		0.26	66.25	0.50	1.79	0.26
B 0030628	11065	13	F		0.60	83.98	0.41	2.14	0.16
	Mean				.277	68.343	.494	1.84	.198
	S.D.				.194	12.447	.23	1.07	.053
Group 13									
B 0030552	10921	2	F		4.22	81.28	0.83	1.04	1.21
B 0030553	10922	2	F		2.31	88.13	0.72	4.41	0.74
B 0030554	10923	2	F		2.89	95.06	0.79	0.96	1.02
B 0030555	10924	2	F		1.24	63.21	0.48	0.48	0.57
B 0030556	10927	2	F		2.38	116.64	1.29	2.92	0.93
	Mean				2.608	88.864	.822	1.962	.894
	S.D.				1.083	19.533	.295	1.655	.248
Group 2									
B 0030557	10929	3	F		0.08	68.57	0.65	1.12	0.30
B 0030558	10938	3	F		0.00	56.59	0.53	0.43	0.17
B 0030559	10942	3	F		0.11	70.90	0.81	2.78	0.30
B 0030610	10941	3	F		0.54	66.95	0.79	0.58	0.31
	Mean				.183	65.753	.695	1.228	.27
	S.D.				.243	6.32	.131	1.077	.067
Group 3									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030611	10943	4	F		0.24	67.82			
B 0030612	10948	4	F		0.32	74.34	0.82	0.84	0.35
B 0030613	10952	4	F		0.77	94.97	0.75	1.42	0.21
B 0030614	10955	4	F		0.23	81.22	0.58	2.02	0.16
B 0030615	10956	4	F		0.39	73.68	0.74	2.15	0.22
B 0030629	10944	4	F		0.04	64.92	0.30	0.40	0.17
	Mean				.332	76.158	.638	1.366	.222
	S.D.				.245	10.815	.208	.751	.076
Group 4									
B 0030560	10957	5	F		2.80	108.48	1.00	0.52	0.87
B 0030561	10966	5	F		3.23	87.83	0.79	1.50	1.51
B 0030562	10967	5	F		1.51	94.97	1.04	1.15	0.78
B 0030563	10968	5	F		1.69	104.99	1.02	0.55	0.70
B 0030564	10969	5	F		1.35	84.75	0.69	0.44	0.89
B 0030565	10970	5	F		1.94	69.56	0.78	0.70	0.81
	Mean				2.087	91.763	.887	.81	.927
	S.D.				.758	14.299	.151	.422	.294
Group 5									
B 0030566	10977	6	F		0.00	50.71	0.36	0.62	0.21
B 0030567	10979	6	F		0.00	55.20	0.48	1.16	0.27
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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B 0030568	10983	6	F		0.00	75.66			0.25
B 0030616	10971	6	F		0.53	65.47	0.39	0.68	0.30
B 0030617	10973	6	F		0.45	64.98	0.60	2.02	0.32
B 0030618	10984	6	F		0.65	79.39	0.72	1.92	0.28
	Mean				.272	65.235	.51	1.28	.272
	S.D.				.304	11.143	.15	.665	.039
Group 6									
B 0030569	10995	7	F		0.00	54.80	0.33	1.32	0.19
B 0030570	10997	7	F		0.00	40.79	0.25	0.74	0.14
B 0030619	10986	7	F		0.43	78.34	0.94	3.12	0.31
B 0030620	10994	7	F		0.24	67.17	0.85	3.12	0.30
B 0030621	10996	7	F		0.00	87.47	0.64	1.12	0.27
	Mean				.134	65.714	.602	1.884	.242
	S.D.				.195	18.542	.306	1.147	.074
Group 7									
B 0030571	10999	8	F		1.05	81.63	0.79		0.47
B 0030572	11000	8	F		1.14	76.76	0.78	1.54	0.50
B 0030573	11001	8	F		0.61	51.06	0.40	1.00	0.41
B 0030574	11002	8	F		0.65	64.38	0.86	1.35	0.64
B 0030575	11003	8	F		0.43	80.94	1.15	0.92	0.30
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030576	11004	8	F		1.48	88.66	0.84	1.36	0.60
B 0030577	11005	8	F		1.12	81.56	0.56	1.02	0.55
B 0030578	11006	8	F		1.03	86.75	0.78	1.06	0.44
B 0030579	11007	8	F		0.38	56.62	0.39	1.15	0.40
B 0030580	11008	8	F		0.19	60.76	0.43	0.88	0.31
	Mean				.808	72.912	.698	1.142	.462
	S.D.				.414	13.47	.247	.226	.114
Group 8									
B 0030581	11009	9	F		0.00	57.68	0.44	2.23	0.22
B 0030582	11010	9	F		0.34	60.23	0.55		0.28
B 0030583	11011	9	F		1.21	59.71	0.70	1.30	0.26
B 0030584	11012	9	F		0.14	55.40	0.40	0.04	0.21
B 0030585	11013	9	F		0.71	73.47	0.85	0.63	0.26
B 0030586	11015	9	F		1.00	71.68	0.70	2.18	0.34
B 0030587	11016	9	F		0.98	68.23	0.49	1.16	0.39
B 0030588	11018	9	F		0.39	63.84	0.57	2.52	0.27
	Mean				.596	63.78	.588	1.437	.279
	S.D.				.443	6.684	.152	.918	.06
Group 9									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

Approved ---------- Date 4/17/01

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Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/14/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0031037	10906	1	F		26
B 0031038	10909	1	F		10
B 0031039	10911	1	F		27
B 0031040	10913	1	F		10
B 0031041	10914	1	F		11
	Mean				16.8
	S.D.				8.9
Group 1					
B 0031079	11019	10	F		17
B 0031080	11021	10	F		0
B 0031081	11020	10	F		2
B 0031082	11023	10	F		38
B 0031083	11024	10	F		0
B 0031084	11025	10	F		0
B 0031085	11026	10	F		41
B 0031086	11027	10	F		17
B 0031087	11028	10	F		23
	Mean				15.3
	S.D.				16.3
Group 10					
Reference Range					48 - 96

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Date Collected:
Date Received: 12/14/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0031088	11029	11	F		18
B 0031089	11031	11	F		0
B 0031090	11032	11	F		0
B 0031091	11033	11	F		10
B 0031092	11034	11	F		15
B 0031093	11035	11	F		19
B 0031094	11036	11	F		14
B 0031095	11037	11	F		0
B 0031096	11038	11	F		3
	Mean				8.8
	S.D.				8.1
Group 11					
B 0031097	11041	12	F		34
B 0031098	11049	12	F		0
	Mean				17
	S.D.				24
Group 12					
B 0031099	11059	13	F		0
	Mean				0
	S.D.				0
Group 13					
Reference Range					48 - 96

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Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0031042	10921	2	F		0
B 0031043	10922	2	F		4
B 0031044	10923	2	F		5
B 0031045	10924	2	F		31
B 0031046	10927	2	F		0
	Mean				8
	S.D.				13.1
Group 2					
B 0031047	10929	3	F		9
B 0031048	10938	3	F		10
B 0031049	10942	3	F		0
	Mean				6.3
	S.D.				5.5
Group 3					
B 0031050	10957	5	F		7
B 0031051	10966	5	F		0
B 0031052	10967	5	F		9
B 0031053	10968	5	F		20
B 0031054	10969	5	F		10
B 0031055	10970	5	F		23
	Mean				11.5
	S.D.				8.5
Group 5					
Reference Range					48 - 96

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Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0031056	10977	6	F		0
B 0031057	10979	6	F		6
B 0031058	10983	6	F		7
	Mean				4.3
	S.D.				3.8
Group 6					
B 0031059	10995	7	F		47
B 0031060	10997	7	F		61
	Mean				54
	S.D.				9.9
Group 7					
B 0031061	10999	8	F		12
B 0031062	11000	8	F		18
B 0031063	11001	8	F		41
B 0031064	11002	8	F		18
B 0031065	11003	8	F		22
B 0031066	11004	8	F		25
B 0031067	11005	8	F		9
B 0031068	11006	8	F		19
B 0031069	11007	8	F		3
Reference Range					48 - 96

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Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0031070	11008	8	F		17
	Mean				18.4
	S.D.				10.2
Group 8					
B 0031071	11009	9	F		110
B 0031072	11010	9	F		22
B 0031073	11011	9	F		4
B 0031074	11012	9	F		2
B 0031075	11013	9	F		12
B 0031076	11015	9	F		19
B 0031077	11016	9	F		15
B 0031078	11018	9	F		1
	Mean				23.1
	S.D.				36
Group 9					
Reference Range					48 - 96

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Date Collected:
Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030217	10901	1			40	69	15	12	28
B 0030218	10902	1			55	55	34	14	31
B 0030219	10903	1			58	70	35	15	34
B 0030220	10904	1			60	56	35	13	41
B 0030221	10905	1			49	69	25	12	39
B 0030222	10907	1			43	61	17	11	39
B 0030223	10908	1			58	64	32	16	36
B 0030224	10910	1			43	66	25	11	27
	Mean				50.8	63.8	27.3	13	34.4
	S.D.				8	5.9	8	1.9	5.3
Group 1									
B 0030273	11040	12			57	61	41	16	19
B 0030274	11044	12			51	74	38	12	26
B 0030275	11045	12			65	82	44	14	38
B 0030276	11046	12			60	78	37	13	36
B 0030277	11047	12			73	59	52	15	38
B 0030278	11050	12			63	79	51	16	21
B 0030279	11051	12			50	96	39	14	25
B 0030280	11052	12			71	80	57	16	20
	Mean				61.3	76.1	44.9	14.5	27.9
	S.D.				8.5	11.8	7.5	1.5	8.2
Group 12									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030281	11053	13			58	70	39	14	37
B 0030282	11054	13			62	51	37	12	44
B 0030283	11056	13			66	51	54	14	21
B 0030284	11058	13			49	84	38	14	21
B 0030285	11060	13			60	75	45	15	19
B 0030286	11062	13			56	82	36	13	33
B 0030287	11063	13			65	88	51	16	17
B 0030288	11066	13			76	90	63	14	24
	Mean				61.5	73.9	45.4	14	27
	S.D.				8	15.5	9.8	1.2	9.8
Group 13									
B 0030225	10915	2			49	91	28	15	22
B 0030226	10916	2			57	71	35	14	33
B 0030227	10917	2			54	71	25	14	42
B 0030228	10918	2			53	62	30	14	38
B 0030229	10919	2			42	63	21	12	27
B 0030230	10920	2			59	51	36	13	48
B 0030231	10925	2			58	57	34	16	37
B 0030232	10928	2			53	41	26	13	44
	Mean				53.1	63.4	29.4	13.9	36.4
	S.D.				5.5	15	5.3	1.2	8.7
Group 2									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030233	10930	3			71	69	48	17	31
B 0030234	10931	3			66	66	49	16	27
B 0030235	10932	3			64	76	48	16	26
B 0030236	10933	3			58	79	44	14	25
B 0030237	10934	3			100	62	67	23	47
B 0030238	10935	3			63	70	46	15	32
B 0030239	10937	3			63	62	41	13	36
B 0030240	10940	3			61	73	43	15	30
	Mean				68.3	69.6	48.3	16.1	31.8
	S.D.				13.4	6.2	8.1	3	7.1
Group 3									
B 0030241	10945	4			65	61	45	13	31
B 0030242	10946	4			72	74	55	17	29
B 0030243	10947	4			65	80	50	16	14
B 0030244	10949	4			42	56	32	12	25
B 0030245	10950	4			49	80	35	16	12
B 0030246	10951	4			71	70	48	16	35
B 0030247	10953	4			76	95	60	17	27
B 0030248	10954	4			65	80	50	17	28
	Mean				63.1	74.5	46.9	15.5	25.1
	S.D.				11.7	12.3	9.4	1.9	8.1
Group 4									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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(215) 443-8710

Date Collected:
Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030249	10958	5			54	62	30	13	34
B 0030250	10959	5			40	65	18	13	39
B 0030251	10960	5			44	81	20	11	35
B 0030252	10961	5			41	68	21	12	27
B 0030253	10962	5			45	78	29	12	21
B 0030254	10963	5			47	71	29	14	25
B 0030255	10964	5			44	78	27	12	29
B 0030256	10965	5			46	60	19	12	44
	Mean				45.1	70.4	24.1	12.4	31.8
	S.D.				4.3	7.9	5.1	.9	7.6
Group 5									
B 0030257	10972	6			45	99	39	14	10
B 0030258	10974	6			64	57	46	16	26
B 0030259	10975	6			82	50	49	14	55
B 0030260	10976	6			59	99	44	16	26
B 0030261	10978	6			47	81	36	14	16
B 0030262	10980	6			54	58	39	11	29
B 0030263	10981	6			66	92	51	15	25
B 0030264	10982	6			56	83	47	15	16
	Mean				59.1	77.4	43.9	14.4	25.4
	S.D.				11.8	19.8	5.4	1.6	13.6
Group 6									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030265	10985	7			64	90	47	16	28
B 0030266	10987	7			85	77	62	17	32
B 0030267	10988	7			67	74	49	12	37
B 0030268	10989	7			59	69	45	15	25
B 0030269	10990	7			65	65	45	15	29
B 0030270	10991	7			49	69	35	13	20
B 0030271	10992	7			65	58	43	14	36
B 0030272	10993	7			58	60	39	13	33
	Mean				64	70.3	45.6	14.4	30
	S.D.				10.3	10.3	8	1.7	5.7
Group 7									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030217	10901	1			0.00	0.00			
B 0030218	10902	1			0.00				
B 0030219	10903	1			0.00	0.00			
B 0030220	10904	1							
B 0030221	10905	1			0.00				
B 0030222	10907	1			0.00				
B 0030223	10908	1			0.00	0.00			
B 0030224	10910	1			0.00	1.69			0.05
	Mean				0	.423			.05
	S.D.				0	.845			0
Group 1									
B 0030273	11040	12			0.00	0.00			
B 0030274	11044	12			0.00	0.00			
B 0030275	11045	12			0.00	0.00	0.00		0.00
B 0030276	11046	12			0.00	0.00			0.00
B 0030277	11047	12			0.00	0.00			
B 0030278	11050	12			0.00	0.00			
B 0030279	11051	12			0.00	0.00			
B 0030280	11052	12			0.00	0.00			0.00
	Mean				0	0	0		0
	S.D.				0	0	0		0
Group 12									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030281	11053	13			0.00	1.16			0.00
B 0030282	11054	13			0.00				0.00
B 0030283	11056	13			0.00			1.16	
B 0030284	11058	13			0.00	1.59			0.00
B 0030285	11060	13			0.00	0.00			0.00
B 0030286	11062	13			0.00	2.80			0.00
B 0030287	11063	13			0.00	0.00			
B 0030288	11066	13			0.00	0.00			
	Mean				0	.925		1.16	0
	S.D.				0	1.147		0	0
Group 13									
B 0030225	10915	2			0.00	8.43			0.07
B 0030226	10916	2			0.00	0.00			
B 0030227	10917	2			0.00	0.00			
B 0030228	10918	2			0.00				
B 0030229	10919	2			0.00				
B 0030230	10920	2							
B 0030231	10925	2			0.00				
B 0030232	10928	2			0.00				
	Mean				0	2.81			.07
	S.D.				0	4.867			0
Group 2									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030233	10930	3			0.00	0.00			
B 0030234	10931	3			0.00	0.00			
B 0030235	10932	3			0.00	2.19	0.00		
B 0030236	10933	3			0.00	0.00			
B 0030237	10934	3			0.00				
B 0030238	10935	3			0.00	2.70			0.00
B 0030239	10937	3			0.00	0.00			0.00
B 0030240	10940	3			0.00	2.78			
	Mean				0	1.096	0		0
	S.D.				0	1.379	0		0
Group 3									
B 0030241	10945	4			0.00	0.00	0.00		0.00
B 0030242	10946	4			0.00	5.10	0.00		0.00
B 0030243	10947	4			0.00				
B 0030244	10949	4			0.00				
B 0030245	10950	4			0.00	1.33			
B 0030246	10951	4			0.00	6.68			
B 0030247	10953	4			0.00	0.38			0.00
B 0030248	10954	4			0.00	4.08			0.00
	Mean				0	2.928	0		0
	S.D.				0	2.747	0		0
Group 4									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030249	10958	5			0.00	0.00			
B 0030250	10959	5			0.00				
B 0030251	10960	5			0.00				
B 0030252	10961	5			0.00	2.96	0.00		0.05
B 0030253	10962	5			0.00	0.00			
B 0030254	10963	5			0.00	1.89			0.04
B 0030255	10964	5			0.00	0.00	0.00		0.02
B 0030256	10965	5			0.00	2.01			
	Mean				0	1.143	0		.037
	S.D.				0	1.306	0		.015
Group 5									
B 0030257	10972	6			0.00	0.00			
B 0030258	10974	6			0.00	3.20	0.00		0.00
B 0030259	10975	6							
B 0030260	10976	6			0.00			0.04	
B 0030261	10978	6			0.00	0.00			
B 0030262	10980	6			0.00				0.00
B 0030263	10981	6			0.00	0.60			0.00
B 0030264	10982	6			0.00	0.00	0.00		0.00
	Mean				0	.76	0	.04	0
	S.D.				0	1.389	0	0	0
Group 6									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/08/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030265	10985	7			0.00	1.96			
B 0030266	10987	7			0.00				
B 0030267	10988	7			0.00	0.00	0.00		0.00
B 0030268	10989	7							
B 0030269	10990	7			0.00				
B 0030270	10991	7			0.00	0.00			0.00
B 0030271	10992	7							
B 0030272	10993	7			0.00				
	Mean				0	.653	0		0
	S.D.				0	1.132	0		0
Group 7									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

Approved _____ Date 1/16/01

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Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030631	10906	1			92	292	25	26	203
B 0030632	10909	1			117	229	35	38	243
B 0030633	10911	1			108	188	22	25	213
B 0030634	10913	1			104	276	22	28	153
B 0030635	10914	1			120	250	29	18	235
	Mean				108.2	247	26.6	27	209.4
	S.D.				11.1	40.9	5.5	7.2	35.4
Group 1									
B 0030673	11019	10			118	217	26	35	229
B 0030674	11021	10			99	154	26	32	173
B 0030675	11020	10			107	206	25	33	218
B 0030676	11023	10			133	222	29	28	265
B 0030677	11024	10			145	282	39	36	216
B 0030678	11025	10			102	154	26	39	184
B 0030679	11026	10			137	197	27	31	270
B 0030680	11027	10			79	170	22	40	84
B 0030681	11028	10			110	176	24	38	100
	Mean				114.4	197.6	27.1	34.7	193.2
	S.D.				21	40.6	4.9	4	65.7
Group 10									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030682	11029	11			131	348	32	26	359
B 0030683	11031	11			108	259	32	39	133
B 0030684	11032	11			126	202	33	24	254
B 0030685	11033	11			120	175	21	26	417
B 0030686	11034	11			131	153	26	26	211
B 0030687	11035	11			198	301	80	39	222
B 0030688	11036	11			100	179	30	39	136
B 0030689	11037	11			135	166	17	28	188
B 0030690	11038	11			107	261	32	31	158
	Mean				128.4	227.1	33.7	30.9	230.9
	S.D.				28.8	68.1	18.3	6.4	98.6
Group 11									
B 0030691	11049	12			192	245	77	40	212
	Mean				192	245	77	40	212
	S.D.				0	0	0	0	0
Group 12									
B 0030692	11059	13			110	249	23	32	149
	Mean				110	249	23	32	149
	S.D.				0	0	0	0	0
Group 13									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Date Collected:
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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030636	10921	2			128	237	31	33	246
B 0030637	10922	2			128	153	28	30	311
B 0030638	10923	2			118	179	47	35	106
B 0030639	10924	2			119	99	38	50	71
B 0030640	10927	2			107	323	27	21	193
	Mean				120	198.2	34.2	33.8	185.4
	S.D.				8.7	85.6	8.3	10.5	98.6
Group 2									
B 0030641	10929	3			148	203	47	42	232
B 0030642	10938	3			202	267	80	30	371
B 0030643	10942	3			151	394	29	30	333
	Mean				167	288	52	34	312
	S.D.				30.3	97.2	25.9	6.9	71.8
Group 3									
B 0030644	10957	5			125	277	23	28	215
B 0030645	10966	5			130	382	20	20	789
B 0030646	10967	5			112	155	22	21	149
B 0030647	10968	5			117	289	28	30	285
B 0030648	10969	5			124	262	20	30	139
B 0030649	10970	5			104	244	1	19	681
	Mean				118.7	268.2	19	24.7	376.3
	S.D.				9.6	73.3	9.3	5.2	284.8
Group 5									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030650	10977	6			173	275	66	41	354
B 0030651	10979	6			118	181	36	44	134
B 0030652	10983	6			128	311	30	34	281
	Mean				139.7	255.7	44	39.7	256.3
	S.D.				29.3	67.1	19.3	5.1	112.1
Group 6									
B 0030653	10995	7			181	204	93	63	99
B 0030654	10997	7			121	216	37	50	85
	Mean				151	210	65	56.5	92
	S.D.				42.4	8.5	39.6	9.2	9.9
Group 7									
B 0030655	10999	8			114	319	17	25	366
B 0030656	11000	8			109	290	21	26	342
B 0030657	11001	8			101	177	30	50	100
B 0030658	11002	8			123	375	20	21	444
B 0030659	11003	8			139	190	37	31	269
B 0030660	11004	8			121	240	26	28	230
B 0030661	11005	8			118	228	30	34	235
B 0030662	11006	8			104	190	31	39	127
B 0030663	11007	8			98	174	28	40	124
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0030664	11008	8			122	227	37	35	142
	Mean				114.9	241	27.7	32.9	237.9
	S.D.				12.4	67.2	6.8	8.6	117.5
Group 8									
B 0030665	11009	9			131	229	50	65	42
B 0030666	11010	9			125	272	25	25	272
B 0030667	11011	9			106	168	24	36	155
B 0030668	11012	9			113	117	33	44	160
B 0030669	11013	9			102	225	19	29	188
B 0030670	11015	9			132	239	32	27	195
B 0030671	11016	9			125	186	35	37	146
B 0030672	11018	9			119	334	34	34	243
	Mean				119.1	221.3	31.5	37.1	175.1
	S.D.				11.2	66.1	9.4	12.8	69.4
Group 9									
Reference Range					48 - 96	74 - 319	0 - 0	0 - 0	3 - 125

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Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030631	10906	1			0.45	39.28			
B 0030632	10909	1			0.43	70.81	0.25		0.06
B 0030633	10911	1			0.79	70.59			0.08
B 0030634	10913	1			0.13	70.66		0.76	0.07
B 0030635	10914	1			0.40	94.97	0.10		0.06
	Mean				.44	69.262	.175	.76	.068
	S.D.				.235	19.786	.106	0	.01
Group 1									
B 0030673	11019	10			0.00	51.23			0.01
B 0030674	11021	10			0.00	40.88	0.00	2.36	0.01
B 0030675	11020	10			0.00	56.43	0.00		0.01
B 0030676	11023	10			0.00				
B 0030677	11024	10			0.00	50.60			0.01
B 0030678	11025	10			0.15	41.97	0.00		0.03
B 0030679	11026	10			0.00	57.95			0.03
B 0030680	11027	10			0.00	34.91	0.00		0.01
B 0030681	11028	10			0.00				
	Mean				.017	47.71	0	2.36	.016
	S.D.				.05	8.613	0	0	.01
Group 10									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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(215) 443-8710

Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030682	11029	11			0.00	103.98	0.00		0.01
B 0030683	11031	11			0.00	47.45	0.03		0.01
B 0030684	11032	11			0.00	31.37	0.00		0.00
B 0030685	11033	11							
B 0030686	11034	11			0.00				
B 0030687	11035	11			0.00				
B 0030688	11036	11			0.00	39.69	0.00		0.00
B 0030689	11037	11			0.00	59.42	0.00		0.03
B 0030690	11038	11			0.00	33.50			0.00
	Mean				0	52.568	.006		.008
	S.D.				0	27.185	.013		.012
Group 11									
B 0030691	11049	12			0.00	42.35			0.02
	Mean				0	42.35			.02
	S.D.				0	0			0
Group 12									
B 0030692	11059	13			0.00	40.17	0.15		0.01
	Mean				0	40.17	.15		.01
	S.D.				0	0	0		0
Group 13									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Collected:
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Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030636	10921	2			0.80	92.83			0.08
B 0030637	10922	2			0.21	67.70	0.51	0.58	0.05
B 0030638	10923	2			0.61	134.10	0.98		0.18
B 0030639	10924	2			0.37	52.98	0.00	0.28	0.10
B 0030640	10927	2			0.44	69.49			0.04
	Mean				.486	83.42	.497	.43	.09
	S.D.				.227	31.721	.49	.212	.056
Group 2									
B 0030641	10929	3			0.00	58.69			0.01
B 0030642	10938	3			0.00	54.04		0.68	0.00
B 0030643	10942	3			0.00	99.17			
	Mean				0	70.633		.68	.005
	S.D.				0	24.823		0	.007
Group 3									
B 0030644	10957	5			0.20	90.58			0.06
B 0030645	10966	5			0.40	102.31	0.10		0.04
B 0030646	10967	5			0.81	87.31	0.44	1.38	0.11
B 0030647	10968	5			0.00	62.28			0.05
B 0030648	10969	5			0.31	63.95			0.06
B 0030649	10970	5			0.22	64.00			
	Mean				.323	78.405	.27	1.38	.064
	S.D.				.273	17.178	.24	0	.027
Group 5									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030650	10977	6			0.00	40.98		0.00	
B 0030651	10979	6			0.00	36.70	0.00		0.00
B 0030652	10983	6			0.00	44.84			0.00
	Mean				0	40.84	0	0	0
	S.D.				0	4.072	0	0	0
Group 6									
B 0030653	10995	7			0.00	25.90			
B 0030654	10997	7							
	Mean				0	25.9			
	S.D.				0	0			
Group 7									
B 0030655	10999	8			0.00	80.67			0.01
B 0030656	11000	8			0.00	39.92			
B 0030657	11001	8			0.00	47.53	0.00		0.03
B 0030658	11002	8			0.00	85.19	0.08		0.01
B 0030659	11003	8			0.00	74.96			0.01
B 0030660	11004	8			0.00				
B 0030661	11005	8			0.00	49.96	0.00		0.02
B 0030662	11006	8			0.00	37.35	0.00		0.02
B 0030663	11007	8			0.00	41.44			0.01
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

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Date Collected:
Date Received: 12/12/2000
Date Reported: 01/16/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T4,TOTAL UG/DL	T3,TOTAL NG/DL	FREE T3 PG/ML	TSH NG/ML	FREE T4 NG/DL
B 0030664	11008	8			0.00	44.97	0.00		0.03
	Mean				0	55.777	.016		.018
	S.D.				0	18.934	.036		.009
Group 8									
B 0030665	11009	9			0.00	31.44	0.00		0.05
B 0030666	11010	9			0.00	89.23	0.00		0.00
B 0030667	11011	9			0.00	51.55	0.00		0.02
B 0030668	11012	9			0.00	46.42			
B 0030669	11013	9			0.00	44.09			0.00
B 0030670	11015	9			0.00	51.27	0.00		0.00
B 0030671	11016	9			0.00	38.39			0.01
B 0030672	11018	9			0.00	38.21	0.00		0.02
	Mean				0	48.825	0		.014
	S.D.				0	17.72	0		.018
Group 9									
Reference Range					3 - 7	50 - 100	0 - 0	.57 - 3.41	1.9 - 2.5

Approved _____ Date 1/16/01

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QA AUDIT REPORT

The report listed below was reviewed for compliance with the FDA Good Laboratory Practices and with EPA Good Laboratory Practices. The final report and all associated raw data were reviewed for accuracy and consistency and the findings were reported to management.

The methods used were the methods described and the report accurately reflects the data. Therefore, these studies were done in compliance with the FDA and EPA Good Laboratory Practices.

Franklin B. Newman
QA Auditor

SPONSOR: ARGUS RESEARCH LABS **STUDY:** 418018

REPORT TYPE:	AUDIT DATE:	REPORT TO MANAGEMENT:	AUDIT #:
CHEM, T3, TH, TSH FT3, FTH, CHOL	1-22-01	1-22-01	01-063

3/8/01
DATE SUBMITTED TO CLIENT

MANAGEMENT 1/22/01

TC Dr Raymond York

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Client: ARGUS RESEARCH LABORATORIES, INC.
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Date Collected:
Date Received: 02/01/2001
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035529	11501	1	F		165
B 0035530	11502	1	F		158
B 0035531	11503	1	F		169
B 0035532	11504	1	F		99
B 0035533	11505	1	F		135
B 0035534	11506	1	F		126
B 0035535	11507	1	F		104
B 0035536	11508	1	F		130
B 0035537	11509	1	F		97
B 0035538	11510	1	F		116
B 0035539	11511	1	F		129
B 0035540	11512	1	F		98
B 0035541	11513	1	F		92
B 0035542	11514	1	F		135
	Mean				125.2
	S.D.				25.8
Group 1					
B 0035609	11620	10	F		78
B 0035610	11621	10	F		112
B 0035611	11622	10	F		130
B 0035612	11623	10	F		103
B 0035613	11624	10	F		78
B 0035614	11625	10	F		78
B 0035615	11626	10	F		164
Reference Range					48 - 96

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Date Collected:
Date Received: 02/01/2001
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035616	11628	10	F		84
B 0035617	11629	10	F		111
	Mean				104.2
	S.D.				29.2
Group 10					
B 0035618	11630	11	F		86
B 0035619	11632	11	F		82
B 0035620	11633	11	F		70
B 0035621	11634	11	F		77
B 0035622	11635	11	F		87
B 0035623	11636	11	F		129
B 0035624	11637	11	F		67
B 0035625	11638	11	F		75
B 0035626	11639	11	F		91
	Mean				84.9
	S.D.				18.4
Group 11					
B 0035627	11640	12	F		93
B 0035628	11641	12	F		57
B 0035629	11642	12	F		80
Reference Range					48 - 96

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Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/01/2001
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035630	11643	12	F		106
B 0035631	11644	12	F		76
B 0035632	11646	12	F		89
B 0035633	11647	12	F		25
B 0035634	11648	12	F		93
B 0035635	11650	12	F		59
B 0035636	11651	12	F		69
B 0035637	11653	12	F		59
	Mean				73.3
	S.D.				22.7
Group 12					
B 0035638	11654	13	F		92
B 0035639	11655	13	F		98
B 0035640	11656	13	F		84
B 0035641	11662	13	F		96
	Mean				92.5
	S.D.				6.2
Group 13					
B 0035543	11515	2	F		89
B 0035544	11516	2	F		
Reference Range					48 - 96

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Date Collected:
Date Received: 02/01/2001
Date Reported: 04/17/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035545	11517	2	F		118
B 0035546	11518	2	F		97
B 0035547	11519	2	F		97
B 0035548	11520	2	F		87
B 0035549	11521	2	F		103
B 0035550	11523	2	F		109
B 0035551	11524	2	F		130
B 0035552	11525	2	F		116
B 0035553	11526	2	F		120
B 0035554	11527	2	F		111
B 0035555	11528	2	F		167
	Mean				112
	S.D.				21.7
Group 2					
B 0035556	11529	3	F		77
B 0035557	11530	3	F		96
B 0035558	11534	3	F		62
B 0035559	11536	3	F		81
B 0035560	11537	3	F		109
B 0035561	11538	3	F		42
B 0035562	11540	3	F		121
B 0035563	11542	3	F		136
B 0035564	11543	3	F		103
	Mean				91.9
	S.D.				29.5
Group 3					
Reference Range					48 - 96

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Date Collected:
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Date Reported: 04/17/2001

Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035565	11547	4	F		269
B 0035566	11552	4	F		107
	Mean				188
	S.D.				114.6
Group 4					
B 0035567	11558	5	F		109
B 0035568	11559	5	F		94
B 0035569	11561	5	F		136
B 0035570	11563	5	F		137
B 0035571	11564	5	F		104
B 0035572	11565	5	F		149
B 0035573	11567	5	F		100
B 0035574	11568	5	F		99
B 0035575	11569	5	F		92
B 0035576	11570	5	F		187
B 0035577	11571	5	F		88
	Mean				117.7
	S.D.				30.9
Group 5					
B 0035578	11574	6	F		72
Reference Range					48 - 96

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Client No. 1028 Study: 418018 LD5 MILK Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035579	11575	6	F		127
B 0035580	11576	6	F		138
B 0035581	11578	6	F		68
B 0035582	11579	6	F		116
B 0035583	11580	6	F		105
B 0035584	11582	6	F		149
B 0035585	11583	6	F		93
B 0035586	11584	6	F		102
	Mean				107.8
	S.D.				27.8
Group 6					
B 0035587	11592	7	F		
B 0035588	11593	7	F		47
B 0035589	11597	7	F		76
	Mean				61.5
	S.D.				20.5
Group 7					
B 0035590	11600	8	F		134
B 0035591	11601	8	F		79
B 0035592	11602	8	F		74
Reference Range					48 - 96

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL
B 0035593	11603	8	F		89
B 0035594	11604	8	F		146
B 0035595	11605	8	F		106
B 0035596	11606	8	F		226
B 0035597	11607	8	F		126
B 0035598	11608	8	F		155
B 0035599	11609	8	F		103
	Mean				123.8
	S.D.				45.3

Group 8

B 0035600	11611	9	F		97
B 0035601	11612	9	F		98
B 0035602	11613	9	F		139
B 0035603	11614	9	F		141
B 0035604	11615	9	F		77
B 0035605	11616	9	F		92
B 0035606	11617	9	F		96
B 0035607	11618	9	F		100
B 0035608	11619	9	F		135
	Mean				108.3
	S.D.				23.5

Group 9

Reference Range 48 - 96

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(215) 443-8710

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Date Received: 02/02/2001
Date Reported: 02/13/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035787	11501	1	F		96	207	7	81	133
B 0035788	11502	1	F		86	132	10	73	82
B 0035789	11503	1	F		67	162	7	53	125
B 0035790	11504	1	F		100	206	7	83	83
B 0035791	11505	1	F		64	204	5	60	71
B 0035792	11506	1	F		85	145	6	70	107
B 0035793	11507	1	F		91	174	4	73	183
B 0035794	11508	1	F		97	154	7	85	92
B 0035795	11509	1	F		95	168	5	85	112
B 0035796	11510	1	F		59	155	1	51	137
B 0035797	11511	1	F		53	149	1	45	149
B 0035798	11512	1	F		84	209	6	74	112
B 0035799	11513	1	F		69	177	3	50	173
B 0035800	11514	1	F		62	203	2	48	173
	Mean				79.1	174.6	5.1	66.5	123.7
	S.D.				16.2	26.7	2.6	14.8	36.2
Group 1									
B 0035801	11630	11	F		44	200	5	39	102
B 0035802	11632	11	F		78	145	1	67	170
B 0035803	11633	11	F		66	208	4	62	129
B 0035804	11634	11	F		79	161	6	74	107
B 0035805	11635	11	F		49	166	1	42	157
B 0035806	11636	11	F		74	156	6	70	93
B 0035807	11637	11	F		63	180	3	61	136
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Date Collected:
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Date Reported: 02/13/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035808	11638	11	F		69	179	6	62	98
B 0035809	11639	11	F		69	185	4	67	90
	Mean				65.7	175.6	4	60.4	120.2
	S.D.				12.1	20.6	2	12.1	29.2
Group 11									
B 0035810	11640	12	F		61	179	2	54	183
B 0035811	11641	12	F		43	186	1	43	77
B 0035812	11642	12	F		57	165	7	51	63
B 0035813	11643	12	F		39	190	3	37	68
B 0035814	11644	12	F		46	180	3	38	153
B 0035815	11645	12	F		77	175	2	59	190
B 0035816	11646	12	F		52	157	2	51	62
B 0035817	11647	12	F		41	207	2	40	44
B 0035818	11648	12	F		68	145	2	66	77
B 0035819	11649	12	F		78	206	8	69	62
B 0035820	11650	12	F		50	159	2	48	54
B 0035821	11651	12	F		47	176	1	46	56
B 0035822	11653	12	F		63	159	7	58	60
	Mean				55.5	175.7	3.2	50.8	88.4
	S.D.				13.1	18.7	2.4	10.2	51
Group 12									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035823	11654	13	F		44	208	4	39	125
B 0035824	11655	13	F		59	168	4	56	48
B 0035825	11656	13	F		50	175	3	45	122
B 0035826	11657	13	F		64	222	6	60	74
B 0035827	11658	13	F		52	206	7	46	50
B 0035828	11659	13	F		61	158	2	60	99
B 0035829	11660	13	F		57	196	5	54	66
B 0035830	11661	13	F		69	197	5	65	93
B 0035831	11662	13	F		37	202	2	36	20
B 0035832	11663	13	F		58	153	3	51	118
B 0035833	11664	13	F		77	152	5	61	159
B 0035834	11665	13	F		60	227	7	53	54
B 0035835	11667	13	F		67	202	5	61	126
	Mean				58.1	189.7	4.5	52.8	88.8
	S.D.				10.6	25.6	1.7	9	40.4
Group 13									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T3,TOTAL NG/DL	T4,TOTAL UG/DL	TSH NG/ML	FREE T3 PG/ML	FREE T4 NG/DL
B 0035787	11501	1	F		65.64	1.30	1.68	0.43	0.62
B 0035788	11502	1	F		104.47	2.97	1.55	1.19	1.42
B 0035789	11503	1	F		37.77	0.85	0.91	0.04	0.55
B 0035790	11504	1	F		73.00	1.11	2.95	0.58	0.78
B 0035791	11505	1	F		55.01	1.35	1.67	0.50	0.77
B 0035792	11506	1	F		63.16	1.28	1.19	0.47	0.70
B 0035793	11507	1	F		57.61	1.08	3.24	0.15	0.64
B 0035794	11508	1	F		76.31	2.39	2.62	0.59	1.03
B 0035795	11509	1	F		79.83	1.49	1.42	0.89	0.68
B 0035796	11510	1	F		71.86	0.88	0.77	0.56	0.79
B 0035797	11511	1	F		58.43	0.68	1.43	0.54	0.48
B 0035798	11512	1	F		80.84	1.25	2.03	0.69	0.92
B 0035799	11513	1	F		53.33	0.95	0.91	0.39	0.80
B 0035800	11514	1	F		65.08	0.92	0.66	0.62	0.77
	Mean				67.31	1.321	1.645	.546	.782
	S.D.				15.865	.628	.808	.28	.232
Group 1									
B 0035801	11630	11	F		26.82	0.37	2.54	0.18	0.28
B 0035802	11632	11	F		47.75	0.06	0.50	0.55	0.20
B 0035803	11633	11	F		37.99	0.00	1.66	0.11	0.17
B 0035804	11634	11	F		46.74	0.01	0.98	0.15	0.29
B 0035805	11635	11	F		46.41	0.06	1.52	0.18	0.28
B 0035806	11636	11	F		43.09	0.05	1.58	0.26	0.26
B 0035807	11637	11	F		48.31	0.11	4.35	0.35	0.21
Reference Range					50 - 100	3 - 7	.57 - 3.41	0 - 0	1.9 - 2.5

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Date Collected:
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Date Reported: 02/13/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T3,TOTAL NG/DL	T4,TOTAL UG/DL	TSH NG/ML	FREE T3 PG/ML	FREE T4 NG/DL
B 0035808	11638	11	F		31.70	0.10	0.60	0.09	0.18
B 0035809	11639	11	F		51.74	0.13	1.64	0.36	0.29
	Mean				42.283	.099	1.708	.248	.24
	S.D.				8.387	.111	1.17	.149	.049
Group 11									
B 0035810	11640	12	F		36.31	0.00	1.13	0.03	0.19
B 0035811	11641	12	F		32.93	0.20	2.25	0.12	0.23
B 0035812	11642	12	F		32.46	0.08	3.11	0.00	0.14
B 0035813	11643	12	F		41.21	0.24	1.25	0.34	0.29
B 0035814	11644	12	F		26.20	0.08	1.68	0.02	0.19
B 0035815	11645	12	F		54.83	0.29	1.30	0.31	0.21
B 0035816	11646	12	F		28.42	0.38	1.46	0.29	0.20
B 0035817	11647	12	F		55.92	0.63	1.48	0.50	0.41
B 0035818	11648	12	F		33.95	0.16	1.79	0.00	0.21
B 0035819	11649	12	F		59.37	0.26	2.38	0.57	0.31
B 0035820	11650	12	F		31.35	0.29	3.38	0.14	0.21
B 0035821	11651	12	F		29.13	0.31	0.46	0.06	0.30
B 0035822	11653	12	F		43.24	0.23	0.71	0.00	0.32
	Mean				38.871	.242	1.722	.183	.247
	S.D.				11.249	.158	.861	.199	.074
Group 12									
Reference Range					50 - 100	3 - 7	.57 - 3.41	0 - 0	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T3,TOTAL NG/DL	T4,TOTAL UG/DL	TSH NG/ML	FREE T3 PG/ML	FREE T4 NG/DL
B 0035823	11654	13	F		35.84	0.25	1.70	0.14	0.24
B 0035824	11655	13	F		39.95	0.49	1.45	0.24	0.33
B 0035825	11656	13	F		28.99	0.10	1.27	0.00	0.17
B 0035826	11657	13	F		46.76	0.18	1.51	0.41	0.36
B 0035827	11658	13	F		46.50	0.11	1.18	0.24	0.23
B 0035828	11659	13	F		33.35	0.22	2.23	0.01	0.30
B 0035829	11660	13	F		48.66	0.23	1.03	0.75	0.26
B 0035830	11661	13	F		59.68	0.38	2.19	0.47	0.37
B 0035831	11662	13	F		21.45	0.32	0.93	0.01	0.20
B 0035832	11663	13	F		56.44	0.06	0.91	0.38	0.21
B 0035833	11664	13	F		77.52	0.18	1.76	0.53	0.25
B 0035834	11665	13	F		52.57	0.20	0.74	0.36	0.35
B 0035835	11667	13	F		54.46	0.08	1.49	0.35	0.40
	Mean				46.321	.215	1.415	.299	.282
	S.D.				14.728	.124	.47	.224	.074
Group 13									
Reference Range					50 - 100	3 - 7	.57 - 3.41	0 - 0	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035934	11620	10	F		44	197	2	43	115
B 0035935	11621	10	F		73	172	8	66	90
B 0035936	11622	10	F		67	155	5	59	122
B 0035937	11623	10	F		46	151	3	44	47
B 0035938	11624	10	F		80	175	3	67	123
B 0035939	11625	10	F		67	149	4	62	47
B 0035940	11626	10	F		48	156	4	45	91
B 0035941	11627	10	F		55	188	4	50	84
B 0035942	11628	10	F		72	170	3	66	116
B 0035943	11629	10	F		50	171	1	48	154
	Mean				60.2	168.4	3.7	55	98.9
	S.D.				13	15.9	1.9	9.9	34.1
Group 10									
B 0035836	11515	2	F		86	196	3	69	148
B 0035837	11516	2	F		101	168	5	96	48
B 0035838	11517	2	F		66	157	1	62	113
B 0035839	11518	2	F		83	168	4	78	127
B 0035840	11519	2	F		94	210	9	82	94
B 0035841	11520	2	F		88	162	4	61	179
B 0035842	11521	2	F		65	279	6	60	90
B 0035843	11523	2	F		105	157	4	81	149
B 0035844	11524	2	F		64	203	3	61	114
B 0035845	11525	2	F		89	243	4	82	133
B 0035846	11526	2	F		89	178	5	71	157
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035847	11527	2	F		69	137	1	50	293
B 0035848	11528	2	F		80	148	3	78	72
	Mean				83	185.1	4	71.6	132.1
	S.D.				13.6	40.5	2.1	12.6	60.5
Group 2									
B 0035849	11529	3	F		67	225	5	63	103
B 0035850	11530	3	F		67	166	5	60	113
B 0035851	11532	3	F		79	194	2	63	184
B 0035852	11533	3	F		74	184	4	67	88
B 0035853	11534	3	F		55	188	4	52	48
B 0035854	11535	3	F		68	163	1	56	201
B 0035855	11536	3	F		59	185	2	58	67
B 0035856	11537	3	F		60	144	5	55	109
B 0035857	11538	3	F		51	198	1	52	80
B 0035858	11539	3	F		56	210	5	44	89
B 0035859	11540	3	F		106	155	8	79	46
B 0035860	11541	3	F		77	172	6	60	110
B 0035861	11542	3	F		53	182	3	42	130
B 0035862	11543	3	F		72	189	3	69	58
	Mean				67.4	182.5	3.9	58.6	101.9
	S.D.				14.3	21.5	2	9.7	46.1
Group 3									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

ANILYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 Fax: 301-977-0433

Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/02/2001
Date Reported: 02/13/2001

Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035863	11544	4	F		69	163	2	44	211
B 0035864	11545	4	F		62	178	1	55	158
B 0035865	11546	4	F		79	186	2	59	139
B 0035866	11547	4	F		50	254	2	48	41
B 0035867	11549	4	F		73	191	1	72	84
B 0035868	11550	4	F		55	247	6	51	65
B 0035869	11551	4	F		82	180	8	75	71
B 0035870	11552	4	F		44	148	1	39	135
B 0035871	11553	4	F		89	211	5	68	169
B 0035872	11554	4	F		62	193	4	55	113
B 0035873	11555	4	F		68	184	5	62	78
B 0035874	11556	4	F		72	170	2	62	138
B 0035875	11557	4	F		64	171	2	44	190
	Mean				66.8	190.5	3.2	56.5	122.5
	S.D.				12.7	30.7	2.2	11.2	52.1
Group 4									
B 0035876	11558	5	F		91	154	1	66	189
B 0035877	11559	5	F		91	136	3	70	139
B 0035878	11561	5	F		88	159	7	79	84
B 0035879	11563	5	F		62	178	6	54	100
B 0035880	11564	5	F		59	189	7	49	101
B 0035881	11565	5	F		71	186	5	65	96
B 0035882	11567	5	F		75	220	4	55	147
B 0035883	11568	5	F		84	172	2	69	136
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035884	11569	5	F		108	189	9	90	133
B 0035885	11570	5	F		53	234	3	51	69
B 0035886	11571	5	F		112	174	8	78	169
	Mean				81.3	181	5	66	123.9
	S.D.				19.3	28	2.6	13	37.1
Group 5									
B 0035887	11572	6	F		56	194	6	52	53
B 0035888	11573	6	F		82	192	5	78	92
B 0035889	11574	6	F		49	175	6	45	60
B 0035890	11575	6	F		57	188	5	53	92
B 0035891	11576	6	F		57	137	6	50	89
B 0035892	11577	6	F		63	170	2	51	148
B 0035893	11578	6	F		52	177	3	44	110
B 0035894	11579	6	F		47	192	8	40	57
B 0035895	11580	6	F		46	157	1	43	103
B 0035896	11581	6	F		71	181	2	68	153
B 0035897	11582	6	F		37	164	2	37	46
B 0035898	11583	6	F		62	172	6	56	89
B 0035899	11584	6	F		54	143	2	53	63
B 0035900	11585	6	F		49	185	6	43	69
	Mean				55.9	173.4	4.3	50.9	87.4
	S.D.				11.3	17.9	2.2	11	33.1
Group 6									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Client No. 1028 Study: 418018 DAMS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035901	11586	7	F		88	194	11	79	86
B 0035902	11587	7	F		69	188	5	66	67
B 0035903	11588	7	F		68	182	4	60	135
B 0035904	11589	7	F		41	206	1	39	31
B 0035905	11590	7	F		57	173	7	47	104
B 0035906	11591	7	F		74	152	7	57	105
B 0035907	11592	7	F		52	192	2	51	75
B 0035908	11593	7	F		38	256	4	31	130
B 0035909	11594	7	F		63	248	6	58	54
B 0035910	11595	7	F		44	163	3	41	51
B 0035911	11596	7	F		67	181	4	65	43
B 0035912	11597	7	F		38	198	5	35	79
B 0035913	11598	7	F		69	203	6	63	87
B 0035914	11599	7	F		62	217	4	54	177
	Mean				59.3	196.6	4.9	53.3	87.4
	S.D.				15	29	2.5	13.5	40.1
Group 7									
B 0035915	11600	8	F		100	167	5	96	58
B 0035916	11601	8	F		81	180	3	71	220
B 0035917	11602	8	F		44	144	4	40	67
B 0035918	11603	8	F		67	216	5	64	104
B 0035919	11604	8	F		64	190	5	60	60
B 0035920	11605	8	F		61	200	3	57	81
B 0035921	11606	8	F		48	157	3	46	58
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035922	11607	8	F		79	212	9	70	56
B 0035923	11608	8	F		68	165	5	62	63
B 0035924	11609	8	F		74	172	5	70	90
	Mean				68.6	180.3	4.7	63.6	85.7
	S.D.				16.3	23.8	1.8	15.3	49.8
Group 8									
B 0035925	11611	9	F		59	182	6	55	118
B 0035926	11612	9	F		44	162	2	44	99
B 0035927	11613	9	F		72	182	4	69	48
B 0035928	11614	9	F		87	145	4	71	147
B 0035929	11615	9	F		77	187	7	62	167
B 0035930	11616	9	F		43	162	2	37	148
B 0035931	11617	9	F		61	154	4	58	83
B 0035932	11618	9	F		72	181	3	70	55
B 0035933	11619	9	F		46	176	2	46	66
	Mean				62.3	170.1	3.8	56.9	103.4
	S.D.				15.8	14.8	1.8	12.4	43.9
Group 9									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 104

Approved _____ Date 2/13/01

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BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

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Date Received: 02/02/2001
Date Reported: 02/13/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035728	11501/506	1			110	327	32	24	235
B 0035729	11502/507	1			111	312	35	29	212
B 0035730	11504	1			107	320	36	28	298
B 0035731	11508/503	1			111	314	30	25	241
B 0035732	11509/510	1			136	245	41	29	271
B 0035733	11512/511	1			115	148	47	42	134
B 0035734	11513/514	1			119	169	48	45	133
	Mean				115.6	262.1	38.4	31.7	217.7
	S.D.				9.8	76.1	7.1	8.3	63.7
Group 1									
B 0035735	11630/633	11			114	141	28	28	242
B 0035736	11632/636	11			115	267	37	38	207
B 0035737	11635/637	11			120	201	48	38	218
B 0035738	11638	11			125	201	32	30	266
B 0035739	11639/634	11			116	187	39	35	213
	Mean				118	199.4	36.8	33.8	229.2
	S.D.				4.5	45.1	7.6	4.6	24.5
Group 11									
B 0035740	11640/641	12			132	217	29	26	263
B 0035741	11646/644	12			118	184	30	37	276
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 125

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Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035742	11648/651	12			145	227	50	36	292
B 0035743	11650	12			95	233	23	31	163
B 0035744	11653/642	12			112	226	33	46	185
	Mean				120.4	217.4	33	35.2	235.8
	S.D.				19.1	19.5	10.2	7.5	57.9
Group 12									
B 0035745	11654	13			172	217	81	39	255
B 0035746	11656/655	13			102	222	30	32	235
	Mean				137	219.5	55.5	35.5	245
	S.D.				49.5	3.5	36.1	4.9	14.1
Group 13									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 125

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Date Collected:
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Date Reported: 02/13/2001

Client No. 1028 Study: 418018 PUPS LD5 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	T3,TOTAL NG/DL	T4,TOTAL UG/DL	TSH NG/ML	FREE T3 PG/ML	FREE T4 NG/DL
B 0035728	11501/506	1			38.73	0.60	0.88	0.00	0.11
B 0035729	11502/507	1			48.84	0.65	1.17	0.00	0.12
B 0035730	11504	1			45.82	0.97	1.27	0.00	0.12
B 0035731	11508/503	1			44.65	0.54	0.99	0.00	0.11
B 0035732	11509/510	1			46.29	0.67	1.10	0.00	0.11
B 0035733	11512/511	1			43.06	0.57	1.06	0.00	0.08
B 0035734	11513/514	1			38.90	0.32	0.91	0.00	0.07
	Mean				43.756	.617	1.054	0	.103
	S.D.				3.8	.194	.14	0	.02
Group 1									
B 0035735	11630/633	11			35.45	0.00	1.09	0.00	0.01
B 0035736	11632/636	11			33.85	0.05	1.07	0.00	0.02
B 0035737	11635/637	11			32.59	0.00	1.35	0.00	0.01
B 0035738	11638	11			47.34	0.00	0.79	0.00	0.01
B 0035739	11639/634	11			27.23	0.02	0.75	0.00	0.02
	Mean				35.292	.014	1.01	0	.014
	S.D.				7.409	.022	.246	0	.005
Group 11									
B 0035740	11640/641	12			35.15	0.00	1.91	0.02	0.01
B 0035741	11646/644	12			36.35	0.03	1.15	0.00	0.01
Reference Range					50 - 100	3 - 7	.57 - 3.41	0 - 0	1.9 - 2.5

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Accession No.	Spec. ID	Gp	Sex	Age	T3,TOTAL NG/DL	T4,TOTAL UG/DL	TSH NG/ML	FREE T3 PG/ML	FREE T4 NG/DL
B 0035742	11648/651	12			33.69	0.00	1.62	0.00	0.01
B 0035743	11650	12			18.76	0.00	1.48	0.00	0.00
B 0035744	11653/642	12			29.95	0.00	1.09	0.00	0.01
	Mean				30.78	.006	1.45	.004	.008
	S.D.				7.137	.013	.339	.009	.004
Group 12									
B 0035745	11654	13			18.74	0.00		0.00	0.00
B 0035746	11656/655	13			39.42	0.00	1.50	0.00	0.02
	Mean				29.08	0	1.5	0	.01
	S.D.				14.623	0	0	0	.014
Group 13									
Reference Range					50 - 100	3 - 7	.57 - 3.41	0 - 0	1.9 - 2.5

Approved ---------- Date 2/13/01

ANI LYTICS, INC.
200 GIRARD STREET
SUITE 200
GAITHERSBURG, MD 20877
(301) 921-0168 or (FAX) 977-0433

CLIENT:	ARGUS RESEARCH LABORATORIES, INC	DATE SPEC. COLLECTED:	
SPECIMEN ID:	11654	DATE SPEC. RECEIVED:	02/02/2001
SPECIES:	RAT	DATE REPORTED:	02/13/2001
STUDY:	418018 PUPS LD5	AGE:	
GROUP:	13	SEX:	
ACCESSION:	B 0035745		

PROFILE/TEST	RESULTS	UNITS	REFERENCE RANGE
ARGUS CHEM PROFILE			
CHOLESTEROL	172	MG/DL	48 - 96
GLUCOSE	217	MG/DL	74 - 319
LDL-DIRECT	81	MG/DL	
HDL-DIRECT	39	MG/DL	20 - 80
TRIGLYCERIDE	255	MG/DL	3 - 125
TRIIODOTHYRONINE	18.74	NG/DL	50 - 100
THYROXINE	0.00	UG/DL	3.0 - 7.0
TSH, RAT	QNS	NG/ML	0.57 - 3.41
T3, FREE	0.00	PG/ML	
FREE T4	0.00	NG/DL	1.9 - 2.5

Laboratory Director: Saroj R. Das, Ph.D.

FINAL REPORT

2/13/01

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B 0035782	11620/626	10			115	173	37	48	135
B 0035783	11621/622	10			108	255	34	43	169
B 0035784	11623	10			106	290	28	27	258
B 0035785	11624/629	10			108	177	32	31	298
B 0035786	11625/628	10			117	267	36	47	170
	Mean				110.8	232.4	33.4	39.2	206
	S.D.				4.9	53.9	3.6	9.6	68.7
Group 10									
B 0035747	11515/524	2			111	213	42	41	158
B 0035748	11517/520	2			111	357	31	31	225
B 0035749	11519/518	2			110	238	30	44	173
B 0035750	11521/516	2			121	327	37	30	294
B 0035751	11523/527	2			117	152	49	50	152
B 0035752	11525/528	2			109	244	28	31	188
B 0035753	11526	2			106	375	36	29	202
	Mean				112.1	272.3	36.1	36.6	198.9
	S.D.				5.1	82.3	7.4	8.3	49
Group 2									
B 0035754	11536/537	3			149	217	53	32	247
B 0035755	11538/534	3			174	310	75	37	329
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 125

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Accession No.	Spec. ID	Gp	Sex	Age	CHOLEST MG/DL	GLUCOSE MG/DL	LDL-DIR MG/DL	HDL-DIR MG/DL	TRIG MG/DL
B 0035756	11540/530	3			145	284	40	32	234
B 0035757	11543/529	3			130	238	32	28	370
	Mean				149.5	262.3	50	32.3	295
	S.D.				18.3	42.4	18.8	3.7	65.3
Group 3									
B 0035758	11558/569	5			122	325	24	24	289
B 0035759	11559/570	5			102	288	41	39	145
B 0035760	11561/568	5			111	253	37	32	295
B 0035761	11563/564	5			119	237	21	22	370
B 0035762	11565/567	5			118	223	41	39	178
B 0035763	11571	5			129	230	44	40	321
	Mean				116.8	259.3	34.7	32.7	266.3
	S.D.				9.3	39.6	9.7	8	86.7
Group 5									
B 0035764	11574/575	6			131	227	47	40	193
B 0035765	11576/578	6			117	257	40	44	147
B 0035766	11582	6			125	303	37	37	286
B 0035767	11583/580	6			132	243	40	38	243
B 0035768	11584/579	6			116	185	32	36	225
	Mean				124.2	243	39.2	39	218.8
	S.D.				7.5	43.1	5.4	3.2	52.3
Group 6									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 125

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B 0035769	11592	7			130	255	42	28	160
B 0035770	11593	7			121	211	46	44	160
B 0035771	11597	7			121	230	58	51	98
	Mean				124	232	48.7	41	139.3
	S.D.				5.2	22.1	8.3	11.8	35.8
Group 7									
B 0035772	11600/608	8			106	307	35	33	249
B 0035773	11602/609	8			97	244	18	33	228
B 0035774	11603/604	8			114	286	31	31	195
B 0035775	11606/601	8			104	179	34	31	248
B 0035776	11607/605	8			109	242	41	34	225
	Mean				106	251.6	31.8	32.4	229
	S.D.				6.3	49.2	8.5	1.3	22
Group 8									
B 0035777	11611	9			100	194	28	46	121
B 0035778	11612/613	9			120	173	37	46	120
B 0035779	11614/616	9			108	284	33	30	233
B 0035780	11617/619	9			106	233	26	45	178
B 0035781	11618/615	9			106	210	33	31	276
	Mean				108	218.8	31.4	39.6	185.6
	S.D.				7.3	42.6	4.4	8.3	68.8
Group 9									
Reference Range					48 - 96	74 - 319	0 - 0	20 - 80	3 - 125

Approved _____ Date 2/13/01

ANALYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 800-237-2815

QA AUDIT REPORT

The report listed below was reviewed for compliance with the FDA Good Laboratory Practices and with EPA Good Laboratory Practices. The final report and all associated raw data were reviewed for accuracy and consistency and the findings were reported to management.

The methods used were the methods described and the report accurately reflects the data. Therefore, these studies were done in compliance with the FDA and EPA Good Laboratory Practices.

Franklin B. Newman
QA Auditor

SPONSOR: ARGUS RESEARCH LABS **STUDY:** H18018

REPORT TYPE:	AUDIT DATE:	REPORT TO MANAGEMENT:	AUDIT #:
CHEM, T3, T4, TSH FREE T3, FREE T4	2-15-01	2-15-01	01-098

3/8/01
DATE SUBMITTED TO CLIENT
TO DR Raymond Yack

MANAGEMENT 2/15/01

ANALYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 800-237-2815

QA AUDIT REPORT

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The methods used were the methods described and the report accurately reflects the data. Therefore, these studies were done in compliance with the FDA and EPA Good Laboratory Practices.

Franklin B. Newman
QA Auditor

SPONSOR: ARGUS RESEARCH LABS **STUDY:** 4/8018

REPORT TYPE:	AUDIT DATE:	REPORT TO MANAGEMENT:	AUDIT #:
CHOL	2-15-01	2-15-01	01-121

3/8/01
DATE SUBMITTED TO CLIENT

MANAGEMENT 2/15/01

TO DR RAYMOND YORK

ANILYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 Fax: 301-977-0433

Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/07/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F0 C/S GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037155	10901	1	F		0.63	0.56	2.83	7.97
B 0037156	10902	1	F		0.85	0.65	3.49	7.44
B 0037157	10903	1	F		0.53	0.50	2.93	7.09
B 0037158	10904	1	F		0.00	0.28	2.43	6.03
B 0037159	10905	1	F		0.65	0.54	2.65	6.76
B 0037160	10907	1	F		0.34	0.60	3.50	11.47
B 0037161	10908	1	F		0.49	0.58	3.07	8.72
B 0037162	10910	1	F		0.80	0.63	3.16	8.27
	Mean				.536	.543	3.008	7.969
	S.D.				.272	.116	.378	1.656
Group 1								
B 0037211	11040	12	F		1.03	0.68	2.38	6.99
B 0037212	11044	12	F		0.78	0.58	2.45	8.63
B 0037213	11045	12	F		0.35	0.37	2.94	7.26
B 0037214	11046	12	F		0.68	0.58	2.66	8.38
B 0037215	11047	12	F		1.09	0.68	2.87	8.59
B 0037216	11050	12	F		0.67	0.56	2.49	7.38
B 0037217	11051	12	F		0.55	0.49	2.77	6.90
B 0037218	11052	12	F		0.69	0.54	2.44	7.62
	Mean				.73	.56	2.625	7.719
	S.D.				.241	.101	.215	.713
Group 12								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037219	11053	13	F		0.73	0.58	2.68	6.83
B 0037220	11054	13	F		0.78	0.60	2.68	7.87
B 0037221	11056	13	F		0.70	0.52	2.13	7.23
B 0037222	11058	13	F		0.58	0.48	2.68	6.70
B 0037223	11060	13	F		0.45	0.40	1.99	5.15
B 0037224	11062	13	F		0.66	0.52	2.37	6.55
B 0037225	11063	13	F		0.45	0.50	2.45	5.83
B 0037226	11066	13	F		0.56	0.48	2.36	6.67
	Mean				.614	.51	2.418	6.604
	S.D.				.124	.062	.262	.826
Group 13								
B 0037163	10915	2	F		0.80	0.59	3.01	7.98
B 0037164	10916	2	F		0.55	0.52	2.81	8.59
B 0037165	10917	2	F		0.38	0.53	3.65	11.86
B 0037166	10918	2	F		0.00	0.35	2.58	8.23
B 0037167	10919	2	F		0.60	0.55	3.33	9.44
B 0037168	10920	2	F		0.55	0.59	3.15	10.33
B 0037169	10925	2	F		0.47	0.49	2.81	10.37
B 0037170	10928	2	F		0.28	0.50	2.89	11.36
	Mean				.454	.515	3.029	9.77
	S.D.				.24	.076	.34	1.447
Group 2								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037171	10930	3	F		0.80	0.59	2.58	7.02
B 0037172	10931	3	F		0.92	0.63	2.62	7.90
B 0037173	10932	3	F		0.82	0.63	2.54	8.33
B 0037174	10933	3	F		0.80	0.56	2.43	6.65
B 0037175	10934	3	F		0.83	0.65	2.29	7.15
B 0037176	10935	3	F		0.96	0.63	2.68	7.52
B 0037177	10937	3	F		0.87	0.60	2.60	7.66
B 0037178	10940	3	F		0.71	0.56	2.51	7.89
	Mean				.839	.606	2.531	7.515
	S.D.				.078	.034	.123	.548
Group 3								
B 0037179	10945	4	F		0.71	0.62	3.01	9.91
B 0037180	10946	4	F		0.68	0.56	2.10	6.67
B 0037181	10947	4	F		0.75	0.55	2.30	6.69
B 0037182	10949	4	F		0.71	0.54	2.51	5.62
B 0037183	10950	4	F		0.75	0.52	2.06	6.17
B 0037184	10951	4	F		1.04	0.68	2.28	7.98
B 0037185	10953	4	F		0.69	0.53	2.43	6.91
B 0037186	10954	4	F		0.73	0.56	2.22	6.30
	Mean				.758	.57	2.364	7.031
	S.D.				.117	.054	.302	1.348
Group 4								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037187	10958	5	F		0.66	0.66	3.07	10.90
B 0037188	10959	5	F		0.12	0.57	3.32	10.77
B 0037189	10960	5	F		0.01	0.43	3.11	9.81
B 0037190	10961	5	F		0.51	0.62	2.90	8.73
B 0037191	10962	5	F		0.25	0.47	2.70	8.43
B 0037192	10963	5	F		0.00	0.34	3.22	8.46
B 0037193	10964	5	F		0.00	0.38	2.41	10.17
B 0037194	10965	5	F		0.61	0.65	3.12	9.23
	Mean				.27	.515	2.981	9.563
	S.D.				.283	.126	.299	.998
Group 5								
B 0037195	10972	6	F		0.71	0.69	2.90	8.51
B 0037196	10974	6	F		0.49	0.57	2.88	7.47
B 0037197	10975	6	F		0.97	0.64	2.19	6.32
B 0037198	10976	6	F		1.07	0.74	3.13	8.27
B 0037199	10978	6	F		0.46	0.42	2.66	7.59
B 0037200	10980	6	F		0.92	0.65	2.56	7.88
B 0037201	10981	6	F		0.93	0.69	2.90	8.42
B 0037202	10982	6	F		0.90	0.61	2.56	7.35
	Mean				.806	.626	2.723	7.726
	S.D.				.228	.098	.291	.719
Group 6								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037203	10985	7	F		0.46	0.45	2.75	6.58
B 0037204	10987	7	F		0.78	0.59	2.39	7.69
B 0037205	10988	7	F		0.81	0.63	2.74	7.48
B 0037206	10989	7	F		1.03	0.69	2.47	7.30
B 0037207	10990	7	F		0.65	0.51	2.83	7.45
B 0037208	10991	7	F		0.75	0.57	3.01	7.82
B 0037209	10992	7	F		0.92	0.69	2.75	8.98
B 0037210	10993	7	F		0.92	0.69	2.52	7.00
	Mean				.79	.603	2.683	7.538
	S.D.				.178	.09	.207	.703
Group 7								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

Approved _____ Date 10/10/01

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Client No. 1028 Study: 418018 F0 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036757	10906	1	F		0.00	0.17	3.26	9.43
B 0036758	10909	1	F		0.00	0.38	5.56	12.82
B 0036759	10911	1	F		0.06	0.31	3.06	10.39
B 0036760	10912	1	F		0.00	0.18	3.97	14.78
B 0036761	10913	1	F		0.00	0.26	3.72	8.18
B 0036762	10914	1	F		0.00	0.24	5.60	16.39
	Mean				.01	.257	4.195	11.998
	S.D.				.024	.08	1.12	3.208
Group 1								
B 0036813	11019	10	F		0.00	0.18	2.85	9.53
B 0036814	11021	10	F		0.00	0.33	2.78	8.38
B 0036815	11023	10	F		0.00	0.21	2.90	7.51
B 0036816	11024	10	F		0.00	0.22	2.85	7.94
B 0036817	11025	10	F		0.02	0.37	3.00	11.05
B 0036818	11026	10	F		0.00	0.31	2.88	9.13
B 0036819	11027	10	F		0.00	0.36	2.99	10.12
B 0036820	11028	10	F		0.00	0.24	2.57	7.56
B 0036839	11020	10	F		0.00	0.34	3.35	9.96
	Mean				.002	.284	2.908	9.02
	S.D.				.007	.072	.209	1.249
Group 10								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036821	11029	11	F		0.15	0.41	2.73	8.47
B 0036822	11031	11	F		0.31	0.49	3.10	10.25
B 0036823	11032	11	F		0.33	0.48	4.24	19.83
B 0036824	11033	11	F		0.01	0.40	3.55	14.02
B 0036825	11034	11	F		0.00	0.31	3.91	15.46
B 0036826	11036	11	F		0.00	0.28	2.76	9.13
B 0036827	11037	11	F		0.00	0.28	2.77	7.62
B 0036828	11038	11	F		0.08	0.37	2.91	7.89
B 0036840	11035	11	F		0.10	0.35	3.37	9.96
	Mean				.109	.374	3.26	11.403
	S.D.				.131	.078	.548	4.156
Group 11								
B 0036829	11041	12	F		0.00	0.42	3.39	13.06
B 0036830	11049	12	F		0.15	0.44	3.39	14.85
B 0036831	11042	12	F		0.00	0.25	3.45	16.06
B 0036832	11048	12	F		0.00	0.32	4.26	15.60
	Mean				.038	.358	3.623	14.893
	S.D.				.075	.089	.426	1.32
Group 12								
B 0036833	11059	13	F		0.19	0.45	3.26	9.58
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036834	11055	13	F		0.00	0.33	6.52	22.98
B 0036835	11057	13	F		0.00	0.26	3.50	15.80
B 0036836	11061	13	F		0.00	0.22	4.11	19.26
B 0036837	11064	13	F		0.13	0.47	3.38	11.96
B 0036838	11065	13	F		0.00	0.45	3.79	15.61
	Mean				.053	.363	4.093	15.865
	S.D.				.085	.108	1.228	4.837
Group 13								
B 0036763	10921	2	F		0.11	0.37	3.59	9.14
B 0036764	10922	2	F		0.00	0.27	4.31	8.94
B 0036765	10923	2	F		0.14	0.51	4.13	10.76
B 0036766	10924	2	F		0.00	0.13	2.91	11.73
B 0036767	10927	2	F		0.00	0.29	3.84	10.75
	Mean				.05	.314	3.756	10.264
	S.D.				.069	.14	.547	1.188
Group 2								
B 0036768	10929	3	F		0.23	0.53	3.34	8.09
B 0036769	10938	3	F		0.00	0.29	2.78	6.59
B 0036770	10941	3	F		0.00	0.41	3.91	10.62
B 0036771	10942	3	F		0.16	0.44	3.07	8.54
	Mean				.098	.418	3.275	8.46
	S.D.				.116	.099	.481	1.664
Group 3								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036772	10943	4	F		0.00	0.26	2.95	18.57
B 0036773	10944	4	F		0.00	0.37	6.56	14.80
B 0036774	10948	4	F		0.00	0.42	3.51	15.15
B 0036775	10952	4	F		0.13	0.48	5.52	13.06
B 0036776	10955	4	F		0.00	0.23	2.89	9.21
B 0036777	10956	4	F		0.00	0.31	3.27	10.87
	Mean				.022	.345	4.117	13.61
	S.D.				.053	.096	1.542	3.333
Group 4								
B 0036778	10957	5	F		0.00	0.30	3.08	9.80
B 0036779	10966	5	F		0.02	0.35	2.89	7.95
B 0036780	10967	5	F		0.00	0.21	2.95	10.65
B 0036781	10968	5	F		0.00	0.27	3.14	7.51
B 0036782	10969	5	F		0.00	0.28	3.35	8.80
B 0036783	10970	5	F		0.00	0.27	2.67	9.03
	Mean				.003	.28	3.013	8.957
	S.D.				.008	.046	.233	1.159
Group 5								
B 0036784	10971	6	F		0.00	0.28	4.16	11.02
B 0036785	10973	6	F		0.00	0.27	3.42	18.88
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036786	10977	6	F		0.00	0.42	2.81	9.54
B 0036787	10983	6	F		0.01	0.44	3.13	8.10
B 0036788	10979	6	F		0.16	0.45	2.90	9.61
B 0036789	10984	6	F		0.00	0.23	2.83	13.41
	Mean				.028	.348	3.208	11.76
	S.D.				.065	.099	.52	3.922
Group 6								
B 0036790	10995	7	F		0.00	0.37	3.46	10.85
B 0036791	10997	7	F		0.00	0.26	2.72	6.25
B 0036792	10986	7	F		0.00	0.29	3.76	12.58
B 0036793	10994	7	F		0.00	0.36	3.25	18.69
B 0036794	10996	7	F		0.00	0.22	2.72	9.35
	Mean				0	.3	3.182	11.544
	S.D.				0	.064	.459	4.622
Group 7								
B 0036795	10999	8	F		0.00	0.32	3.04	8.57
B 0036796	11000	8	F		0.00	0.31	3.34	7.55
B 0036797	11001	8	F		0.00	0.34	3.23	10.31
B 0036798	11002	8	F		0.00	0.35	3.02	8.00
B 0036799	11003	8	F		0.00	0.32	3.00	9.66
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036800	11004	8	F		0.00	0.27	3.21	10.48
B 0036801	11005	8	F		0.00	0.34	3.08	11.49
B 0036802	11006	8	F		0.00	0.25	3.21	7.95
B 0036803	11007	8	F		0.00	0.23	3.35	7.79
B 0036804	11008	8	F		0.15	0.47	3.45	8.06
	Mean				.015	.32	3.193	8.986
	S.D.				.047	.066	.155	1.386
Group 8								
B 0036805	11009	9	F		0.00	0.29	2.86	6.53
B 0036806	11010	9	F		0.22	0.39	2.96	7.32
B 0036807	11011	9	F		0.20	0.46	3.38	9.65
B 0036808	11012	9	F		0.00	0.33	2.99	7.32
B 0036809	11013	9	F		0.13	0.40	2.90	7.98
B 0036810	11015	9	F		0.27	0.43	3.07	8.30
B 0036811	11016	9	F		0.00	0.19	2.95	9.19
B 0036812	11018	9	F		0.00	0.27	2.86	7.82
	Mean				.103	.345	2.996	8.014
	S.D.				.116	.091	.17	1.024
Group 9								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

Approved ---------- Date 10/30/01

ANILYTICS INCORPORATED
200 Girard Street, Suite 200, Gaithersburg, MD 20877
301-921-0168 Fax: 301-977-0433

Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/07/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036600	11501	1	F		0.00	0.09	1.43	5.45
B 0036601	11502	1	F		0.00	0.11	1.66	6.19
B 0036602	11503	1	F		0.00	0.11	1.79	5.49
B 0036603	11504	1	F		0.00	0.07	1.76	6.72
B 0036604	11505	1	F		0.00	0.08	1.81	6.36
B 0036605	11506	1	F		0.00	0.08	1.75	5.79
B 0036606	11507	1	F		0.00	0.05	1.63	8.69
B 0036607	11508	1	F		0.00	0.09	1.57	5.08
B 0036608	11509	1	F		0.00	0.06	1.68	5.85
B 0036609	11510	1	F		0.00	0.08	1.71	7.33
B 0036610	11511	1	F		0.00	0.09	1.75	6.38
B 0036611	11512	1	F		0.00	0.08	1.60	6.07
B 0036612	11513	1	F		0.00	0.09	1.93	8.51
B 0036613	11514	1	F		0.00	0.10	1.95	5.74
	Mean				0	.084	1.716	6.404
	S.D.				0	.017	.138	1.088
Group 1								
B 0036712	11620	10	F		0.00	0.14	1.89	8.20
B 0036713	11621	10	F		0.00	0.10	1.99	6.76
B 0036714	11622	10	F		0.00	0.14	2.46	22.27
B 0036715	11623	10	F		0.00	0.17	2.04	6.65
B 0036716	11624	10	F		0.00	0.09	1.78	7.93
B 0036717	11625	10	F		0.00	0.11	1.90	6.88
B 0036718	11626	10	F		0.00	0.12	2.11	6.29
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036719	11627	10	F		0.00	0.16	3.30	59.25
B 0036720	11628	10	F		0.00	0.15	1.83	7.40
B 0036721	11629	10	F		0.00	0.15	1.86	10.48
	Mean				0	.133	2.116	14.211
	S.D.				0	.027	.459	16.528
Group 10								
B 0036722	11630	11	F		0.00	0.14	1.79	8.04
B 0036723	11632	11	F		0.00	0.11	1.73	9.16
B 0036724	11633	11	F		0.00	0.18	1.78	7.66
B 0036725	11634	11	F		0.00	0.09	1.78	7.91
B 0036726	11635	11	F		0.00	0.14	1.78	9.92
B 0036727	11636	11	F		0.00	0.17	1.91	7.01
B 0036728	11637	11	F		0.00	0.13	1.81	7.81
B 0036729	11638	11	F		0.00	0.12	1.78	5.88
B 0036730	11639	11	F		0.00	0.14	2.05	9.00
	Mean				0	.136	1.823	8.043
	S.D.				0	.028	.098	1.207
Group 11								
B 0036731	11640	12	F		0.00	0.13	1.69	8.68
B 0036732	11641	12	F		0.00	0.12	1.76	12.72
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036733	11642	12	F		0.00	0.10	1.92	8.11
B 0036734	11643	12	F		0.00	0.16	2.10	8.94
B 0036735	11644	12	F		0.00	0.13	1.83	7.96
B 0036736	11645	12	F		0.00	0.20	2.27	20.75
B 0036737	11646	12	F		0.00	0.17	2.20	10.80
B 0036738	11647	12	F		0.05	0.29	3.59	29.18
B 0036739	11648	12	F		0.00	0.15	2.22	7.64
B 0036740	11649	12	F		0.00	0.28	3.14	29.88
B 0036741	11650	12	F		0.00	0.15	2.20	7.64
B 0036742	11651	12	F		0.00	0.15	1.88	8.43
B 0036743	11653	12	F		0.00	0.16	2.36	6.95
	Mean				.004	.168	2.243	12.898
	S.D.				.014	.057	.548	8.221
Group 12								
B 0036744	11654	13	F		0.03	0.11	2.26	10.47
B 0036745	11655	13	F		0.00	0.15	1.94	10.79
B 0036746	11656	13	F		0.00	0.11	1.89	8.29
B 0036747	11657	13	F		0.00	0.18	2.98	19.04
B 0036748	11658	13	F		0.08	0.18	2.64	13.78
B 0036749	11659	13	F		0.00	0.15	2.72	19.86
B 0036750	11660	13	F		0.00	0.16	2.61	19.46
B 0036751	11661	13	F		0.00	0.16	2.09	8.88
B 0036752	11662	13	F		0.00	0.14	2.09	28.49
B 0036753	11663	13	F		0.00	0.18	2.65	17.65
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036754	11664	13	F		0.00	0.11	2.01	16.44
B 0036755	11665	13	F		0.08	0.23	2.59	21.77
B 0036756	11667	13	F		0.00	0.19	2.42	14.12
	Mean				.015	.158	2.376	16.08
	S.D.				.03	.035	.35	5.806
Group 13								
B 0036614	11515	2	F		0.00	0.12	1.76	6.38
B 0036615	11516	2	F		0.00	0.09	1.73	5.08
B 0036616	11517	2	F		0.00	0.07	1.31	6.11
B 0036617	11518	2	F		0.00	0.08	1.91	6.59
B 0036618	11519	2	F		0.00	0.12	1.77	6.06
B 0036619	11520	2	F		0.00	0.11	1.56	6.35
B 0036620	11521	2	F		0.00	0.12	2.13	9.30
B 0036621	11523	2	F		0.00	0.10	1.57	6.28
B 0036622	11524	2	F		0.00	0.11	1.49	6.35
B 0036623	11525	2	F		0.00	0.09	1.92	6.89
B 0036624	11526	2	F		0.00	0.08	1.80	5.56
B 0036625	11527	2	F		0.00	0.08	1.63	7.44
B 0036626	11528	2	F		0.00	0.09	1.66	5.48
	Mean				0	.097	1.711	6.452
	S.D.				0	.018	.211	1.051
Group 2								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036627	11529	3	F		0.00	0.16	1.79	5.60
B 0036628	11530	3	F		0.00	0.14	1.75	6.28
B 0036629	11532	3	F		0.00	0.13	2.09	7.69
B 0036630	11533	3	F		0.00	0.12	2.23	10.26
B 0036631	11534	3	F		0.00	0.10	1.81	10.89
B 0036632	11535	3	F		0.00	0.13	1.97	8.99
B 0036633	11536	3	F		0.00	0.11	1.97	9.04
B 0036634	11537	3	F		0.00	0.13	1.60	6.01
B 0036635	11538	3	F		0.00	0.15	2.03	8.44
B 0036636	11539	3	F		0.02	0.11	2.10	10.65
B 0036637	11540	3	F		0.00	0.12	2.38	28.91
B 0036638	11541	3	F		0.00	0.12	2.39	24.63
B 0036639	11542	3	F		0.01	0.06	1.41	8.05
B 0036640	11543	3	F		0.00	0.15	1.86	6.86
	Mean				.002	.124	1.956	10.879
	S.D.				.006	.025	.279	6.987
Group 3								
B 0036641	11544	4	F		0.00	0.08	1.84	16.82
B 0036642	11545	4	F		0.04	0.09	2.17	30.38
B 0036643	11546	4	F		0.00	0.04	2.02	16.20
B 0036644	11547	4	F		0.01	0.14	2.29	18.27
B 0036645	11549	4	F		0.00	0.08	2.09	21.34
B 0036646	11550	4	F		0.00	0.15	2.35	12.24
B 0036647	11551	4	F		0.00	0.16	2.03	10.45
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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(215) 443-8710

Date Collected:
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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036648	11552	4	F		0.03	0.14	2.05	10.22
B 0036649	11553	4	F		0.00	0.11	2.05	10.47
B 0036650	11554	4	F		0.00	0.06	1.77	12.68
B 0036651	11555	4	F		0.00	0.12	1.92	12.01
B 0036652	11556	4	F		0.00	0.12	2.02	24.42
B 0036653	11557	4	F		0.00	0.08	1.92	11.83
	Mean				.006	.105	2.04	15.948
	S.D.				.013	.037	.164	6.227
Group 4								
B 0036654	11558	5	F		0.00	0.11	1.74	6.38
B 0036655	11559	5	F		0.00	0.12	1.66	5.20
B 0036656	11561	5	F		0.00	0.09	1.44	6.22
B 0036657	11563	5	F		0.00	0.10	1.84	9.49
B 0036658	11564	5	F		0.00	0.10	1.86	7.20
B 0036659	11565	5	F		0.00	0.08	1.69	5.80
B 0036660	11567	5	F		0.00	0.12	1.88	9.37
B 0036661	11568	5	F		0.00	0.07	1.45	6.94
B 0036662	11569	5	F		0.00	0.11	1.59	6.64
B 0036663	11570	5	F		0.00	0.07	1.56	5.55
B 0036664	11571	5	F		0.00	0.07	1.35	5.96
	Mean				0	.095	1.642	6.795
	S.D.				0	.02	.181	1.428
Group 5								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036665	11572	6	F		0.00	0.14	2.47	24.06
B 0036666	11573	6	F		0.00	0.11	1.92	11.41
B 0036667	11574	6	F		0.00	0.16	1.95	8.96
B 0036668	11575	6	F		0.00	0.14	1.69	6.68
B 0036669	11576	6	F		0.00	0.12	1.88	6.78
B 0036670	11577	6	F		0.00	0.11	2.08	9.18
B 0036671	11578	6	F		0.00	0.15	1.95	9.91
B 0036672	11579	6	F		0.00	0.16	2.19	14.21
B 0036673	11580	6	F		0.00	0.12	1.77	4.78
B 0036674	11581	6	F		0.00	0.13	1.80	6.86
B 0036675	11582	6	F		0.00	0.08	1.80	9.79
B 0036676	11583	6	F		0.00	0.15	1.67	5.57
B 0036677	11584	6	F		0.00	0.13	1.67	5.31
B 0036678	11585	6	F		0.00	0.18	2.02	8.45
	Mean				0	.134	1.919	9.425
	S.D.				0	.026	.222	4.939
Group 6								
B 0036679	11586	7	F		0.00	0.08	2.86	23.94
B 0036680	11587	7	F		0.00	0.14	2.05	14.70
B 0036681	11588	7	F		0.00	0.14	2.07	8.33
B 0036682	11589	7	F		0.00	0.18	2.24	18.17
B 0036683	11590	7	F		0.00	0.14	1.96	7.11
B 0036684	11591	7	F		0.00	0.13	1.88	7.80
B 0036685	11592	7	F		0.00	0.18	1.88	13.17
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036686	11593	7	F		0.00	0.14	1.72	8.00
B 0036687	11594	7	F		0.00	0.16	1.80	8.52
B 0036688	11595	7	F		0.00	0.14	2.30	8.05
B 0036689	11596	7	F		0.00	0.14	2.07	9.62
B 0036690	11597	7	F		0.00	0.19	1.88	9.26
B 0036691	11598	7	F		0.00	0.22	2.14	7.88
B 0036692	11599	7	F		0.00	0.16	1.84	5.99
	Mean				0	.153	2.049	10.753
	S.D.				0	.033	.287	5.057
Group 7								
B 0036693	11600	8	F		0.00	0.14	1.70	4.77
B 0036694	11601	8	F		0.00	0.11	1.90	6.46
B 0036695	11602	8	F		0.00	0.10	2.05	7.21
B 0036696	11603	8	F		0.00	0.13	1.81	8.74
B 0036697	11604	8	F		0.00	0.12	2.02	9.98
B 0036698	11605	8	F		0.00	0.09	2.04	10.15
B 0036699	11606	8	F		0.00	0.12	2.00	7.80
B 0036700	11607	8	F		0.02	0.11	1.76	9.19
B 0036701	11608	8	F		0.00	0.11	2.05	5.41
B 0036702	11609	8	F		0.00	0.12	1.84	8.55
	Mean				.002	.115	1.917	7.826
	S.D.				.006	.014	.132	1.846
Group 8								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F0 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036703	11611	9	F		0.00	0.11	2.06	11.98
B 0036704	11612	9	F		0.00	0.13	1.73	6.11
B 0036705	11613	9	F		0.00	0.13	2.36	16.42
B 0036706	11614	9	F		0.00	0.11	1.65	7.18
B 0036707	11615	9	F		0.00	0.14	1.97	8.63
B 0036708	11616	9	F		0.00	0.13	1.76	6.32
B 0036709	11617	9	F		0.00	0.13	1.73	9.22
B 0036710	11618	9	F		0.00	0.11	2.17	9.19
B 0036711	11619	9	F		0.00	0.10	1.77	7.77
	Mean				0	.121	1.911	9.202
	S.D.				0	.014	.243	3.243

Group 9

Reference Range	0 - 0	0 - 0	0 - 0	0 - 0

Approved ---------- Date 10/10/01

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Date Reported: 10/30/2001

Client No. 1028 Study: 418018 F1 C/S GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036958	10901	1			0.00	0.02	3.26	5.04
B 0036959	10902	1			0.00	0.00	3.76	5.92
B 0036960	10903	1			0.00	0.01	2.89	3.94
B 0036961	10904	1			0.00	0.01	3.88	5.35
B 0036962	10905	1			0.00	0.02	3.71	5.05
B 0036963	10907	1			0.00	0.00	3.59	4.99
B 0036964	10908	1			0.00	0.02	3.10	4.94
B 0036965	10910	1			0.00	0.00	2.99	4.15
	Mean				0	.01	3.398	4.923
	S.D.				0	.009	.384	.63
Group 1								
B 0037014	11040	12			0.00	0.02	3.28	5.06
B 0037015	11044	12			0.00	0.02	3.21	5.13
B 0037016	11045	12			0.00	0.01	3.70	6.04
B 0037017	11046	12			0.00	0.03	3.18	5.95
B 0037018	11047	12			0.00	0.03	4.32	7.90
B 0037019	11050	12			0.00	0.02	3.26	5.18
B 0037020	11051	12			0.00	0.02	3.32	6.16
B 0037021	11052	12			0.00	0.02	3.36	5.48
	Mean				0	.021	3.454	5.863
	S.D.				0	.006	.385	.931
Group 12								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/07/2001
Date Reported: 10/30/2001

Client No. 1028 Study: 418018 F1 C/S GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037022	11053	13			0.00	0.03	3.18	5.82
B 0037023	11054	13			0.00	0.01	3.61	5.99
B 0037024	11056	13			0.00	0.03	3.30	5.21
B 0037025	11058	13			0.00	0.02	3.23	6.37
B 0037026	11060	13			0.00	0.00	3.43	5.91
B 0037027	11062	13			0.00	0.05	3.71	6.92
B 0037028	11063	13			0.00	0.03	2.77	4.27
B 0037029	11066	13			0.00	0.02	2.80	4.48
	Mean				0	.024	3.254	5.621
	S.D.				0	.015	.341	.911
Group 13								
B 0036966	10915	2			0.00	0.00	2.97	4.79
B 0036967	10916	2			0.00	0.01	3.45	5.04
B 0036968	10917	2			0.00	0.00	3.60	4.96
B 0036969	10918	2			0.00	0.02	3.04	4.42
B 0036970	10919	2			0.00	0.02	4.44	8.40
B 0036971	10920	2			0.00	0.00	4.01	4.99
B 0036972	10925	2			0.00	0.00	3.89	5.60
B 0036973	10928	2			0.00	0.00	3.67	5.24
	Mean				0	.006	3.634	5.43
	S.D.				0	.009	.491	1.247
Group 2								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 C/S GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036974	10930	3			0.00	0.03	5.09	9.06
B 0036975	10931	3			0.00	0.05	4.88	8.96
B 0036976	10932	3			0.00	0.07	4.69	8.91
B 0036977	10933	3			0.00	0.03	4.31	7.46
B 0036978	10934	3			0.00	0.05	5.10	9.06
B 0036979	10935	3			0.00	0.04	4.10	7.01
B 0036980	10937	3			0.00	0.01	4.32	6.26
B 0036981	10940	3			0.00	0.02	3.81	6.90
	Mean				0	.038	4.538	7.953
	S.D.				0	.019	.475	1.164
Group 3								
B 0036982	10945	4			0.00	0.05	5.70	10.53
B 0036983	10946	4			0.00	0.03	4.90	9.96
B 0036984	10947	4			0.00	0.03	5.70	10.06
B 0036985	10949	4			0.00	0.01	5.00	9.71
B 0036986	10950	4			0.00	0.00	4.95	8.50
B 0036987	10951	4			0.00	0.02	4.48	7.39
B 0036988	10953	4			0.00	0.02	3.90	6.25
B 0036989	10954	4			0.00	0.05	6.55	14.22
	Mean				0	.026	5.148	9.578
	S.D.				0	.018	.82	2.387
Group 4								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0036990	10958	5			0.00	0.01	3.72	5.39
B 0036991	10959	5			0.00	0.04	3.99	7.02
B 0036992	10960	5			0.00	0.05	3.41	5.45
B 0036993	10961	5			0.00	0.03	3.17	4.75
B 0036994	10962	5			0.00	0.00	3.67	5.04
B 0036995	10963	5			0.00	0.03	3.73	5.77
B 0036996	10964	5			0.00	0.01	3.25	4.80
B 0036997	10965	5			0.00	0.00	3.86	5.72
	Mean				0	.021	3.6	5.493
	S.D.				0	.019	.293	.728
Group 5								
B 0036998	10972	6			0.00	0.03	4.44	7.99
B 0036999	10974	6			0.00	0.04	4.70	9.46
B 0037000	10975	6			0.00	0.03	4.63	7.79
B 0037001	10976	6			0.00	0.01	4.63	7.92
B 0037002	10978	6			0.00	0.03	4.83	9.08
B 0037003	10980	6			0.00	0.02	3.80	5.99
B 0037004	10981	6			0.00	0.03	3.77	6.11
B 0037005	10982	6			0.00	0.04	4.35	7.94
	Mean				0	.029	4.394	7.785
	S.D.				0	.01	.404	1.23
Group 6								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 C/S GD21 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037006	10985	7			0.00	0.05	5.00	8.88
B 0037007	10987	7			0.00	0.06	5.05	8.29
B 0037008	10988	7			0.00	0.00	3.57	8.04
B 0037009	10989	7			0.00	0.03	3.73	6.39
B 0037010	10990	7			0.00	0.03	3.29	6.18
B 0037011	10991	7			0.00	0.07	3.90	7.07
B 0037012	10992	7			0.00	0.02	3.67	6.09
B 0037013	10993	7			0.00	0.03	3.52	5.88
	Mean				0	.036	3.966	7.103
	S.D.				0	.023	.677	1.154
Group 7								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037092	10906	1	F		0.00	0.08	4.40	29.86
B 0037093	10909	1	F		0.00	0.05	4.45	21.02
B 0037094	10911	1	F		0.00	0.09	3.82	11.37
B 0037095	10913	1	F		0.00	0.09	3.99	8.79
B 0037096	10914	1	F		0.00	0.14	6.11	26.27
	Mean				0	.09	4.554	19.462
	S.D.				0	.032	.91	9.169
Group 1								
B 0037030	10906	1	M		0.00	0.06	3.94	21.88
B 0037031	10909	1	M		0.00	0.06	3.83	15.45
B 0037032	10911	1	M		0.00	0.10	4.00	12.96
B 0037033	10913	1	M		0.00	0.07	3.51	8.95
B 0037034	10914	1	M		0.00	0.11	4.82	30.18
	Mean				0	.08	4.02	17.884
	S.D.				0	.023	.486	8.324
Group 1								
B 0037134	11019	10	F		0.00	0.03	4.08	13.30
B 0037135	11021	10	F		0.00	0.08	4.16	8.26
B 0037136	11023	10	F		0.00	0.05	3.96	13.46
B 0037137	11024	10	F		0.00	0.07	5.45	23.83
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037138	11025	10	F		0.00	0.11	5.52	16.93
B 0037139	11026	10	F		0.00	0.10	4.05	9.43
B 0037140	11027	10	F		0.00	0.05	4.66	12.57
B 0037141	11028	10	F		0.00	0.04	3.39	10.10
B 0037154	11020	10	F		0.00	0.10	4.35	10.29
	Mean				0	.07	4.402	13.13
	S.D.				0	.029	.7	4.796
Group 10								
B 0037072	11019	10	M		0.00	0.08	4.22	12.97
B 0037073	11021	10	M		0.00	0.11	4.42	8.95
B 0037074	11023	10	M		0.00	0.09	4.12	13.31
B 0037075	11024	10	M		0.00	0.07	4.16	16.23
B 0037076	11025	10	M		0.00	0.14	4.38	13.38
B 0037077	11026	10	M		0.00	0.05	3.99	9.97
B 0037078	11027	10	M		0.00	0.11	3.89	8.79
B 0037079	11028	10	M		0.00	0.14	3.80	9.09
B 0037091	11020	10	M		0.00	0.07	5.30	9.74
	Mean				0	.096	4.253	11.381
	S.D.				0	.032	.444	2.653
Group 10								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037142	11029	11	F		0.00	0.04	3.78	9.56
B 0037143	11031	11	F		0.00	0.07	4.26	19.52
B 0037144	11032	11	F		0.00	0.05	4.14	17.52
B 0037145	11033	11	F		0.00	0.08	3.79	10.94
B 0037146	11034	11	F		0.00	0.14	4.04	5.10
B 0037147	11035	11	F		0.00	0.06	3.87	6.53
B 0037148	11036	11	F		0.00	0.06	4.02	9.08
B 0037149	11037	11	F		0.00	0.08	3.98	13.43
B 0037150	11038	11	F		0.00	0.03	3.49	8.40
	Mean				0	.068	3.93	11.12
	S.D.				0	.032	.228	4.85
Group 11								
B 0037080	11029	11	M		0.00	0.11	3.44	6.71
B 0037081	11031	11	M		0.00	0.08	4.15	9.86
B 0037082	11032	11	M		0.00	0.05	4.27	20.08
B 0037083	11033	11	M		0.00	0.09	4.14	8.17
B 0037084	11034	11	M		0.00	0.06	4.43	10.71
B 0037085	11035	11	M		0.00	0.08	4.31	7.52
B 0037086	11036	11	M		0.00	0.07	4.14	8.99
B 0037087	11037	11	M		0.00	0.03	4.06	11.59
B 0037088	11038	11	M		0.00	0.03	3.25	9.21
	Mean				0	.067	4.021	10.316
	S.D.				0	.027	.402	3.964
Group 11								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037151	11041	12	F		0.00	0.09	4.13	12.91
B 0037152	11049	12	F		0.00	0.13	3.43	12.04
	Mean				0	.11	3.78	12.475
	S.D.				0	.028	.495	.615
Group 12								
B 0037089	11049	12	M		0.00	0.07	3.97	8.82
	Mean				0	.07	3.97	8.82
	S.D.				0	0	0	0
Group 12								
B 0037153	11059	13	F		0.00	0.07	4.39	11.96
	Mean				0	.07	4.39	11.96
	S.D.				0	0	0	0
Group 13								
B 0037090	11059	13	M		0.00	0.04	3.31	8.45
	Mean				0	.04	3.31	8.45
	S.D.				0	0	0	0
Group 13								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037097	10921	2	F		0.00	0.05	4.26	22.52
B 0037098	10922	2	F		0.00	0.14	4.63	30.62
B 0037099	10923	2	F		0.00	0.04	3.17	16.50
B 0037100	10924	2	F		0.00	0.10	4.73	9.40
B 0037101	10927	2	F		0.00	0.05	4.00	32.85
	Mean				0	.076	4.158	22.378
	S.D.				0	.043	.625	9.754
Group 2								
B 0037035	10921	2	M		0.00	0.05	4.40	12.79
B 0037036	10922	2	M		0.00	0.12	4.75	23.41
B 0037037	10923	2	M		0.00	0.08	4.44	14.33
B 0037038	10924	2	M		0.00	0.11	4.42	7.43
B 0037039	10927	2	M		0.00	0.07	3.99	35.20
	Mean				0	.086	4.4	18.632
	S.D.				0	.029	.27	10.902
Group 2								
B 0037102	10929	3	F		0.00	0.09	5.16	27.88
B 0037103	10938	3	F		0.00	0.08	3.98	15.75
B 0037104	10942	3	F		0.00	0.05	3.72	15.74
	Mean				0	.073	4.287	19.79
	S.D.				0	.021	.767	7.006
Group 3								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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B 0037040	10929	3	M		0.00	0.06	5.03	24.76
B 0037041	10938	3	M		0.00	0.04	3.65	9.29
B 0037042	10942	3	M		0.00	0.04	3.83	19.75
	Mean				0	.047	4.17	17.933
	S.D.				0	.012	.75	7.893
Group 3								
B 0037105	10957	5	F		0.00	0.04	3.95	16.66
B 0037106	10966	5	F		0.00	0.09	4.04	20.88
B 0037107	10967	5	F		0.00	0.07	4.13	14.94
B 0037108	10968	5	F		0.00	0.03	3.82	14.56
B 0037109	10969	5	F		0.00	0.09	4.17	27.74
B 0037110	10970	5	F		0.00	0.06	3.96	21.63
	Mean				0	.063	4.012	19.402
	S.D.				0	.025	.129	5.051
Group 5								
B 0037043	10957	5	M		0.00	0.04	4.51	19.77
B 0037044	10966	5	M		0.00	0.03	3.22	26.21
B 0037045	10967	5	M		0.00	0.11	3.66	19.79
B 0037046	10968	5	M		0.00	0.07	3.93	17.13
B 0037047	10969	5	M		0.00	0.05	4.07	18.42
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037048	10970	5	M		0.00	0.08	3.92	27.48
	Mean				0	.063	3.885	21.467
	S.D.				0	.029	.429	4.3
Group 5								
B 0037111	10977	6	F		0.00	0.07	3.66	12.43
B 0037112	10979	6	F		0.00	0.05	4.14	17.90
B 0037113	10983	6	F		0.00	0.02	4.38	16.15
	Mean				0	.047	4.06	15.493
	S.D.				0	.025	.367	2.793
Group 6								
B 0037049	10977	6	M		0.00	0.07	3.80	17.37
B 0037050	10979	6	M		0.00	0.12	3.96	9.84
B 0037051	10983	6	M		0.00	0.05	3.62	11.76
	Mean				0	.08	3.793	12.99
	S.D.				0	.036	.17	3.913
Group 6								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037114	10995	7	F		0.00	0.14	3.81	7.37
B 0037115	10997	7	F		0.00	0.05	4.02	11.63
	Mean				0	.095	3.915	9.5
	S.D.				0	.064	.148	3.012
Group 7								
B 0037052	10995	7	M		0.00	0.04	4.55	15.32
B 0037053	10997	7	M		0.00	0.08	4.49	7.92
	Mean				0	.06	4.52	11.62
	S.D.				0	.028	.042	5.233
Group 7								
B 0037116	10999	8	F		0.00	0.07	3.45	12.00
B 0037117	11000	8	F		0.00	0.02	3.89	24.76
B 0037118	11001	8	F		0.00	0.09	3.66	5.34
B 0037119	11002	8	F		0.00	0.06	4.40	11.96
B 0037120	11003	8	F		0.00	0.07	4.40	16.38
B 0037121	11004	8	F		0.00	0.09	4.24	9.45
B 0037122	11005	8	F		0.00	0.07	4.02	16.78
B 0037123	11006	8	F		0.00	0.06	4.17	9.86
B 0037124	11007	8	F		0.00	0.08	4.07	14.07
B 0037125	11008	8	F		0.00	0.05	3.62	8.73
	Mean				0	.066	3.992	12.933
	S.D.				0	.021	.331	5.442
Group 8								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client: ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE
BUILDING A
HORSHAM, PA 19044-
(215) 443-8710

Date Collected:
Date Received: 02/07/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP1 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037054	10999	8	M		0.00	0.04	3.90	16.84
B 0037055	11000	8	M		0.00	0.08	4.65	28.77
B 0037056	11001	8	M		0.00	0.08	3.87	7.18
B 0037057	11002	8	M		0.00	0.07	4.05	13.48
B 0037058	11003	8	M		0.00	0.11	4.47	29.31
B 0037059	11004	8	M		0.00	0.05	3.44	7.92
B 0037060	11005	8	M		0.00	0.06	3.85	15.88
B 0037061	11006	8	M		0.00	0.00	4.26	13.43
B 0037062	11007	8	M		0.00	0.22	6.47	20.61
B 0037063	11008	8	M		0.00	0.07	4.98	19.78
	Mean				0	.078	4.394	17.32
	S.D.				0	.058	.855	7.565
Group 8								
B 0037126	11009	9	F		0.00	0.04	4.15	10.70
B 0037127	11010	9	F		0.00	0.03	3.86	14.04
B 0037128	11011	9	F		0.00	0.09	3.97	8.39
B 0037129	11012	9	F		0.00	0.07	4.21	10.84
B 0037130	11013	9	F		0.00	0.04	3.46	10.94
B 0037131	11015	9	F		0.00	0.06	4.20	7.80
B 0037132	11016	9	F		0.00	0.08	4.40	17.91
B 0037133	11018	9	F		0.00	0.09	3.66	16.75
	Mean				0	.063	3.989	12.171
	S.D.				0	.024	.315	3.708
Group 9								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037064	11009	9	M		0.00	0.03	4.14	13.73
B 0037065	11010	9	M		0.00	0.02	3.70	11.29
B 0037066	11011	9	M		0.00	0.02	4.06	11.14
B 0037067	11012	9	M		0.00	0.06	4.06	7.78
B 0037068	11013	9	M		0.00	0.07	4.03	14.71
B 0037069	11015	9	M		0.00	0.10	3.10	5.07
B 0037070	11016	9	M		0.00	0.07	4.63	17.71
B 0037071	11018	9	M		0.00	0.07	4.42	23.50
	Mean				0	.055	4.018	13.116
	S.D.				0	.029	.463	5.761

Group 9

Reference Range				
	0 - 0	0 - 0	0 - 0	0 - 0

Approved _____ Date 10/10/01

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Date Collected:
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Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037431	11501	1	F		0.00	0.10	3.51	18.40
B 0037432	11502	1	F		0.05	0.09	3.19	7.39
B 0037433	11503	1	F		0.00	0.13	3.54	29.23
B 0037434	11504	1	F		0.00	0.12	3.50	22.39
B 0037435	11505	1	F		0.03	0.16	3.29	10.50
B 0037436	11506	1	F		0.00	0.08	3.37	18.51
B 0037437	11507	1	F					
B 0037438	11508	1	F		0.00	0.09	3.86	32.22
B 0037439	11509	1	F		0.00	0.11	3.70	24.47
B 0037440	11510	1	F		0.00	0.11	3.73	17.71
B 0037441	11511	1	F		0.03	0.10	3.46	10.33
B 0037442	11512	1	F		0.10	0.10	3.71	9.15
B 0037443	11513	1	F		0.00	0.09	3.67	14.90
B 0037444	11514	1	F		0.00	0.09	3.91	13.41
	Mean				.016	.105	3.572	17.585
	S.D.				.03	.021	.215	7.769
Group 1								
B 0037325	11501	1	M		0.00	0.10	3.46	24.63
B 0037326	11502	1	M		0.05	0.10	3.11	10.65
B 0037327	11503	1	M		0.00	0.08	2.94	11.14
B 0037328	11504	1	M		0.00	0.09	3.65	22.96
B 0037329	11505	1	M		0.00	0.11	2.82	7.25
B 0037330	11506	1	M		0.00	0.09	3.13	23.68
B 0037331	11507	1	M		0.00	0.06	3.09	13.75
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037332	11508	1	M		0.00	0.07	3.51	35.39
B 0037333	11509	1	M					
B 0037334	11510	1	M		0.00	0.06	2.85	11.38
B 0037335	11511	1	M		0.00	0.06	3.48	12.80
B 0037336	11512	1	M		0.00	0.11	3.49	13.37
B 0037337	11513	1	M		0.00	0.07	3.73	24.71
B 0037338	11514	1	M		0.00	0.08	3.14	10.42
	Mean				.004	.083	3.262	17.087
	S.D.				.014	.018	.306	8.276
Group 1								
B 0037507	11620	10	F		0.00	0.12	3.34	8.79
B 0037508	11621	10	F		0.00	0.09	3.57	12.10
B 0037509	11622	10	F		0.00	0.15	4.15	13.60
B 0037510	11623	10	F		0.00	0.10	3.76	14.72
B 0037511	11624	10	F		0.00	0.11	3.41	8.14
B 0037512	11625	10	F		0.00	0.07	2.74	12.16
B 0037513	11626	10	F		0.00	0.04	2.34	5.38
B 0037514	11628	10	F		0.00	0.09	3.50	17.09
B 0037515	11629	10	F		0.00	0.14	4.88	20.06
	Mean				0	.101	3.521	12.449
	S.D.				0	.034	.738	4.584
Group 10								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037401	11620	10	M		0.00	0.06	3.02	11.72
B 0037402	11621	10	M		0.00	0.06	3.01	17.00
B 0037403	11622	10	M		0.01	0.10	2.79	8.95
B 0037404	11623	10	M		0.01	0.09	2.68	6.73
B 0037405	11624	10	M		0.00	0.11	3.40	10.34
B 0037406	11625	10	M		0.00	0.09	2.93	14.30
B 0037407	11626	10	M		0.04	0.15	3.40	5.22
B 0037408	11628	10	M		0.00	0.09	2.44	9.05
B 0037409	11629	10	M		0.00	0.13	4.20	14.28
	Mean				.007	.098	3.097	10.843
	S.D.				.013	.029	.517	3.841
Group 10								
B 0037516	11630	11	F		0.00	0.18	5.48	33.81
B 0037517	11632	11	F					
B 0037518	11633	11	F		0.00	0.12	4.46	16.26
B 0037519	11634	11	F		0.00	0.10	3.54	10.71
B 0037520	11635	11	F		0.00	0.10	3.30	8.58
B 0037521	11636	11	F		0.00	0.10	3.07	8.49
B 0037522	11637	11	F		0.00	0.10	3.21	7.34
B 0037523	11638	11	F		0.00	0.08	2.99	9.19
B 0037524	11639	11	F		0.00	0.09	3.15	9.40
	Mean				0	.109	3.65	12.973
	S.D.				0	.031	.875	8.85
Group 11								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037410	11630	11	M		0.00	0.12	3.53	10.71
B 0037411	11632	11	M		0.00	0.12	3.23	16.88
B 0037412	11633	11	M		0.00	0.11	3.57	20.07
B 0037413	11634	11	M		0.00	0.17	2.94	19.35
B 0037414	11635	11	M		0.00	0.12	2.87	5.39
B 0037415	11636	11	M		0.00	0.09	2.95	8.15
B 0037416	11637	11	M		0.00	0.15	3.10	6.36
B 0037417	11638	11	M		0.00	0.17	3.46	8.31
B 0037418	11639	11	M		0.00	0.11	2.93	8.36
	Mean				0	.129	3.176	11.509
	S.D.				0	.028	.281	5.697
Group 11								
B 0037525	11640	12	F		0.00	0.11	3.53	9.83
B 0037526	11641	12	F		0.03	0.19	3.81	14.14
B 0037527	11642	12	F		0.00	0.09	3.12	8.43
B 0037528	11644	12	F		0.00	0.10	3.40	9.74
B 0037529	11646	12	F		0.00	0.13	3.75	14.64
B 0037530	11648	12	F		0.00	0.10	3.24	9.54
B 0037531	11650	12	F		0.00	0.09	3.73	16.33
B 0037532	11651	12	F		0.00	0.09	3.21	6.42
B 0037533	11653	12	F					
	Mean				.004	.113	3.474	11.134
	S.D.				.011	.034	.271	3.465
Group 12								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037419	11640	12	M		0.00	0.09	3.16	8.54
B 0037420	11641	12	M		0.00	0.05	2.75	11.64
B 0037421	11642	12	M		0.00	0.12	3.23	6.34
B 0037422	11644	12	M		0.00	0.13	3.26	7.98
B 0037423	11646	12	M		0.00	0.08	2.84	10.27
B 0037424	11648	12	M		0.00	0.12	3.37	9.06
B 0037425	11650	12	M		0.00	0.13	4.41	31.92
B 0037426	11651	12	M		0.01	0.06	3.38	13.62
B 0037427	11653	12	M		0.02	0.08	2.87	6.04
	Mean				.003	.096	3.252	11.712
	S.D.				.007	.03	.493	7.954
Group 12								
B 0037534	11654	13	F		0.00	0.11	3.30	7.80
B 0037535	11655	13	F		0.00	0.10	3.24	11.22
B 0037536	11656	13	F		0.00	0.09	4.30	12.20
	Mean				0	.1	3.613	10.407
	S.D.				0	.01	.595	2.31
Group 13								
B 0037428	11654	13	M		0.00	0.11	3.18	7.27
B 0037429	11655	13	M		0.02	0.09	3.30	8.74
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037430	11656	13	M		0.00	0.11	3.76	5.34
	Mean				.007	.103	3.413	7.117
	S.D.				.012	.012	.306	1.705
Group 13								
B 0037445	11515	2	F		0.00	0.10	3.80	17.11
B 0037446	11516	2	F		0.00	0.13	3.72	14.02
B 0037447	11517	2	F		0.00	0.11	3.29	9.73
B 0037448	11518	2	F		0.00	0.10	2.98	7.05
B 0037449	11519	2	F		0.00	0.10	3.26	17.42
B 0037450	11520	2	F		0.02	0.08	2.78	8.80
B 0037451	11521	2	F		0.00	0.18	4.52	26.69
B 0037452	11522	2	F					
B 0037453	11523	2	F		0.05	0.14	3.83	11.21
B 0037454	11524	2	F		0.00	0.15	4.21	32.61
B 0037455	11525	2	F		0.00	0.11	4.06	16.83
B 0037456	11526	2	F		0.00	0.08	3.52	21.48
B 0037457	11527	2	F		0.00	0.11	3.31	7.22
B 0037458	11528	2	F		0.08	0.16	4.96	29.31
	Mean				.012	.119	3.711	16.883
	S.D.				.025	.031	.618	8.497
Group 2								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037339	11515	2	M		0.00	0.12	3.28	13.01
B 0037340	11516	2	M		0.00	0.10	2.70	5.81
B 0037341	11517	2	M		0.00	0.10	3.08	15.74
B 0037342	11518	2	M		0.00	0.10	2.98	6.38
B 0037343	11519	2	M		0.00	0.11	3.45	18.51
B 0037344	11520	2	M		0.00	0.11	2.79	10.59
B 0037345	11521	2	M		0.00	0.07	3.81	12.36
B 0037346	11522	2	M					
B 0037347	11523	2	M		0.01	0.03	4.54	7.59
B 0037348	11524	2	M		0.00	0.12	4.07	13.11
B 0037349	11525	2	M		0.00	0.09	2.87	6.74
B 0037350	11526	2	M		0.00	0.07	2.93	9.96
B 0037351	11527	2	M		0.04	0.12	3.16	5.25
B 0037352	11528	2	M		0.00	0.10	3.45	16.73
	Mean				.004	.095	3.316	10.906
	S.D.				.011	.026	.544	4.419
Group 2								
B 0037459	11529	3	F		0.00	0.03	2.37	10.24
B 0037460	11530	3	F		0.00	0.11	2.96	13.20
B 0037461	11534	3	F		0.02	0.08	3.06	8.90
B 0037462	11536	3	F		0.00	0.13	2.88	9.99
B 0037463	11537	3	F		0.00	0.10	2.80	16.11
B 0037464	11538	3	F					
B 0037465	11543	3	F		0.00	0.08	2.64	8.74
	Mean				.003	.088	2.785	11.197
	S.D.				.008	.034	.248	2.893
Group 3								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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B 0037353	11529	3	M		0.00	0.05	3.16	13.12
B 0037354	11530	3	M		0.00	0.12	2.83	11.65
B 0037355	11534	3	M		0.00	0.10	3.09	9.38
B 0037356	11536	3	M		0.08	0.12	2.68	7.54
B 0037357	11537	3	M		0.00	0.14	3.14	15.19
B 0037358	11538	3	M		0.00	0.10	2.94	9.76
B 0037359	11543	3	M		0.00	0.11	3.12	15.43
	Mean				.011	.106	2.994	11.724
	S.D.				.03	.028	.184	3.015
Group 3								
B 0037466	11558	5	F		0.00	0.14	4.02	21.52
B 0037467	11559	5	F		0.00	0.09	3.22	11.76
B 0037468	11561	5	F		0.07	0.12	3.71	11.35
B 0037469	11563	5	F		0.00	0.16	4.56	25.84
B 0037470	11564	5	F		0.00	0.06	2.36	9.81
B 0037471	11565	5	F		0.00	0.10	3.55	10.87
B 0037472	11567	5	F		0.00	0.16	4.31	22.76
B 0037473	11568	5	F		0.03	0.10	3.06	7.64
B 0037474	11569	5	F		0.00	0.05	3.17	27.62
B 0037475	11570	5	F		0.09	0.12	3.56	9.52
B 0037476	11571	5	F		0.00	0.13	4.43	29.93
	Mean				.017	.112	3.632	17.147
	S.D.				.033	.036	.667	8.389
Group 5								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Date Collected:
Date Received: 02/08/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037360	11558	5	M		0.00	0.11	4.31	23.45
B 0037361	11559	5	M		0.00	0.11	2.93	19.35
B 0037362	11561	5	M		0.00	0.09	3.38	19.76
B 0037363	11563	5	M		0.00	0.06	3.55	18.74
B 0037364	11564	5	M		0.00	0.08	3.57	9.09
B 0037365	11565	5	M		0.00	0.07	3.58	11.62
B 0037366	11567	5	M		0.00	0.13	3.63	12.33
B 0037367	11568	5	M		0.03	0.09	3.45	8.43
B 0037368	11569	5	M		0.00	0.05	3.05	30.72
B 0037369	11570	5	M		0.03	0.11	3.43	7.14
B 0037370	11571	5	M		0.00	0.11	4.34	22.41
	Mean				.005	.092	3.565	16.64
	S.D.				.012	.025	.435	7.469
Group 5								
B 0037477	11574	6	F		0.00	0.10	2.98	7.73
B 0037478	11575	6	F		0.00	0.12	3.34	20.40
B 0037479	11576	6	F		0.00	0.05	3.42	9.36
B 0037480	11578	6	F		0.00	0.09	2.72	9.82
B 0037481	11580	6	F		0.00	0.10	2.73	6.93
B 0037482	11582	6	F		0.00	0.10	3.14	10.80
B 0037483	11583	6	F		0.00	0.09	3.26	14.62
B 0037484	11584	6	F		0.00	0.11	3.82	15.38
	Mean				0	.095	3.176	11.88
	S.D.				0	.021	.369	4.564
Group 6								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Date Collected:
Date Received: 02/08/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037371	11574	6	M					
B 0037372	11575	6	M		0.00	0.12	3.78	14.76
B 0037373	11576	6	M		0.00	0.11	3.07	6.69
B 0037374	11578	6	M		0.00	0.14	3.01	6.64
B 0037375	11580	6	M		0.00	0.12	2.74	7.02
B 0037376	11582	6	M					
B 0037377	11583	6	M		0.00	0.08	3.17	9.75
B 0037378	11584	6	M					
	Mean				0	.114	3.154	8.972
	S.D.				0	.022	.384	3.484
Group 6								
B 0037485	11592	7	F		0.00	0.11	4.12	19.32
B 0037486	11593	7	F		0.00	0.10	3.88	15.71
B 0037487	11597	7	F					
	Mean				0	.105	4	17.515
	S.D.				0	.007	.17	2.553
Group 7								
B 0037379	11592	7	M					
B 0037380	11593	7	M					
B 0037381	11597	7	M		0.00	0.11	3.25	8.48
	Mean				0	.11	3.25	8.48
	S.D.				0	0	0	0
Group 7								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Date Collected:
Date Received: 02/08/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037488	11600	8	F		0.00	0.08	3.64	11.24
B 0037489	11601	8	F		0.00	0.13	3.91	21.85
B 0037490	11602	8	F		0.00	0.13	3.84	17.00
B 0037491	11603	8	F		0.00	0.14	3.22	8.90
B 0037492	11604	8	F		0.00	0.12	4.04	24.28
B 0037493	11605	8	F		0.01	0.12	3.29	4.49
B 0037494	11606	8	F		0.00	0.09	4.49	23.10
B 0037495	11607	8	F		0.00	0.11	4.80	19.22
B 0037496	11608	8	F		0.00	0.06	2.82	7.97
B 0037497	11609	8	F		0.00	0.11	3.67	12.59
	Mean				.001	.109	3.772	15.064
	S.D.				.003	.025	.591	6.972
Group 8								
B 0037382	11600	8	M		0.00	0.11	3.85	15.00
B 0037383	11601	8	M		0.00	0.09	3.65	21.52
B 0037384	11602	8	M		0.00	0.10	3.36	9.48
B 0037385	11603	8	M		0.00	0.08	3.30	18.07
B 0037386	11604	8	M		0.00	0.11	3.00	8.62
B 0037387	11605	8	M		0.00	0.13	3.31	9.32
B 0037388	11606	8	M		0.00	0.05	3.73	20.78
B 0037389	11607	8	M		0.00	0.06	3.38	13.09
B 0037390	11608	8	M		0.00	0.09	2.75	4.53
B 0037391	11609	8	M		0.00	0.09	3.12	15.49
	Mean				0	.091	3.345	13.59
	S.D.				0	.024	.337	5.602
Group 8								
Reference Range					0 - 0	0 - 0	0 - 0	0 - 0

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Date Collected:
Date Received: 02/08/2001
Date Reported: 10/10/2001

Client No. 1028 Study: 418018 F1 LD5 REP2 Species: RAT

Accession No.	Spec. ID	Gp	Sex	Age	LDL-DIR MG/GM	HDL-DIR MG/GM	CHOLEST MG/GM	TRIG MG/GM
B 0037498	11611	9	F		0.00	0.16	3.90	15.82
B 0037499	11612	9	F		0.00	0.15	3.51	13.82
B 0037500	11613	9	F		0.00	0.15	4.04	15.87
B 0037501	11614	9	F		0.00	0.12	3.29	7.98
B 0037502	11615	9	F		0.00	0.10	3.93	10.96
B 0037503	11616	9	F		0.00	0.10	3.67	20.01
B 0037504	11617	9	F		0.00	0.10	3.60	11.90
B 0037505	11618	9	F		0.00	0.10	3.83	21.01
B 0037506	11619	9	F		0.00	0.08	3.72	23.13
	Mean				0	.118	3.721	15.611
	S.D.				0	.029	.234	5.025

Group 9

B 0037392	11611	9	M		0.00	0.10	3.17	16.14
B 0037393	11612	9	M		0.00	0.10	2.86	7.61
B 0037394	11613	9	M		0.00	0.12	3.60	23.50
B 0037395	11614	9	M		0.00	0.09	3.31	16.50
B 0037396	11615	9	M		0.00	0.03	3.18	15.77
B 0037397	11616	9	M		0.00	0.13	3.61	12.62
B 0037398	11617	9	M		0.00	0.08	3.09	10.08
B 0037399	11618	9	M		0.00	0.15	3.28	29.27
B 0037400	11619	9	M		0.00	0.14	2.77	7.90
	Mean				0	.104	3.208	15.488
	S.D.				0	.036	.287	7.183

Group 9

Reference Range	0 - 0	0 - 0	0 - 0	0 - 0

Approved ---------- Date 10/10/01

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QA AUDIT REPORT

The report listed below was reviewed for compliance with the FDA Good Laboratory Practices and with EPA Good Laboratory Practices. The final report and all associated raw data were reviewed for accuracy and consistency and the findings were reported to management.

The methods used were the methods described and the report accurately reflects the data. Therefore, these studies were done in compliance with the FDA and EPA Good Laboratory Practices.

Franklin B. Newman
QA Auditor

SPONSOR: ARGUS LABS STUDY: H18018

REPORT TYPE	AUDIT DATE	REPORT TO MANAGEMENT	AUDIT #
CHOL, LDL, HDL, TRIG	10-31-01	10-32-01	01-906

10/3/01 TO DR R. York
DATE SUBMITTED TO STUDY DIRECTOR

MANAGEMENT 10/24/01

APPENDIX I

BIOANALYTICAL REPORTS
(PRIMEDICA WORCESTER, SPONSOR AND SRI)

FINAL REPORT

VALIDATION OF A GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC METHOD FOR THE ANALYSIS OF MEVALONIC ACID IN EDTA RAT PLASMA FOR PRIMEDICA ARGUS STUDY 418-018

Primedica-Worcester Project Number: PABX-BVA

PRIMEDICA ARGUS
905 Sheehy Drive, Building A
Horsham, PA 19044

PRIMEDICA

FINAL REPORT

VALIDATION OF A GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC METHOD FOR THE ANALYSIS OF MEVALONIC ACID IN EDTA RAT PLASMA FOR PRIMEDICA ARGUS STUDY 418-018

Primedica-Worcester Project Number: PABX-BVA

Submitted to:

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905 Sheehy Drive, Building A
Horsham, PA 19044

Submitted by:

Primedica-Worcester
57 Union Street
Worcester, MA 01608

Primedica-Worcester Report # PABX-BVA-01-62

Issue Date: November 7, 2001

Mark A. Netsch / Date
Project Scientist
Department of Analytical Chemistry
Primedica-Worcester

COMPLIANCE STATEMENT

This project was conducted in compliance with the Good Laboratory Practice Regulations, 21CFR, Part 58, Good Laboratory Practice Standard for Safety Studies on Drugs, MHW Ordinance Number 21, March 26, 1997 and Council decision/ recommendation on compliance with principles of good laboratory practice. Official Journal of European Communities: Legislation 32 (No. L 315; 28 October): 1-17. There were no deviations from the aforementioned standards, which affected the quality or integrity of the project or the interpretation of the results in this report.

Mark A. Netsch 11/7/01

Mark A. Netsch / Date
Project Scientist

QUALITY ASSURANCE STATEMENT

The following are the inspection dates and report dates of QAU audit/inspections for Validation Of A Gas Chromatographic-Mass Spectrometric Method For The Analysis Of Mevalonic Acid In EDTA Rat Plasma For Primedica Argus Study 418-018, Project Number PABX-BVA.

Critical Phases	Date Inspected	Date Report Submitted to Project Scientist	Management
1. Laboratory Procedures	10/19/2000	10/20/2000	10/23/2000
1. Raw Data	11/07/2000	04/06/2001	04/06/2001
2. Draft Final Report	03/26/2001	03/26/2001	04/04/2001

The Final Report for Validation of A Gas Chromatographic-Mass Spectrometric Method For The Analysis Of Mevalonic Acid In EDTA Rat Plasma For Primedica Argus Study 418-018, report number PABX-BVA-01-62, was reviewed for compliance with the Good Laboratory Practice Regulations, 21CFR, Part 58, Good Laboratory Practice Standard for Safety Studies on Drugs, MHW Ordinance Number 21, March 26, 1997 and Council decision/ recommendation on compliance with principles of good laboratory practice. Official Journal of European Communities: Legislation 32 (No. L 315; 28 October): 1-17, on 11/7/01. The results as presented accurately reflect the raw data.

Quality Assurance Auditor 11/07/01
Date

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CONTRIBUTING PERSONNEL

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Research Associate ..... Heidi Gagnon, B.S.

Director, Analytical Chemistry ..... James A. Jersey, Ph.D.

Report Coordinator ..... Brenda L. Brooks

ANALYTICAL REFERENCE STANDARD CHARACTERIZATION/STABILITY

Analytical Reference Standard:	DL-Mevalonic Acid Lactone
Common Name:	Mevalonic Acid Lactone or Mevalonolacetone or MVL
Physical Description:	White crystals
Lot Number:	47300/1 50498
Storage Conditions:	5±3 °C, desiccate, store under nitrogen
Expiration Date:	September 13, 2002 (Assigned by Primedica)
Date Received:	September 13, 2000
Amount Received:	5 grams
Supplier:	Aldrich Chemical Co.
Internal Standard:	DL-Mevalonolacetone-4,4,5,5-d_4
Common Name:	MVL-d_4
Physical Description:	Clear liquid
Lot Number:	U-295
Storage Conditions:	22±5°C
Expiration Date:	September 11, 2002 (Assigned by Primedica)
Date Received:	September 11, 2000
Amount Received:	0.1 gram
Supplier:	Cambridge Isotope Laboratories

Characterization and Stability: The characterization of the analytical standard and internal standard is the responsibility of the Supplier, as is the method of synthesis, fabrication or derivation and stability determination.

ARCHIVAL STORAGE

Archival Storage: The original Final Report and raw data will be maintained for a minimum period of five years following submission of the final report in the Primedica-Worcester Archives in Worcester, MA. After five years the Sponsor will be contacted for disposition instructions. Archival material will be indexed by Primedica-Worcester Report #PABX-BVA-01-62.

ABSTRACT:

A procedure has been developed and validated for the determination of mevalonic acid in EDTA rat plasma. The procedure involves the conversion of mevalonic acid (MVA) to mevalonic acid lactone (MVL) and the analysis of a liquid/liquid extract by gas chromatography coupled with mass spectrometry (GC/MS) using positive chemical ionization (PCI). A mathematical factor to convert sample concentrations of MVL to MVA is included in the Laboratory Method in Appendix A. Calibration and quality control standards are prepared in water since mevalonic acid is a naturally occurring compound in plasma and concentrations vary with diet. The internal standard, MVL-d_4, was used for quantification.

The results for the validation indicate that the method is sufficiently linear, specific, reproducible and accurate to support the analysis of mevalonic acid in EDTA rat plasma samples.

INTRODUCTION:

The objective of this study was to develop and validate an analytical method for determining levels of mevalonic acid (MVA) in EDTA rat plasma.

EXPERIMENTAL DESIGN:

Overview:
The assay described in this report employed the conversion of mevalonic acid (MVA) to mevalonic acid lactone (MVL) and the analysis of liquid/liquid EDTA rat plasma samples by GC/MS using positive chemical ionization. The internal standard, MVL-d_4, was used for quantitation. The validated assay covered the concentration range of 10.0 ng/mL to 250 ng/mL of MVL in EDTA rat plasma using 100 µL sample volumes.

Materials and Methods:
Refer to Appendix A for a detailed description of materials and methods employed during the course of this validation study. In addition, quality control (QC) standards were prepared in water at the lower limit of quantiation (LLOQ QC, 10.0 mg/mL) using the same stock solutions used for the water QC standards. A set of QC standards (Low, Mid and High) was prepared in rat plasma using the same stock standards and dilution procedure used for the water QC standards. One set of solution calibration standards was prepared to mimic final extract concentration assuming 100% recovery using the same stock standards used for the calibration standards.

General Comments:
Representative raw chromatographic data from validation day 1 are provided in Appendix B.

Validation Design:

Validation Description:
The assay was comprised of five analytical runs. Three of the five analytical runs were comprised of bracketing seven-point water matrix calibration curves with six replicates of water matrix quality control (QC) samples at four concentrations, six replicates of EDTA rat plasma matrix QC samples at three concentrations and six replicates of rat matrix control samples (EDTA rat plasma with internal standard). Multiple water matrix blanks and water matrix control samples (matrix with internal standard) were analyzed in each

run. An analysis of the method recovery was included in the third analytical run, which consisted of an extracted calibration curve and a solvent calibration curve. The analysis of freeze/thaw (F/T) stability and room temperature (RT) stability, both in water and matrix, was included in the fourth analytical run. The fifth analytical run was a re-injection of the extracts from the first run to evaluate the final extract stability when stored at room temperature. Text Table 1 lists each validation analytical run and the assay performance parameters that were evaluated for the study.

TEXT TABLE 1

Validation Course

Validation Run Identification	Parameters Evaluated
Day 1	Precision, accuracy, linearity, and water/plasma equivalency
Day 2	Precision, accuracy, linearity, specificity, and water/plasma equivalency
Day 3	Precision, accuracy, linearity, recovery, dilution accuracy, precision, and water/plasma equivalency
Day 4	Freeze/thaw and room temperature stability
Day 5	6-day room temperature final extract stability

Parameters Evaluated:

Mevalonic acid is a naturally occurring compound in plasma. The concentration levels found in blank plasma were anticipated to be above the validated lower limit of quantitation (LLOQ) of 10 ng/mL. This level of background concentration would significantly skew the results of plasma QC's at the lower concentration levels. Therefore, calibration and QC standards were prepared in water matrix to evaluate precision, accuracy and linearity of the method. The second set of QC's was prepared at three concentration levels in EDTA rat plasma to evaluate the ability of the method to extract and quanitate MVL equally from water or plasma matrices. The plasma QC's were also used to evaluate matrix stability.

Water/plasma extraction equivalency was evaluated by the analysis of six replicates of each QC standard concentration levels in both water and plasma. Mean peak area counts of the isotopically labeled mevalonic acid lactone internal standard were calculated. The difference between the water and plasma mean peak areas were expressed as percent difference. The acceptable limits were ±10% difference. The isotopically labeled internal standard was used to evaluate extraction equivalency because it is chemically identical to mevalonic acid lactone and is not present in blank plasma. Therefore, the internal standard mimics the extraction behavior of mevalonic acid lactone but has no naturally occurring background concentration to interfere with the results.

Water/plasma extraction equivalency was also evaluated by the six replicates of High QC standards in both water and plasma. The endogenous concentration of mevalonic acid was low compared to the high QC concentration and did not make a significant contribution to the concentration results. Mean concentrations of mevalonic acid lactone were calculated and expressed as percent bias compared to the nominal concentration. The present bias values from the high QC in plasma were compared with the water QC and expressed as percent difference. The acceptable limits were ±10% difference.

Inter- and intra-day accuracy and precision of the method were evaluated at four concentrations by analyzing six replicates of the QC standards prepared in water over the course of three validation batches. Accuracy results are reported as % bias. Method precision for QC standards is expressed as % variance. Inter-day method precision and accuracy were also evaluated for calibration standards.

Dilution accuracy and precision was measured by analyzing six replicate dilutions of a QC standard diluted 1:5 water. Intra-day precision and accuracy was evaluated and reported as % RSD and % bias, respectively.
Recovery of the assay was evaluated by comparing the absolute peak areas in extracted standards to those obtained from solvent standards prepared to mimic final extract concentrations assuming 100% recovery.

Linearity of the method was evaluated by visual inspection of the calibration curve and examination of the correlation coefficient (r) for each standard curve.

Freeze-Thaw (F/T) stability in both water and plasma matrices were evaluated by analyzing six replicates of quality control samples prepared at two levels, which were subjected to three F/T cycles, prior to their extraction and analysis.

Room temperature stability in both water and plasma matrices were demonstrated by analyzing six replicates of QC standards prepared at two levels which were left standing at room temperature for seventy-two hours prior to their extraction and analysis.

Six-day room temperature stability of final extracts was evaluated by re-analyzing the day-one validation extracts consisting of duplicate calibration curves, six replicates of QC standards in both water and plasma matrices.
Assay specificity with respect to endogenous compounds was evaluated by assaying six unique plasma lots from untreated rats.

RESULTS AND DISCUSSION:

Validation Results:

Water/Plasma Extraction Equivalency:
The ability of the method to extract and quantitate mevalonic acid equivalently from water or plasma matrices was evaluated.

The equivalence was evaluated by the analysis of six replicates of each of three QC standard levels in water and plasma during the first three validation runs. Mean peak area counts of the internal standard (isotopically labeled mevalonic acid lactone) found for the plasma matrix QC's during each run were compared to the results for water matrix QC's. The difference was expressed as % difference. Percent difference values for the first three validation runs were 0.5%, 0.5% and 4.4%, respectively. Refer to Table 13 for a complete summary of results.

The comparison was also evaluated by the analysis of six replicates of high-QC standards in water and plasma during the first three validation runs. At this concentration level (200 ng/mL) the endogenous level of mevalonic acid was not a significant interference. Mean concentrations of found for the plasma matrix High-QC's during each run was compared to the results for water matrix High-QC's. The results were expressed as % difference. Percent difference values for the first three validation runs were –2.0%, 0.5% and 0.5%, respectively. Refer to Table 14 for a complete summary of results.

The percent difference results were all within the acceptable limits of ±10%. The extraction of mevalonic acid lactone from water and plasma are equivalent. Therefore,

the calibration curve and quality control sample prepared in water can be used to quantitate mevalonic acid lactone concentration levels in plasma.

Accuracy:
Inter-day and intra-day accuracy were acceptable for the assay of Mevalonic acid lactone in water over the concentration range of 10.0 ng/mL to 250 ng/mL.

Intra-day accuracy was evaluated by the analysis of six replicates of each of four QC standard levels in water during the first three validation runs. Mean concentrations found during each run were compared to theoretical nominal concentrations and the difference relative to theoretical nominal concentrations was expressed as % bias. Percent bias values for the lower limit of quantitation (LLOQ-QC, 10 ng/mL), low-QC (25 ng/mL), middle-QC (70 ng/mL), and high-QC (200 ng/mL) standards ranged from –4.8% to 0.1% over the three analytical runs. Refer to Table 1 for a complete summary of results.

Inter-day accuracy was evaluated by the analysis of six replicates of each of four QC standard levels in water during the first three validation runs. Mean concentrations across these runs were compared to theoretical nominal concentrations and the difference was expressed as % bias. Percent bias values ranged from –3.6% to –1.4% across concentrations. Refer to Table 1 for a complete summary of results.

The inter-day accuracy statistics for the back-calculated calibration standard concentrations are also represented by % bias. The % bias values for the calibration standards ranged from –1.6% to 1.7%. See Table 2 for a complete summary of results.

Precision:
Inter-day and intra-day precision was acceptable for the assay of mevalonic acid lactone in water over the concentration range of 10.0 ng/mL to 250 ng/mL.

Intra-day precision was evaluated by the analysis of six replicates of each of four QC standard levels in water during the first three validation runs. The intra-assay variance estimate of the interpolated concentrations for the replicate QC standards ranged from 1.3% to 4.5% across concentrations. Refer to Table 1 for a complete summary of results.
Inter-day precision was evaluated by the analysis of six replicates of each of four QC standard levels in water during the first three validation runs. The inter-assay variance estimate of the interpolated concentrations for the replicate QC standards ranged from 0.4% to 1.2% across concentrations. Refer to Table 1 for a complete summary of results.

The inter-day precision statistics for the back-calculated calibration standards ranged from 1.6% to 3.0% relative standard deviation (RSD) across concentrations and analytical runs. See Table 2 for a complete summary of results.

Dilution QC:
The dilution QC results were acceptable. Six replicates of the dilution QC with a pre-dilution concentration of 200 ng/mL, were diluted with water by a factor of 5 prior to extraction and analysis. The mean concentration found was compared to the theoretical nominal concentration (40 ng/mL) and the difference relative to the theoretical nominal concentration was expressed as % bias. The result was –1.8% bias with an RSD of 3.0%. See Table 8 for a complete summary of results.

Recovery:
Recovery values were calculated by comparison of mean duplicate spiked and extracted calibration standard peak areas in water to the peak areas obtained for solution standards prepared to mimic final extract concentrations assuming 100% recovery. Recovery ranged from 32.9% to 39.6% for mevalonic acid lactone and from 33.6% to 42.0% for the internal standard across concentrations. Refer to Tables 3 and 4 for a complete summary of results.

Linearity:
The assay was linear for mevalonic acid lactone within the calibration range of 10.0 ng/mL to 250 ng/mL.

Figure 1 shows the $1/X^2$ weighted least-squares linear regression plot with the actual spiked calibration standard data points for one of the validation runs. Linearity was also indicated by the correlation coefficients (r) obtained, which were greater than or equal to 0.998 for each of the first three validation runs. Refer to Table 5 for a summary of regression constants.

Specificity:
Mevalonic acid is a naturally occurring compound in plasma. The background concentration level in the plasma QC's was evaluated by the analysis of six replicates of control blank EDTA rat plasma matrix during the first three validation runs. The inter-assay mean concentration found was 16.6 ng/mL. Refer to Table 11 for complete results for the control blanks of plasma.

The variation of background concentration levels in EDTA rat plasma was evaluated by the analysis of six unique lots of plasma during validation Day 2. The result was a mean concentration of 15.8 ng/mL.

See Tables 12 for complete results of the six unique lots of plasma.

Stability:
The acceptable criteria for stability evaluations were a mean bias of ≤±15% from the theoretical values except for the lowest calibration, Low-QC and LLOQ QC standards, where the criteria were ≤±20%. Due to the presence of background concentrating of mevalonic acid lactone the theoretical values used for the Plasma QC standards were the mean concentrations obtain during the same analytical run from the analysis of six control Plasma QC standards.

Room temperature matrix stability was evaluated by analyzing six replicates of quality control samples prepared at two levels, in both water and EDTA rat plasma matrices, which were exposed to room temperature for 72-hours prior to their extraction and analysis. The values for % bias were within the acceptance criteria for both concentrations for the 72-hour room temperature stability assessment. Refer to Table 6 for a complete summary of the results.

Freeze/thaw matrix stability was evaluated by analyzing six replicates of QC standards prepared at two levels, in both water and EDTA rat plasma matrices that were subjected to four freeze/thaw cycles. The values for % bias were within the acceptance criteria. Refer to Table 7 for a complete summary of the results.

Six-day room temperature stability of final extracts was evaluated by re-analyzing the duplicate calibration curves and the six replicates of QC standards, in both water and EDTA rat plasma matrices, from the first day of the validation. The solvent in the extracts evaporated from the vials during the storage period. More solvent was added to each vial to reconstitute the extracts. Results from the re-analyses demonstrated that the extracts were stable for a minimum period of six days when stored at room temperature. See Tables 9 and 10 for the final extract stability results.

Studies of long-term storage stability of mevalonic acid in matrix at -20°C are ongoing.

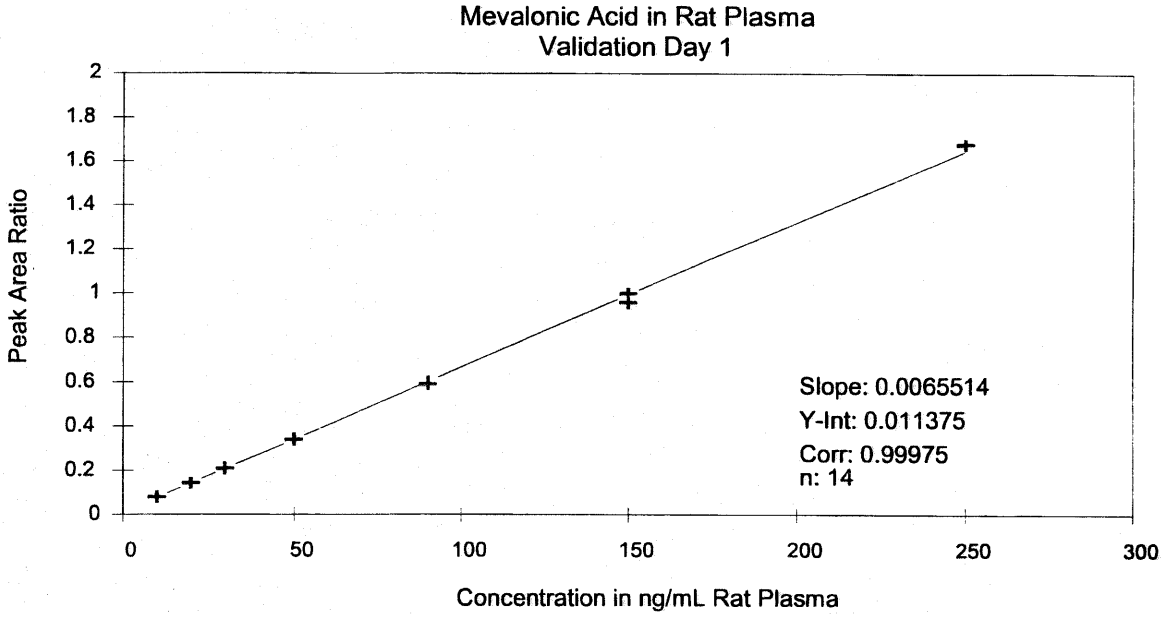
CONCLUSIONS:

Overall, the results for the validation indicated that the method was sufficiently linear, specific, reproducible and accurate to support EDTA rat plasma sample analyses for mevalonic acid content.

FIGURE

FIGURE 1

Day 1 Validation Calibration Curve



TABLES

TABLE 1

SUMMARY OF INTERPOLATED MEVALONIC ACID LACTONE QC STANDARD CONCENTRATIONS WITH INTER- AND INTRA-DAY SUMMARY STATISTICS

	Theoretical Nominal Concentrations (ng/mL)			
Day 1	10.0	25.0	70.0	200
Rep 1	9.63	23.6	70.1	202
Rep 2	8.91	25.0	68.7	200
Rep 3	9.51	25.0	67.8	196
Rep 4	9.38	23.9	68.3	196
Rep 5	9.75	24.0	67.4	195
Rep 6	9.92	23.9	69.8	199
Mean	9.52	24.2	68.7	198
n	6	6	6	6
% Bias	-4.8%	-3.2%	-1.9%	-1.0%

	Theoretical Nominal Concentrations (ng/mL)			
Day 2	10.0	25.0	70.0	200
Rep 1	9.87	24.4	69.9	202
Rep 2	9.29	24.8	68.1	195
Rep 3	10.3	24.1	68.4	195
Rep 4	9.07	23.8	68.2	193
Rep 5	9.10	24.8	68.0	194
Rep 6	10.2	24.5	67.3	195
Mean	9.64	24.4	68.3	196
n	6	6	6	6
% Bias	-3.6%	-2.4%	-2.4%	-2.0%

TABLE 1 (Concluded)

SUMMARY OF INTERPOLATED MEVALONIC LACTONE ACID QC STANDARD CONCENTRATIONS WITH INTER- AND INTRA-DAY SUMMARY STATISTICS

	Theoretical Nominal Concentrations (ng/mL)			
Day 3	10.0	25.0	70.0	200
Rep 1	9.49	23.9	70.6	198
Rep 2	10.1	25.2	70.1	197
Rep 3	9.49	25.4	70.6	200
Rep 4	9.96	24.6	70.0	198
Rep 5	9.84	24.8	70.0	199
Rep 6	NA	23.5	69.0	188
Mean	9.78	24.6	70.1	197
n	5	6	6	6
% Bias	-2.2%	-1.6%	0.1%	-1.5%
Intra-assay variance estimate	4.5%	2.5%	1.3%	1.8%
Inter-assay variance estimate	1.2%	0.7%	1.2%	0.4%
Inter-day Mean	9.64	24.4	69.0	197
n	17	18	18	18
% Bias	-3.6%	-2.4%	-1.4%	-1.5%

NA = Not Available. This sample was accidentally spilled during preparation

TABLE 2

SUMMARY OF BACK-CALCULATED MEVALONIC ACID LACTONE CALIBRATION STANDARD CONCENTRATIONS

	Theoretical Nominal Concentrations (ng/mL)						
	10.0	20.0	30.0	50.0	90.0	150	250
Day 1	9.90	20.0	30.7	50.6	89.5	151	254
	10.1	20.0	30.0	49.7	88.1	144	254
Day 2	9.84	19.5	29.6	50.4	90.8	152	250
	10.3	19.3	31.6	49.2	91.7	146	250
Day 3	10.3	19.7	30.5	51.7	91.7	147	261
	9.54	20.9	30.6	47.8	84.8	146	251
Mean	10.0	19.9	30.5	49.9	89.4	148	253
Std. Dev.	0.296	0.562	0.681	1.34	2.66	3.14	4.18
n	6	6	6	6	6	6	6
%RSD	3.0%	2.8%	2.2%	2.7%	3.0%	2.1%	1.6%
% Bias	0.0%	-0.5%	1.7%	-0.2%	-0.6%	-1.6%	1.3%

TABLE 3

MEVALONIC ACID LACTONE EXTRACTION DATA & RECOVERY CALCULATIONS

	Extracted Standards Mean Response Areas	Solution Standards Response Areas	% Recovery
Std 1	417.5	1066	39.2%
Std 2	785	1981	39.6%
Std 3	1057.5	2963	35.7%
Std 4	1896	4975	38.1%
Std 5	3144	8678	36.2%
Std 6	4693.5	14279	32.9%
Std 7	8433	25380	33.2%
		Mean	36.4%
		Std. Dev.	0.0327
		% RSD	7.4%

TABLE 4

INTERNAL STANDARD EXTRACTION DATA & RECOVERY CALCULATIONS

	Extracted Standards Mean Response Area	Solution Standards Response Area	% Recovery
Std 1	6142	15019	40.9%
Std 2	5876	14959	39.3%
Std 3	5365	15158	35.4%
Std 4	6004	14283	42.0%
Std 5	5657	14739	38.4%
Std 6	5117.5	15226	33.6%
Std 7	5274.5	15286	34.5%
		Mean	37.7%
		Std. Dev.	0.0327
		% RSD	8.7%

TABLE 5

SUMMARY OF LEAST-SQUARES LINEAR REGRESSION CONSTANTS AND ANALYSIS DATES

	Slope	Intercept	Correlation Coefficient (r)	Analysis Date
Day 1	0.0065514	0.0113750	0.99975	10/17/00
Day 2	0.0063508	0.0082756	0.99939	10/18/00
Day 3	0.0062253	0.0067910	0.99884	10/19/00
Day 4	0.0062800	0.0060925	0.99891	10/20/00
Day 5	0.0065156	0.0112850	0.99981	10/23/00

TABLE 6

SUMMARY OF QC STANDARD 72-HOUR ROOM TEMPERATURE STABILITY IN MATRIX

WATER QC's

	Theoretical Nominal Concentrations (ng/mL)	
	25.0	200
Rep 1	23.8	189
Rep 2	23.1	191
Rep 3	23.8	193
Rep 4	22.9	193
Rep 5	23.0	194
Rep 6	22.9	194
Mean	23.3	192
Std. Dev.	0.432	1.97
n	6	6
%RSD	1.9%	1.0%
% Bias	-6.8%	-4.0%

EDTA RAT PLASMA QC's

	Theoretical Nominal Concentrations (ng/mL)	
	34.2*	192*
Rep 1	35.1	199
Rep 2	34.2	200
Rep 3	34.0	197
Rep 4	33.2	195
Rep 5	33.6	194
Rep 6	33.5	188
Mean	33.9	196
Std. Dev.	0.674	4.32
n	6	6
%RSD	2.0%	2.2%
% Bias	-0.9%	2.1%

* = Mean concentration of six control Plasma QC's analyzed in the same analytical batch.

TABLE 7

SUMMARY OF QC STANDARD FREEZE/THAW (3 CYCLES) STABILITY IN MATRIX

WATER QC's

	Theoretical Nominal Concentrations (ng/mL)	
	25.0	200
Rep 1	24.3	194
Rep 2	23.6	194
Rep 3	23.2	194
Rep 4	23.8	194
Rep 5	23.0	196
Rep 6	23.3	192
Mean	23.5	194
Std. Dev	0.472	1.26
n	6	6
%RSD	2.0%	0.6%
% Bias	-6.0%	-3.0%

EDTA RAT PLASMA QC's

	Theoretical Nominal Concentrations (ng/mL)	
	34.2*	192*
Rep 1	33.5	194
Rep 2	34.4	200
Rep 3	32.9	197
Rep 4	33.6	193
Rep 5	32.3	190
Rep 6	32.4	184
Mean	33.2	193
Std. Dev	0.804	5.59
n	6	6
%RSD	2.4%	2.9%
% Bias	-2.9%	0.5%

* = Mean concentration of six control Plasma QC's analyzed in the same analytical batch.

TABLE 8

SUMMARY OF INTERPOLATED MEVALONIC ACID LACTONE DILUTION QC CONCENTRATIONS FOR DILUTION VALIDATION

	Theoretical Nominal Concentration (ng/mL)
	200 *
Rep 1	40.4
Rep 2	39.5
Rep 3	40.7
Rep 4	38.1
Rep 5	38.9
Rep 6	37.9
Mean	39.3
Std. Dev	1.16
n	6
%RSD	3.0%
% Bias	-1.8%

* = Dilution QC's undiluted concentration was 200 ng/mL (1:5 dilution performed prior to extraction and analysis)

TABLE 9

6-DAY ROOM TEMPERATURE FINAL EXTRACT STABILITY BACK-CALCULATED CALIBRATION STANDARD CONCENTRATIONS

	Theoretical Nominal Concentrations (ng/mL)						
	10.0	20.0	30.0	50.0	90.0	150	250
	9.87	19.8	30.2	50.2	89.9	150	254
	10.2	19.7	30.5	49.4	90.6	146	253
Mean	10.0	19.8	30.4	49.8	90.3	148	254
n	2	2	2	2	2	2	2
% Bias	0.4%	-1.3%	1.2%	-0.4%	0.3%	-1.3%	1.4%

TABLE 10

6-DAY ROOM TEMPERATURE FINAL EXTRACT STABILITY QUALITY CONTROL STANDARD CONCENTRATIONS

WATER QC'S

	Theoretical Nominal Concentrations (ng/mL)			
	10.0	25.0	70.0	200
Rep 1	9.89	24.3	68.8	198
Rep 2	9.17	25.1	67.7	198
Rep 3	10.5	25.5	68.7	197
Rep 4	9.75	24.4	68.3	200
Rep 5	10.7	24.7	67.7	198
Rep 6	10.1	24.3	69.9	199
Mean	10.0	24.7	68.5	198
Std. Dev.	0.550	0.492	0.826	1.03
n	6	6	6	6
%RSD	5.5%	2.0%	1.2%	0.5%
% Bias	0.0%	-1.2%	-2.1%	-1.0%

EDTA RAT PLASMA QC'S

	Theoretical Nominal Concentrations (ng/mL)		
	33.1	73.9	194*
Rep 1	35.0	73.5	195
Rep 2	34.4	75.6	189
Rep 3	32.8	76.2	192
Rep 4	32.2	71.4	191
Rep 5	31.6	70.7	186
Rep 6	33.7	74.9	185
Mean	33.3	73.7	190
Std. Dev.	1.31	2.26	3.78
n	6	6	6
%RSD	3.9%	3.1%	2.0%
% Bias	0.6%	-0.3%	-2.1%

* = Mean concentration obtained on the first day of validation

TABLE 11

SUMMARY OF CONTROL BLANK EDTA RAT PLASMA CONCENTRATIONS

	Concentrations (ng/mL)		
	Day 1	Day 2	Day 3
Rep 1	16.4	16.5	17.0
Rep 2	16.2	15.9	16.8
Rep 3	16.6	16.3	16.8
Rep 4	17.4	17.4	17.3
Rep 5	16.3	16.1	17.1
Rep 6	15.8	16.2	17.0
Mean	16.5	16.4	17.0
Std. Dev.	0.536	0.529	0.190
n	6	6	6
%RSD	3.2%	3.2%	1.1%
Inter-Assay Mean	16.6		
n	18		
Std. Dev.	0.506		
%RSD	3.0%		

TABLE 12

SUMMARY OF UNIQUE LOTS OF EDTA RAT PLASMA CONCENTRATIONS

	Concentrations (ng/mL)
Lot 1	11.0
Lot 2	16.2
Lot 3	16.8
Lot 4	16.1
Lot 5	17.6
Lot 6	17.0
Mean	15.8
Std. Dev.	2.41
n	6
%RSD	15.3%

TABLE 13

SUMMARY OF INTERNAL STANDARD PEAK AREAS

Water QC's

		Day 1	Day 2	Day 3
Low-QC	Rep 1	4096	4303	5191
	Rep 2	4380	4861	5911
	Rep 3	5310	5511	6016
	Rep 4	4968	6253	5585
	Rep 5	4124	5620	6203
	Rep 6	6187	6437	3846
Mid-QC	Rep 1	4323	4827	4928
	Rep 2	4390	5502	5230
	Rep 3	4522	5757	5681
	Rep 4	4777	5771	5479
	Rep 5	5024	5881	5960
	Rep 6	6314	6632	5452
High-QC	Rep 1	4021	4124	5197
	Rep 2	5545	5015	5314
	Rep 3	4246	5029	6189
	Rep 4	3568	3950	5978
	Rep 5	5531	5027	7684
	Rep 6	5458	6200	6335
	Mean Area	4821	5372	5677

TABLE 13 (Concluded)

SUMMARY OF INTERNAL STANDARD PEAK AREAS

Plasma QC's

		Day 1	Day 2	Day 3
Low-QC	Rep 1	4700	4503	6100
	Rep 2	4321	5363	6151
	Rep 3	3850	6736	6067
	Rep 4	5084	5184	5909
	Rep 5	3350	6350	5159
	Rep 6	5138	5493	6755
Mid-QC	Rep 1	3988	4091	5413
	Rep 2	4580	5157	6040
	Rep 3	4925	6063	6238
	Rep 4	4477	3722	6216
	Rep 5	5132	5601	6049
	Rep 6	4988	6044	5746
High-QC	Rep 1	6540	4445	5985
	Rep 2	5208	5474	5811
	Rep 3	5002	6088	5615
	Rep 4	6790	4231	6084
	Rep 5	5671	7133	5879
	Rep 6	3508	5471	5467
	Mean Area	4847	5397	5927

Comparison of Plasma QC vs Water QC Mean Areas

% Difference	0.5%	0.5%	4.4%

TABLE 14

SUMMARY OF PLASMA QC STANDARD CONCENTRATIONS WITH INTER- AND INTRA-DAY SUMMARY STATISTICS

	Theoretical Nominal Concentrations (ng/mL)		
Day 1	25.0	70.0	200
Rep 1	34.5	75.7	198
Rep 2	33.4	74.3	191
Rep 3	32.4	75.3	192
Rep 4	33.0	71.8	199
Rep 5	32.2	72.7	193
Rep 6	33.2	73.3	190
Mean	33.1	73.9	194
n	6	6	6
% Bias	32.4%	5.6%	-3.0%
% Difference vs Water QC (Table 1)			-2.0%

	Theoretical Nominal Concentrations (ng/mL)		
Day 2	25.0	70.0	200
Rep 1	34.3	76.4	198
Rep 2	33.2	75.9	194
Rep 3	33.0	76.9	202
Rep 4	33.4	75.3	194
Rep 5	34.8	78.3	194
Rep 6	35.1	78.4	199
Mean	34.0	76.9	197
n	6	6	6
% Bias	36.0%	9.9%	-1.5%
% Difference vs Water QC (Table 1)			0.5%

TABLE 14 (Concluded)

SUMMARY OF PLASMA QC STANDARD CONCENTRATIONS WITH INTER- AND INTRA-DAY SUMMARY STATISTICS

	Theoretical Nominal Concentrations (ng/mL)		
Day 3	25.0	70.0	200
Rep 1	34.9	75.5	198
Rep 2	34.5	76.8	197
Rep 3	35.1	77.1	199
Rep 4	34.2	77.9	195
Rep 5	34.7	76.0	202
Rep 6	35.7	74.7	195
Mean	34.9	76.3	198
n	6	6	6
% Bias	39.6%	9.0%	-1.0%
% Difference vs Water QC (Table 1)			0.5%
Intra-assay variance estimate	2.3%	1.8%	1.7%
Inter-assay variance estimate	2.4%	2.0%	0.8%
Inter-Assay Mean	34.0	75.7	196
n	18	18	18
% Bias	36.0%	8.1%	-2.0%

APPENDIX A
LABORATORY METHOD

PRIMEDICA CORPORATION

Worcester, Massachusetts

Laboratory Method For
Analysis of Mevalonic Acid in Rat Plasma By GC/MSD

LM Number MVAL00

Revision Number 00

Effective Date November 1, 2000

Page 1 **of** 12

Prepared By: Mark Netzel **Date:** 11/8/00

Reviewed By: Brian Sills **Date:** 11/08/00

Authorized By: **Date:** 11/8/00

James Jersey, Ph.D.
Director of Bioanalytical Chemistry

THE ANALYSIS MEVALONIC ACID IN RAT PLASMA BY GC/MSD	
LM Number: MVAL00	Effective Date: November 1, 2000
Revision Number: 00	Page 2 of 12

1 Purpose

The purpose of this Laboratory Method (LM) is to describe procedures to accurately determine the concentrations of mevalonic acid in rat plasma samples by GC/MSD.

2 Scope

The procedures provided in this LM are applicable for the quantification of mevalonic acid in rat plasma EDTA. During the extraction mevalonic acid (MVA) is converted to mevalonic acid lactone (MVL). The validated calibration range is 10.0 ng/mL to 250 ng/mL of mevalonic acid lactone in rat plasma EDTA. The results can be converted to the units of pmol/mL of mevalonic acid in rat plasma EDTA using the conversion described in the calculation section below.

3 Definitions/Abbreviations

GC:	Gas Chromatography
MSD:	Mass Selective Detector
IS:	Internal Standard
MVA:	Mevalonic Acid
MVL:	Mevalonic Acid Lactone or DL-Mevalonic Acid Lactone or Mevalonolactone
MVL-d_4:	DL-Mevalonolactone-4,4,5,5-d_4
QC:	Quality Control
G:	Gravitational Constant

4 Materials

4.1 Chemicals

DL-Mevalonic acid lactone, Sigma Chemical Co., approximately 97% grade, or equivalent
DL-Mevalonolactone-4,4,5,5-d_4,Cambridge Isotope Laboratories, Inc., 98% grade, or equivalent
Ethyl acetate, J.T. Baker, HPLC grade or equivalent
Methylene chloride, J.T. Baker, HPLC grade or equivalent
2-Propanol (isopropyl alcohol), EM Science, HPLC grade or equivalent
Formic acid, J.T. Baker, reagent grade or equivalent
Chloroform, J.T. Baker, HPLC grade or equivalent
Sodium sulfate, Aldrich, reagent grade, or equivalent
Deionized water, Millipore Milli-Q water, or equivalent
Helium, Northeast Airgas, Inc., ultra high purity or equivalent

THE ANALYSIS MEVALONIC ACID IN RAT PLASMA BY GC/MSD	
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Isobutane, Matheson Gas Products, research grade or equivalent
Hexanes, J.T. Baker, HPLC grade or equivalent
Pooled rat blank plasma EDTA

4.2 Consumables

Disposable 15 mL conical bottom polypropylene test tubes
Pipetman and tips
Eppendorf repeater and tips
Disposable polyethylene transfer pipettes or equivalent
Glass crimp top autosampler vials with flat bottom inserts or equivalent
Polypropylene vials with o-ring sealed caps or equivalent

4.3 Equipment

VWR Multi-Tube Vortexer or equivalent
Lab Industries Pipet Dispenser or equivalent
Beckman GS-6KR centrifuge or equivalent
Zymark Turbovap LV Evaporator or equivalent
AND ER-182A analytical balance or equivalent
J&W GC column, DB-210, 30 m, 0.25 mm ID, 0.25 µm film thickness or equivalent
Hewlett Packard 7683 injector or equivalent
Hewlett Packard 6890 gas chromatograph or equivalent
Hewlett Packard 5973 mass selective detector or equivalent
Hewlett Packard ChemStation (G1701BA, Revision B.01.00) or equivalent
Microsoft Excel 97 version SR-2 or equivalent

Note: Equipment, reagents, or consumables can be substituted provided that equivalent assay performance is demonstrated.

5 Procedure

This method has been validated for the analysis of mevalonic acid (as mevalonic acid lactone) in rat plasma EDTA by GC/MSD using 100 µL sample volumes. The validated concentration range is 10.0 ng/mL to 250 ng/mL of mevalonic acid lactone in rat plasma EDTA. The conversion of the results to pmol/mL of mevalonic acid in rat plasma EDTA is described in the calculations section below. Note that the calibration curve and quality control standards are all prepared in water, not plasma. Mevalonic acid is a naturally occurring compound in plasma and concentrations will vary with diet. Concentrations found in pooled lots of blank rat plasma EDTA during the method validation were approximately 17 ng/mL. This background concentration level would interfere with the quantitation, especially at the lower calibration level. This method has been validated to use water matrix calibration curves and quality control samples. The validation demonstrated that the mevalonic acid lactone calculated results for the water matrix is equivalent to rat plasma EDTA.

THE ANALYSIS MEVALONIC ACID IN RAT PLASMA BY GC/MSD	
LM Number: MVAL00	Effective Date: November 1, 2000
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5.1 Preparation of Reagents

Note: Other volumes than those specified may be prepared using the same proportions.

5.1.1 Methylene Chloride:2-Propanol, (90:10, v:v) Solution

Combine 900 mL of methylene chloride with 100 mL of 2-propanol and mix. Store at room temperature. The expiration date for this solution is one week after preparation.

5.2 Preparation of Internal Standard Solutions

Concentration calculations are based on assuming that the standard reference materials are 100% pure unless noted otherwise. The following standard preparation scheme is a suggested approach. Appropriate modifications to reach the targeted nominal concentrations are acceptable and will be documented in the study notebook. All standard solutions will be stored at ≤-20°C unless noted otherwise. The expiration dates for these solutions are six months after preparation unless noted otherwise. Ongoing stability studies may change the expiration dates.

5.2.1 Internal Standard Stock (ISA)

MVL-d_4 is a liquid at room temperature and is purchased in vials containing approximately 100 mg. Weigh the vial and MVL-d_4. Transfer the MVL-d_4 to a 50 mL volumetric flask. Weigh the empty vial. Subtract the weights to obtain the amount of MVL-d_4 in the volumetric flask. Bring to volume with Milli-Q water and mix. The nominal MVL-d_4 IS concentration of this solution is 2000 µg/mL.

5.2.2 Internal Standard Spiking Solution

Transfer 20.0 µL of internal standard stock (ISA) into a 100 mL volumetric flask. Dilute to volume with Milli-Q water and mix. The nominal MVL-d_4 concentration of this solution is 400 ng/mL.

5.3 Preparation of Calibration Standard Stock Solutions

The following standard preparation scheme is a suggested approach. Appropriate modifications to reach the targeted nominal concentrations are acceptable and will be documented in the project notebook. For example, if the targeted nominal concentration is not achieved when preparing the analytical calibration stocks, the volume of the stock solutions used in subsequent dilutions can be modified so that the nominal calibration standard spiking solution concentrations are achieved. Standard reference materials are assumed to be 100% pure. Standard weights listed are not corrected for purity. All standard solutions will be stored at ≤-20°C unless noted otherwise. Ongoing stability studies are establishing the expiration dates of these solutions.

5.3.1 MVL Primary Stock (A)

Note that MVL is hydroscopic. A large amount of MVL is used and it is weighed out quickly to minimize the effects of absorbing moisture out of the air. Store the analytical reference standard under an inert gas such as nitrogen.

Weigh out approximately 100 mg of MVL and transfer it into a 100 mL volumetric flask. Bring to volume with ethyl acetate and mix. The nominal MVL concentration of this solution is 1000 µg/mL.

5.3.2 Secondary Stock (B)

Transfer 3.75 mL of the Primary Stock (A) into a 25.0 mL volumetric flask. Bring to volume with ethyl acetate and mix. The nominal MVL concentration of this solution is 150 µg/mL.

5.3.3 Preparation of Calibration Standard Spiking (CSS) Solutions

The following standard preparation scheme is a suggested approach. Appropriate modifications to reach the targeted nominal concentrations are acceptable and will be documented in the study notebook. All standard solutions will be stored at ≤-20°C unless noted otherwise. Ongoing stability studies are establishing the expiration dates of these solutions.

5.3.4 Prepare CSS solutions in 25.0 mL volumetric flasks as shown in the table below. All solutions are brought to volume with ethyl acetate. Final volumes of these calibration standard spiking solutions can be adjusted as long as proportionality is maintained and their preparation is properly documented in the study notebook.

Calibration Standard Spiking Solution Preparation

Spiking Solution ID	Stock Solution ID	Stock Solution Volume (µL)	Stock Solution Concentration (µg/mL)	Spiking Solution Final Volume (mL)	Spiking Solution Concentration (ng/mL)
CSS-1	Secondary Stock B	168	150	25.0	1010
CSS-2	Secondary Stock B	337	150	25.0	2020
CSS-3	Secondary Stock B	505	150	25.0	3030
CSS-4	Secondary Stock B	842	150	25.0	5050
CSS-5	Primary Stock A	227	1000	25.0	9090
CSS-6	Primary Stock A	379	1000	25.0	15150
CSS-7	Primary Stock A	631	1000	25.0	25250

5.3.5 Once prepared, aliquot the Calibration Spiking Solutions (suggested approximately 0.6 mL volumes) into plastic vials with o-ring sealed caps and store them at ≤-20°C until the time of analysis.

5.4 Preparation of Calibration Standards (STD) in Water

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Prepare calibration standards on the day of analysis by combining 2.50 mL of Milli-Q water, individually, with 0.0250 mL of the respective Calibration Spiking Solution (CSS) followed by mixing. The final concentration in water is listed in the table below.

Calibration Standard Preparation					
Calibration Standard ID	Water Volume (mL)	Spiking Solution Volume Added (mL)	Spiking Solution ID	Spiking Solution Concentration (ng/mL)	Final Nominal Plasma Conc. (ng/mL)
STD 1	2.50	0.0250	CSS-1	1010	10.0
STD 2	2.50	0.0250	CSS-2	2020	20.0
STD 3	2.50	0.0250	CSS-3	3030	30.0
STD 4	2.50	0.0250	CSS-4	5050	50.0
STD 5	2.50	0.0250	CSS-5	9090	90.0
STD 6	2.50	0.0250	CSS-6	15150	150
STD 7	2.50	0.0250	CSS-7	25250	250

5.5 Preparation of Quality Control (QC) Stock Solutions

The following standard preparation scheme is a suggested approach. Appropriate modifications to reach the targeted nominal concentrations are acceptable and will be documented in the project notebook. Standard reference materials are assumed to be 100% pure. Standard weights listed are not corrected for purity. All standard solutions will be stored at ≤-20°C unless noted otherwise. Ongoing stability studies are establishing the expiration dates of these solutions.

5.5.1 Primary QC Stock (AA)

Note that MVL is hydroscopic. A large amount of MVL is used and it is weighed out quickly to minimize the effects of absorbing moisture out of the air. Store the analytical reference standard under an inert gas such as nitrogen.

Weigh out approximately 100 mg of MVL and transfer it into a 100 mL volumetric flask. Bring to volume with ethyl acetate and mix. The nominal MVL concentration of this solution is 1000 µg/mL.

5.5.2 Secondary QC Stock (BB)

Transfer 5.00 mL of the Primary QC Stock (AA) into a 25.0 mL volumetric flask. Bring to volume with ethyl acetate and mix. The nominal MVL concentration of this solution is 200 µg/mL.

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5.6 Preparation of Quality Control Spiking Solutions (QCSS)

The following standard preparation scheme is a suggested approach. Appropriate modifications to reach the targeted nominal concentrations are acceptable and will be documented in the study notebook. All standard solutions will be stored at ≤-20°C unless noted otherwise. Ongoing stability studies are establishing the expiration dates of these solutions.

Prepare QCSS solutions in 25.0 mL volumetric flasks as shown in the table below. All solutions are brought to volume with ethyl acetate. Final volumes of these quality control spiking solutions can be adjusted as long as proportionality is maintained and their preparation is properly documented in the study notebook.

QC Standard Spiking Solution Preparation					
Spiking Solution ID	**Stock Solution ID Used**	**Stock Solution Volume (µL)**	**Stock Solution Conc. (µg/mL)**	**Spiking Solution Final Volume (mL)**	**Spiking Solution Conc. (ng/mL)**
QCSS-LOW	Secondary QC Stock BB	316	200	25.0	2525
QCSS-MED	Secondary QC Stock BB	884	200	25.0	7070
QCSS-HIGH	Primary QC Stock AA	505	1000	25.0	20200

5.7 Preparation of Quality Control (QC) Standards in Water

Combine 100 mL of Milli-Q water, individually, with 1.00 mL of each Quality Control Spiking Solution (QCSS) as shown on the table below.

Quality Control Standard Preparation					
Quality Control Standard ID	**Stock Solution ID**	**Stock Solution Concentration (ng/mL)**	**Stock Solution Spiking Volume (mL)**	**Final Volume. (mL)**	**QC Standard Concentration (ng/mL)**
Low QC	QCSS-LOW	2525	1.00	100	25.0
Mid QC	QCSS-MED	7070	1.00	100	70.0
High QC	QCSS-HIGH	20200	1.00	100	200

5.7.1 Once prepared, aliquot the QC standards (suggested approximately 1.2 mL volumes) into plastic vials with o-ring sealed caps and store them at ≤-20°C until the time of analysis.

5.8 Sample Extraction

5.8.1 Transfer 100 µL of each standard (total of 14), method blanks (in duplicate), control blanks (in duplicate), Quality Control Standards (duplicates at three concentration levels), and study samples into individual 15 mL conical bottom polypropylene test tubes.

5.8.2 Add 50.0 µL of Milli-Q water to each method blank.

5.8.3 Add 50.0 µL of the Internal Standard Spiking Solution to each tube except for the method blanks.

5.8.4 Vortex the tubes for a minimum of 5 seconds.

5.8.5 Add 0.100 mL of formic acid to each tube and vortex for a minimum of 5 seconds.

5.8.6 Allow tubes to sit on the bench for approximately 30 minutes to allow time for the conversion of MVA to MVL.

5.8.7 Add 0.800 mL of Milli-Q water to each tube and vortex for a minimum of 5 seconds.

5.8.8 Add 0.500 mL of chloroform to each tube and vortex for a minimum of 5 seconds. Note: a pipet dispenser may be used to add this reagent.

5.8.9 Centrifuge the tubes approximately 5 minutes at approximately 3500 rpm (approximately 2500 G). Distinct layers should form in each sample tube. Centrifuge again any sample which does not have distinct layers.

5.8.10 Transfer the top (aqueous) layer into new individual 15 mL conical bottom polypropylene test tubes and discard the choroform layer.

5.8.11 Saturate the aqueous layer with sodium sulfate. (Note: approximately 0.15 grams of sodium sulfate is plenty to saturate the aqueous layer. A measuring spoon may be used to add the sodium sulfate because the exact weight is not critical.)

5.8.12 Add 1.0 mL of methylene chloride:2-propanol solution to each tube containing the aqueous layer and vortex for a minimum of 5 seconds. Note: a pipet dispenser may be used to add this reagent.

5.8.13 Centrifuge the tubes approximately 5 minutes at approximately 3500 rpm (approximately 2500 G).

5.8.14 Transfer the bottom (organic) layer into new 15 mL conical bottom polypropylene test tubes.

5.8.15 Repeat the previous three steps.

5.8.16 Evaporate the organic layer to dryness in a Turbovap at 40 ±5°C at approximately 10 psi.

5.8.17 Add 50 uL of the ethyl acetate to each tube and vortex for a minimum of 5 seconds.

5.8.18 Transfer into crimp top autosampler vials with flat bottom inserts. Extracts are stable in autosampler vials stored at room temperature for up to 6 days. Note: If the extracts evaporate to dryness while waiting for analysis they may be reconstituted with more ethyl acetate before injecting.

5.9 Analytical Conditions

GC/MSD analysis is performed as follows:

5.9.1 Oven

Column: J&W, DB-210, 30 m, 0.25 mm ID, 0.25 µm film thickness

Initial Temperature: 50°C

Initial Time: 1.50 minutes

Oven Ramp:

Rate (°C/min.)	Final Temp. (°C)	Final Time (min.)
30.0	160	3.50
50.0	230	3.50

Run Time: approximately 14 minutes

5.9.2 Inlet

Injection Volume: 1 µL
Rinse Solvent: Hexanes
Mode: Splitless
Temperature: 240 °C
Purge Flow: 50.0 mL/minute
Purge Time: 0.75 minutes
Gas Type: Helium
Initial Flow: 3.5 mL/minute
Flow Ramp: Constant Flow Mode

5.9.3 Mass Selective Detector

Source:	Chemical Ionization (CI)
Source Mode:	Positive
CI Gas:	Isobutane
Flow Control Setting:	20
Acquisition Mode:	Selective Ion Monitoring (SIM)
Solvent Delay:	6.0 minutes (may be adjusted to be as long as possible without eliminating the first peak of interest)
MS Quad:	106°C
MS Source:	250°C
MSD Transfer Line:	250°C

5.9.4 Ions Monitored:

5.9.4.1 Group 1: Start time approximately 6.00[3]

Compound Name	Nominal Ion (m/z)	Dwell Time[1] (msec.)	Retention Time[2] (min.)
MVL	131	100	7.2
MVL-d_4	135	100	7.2

[1] = Dwell times may be modified to optimize performance.
[2] = Approximate retention time (RT) for a new column. Actual RT may vary as the column is shortened during maintenance. The RT is confirmed using the isotopically labeled internal standard.
[3] = Start time may be adjusted.

5.10 Analytical Run Sequence and Composition

Each analytical run will be comprised of bracketing water calibration curves (7 points) each with a water method blank sample (water with neither analyte nor internal standard spiked) and a water control blank (water with only internal standard included). Duplicate water QC standards at each of the three concentrations will be interspersed between the calibration curves.
Plasma Dilution QC's will be analyzed within analytical batches in which plasma samples are analyzed at a dilution. The dilution of plasma samples and plasma QC's will be performed using water as the diluent.

5.11 Calculations

5.11.1 Chromatograms will be automatically integrated and visually inspected for an acceptable integration using HP ChemStation (or equivalent). Manual integrations will be performed when necessary.

5.11.2 Compute the $1/X^2$-weighted least-squares linear regression relating the peak area ratios (relative to internal standard) of the calibration standards to their respective nominal concentration (ng/mL of MVL in water) using validated Excel spreadsheets (or equivalent).

5.11.3 Using the peak area ratios of the analyte (relative to the internal standards) in the samples and the appropriate regression equation constants, determine the concentration in ng/mL of MVL in water or plasma for all standards and samples using validated Excel spreadsheets (or equivalent). Correct for dilutions if appropriate.

5.11.4 If requested, the units of ng/mL of MVL in water or plasma may be converted to pmol/mL of MVA in water or plasma by multiplying by a unit conversion value (1000 pmol g/mol ng) and dividing by the molecular weight of MVL (130.14 g/mol). Below is an example showing the conversion of a sample concentration of 25 ng/mL of MVL in plasma.

$$\frac{25.0\ \text{ng}}{\text{mL}} \times \frac{1000\ \text{pmol g}}{\text{mol ng}} \times \frac{1\ \text{mol}}{130.14\ \text{g}} = \frac{192\ \text{pmol}}{\text{mL}}$$

5.12 Acceptance Criteria

5.12.1 Calibration Standards

5.12.1.1 The lower limit of quantitation (LLOQ) standard's back-calculated concentration must be within ±20% of theoretical nominal concentration.

5.12.1.2 All other standards' back-calculated concentration must be within ±15% of their nominal theoretical concentrations.

5.12.1.3 A minimum of 75% of the calibration standards must meet the back-calculated concentration criteria. (Note: this limit will be rounded down when using 14 calibration standards. Thus, a maximum of 4 standards may be rejected when analyzing a total of 14 calibration standards in a batch.)

5.12.1.4 At least one standard at the LLOQ and at the upper limit of quantitation (ULOQ) must meet the back-calculated concentration criteria.

5.12.2 Quality Control (QC) Standards

5.12.2.1 The lowest level QC's calculated concentration must be within ±20% of the nominal theoretical concentration.

5.12.2.2 All other QC's calculated concentration must be within ±15% of their nominal theoretical concentration

5.12.2.3 A minimum of 66% of all QC's must meet the calculated concentration criteria.

5.12.2.4 At least one QC at each concentration level must meet the calculated concentration criteria.

5.12.3 Blanks and Controls

A control blank should have a response (peak area ratio) less than or equal to 33% of the lowest accepted LLOQ calibration standard

The control blanks (in water) should have a response (peak area ratio) ≤33% of the lowest accepted LLOQ calibration standard.

5.13 Data Reporting

5.13.1 Sample concentrations less than the lowest calibration standard will be flagged as Below the Quantitation Limit (BQL).

5.13.2 Sample concentrations greater than the highest calibration standard will be appropriately diluted with Milli-Q water, re-extracted, and re-analyzed, provided that enough sample volume remains. If there is insufficient sample available, the original result will be reported as Above the Quantitation Limit (AQL).

6 Revision History

Initial laboratory method.

APPENDIX B

REPRESENTATIVE CHROMATOGRAMS FROM VALIDATION DAY 1

Peak Area Report

Sample Name: 1x Blank Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 13:52
Operator: MAN

Data File Name: 0621001.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 1

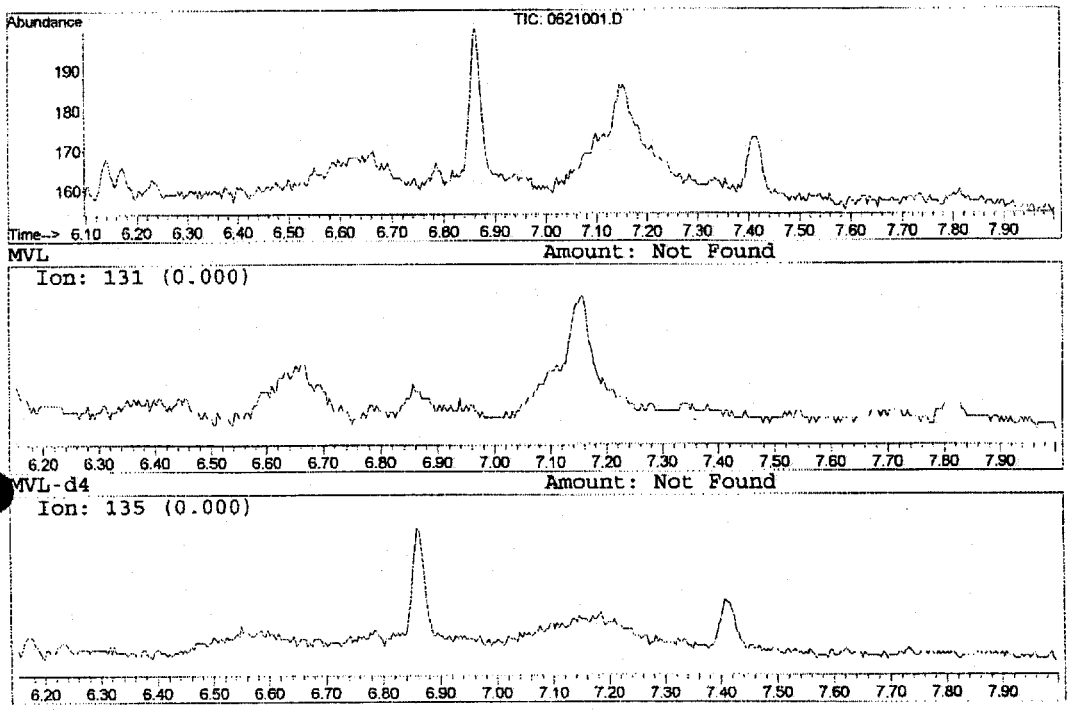
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		#DIV/0!
2)	MVL-d4	0.00	135	0		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621001.D Vial: 1
Acq On : 17 Oct 2000 13:52 Operator: MAN
Sample : 1x Blank Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-1 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 14:11
Operator: MAN

Data File Name: 0621002.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 2

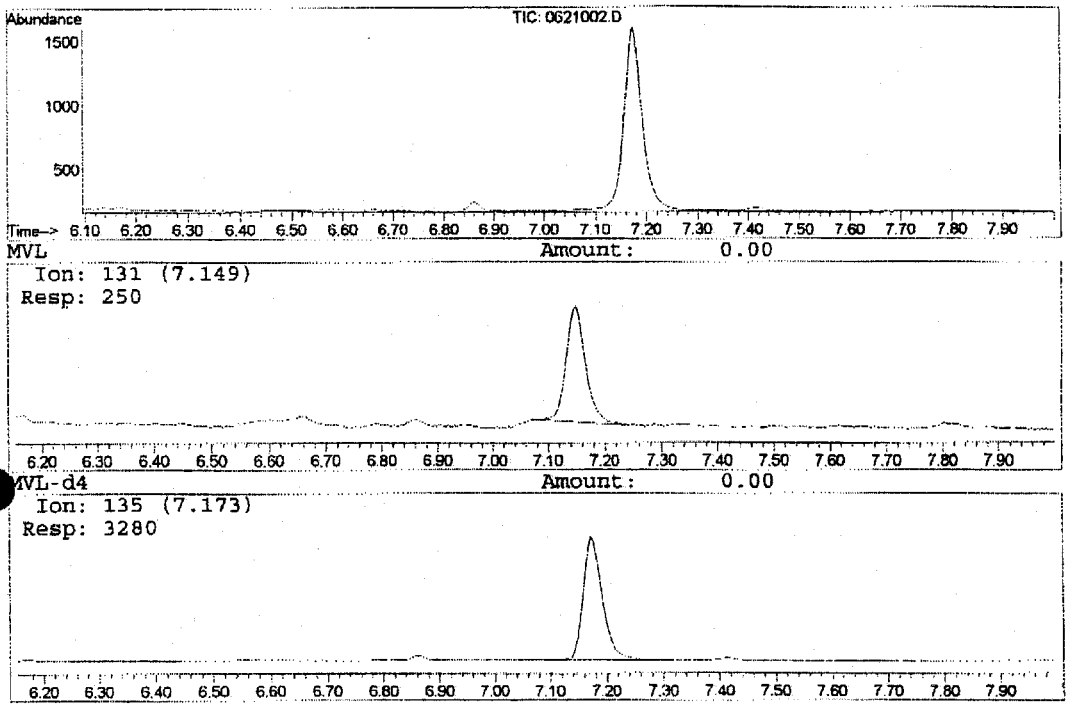
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.15	131	250		762.2E-4
2)	MVL-d4	7.17	135	3280		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621002.D Vial: 2
Acq On : 17 Oct 2000 14:11 Operator: MAN
Sample : 1x Std-1 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-2 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 14:30
Operator: MAN

Data File Name: 0621003.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 3

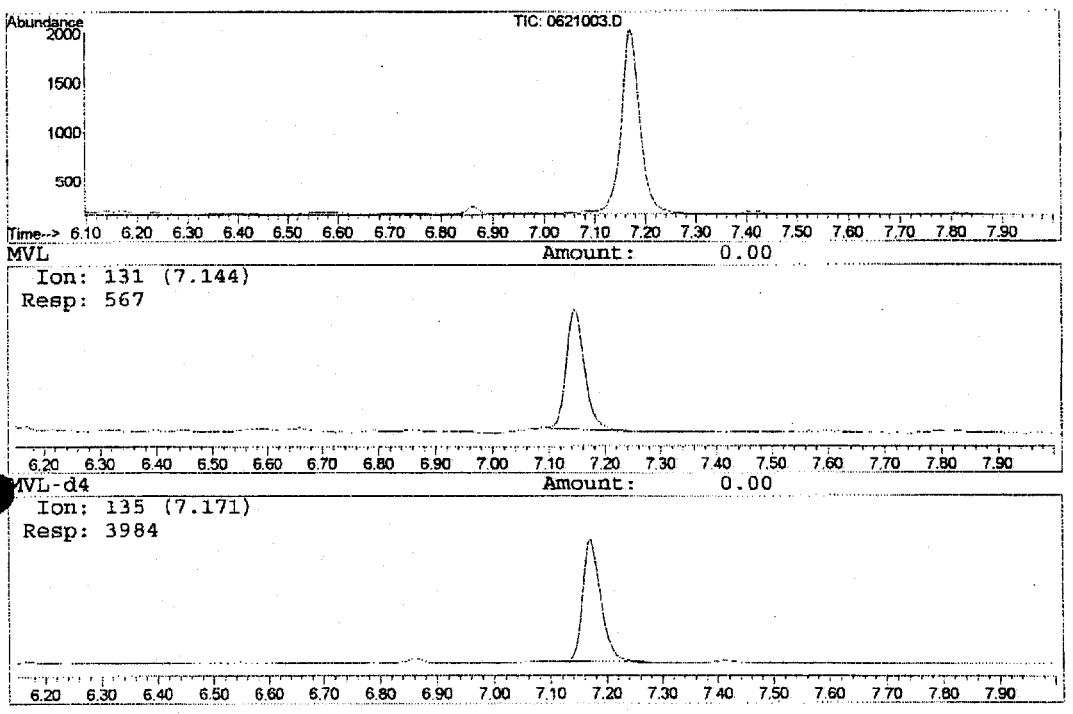
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	567	m	142.3E-3
2)	MVL-d4	7.17	135	3984		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621003.D Vial: 3
Acq On : 17 Oct 2000 14:30 Operator: MAN
Sample : 1x Std-2 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-3 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 14:50
Operator: MAN

Data File Name: 0621004.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 4

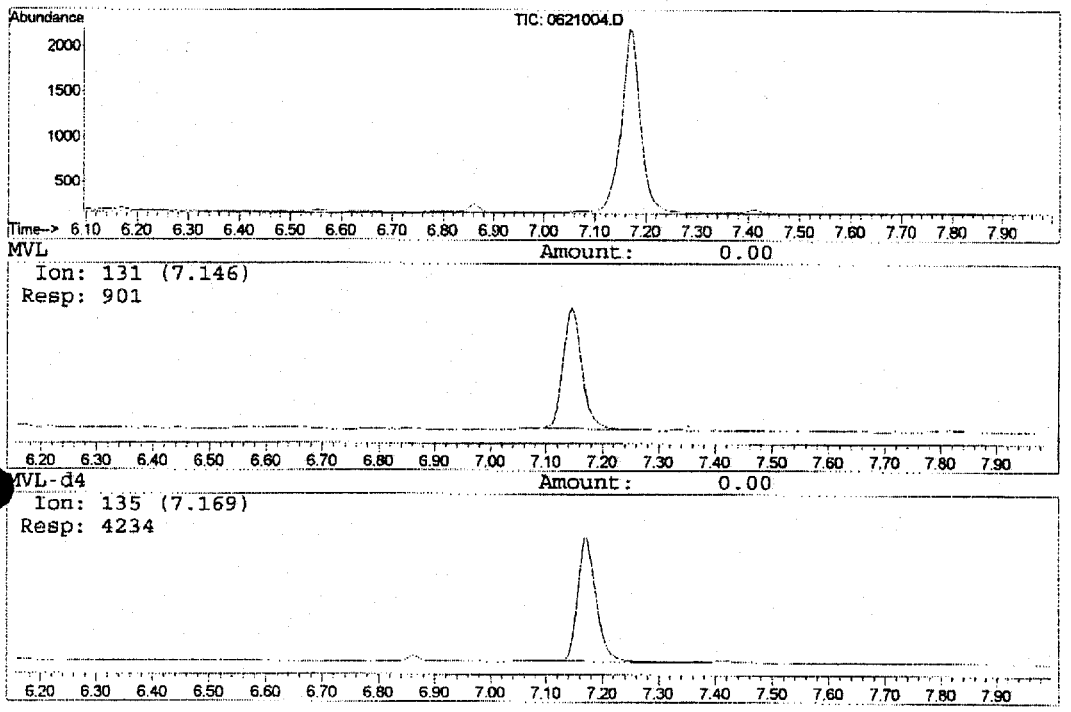
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.15	131	901	m	212.8E-3
2)	MVL-d4	7.17	135	4234		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621004.D Vial: 4
Acq On : 17 Oct 2000 14:50 Operator: MAN
Sample : 1x Std-3 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-4 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 15:09
Operator: MAN

Data File Name: 0621005.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 5

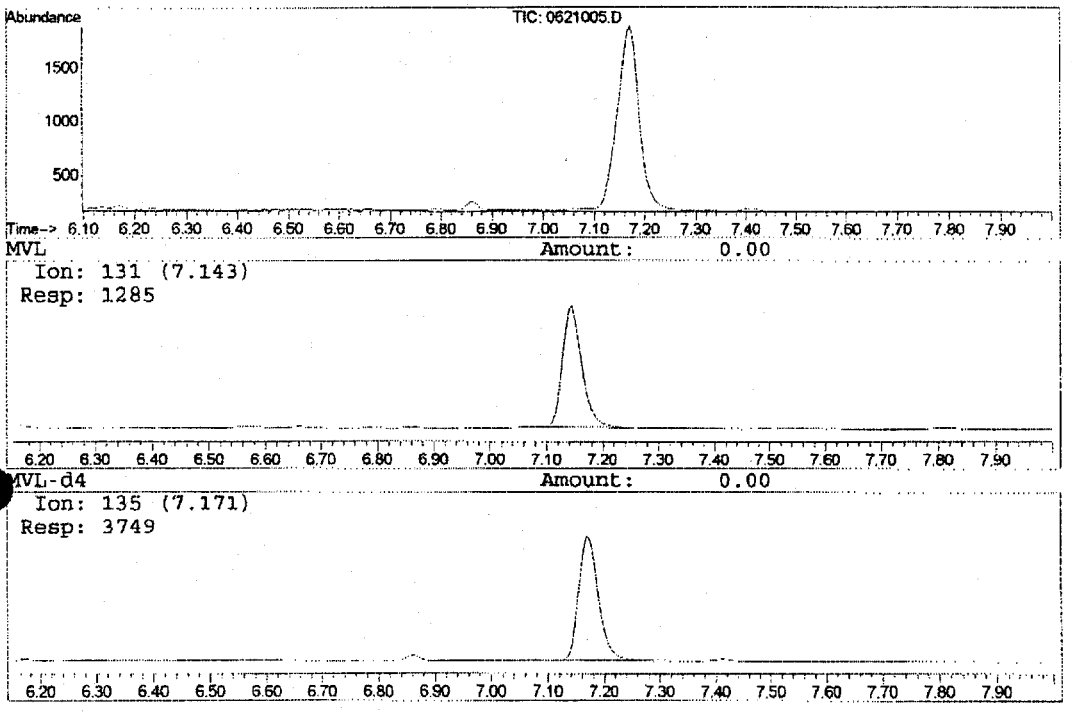
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	1285		342.8E-3
2)	MVL-d4	7.17	135	3749		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621005.D Vial: 5
Acq On : 17 Oct 2000 15:09 Operator: MAN
Sample : 1x Std-4 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-5 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 15:29
Operator: MAN

Data File Name: 0621006.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 6

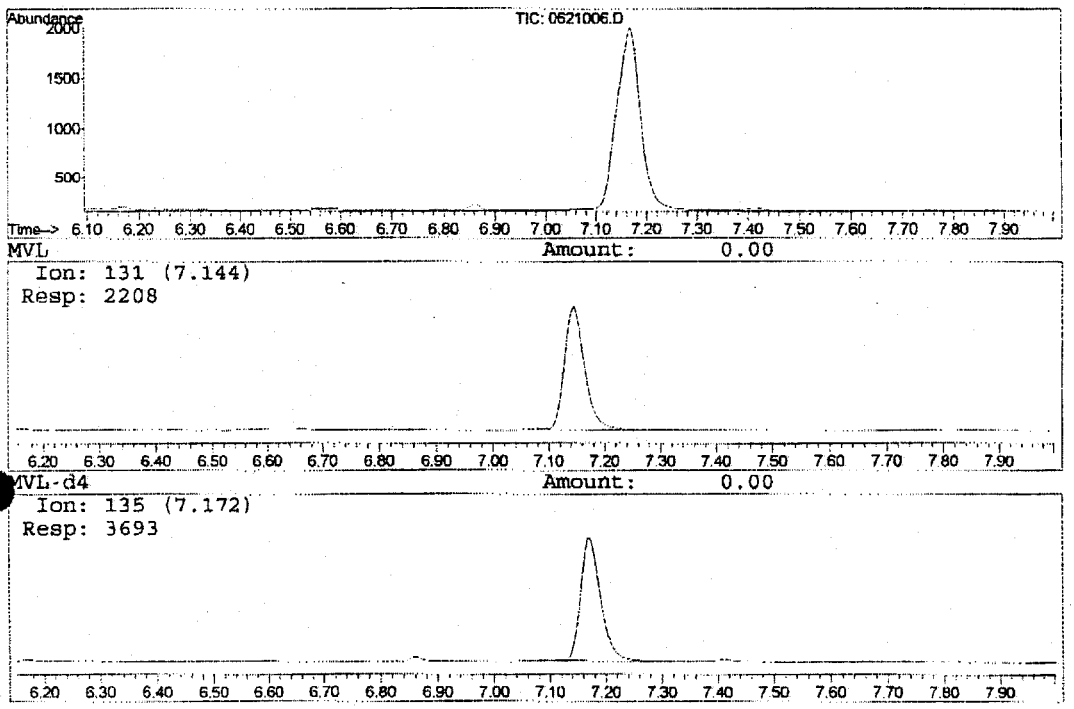
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2208		597.9E-3
2)	MVL-d4	7.17	135	3693		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621006.D Vial: 6
Acq On : 17 Oct 2000 15:29 Operator: MAN
Sample : 1x Std-5 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-6 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 15:48
Operator: MAN

Data File Name: 0621007.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 7

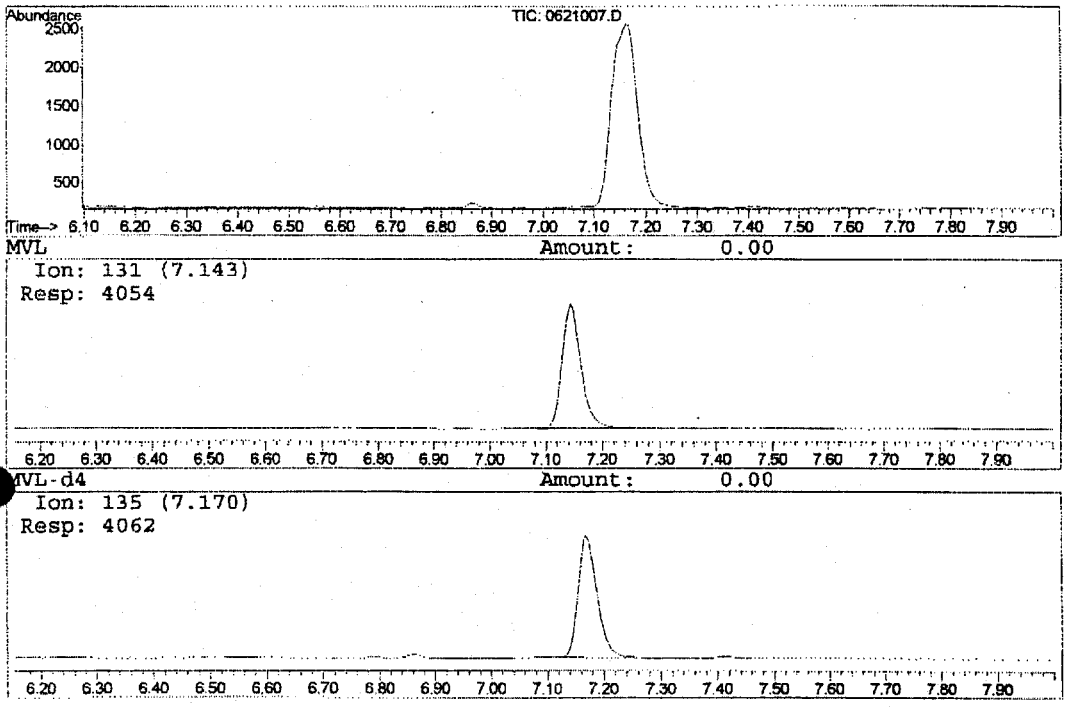
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	4054	m	998.0E-3
2)	MVL-d4	7.17	135	4062		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621007.D Vial: 7
Acq On : 17 Oct 2000 15:48 Operator: MAN
Sample : 1x Std-6 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Std-7 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 16:08
Operator: MAN

Data File Name: 0621008.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 8

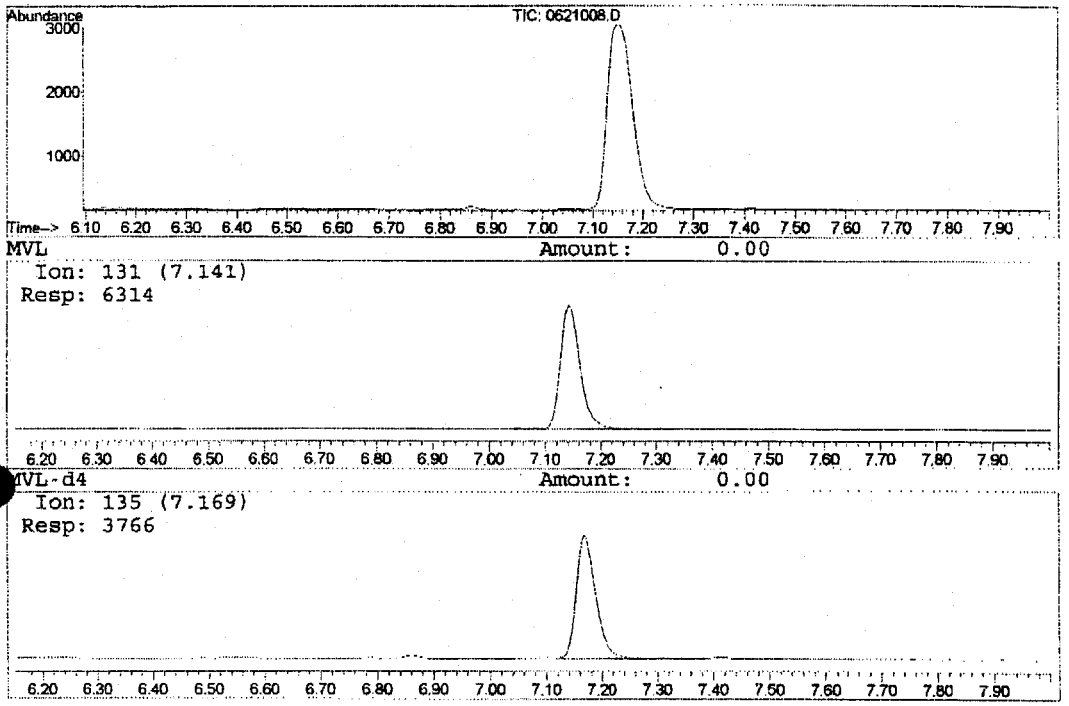
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	6314		167.7E-2
2)	MVL-d4	7.17	135	3766		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621008.D Vial: 8
Acq On : 17 Oct 2000 16:08 Operator: MAN
Sample : 1x Std-7 Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Control Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 16:27
Operator: MAN

Data File Name: 0621009.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 9

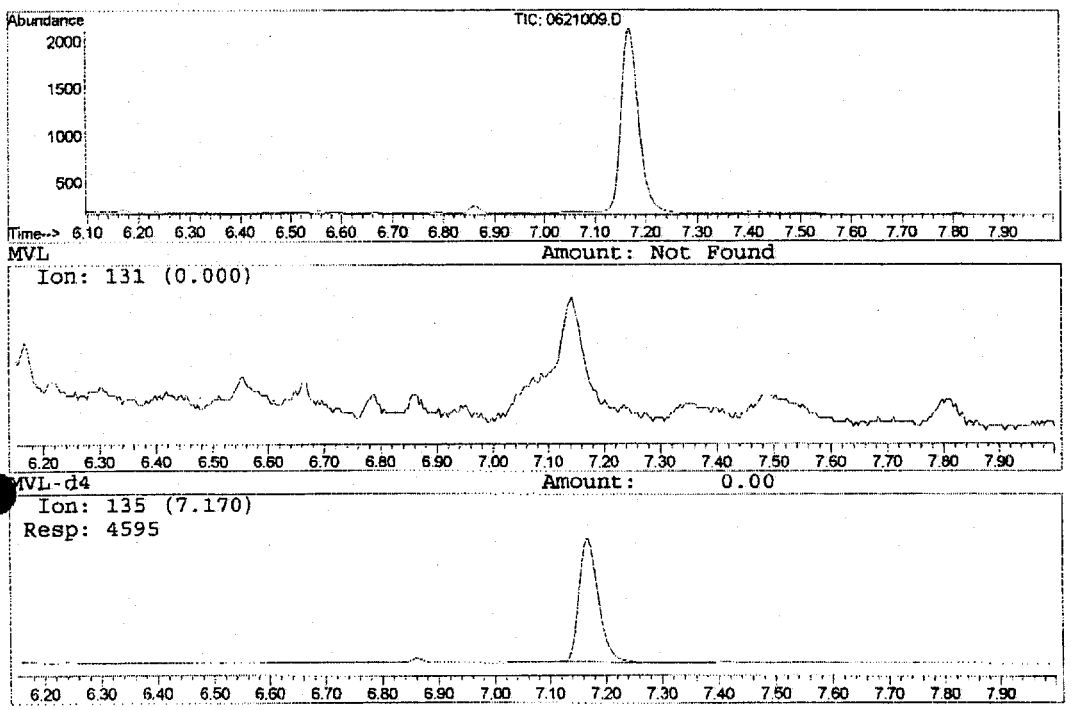
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		000.0E-3
2)	MVL-d4	7.17	135	4595		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621009.D Vial: 9
Acq On : 17 Oct 2000 16:27 Operator: MAN
Sample : 1x Control Water Inst : MS7
Misc :

MS Integration Params: rteint.p
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC HIGH Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 16:47
Operator: MAN

Data File Name: 0621010.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 10

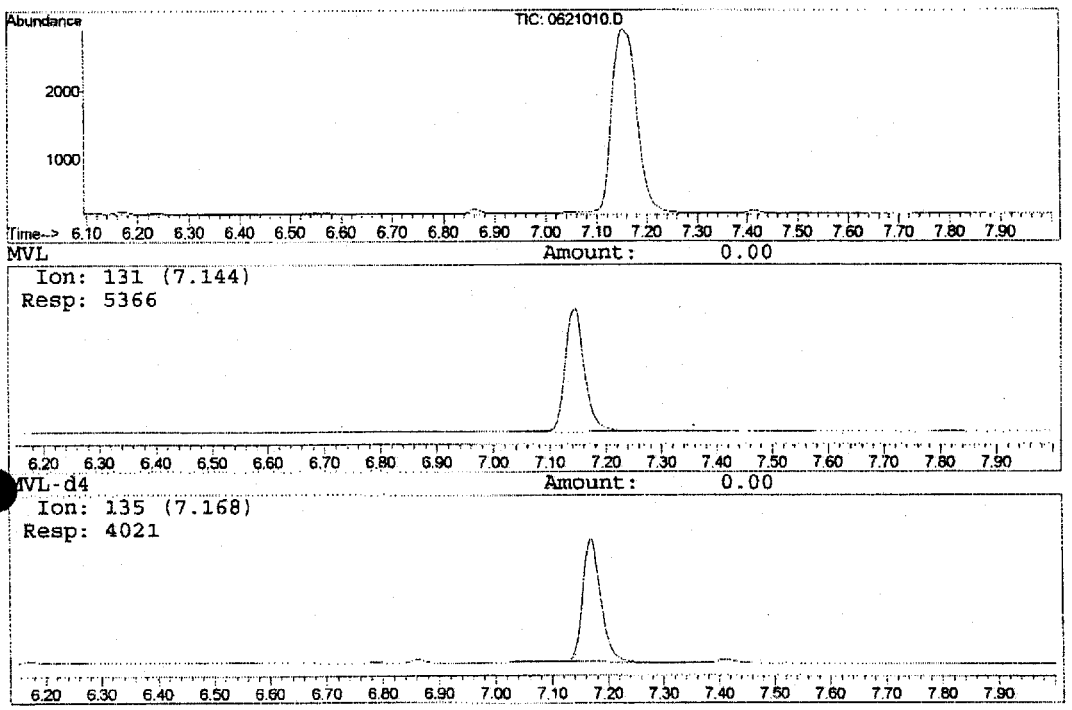
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	5366		133.4E-2
2)	MVL-d4	7.17	135	4021		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621010.D Vial: 10
Acq On : 17 Oct 2000 16:47 Operator: MAN
Sample : 1x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 17:07
Operator: MAN

Data File Name: 0621011.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 11

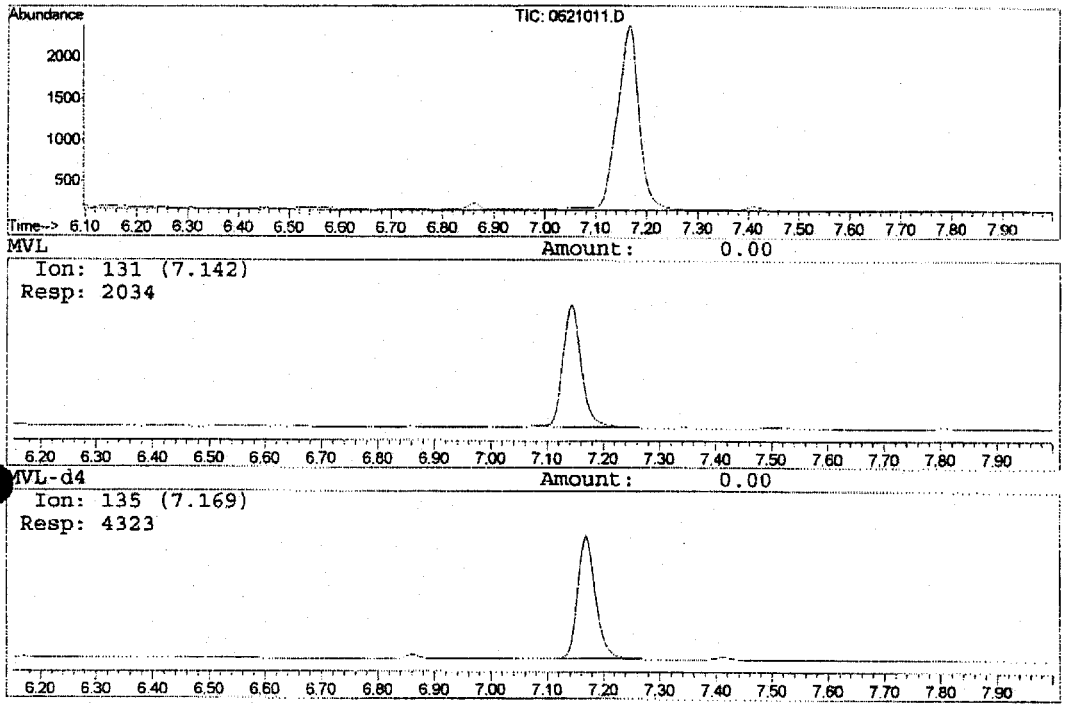
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2034	m	470.5E-3
2)	MVL-d4	7.17	135	4323		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621011.D Vial: 11
Acq On : 17 Oct 2000 17:07 Operator: MAN
Sample : 1x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 17:26
Operator: MAN

Data File Name: 0621012.D
Data File Path: D:\MSD_DATA\PABV\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 12

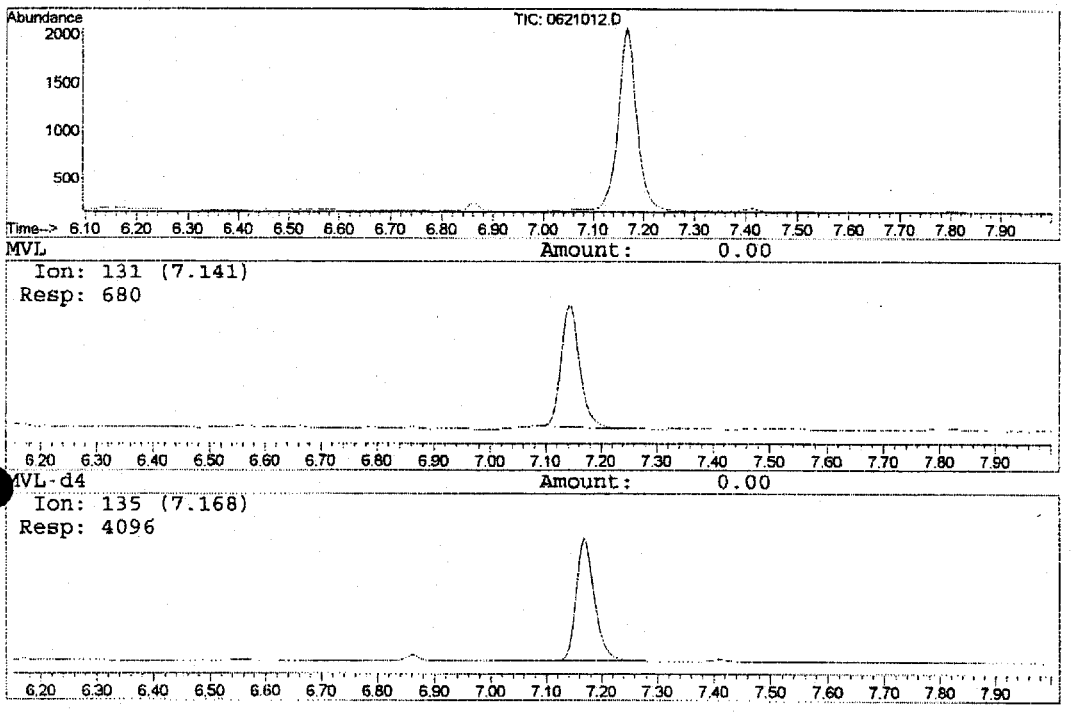
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	680	m	166.0E-3
2)	MVL-d4	7.17	135	4096		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621012.D Vial: 12
Acq On : 17 Oct 2000 17:26 Operator: MAN
Sample : 1x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 17:46
Operator: MAN

Data File Name: 0621013.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 13

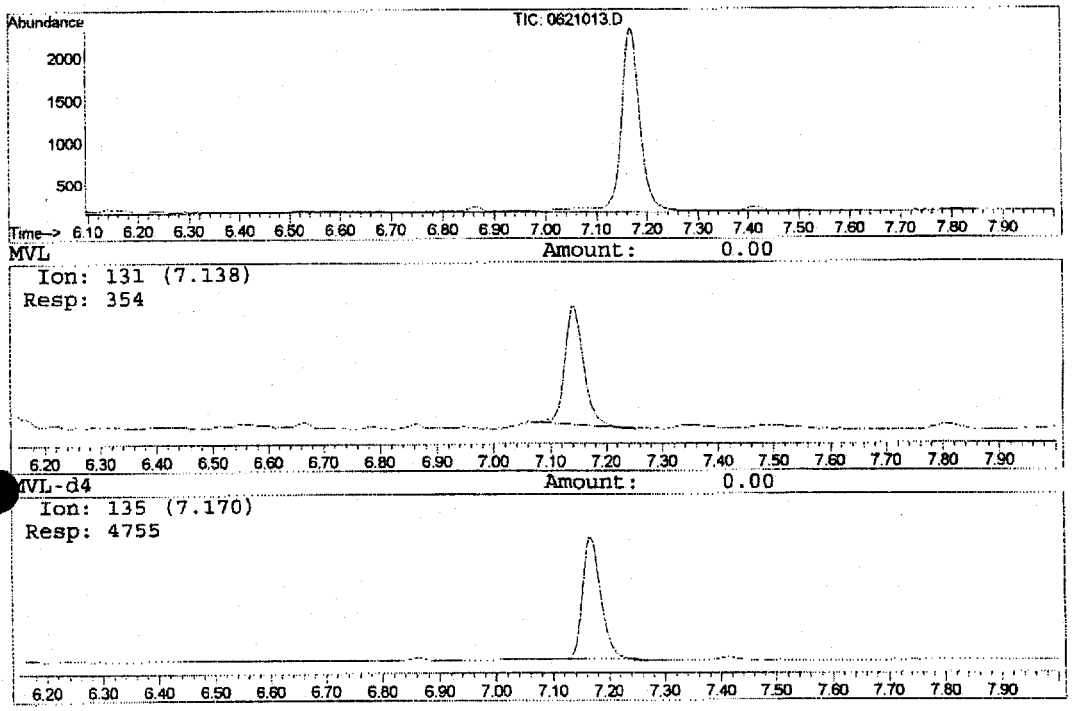
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	354		744.5E-4
2)	MVL-d4	7.17	135	4755		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621013.D Vial: 13
Acq On : 17 Oct 2000 17:46 Operator: MAN
Sample : 1x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 18:05
Operator: MAN

Data File Name: 0621014.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 14

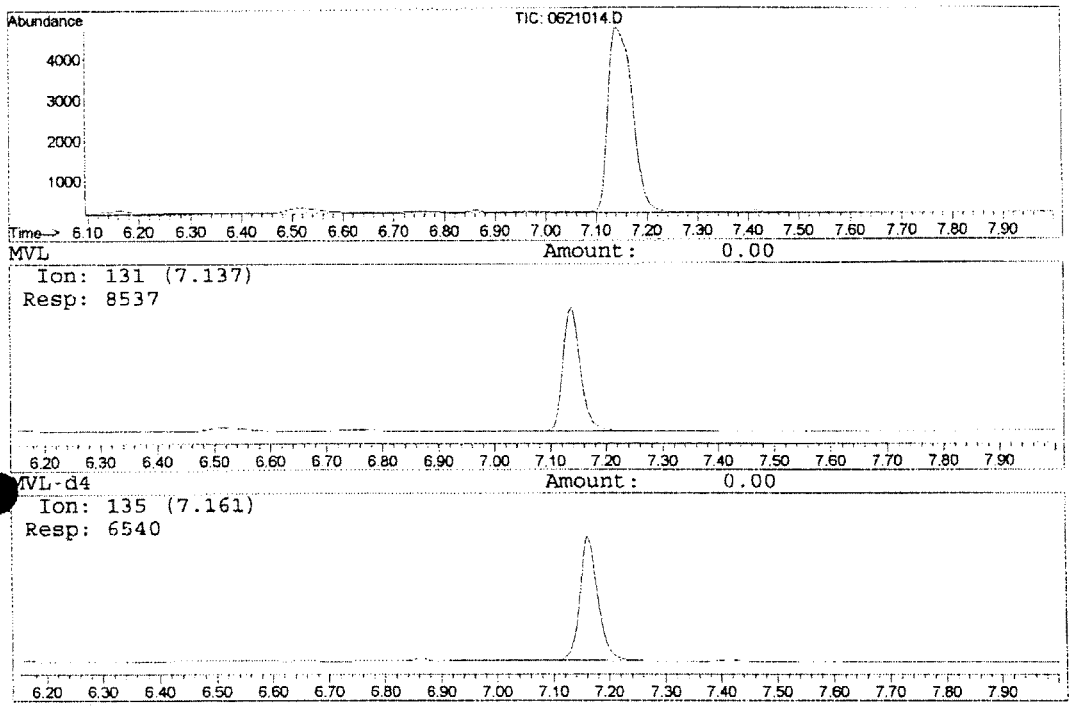
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	8537		130.5E-2
2)	MVL-d4	7.16	135	6540		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621014.D Vial: 14
Acq On : 17 Oct 2000 18:05 Operator: MAN
Sample : 1x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC MID Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 18:25
Operator: MAN

Data File Name: 0621015.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 15

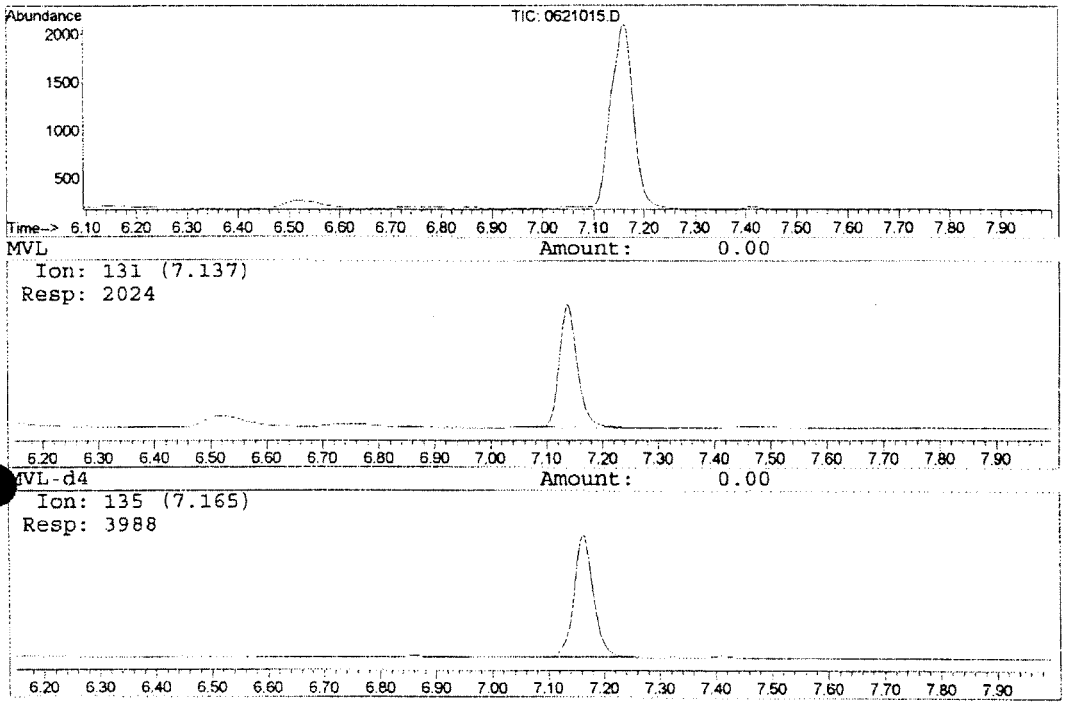
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2024		507.5E-3
2)	MVL-d4	7.16	135	3988		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621015.D Vial: 15
Acq On : 17 Oct 2000 18:25 Operator: MAN
Sample : 1x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 18:44
Operator: MAN

Data File Name: 0621016.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 16

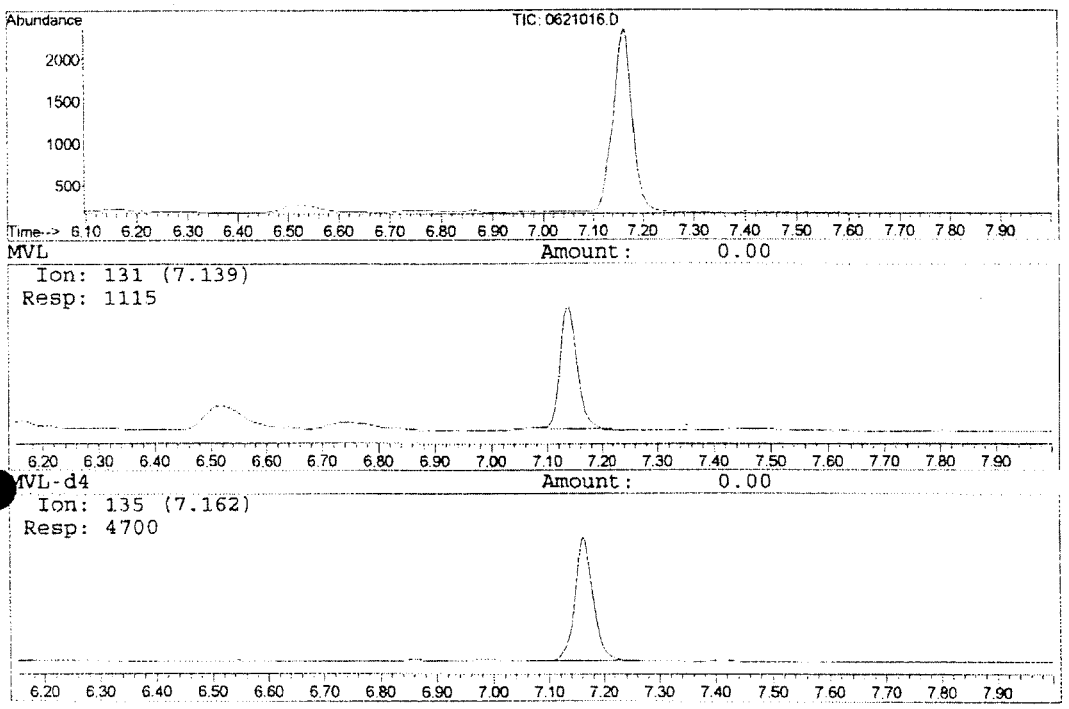
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	1115	m	237.2E-3
2)	MVL-d4	7.16	135	4700		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621016.D Vial: 16
Acq On : 17 Oct 2000 18:44 Operator: MAN
Sample : 1x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 1x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 19:04
Operator: MAN

Data File Name: 0621017.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 17

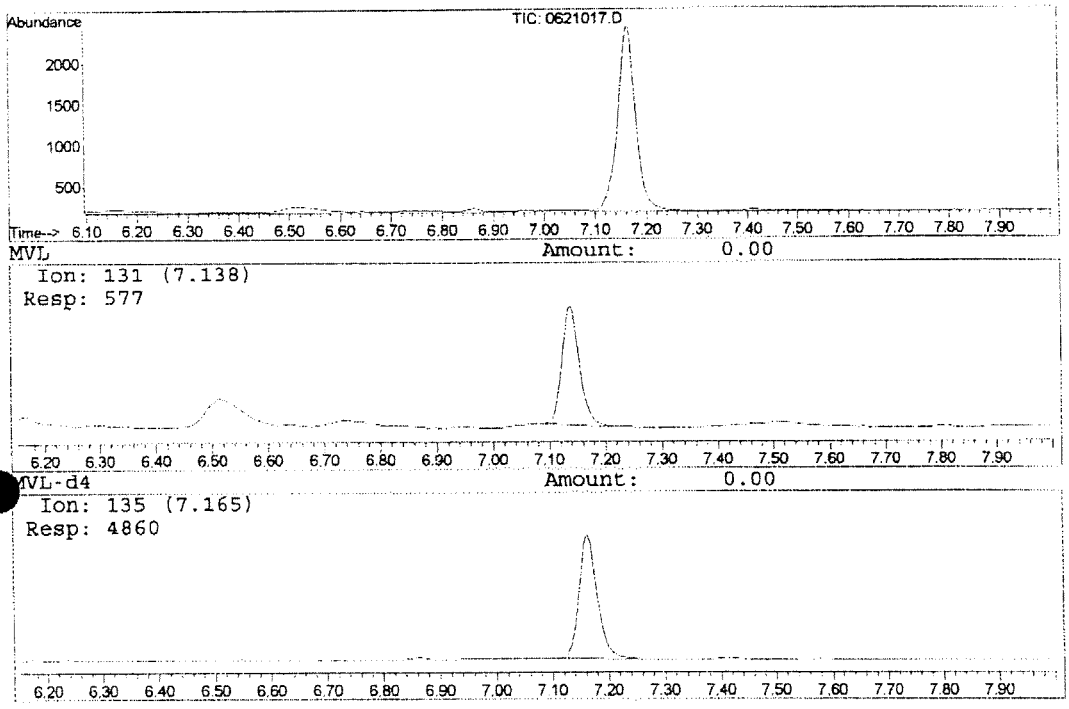
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	577	m	118.7E-3
2)	MVL-d4	7.17	135	4860		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621017.D Vial: 17
Acq On : 17 Oct 2000 19:04 Operator: MAN
Sample : 1x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC HIGH Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 19:24
Operator: MAN

Data File Name: 0621018.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 18

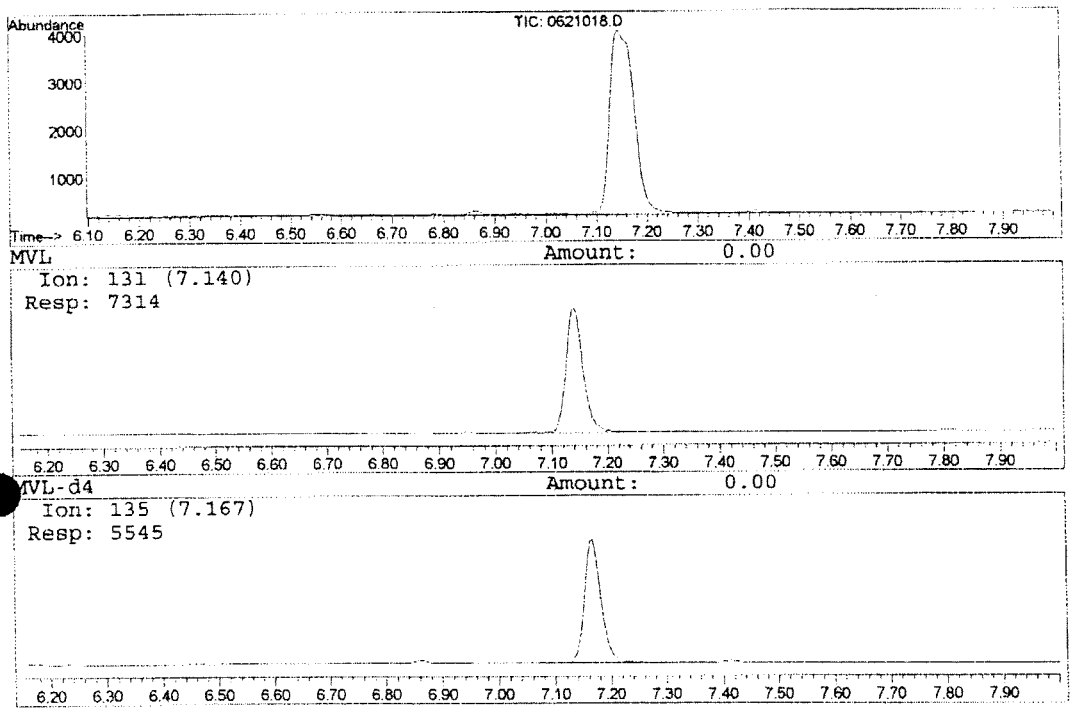
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	7314		131.9E-2
2)	MVL-d4	7.17	135	5545		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621018.D Vial: 18
Acq On : 17 Oct 2000 19:24 Operator: MAN
Sample : 2 x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 19:43
Operator: MAN

Data File Name: 0621019.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 19

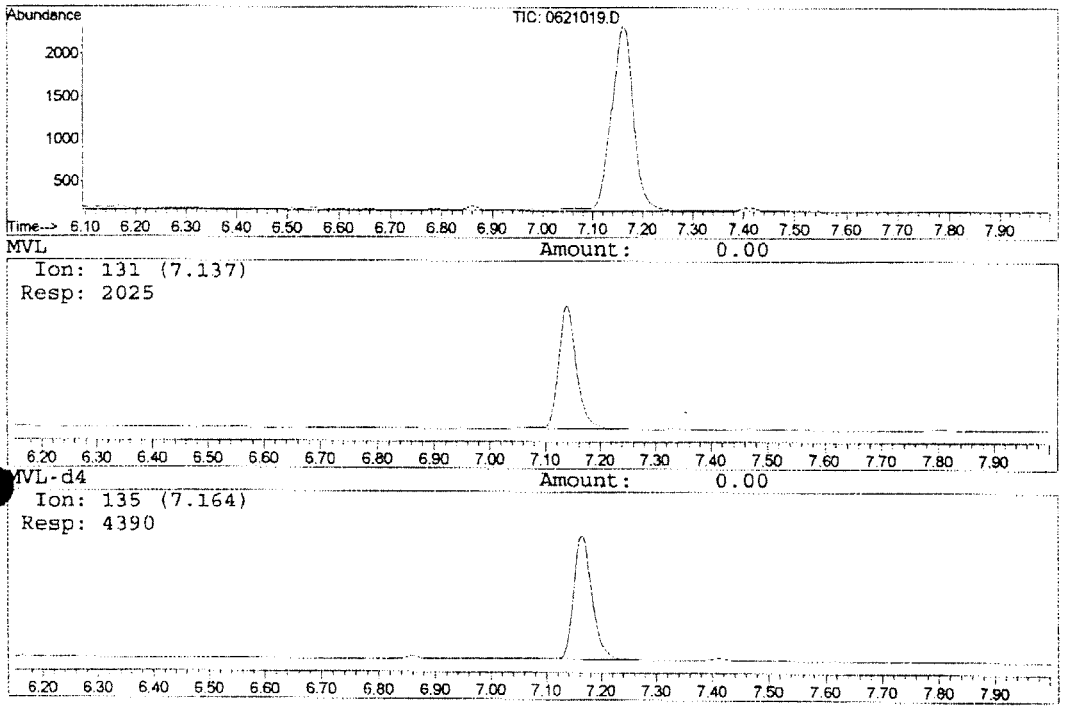
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2025	m	461.3E-3
2)	MVL-d4	7.16	135	4390		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621019.D Vial: 19
Acq On : 17 Oct 2000 19:43 Operator: MAN
Sample : 2 x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 20:03
Operator: MAN

Data File Name: 0621020.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 20

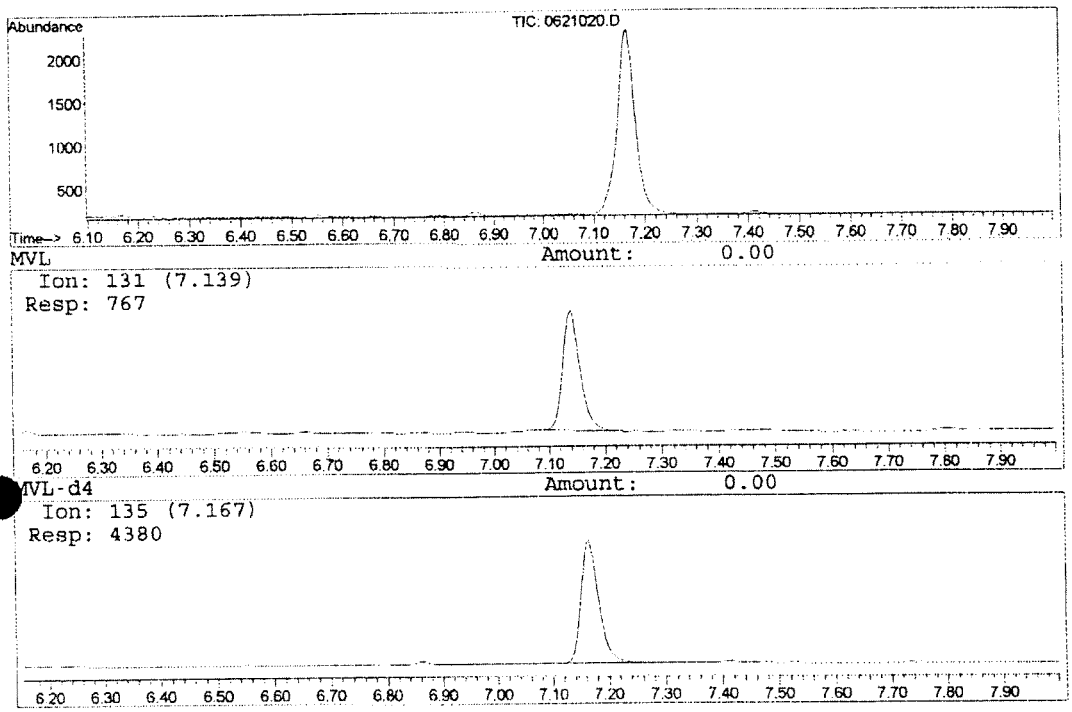
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	767	m	175.1E-3
2)	MVL-d4	7.17	135	4380		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621020.D Vial: 20
Acq On : 17 Oct 2000 20:03 Operator: MAN
Sample : 2 x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 20:22
Operator: MAN

Data File Name: 0621021.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 21

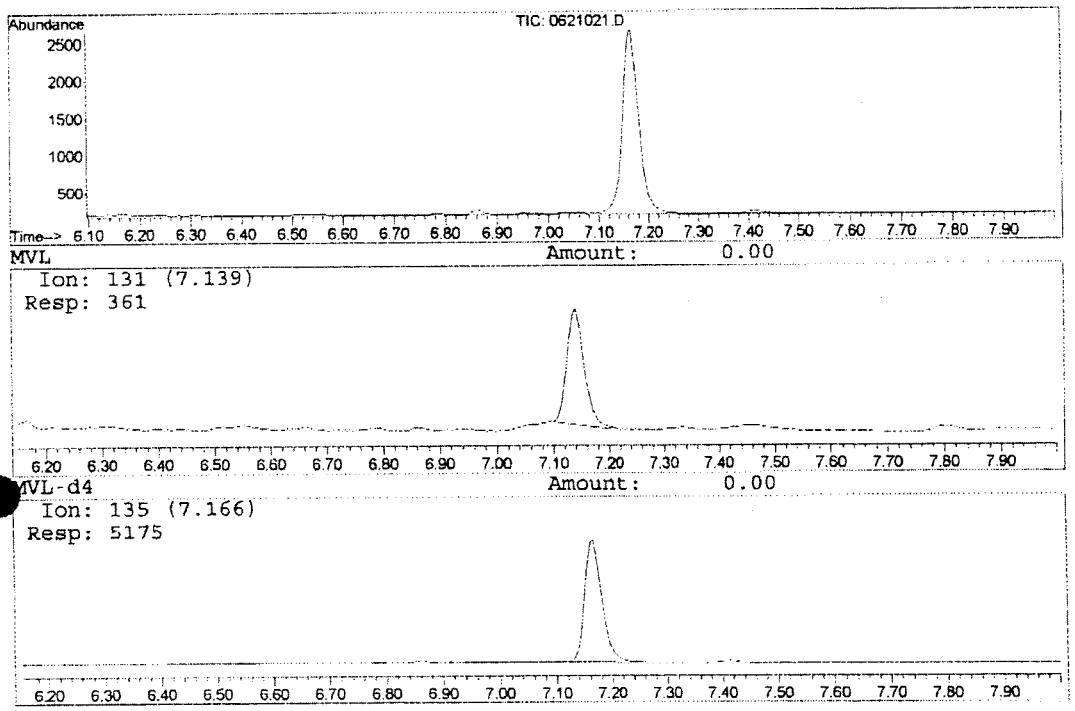
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	361	m	697.6E-4
2)	MVL-d4	7.17	135	5175		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621021.D Vial: 21
Acq On : 17 Oct 2000 20:22 Operator: MAN
Sample : 2 x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 20:42
Operator: MAN

Data File Name: 0621022.D
Data File Path: D:\MSD_DATA\PABV\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 22

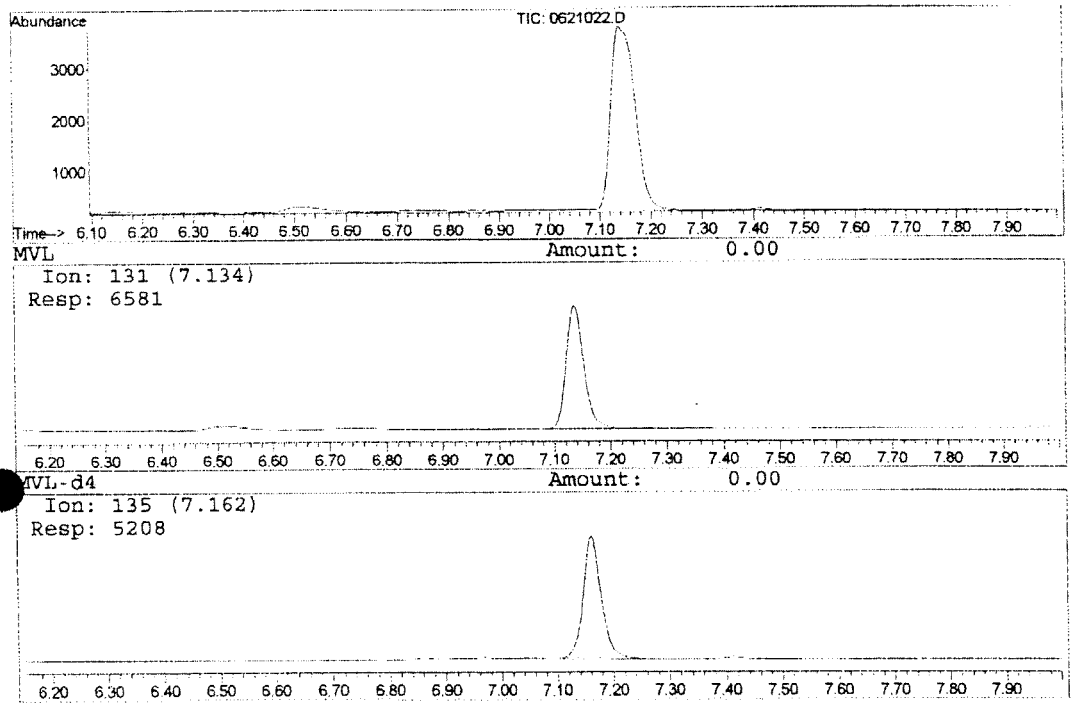
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	6581		126.4E-2
2)	MVL-d4	7.16	135	5208		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621022.D Vial: 22
Acq On : 17 Oct 2000 20:42 Operator: MAN
Sample : 2 x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC MID Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 21:01
Operator: MAN

Data File Name: 0621023.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 23

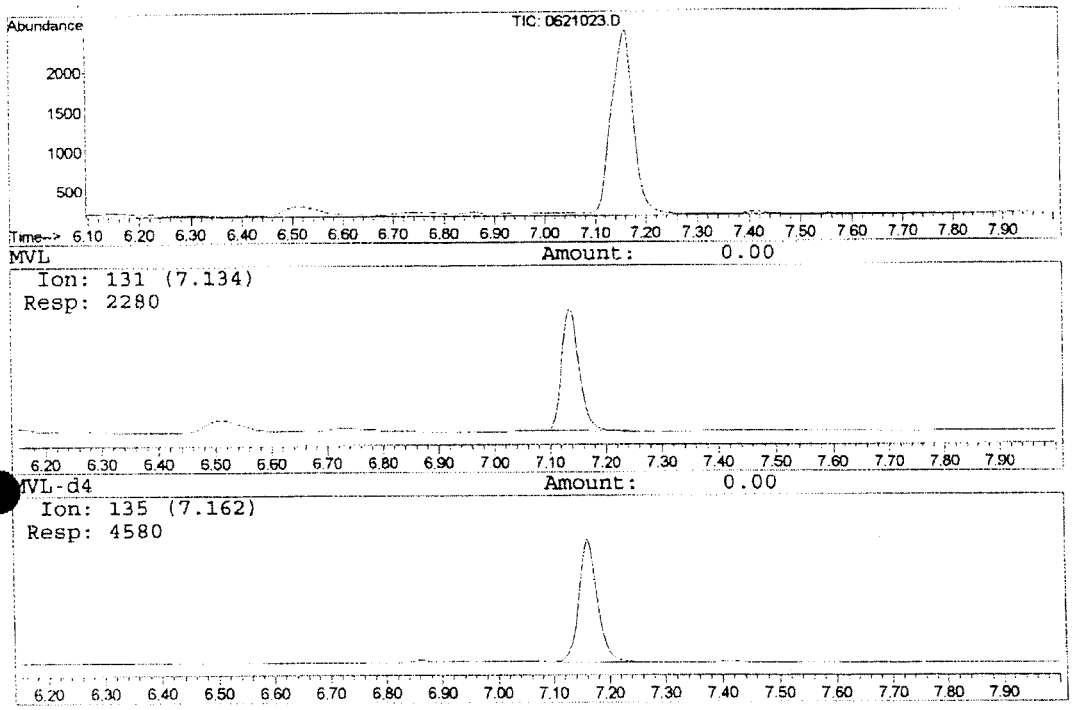
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2280	m	497.8E-3
2)	MVL-d4	7.16	135	4580		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621023.D Vial: 23
Acq On : 17 Oct 2000 21:01 Operator: MAN
Sample : 2 x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062
Date Acquired: 10/17/2000 21:21
Operator: MAN

Data File Name: 0621024.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA
Instrument Name: MS7
Instrument Vial Number: 24

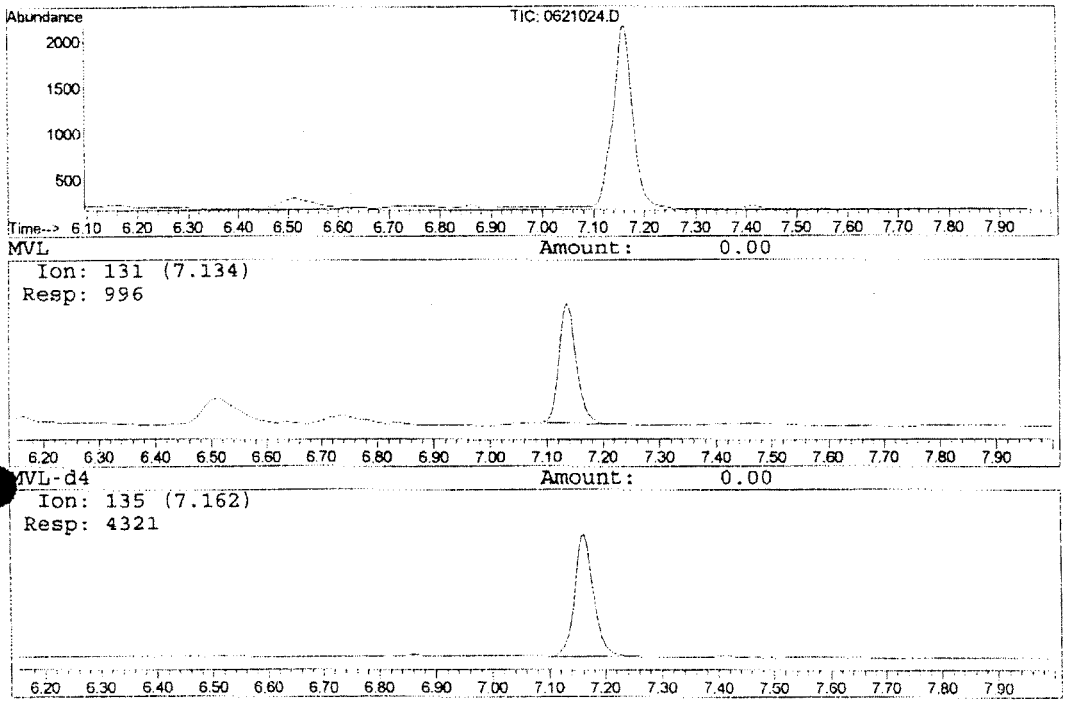
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	996		230.5E-3
2)	MVL-d4	7.16	135	4321		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621024.D Vial: 24
Acq On : 17 Oct 2000 21:21 Operator: MAN
Sample : 2 x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 21:40
Operator: MAN

Data File Name: 0621025.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 25

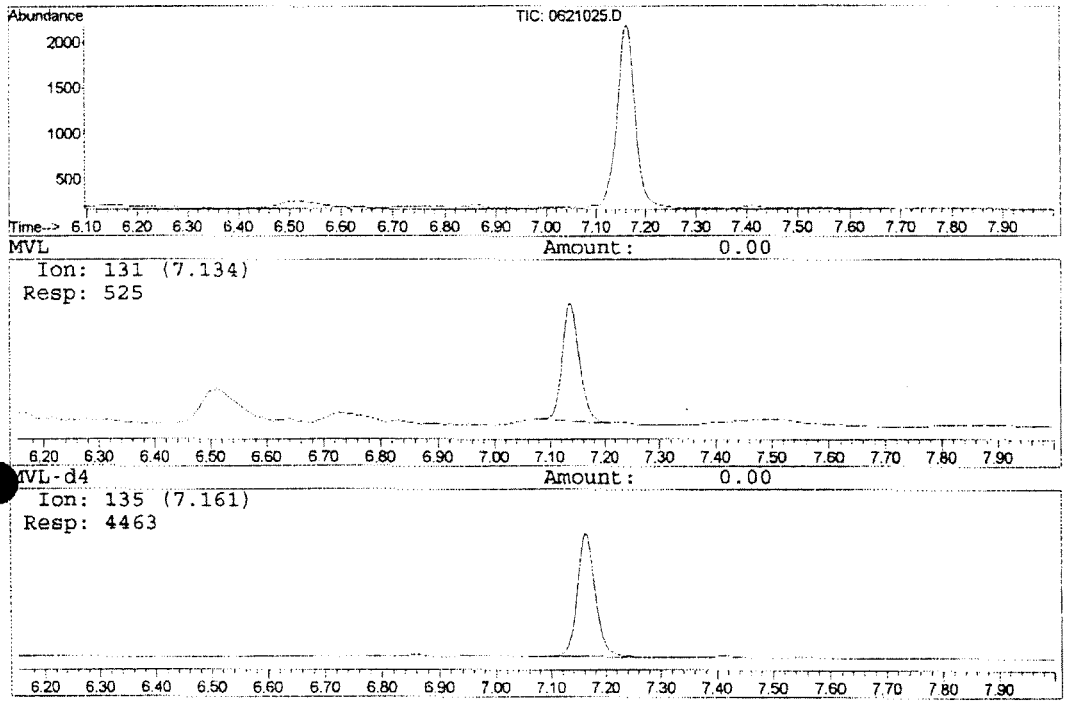
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	525	m	117.6E-3
2)	MVL-d4	7.16	135	4463		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621025.D Vial: 25
Acq On : 17 Oct 2000 21:40 Operator: MAN
Sample : 2 x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC HIGH Water
Notebook Reference: PABX-BVA-1-062
Date Acquired: 10/17/2000 22:00
Operator: MAN

Data File Name: 0621026.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA
Instrument Name: MS7
Instrument Vial Number: 26

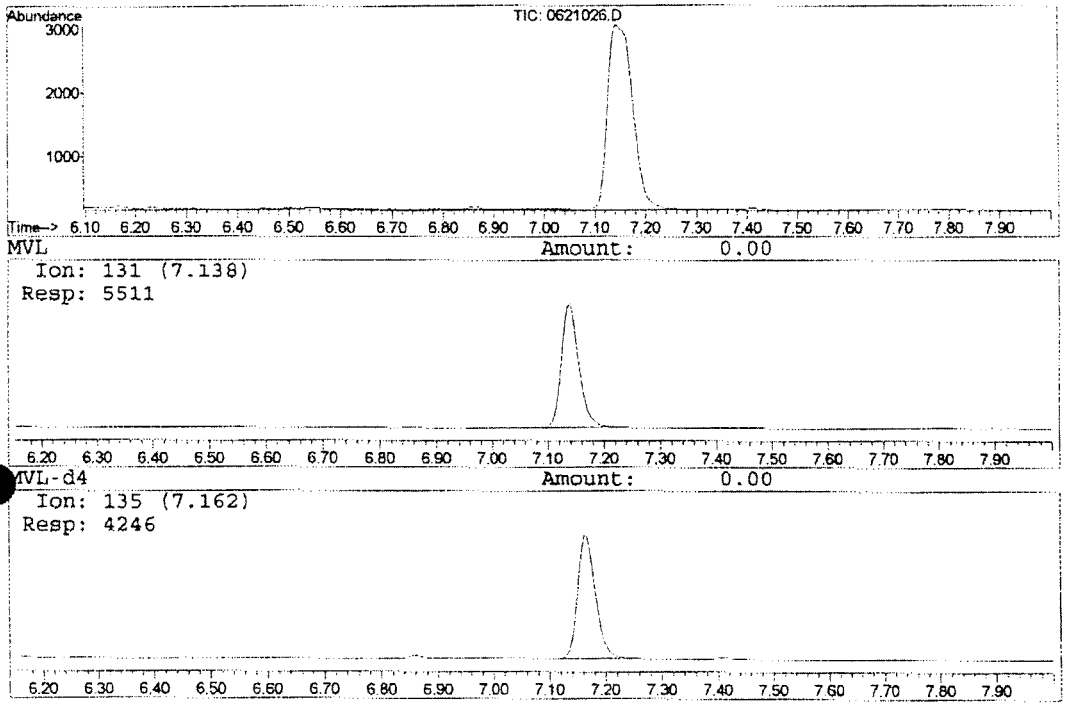
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	5511		129.8E-2
2)	MVL-d4	7.16	135	4246		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621026.D Vial: 26
Acq On : 17 Oct 2000 22:00 Operator: MAN
Sample : 3 x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 22:19
Operator: MAN

Data File Name: 0621027.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 27

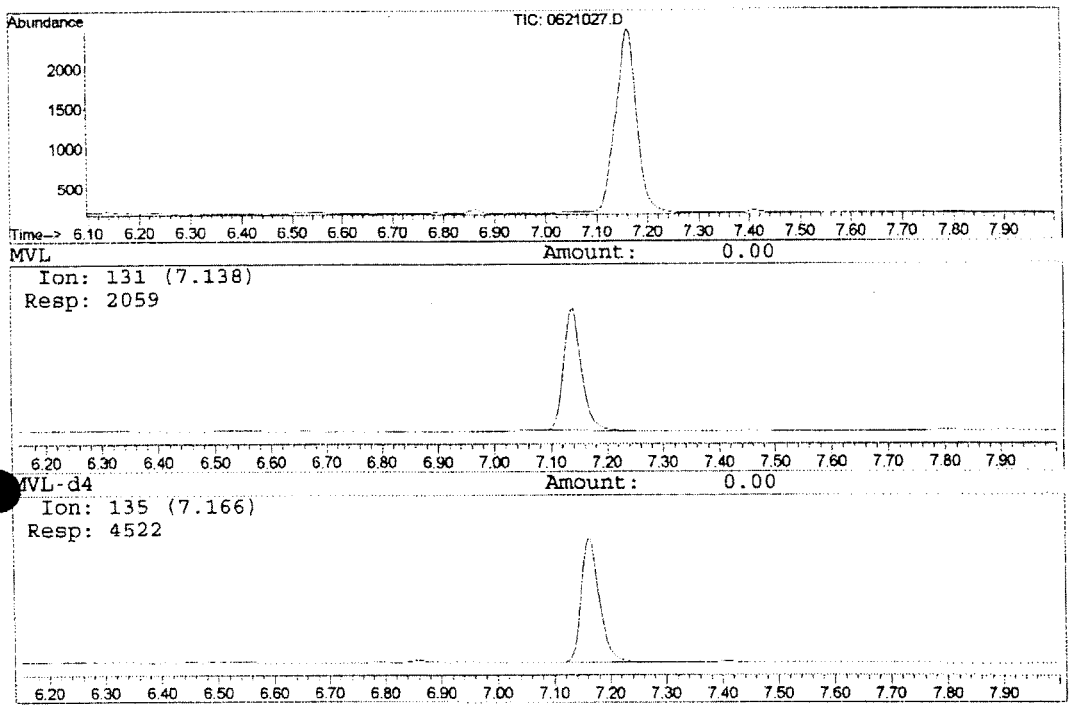
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2059	m	455.3E-3
2)	MVL-d4	7.17	135	4522		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621027.D Vial: 27
Acq On : 17 Oct 2000 22:19 Operator: MAN
Sample : 3 x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 22:39
Operator: MAN

Data File Name: 0621028.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 28

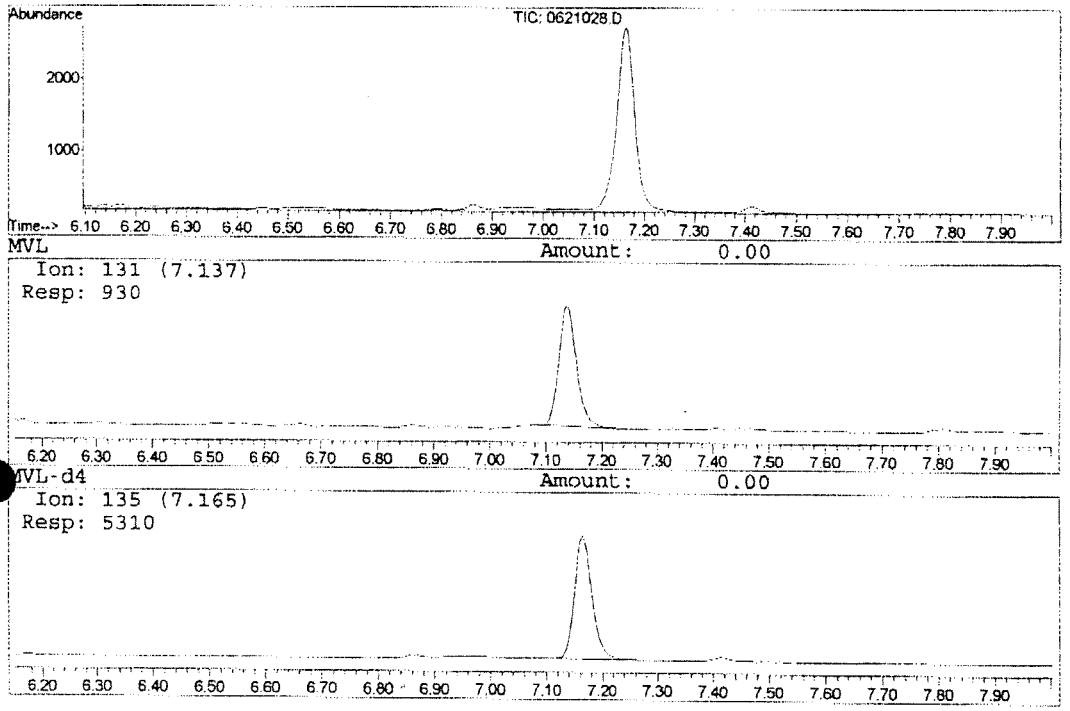
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	930	m	175 1E-3
2)	MVL-d4	7.16	135	5310		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621028.D Vial: 28
Acq On : 17 Oct 2000 22:39 Operator: MAN
Sample : 3 x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 22:58
Operator: MAN

Data File Name: 0621029.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 29

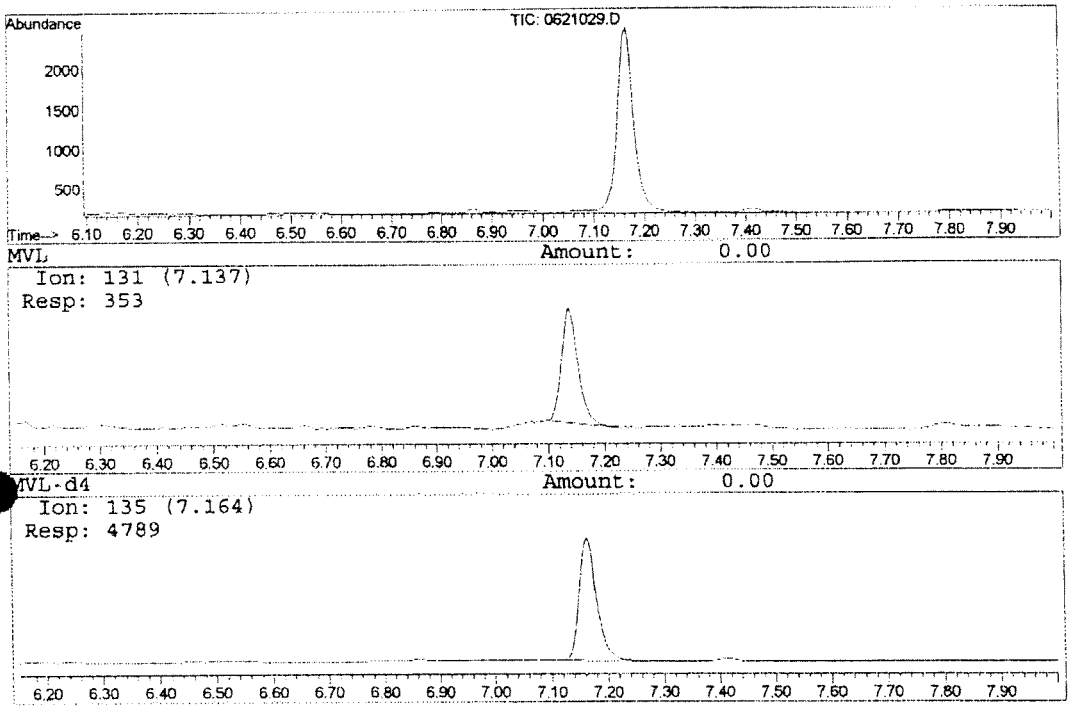
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	353		737.1E-4
2)	MVL-d4	7.16	135	4789		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621029.D Vial: 29
Acq On : 17 Oct 2000 22:58 Operator: MAN
Sample : 3 x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062
Date Acquired: 10/17/2000 23:18
Operator: MAN

Data File Name: 0621030.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA
Instrument Name: MS7
Instrument Vial Number: 30

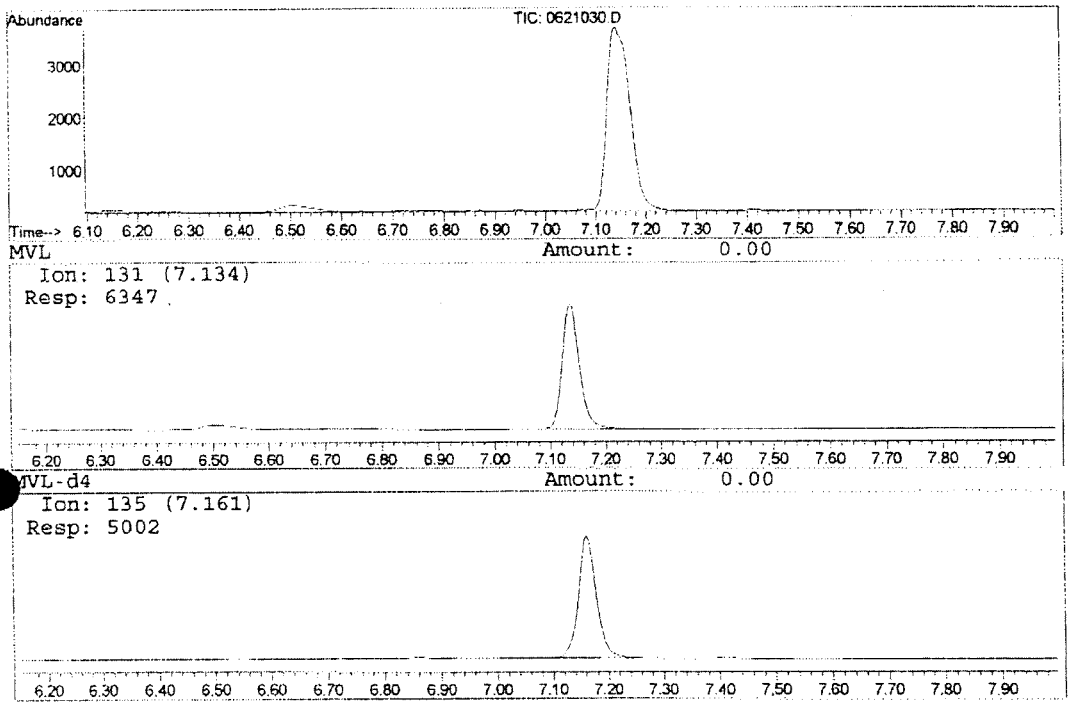
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	6347		126.9E-2
2)	MVL-d4	7.16	135	5002		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621030.D Vial: 30
Acq On : 17 Oct 2000 23:18 Operator: MAN
Sample : 3 x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC MID Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 23:37
Operator: MAN

Data File Name: 0621031.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 31

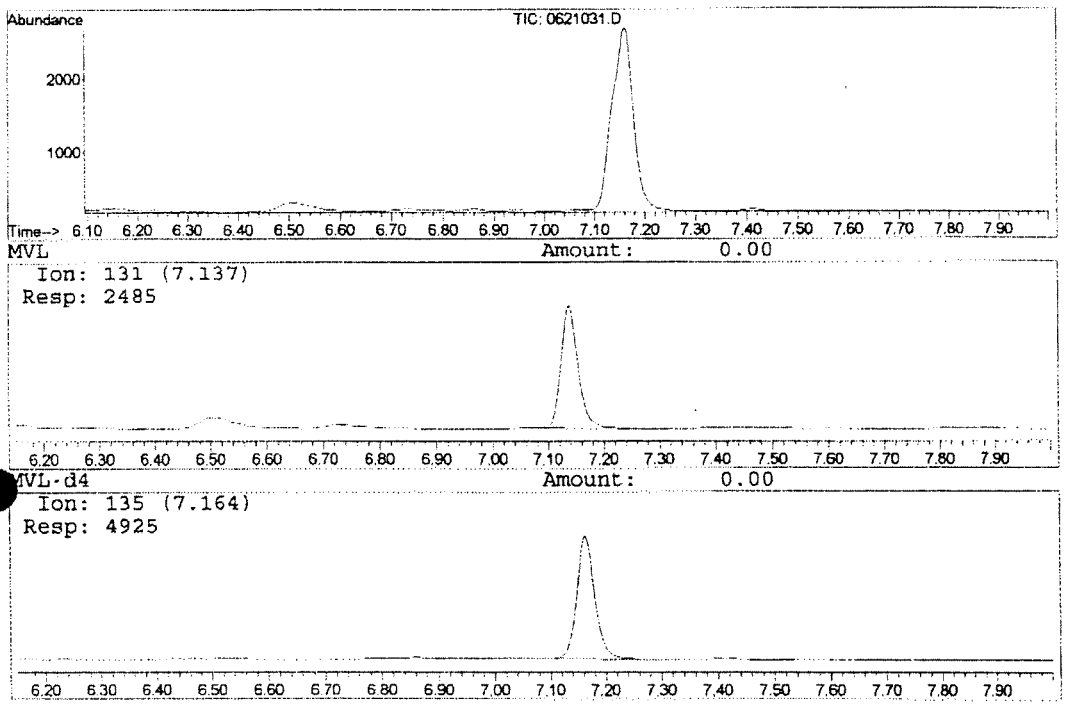
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2485		504.6E-3
2)	MVL-d4	7.16	135	4925		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621031.D Vial: 31
Acq On : 17 Oct 2000 23:37 Operator: MAN
Sample : 3 x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/17/2000 23:57
Operator: MAN

Data File Name: 0621032.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 32

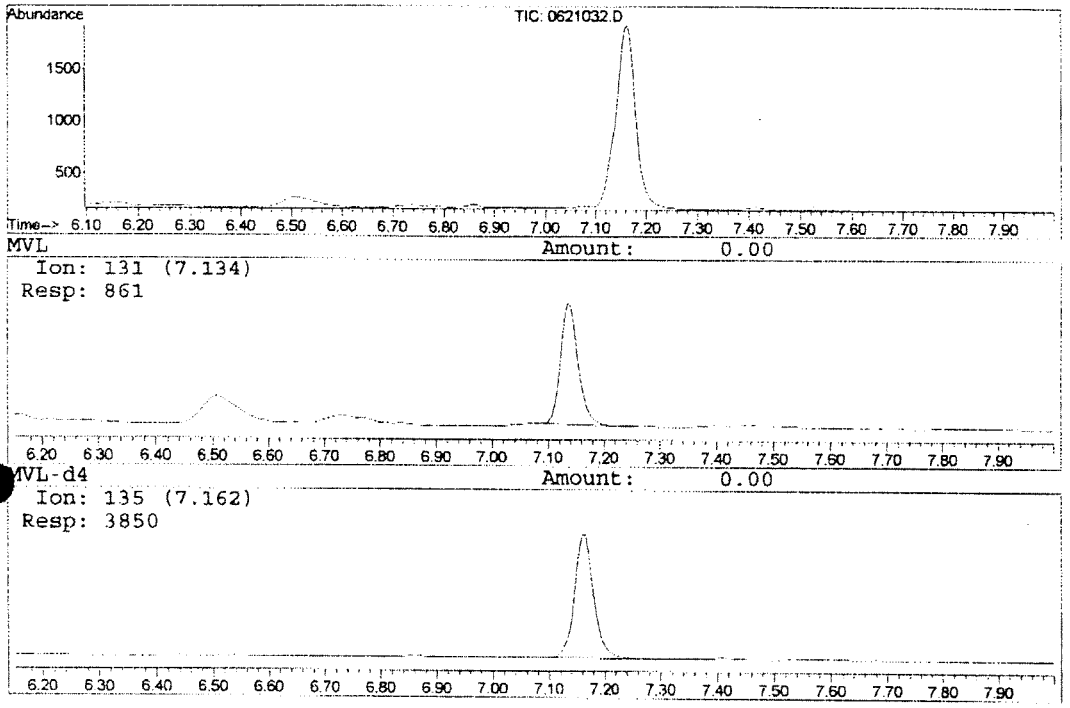
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	861		223.6E-3
2)	MVL-d4	7.16	135	3850		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621032.D Vial: 32
Acq On : 17 Oct 2000 23:57 Operator: MAN
Sample : 3 x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 3 x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 0:16
Operator: MAN

Data File Name: 0621033.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 33

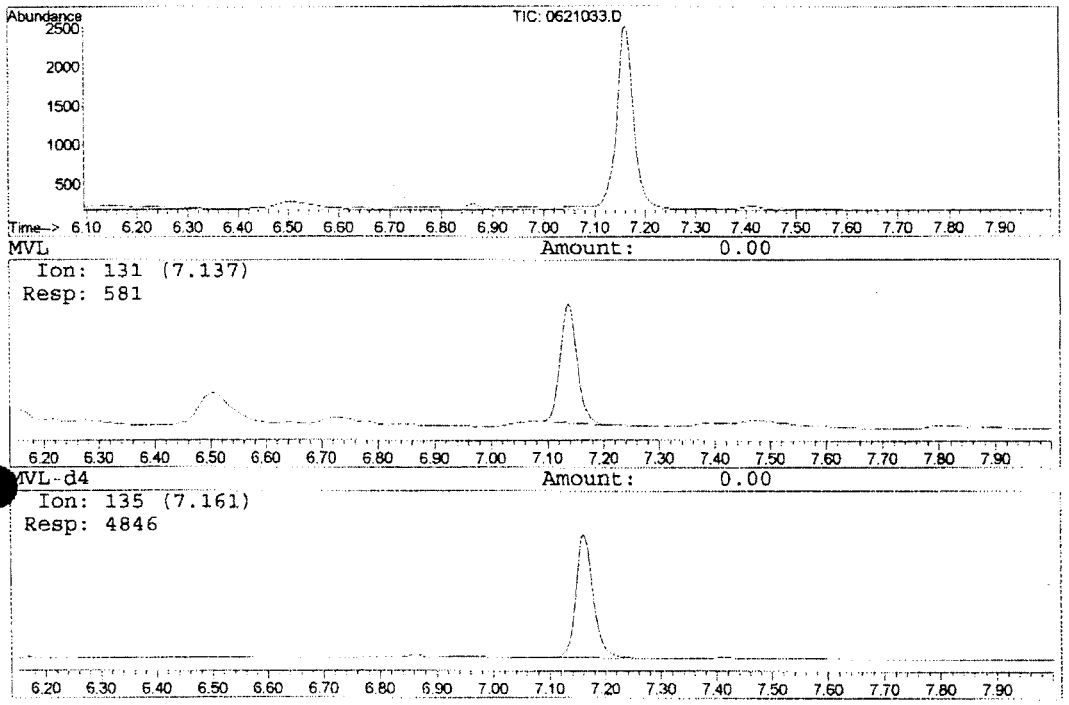
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	581	m	119.9E-3
2)	MVL-d4	7.16	135	4846		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621033.D Vial: 33
Acq On : 18 Oct 2000 00:16 Operator: MAN
Sample : 3 x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC HIGH Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 0:36
Operator: MAN

Data File Name: 0621034.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 34

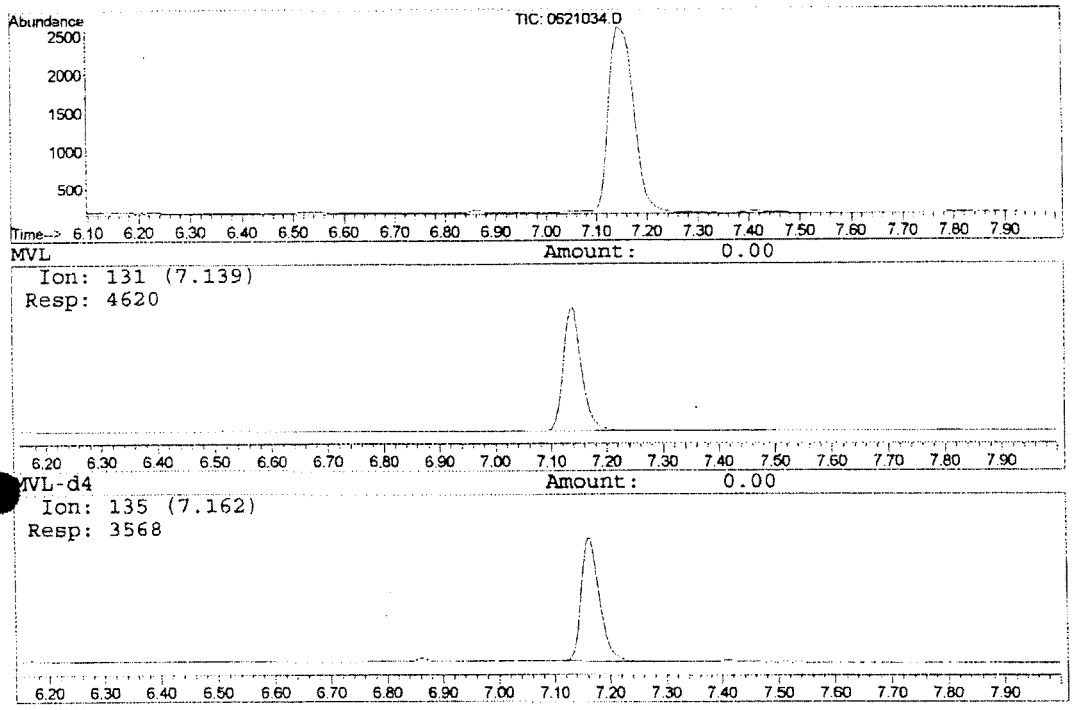
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	4620		129.5E-2
2)	MVL-d4	7.16	135	3568		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621034.D Vial: 34
Acq On : 18 Oct 2000 00:36 Operator: MAN
Sample : 4 x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 0:55
Operator: MAN

Data File Name: 0621035.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 35

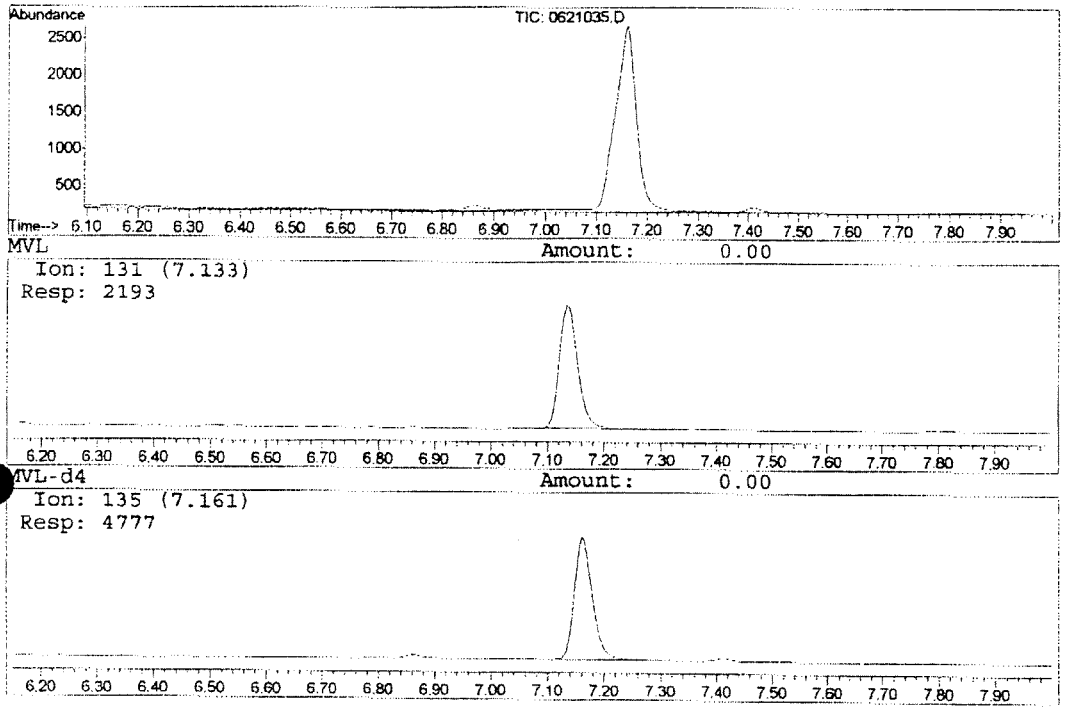
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2193	m	459.1E-3
2)	MVL-d4	7.16	135	4777		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621035.D Vial: 35
Acq On : 18 Oct 2000 00:55 Operator: MAN
Sample : 4 x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 1:15
Operator: MAN

Data File Name: 0621036.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 36

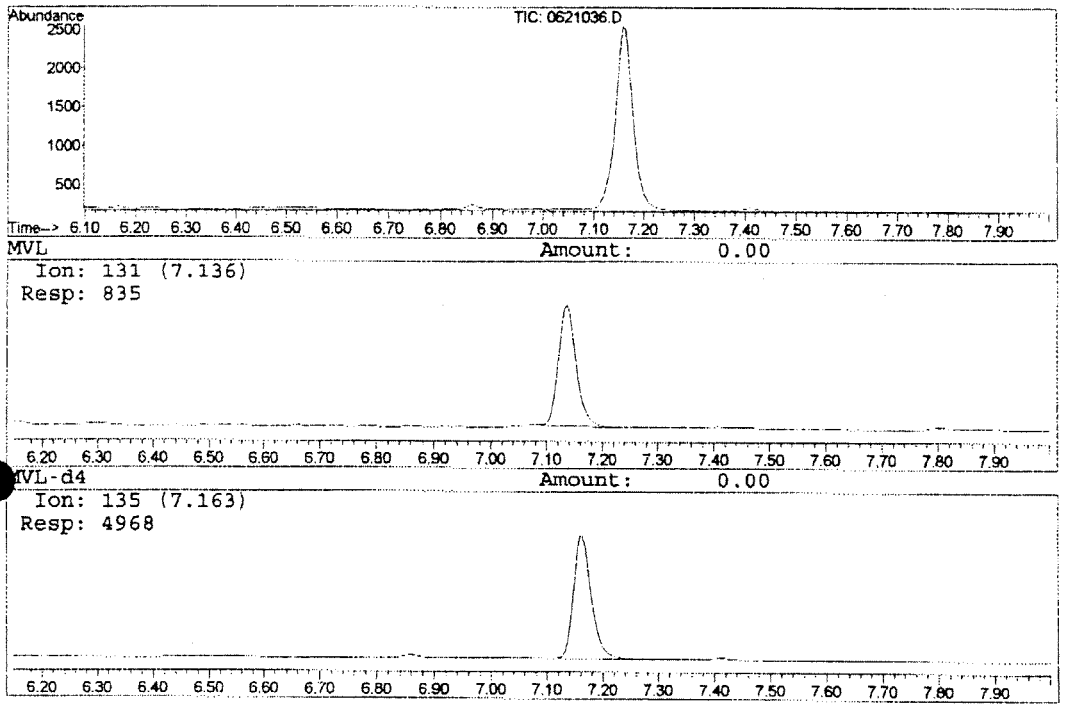
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	835		168.1E-3
2)	MVL-d4	7.16	135	4968		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621036.D Vial: 36
Acq On : 18 Oct 2000 1:15 Operator: MAN
Sample : 4 x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 1:34
Operator: MAN

Data File Name: 0621037.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 37

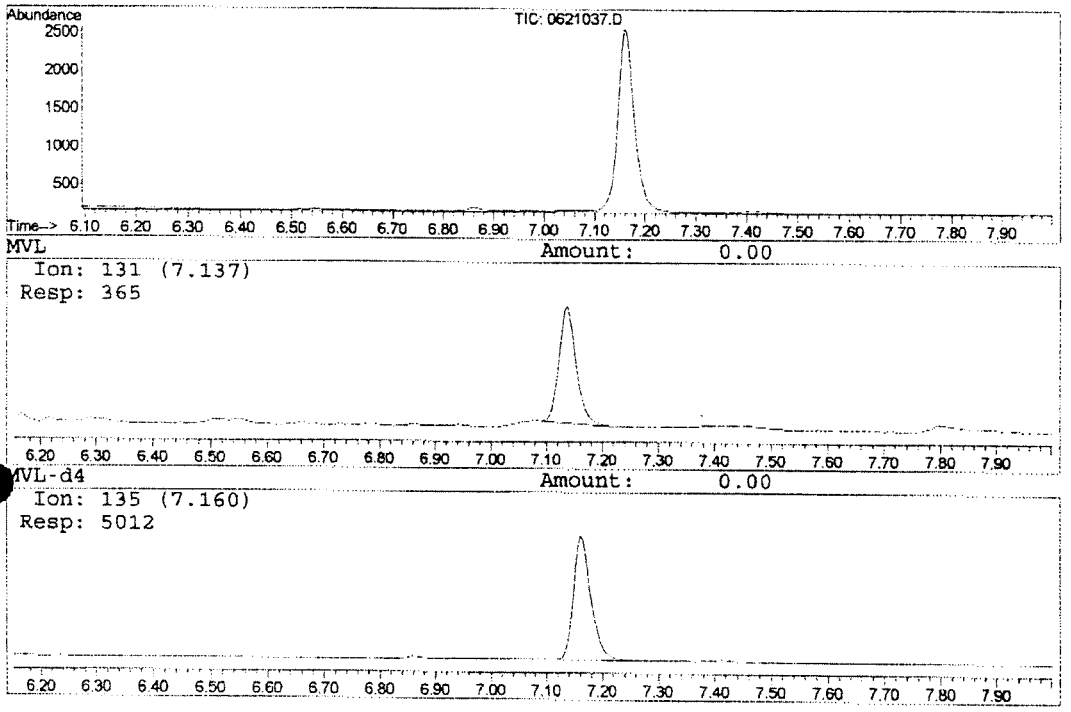
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	365		728.3E-4
2)	MVL-d4	7.16	135	5012		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621037.D Vial: 37
Acq On : 18 Oct 2000 1:34 Operator: MAN
Sample : 4 x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 1:54
Operator: MAN

Data File Name: 0621038.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 38

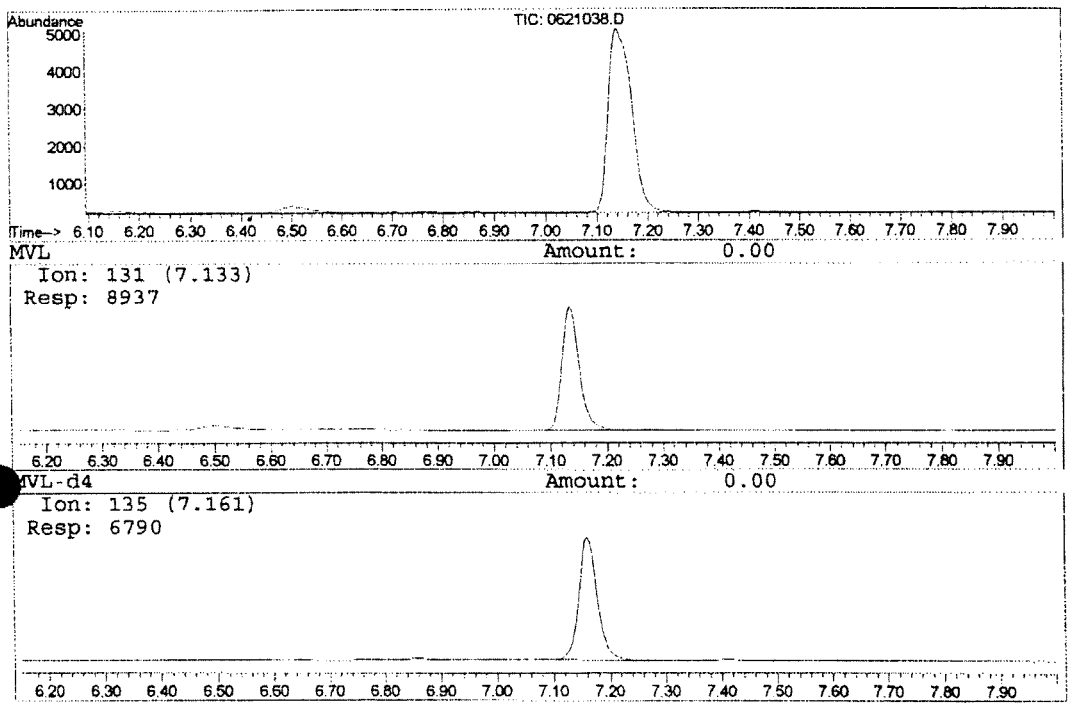
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	8937		131.6E-2
2)	MVL-d4	7.16	135	6790		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621038.D Vial: 38
Acq On : 18 Oct 2000 1:54 Operator: MAN
Sample : 4 x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC MID Plasma
Notebook Reference: PABX-BVA-1-062
Date Acquired: 10/18/2000 2:13
Operator: MAN

Data File Name: 0621039.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA
Instrument Name: MS7
Instrument Vial Number: 39

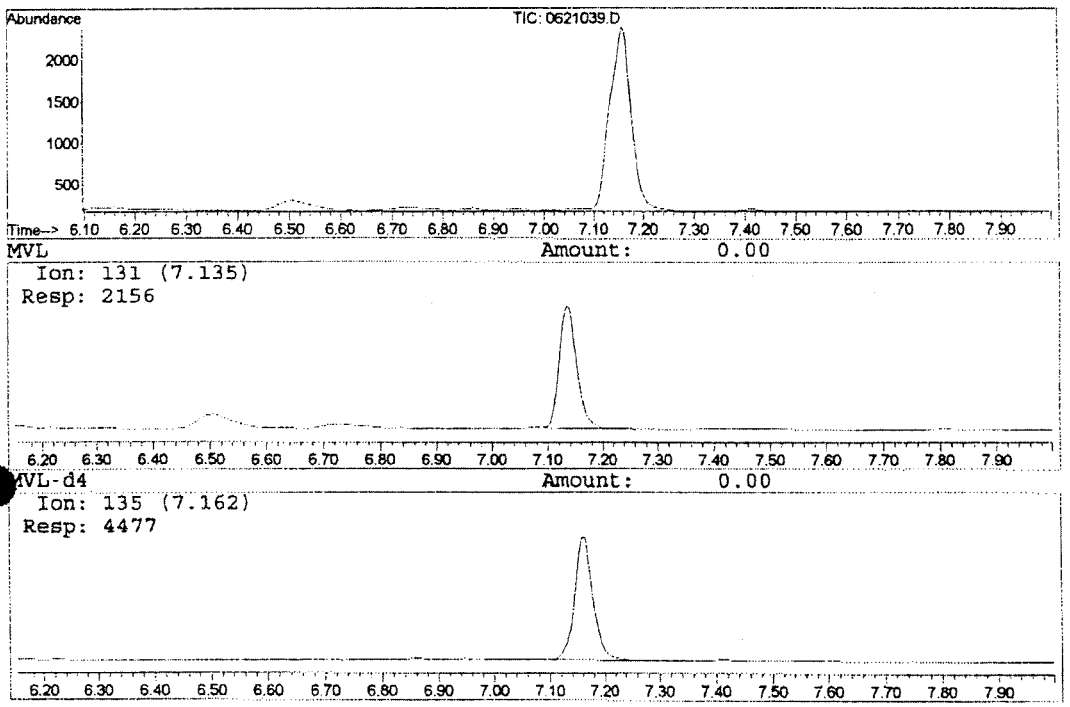
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2156		481.6E-3
2)	MVL-d4	7.16	135	4477		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621039.D Vial: 39
Acq On : 18 Oct 2000 2:13 Operator: MAN
Sample : 4 x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 2:33
Operator: MAN

Data File Name: 0621040.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 40

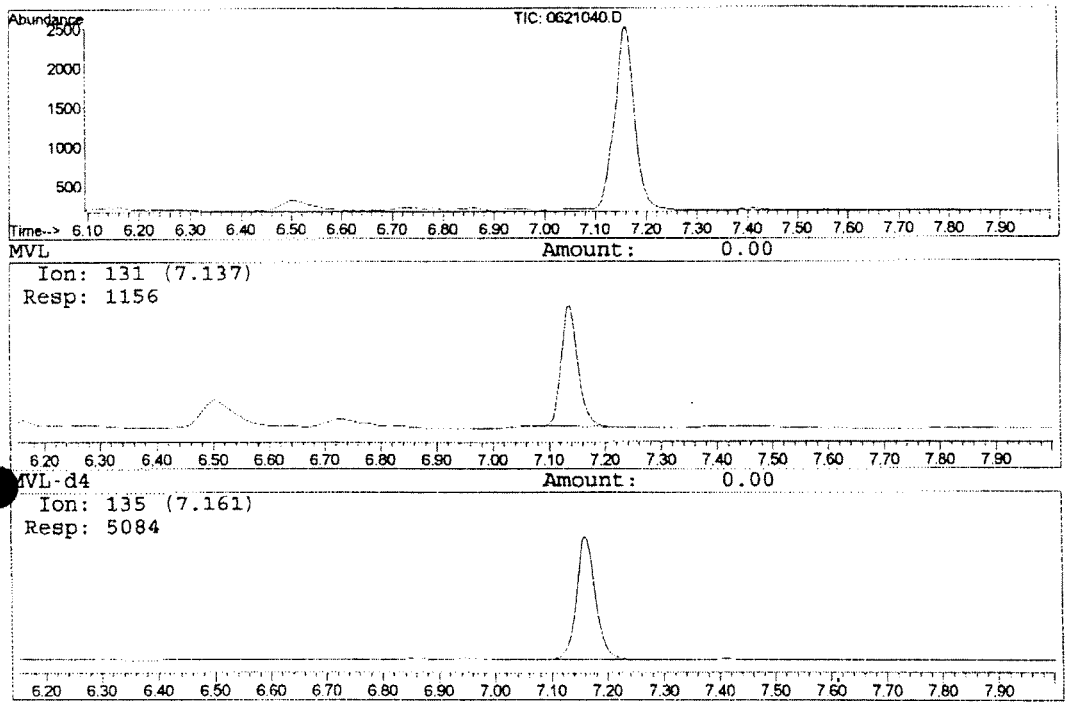
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	1156		227.4E-3
2)	MVL-d4	7.16	135	5084		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621040.D Vial: 40
Acq On : 18 Oct 2000 2:33 Operator: MAN
Sample : 4 x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 4 x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 2:52
Operator: MAN

Data File Name: 0621041.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 41

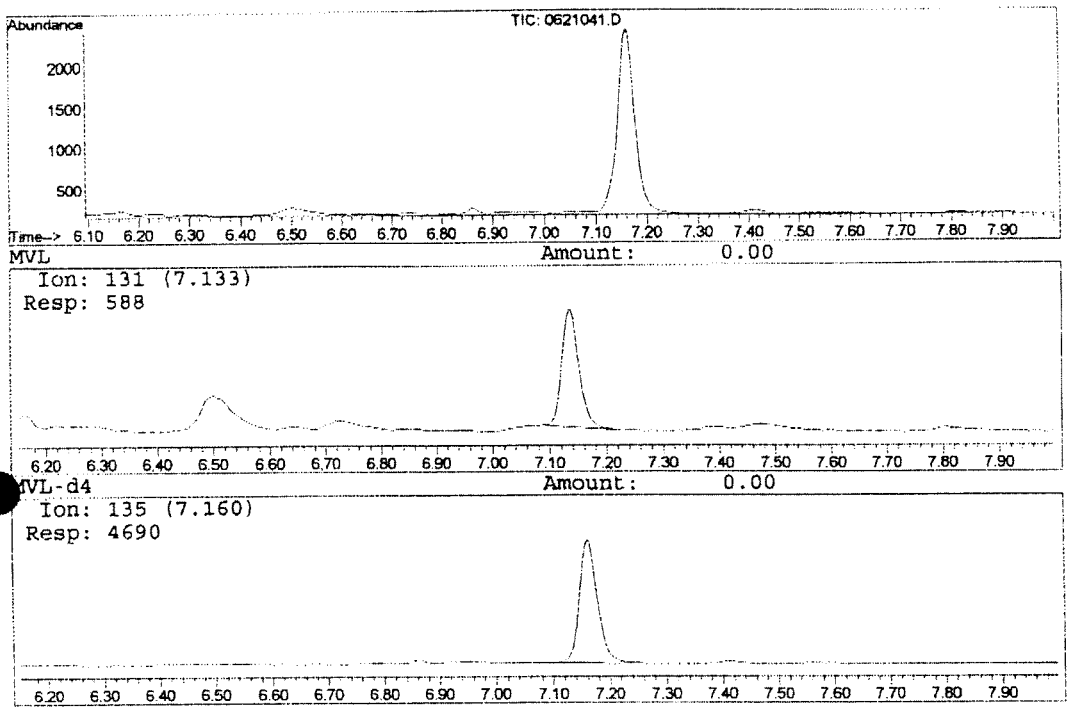
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	588	m	125.4E-3
2)	MVL-d4	7.16	135	4690		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621041.D Vial: 41
Acq On : 18 Oct 2000 2:52 Operator: MAN
Sample : 4 x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC HIGH Water
Notebook Reference: PABX-BVA-1-062
Date Acquired: 10/18/2000 3:12
Operator: MAN

Data File Name: 0621042.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA
Instrument Name: MS7
Instrument Vial Number: 42

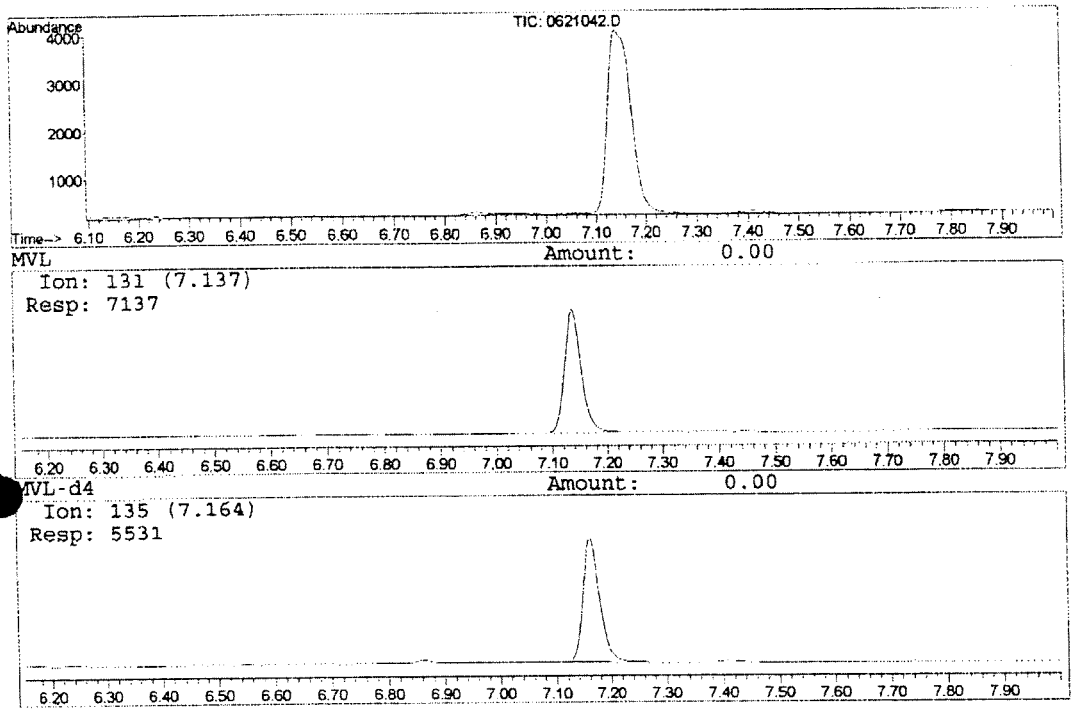
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	7137		129.0E-2
2)	MVL-d4	7.16	135	5531		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621042.D Vial: 42
Acq On : 18 Oct 2000 3:12 Operator: MAN
Sample : 5 x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 3:31
Operator: MAN

Data File Name: 0621043.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 43

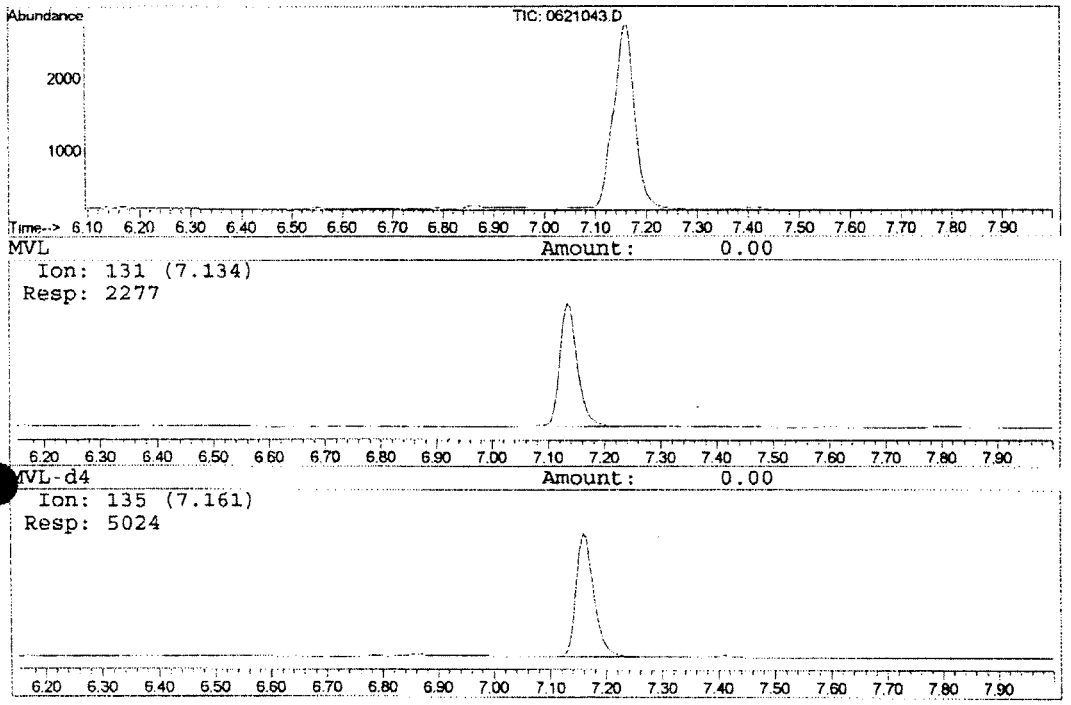
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2277		453.2E-3
2)	MVL-d4	7.16	135	5024		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621043.D Vial: 43
Acq On : 18 Oct 2000 3:31 Operator: MAN
Sample : 5 x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 3:50
Operator: MAN

Data File Name: 0621044.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 44

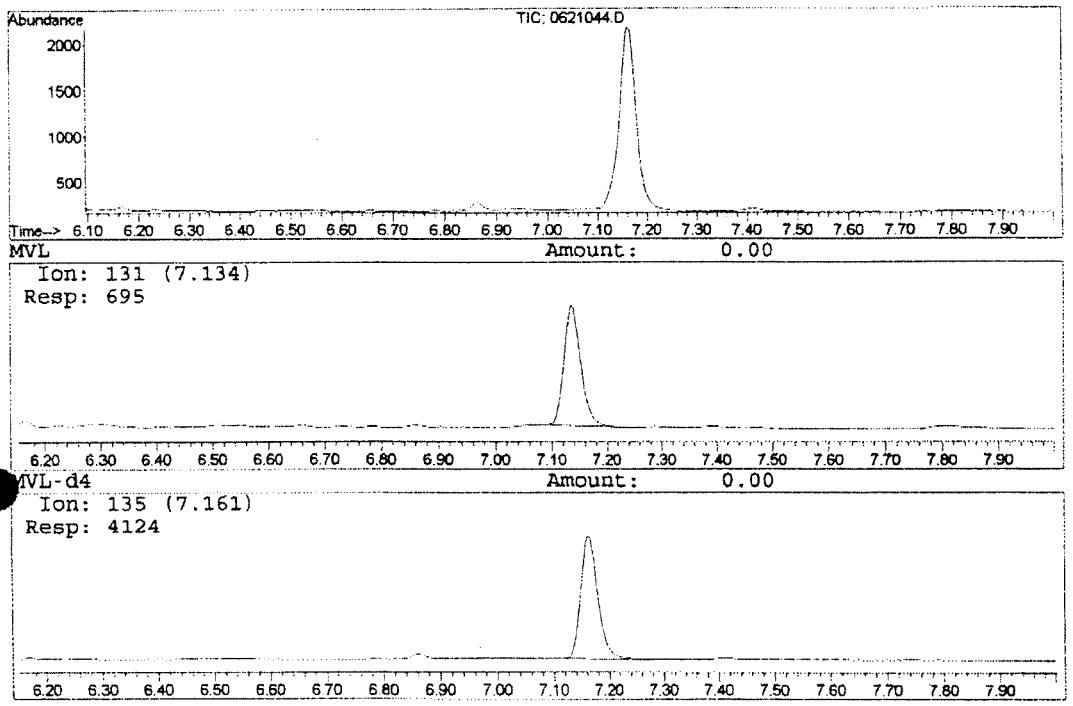
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	695		168.5E-3
2)	MVL-d4	7.16	135	4124		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621044.D Vial: 44
Acq On : 18 Oct 2000 3:50 Operator: MAN
Sample : 5 x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 4:10
Operator: MAN

Data File Name: 0621045.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 45

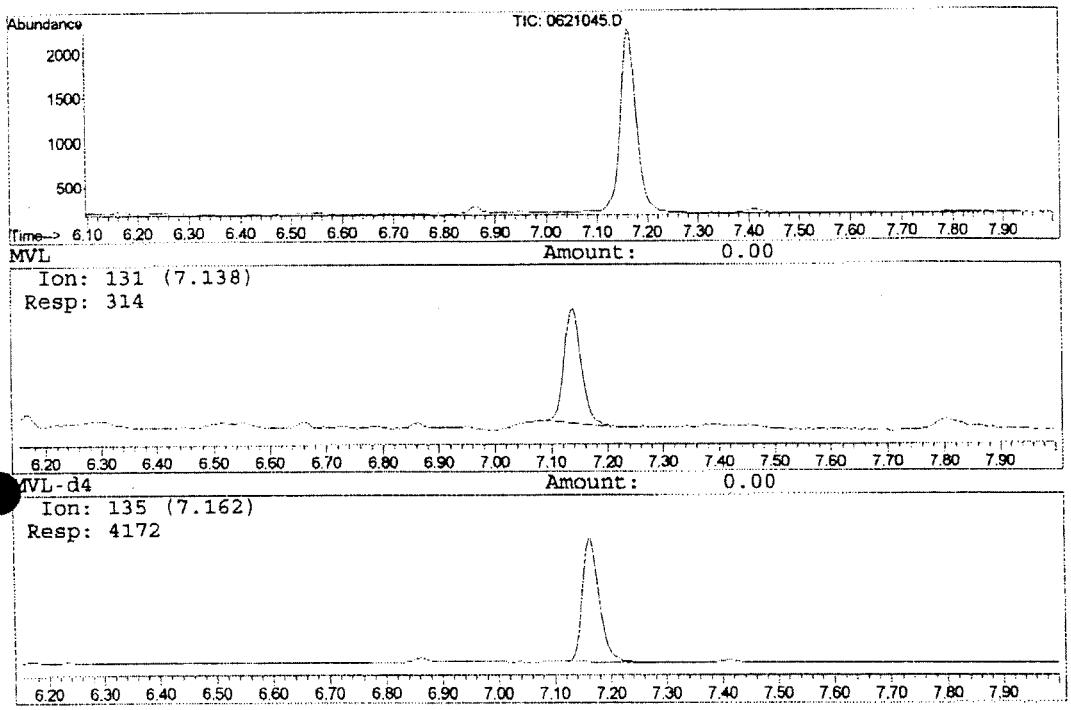
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	314		752.6E-4
2)	MVL-d4	7.16	135	4172		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621045.D Vial: 45
Acq On : 18 Oct 2000 4:10 Operator: MAN
Sample : 5 x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 4:29
Operator: MAN

Data File Name: 0621046.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 46

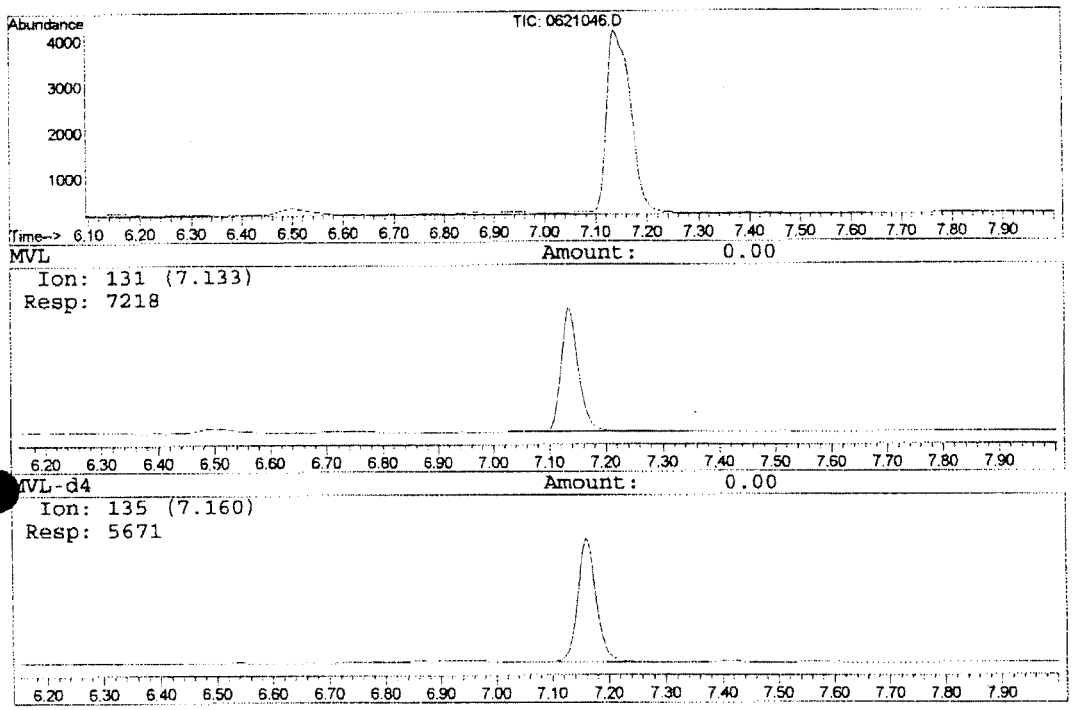
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	7218		127.3E-2
2)	MVL-d4	7.16	135	5671		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621046.D Vial: 46
Acq On : 18 Oct 2000 4:29 Operator: MAN
Sample : 5 x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC MID Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 4:49
Operator: MAN

Data File Name: 0621047.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 47

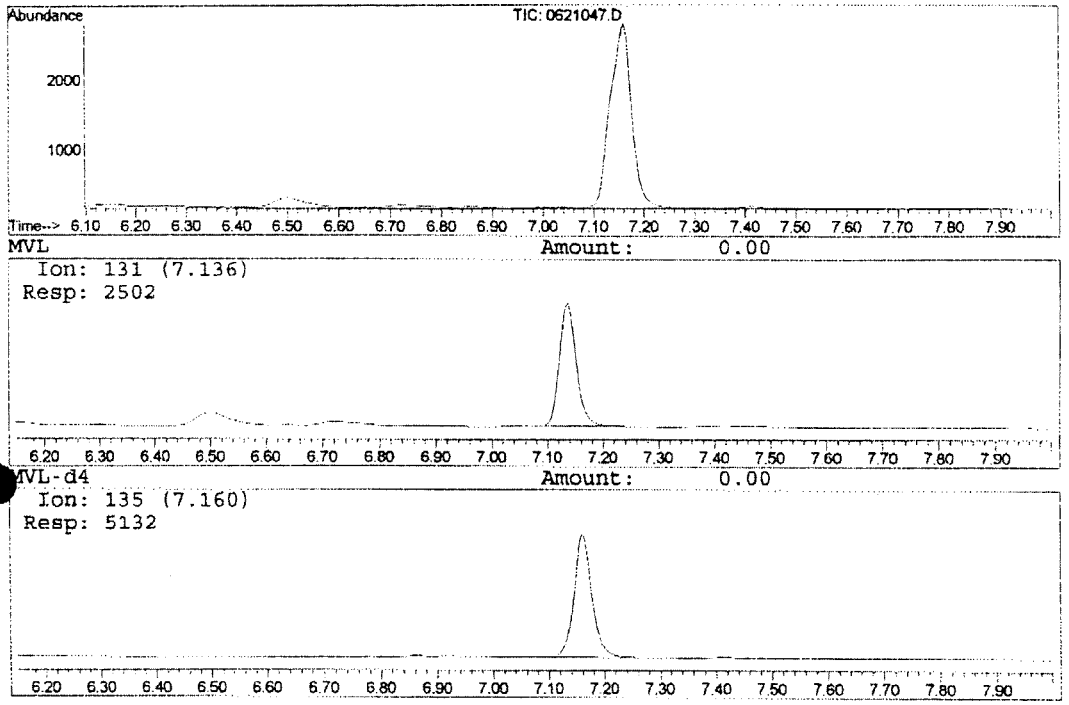
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	2502		487.5E-3
2)	MVL-d4	7.16	135	5132		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621047.D Vial: 47
Acq On : 18 Oct 2000 4:49 Operator: MAN
Sample : 5 x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 5:08
Operator: MAN

Data File Name: 0621048.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 48

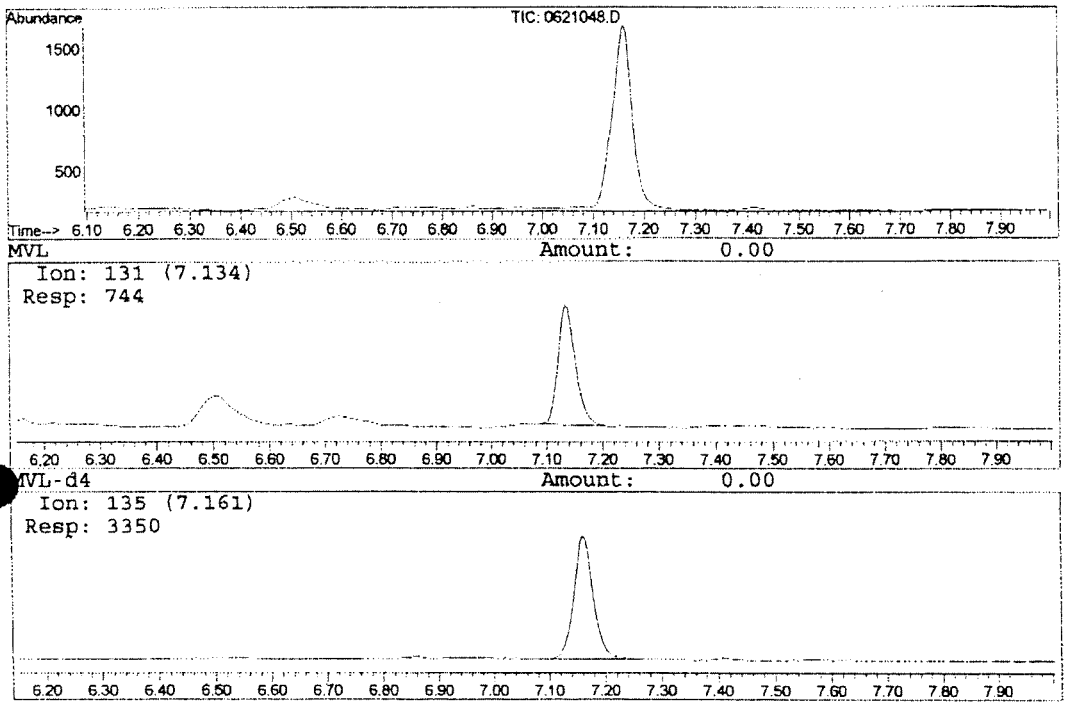
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	744		222.1E-3
2)	MVL-d4	7.16	135	3350		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621048.D Vial: 48
Acq On : 18 Oct 2000 5:08 Operator: MAN
Sample : 5 x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 5 x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 5:28
Operator: MAN

Data File Name: 0621049.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 49

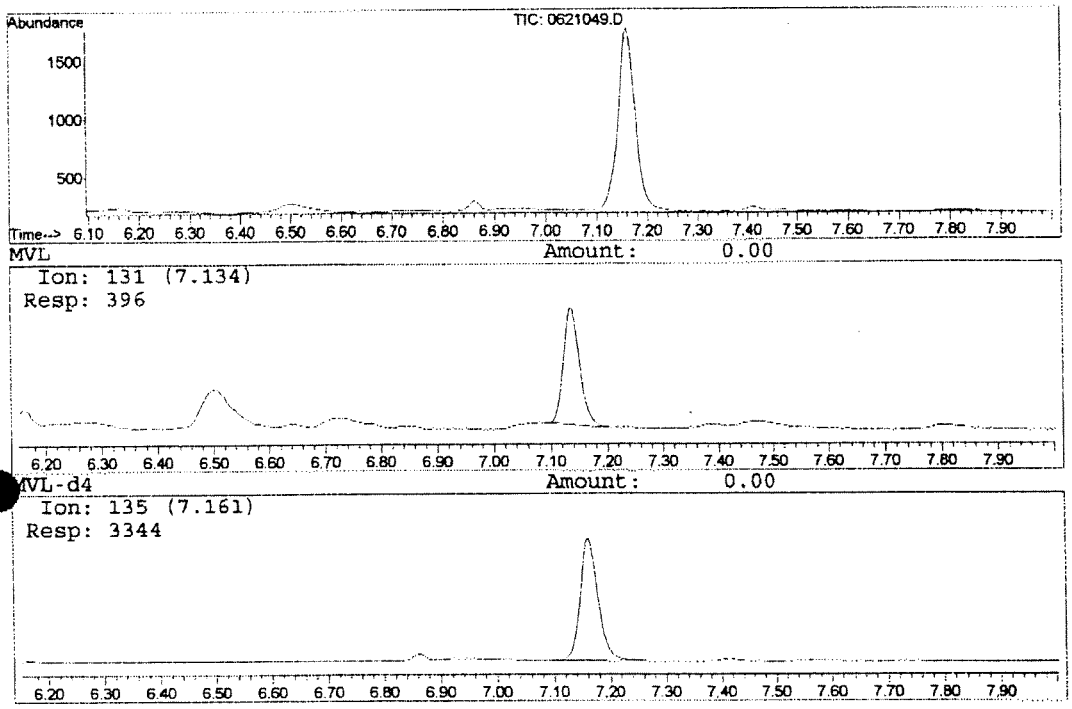
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	396		118.4E-3
2)	MVL-d4	7.16	135	3344		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621049.D Vial: 49
Acq On : 18 Oct 2000 5:28 Operator: MAN
Sample : 5 x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC HIGH Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 5:47
Operator: MAN

Data File Name: 0621050.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 50

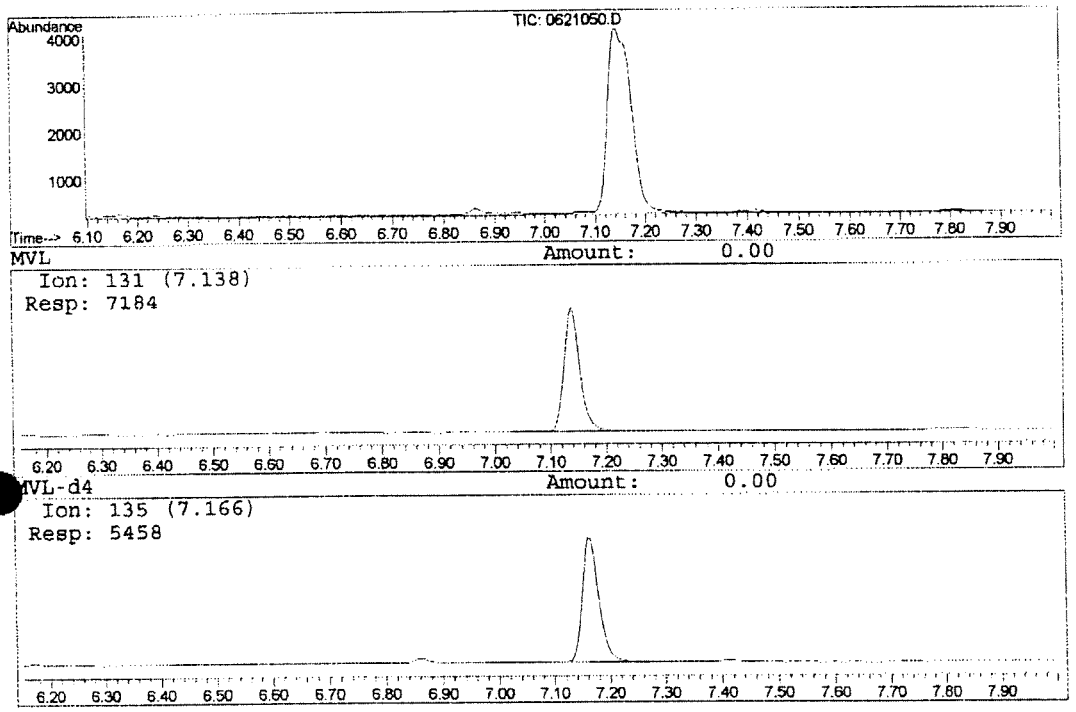
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	7184		131.6E-2
2)	MVL-d4	7.17	135	5458		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621050.D Vial: 50
Acq On : 18 Oct 2000 5:47 Operator: MAN
Sample : 6 x QC HIGH Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC MID Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 6:07
Operator: MAN

Data File Name: 0621051.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 51

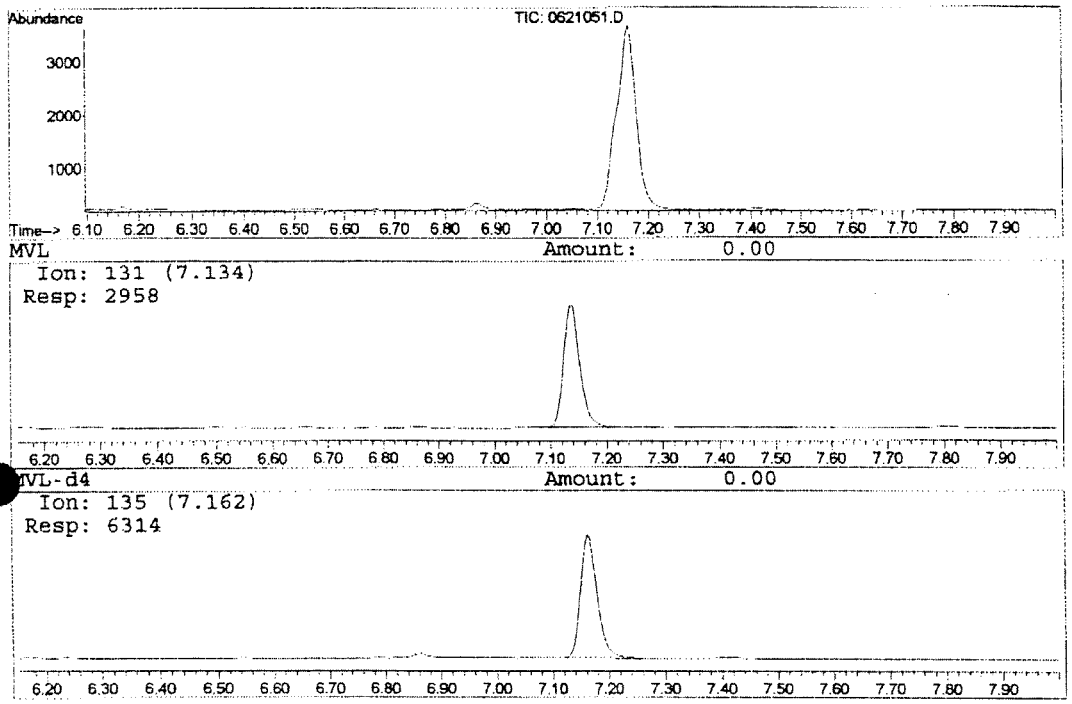
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2958	m	468.5E-3
2)	MVL-d4	7.16	135	6314		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621051.D Vial: 51
Acq On : 18 Oct 2000 6:07 Operator: MAN
Sample : 6 x QC MID Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC LOW Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 6:26
Operator: MAN

Data File Name: 0621052.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 52

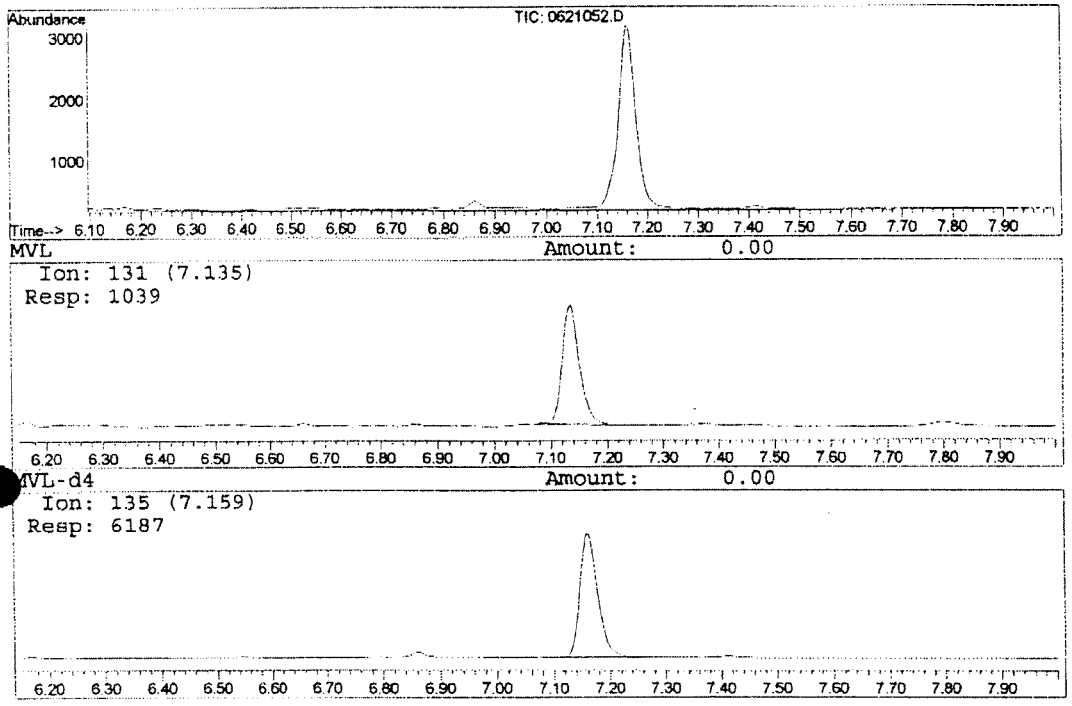
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	1039		167.9E-3
2)	MVL-d4	7.16	135	6187		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621052.D Vial: 52
Acq On : 18 Oct 2000 6:26 Operator: MAN
Sample : 6 x QC LOW Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC LLOQ Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 6:46
Operator: MAN

Data File Name: 0621053.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 53

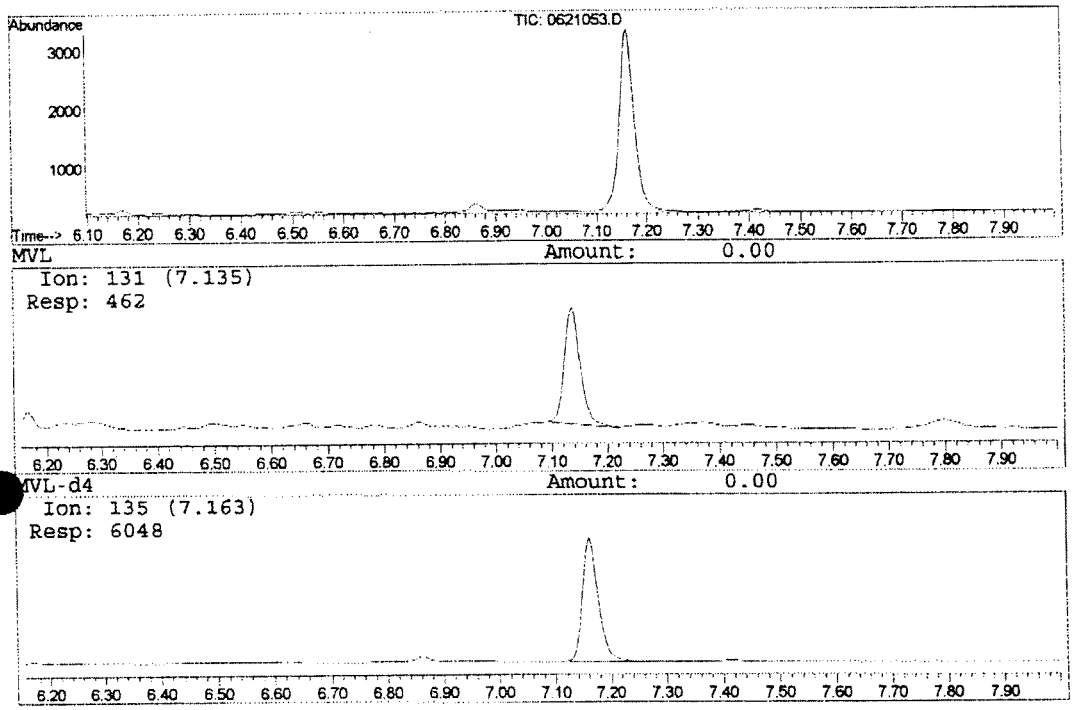
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	462	m	763.9E-4
2)	MVL-d4	7.16	135	6048		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621053.D Vial: 53
Acq On : 18 Oct 2000 6:46 Operator: MAN
Sample : 6 x QC LLOQ Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC HIGH Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 7:05
Operator: MAN

Data File Name: 0621054.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 54

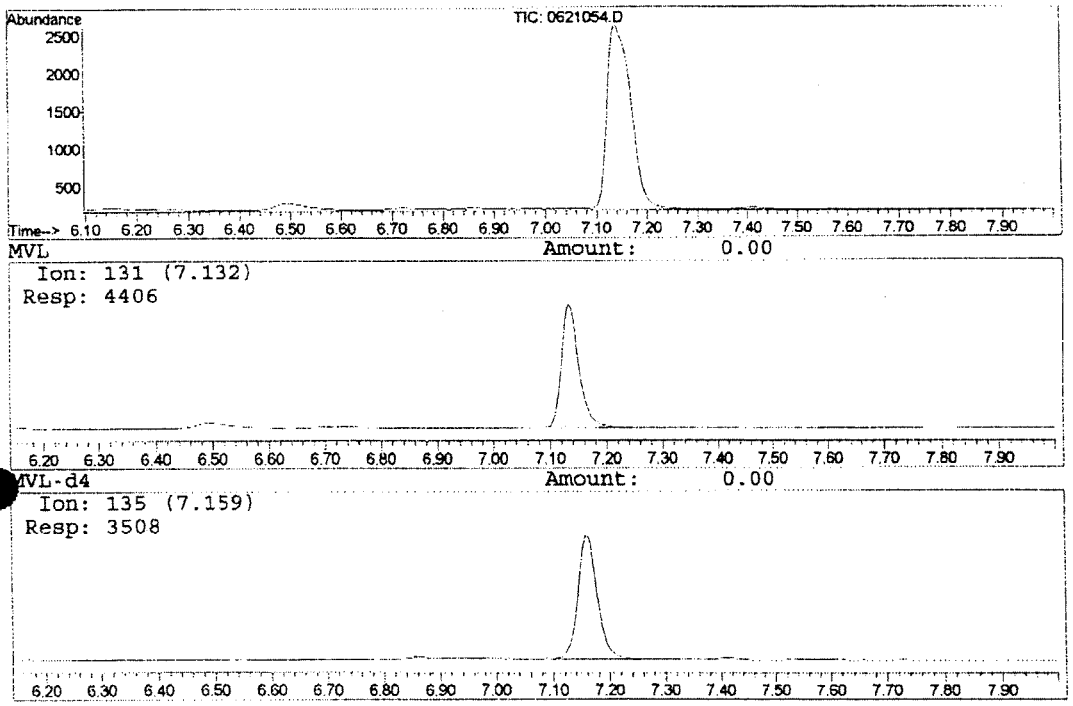
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	4406		125.6E-2
2)	MVL-d4	7.16	135	3508		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621054.D Vial: 54
Acq On : 18 Oct 2000 7:05 Operator: MAN
Sample : 6 x QC HIGH Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC MID Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 7:25
Operator: MAN

Data File Name: 0621055.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 55

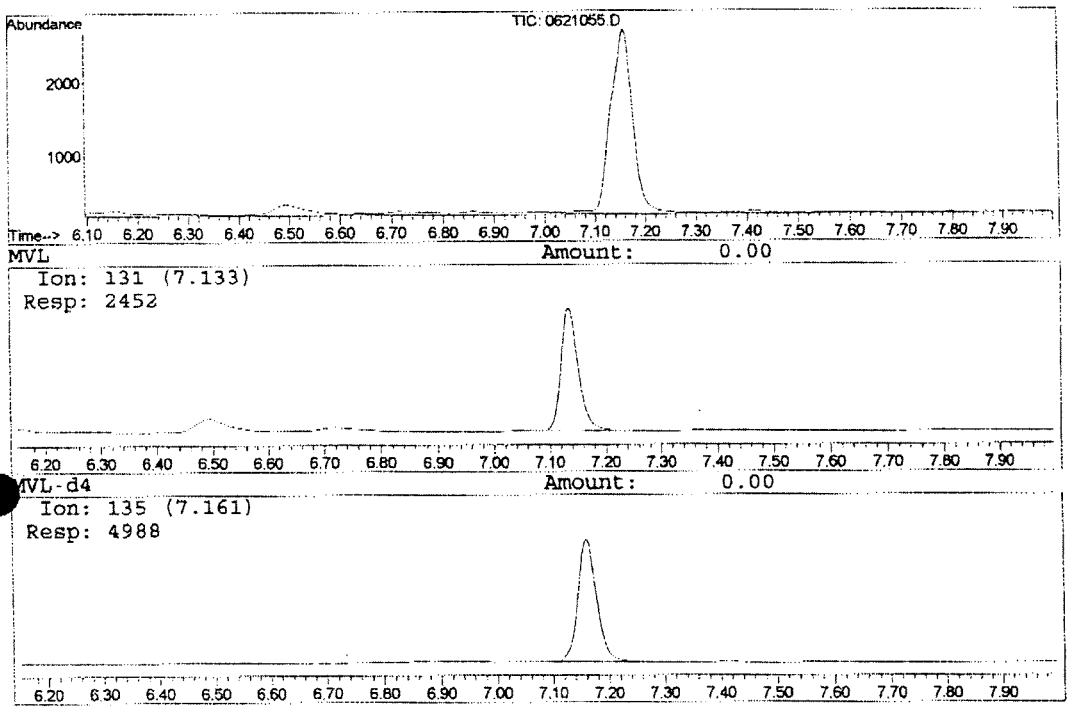
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2452		491.6E-3
2)	MVL-d4	7.16	135	4988		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621055.D Vial: 55
Acq On : 18 Oct 2000 7:25 Operator: MAN
Sample : 6 x QC MID Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x QC LOW Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 7:44
Operator: MAN

Data File Name: 0621056.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 56

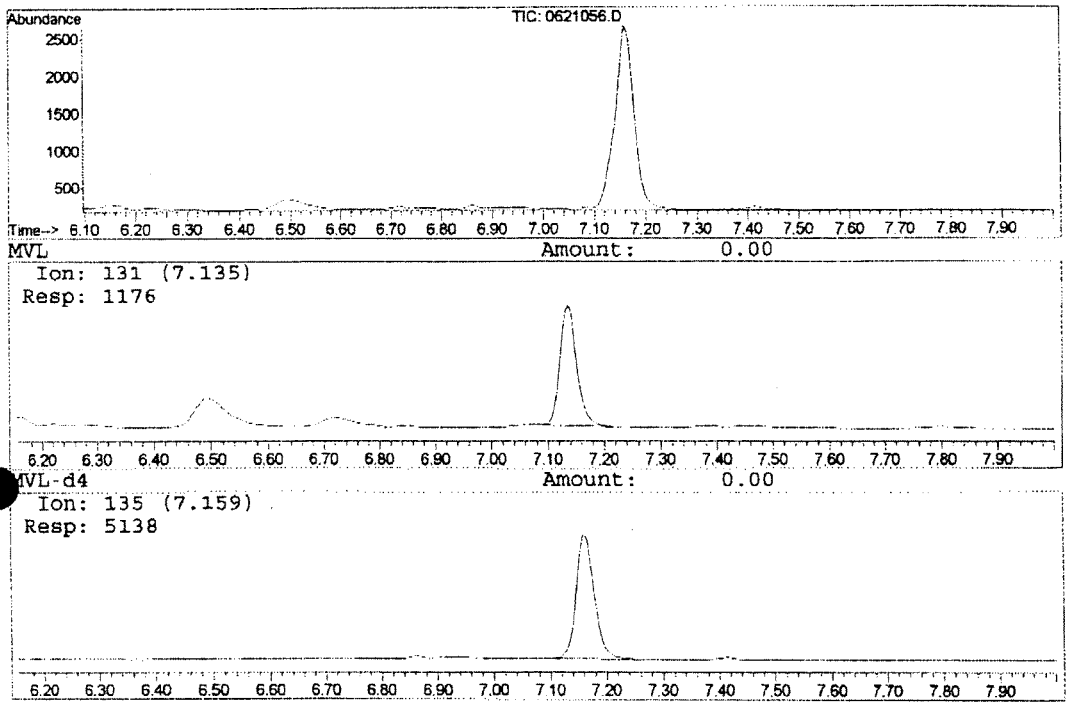
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	1176		228.9E-3
2)	MVL-d4	7.16	135	5138		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621056.D Vial: 56
Acq On : 18 Oct 2000 7:44 Operator: MAN
Sample : 6 x QC LOW Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 6 x Control Plasma
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 8:04
Operator: MAN

Data File Name: 0621057.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 57

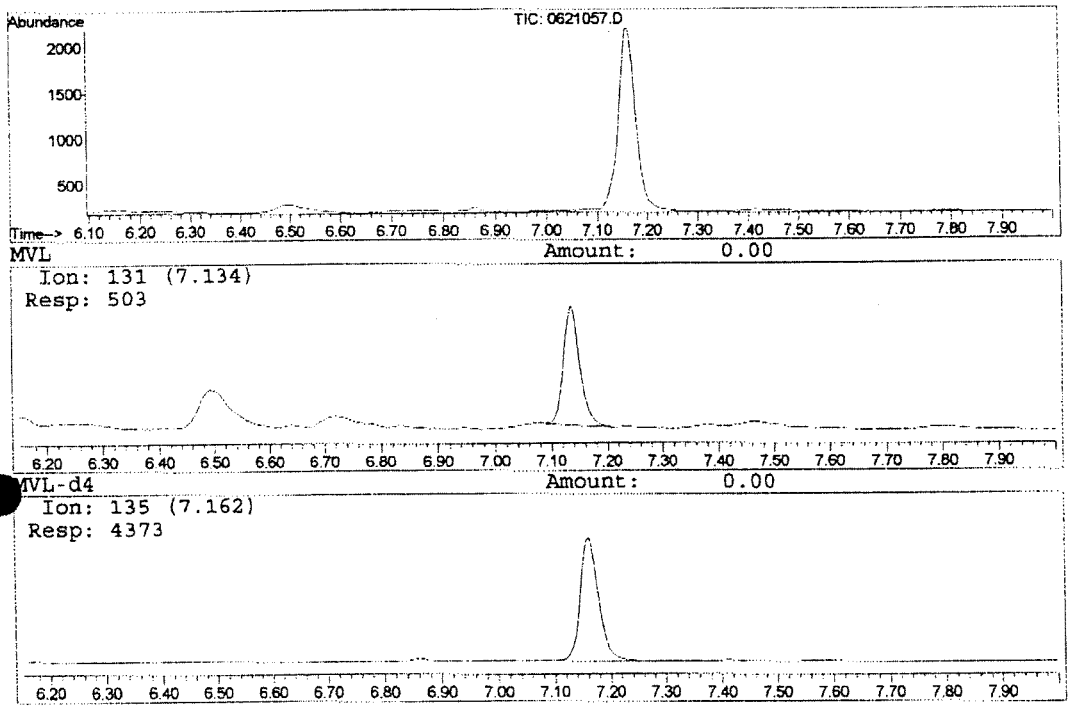
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	503		115.0E-3
2)	MVL-d4	7.16	135	4373		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621057.D Vial: 57
Acq On : 18 Oct 2000 8:04 Operator: MAN
Sample : 6 x Control Plasma Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x Blank Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 8:23
Operator: MAN

Data File Name: 0621058.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 58

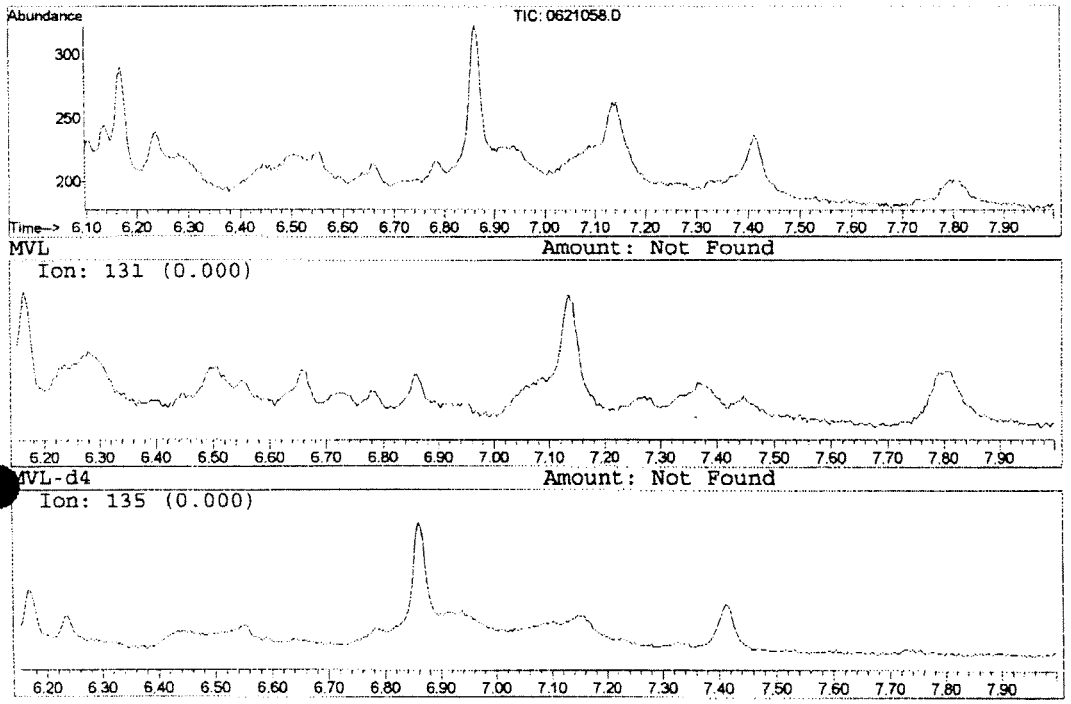
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		#DIV/0!
2)	MVL-d4	0.00	135	0		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621058.D Vial: 58
Acq On : 18 Oct 2000 8:23 Operator: MAN
Sample : 2 x Blank Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x Control Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 8:43
Operator: MAN

Data File Name: 0621059.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 59

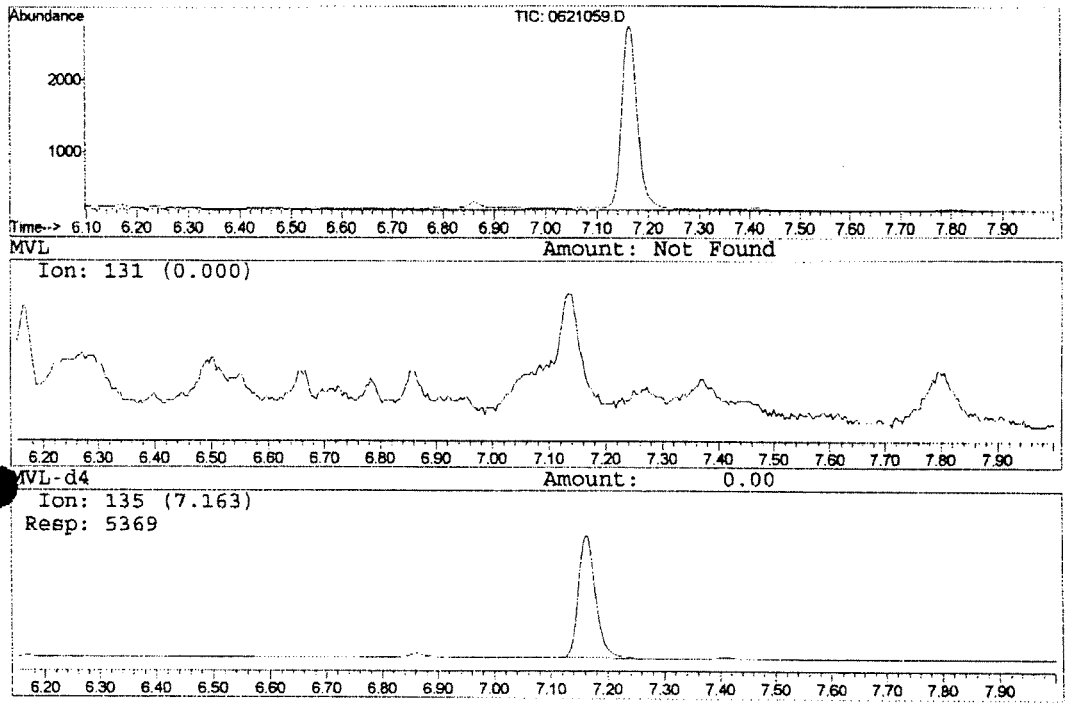
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		000.0E-3
2)	MVL-d4	7.16	135	5369		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621059.D Vial: 59
Acq On : 18 Oct 2000 8:43 Operator: MAN
Sample : 2 x Control Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-1 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 9:02
Operator: MAN

Data File Name: 0621060.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 60

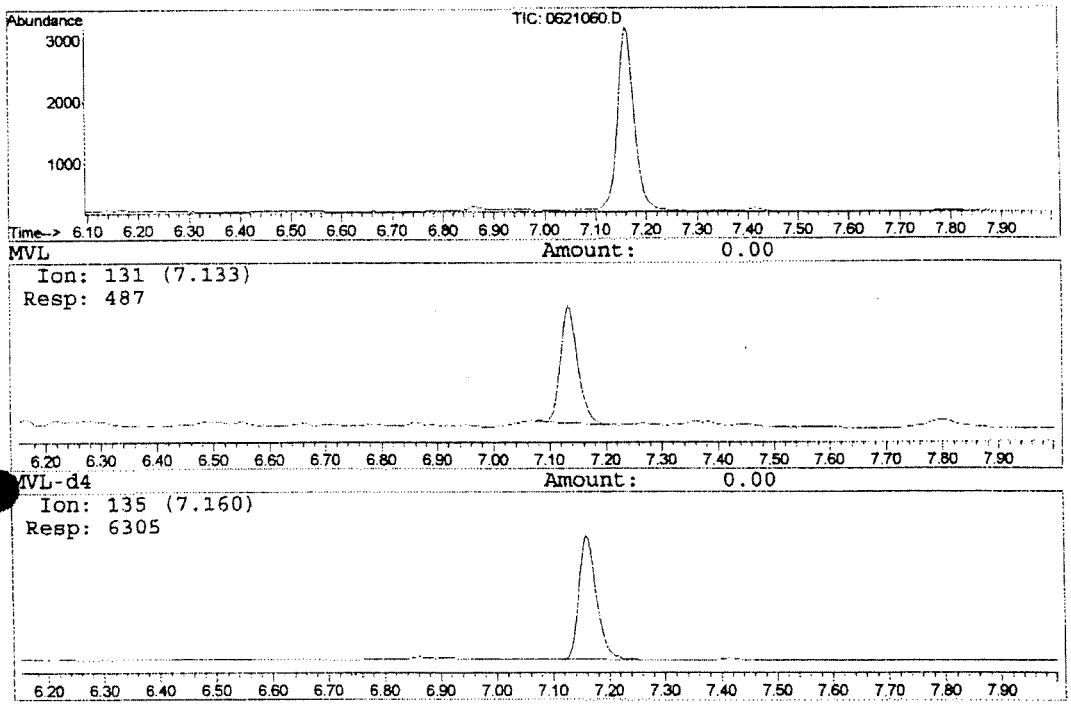
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	487		772.4E-4
2)	MVL-d4	7.16	135	6305		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621060.D Vial: 60
Acq On : 18 Oct 2000 9:02 Operator: MAN
Sample : 2 x STD-1 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-2 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 9:22
Operator: MAN

Data File Name: 0621061.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 61

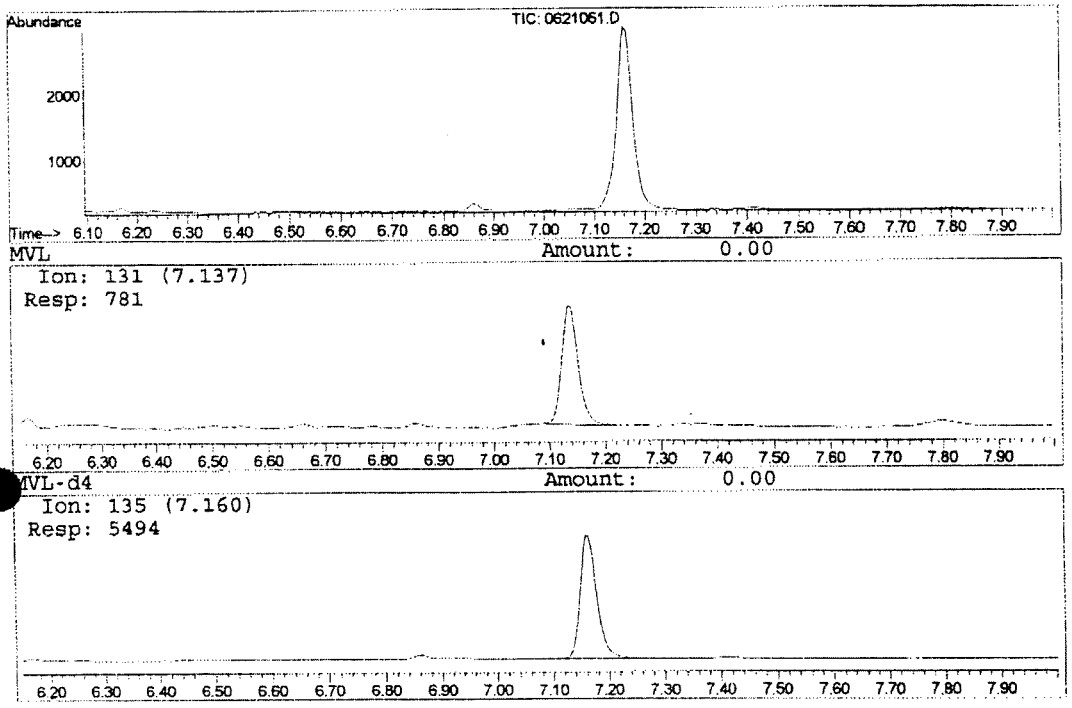
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	781	m	142.2E-3
2)	MVL-d4	7.16	135	5494		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621061.D Vial: 61
Acq On : 18 Oct 2000 9:22 Operator: MAN
Sample : 2 x STD-2 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-3 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 9:41
Operator: MAN

Data File Name: 0621062.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 62

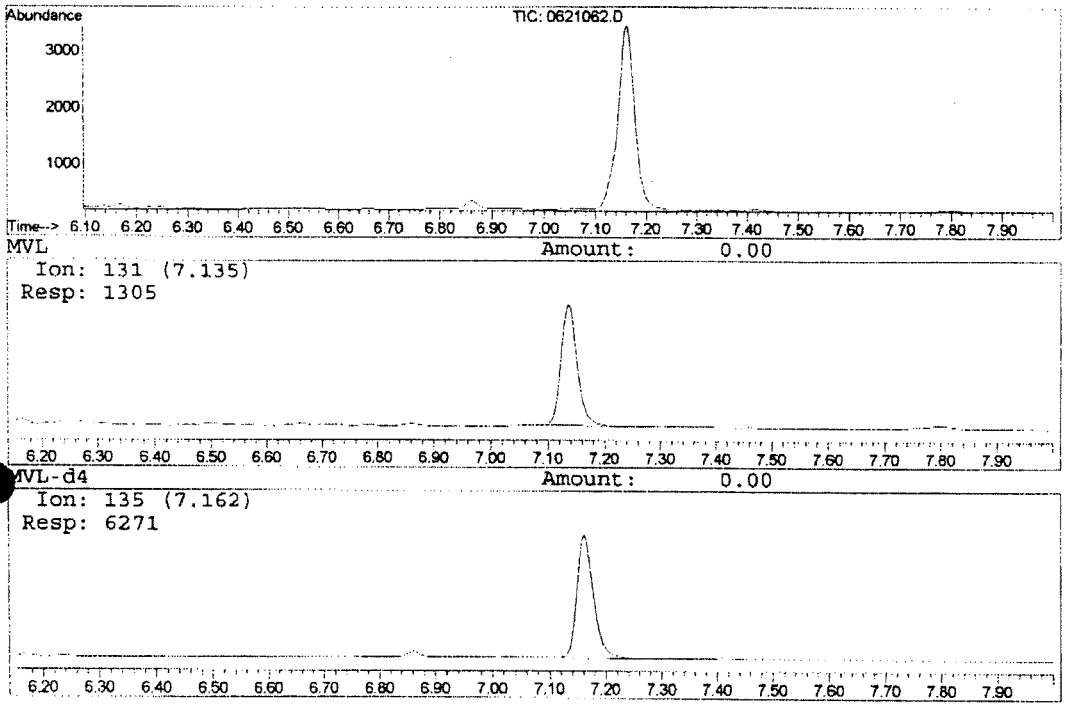
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	1305		208.1E-3
2)	MVL-d4	7.16	135	6271		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621062.D Vial: 62
Acq On : 18 Oct 2000 9:41 Operator: MAN
Sample : 2 x STD-3 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-4 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 10:01
Operator: MAN

Data File Name: 0621063.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 63

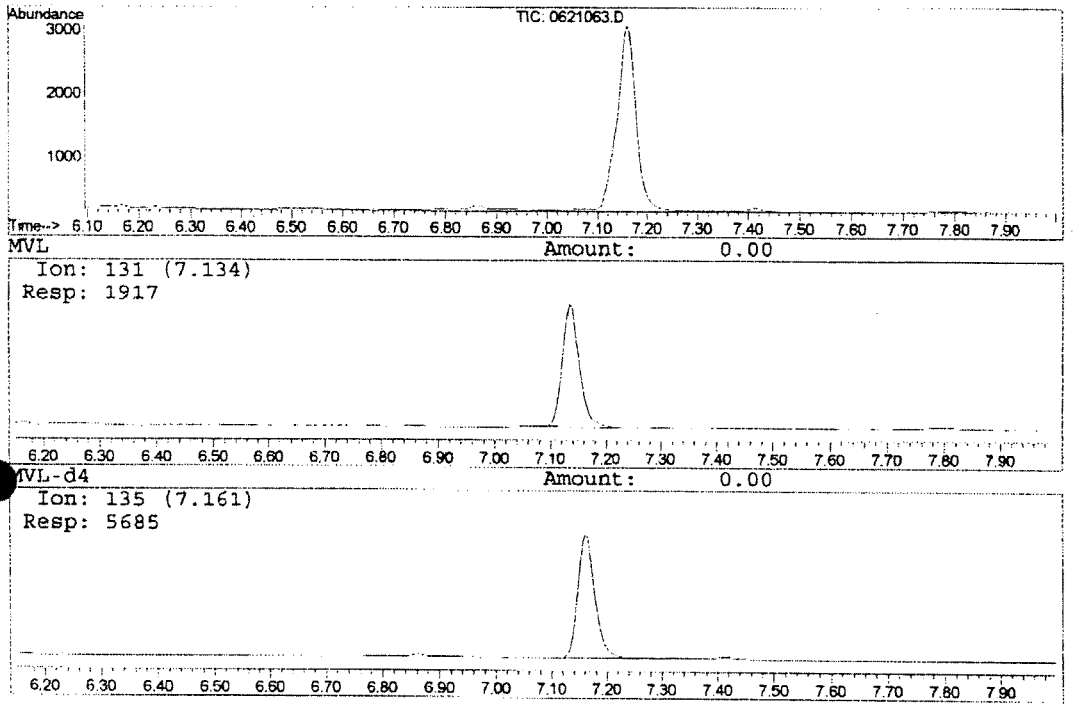
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	1917	m	337.2E-3
2)	MVL-d4	7.16	135	5685		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621063.D Vial: 63
Acq On : 18 Oct 2000 10:01 Operator: MAN
Sample : 2 x STD-4 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-5 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 10:20
Operator: MAN

Data File Name: 0621064.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 64

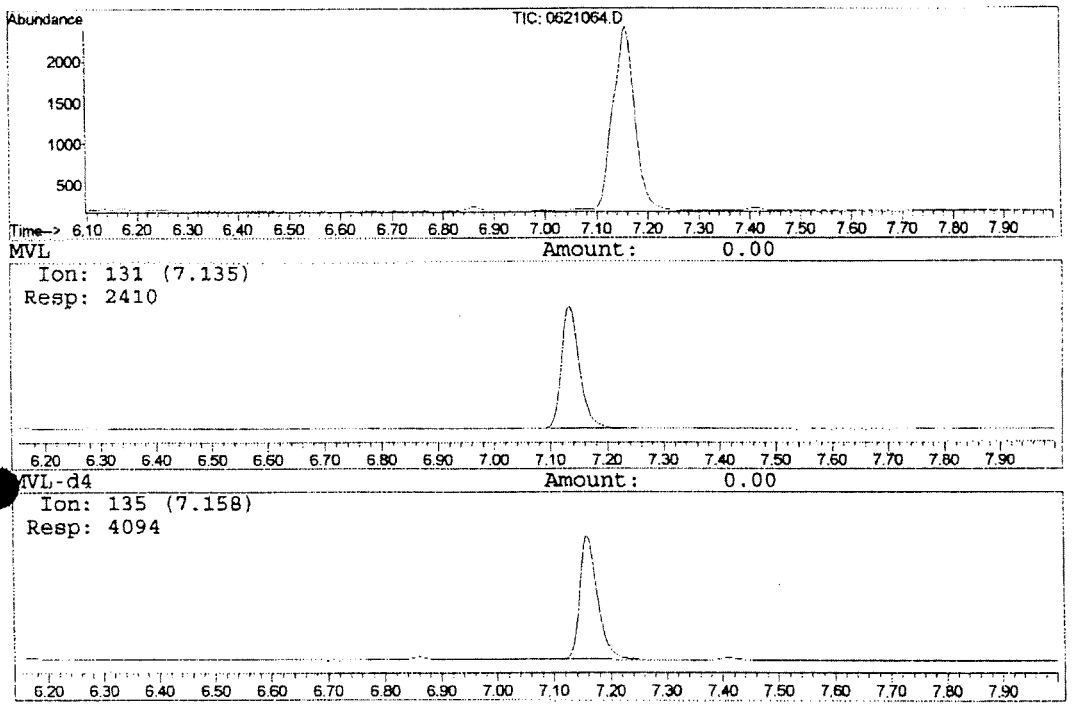
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	2410		588.7E-3
2)	MVL-d4	7.16	135	4094		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621064.D Vial: 64
Acq On : 18 Oct 2000 10:20 Operator: MAN
Sample : 2 x STD-5 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-6 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 10:40
Operator: MAN

Data File Name: 0621065.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 65

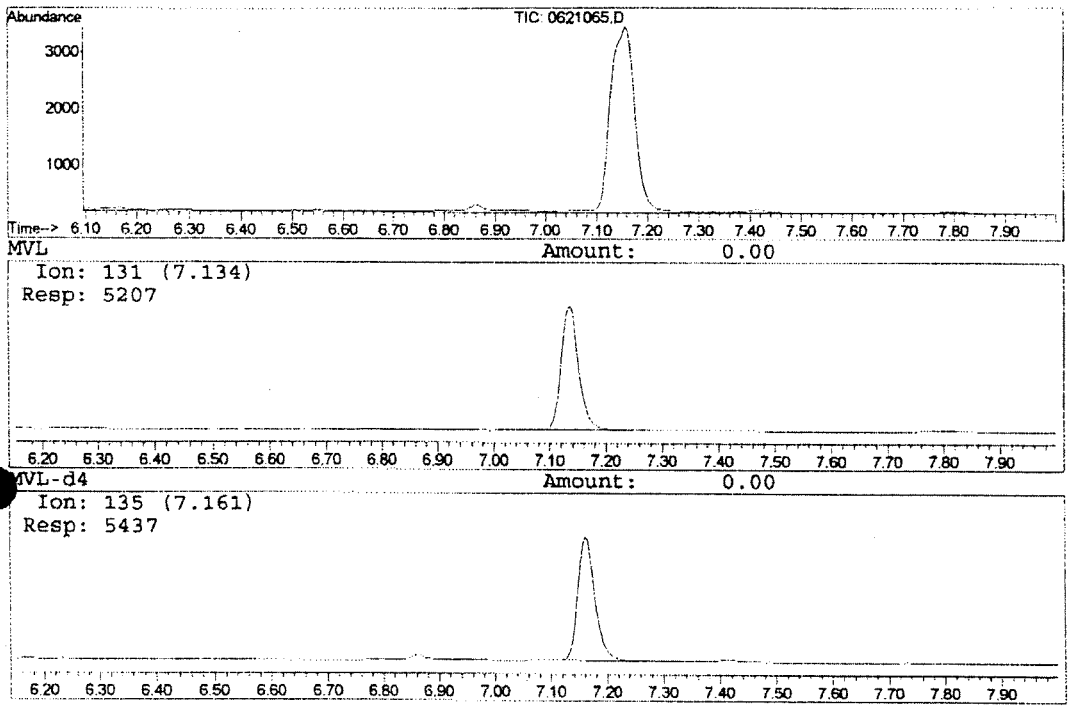
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.13	131	5207		957.7E-3
2)	MVL-d4	7.16	135	5437		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621065.D Vial: 65
Acq On : 18 Oct 2000 10:40 Operator: MAN
Sample : 2 x STD-6 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 x STD-7 Water
Notebook Reference: PABX-BVA-1-062

Date Acquired: 10/18/2000 10:59
Operator: MAN

Data File Name: 0621066.D
Data File Path: D:\MSD_DATA\PAB\PABX-BVA\1-062-1\
Instrument Method Name: PABX_BVA

Instrument Name: MS7
Instrument Vial Number: 66

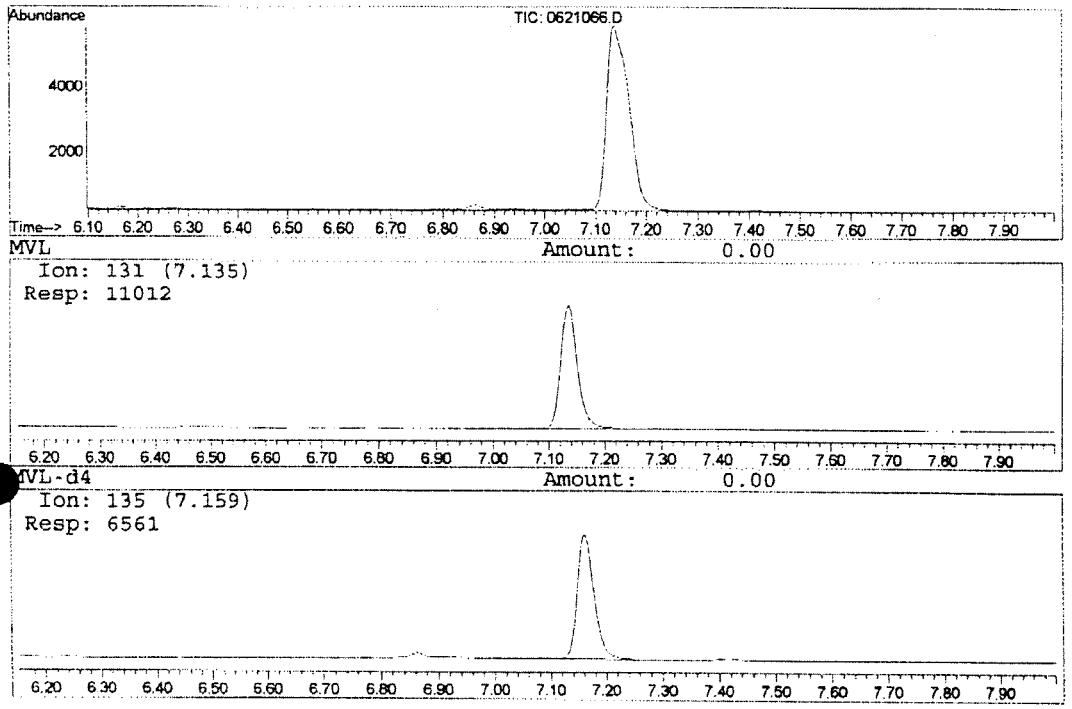
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.14	131	11012		167.8E-2
2)	MVL-d4	7.16	135	6561		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed) 10/18/00

Data File : D:\MSD_DATA\PAB\PABX-BVA\1-062-1\0621066.D Vial: 66
Acq On : 18 Oct 2000 10:59 Operator: MAN
Sample : 2 x STD-7 Water Inst : MS7
Misc :

MS Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BVA.M (RTE Integrator)



FINAL REPORT

GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC ANALYSIS OF MEVALONIC ACID IN EDTA RAT PLASMA FOR ARGUS STUDY 418-018

Primedica Project Number: PABX-BBA

PRIMEDICA ARGUS
905 Sheehy Drive, Building A
Horsham, PA 19044

PRIMEDICA

FINAL REPORT

GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC ANALYSIS OF MEVALONIC ACID IN EDTA RAT PLASMA FOR ARGUS STUDY 418-018

Primedica Project Number: PABX-BBA

Submitted to:

PRIMEDICA ARGUS
905 Sheehy Drive, Building A
Horsham, PA 19044

Submitted by:
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57 Union Street
Worcester, MA 01608

Primedica Report # PABX-BBA-01-145

Page 1 of 187

Issue Date: November 7, 2001

Mark A. Netsch / Date
Project Scientist
Bioanalytical Chemistry Department
Primedica-Worcester

COMPLIANCE STATEMENT

This project was conducted in compliance with the Good Laboratory Practice Regulations, 21CFR, Part 58, Good Laboratory Practice Standard for Safety Studies on Drugs, MHW Ordinance Number 21, March 26, 1997 and Council decision/ recommendation on compliance with principles of good laboratory practice. Official Journal of European Communities: Legislation 32 (No. L 315; 28 October): 1-17. There were no deviations from the aforementioned standards, which affected the quality or integrity of the project or the interpretation of the results in this report.

Mark A. Netsch 11/7/01

Mark A. Netsch, B.A. / Date
Project Scientist

QUALITY ASSURANCE STATEMENT

The following are the inspection dates and report dates of QAU audit/inspections for **GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC ANALYSIS OF MEVALONIC ACID IN EDTA PLASMA FOR ARGUS STUDY 418-018**, Project Number PABX-BBA.

Critical Phases	Date Inspected	Date Report Submitted to Study Director	Management
1.Laboratory Procedure	01/23/2000	04/27/2001	01/29/2001
2. Raw Data	03/29/2001	04/27/2001	04/03/2001
3. Draft Final Report	04/19/2001	04/27/2001	04/26/2001

The Final Report **GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC ANALYSIS OF MEVALONIC ACID IN EDTA PLASMA FOR ARGUS STUDY 418-018**, report number PABX-BBA-01-145, was reviewed for compliance with the Good Laboratory Practice Regulations, 21CFR, Part 58, Good Laboratory Practice Standard for Safety Studies on Drugs, MHW Ordinance Number 21, March 26, 1997 and Council decision/ recommendation on compliance with principles of good laboratory practice. Official Journal of European Communities: Legislation 32 (No. L 315; 28 October): 1-17, on 11/07/01. The results as presented accurately reflect the raw data.

Quality Assurance Auditor

11/07/01
Date

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CONTRIBUTING PERSONNEL

Project Scientist ..... Mark A. Netsch, B.A.

Director, Analytical Chemistry ..... Jim Jersey, Ph.D.

Analytical Chemist ..... Yanira Villalobos, A.C.E.

Report Coordinator ..... Brenda L. Brooks

ANALYTICAL STANDARD CHARACTERIZATION/STABILITY

Analytical Standard:	DL-Mevalonic acid lactone
Common Name:	Mevalonic acid lactone or Mevalonolacetone or MVL
Physical Description:	White crystals
Lot Number:	47300/1 50498
Storage Conditions:	5 ±3 °C, desiccate, store under nitrogen
Expiration Date:	September 13, 2002 (Assigned by Primedica)
Date Received:	September 13, 2000
Amount Received:	5 grams
Supplier:	Aldrich Chemical Co.
Internal Standard:	DL-Mevalonolacetone-4,4,5,5-d_4
Common Name:	MVL-d_4
Physical Description:	Clear liquid
Lot Number:	U-295
Storage Conditions:	22 ±5 °C
Expiration Date:	September 11, 2002 (Assigned by Primedica)
Date Received:	September 11, 2000
Amount Received:	0.1 gram
Supplier:	Cambridge Isotope Laboratories

Characterization and Stability: The characterization of the analytical standard and internal standard is the responsibility of the Supplier, as is the method of synthesis, fabrication or derivation and stability determination.

ARCHIVAL STORAGE

Archival Storage: The original Final Report and raw data will be maintained for a minimum period of five years following submission of the final report in the Primedica-Worcester Archives in Worcester, MA. After five years, the Sponsor will be contacted for disposition instructions. Archival materials will be indexed by Primedica-Worcester Report # PABX-BBA-01-145.

SUMMARY:

Sample Receipt:
Samples in this project were received in good condition from Primedica Argus Laboratories in four shipments between the dates of December 5, 2000 and February 13, 2001. The samples were stored at ≤-20°C until the time of analysis.

Method Summary:
Samples in this project were analyzed according to the method described in Primedica Validation Report # PABX-BVA-01-62. The method involves the conversion of mevalonic acid (MVA) to mevalonic acid lactone (MVL) and the analysis of a liquid/liquid extract by gas chromatography coupled with mass spectrometry (GC/MS) using positive chemical ionization (PCI). Calibration and quality control standards were prepared in water because mevalonic acid is a naturally occurring compound in plasma and concentrations vary with diet. The internal standard, MVL-d_4, was used for quantification.

The method was validated for the extraction of mevalonic acid lactone from 100 µL EDTA rat plasma samples over a concentration range of 10.0 ng/mL to 250 ng/mL.

The complete description of the assay and summaries of its performance during the validation can be found in the report cited above. Sample analyses for this project were initiated on January 2, 2001 and completed on February 15, 2001. See Table 3 for the analysis dates of each batch.

A copy of representative raw chromatographic data from the first batch of sample analyses is provided in Appendix A.

Calibration Standard Accuracy and Precision:
Duplicate and bracketing seven-point calibration curves were prepared and analyzed with each batch of samples in an analytical run. For each analytical run, a $1/X^2$-weighted least-squares linear regression was performed on the combined calibrant data set.

Calculated correlation coefficients (r) for the regressions performed were ≥0.996 (see Table 3). Summaries of back-calculated calibration standard concentrations are provided in Table 1. Mean accuracy, expressed as %bias, ranged between 97.9% and 102.7% across concentrations and analytical runs. In addition, precision, as measured by % Relative Standard Deviation (%RSD), ranged from 2.2% to 4.9% across concentrations and analytical runs.

Quality Control Sample Accuracy and Precision:
Summaries of interpolated Quality Control sample concentrations are provided in Table 2. Accuracy, as measured by %bias, ranged between 93.6% and 95.6%. Precision, as measured by %RSD, ranged from 2.9% to 8.9% across all concentrations.

Study Sample Concentrations:
Samples where no peak was detected or the interpolated concentration was less than 10.0 ng/mL before adjustments for dilution factors, the assay lower limit of quantification, were labeled as "BQL" (below quantitation limit). Some samples reported as BQL were analyzed with a dilution but due to limited sample volume could not be reanalyzed. The detection limit for these samples is the lower limit of quantification (10.0 ng/mL) multiplied by the dilution factor.

One samples where the interpolated concentration was greater than 250 ng/mL before adjustment for the dilution factor, the assay upper limit of quantification, was labeled as "AQL" (above quantitation limit). This sample could not be reanalyzed due to limited sample volume. The result for this sample was estimated to be greater than 12,500 ng/mL (250 ng/mL multiplied by the dilution factor of 50).

Interpolated concentrations for all remaining samples are expressed in ng/mL.

Refer to Table 4 for concentrations of mevalonic acid lactone in rat plasma study samples.

CONCLUSIONS:

All analytical results were within acceptable limits with the exception of one value reported as an AQL estimate due to insufficient sample available for reanalysis.

TABLES

TABLE 1

SUMMARY OF BACK-CALCULATED MEVALONIC ACID LACTONE CALIBRATION STANDARD CONCENTRATIONS

	Theoretical Nominal Concentrations (ng/mL)						
Batch ID	10.0	20.0	30.0	50.0	90.0	150	250
PABX-BBA-1-047-1	NR	19.9	29.6	48.6	94.9	152	249
	10.1	20.0	NR	48.9	91.6	150	245
PABX-BBA-1-054-1	10.4	19.8	30.3	48.4	88.4	150	246
	9.82	19.3	30.1	51.0	91.5	155	251
PABX-BBA-1-056-1	10.3	19.8	30.9	49.0	87.8	150	248
	9.68	20.0	30.2	51.2	89.4	150	254
PABX-BBA-1-058-1	9.85	21.3	30.7	48.1	89.4	152	249
	9.68	20.6	30.9	48.1	87.0	152	248
PABX-BBA-1-062-1	9.73	20.2	30.5	48.6	89.2	153	242
	NR	20.5	31.0	50.0	91.2	151	244
PABX-BBA-1-065-1	10.4	19.6	30.5	46.7	85.6	149	255
	10.1	18.6	30.9	47.6	93.8	163	255
PABX-BBA-1-067-1	9.37	19.4	30.2	46.8	87.0	148	235
	9.94	22.9	31.4	53.1	92.0	152	245
PABX-BBA-1-069-1	9.14	19.0	29.6	52.2	90.8	155	239
	10.7	20.6	32.4	49.6	89.6	147	240
PABX-BBA-1-072-1	10.0	19.7	30.4	48.5	92.1	144	239
	NR	NR	NR	51.3	92.0	159	246
PABX-BBA-1-075-1	NR	NR	34.1	46.1	91.0	145	249
	9.97	19.1	31.0	45.5	88.6	163	251
Mean	9.95	20.0	30.8	49.0	90.1	152	247
Std. Dev.	0.396	0.972	1.05	2.02	2.37	5.08	5.54
n	16	18	18	20	20	20	20
%RSD	4.0%	4.9%	3.4%	4.1%	2.6%	3.3%	2.2%
%Nominal	99.5%	100.1%	102.7%	97.9%	100.2%	101.3%	98.6%

NR = Calibration standard excluded from regression, data not reported

TABLE 2

SUMMARY OF INTERPOLATED MEVALONIC ACID LACTONE QC STANDARD CONCENTRATIONS

	Theoretical Nominal Concentrations (ng/mL)		
Batch ID	25.0	70.0	200
PABX-BBA-1-047-1	22.1	74.3	199
	53.6*	67.2	184
PABX-BBA-1-054-1	23.5	65.4	183
	24.9	70.0	187
PABX-BBA-1-056-1	22.5	65.2	184
	22.9	65.9	182
PABX-BBA-1-058-1	24.2	68.1	189
	23.3	68.2	191
PABX-BBA-1-062-1	23.0	64.2	187
	24.1	65.5	188
PABX-BBA-1-065-1	21.9	64.1	184
	26.5	64.0	192
PABX-BBA-1-067-1	22.4	66.8	183
	28.6	68.4	182
PABX-BBA-1-069-1	23.5	66.4	187
	23.2	63.1	188
PABX-BBA-1-072-1	21.1	69.1	200
	23.2	69.8	192
PABX-BBA-1-075-1	29.3	61.6	184
	23.9	62.5	179
Mean	23.9	66.5	187
Std. Dev.	2.13	3.02	5.46
n	19	20	20
%RSD	8.9%	4.5%	2.9%
%Nominal	95.6%	95.0%	93.6%

* = Failed to meet the acceptance criteria and determined to be a statistical outlier using Grubbs' Test. Value excluded from summary statistics

TABLE 3

SUMMARY OF MEVALONIC ACID LACTONE LEAST-SQUARES LINEAR REGRESSION CONSTANTS AND ANALYSIS DATES

Batch ID	Slope	Intercept	Correlation Coefficient (r)	Analysis Date
PABX-BBA-1-047-1	0.0067118	0.014046	0.99956	01/02/01
PABX-BBA-1-054-1	0.0062552	-0.007087	0.99953	01/17/01
PABX-BBA-1-056-1	0.0061528	-0.007974	0.99965	01/19/01
PABX-BBA-1-058-1	0.0060042	-0.006094	0.99909	01/23/01
PABX-BBA-1-062-1	0.0061041	-0.006886	0.99954	01/26/01
PABX-BBA-1-065-1	0.0064579	-0.008650	0.99802	02/01/01
PABX-BBA-1-067-1	0.0064673	-0.002970	0.99698	02/07/01
PABX-BBA-1-069-1	0.0063214	0.00018303	0.99789	02/07/01
PABX-BBA-1-072-1	0.0064268	0.0090496	0.99919	02/13/01
PABX-BBA-1-075-1	0.0069212	-0.01975	0.99652	02/15/01

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
10902-GROUP1-F0	17.3	PABX-BBA-1-054-1
10903-GROUP1-F0	23.7	PABX-BBA-1-054-1
10904-GROUP1-F0	26.3	PABX-BBA-1-054-1
10905-GROUP1-F0	26.0	PABX-BBA-1-054-1
10906-GROUP1-F0	36.0	PABX-BBA-1-054-1
10907-GROUP1-F0	205	PABX-BBA-1-054-1
10908-GROUP1-F0	36.5	PABX-BBA-1-054-1
10909-GROUP1-F0	32.1	PABX-BBA-1-054-1
10910-GROUP1-F0	20.7	PABX-BBA-1-054-1
10911-GROUP1-F0	35.1	PABX-BBA-1-054-1
10912-GROUP1-F0	19.8	PABX-BBA-1-054-1
10913-GROUP1-F0	34.2	PABX-BBA-1-054-1
10914-GROUP1-F0	23.3	PABX-BBA-1-054-1
10901-GROUP1-F1	37.9	PABX-BBA-1-054-1
10902-GROUP1-F1	36.8	PABX-BBA-1-054-1
10903-GROUP1-F1	BQL (DF = 10, <100 ng/mL)	PABX-BBA-1-054-1
10904-GROUP1-F1	40.8	PABX-BBA-1-054-1
10905-GROUP1-F1	44.3	PABX-BBA-1-054-1
10906-GROUP1-F1	BQL (DF = 10, <100 ng/mL)	PABX-BBA-1-054-1
10907-GROUP1-F1	146	PABX-BBA-1-054-1
10908-GROUP1-F1	32.7	PABX-BBA-1-054-1
10909-GROUP1-F1	25.2	PABX-BBA-1-054-1
10910-GROUP1-F1	42.8	PABX-BBA-1-054-1
10911-GROUP1-F1	16.1	PABX-BBA-1-054-1
10913-GROUP1-F1	31.6	PABX-BBA-1-054-1
10915-GROUP2-F0	2300	PABX-BBA-1-058-1
10916-GROUP2-F0	1550	PABX-BBA-1-058-1
10917-GROUP2-F0	1130	PABX-BBA-1-058-1
10918-GROUP2-F0	1500	PABX-BBA-1-058-1
10919-GROUP2-F0	1850	PABX-BBA-1-058-1
10920-GROUP2-F0	1140	PABX-BBA-1-058-1
10921-GROUP2-F0	99.7	PABX-BBA-1-054-1
10922-GROUP2-F0	522	PABX-BBA-1-058-1
10923-GROUP2-F0	159	PABX-BBA-1-054-1
10924-GROUP2-F0	432	PABX-BBA-1-058-1
10925-GROUP2-F0	1780	PABX-BBA-1-058-1
10927-GROUP2-F0	218	PABX-BBA-1-054-1
10928-GROUP2-F0	2060	PABX-BBA-1-058-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
10915-GROUP2-F1	29300	PABX-BBA-1-058-1
10916-GROUP2-F1	AQL (estimated 23,200)	PABX-BBA-1-058-1
10917-GROUP2-F1	15100	PABX-BBA-1-062-1
10918-GROUP2-F1	17000	PABX-BBA-1-062-1
10919-GROUP2-F1	24000	PABX-BBA-1-058-1
10920-GROUP2-F1	12900	PABX-BBA-1-062-1
10921-GROUP2-F1	671	PABX-BBA-1-058-1
10922-GROUP2-F1	168	PABX-BBA-1-054-1
10924-GROUP2-F1	326	PABX-BBA-1-058-1
10925-GROUP2-F1	17400	PABX-BBA-1-058-1
10927-GROUP2-F1	821	PABX-BBA-1-058-1
10928-GROUP2-F1	17100	PABX-BBA-1-062-1
10929-GROUP3-F0	158	PABX-BBA-1-047-1
10930-GROUP3-F0	1670	PABX-BBA-1-058-1
10931-GROUP3-F0	1440	PABX-BBA-1-058-1
10932-GROUP3-F0	1220	PABX-BBA-1-058-1
10933-GROUP3-F0	1440	PABX-BBA-1-058-1
10934-GROUP3-F0	866	PABX-BBA-1-058-1
10935-GROUP3-F0	1530	PABX-BBA-1-058-1
10937-GROUP3-F0	1410	PABX-BBA-1-058-1
10938-GROUP3-F0	451	PABX-BBA-1-058-1
10940-GROUP3-F0	1380	PABX-BBA-1-062-1
10941-GROUP3-F0	416	PABX-BBA-1-058-1
10942-GROUP3-F0	327	PABX-BBA-1-058-1
10929-GROUP3-F1	156	PABX-BBA-1-047-1
10930-GROUP3-F1	25500	PABX-BBA-1-058-1
10931-GROUP3-F1	28500	PABX-BBA-1-058-1
10932-GROUP3-F1	9770	PABX-BBA-1-058-1
10933-GROUP3-F1	19300	PABX-BBA-1-058-1
10934-GROUP3-F1	9430	PABX-BBA-1-058-1
10935-GROUP3-F1	13900	PABX-BBA-1-058-1
10937-GROUP3-F1	13400	PABX-BBA-1-058-1
10940-GROUP3-F1	12700	PABX-BBA-1-058-1
10942-GROUP3-F1	327	PABX-BBA-1-058-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor
* = Estimated value, DF = > 12,500 ng/mL

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
10943-GROUP4-F0	133	PABX-BBA-1-047-1
10944-GROUP4-F0	172	PABX-BBA-1-047-1
10945-GROUP4-F0	1590	PABX-BBA-1-058-1
10946-GROUP4-F0	2460	PABX-BBA-1-058-1
10947-GROUP4-F0	1600	PABX-BBA-1-058-1
10948-GROUP4-F0	161	PABX-BBA-1-047-1
10949-GROUP4-F0	760	PABX-BBA-1-058-1
10950-GROUP4-F0	1730	PABX-BBA-1-058-1
10951-GROUP4-F0	1560	PABX-BBA-1-058-1
10952-GROUP4-F0	99.1	PABX-BBA-1-047-1
10953-GROUP4-F0	1160	PABX-BBA-1-058-1
10954-GROUP4-F0	1000	PABX-BBA-1-058-1
10955-GROUP4-F0	203	PABX-BBA-1-047-1
10956-GROUP4-F0	24000	PABX-BBA-1-058-1
10945-GROUP4-F1	25300	PABX-BBA-1-058-1
10946-GROUP4-F1	22900	PABX-BBA-1-058-1
10947-GROUP4-F1	16300	PABX-BBA-1-058-1
10949-GROUP4-F1	20500	PABX-BBA-1-058-1
10950-GROUP4-F1	19000	PABX-BBA-1-058-1
10951-GROUP4-F1	20300	PABX-BBA-1-058-1
10953-GROUP4-F1	18000	PABX-BBA-1-058-1
10954-GROUP4-F1	19100	PABX-BBA-1-058-1
11029-GROUP11-F0	61.4	PABX-BBA-1-047-1
11031-GROUP11-F0	59.7	PABX-BBA-1-047-1
11032-GROUP11-F0	22.0	PABX-BBA-1-047-1
11033-GROUP11-F0	27.5	PABX-BBA-1-047-1
11034-GROUP11-F0	797	PABX-BBA-1-058-1
11035-GROUP11-F0	37.3	PABX-BBA-1-047-1
11036-GROUP11-F0	48.0	PABX-BBA-1-047-1
11037-GROUP11-F0	38.0	PABX-BBA-1-047-1
11038-GROUP11-F0	42.6	PABX-BBA-1-047-1
11029-GROUP11-F1	17.4	PABX-BBA-1-047-1
11031-GROUP11-F1	11.4	PABX-BBA-1-047-1
11033-GROUP11-F1	20.2	PABX-BBA-1-047-1
11036-GROUP11-F1	17.8	PABX-BBA-1-047-1
11037-GROUP11-F1	15.7	PABX-BBA-1-047-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
11040-GROUP12-F0	15.5	PABX-BBA-1-056-1
11041-GROUP12-F0	24.8	PABX-BBA-1-056-1
11042-GROUP12-F0	22.3	PABX-BBA-1-056-1
11044-GROUP12-F0	31.5	PABX-BBA-1-056-1
11045-GROUP12-F0	15.5	PABX-BBA-1-056-1
11046-GROUP12-F0	18.9	PABX-BBA-1-056-1
11047-GROUP12-F0	22.5	PABX-BBA-1-056-1
11048-GROUP12-F0	BQL (DF = 1, <10 ng/mL)	PABX-BBA-1-056-1
11049-GROUP12-F0	14.0	PABX-BBA-1-056-1
11050-GROUP12-F0	14.9	PABX-BBA-1-056-1
11051-GROUP12-F0	24.2	PABX-BBA-1-056-1
11052-GROUP12-F0	21.9	PABX-BBA-1-056-1
11040-GROUP12-F1	52.5	PABX-BBA-1-056-1
11044-GROUP12-F1	54.4	PABX-BBA-1-056-1
11045-GROUP12-F1	31.6	PABX-BBA-1-056-1
11046-GROUP12-F1	190	PABX-BBA-1-056-1
11047-GROUP12-F1	87.3	PABX-BBA-1-056-1
11050-GROUP12-F1	33.7	PABX-BBA-1-056-1
11051-GROUP12-F1	55.6	PABX-BBA-1-056-1
11052-GROUP12-F1	31.0	PABX-BBA-1-056-1
11053-GROUP13-F0	28.3	PABX-BBA-1-056-1
11054-GROUP13-F0	524	PABX-BBA-1-062-1
11055-GROUP13-F0	BQL (DF = 1, <10 ng/mL)	PABX-BBA-1-056-1
11056-GROUP13-F0	28.8	PABX-BBA-1-056-1
11057-GROUP13-F0	20.8	PABX-BBA-1-056-1
11058-GROUP13-F0	29.4	PABX-BBA-1-056-1
11059-GROUP13-F0	36.7	PABX-BBA-1-056-1
11060-GROUP13-F0	15.0	PABX-BBA-1-056-1
11061-GROUP13-F0	19.2	PABX-BBA-1-056-1
11062-GROUP13-F0	23.8	PABX-BBA-1-056-1
11063-GROUP13-F0	22.9	PABX-BBA-1-056-1
11064-GROUP13-F0	18.0	PABX-BBA-1-056-1
11065-GROUP13-F0	66.9	PABX-BBA-1-056-1
11066-GROUP13-F0	17.3	PABX-BBA-1-056-1
11053-GROUP13-F1	32.0	PABX-BBA-1-056-1
11054-GROUP13-F1	199	PABX-BBA-1-056-1
11056-GROUP13-F1	41.3	PABX-BBA-1-056-1
11058-GROUP13-F1	64.0	PABX-BBA-1-056-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
11059-GROUP13-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-056-1
11060-GROUP13-F1	185	PABX-BBA-1-056-1
11062-GROUP13-F1	71.1	PABX-BBA-1-056-1
11063-GROUP13-F1	194	PABX-BBA-1-056-1
11066-GROUP13-F1	51.9	PABX-BBA-1-056-1
11501-GROUP1-F0	27.1	PABX-BBA-1-065-1
11502-GROUP1-F0	30.2	PABX-BBA-1-065-1
11503-GROUP1-F0	26.9	PABX-BBA-1-065-1
11504-GROUP1-F0	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-065-1
11505-GROUP1-F0	107	PABX-BBA-1-065-1
11506-GROUP1-F0	22.8	PABX-BBA-1-065-1
11507-GROUP1-F0	17.8	PABX-BBA-1-065-1
11508-GROUP1-F0	25.5	PABX-BBA-1-065-1
11509-GROUP1-F0	19.0	PABX-BBA-1-065-1
11510-GROUP1-F0	18.9	PABX-BBA-1-065-1
11511-GROUP1-F0	28.0	PABX-BBA-1-065-1
11512-GROUP1-F0	27.2	PABX-BBA-1-065-1
11513-GROUP1-F0	20.8	PABX-BBA-1-065-1
11514-GROUP1-F0	26.4	PABX-BBA-1-065-1
11515-GROUP2-F0	173	PABX-BBA-1-065-1
11516-GROUP2-F0	161	PABX-BBA-1-065-1
11517-GROUP2-F0	92.8	PABX-BBA-1-065-1
11518-GROUP2-F0	160	PABX-BBA-1-065-1
11519-GROUP2-F0	135	PABX-BBA-1-065-1
11520-GROUP2-F0	413	PABX-BBA-1-072-1
11521-GROUP2-F0	135	PABX-BBA-1-065-1
11523-GROUP2-F0	190	PABX-BBA-1-065-1
11524-GROUP2-F0	32.7	PABX-BBA-1-065-1
11525-GROUP2-F0	146	PABX-BBA-1-065-1
11526-GROUP2-F0	89.6	PABX-BBA-1-065-1
11527-GROUP2-F0	356	PABX-BBA-1-072-1
11528-GROUP2-F0	111	PABX-BBA-1-065-1
11529-GROUP3-F0	126	PABX-BBA-1-067-1
11530-GROUP3-F0	429	PABX-BBA-1-072-1
11532-GROUP3-F0	1180	PABX-BBA-1-072-1
11533-GROUP3-F0	821	PABX-BBA-1-072-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
11534-GROUP3-F0	128	PABX-BBA-1-067-1
11535-GROUP3-F0	8210	PABX-BBA-1-072-1
11536-GROUP3-F0	375	PABX-BBA-1-072-1
11537-GROUP3-F0	141	PABX-BBA-1-067-1
11538-GROUP3-F0	411	PABX-BBA-1-072-1
11539-GROUP3-F0	2530	PABX-BBA-1-072-1
11540-GROUP3-F0	173	PABX-BBA-1-067-1
11541-GROUP3-F0	3680	PABX-BBA-1-072-1
11542-GROUP3-F0	311	PABX-BBA-1-072-1
11543-GROUP3-F0	347	PABX-BBA-1-072-1
11544-GROUP4-F0	6970	PABX-BBA-1-072-1
11545-GROUP4-F0	1550	PABX-BBA-1-072-1
11546-GROUP4-F0	9720	PABX-BBA-1-075-1
11547-GROUP4-F0	164	PABX-BBA-1-067-1
11549-GROUP4-F0	82.1	PABX-BBA-1-067-1
11550-GROUP4-F0	494	PABX-BBA-1-072-1
11551-GROUP4-F0	483	PABX-BBA-1-072-1
11552-GROUP4-F0	457	PABX-BBA-1-072-1
11553-GROUP4-F0	308000 **	PABX-BBA-1-075-1
11554-GROUP4-F0	389	PABX-BBA-1-072-1
11555-GROUP4-F0	648	PABX-BBA-1-072-1
11556-GROUP4-F0	320	PABX-BBA-1-072-1
11557-GROUP4-F0	541	PABX-BBA-1-072-1
11630-GROUP11-F0	48.1	PABX-BBA-1-067-1
11632-GROUP11-F0	25.4	PABX-BBA-1-067-1
11633-GROUP11-F0	25.8	PABX-BBA-1-067-1
11634-GROUP11-F0	29.6	PABX-BBA-1-067-1
11635-GROUP11-F0	80.8	PABX-BBA-1-067-1
11636-GROUP11-F0	40.3	PABX-BBA-1-067-1
11637-GROUP11-F0	38.7	PABX-BBA-1-067-1
11638-GROUP11-F0	35.8	PABX-BBA-1-067-1
11639-GROUP11-F0	38.3	PABX-BBA-1-067-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor
** = Value was confirmed

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
11640-GROUP12-F0	41.3	PABX-BBA-1-067-1
11641-GROUP12-F0	34.2	PABX-BBA-1-067-1
11642-GROUP12-F0	47.6	PABX-BBA-1-067-1
11643-GROUP12-F0	14.6	PABX-BBA-1-067-1
11644-GROUP12-F0	25.8	PABX-BBA-1-067-1
11645-GROUP12-F0	17.5	PABX-BBA-1-067-1
11646-GROUP12-F0	26.5	PABX-BBA-1-067-1
11647-GROUP12-F0	35.5	PABX-BBA-1-067-1
11648-GROUP12-F0	102	PABX-BBA-1-067-1
11649-GROUP12-F0	19.7	PABX-BBA-1-067-1
11650-GROUP12-F0	27.3	PABX-BBA-1-072-1
11651-GROUP12-F0	24.6	PABX-BBA-1-067-1
11653-GROUP12-F0	38.1	PABX-BBA-1-067-1
11654-GROUP13-F0	32.4	PABX-BBA-1-069-1
11655-GROUP13-F0	30.5	PABX-BBA-1-069-1
11656-GROUP13-F0	39.5	PABX-BBA-1-069-1
11657-GROUP13-F0	11.9	PABX-BBA-1-069-1
11658-GROUP13-F0	11.8	PABX-BBA-1-069-1
11659-GROUP13-F0	BQL (DF = 1, <10 ng/mL)	PABX-BBA-1-069-1
11660-GROUP13-F0	38.1	PABX-BBA-1-069-1
11661-GROUP13-F0	31.2	PABX-BBA-1-069-1
11662-GROUP13-F0	16.8	PABX-BBA-1-069-1
11663-GROUP13-F0	42.0	PABX-BBA-1-069-1
11664-GROUP13-F0	28.0	PABX-BBA-1-069-1
11665-GROUP13-F0	BQL (DF = 1, <10 ng/mL)	PABX-BBA-1-069-1
11667-GROUP13-F0	BQL (DF = 1, <10 ng/mL)	PABX-BBA-1-069-1
11501/11506-GROUP1-F1	15.4	PABX-BBA-1-069-1
11504-GROUP1-F1	BQL (DF = 4, <40 ng/mL)	PABX-BBA-1-069-1
11502/11507-GROUP1-F1	19.2	PABX-BBA-1-069-1
11505-GROUP1-F1	BQL (DF = 3, <30 ng/mL)	PABX-BBA-1-069-1
11508/11503-GROUP1-F1	26.4	PABX-BBA-1-069-1
11509/11510-GROUP1-F1	25.8	PABX-BBA-1-069-1
11512/11511-GROUP1-F1	23.3	PABX-BBA-1-069-1
11513/11514-GROUP1-F1	20.5	PABX-BBA-1-069-1
11515/11524-GROUP2-F1	380	PABX-BBA-1-072-1
11517/11520-GROUP2-F1	393	PABX-BBA-1-072-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

TABLE 4

SUMMARY OF MEVALONIC ACID LACTONE CONCENTRATIONS IN EDTA RAT PLASMA STUDY SAMPLES

Animal # -Group #-Generation	Concentration (ng/mL)	Batch ID
11519/11518-GROUP2-F1	275	PABX-BBA-1-072-1
11521/11516-GROUP2-F1	239	PABX-BBA-1-069-1
11523/11527-GROUP2-F1	214	PABX-BBA-1-069-1
11525/11528-GROUP2-F1	152	PABX-BBA-1-069-1
11526-GROUP2-F1	49.0	PABX-BBA-1-069-1
11536/11537-GROUP3-F1	242	PABX-BBA-1-069-1
11538/11534-GROUP3-F1	395	PABX-BBA-1-072-1
11540/11530-GROUP3-F1	193	PABX-BBA-1-069-1
11542-GROUP3-F1	243	PABX-BBA-1-069-1
11543/11529-GROUP3-F1	340	PABX-BBA-1-072-1
11547-GROUP4-F1	51.3	PABX-BBA-1-069-1
11552-GROUP4-F1	339	PABX-BBA-1-069-1
11630/11633-GROUP11-F1	21.7	PABX-BBA-1-069-1
11632/11636-GROUP11-F1	24.0	PABX-BBA-1-069-1
11635/11637-GROUP11-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-069-1
11638-GROUP11-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-069-1
11639/11634-GROUP11-F1	21.4	PABX-BBA-1-069-1
11640/11641-GROUP12-F1	23.3	PABX-BBA-1-069-1
11643/11647-GROUP12-F1	BQL (DF = 4, <40 ng/mL)	PABX-BBA-1-072-1
11646/11644-GROUP12-F1	14.7	PABX-BBA-1-069-1
11648/11651-GROUP12-F1	21.9	PABX-BBA-1-069-1
11650-GROUP12-F1	22.4	PABX-BBA-1-072-1
11653/11642-GROUP12-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-069-1
11654/11662-GROUP13-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-069-1
11656/11655-GROUP13-F1	BQL (DF = 2, <20 ng/mL)	PABX-BBA-1-069-1

BQL = Below quantitation limit.
AQL = Above quantitation limit
DF = Dilution Factor

APPENDIX A

REPRESENTATIVE CHROMATOGRAPHIC DATA - BATCH NO. PABX-1-047-1

Peak Area Report

Sample Name: 1x Blank
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 15:29
Operator:

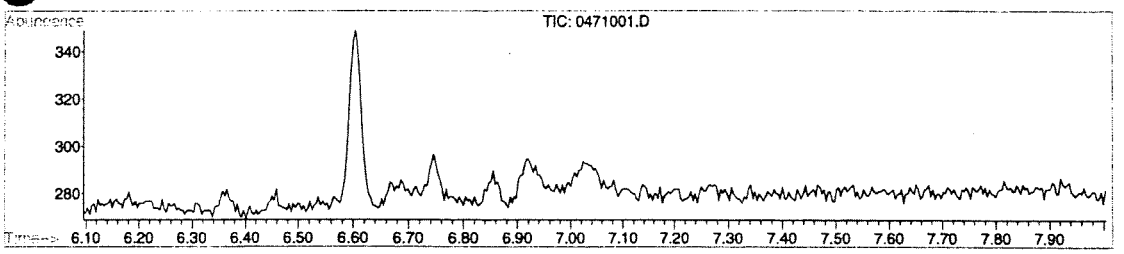
Data File Name: 0471001.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 1

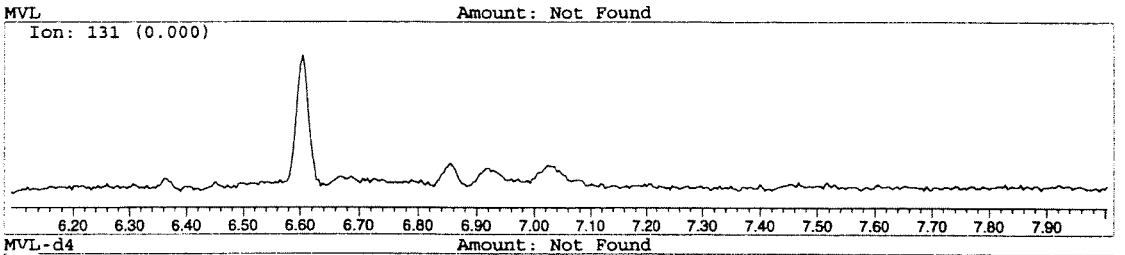
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		#DIV/0!
2)	MVL-d4	0.00	135	0		

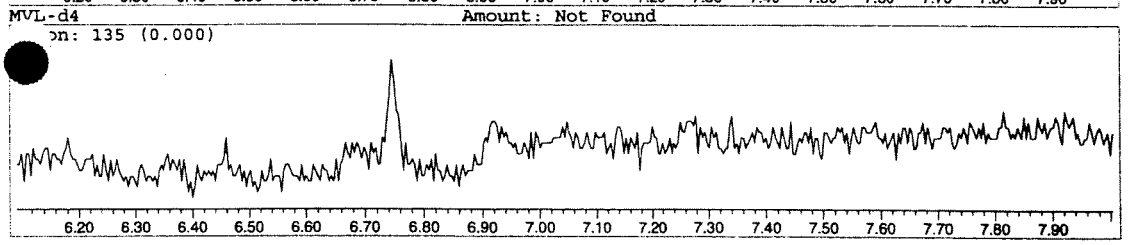
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471001.D Vial: 1
Acq On : 2 Jan 2001 15:29 Operator:
Sample : 1x Blank Inst : MS7
Misc :

; Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 15:48
Operator:

Data File Name: 0471002.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

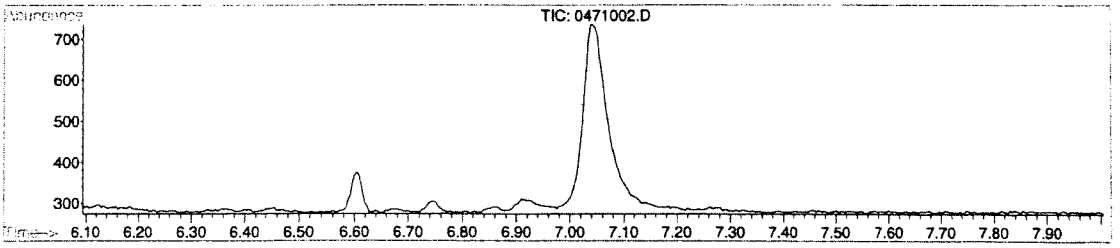
Instrument Name: MS7
Instrument Vial Number: 2

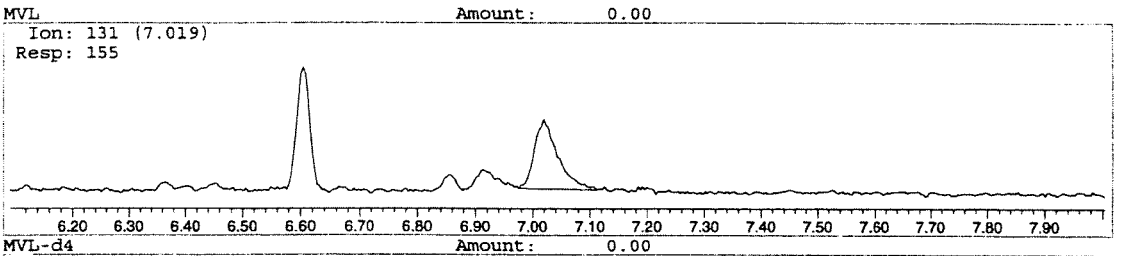
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	155		120.9E-3
2)	MVL-d4	7.04	135	1282		

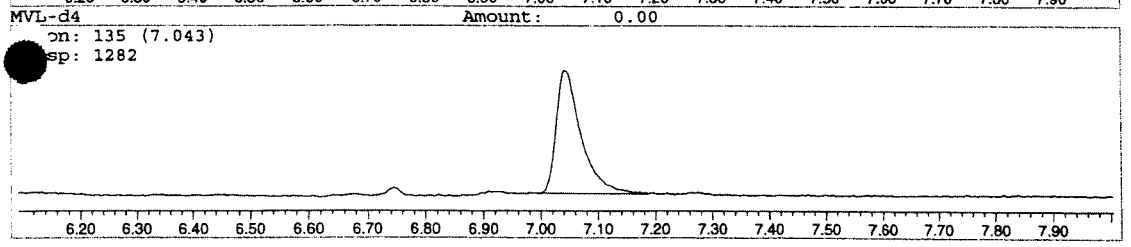
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471002.D Vial: 2
Acq On : 2 Jan 2001 15:48 Operator:
Sample : 1 X STD 1 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 2
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 16:08
Operator:

Data File Name: 0471003.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

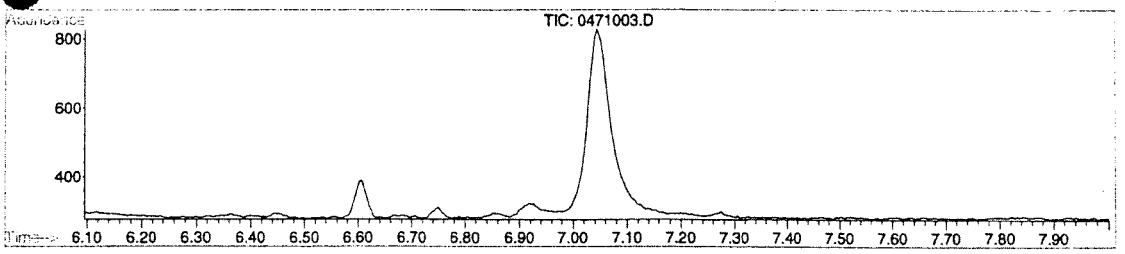
Instrument Name: MS7
Instrument Vial Number: 3

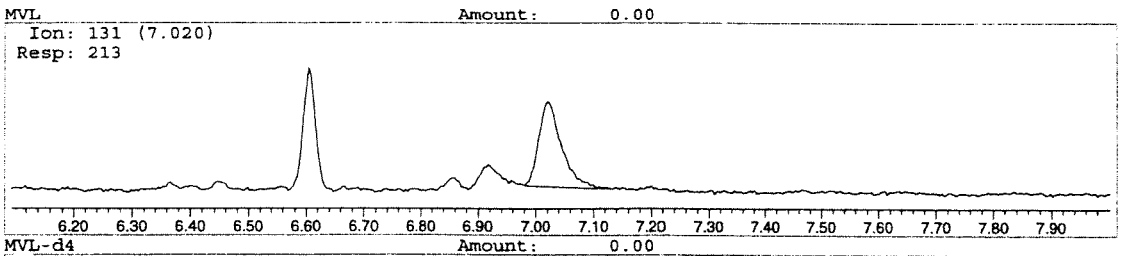
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	213		147.8E-3
2)	MVL-d4	7.04	135	1441		

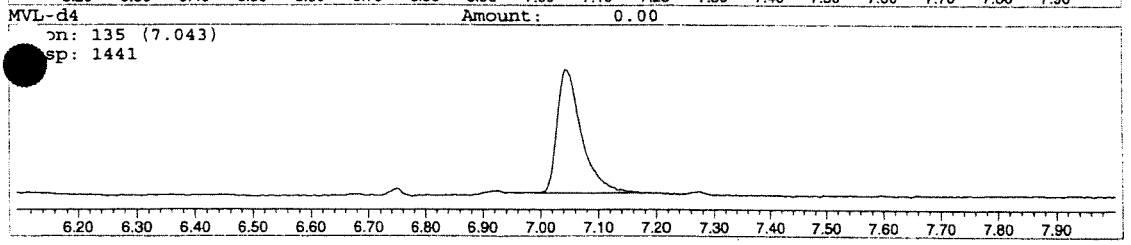
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471003.D Vial: 3
Acq On : 2 Jan 2001 16:08 Operator:
Sample : 1 X STD 2 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 3
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 16:28
Operator:

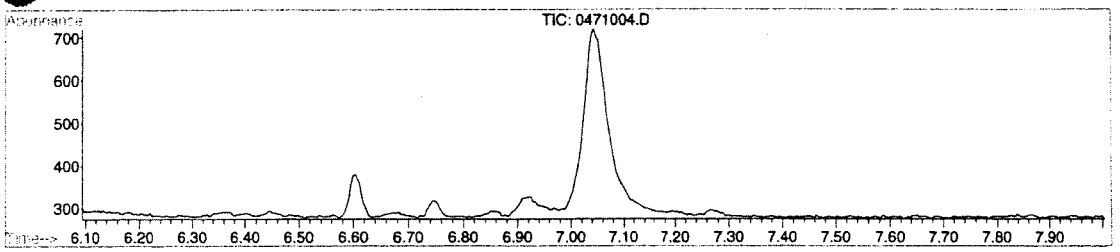
Data File Name: 0471004.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Name: MS7
Instrument Vial Number: 4
Instrument Method Name: PABX_BBA

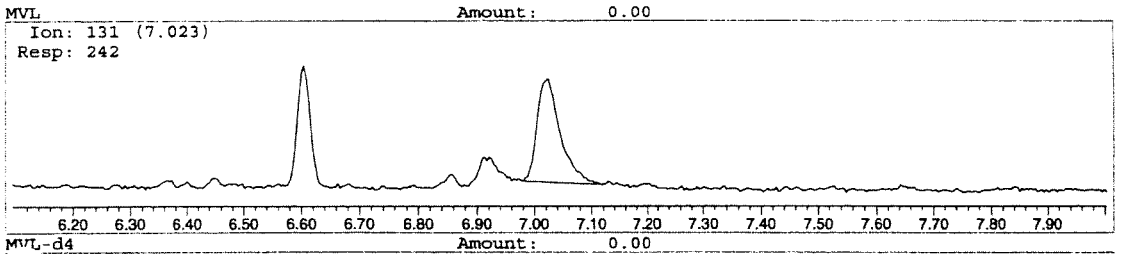
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	242		212.7E-3
2)	MVL-d4	7.04	135	1138		

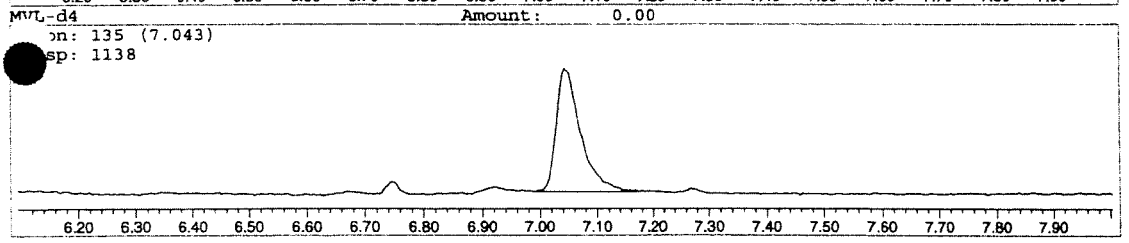
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471004.D Vial: 4
Acq On : 2 Jan 2001 16:28 Operator:
Sample : 1 X STD 3 Inst : MS7
Misc :

; Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 4
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 16:47
Operator:

Data File Name: 0471005.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

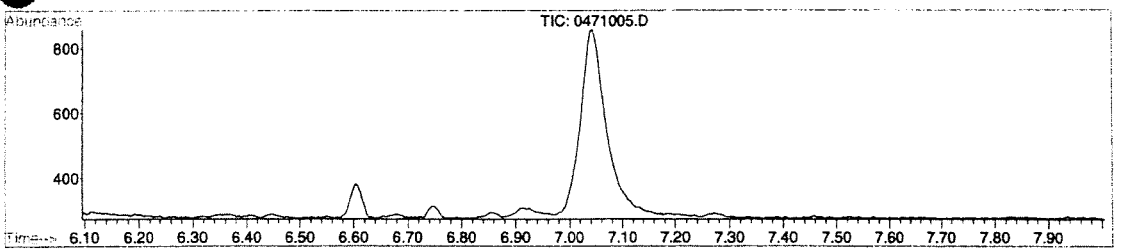
Instrument Name: MS7
Instrument Vial Number: 5

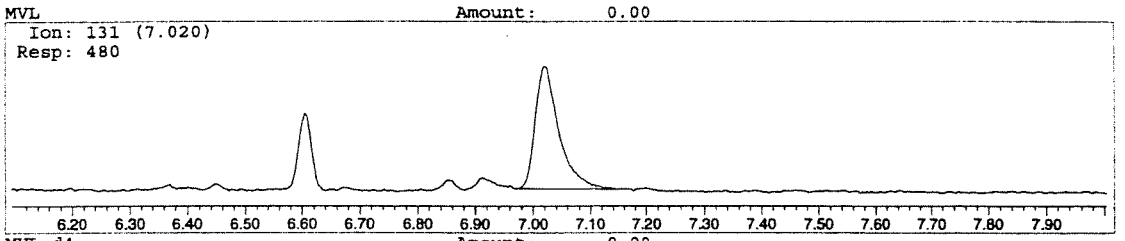
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	480		339.9E-3
2)	MVL-d4	7.04	135	1412		

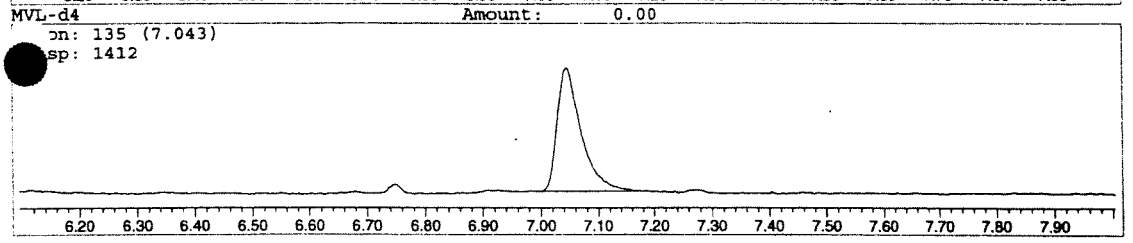
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471005.D Vial: 5
Acq On : 2 Jan 2001 16:47 Operator:
Sample : 1 X STD 4 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 5
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 17:07
Operator:

Data File Name: 0471006.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

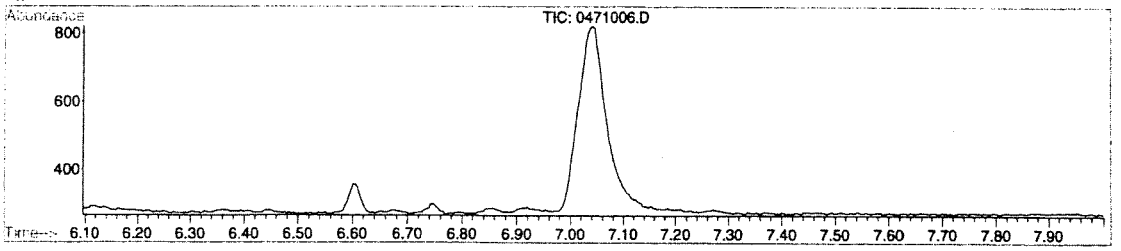
Instrument Name: MS7
Instrument Vial Number: 6

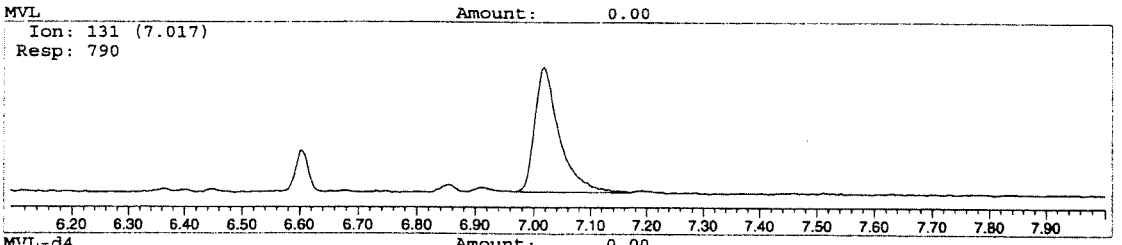
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	790		651.3E-3
2)	MVL-d4	7.04	135	1213		

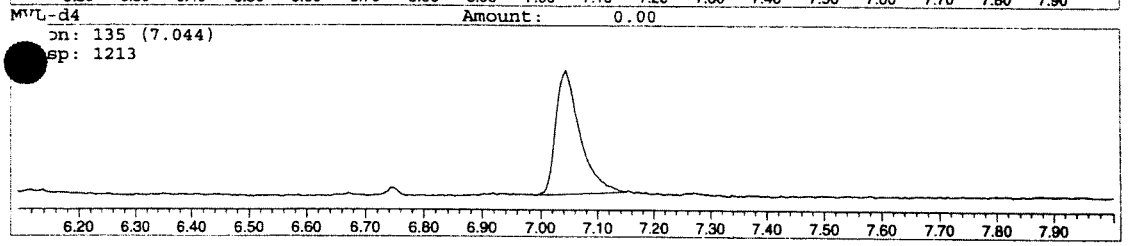
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471006.D Vial: 6
Acq On : 2 Jan 2001 17:07 Operator:
Sample : 1 X STD 5 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 6
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 17:27
Operator:

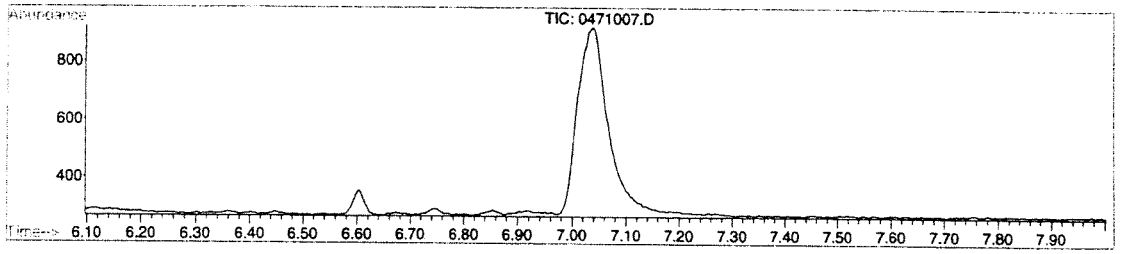
Data File Name: 0471007.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 7

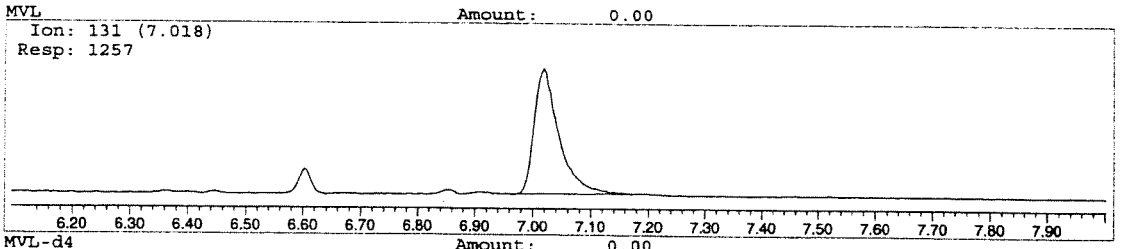
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1257		103.2E-2
2)	MVL-d4	7.04	135	1218		

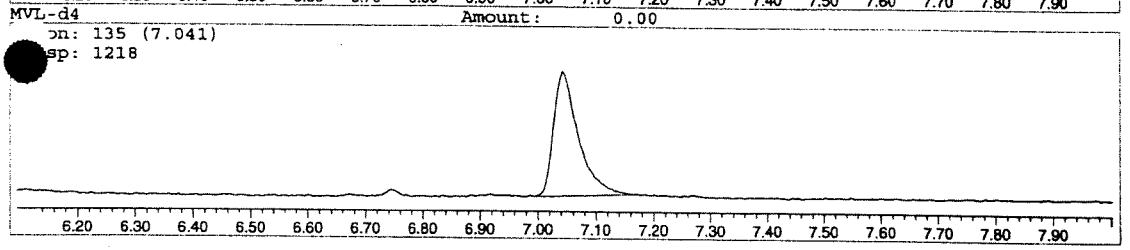
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471007.D Vial: 7
Acq On : 2 Jan 2001 17:27 Operator:
Sample : 1 X STD 6 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X STD 7
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 17:47
Operator:

Data File Name: 0471008.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

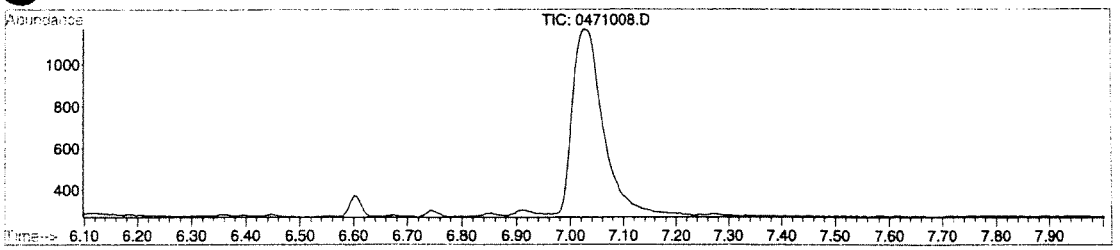
Instrument Name: MS7
Instrument Vial Number: 8

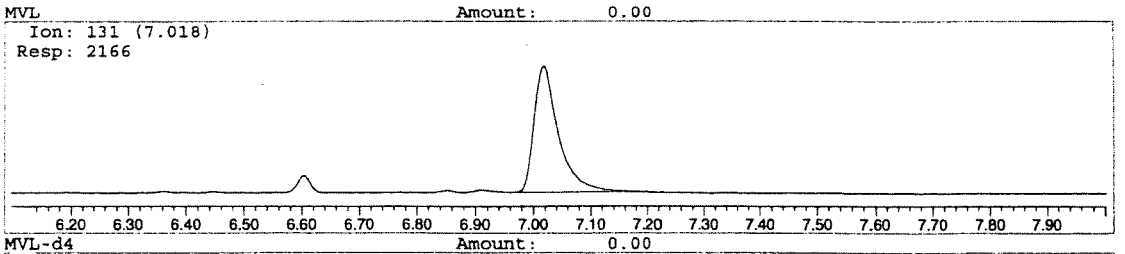
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	2166		168.7E-2
2)	MVL-d4	7.04	135	1284		

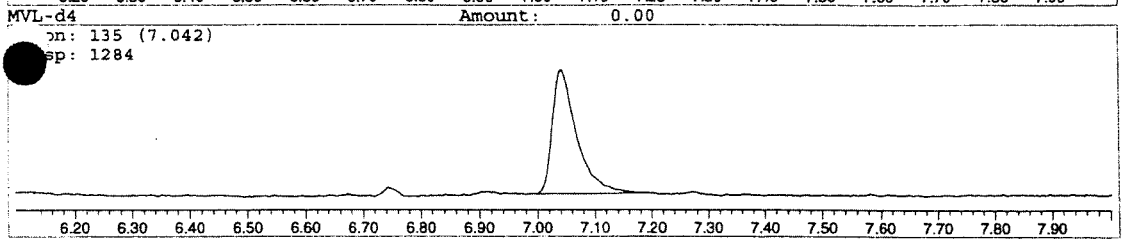
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471008.D Vial: 8
Acq On : 2 Jan 2001 17:47 Operator:
Sample : 1 X STD 7 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X CONTROL
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 18:07
Operator:

Data File Name: 0471009.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

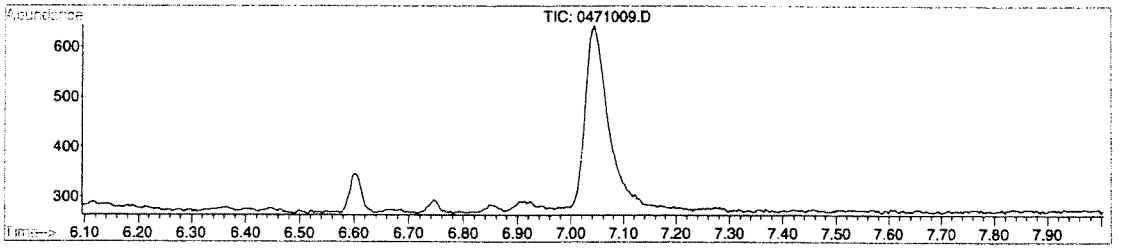
Instrument Name: MS7
Instrument Vial Number: 9

Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		000.0E-3
2)	MVL-d4	7.04	135	1087		

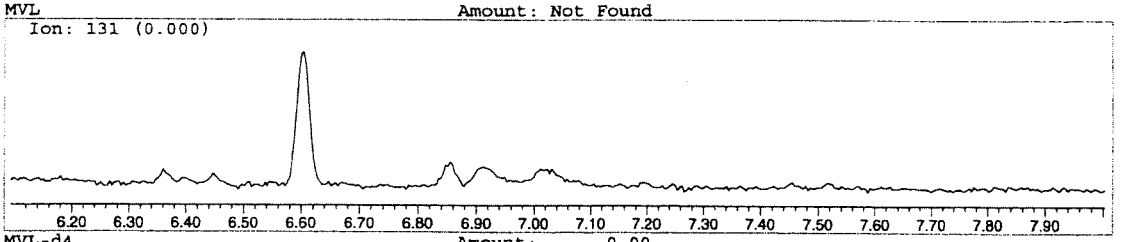
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471009.D Vial: 9
Acq On : 2 Jan 2001 18:07 Operator:
Sample : 1 X CONTROL Inst : MS7
Misc :

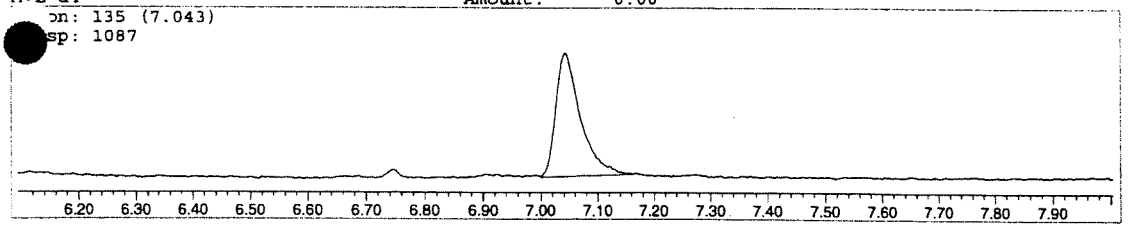
3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: Not Found
Ion: 131 (0.000)



MVL-d4 Amount: 0.00
on: 135 (7.043)
sp: 1087



Peak Area Report

Sample Name: 1 X QC LOW
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 18:26
Operator:

Data File Name: 0471014.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

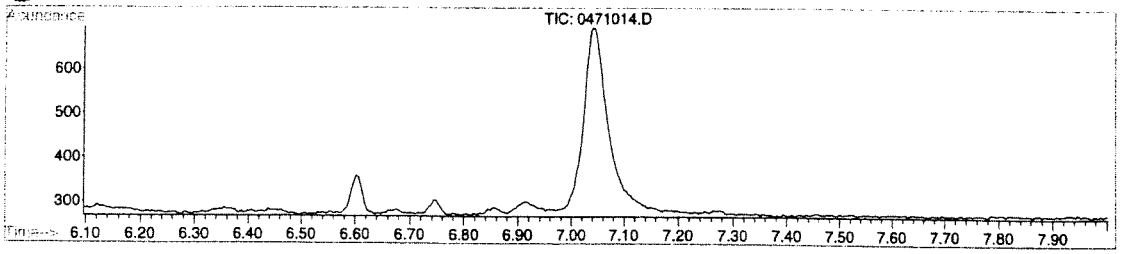
Instrument Name: MS7
Instrument Vial Number: 14

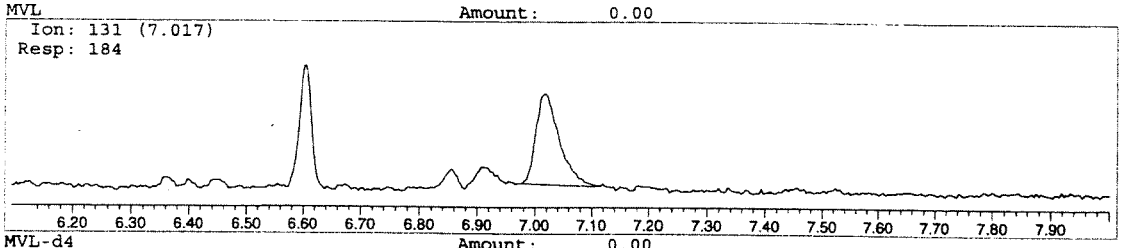
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	184		162.1E-3
2)	MVL-d4	7.04	135	1135		

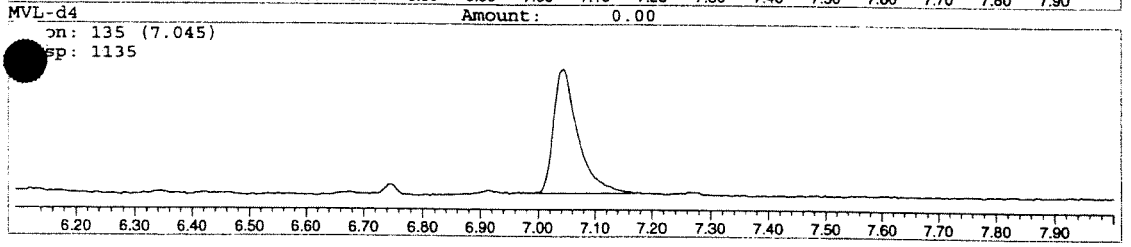
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471014.D Vial: 14
Acq On : 2 Jan 2001 18:26 Operator:
Sample : 1 X QC LOW Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10930-GROUP3-FO
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 18:46
Operator:

Data File Name: 0471025.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 25

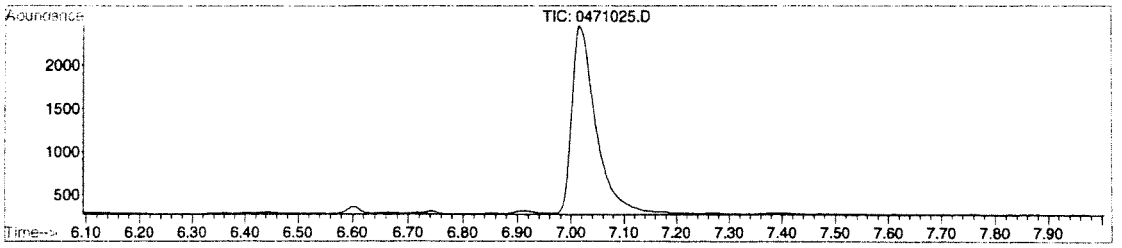
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	6106		864.9E-2
2)	MVL-d4	7.04	135	706		

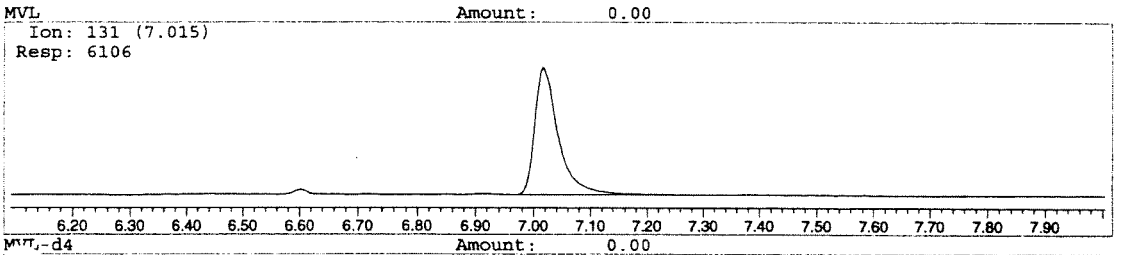
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

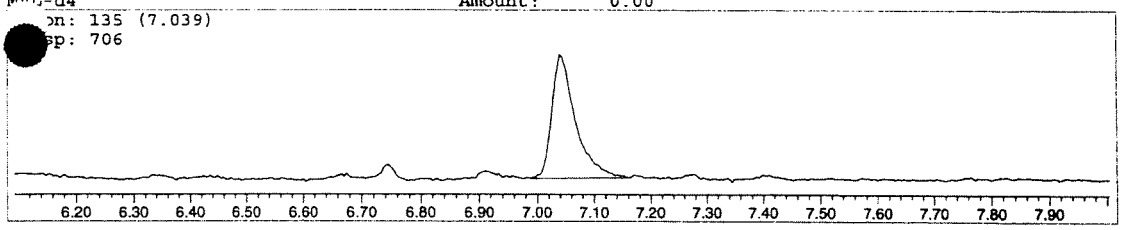
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471025.D Vial: 25
Acq On : 2 Jan 2001 18:46 Operator:
Sample : 10930-GROUP3-FO Inst : MS7
Misc :

[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10931-GROUP3-FO
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 19:06
Operator:

Data File Name: 0471026.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 26

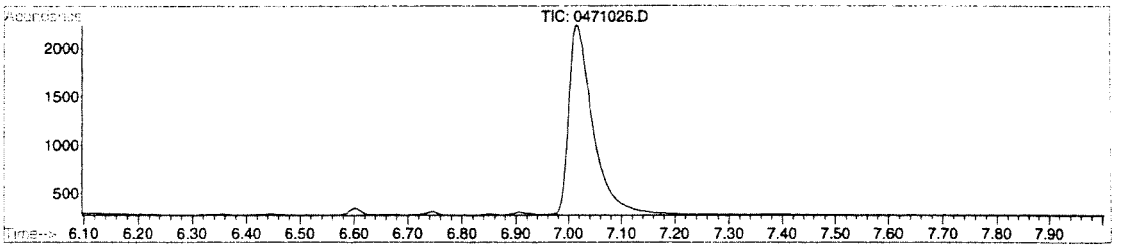
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	5583		984.7E-2
2)	MVL-d4	7.04	135	567		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

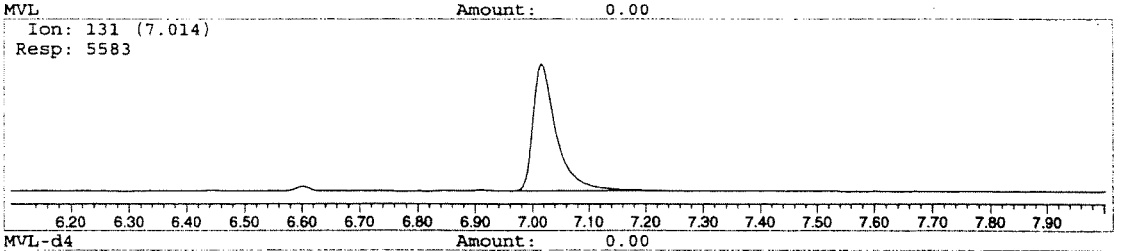
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471026.D Vial: 26
Acq On : 2 Jan 2001 19:06 Operator:
Sample : 10931-GROUP3-FO Inst : MS7
Misc :

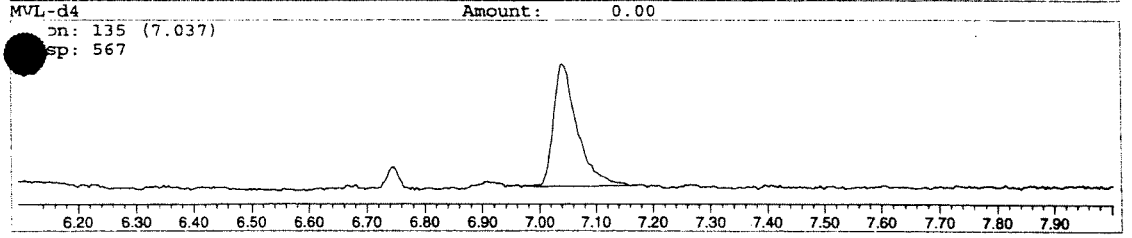
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.014)
Resp: 5583



MVL-d4 Amount: 0.00
Ion: 135 (7.037)
Resp: 567



Peak Area Report

Sample Name: 10932-GROUP3-FO
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 19:26
Operator:

Data File Name: 0471027.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 27

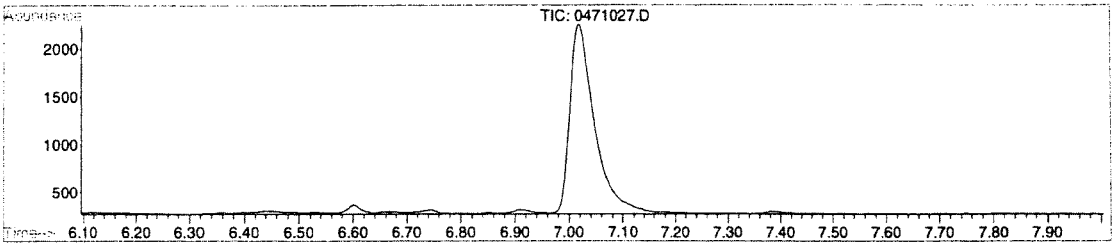
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	5389		680.4E-2
2)	MVL-d4	7.04	135	792		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

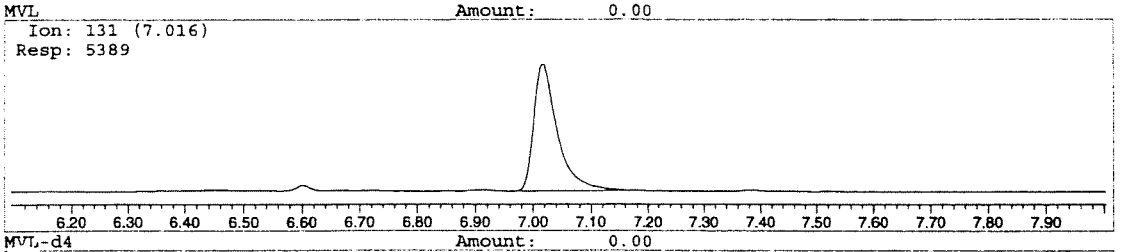
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471027.D Vial: 27
Acq On : 2 Jan 2001 19:26 Operator:
Sample : 10932-GROUP3-FO Inst : MS7
Misc :

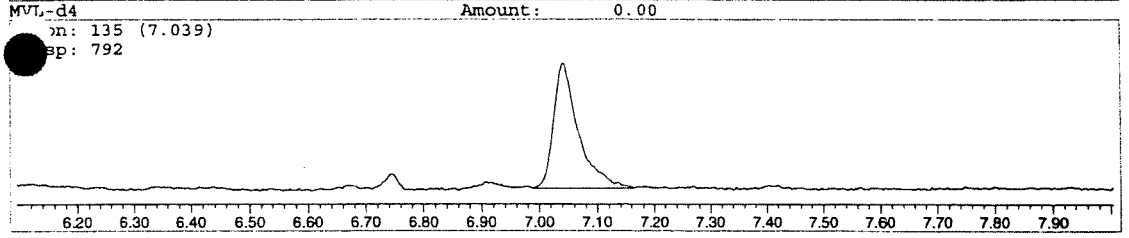
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 5389



MVL-d4 Amount: 0.00
Ion: 135 (7.039)
Resp: 792



Peak Area Report

Sample Name: 10933-GROUP3-FO
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 19:45
Operator:

Data File Name: 0471028.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 28

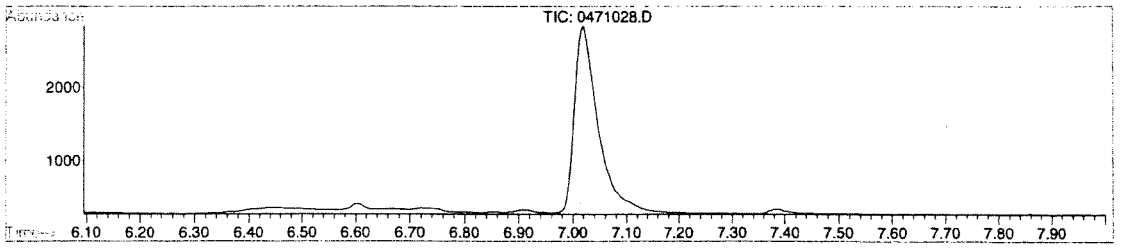
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	7053		137.0E-1
2)	MVL-d4	7.04	135	515		

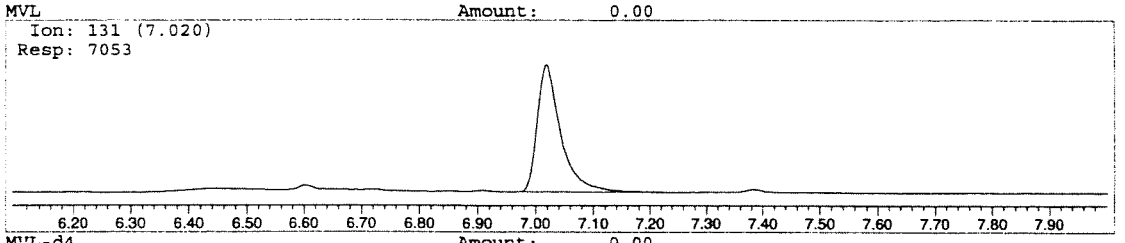
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

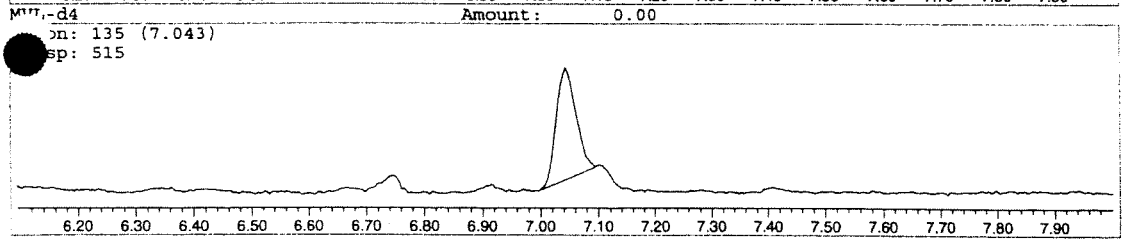
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471028.D Vial: 28
Acq On : 2 Jan 2001 19:45 Operator:
Sample : 10933-GROUP3-FO Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10934-GROUP3-FO
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 20:05
Operator:

Data File Name: 0471029.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 29

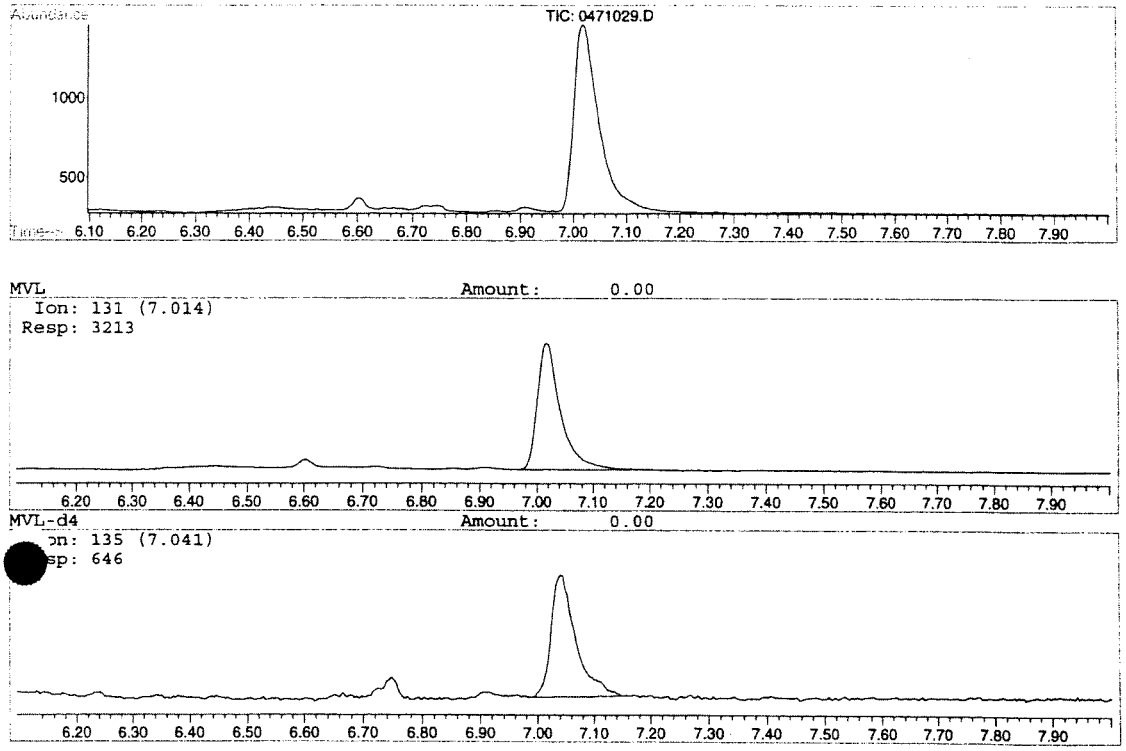
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	3213		497.4E-2
2)	MVL-d4	7.04	135	646		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471029.D Vial: 29
Acq On : 2 Jan 2001 20:05 Operator:
Sample : 10934-GROUP3-FO Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



Peak Area Report

Sample Name: 10935-GROUP3-FO
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 20:25
Operator:

Data File Name: 0471030.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 30

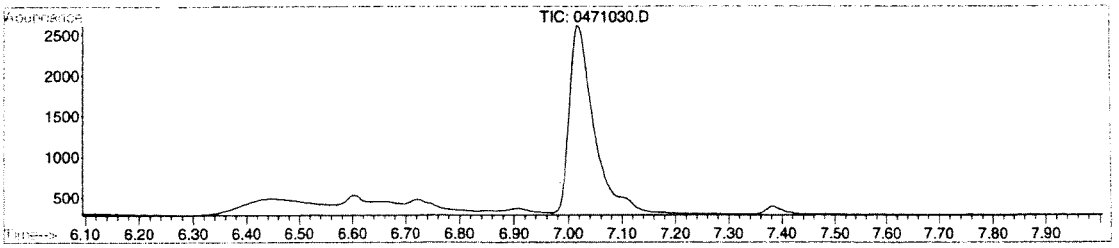
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	6310		105.9E-1
2)	MVL-d4	7.04	135	596		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

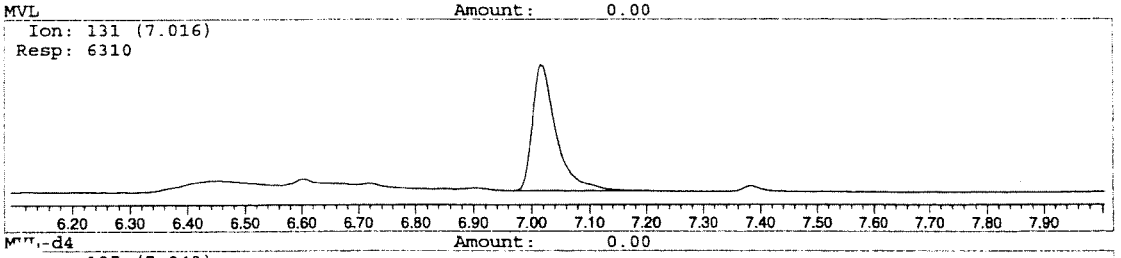
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471030.D Vial: 30
Acq On : 2 Jan 2001 20:25 Operator:
Sample : 10935-GROUP3-FO Inst : MS7
Misc :

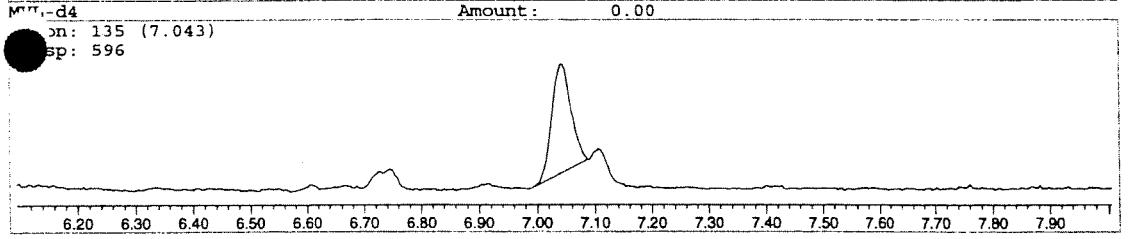
3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 6310



M[illegible]-d4 Amount: 0.00
on: 135 (7.043)
sp: 596



Peak Area Report

Sample Name: 10937-GROUP3-FO
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 20:45
Operator:

Data File Name: 0471031.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 31

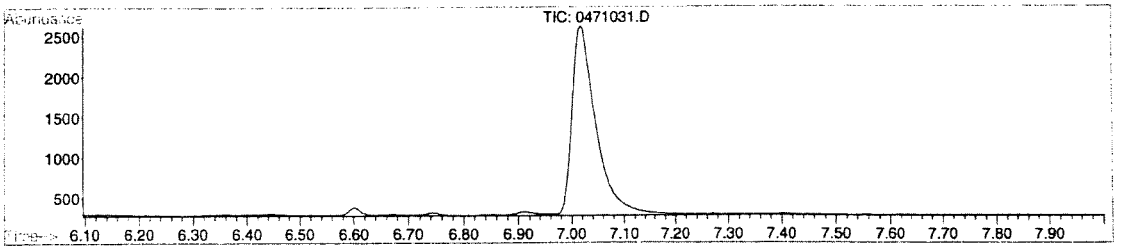
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	6228		627.8E-2
2)	MVL-d4	7.04	135	992		

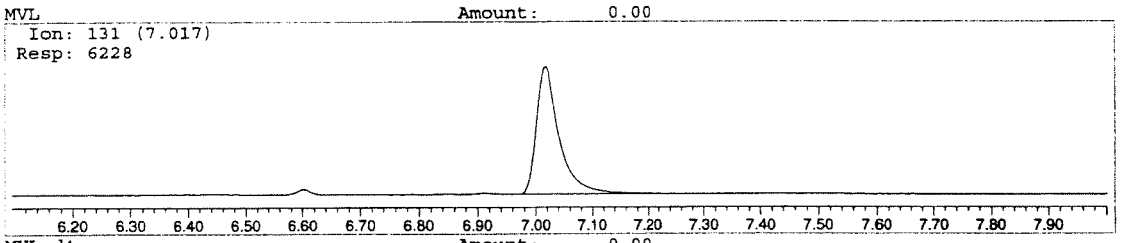
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

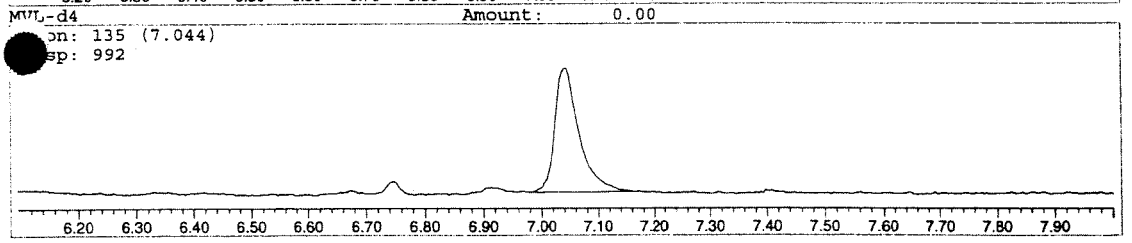
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471031.D Vial: 31
Acq On : 2 Jan 2001 20:45 Operator:
Sample : 10937-GROUP3-FO Inst : MS7
Misc :

[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10940-GROUP3-FO
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 21:04
Operator:

Data File Name: 0471032.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 32

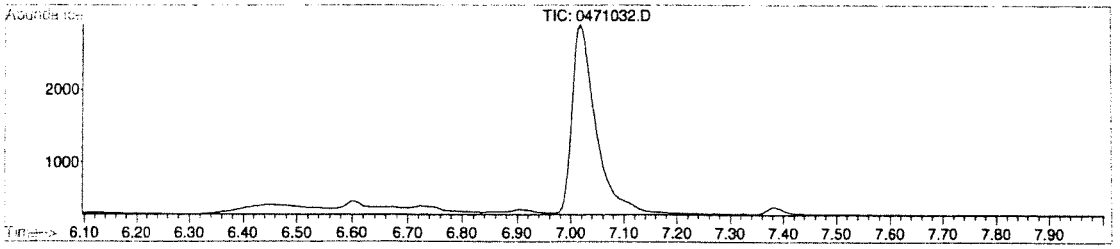
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	7133		118.5E-1
2)	MVL-d4	7.04	135	602		

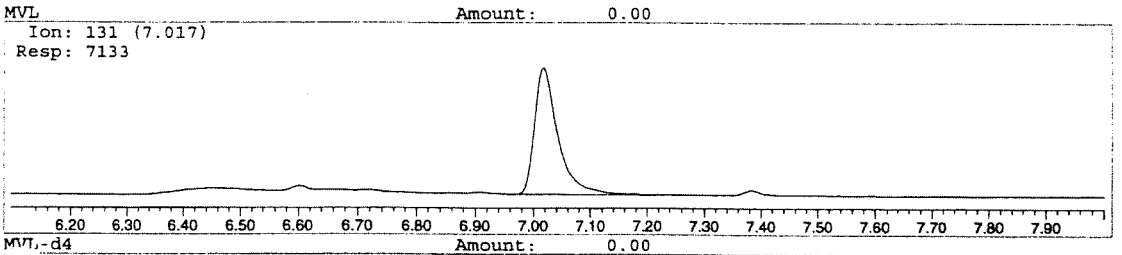
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

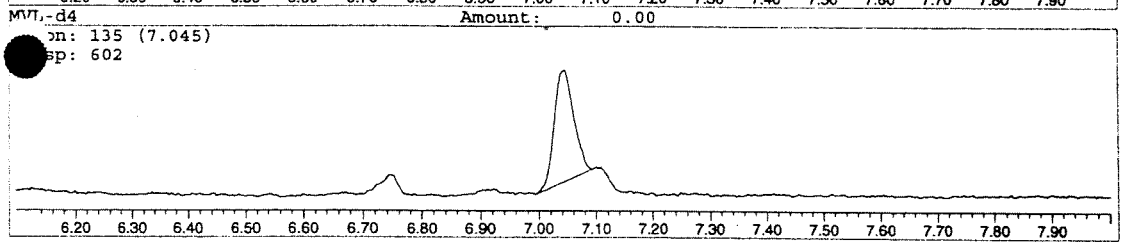
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471032.D Vial: 32
Acq On : 2 Jan 2001 21:04 Operator:
Sample : 10940-GROUP3-FO Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10930-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 21:24
Operator:

Data File Name: 0471033.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 33

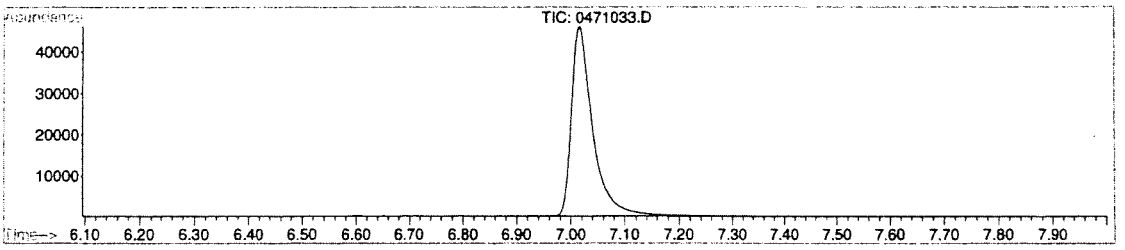
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	124493		159.8E+0
2)	MVL-d4	7.04	135	779		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

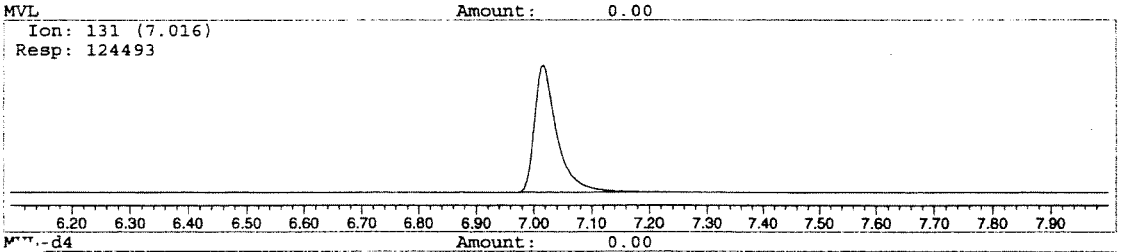
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471033.D Vial: 33
Acq On : 2 Jan 2001 21:24 Operator:
Sample : 10930-GROUP3-F1 Inst : MS7
Misc :

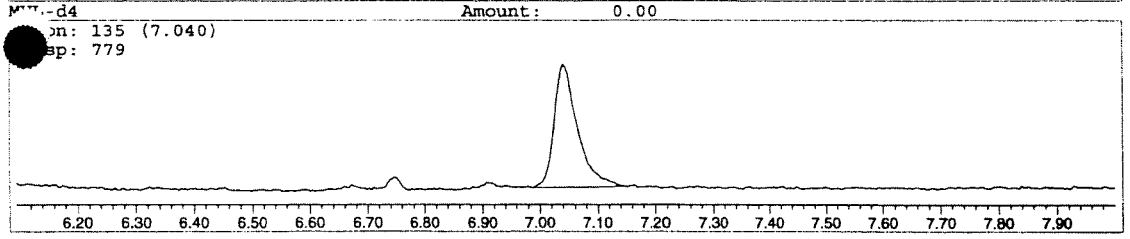
[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 124493



[redacted]-d4 Amount: 0.00
[redacted]on: 135 (7.040)
[redacted]esp: 779



Peak Area Report

Sample Name: 10931-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 21:44
Operator:

Data File Name: 0471034.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 34

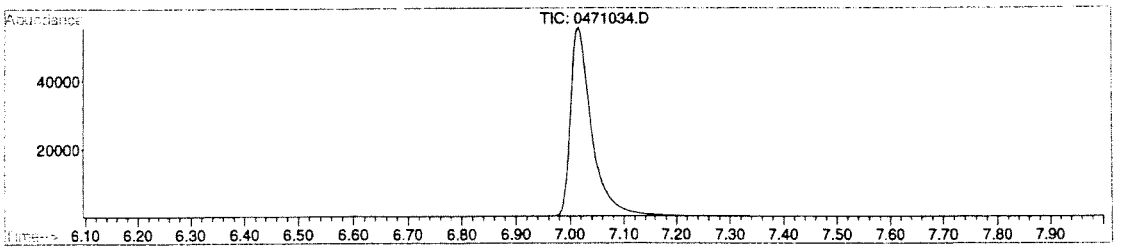
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	148288		181.9E+0
2)	MVL-d4	7.04	135	815		

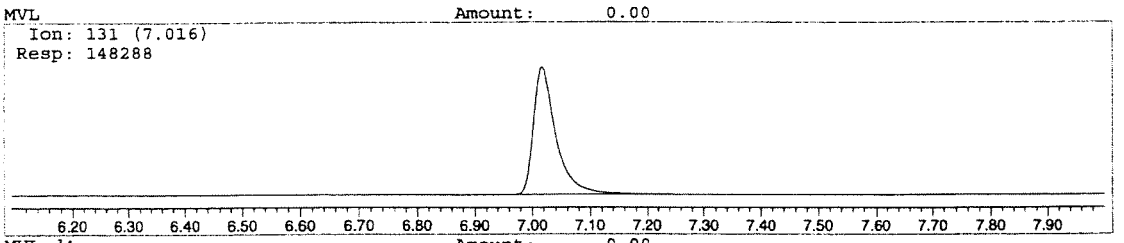
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

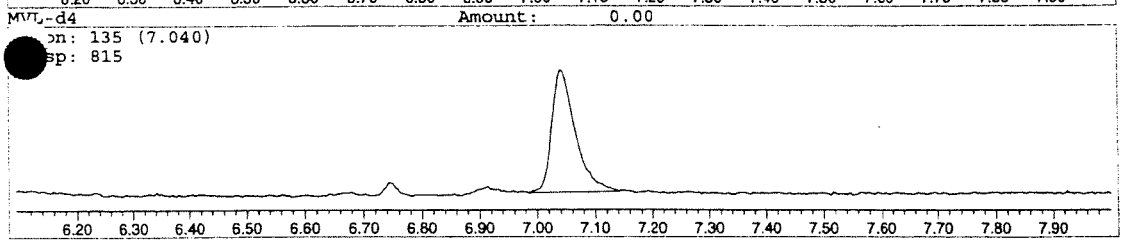
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471034.D Vial: 34
Acq On : 2 Jan 2001 21:44 Operator:
Sample : 10931-GROUP3-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10932-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 22:03
Operator:

Data File Name: 0471035.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 35

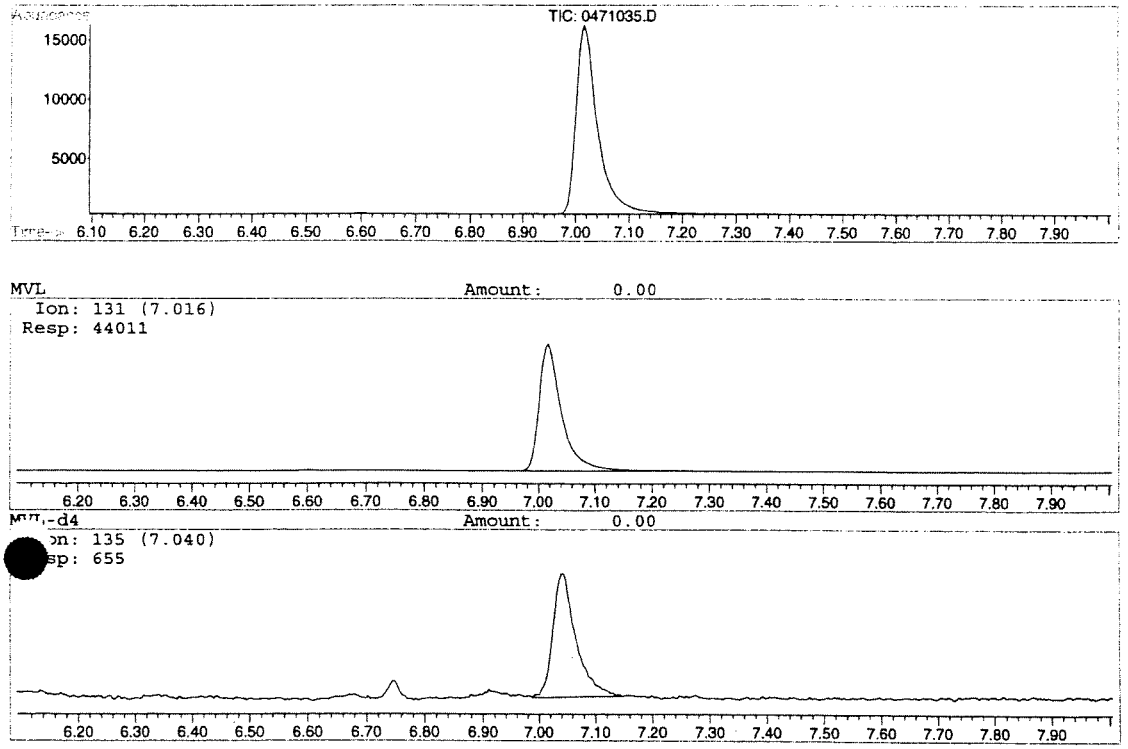
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	44011		671.9E-1
2)	MVL-d4	7.04	135	655		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (Not Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471035.D Vial: 35
Acq On : 2 Jan 2001 22:03 Operator:
Sample : 10932-GROUP3-F1 Inst : MS7
Misc :

[redacted]3 Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



[redacted]

Peak Area Report

Sample Name: 1 X QC MID
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 22:23
Operator:

Data File Name: 0471012.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 12

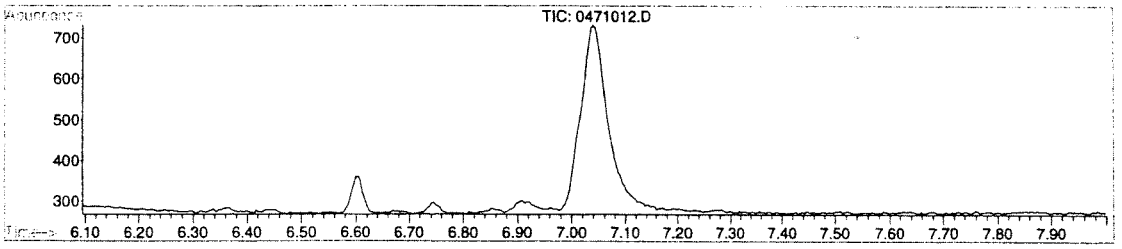
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	522		512.8E-3
2)	MVL-d4	7.04	135	1018		

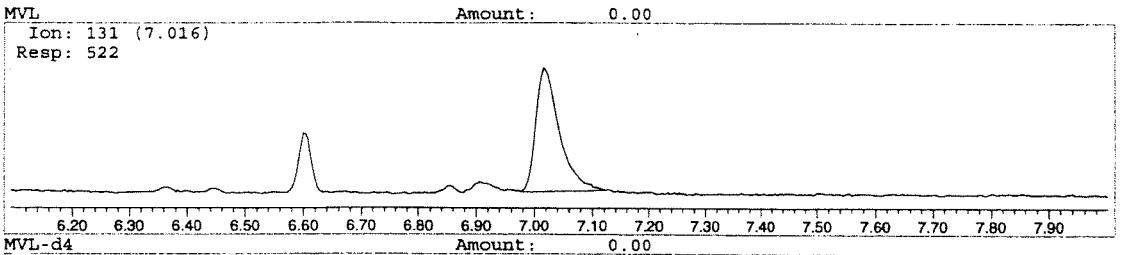
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

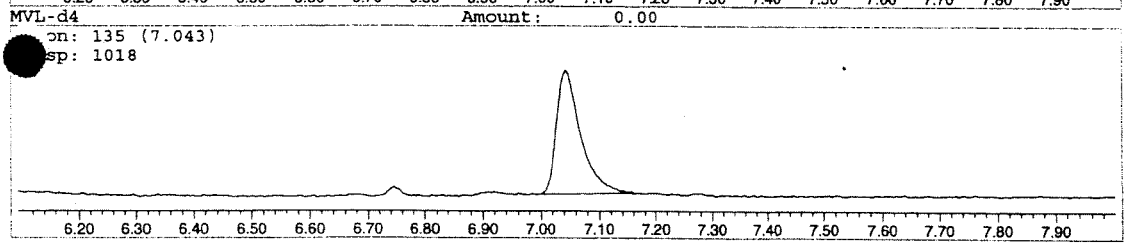
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471012.D Vial: 12
Acq On : 2 Jan 2001 22:23 Operator:
Sample : 1 X QC MID Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10933-GROUP3-F1
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/2/01 22:43
Operator:

Data File Name: 0471036.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 36

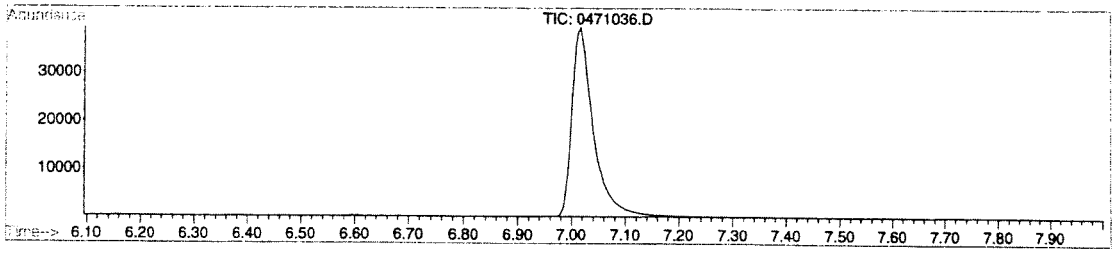
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	106656	m	136.2E+0
2)	MVL-d4	7.04	135	783		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

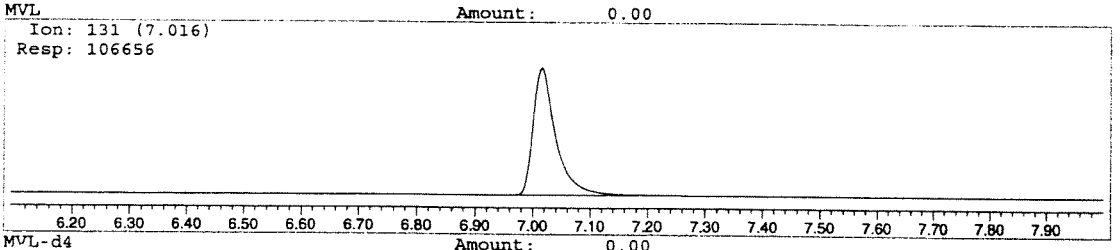
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471036.D Vial: 36
Acq On : 2 Jan 2001 22:43 Operator:
Sample : 10933-GROUP3-F1 Inst : MS7
Misc :

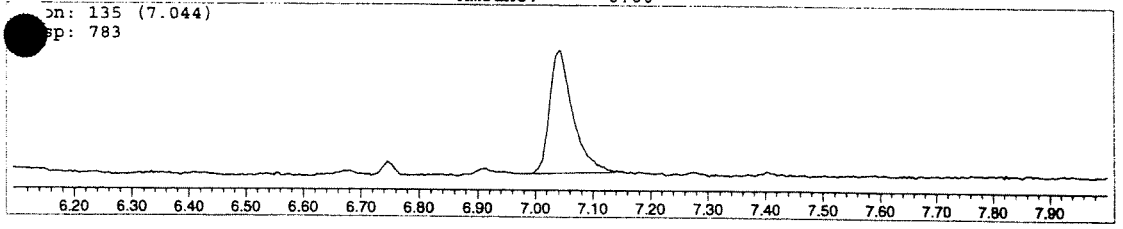
S Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 106656



MVL-d4 Amount: 0.00
on: 135 (7.044)
sp: 783



Peak Area Report

Sample Name: 10934-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 23:02
Operator:

Data File Name: 0471037.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

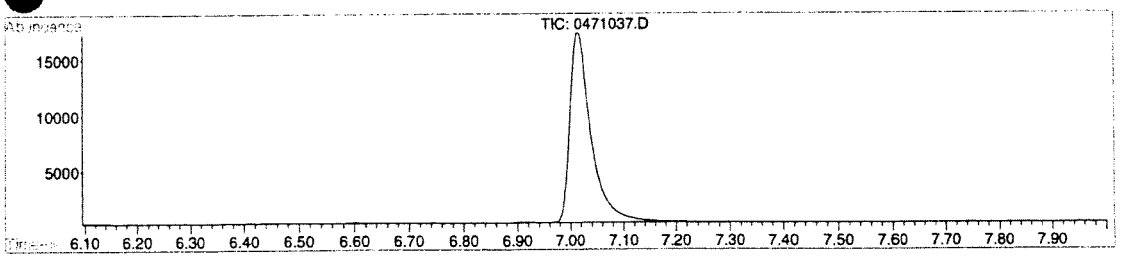
Instrument Name: MS7
Instrument Vial Number: 37

Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	46551		706.4E-1
2)	MVL-d4	7.04	135	659		

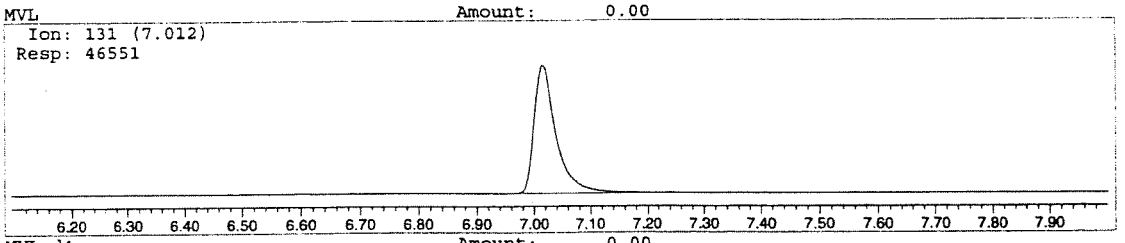
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471037.D Vial: 37
Acq On : 2 Jan 2001 23:02 Operator:
Sample : 10934-GROUP3-F1 Inst : MS7
Misc :

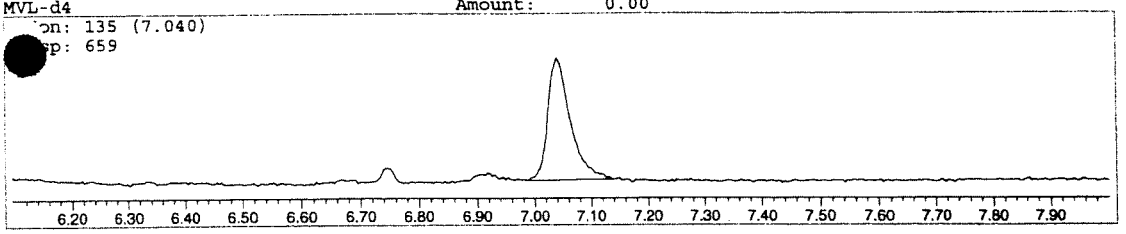
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.012)
Resp: 46551



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 659



Peak Area Report

Sample Name: 10935-GROUP3-F1 **Date Acquired:** 1/2/01 23:22
Notebook Reference: PABX-BBA-1-047 **Operator:**

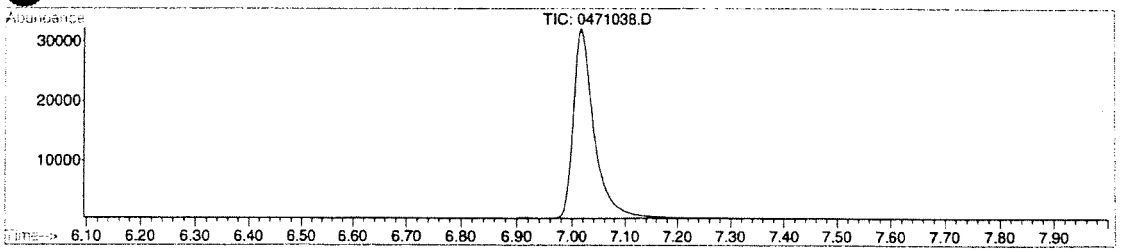
Data File Name: 0471038.D **Instrument Name:** MS7
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\ **Instrument Vial Number:** 38
Instrument Method Name: PABX_BBA

Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	85000		950.8E-1
2)	MVL-d4	7.04	135	894		

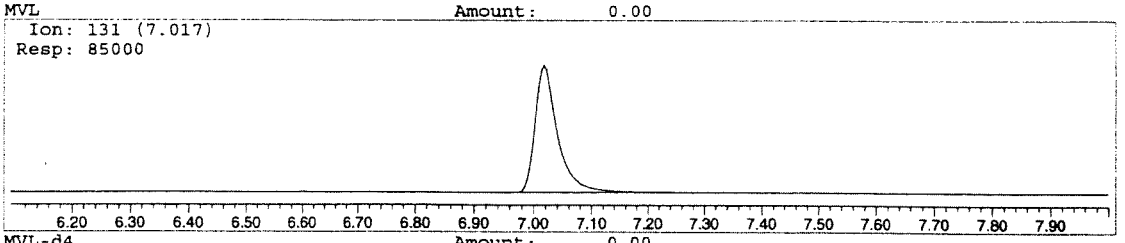
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471038.D Vial: 38
Acq On : 2 Jan 2001 23:22 Operator:
Sample : 10935-GROUP3-F1 Inst : MS7
Misc :

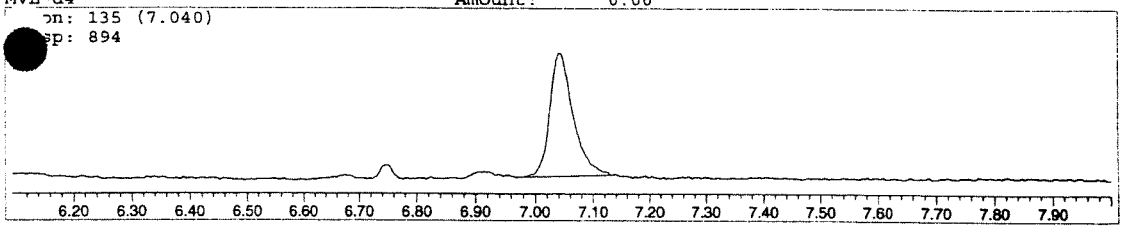
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.017)
Resp: 85000



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 894



Peak Area Report

Sample Name: 10937GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/2/01 23:42
Operator:

Data File Name: 0471039.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

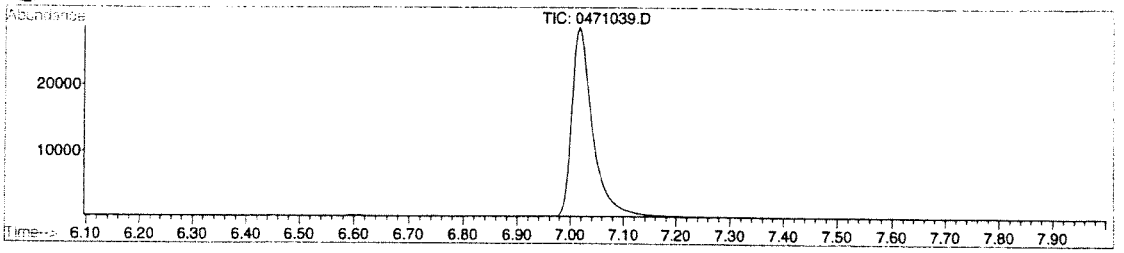
Instrument Name: MS7
Instrument Vial Number: 39

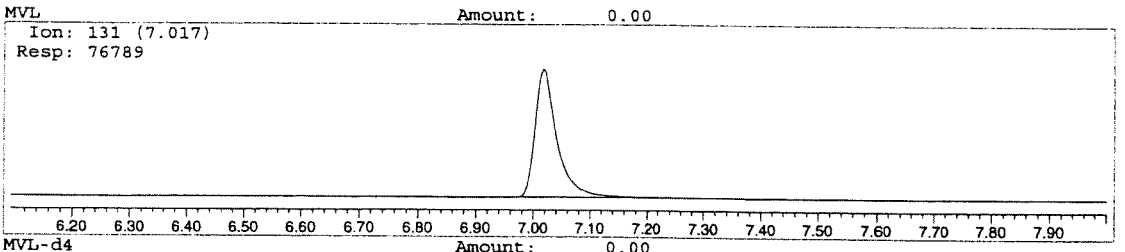
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	76789		102.2E+0
2)	MVL-d4	7.04	135	751		

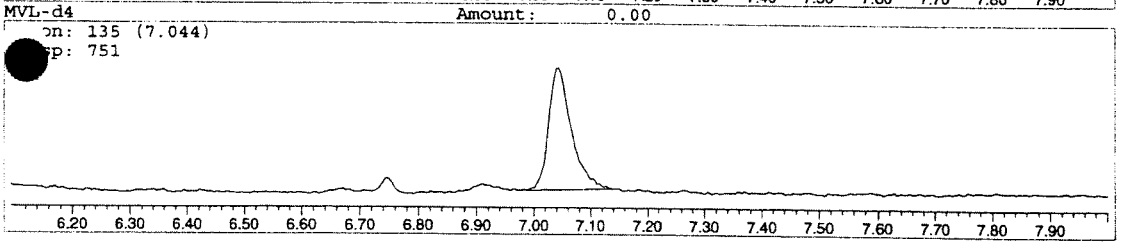
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471039.D Vial: 39
Acq On : 2 Jan 2001 23:42 Operator:
Sample : 10937GROUP3-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10940-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 0:01
Operator:

Data File Name: 0471040.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

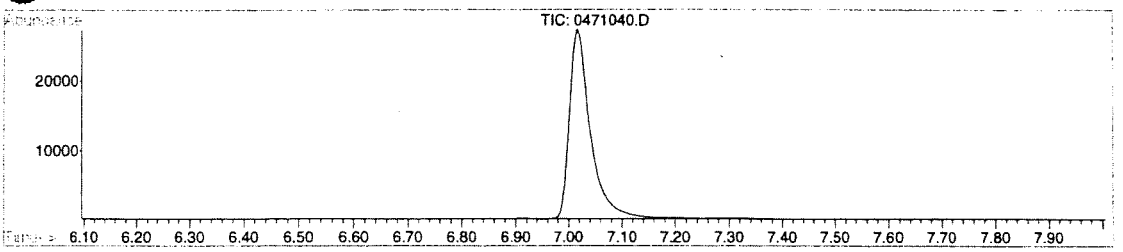
Instrument Name: MS7
Instrument Vial Number: 40

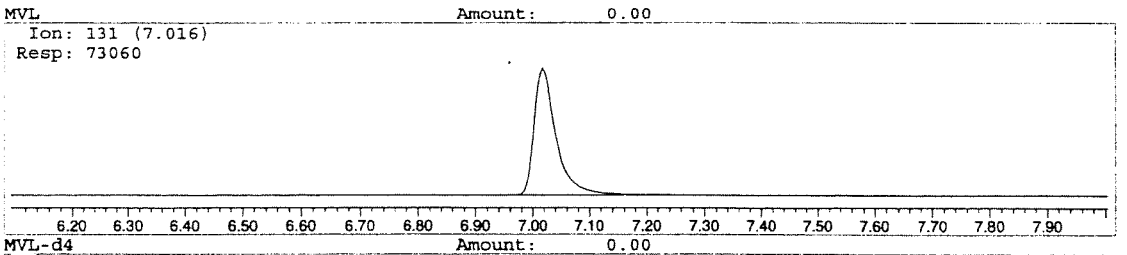
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	73060		102.6E+0
2)	MVL-d4	7.04	135	712		

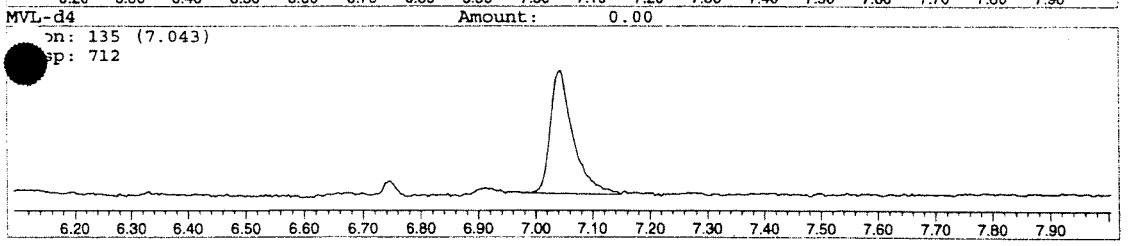
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471040.D Vial: 40
Acq On : 3 Jan 2001 00:01 Operator:
Sample : 10940-GROUP3-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10929-GROUP3-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 0:21
Operator:

Data File Name: 0471041.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

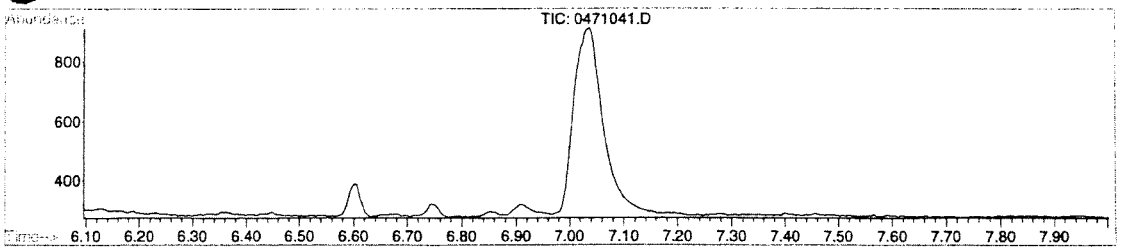
Instrument Name: MS7
Instrument Vial Number: 41

Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1190		107.4E-2
2)	MVL-d4	7.04	135	1108		

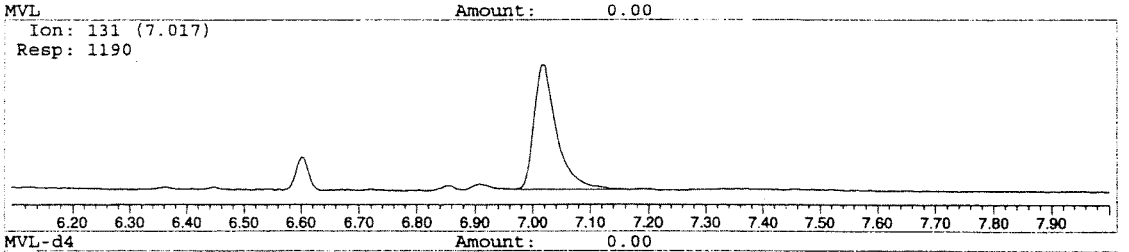
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471041.D Vial: 41
Acq On : 3 Jan 2001 00:21 Operator:
Sample : 10929-GROUP3-F0 Inst : MS7
Misc :

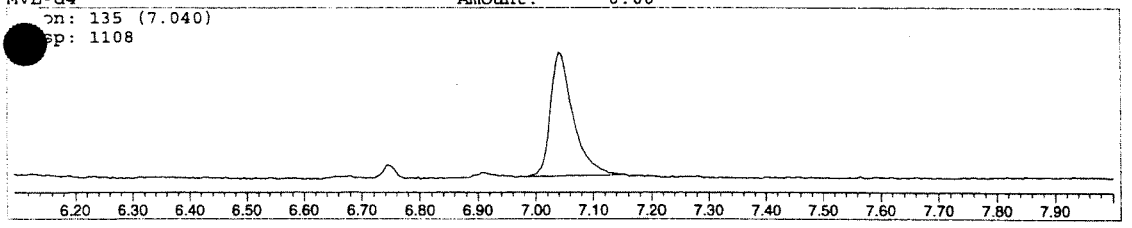
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.017)
Resp: 1190



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 1108



Peak Area Report

Sample Name: 10938-GROUP3-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 0:41
Operator:

Data File Name: 0471042.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 42

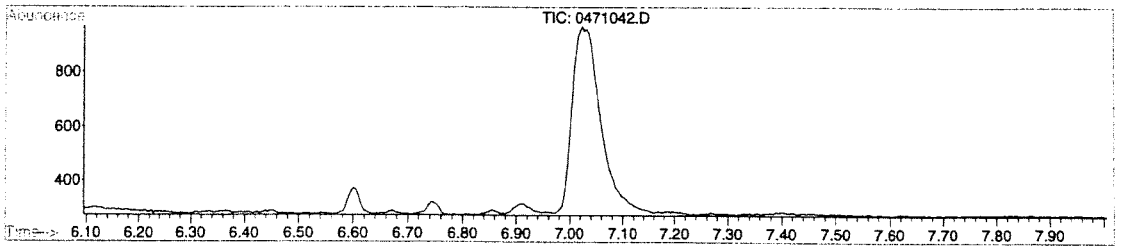
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1604		174.9E-2
2)	MVL-d4	7.04	135	917		

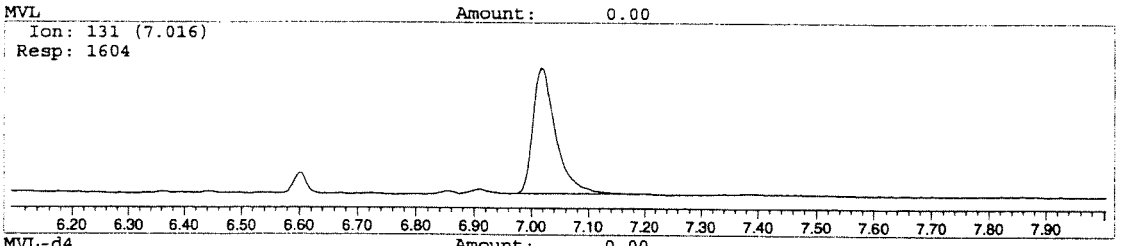
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

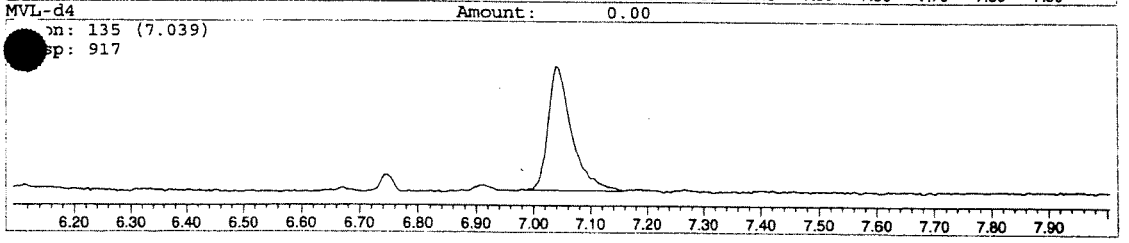
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471042.D Vial: 42
Acq On : 3 Jan 2001 00:41 Operator:
Sample : 10938-GROUP3-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10942-GROUP3-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 1:00
Operator:

Data File Name: 0471043.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 43

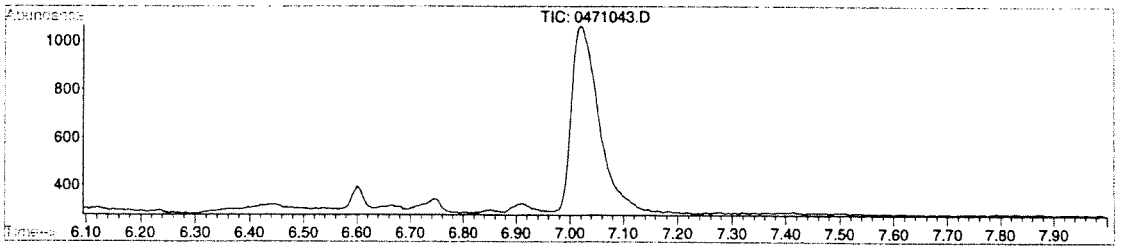
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1938		249.4E-2
2)	MVL-d4	7.04	135	777		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

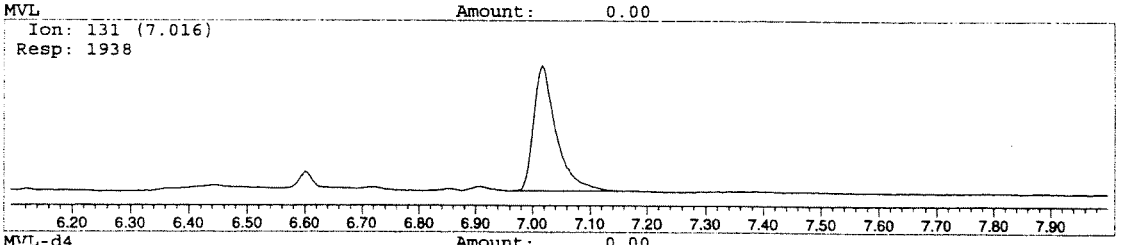
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471043.D Vial: 43
Acq On : 3 Jan 2001 1:00 Operator:
Sample : 10942-GROUP3-F0 Inst : MS7
Misc :

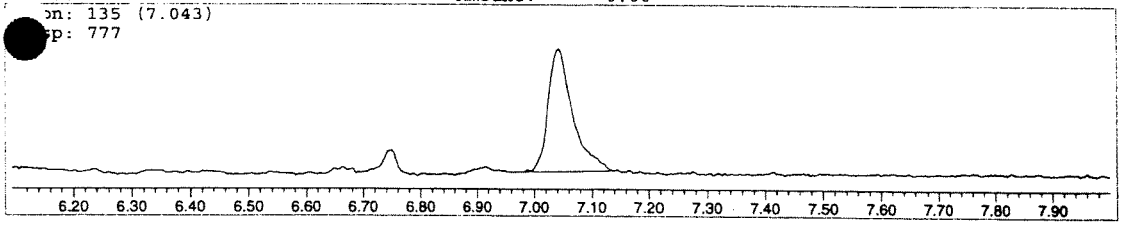
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 1938



MVL-d4 Amount: 0.00
Ion: 135 (7.043)
Resp: 777



Peak Area Report

Sample Name: 10941-GROUP3-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 1:20
Operator:

Data File Name: 0471044.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 44

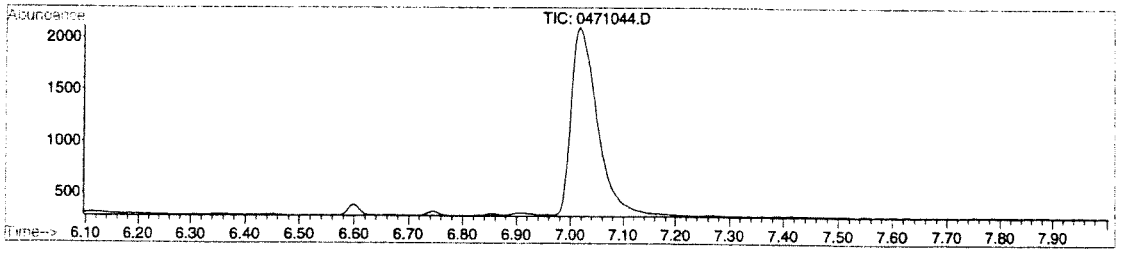
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	4575		275.9E-2
2)	MVL-d4	7.04	135	1658		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

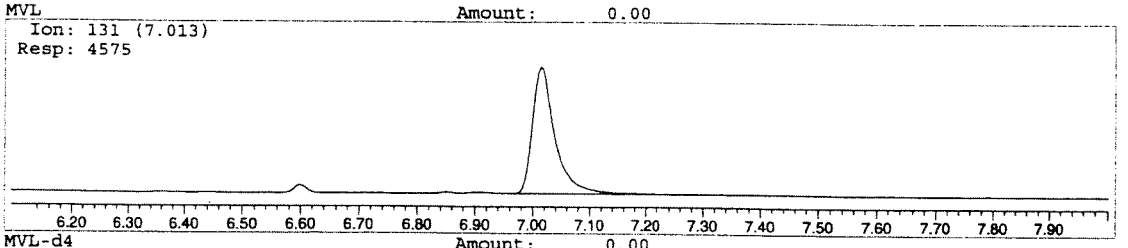
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471044.D Vial: 44
Acq On : 3 Jan 2001 1:20 Operator:
Sample : 10941-GROUP3-F0 Inst : MS7
Misc :

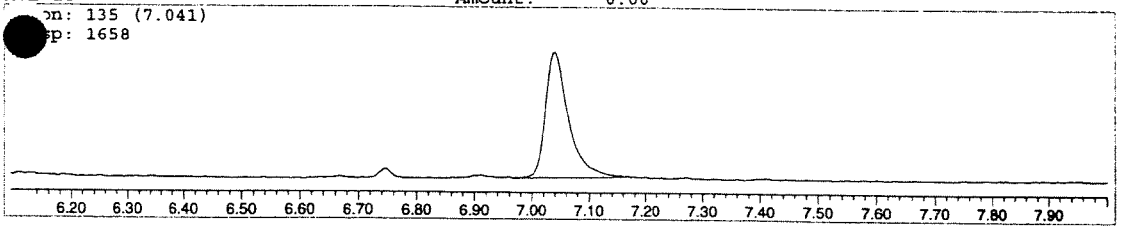
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.013)
Resp: 4575



MVL-d4 Amount: 0.00
Ion: 135 (7.041)
Resp: 1658



Peak Area Report

Sample Name: 10929GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 1:40
Operator:

Data File Name: 0471045.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 45

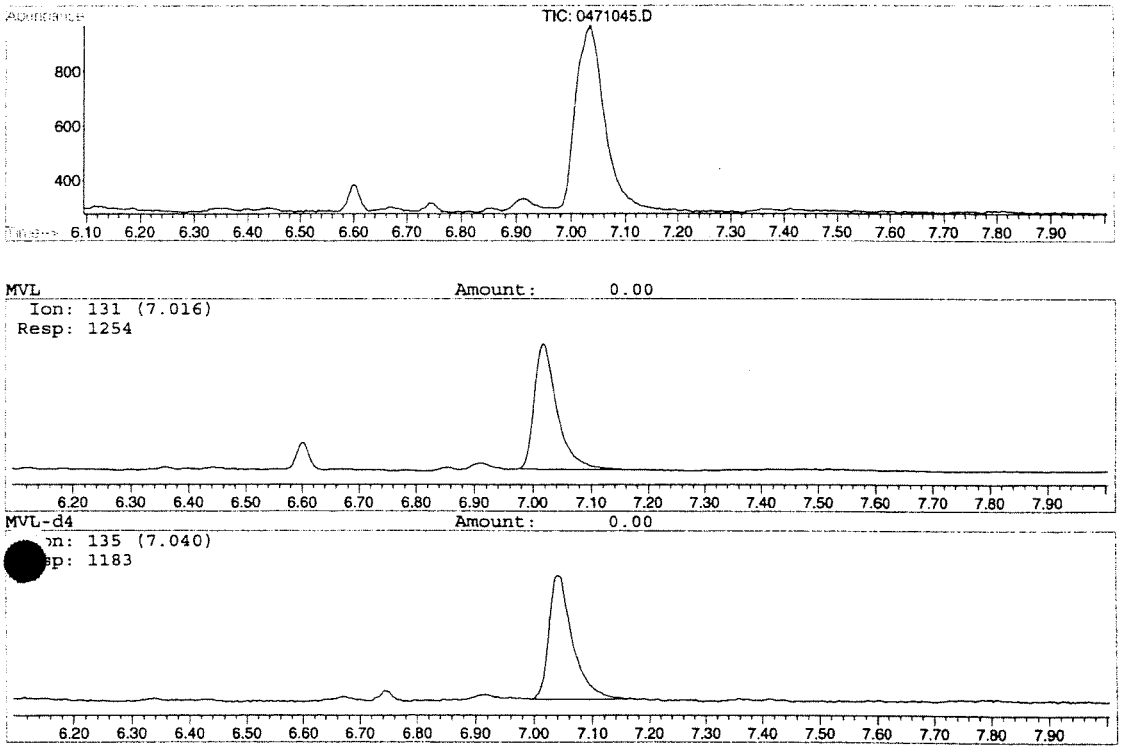
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1254		106.0E-2
2)	MVL-d4	7.04	135	1183		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471045.D Vial: 45
Acq On : 3 Jan 2001 1:40 Operator:
Sample : 10929GROUP3-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



Peak Area Report

Sample Name: 10942-GROUP3-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 1:59
Operator:

Data File Name: 0471046.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 46

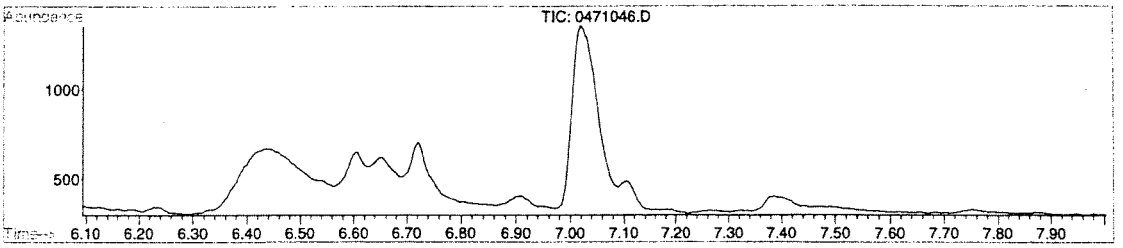
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	2074		235.1E-2
2)	MVL-d4	7.04	135	882		

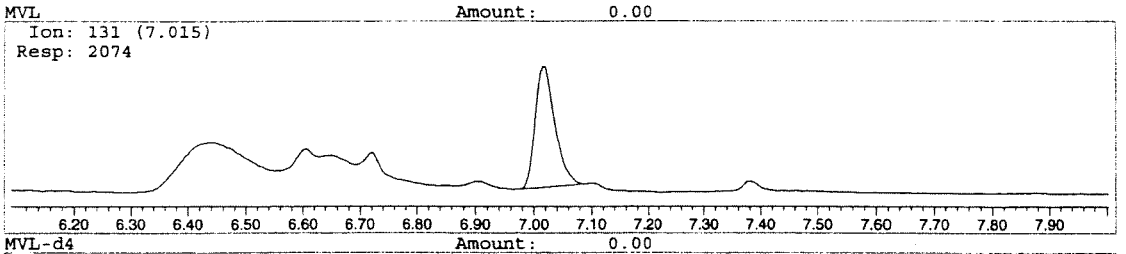
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

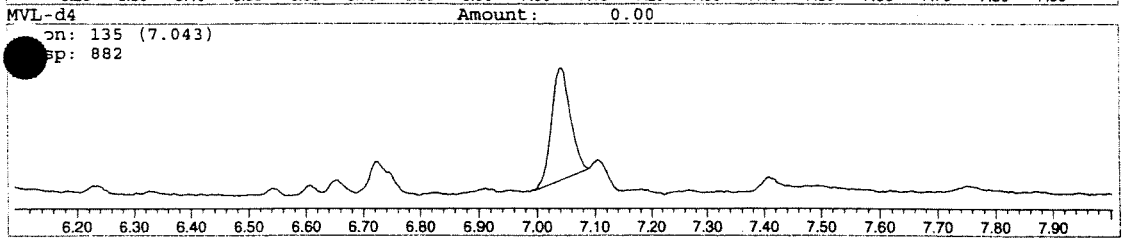
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471046.D Vial: 46
Acq On : 3 Jan 2001 1:59 Operator:
Sample : 10942-GROUP3-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 1 X QC HIGH
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 2:19
Operator:

Data File Name: 0471010.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 10

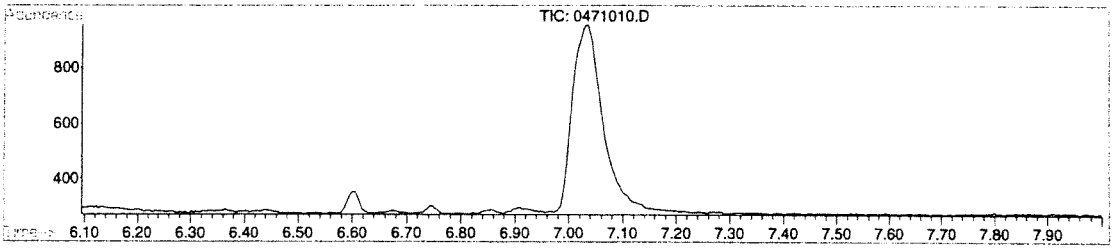
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1470		134.7E-2
2)	MVL-d4	7.04	135	1091		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

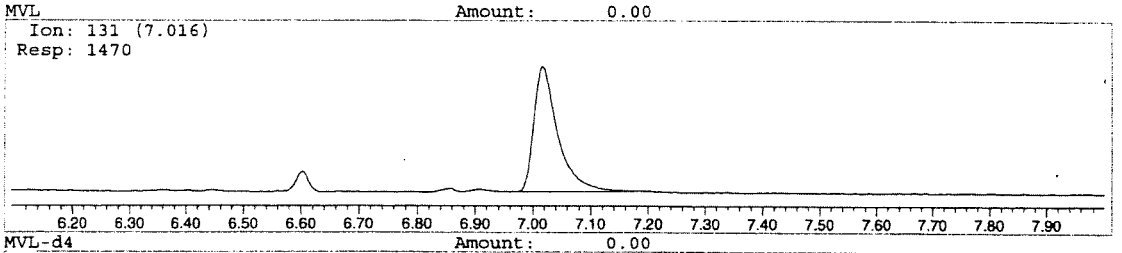
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471010.D Vial: 10
Acq On : 3 Jan 2001 2:19 Operator:
Sample : 1 X QC HIGH Inst : MS7
Misc :

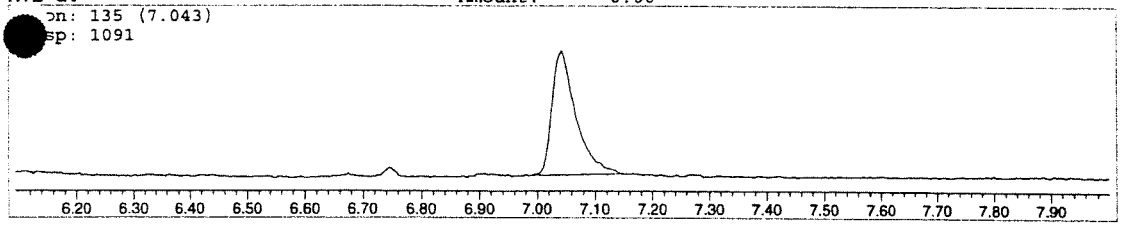
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 1470



MVL-d4 Amount: 0.00
Ion: 135 (7.043)
Resp: 1091



Peak Area Report

Sample Name: 10945-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 2:39
Operator:

Data File Name: 0471047.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 47

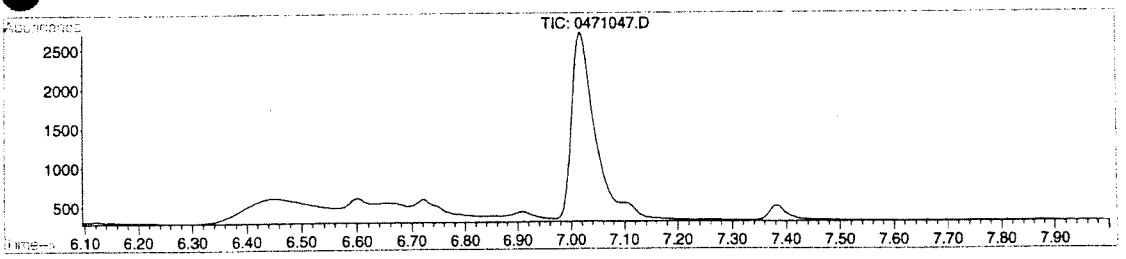
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	6392		126.6E-1
2)	MVL-d4	7.04	135	505		

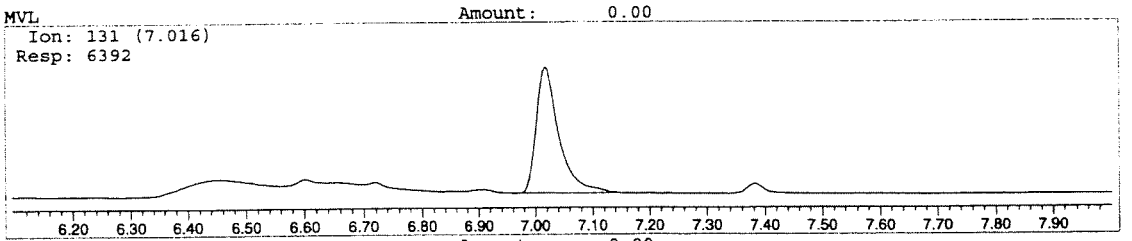
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

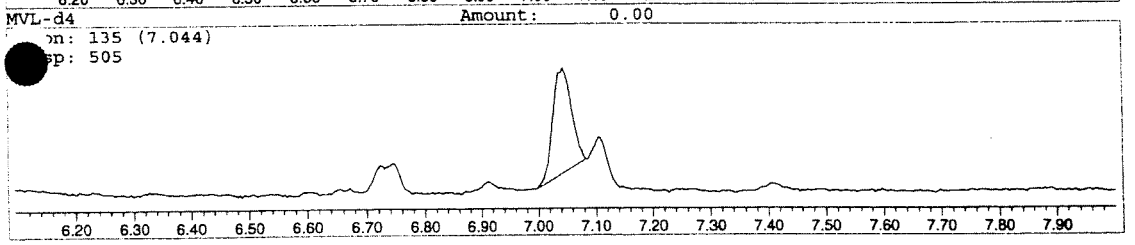
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471047.D Vial: 47
Acq On : 3 Jan 2001 2:39 Operator:
Sample : 10945-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10946-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 2:58
Operator:

Data File Name: 047048.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 48

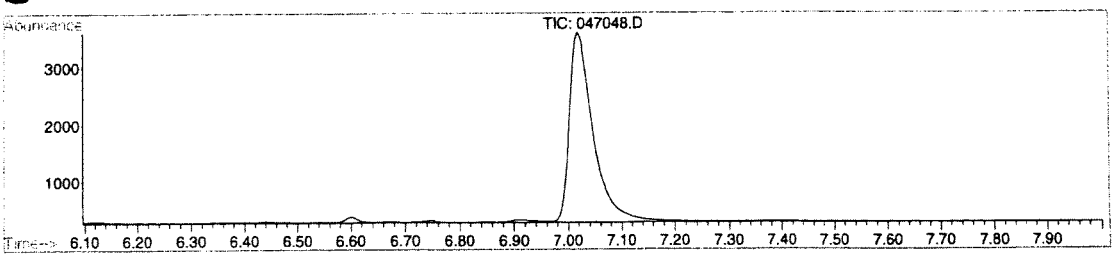
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	9124		100.4E-1
2)	MVL-d4	7.04	135	909		

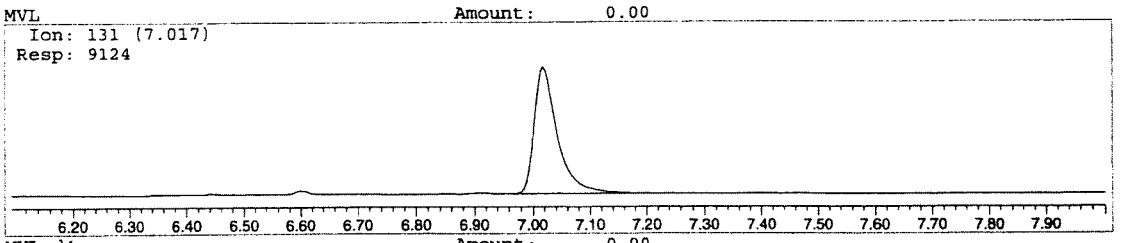
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

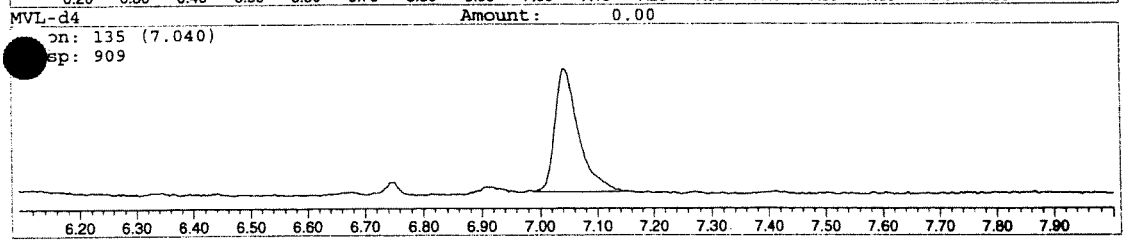
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\047048.D Vial: 48
Acq On : 3 Jan 2001 2:58 Operator:
Sample : 10946-GROUP4-F0 Inst : MS7
Misc :

[redacted]3 Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







[redacted]

Peak Area Report

Sample Name: 10947-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 3:18
Operator:

Data File Name: 0471049.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 49

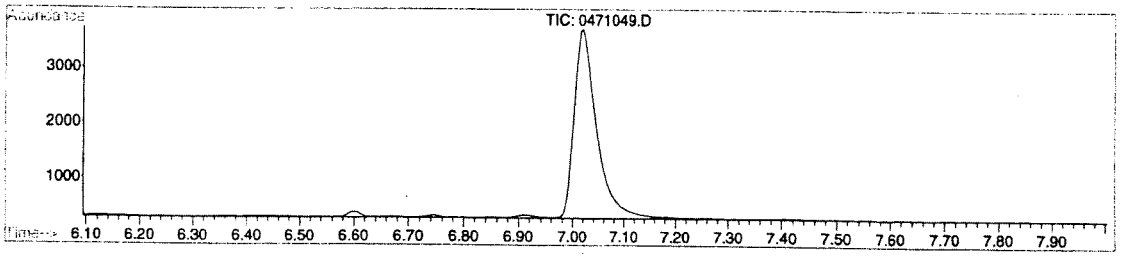
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	9253		936.5E-2
2)	MVL-d4	7.04	135	988		

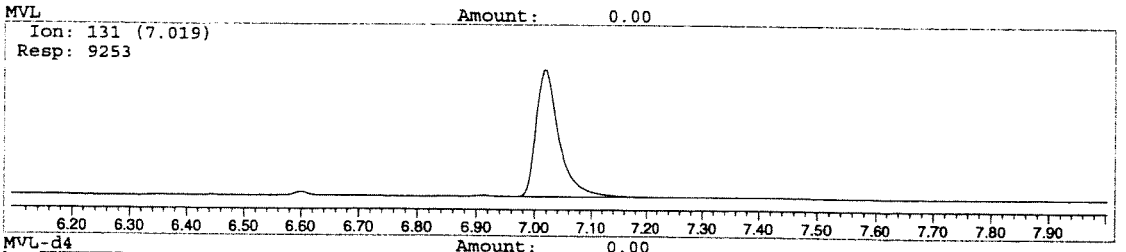
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

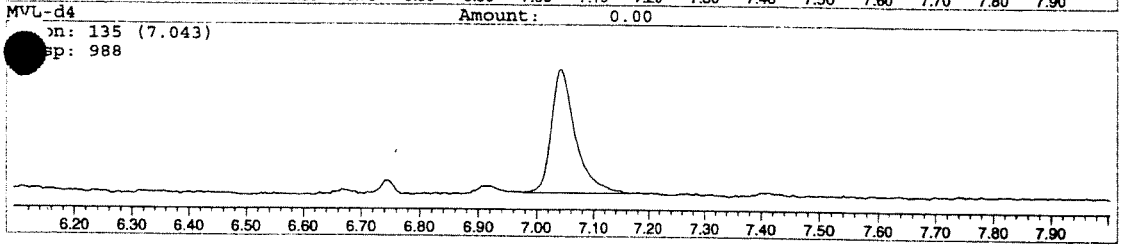
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471049.D Vial: 49
Acq On : 3 Jan 2001 3:18 Operator:
Sample : 10947-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10949-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 3:37
Operator:

Data File Name: 0471050.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 50

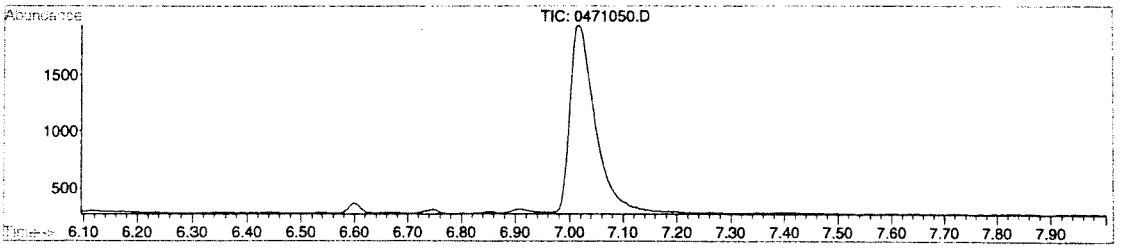
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	4358		460.2E-2
2)	MVL-d4	7.04	135	947		

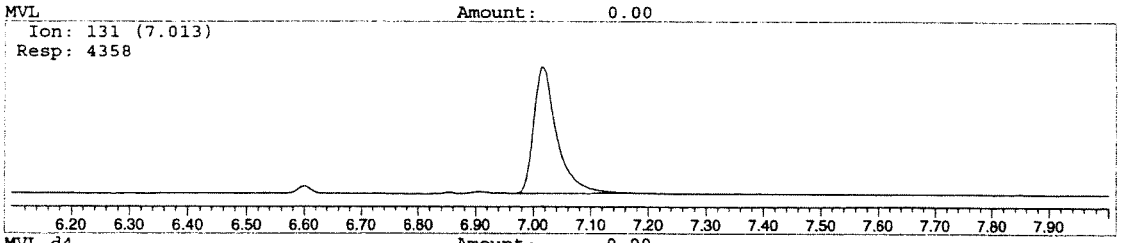
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

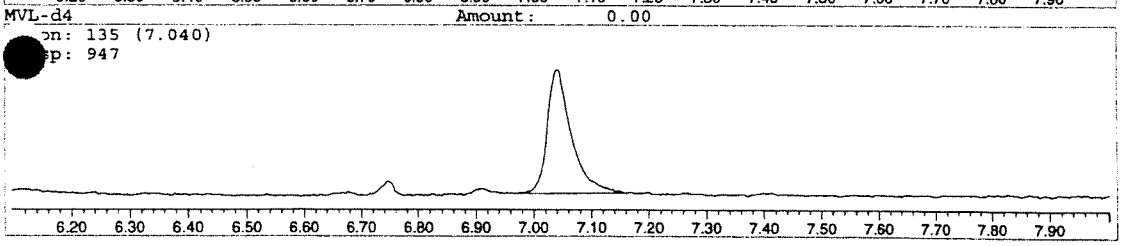
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471050.D Vial: 50
Acq On : 3 Jan 2001 3:37 Operator:
Sample : 10949-GROUP4-F0 Inst : MS7
Misc :

[redacted] Integration Params: RTEINT.P
[redacted]ant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10950-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 3:57
Operator:

Data File Name: 0471051.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 51

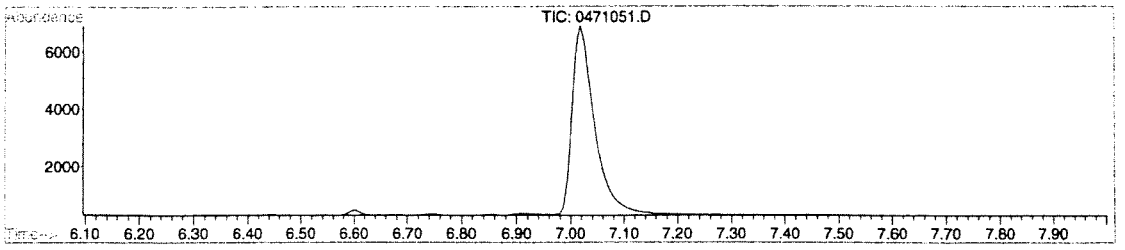
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	17179		862.0E-2
2)	MVL-d4	7.04	135	1993		

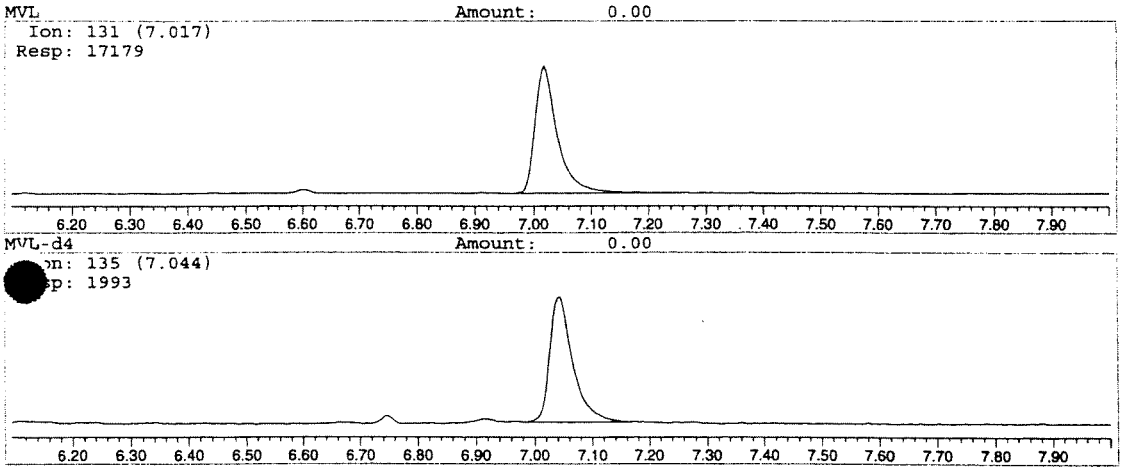
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471051.D Vial: 51
Acq On : 3 Jan 2001 3:57 Operator:
Sample : 10950-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)





Peak Area Report

Sample Name: 10951-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 4:17
Operator:

Data File Name: 0471052.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 52

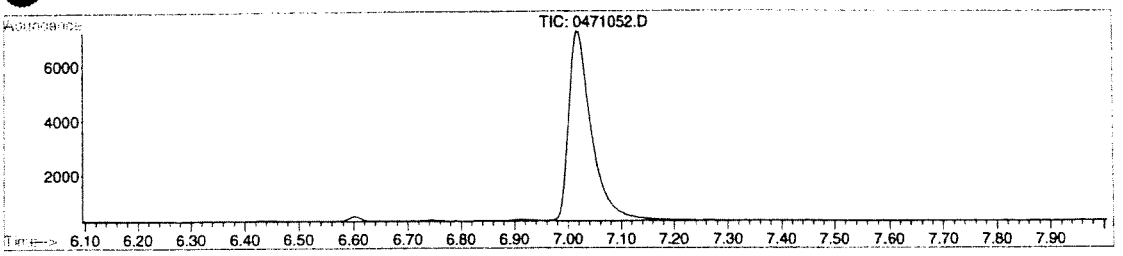
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	18058		823.4E-2
2)	MVL-d4	7.04	135	2193		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

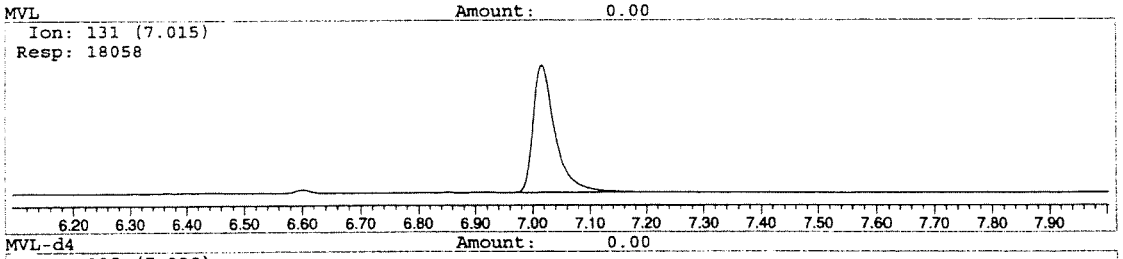
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471052.D Vial: 52
Acq On : 3 Jan 2001 4:17 Operator:
Sample : 10951-GROUP4-F0 Inst : MS7
Misc :

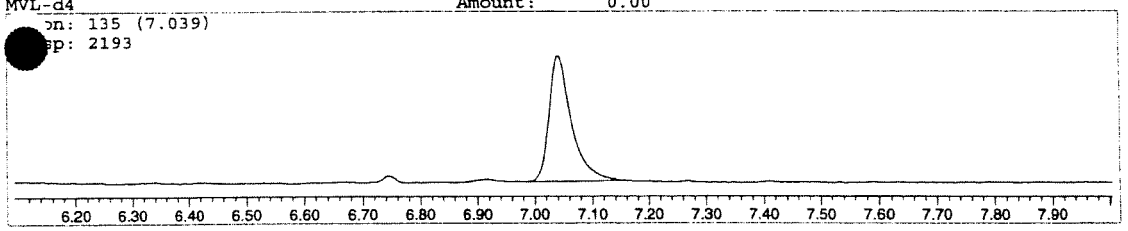
3 Integration Params: RTEINT.P
ant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.015)
Resp: 18058



MVL-d4 Amount: 0.00
on: 135 (7.039)
ep: 2193



Peak Area Report

Sample Name: 10953-GROUP4-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 4:36
Operator:

Data File Name: 0471053.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 53

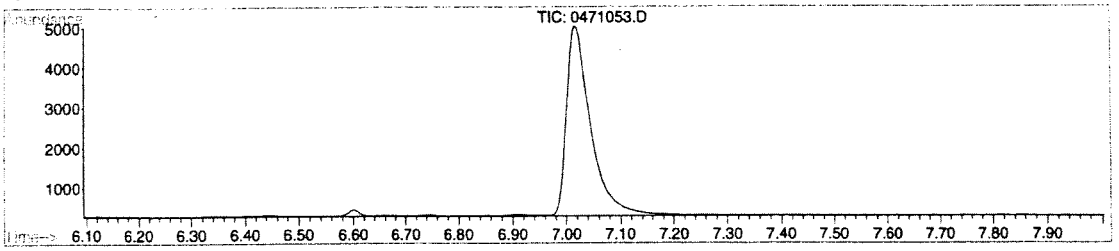
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	12921		815.7E-2
2)	MVL-d4	7.04	135	1584		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

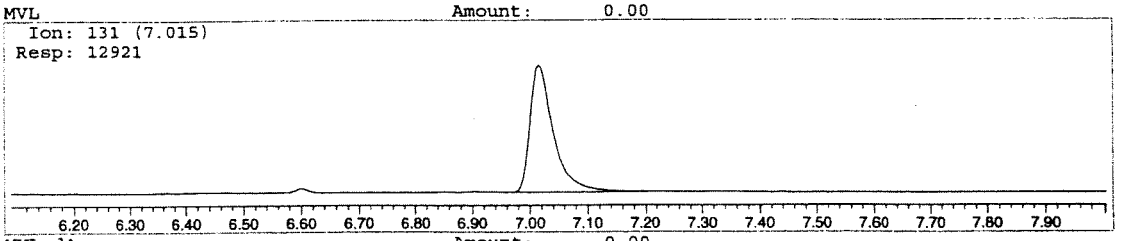
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471053.D Vial: 53
Acq On : 3 Jan 2001 4:36 Operator:
Sample : 10953-GROUP4-F0 Inst : MS7
Misc :

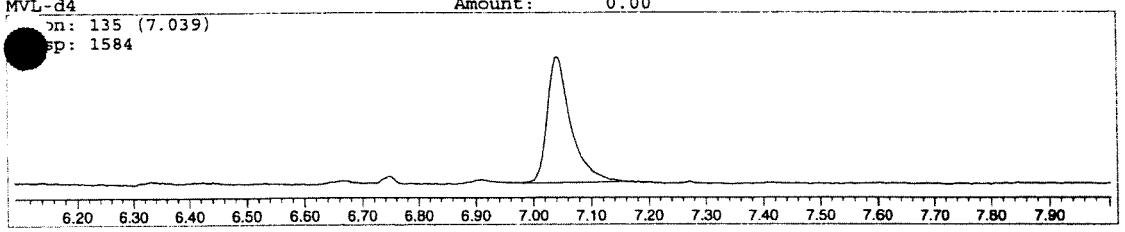
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.015)
Resp: 12921



MVL-d4 Amount: 0.00
Ion: 135 (7.039)
Resp: 1584



Peak Area Report

Sample Name: 10954-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 4:56
Operator:

Data File Name: 0471054.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 54

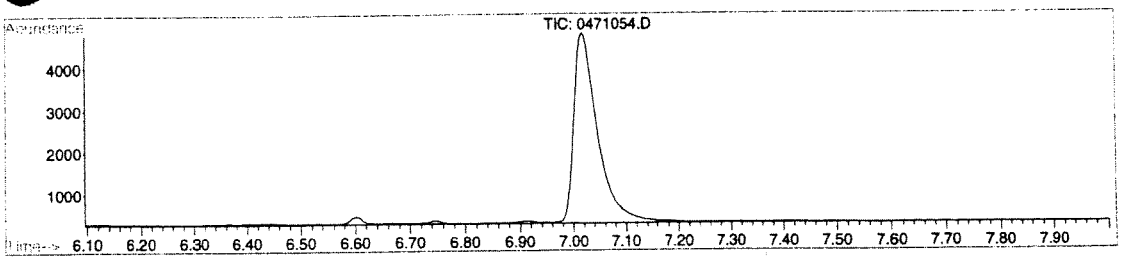
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	11975		637.0E-2
2)	MVL-d4	7.04	135	1880		

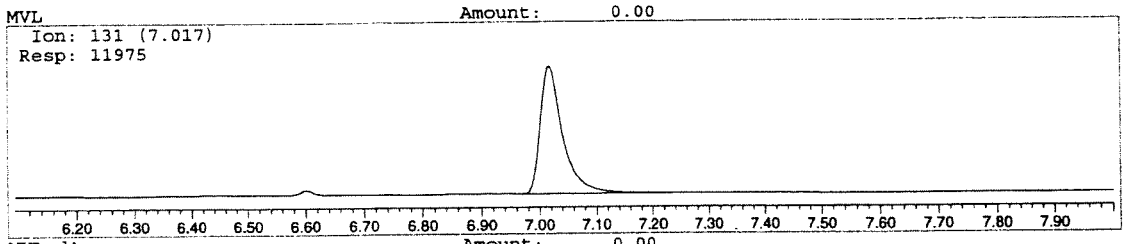
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

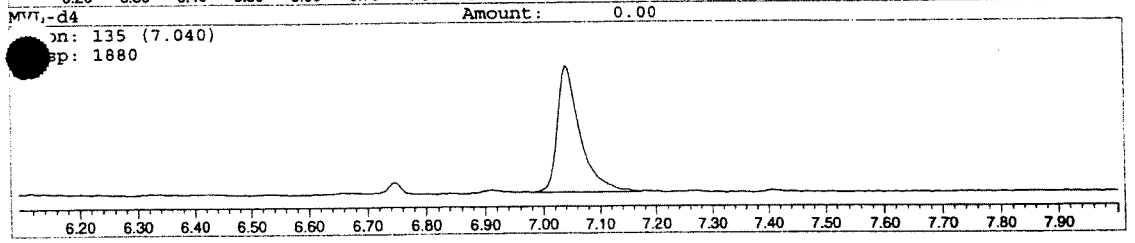
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471054.D Vial: 54
Acq On : 3 Jan 2001 4:56 Operator:
Sample : 10954-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10945-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 5:15
Operator:

Data File Name: 0471055.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 55

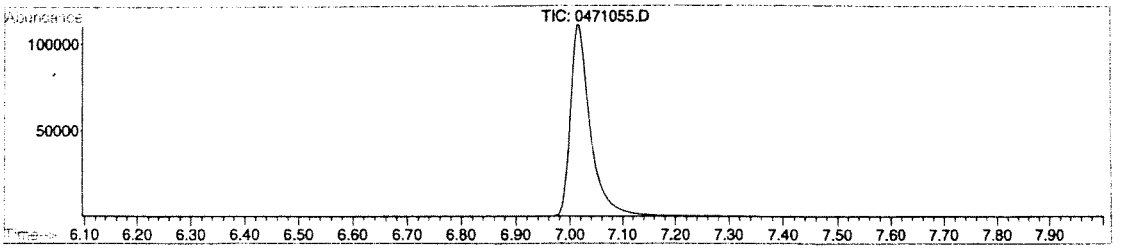
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	285856		166.2E+0
2)	MVL-d4	7.04	135	1720		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

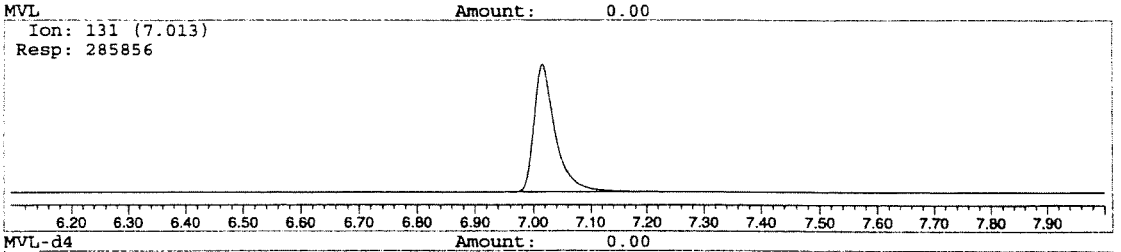
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471055.D Vial: 55
Acq On : 3 Jan 2001 5:15 Operator:
Sample : 10945-GROUP4-F1 Inst : MS7
Misc :

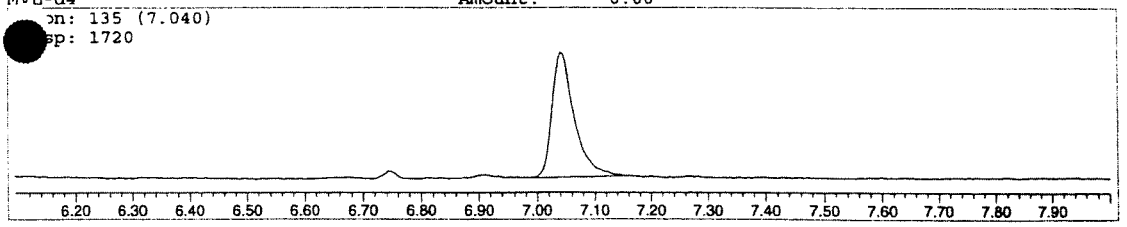
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.013)
Resp: 285856



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 1720



Peak Area Report

Sample Name: 10946-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 5:35
Operator:

Data File Name: 0471056.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 56

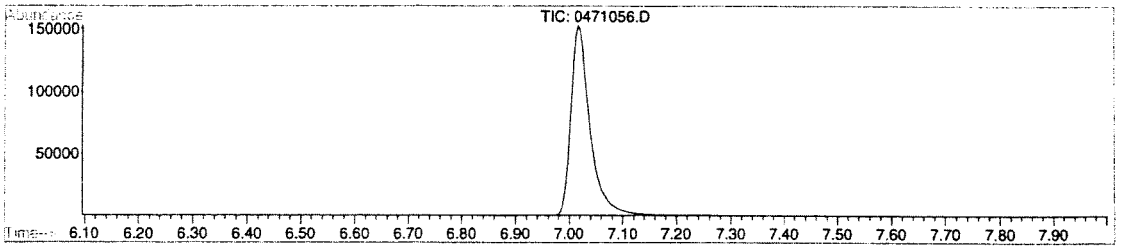
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	380925		155.2E+0
2)	MVL-d4	7.04	135	2454		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

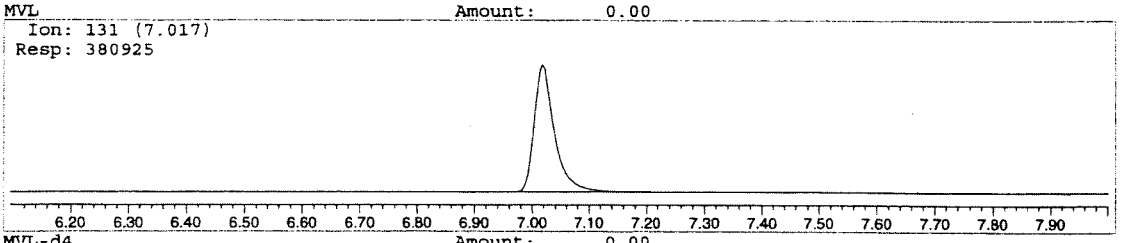
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471056.D Vial: 56
Acq On : 3 Jan 2001 5:35 Operator:
Sample : 10946-GROUP4-F1 Inst : MS7
Misc :

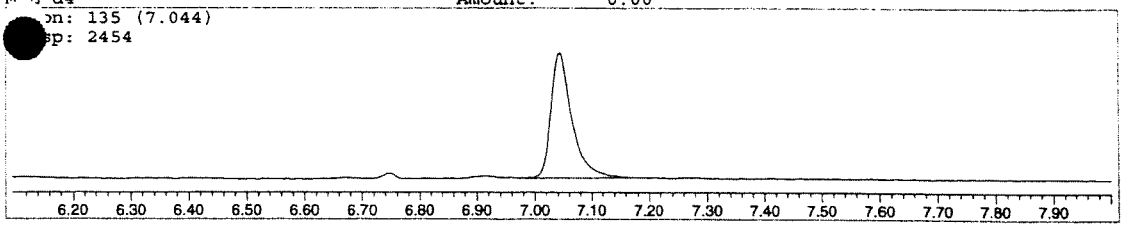
[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.017)
Resp: 380925



MVL-d4 Amount: 0.00
[redacted]on: 135 (7.044)
[redacted]sp: 2454



Peak Area Report

Sample Name: 10947-GROUP4-F1
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 5:55
Operator:

Data File Name: 0471057.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 57

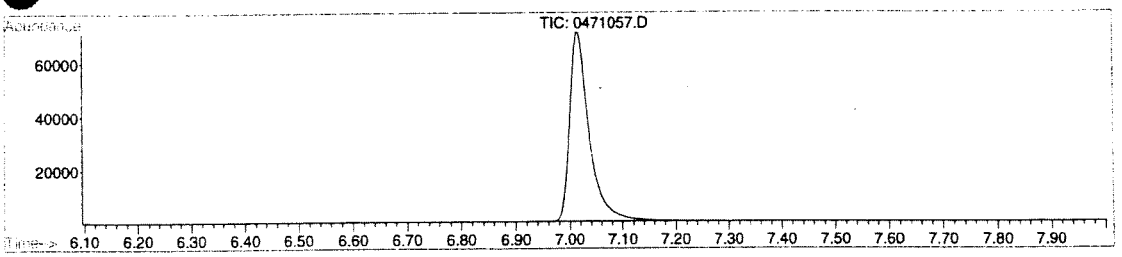
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	180712		990.7E-1
2)	MVL-d4	7.04	135	1824		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

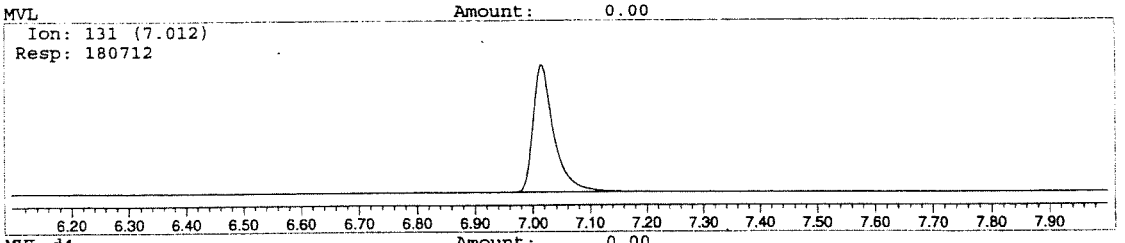
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471057.D Vial: 57
Acq On : 3 Jan 2001 5:55 Operator:
Sample : 10947-GROUP4-F1 Inst : MS7
Misc :

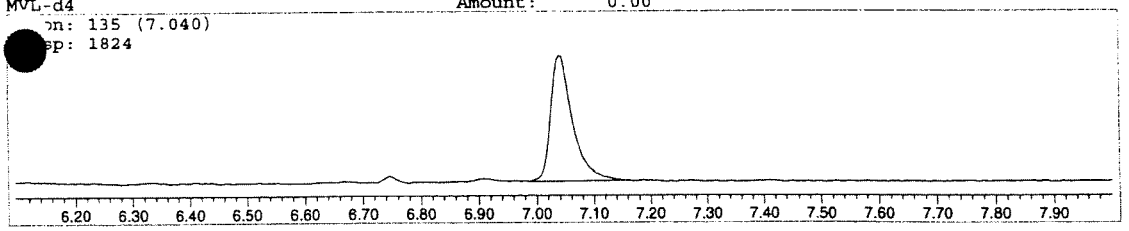
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.012)
Resp: 180712



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 1824



Peak Area Report

Sample Name: 10949-GROUP4-F1
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 6:14
Operator:

Data File Name: 0471058.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 58

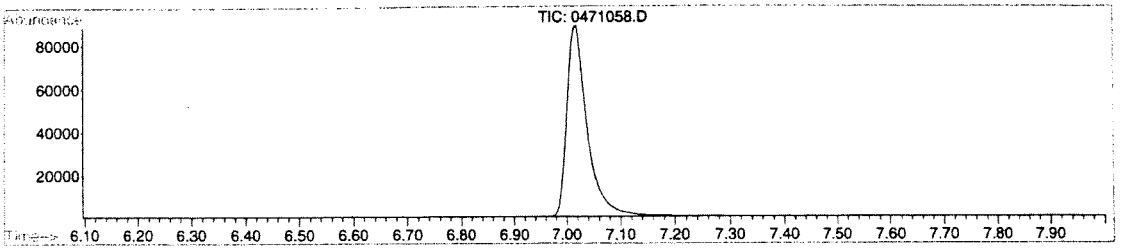
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	230169		147.5E+0
2)	MVL-d4	7.04	135	1560		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

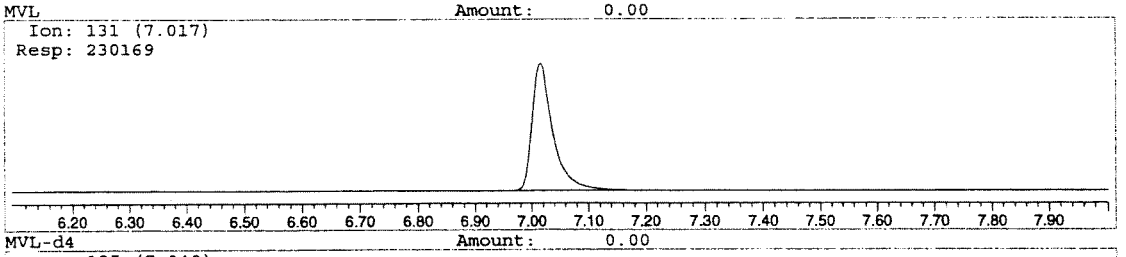
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471058.D Vial: 58
Acq On : 3 Jan 2001 6:14 Operator:
Sample : 10949-GROUP4-F1 Inst : MS7
Misc :

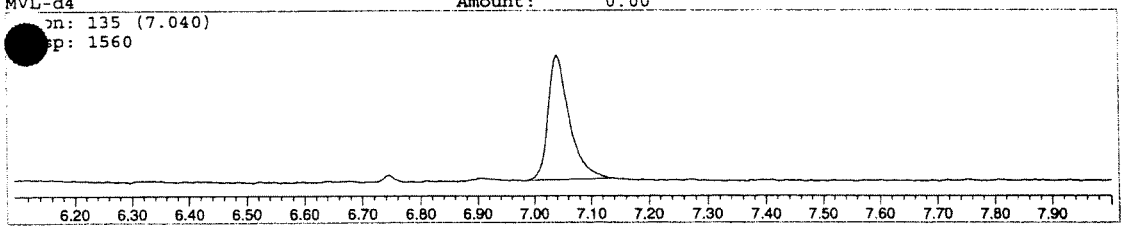
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.017)
Resp: 230169



MVL-d4 Amount: 0.00
Ion: 135 (7.040)
Resp: 1560



Peak Area Report

Sample Name: 2 X QC LOW
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 6:34
Operator:

Data File Name: 0471015.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 15

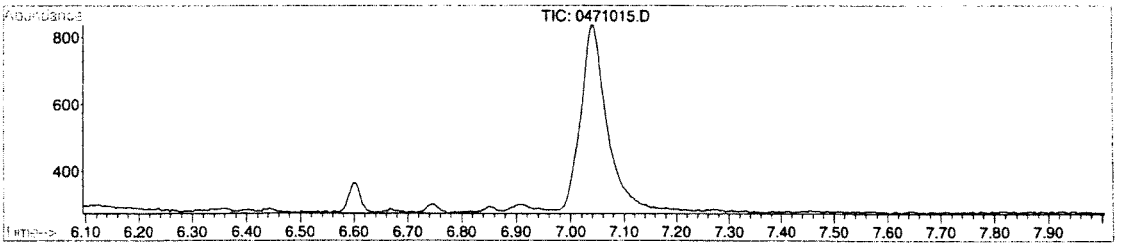
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	502		373.8E-3
2)	MVL-d4	7.04	135	1343		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

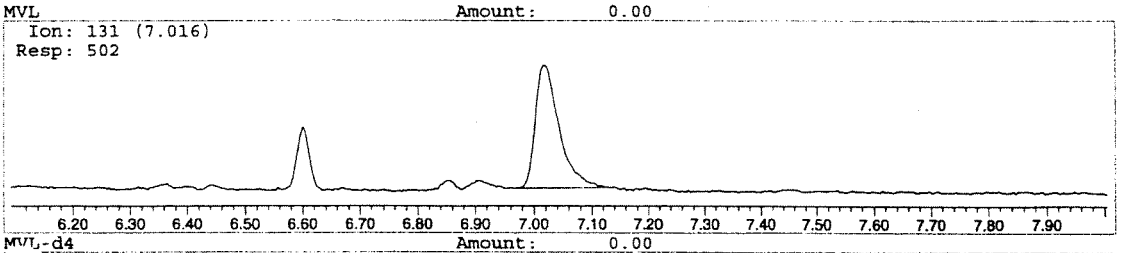
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471015.D Vial: 15
Acq On : 3 Jan 2001 6:34 Operator:
Sample : 2 X QC LOW Inst : MS7
Misc :

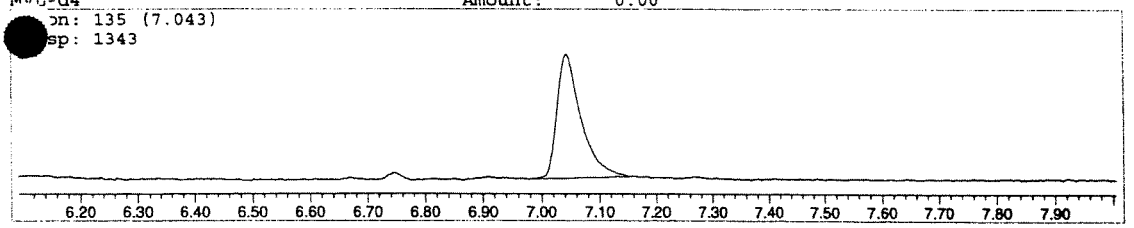
[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 502



MVL-d4 Amount: 0.00
[redacted]on: 135 (7.043)
[redacted]sp: 1343



Peak Area Report

Sample Name: 10950-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 6:54
Operator:

Data File Name: 0471059.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 59

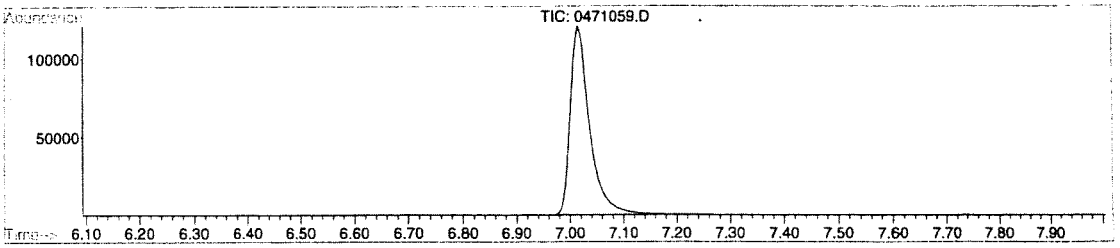
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	298676		113.9E+0
2)	MVL-d4	7.04	135	2623		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

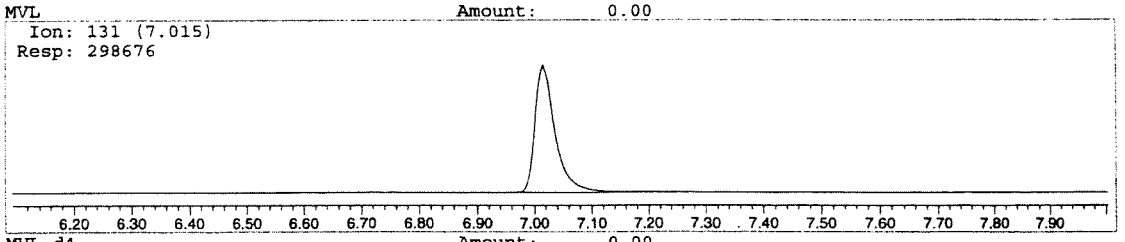
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471059.D Vial: 59
Acq On : 3 Jan 2001 6:54 Operator:
Sample : 10950-GROUP4-F1 Inst : MS7
Misc :

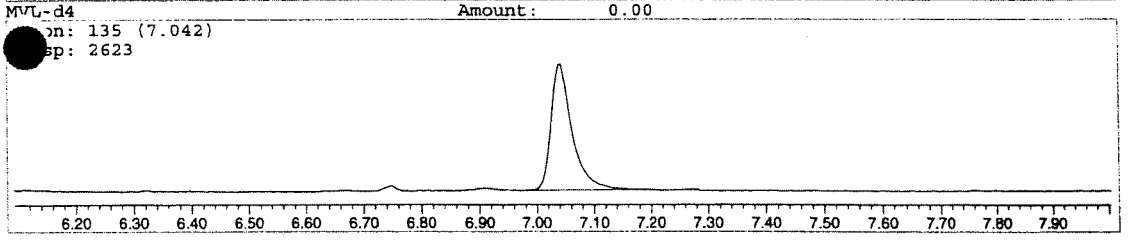
[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.015)
Resp: 298676



MVL-d4 Amount: 0.00
[redacted]n: 135 (7.042)
[redacted]sp: 2623



Peak Area Report

Sample Name: 10951-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 7:13
Operator:

Data File Name: 0471060.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 60

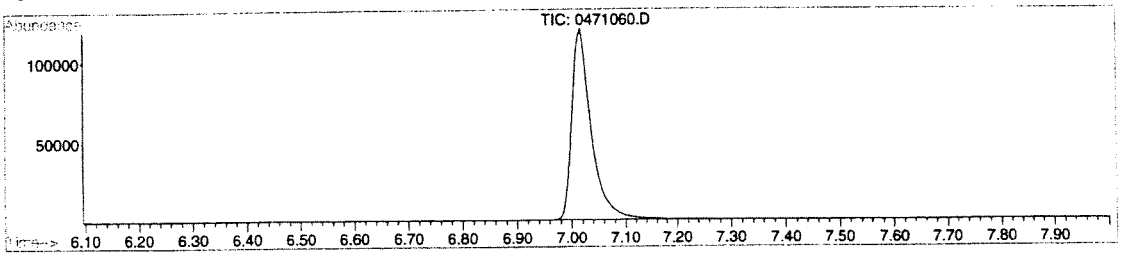
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	292458		136.7E+0
2)	MVL-d4	7.04	135	2139		

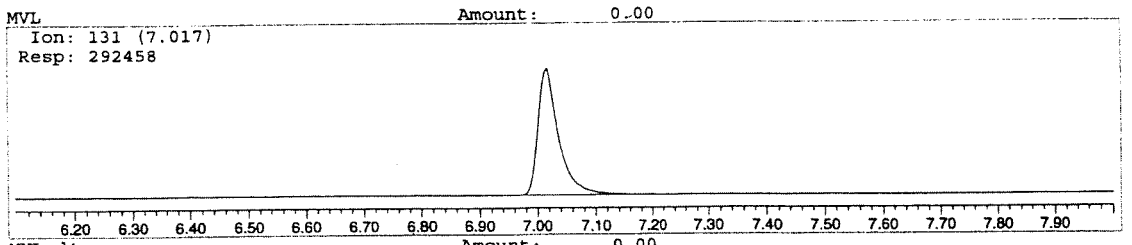
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

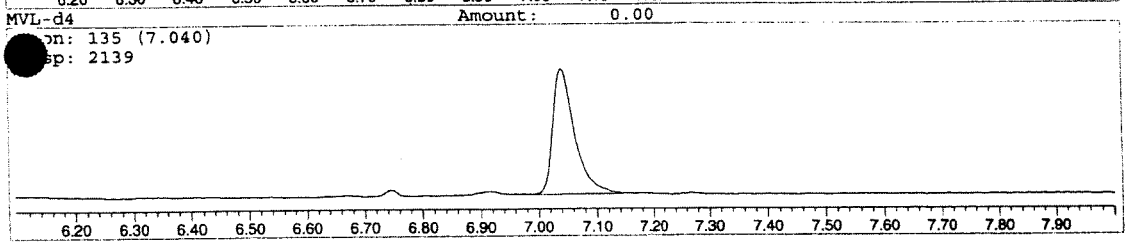
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471060.D Vial: 60
Acq On : 3 Jan 2001 7:13 Operator:
Sample : 10951-GROUP4-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10953-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 7:33
Operator:

Data File Name: 0471061.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 61

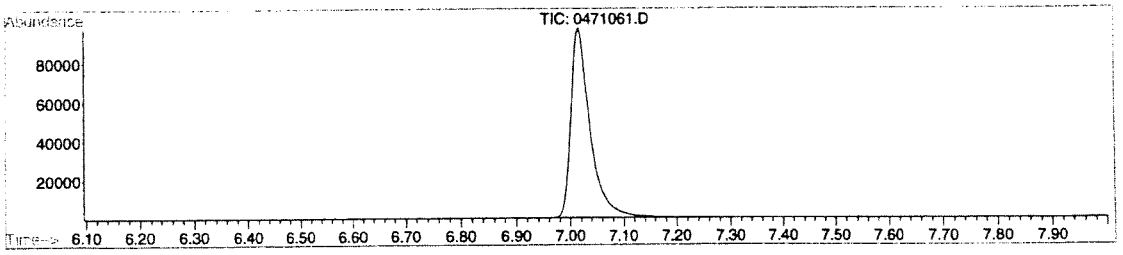
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	241386		115.8E+0
2)	MVL-d4	7.04	135	2084		

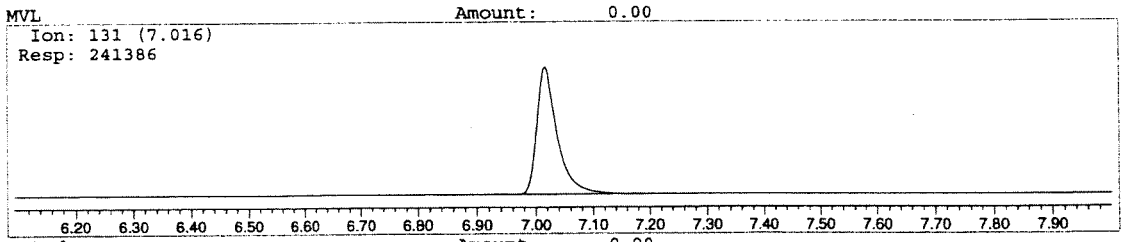
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

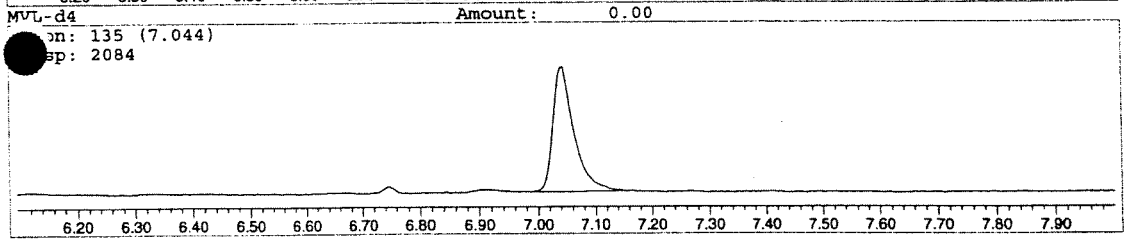
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471061.D Vial: 61
Acq On : 3 Jan 2001 7:33 Operator:
Sample : 10953-GROUP4-F1 Inst : MS7
Misc :

[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







[redacted]

Peak Area Report

Sample Name: 10954-GROUP4-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 7:53
Operator:

Data File Name: 0471062.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 62

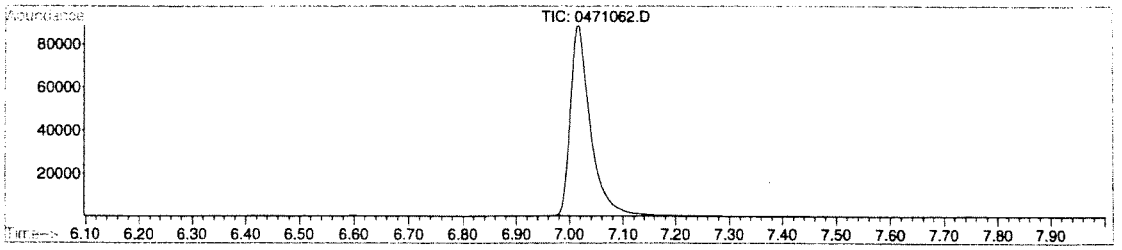
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	226425		122.8E+0
2)	MVL-d4	7.04	135	1844		

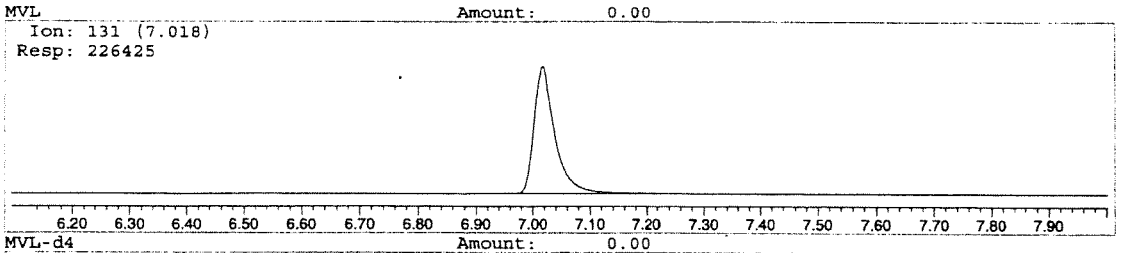
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471062.D Vial: 62
Acq On : 3 Jan 2001 7:53 Operator:
Sample : 10954-GROUP4-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)





Peak Area Report

Sample Name: 10943-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 8:12
Operator:

Data File Name: 0471063.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 63

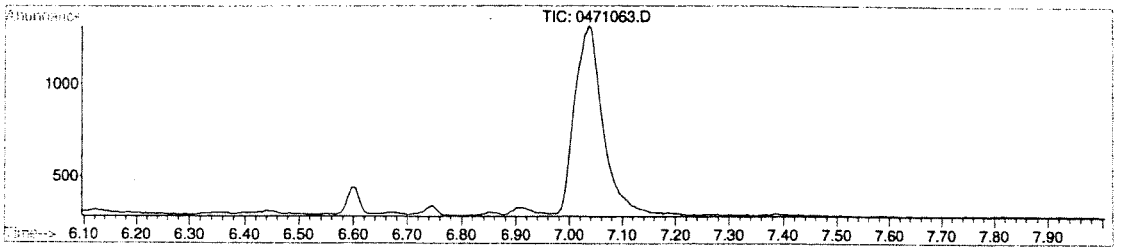
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1753		904.1E-3
2)	MVL-d4	7.04	135	1939		

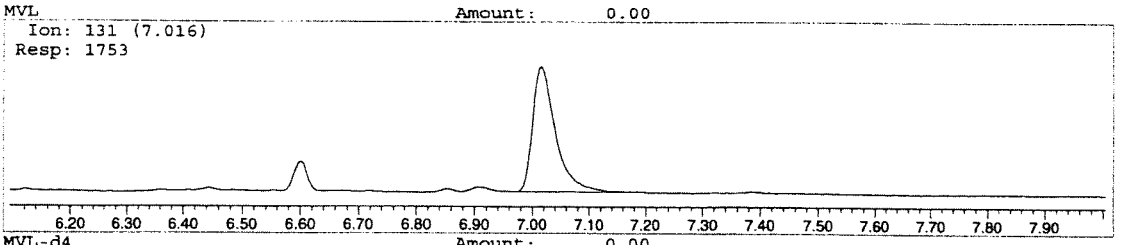
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

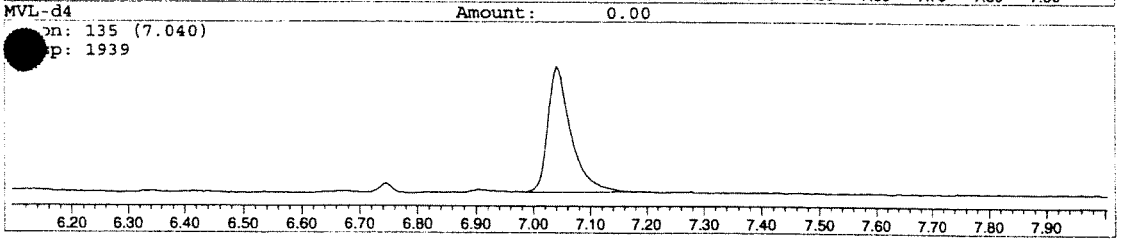
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471063.D Vial: 63
Acq On : 3 Jan 2001 8:12 Operator:
Sample : 10943-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10948-GROUP4-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 8:32
Operator:

Data File Name: 0471064.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 64

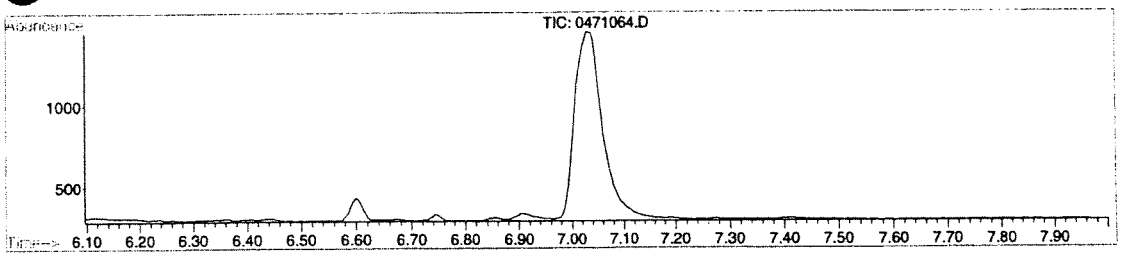
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	2188		109.6E-2
2)	MVL-d4	7.04	135	1996		

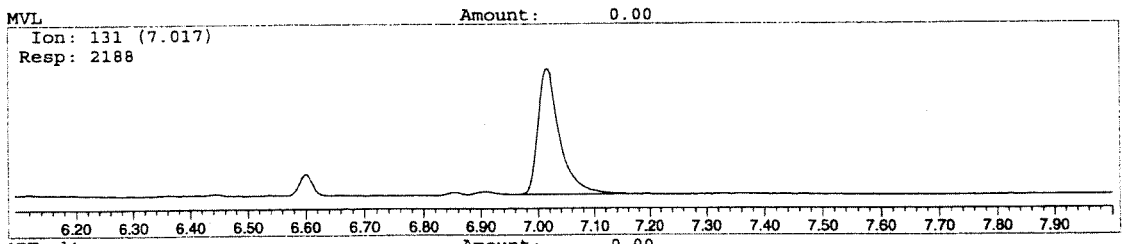
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

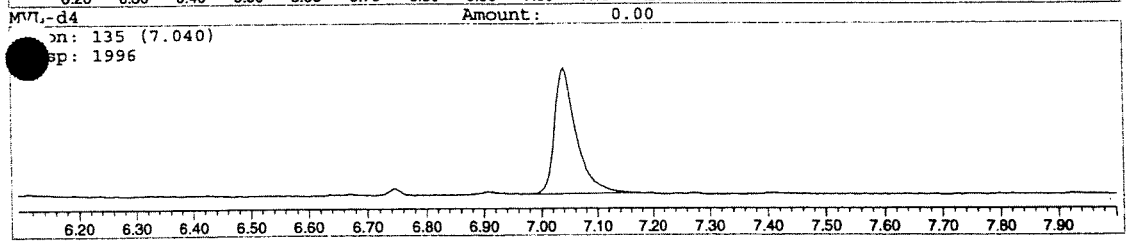
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471064.D Vial: 64
Acq On : 3 Jan 2001 8:32 Operator:
Sample : 10948-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10952-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 8:52
Operator:

Data File Name: 0471065.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 65

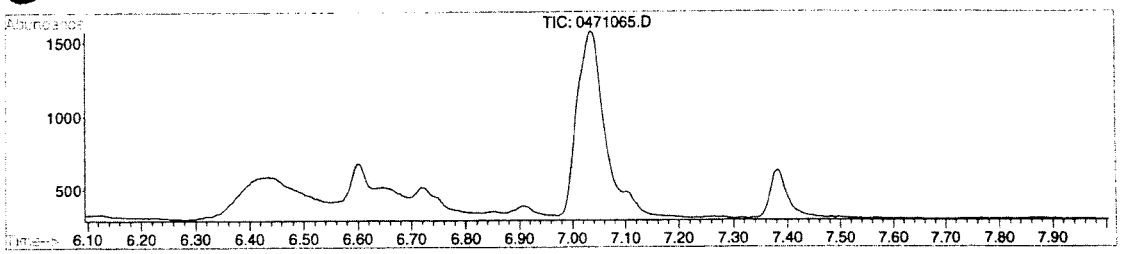
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	1778		679.4E-3
2)	MVL-d4	7.04	135	2617		

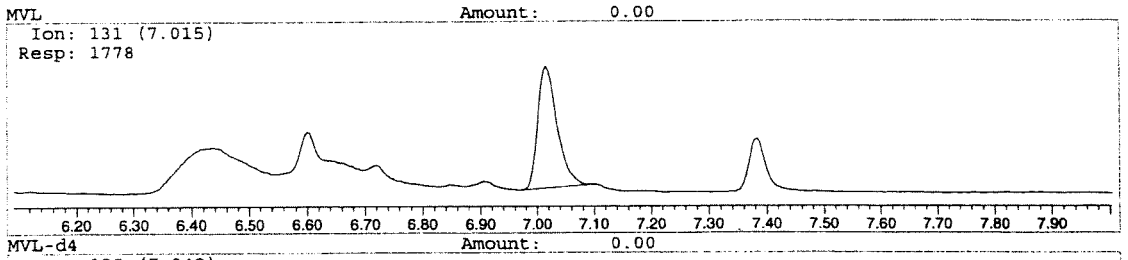
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

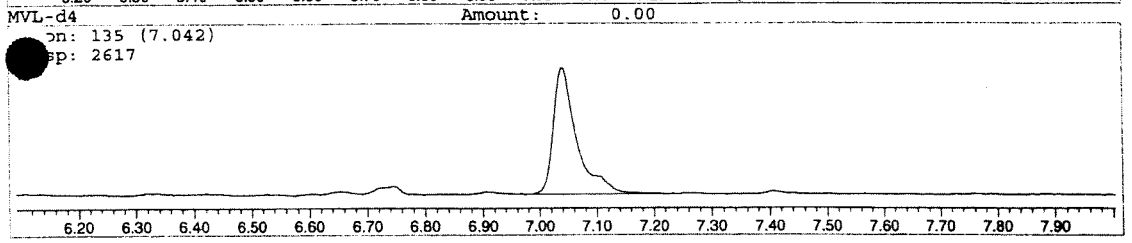
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471065.D Vial: 65
Acq On : 3 Jan 2001 8:52 Operator:
Sample : 10952-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10955-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 9:11
Operator:

Data File Name: 0471066.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 66

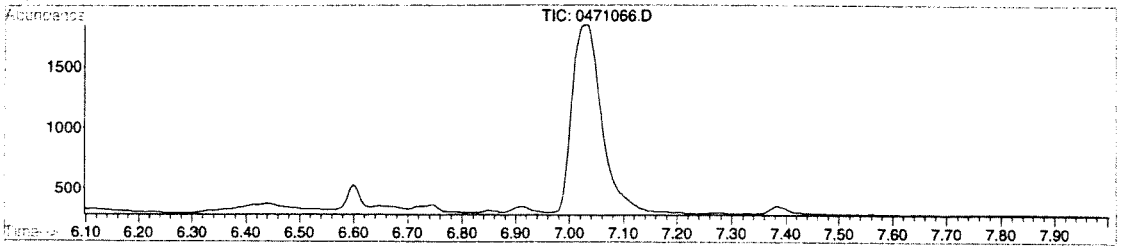
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	3322		137.7E-2
2)	MVL-d4	7.04	135	2412		

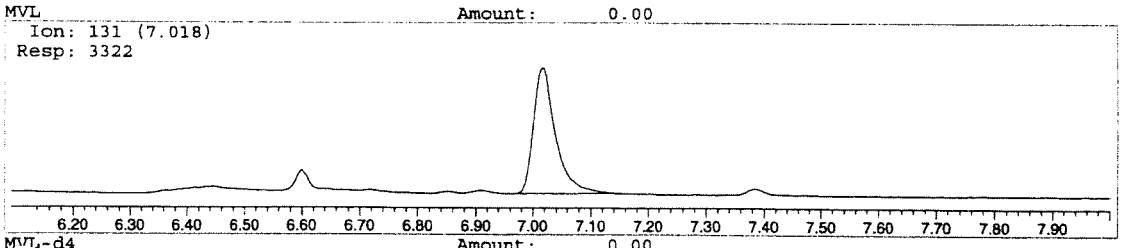
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

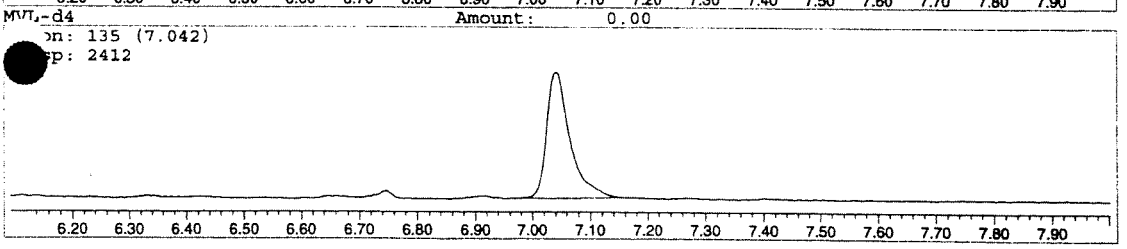
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471066.D Vial: 66
Acq On : 3 Jan 2001 9:11 Operator:
Sample : 10955-GROUP4-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 10956-GROUP4-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 9:31
Operator:

Data File Name: 0471067.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 67

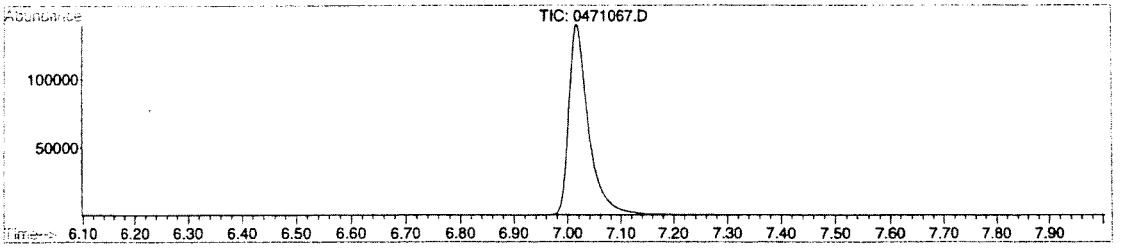
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	357223		152.7E+0
2)	MVL-d4	7.04	135	2339		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

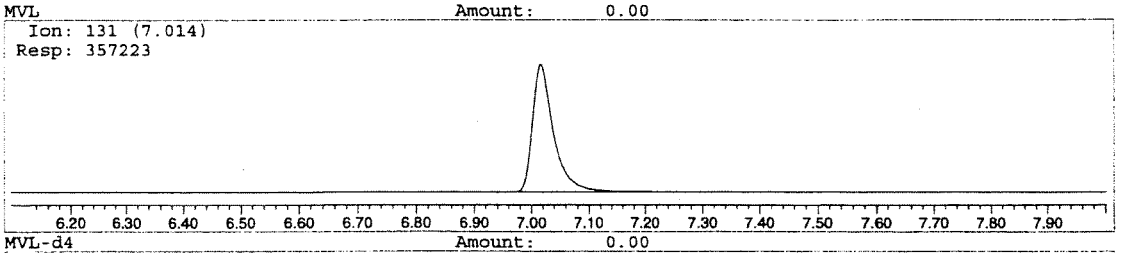
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471067.D Vial: 67
Acq On : 3 Jan 2001 9:31 Operator:
Sample : 10956-GROUP4-F0 Inst : MS7
Misc :

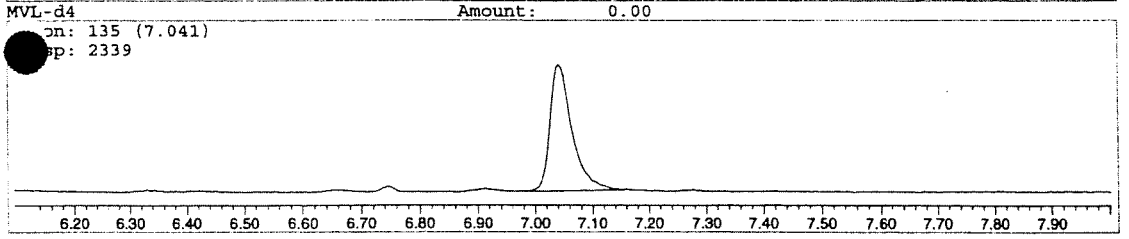
S Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.014)
Resp: 357223



MVL-d4 Amount: 0.00
on: 135 (7.041)
sp: 2339



Peak Area Report

Sample Name: 10944-GROUP4-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 9:51
Operator:

Data File Name: 0471068.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Name: MS7
Instrument Vial Number: 68
Instrument Method Name: PABX_BBA

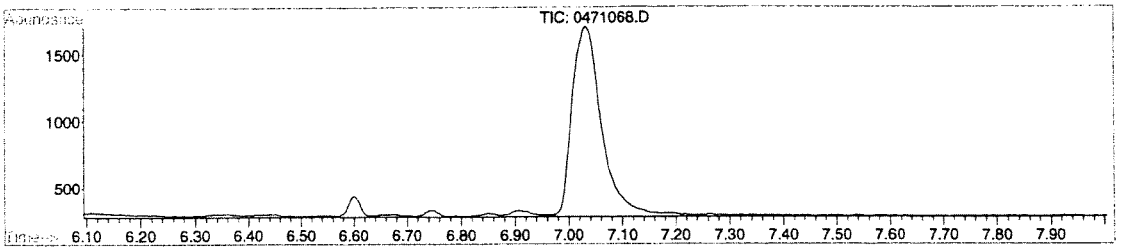
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	2815		116.6E-2
2)	MVL-d4	7.04	135	2414		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

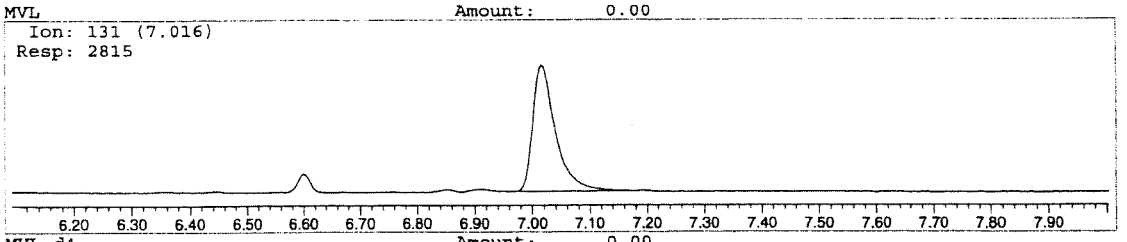
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471068.D Vial: 68
Acq On : 3 Jan 2001 9:51 Operator:
Sample : 10944-GROUP4-F0 Inst : MS7
Misc :

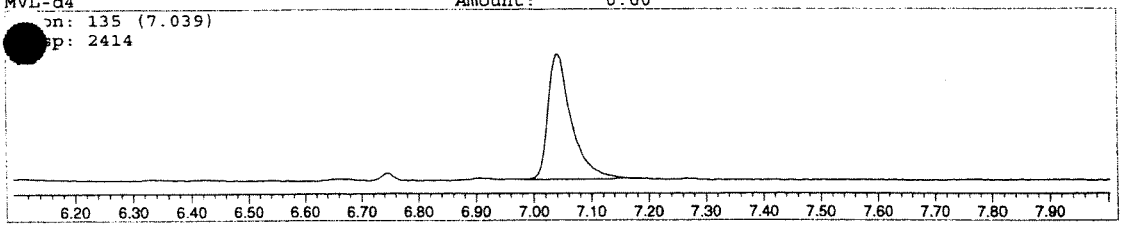
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.016)
Resp: 2815



MVL-d4 Amount: 0.00
Ion: 135 (7.039)
Resp: 2414



Peak Area Report

Sample Name: 11029-GROUP11-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 10:11
Operator:

Data File Name: 0471069.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 69

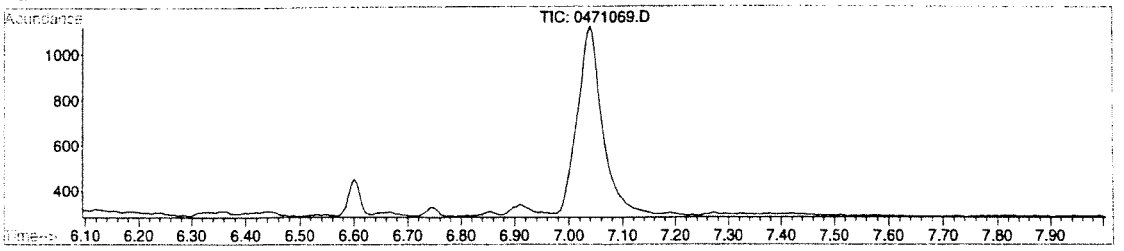
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	781		426.1E-3
2)	MVL-d4	7.04	135	1833		

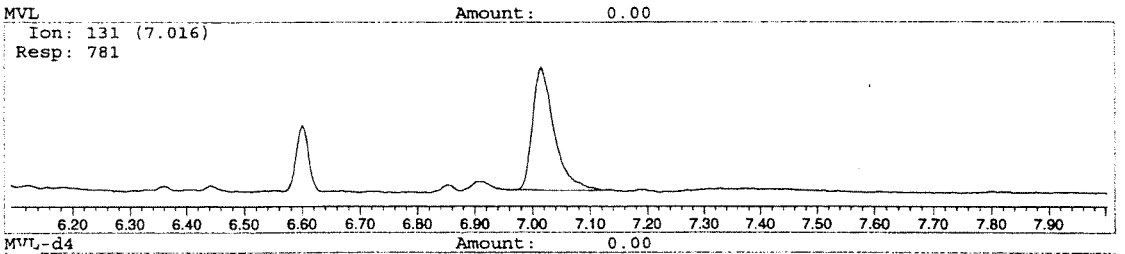
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

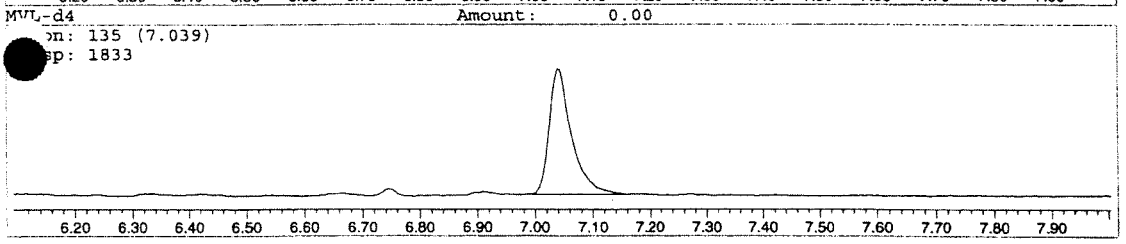
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471069.D Vial: 69
Acq On : 3 Jan 2001 10:11 Operator:
Sample : 11029-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11031-GROUP11-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 10:31
Operator:

Data File Name: 0471070.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 70

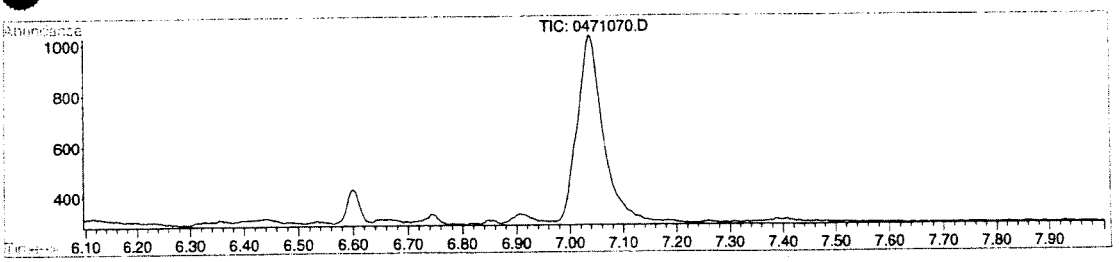
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	710		414.5E-3
2)	MVL-d4	7.04	135	1713		

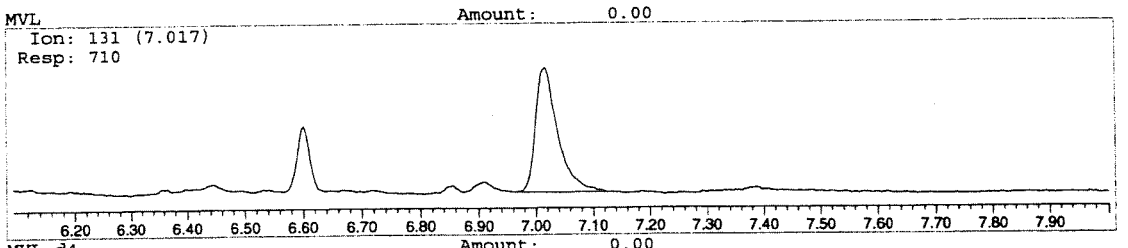
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

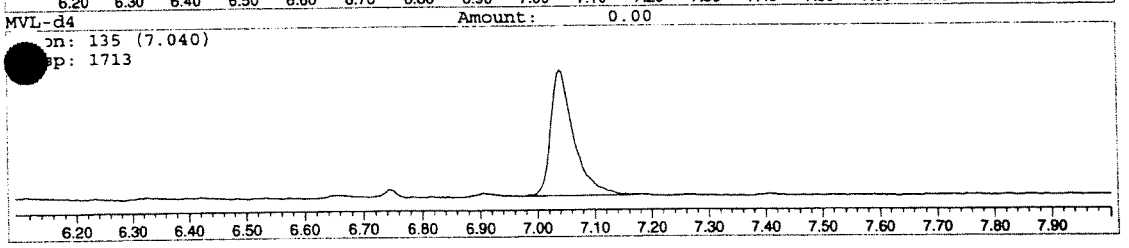
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471070.D Vial: 70
Acq On : 3 Jan 2001 10:31 Operator:
Sample : 11031-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X QC MID
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 10:50
Operator:

Data File Name: 0471013.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 13

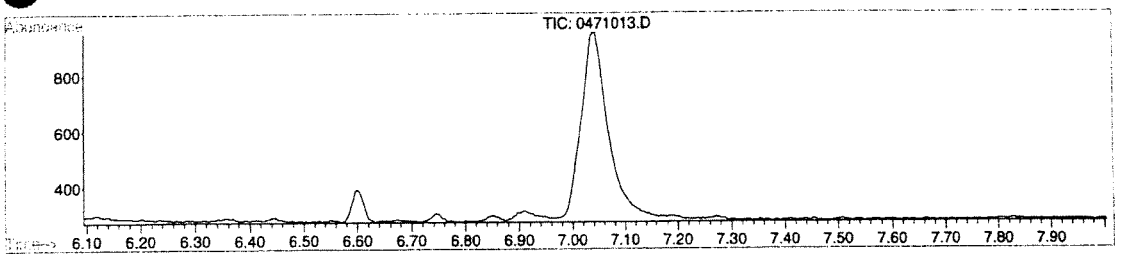
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	737		465.3E-3
2)	MVL-d4	7.04	135	1584		

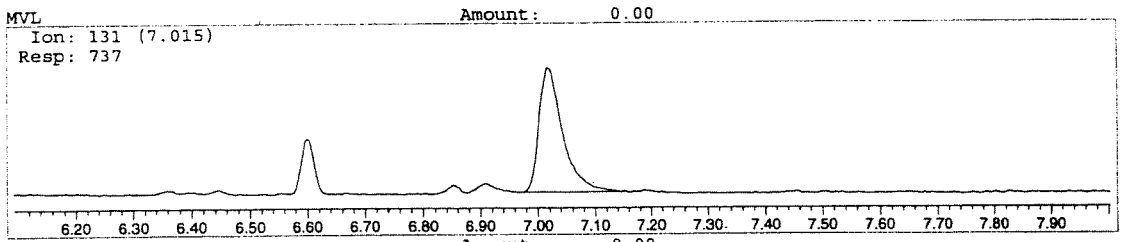
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

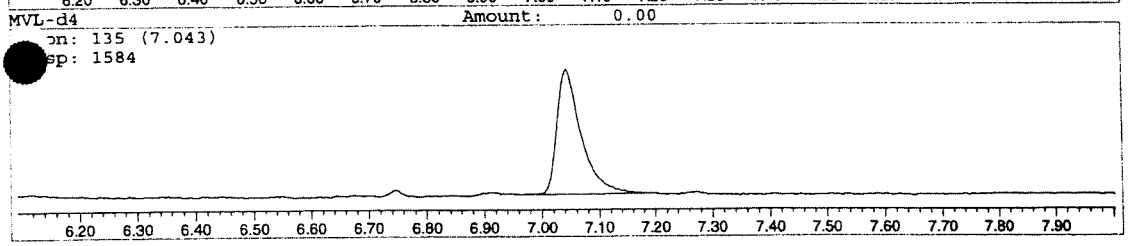
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471013.D Vial: 13
Acq On : 3 Jan 2001 10:50 Operator:
Sample : 2 X QC MID Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11032-GROUP11-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 11:10
Operator:

Data File Name: 0471071.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 71

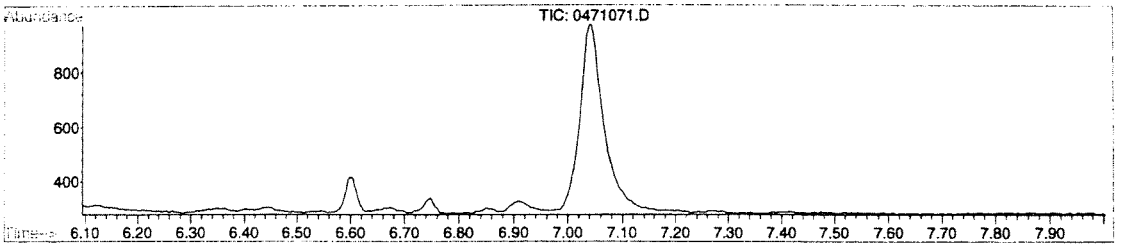
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	285		161.4E-3
2)	MVL-d4	7.04	135	1766		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

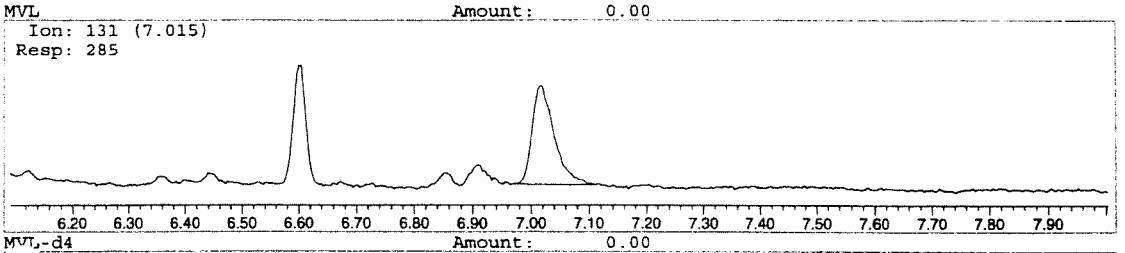
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471071.D Vial: 71
Acq On : 3 Jan 2001 11:10 Operator:
Sample : 11032-GROUP11-F0 Inst : MS7
Misc :

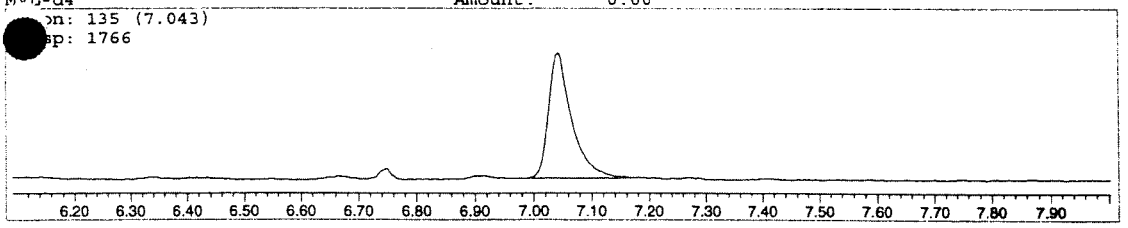
[redacted] Integration Params: RTEINT.P
[redacted]uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.015)
Resp: 285



MVL-d4 Amount: 0.00
[redacted]n: 135 (7.043)
[redacted]sp: 1766



[redacted]

Peak Area Report

Sample Name: 11033-GROUP11-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 11:30
Operator:

Data File Name: 0471072.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 72

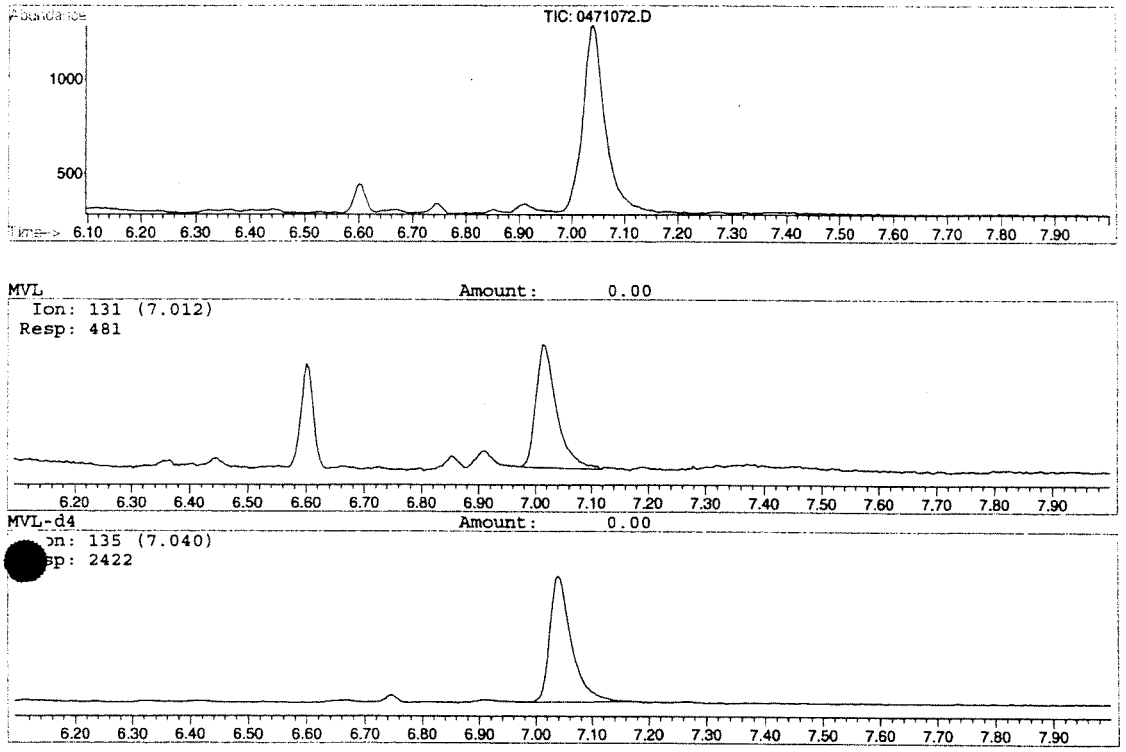
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	481		198.6E-3
2)	MVL-d4	7.04	135	2422		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471072.D Vial: 72
Acq On : 3 Jan 2001 11:30 Operator:
Sample : 11033-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



Peak Area Report

Sample Name: 11034-GROUP11-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 11:50
Operator:

Data File Name: 0471073.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 73

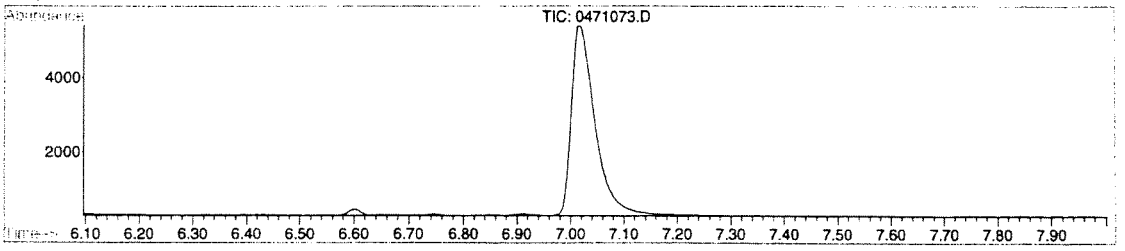
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.01	131	12941		495.3E-2
2)	MVL-d4	7.04	135	2613		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

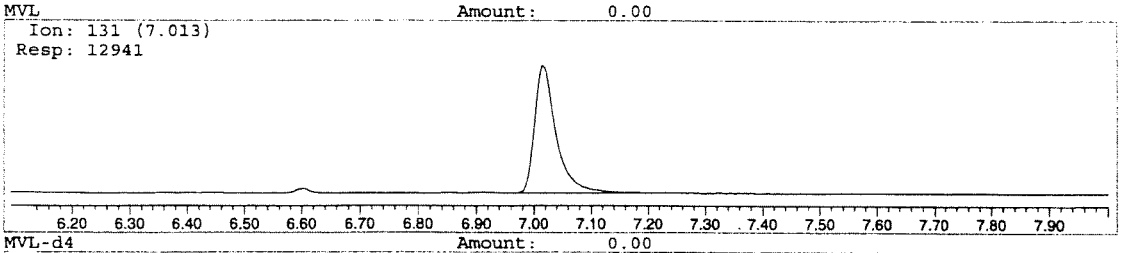
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471073.D Vial: 73
Acq On : 3 Jan 2001 11:50 Operator:
Sample : 11034-GROUP11-F0 Inst : MS7
Misc :

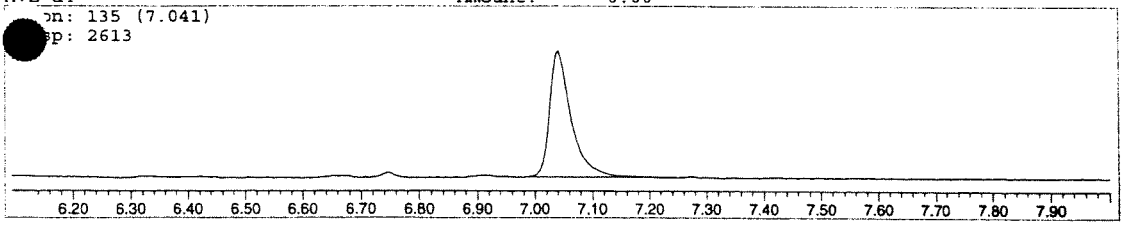
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.013)
Resp: 12941



MVL-d4 Amount: 0.00
Ion: 135 (7.041)
Resp: 2613



Peak Area Report

Sample Name: 11035-GROUP11-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 12:10
Operator:

Data File Name: 0471074.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 74

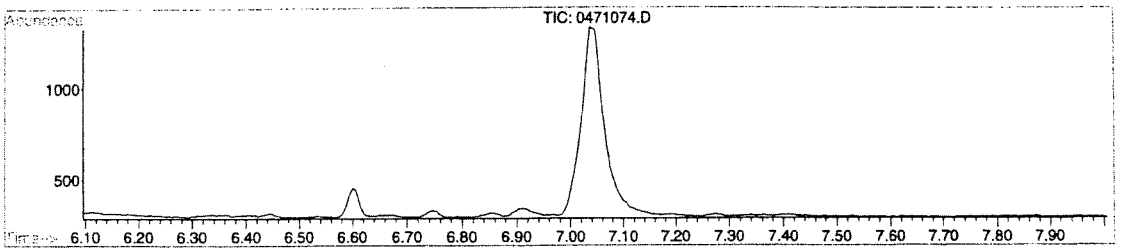
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	647		264.3E-3
2)	MVL-d4	7.04	135	2448		

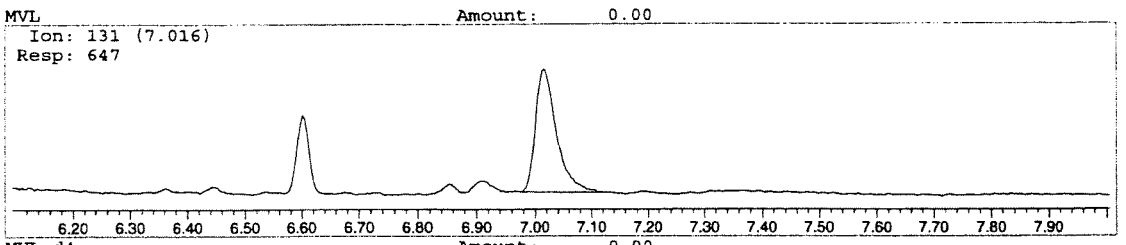
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

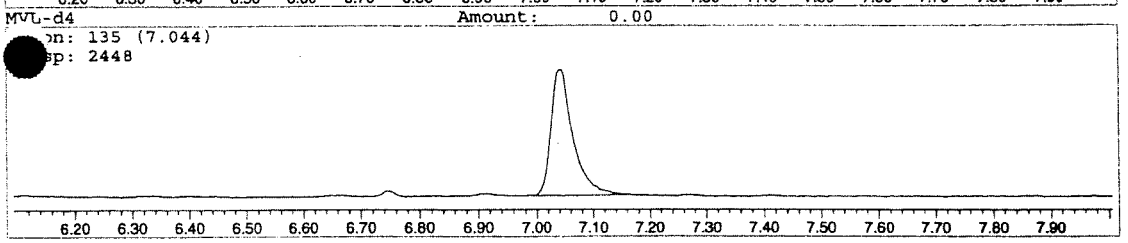
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471074.D Vial: 74
Acq On : 3 Jan 2001 12:10 Operator:
Sample : 11035-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11036-GROUP11-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 12:30
Operator:

Data File Name: 0471075.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 75

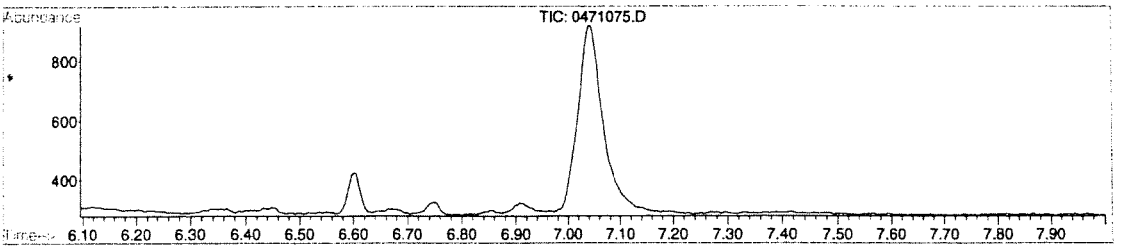
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	526		335.9E-3
2)	MVL-d4	7.04	135	1566		

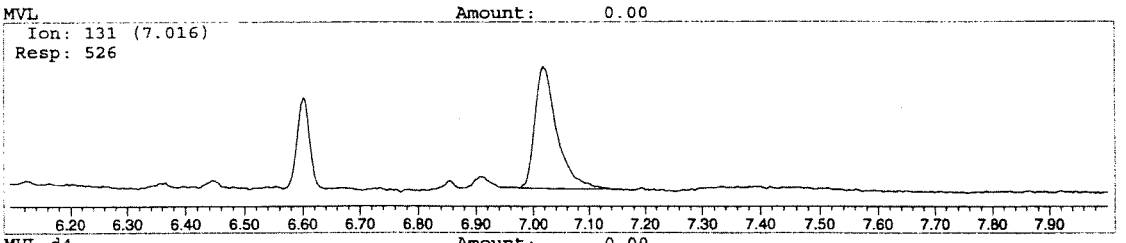
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

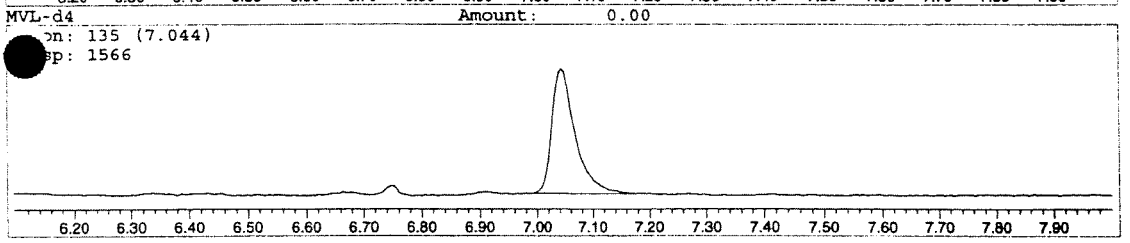
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471075.D Vial: 75
Acq On : 3 Jan 2001 12:30 Operator:
Sample : 11036-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11037-GROUP11-F0
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 12:50
Operator:

Data File Name: 0471076.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 76

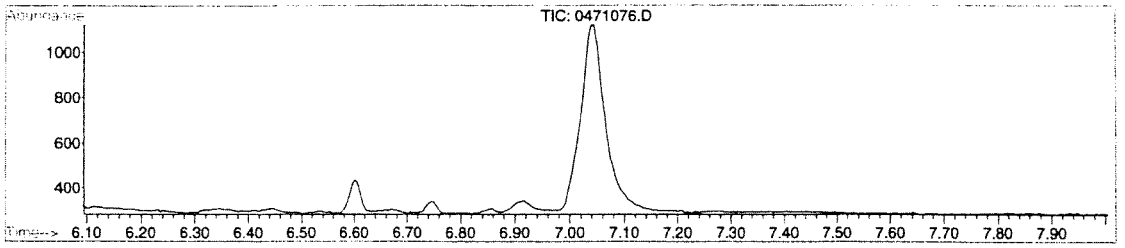
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	542		268.8E-3
2)	MVL-d4	7.04	135	2016		

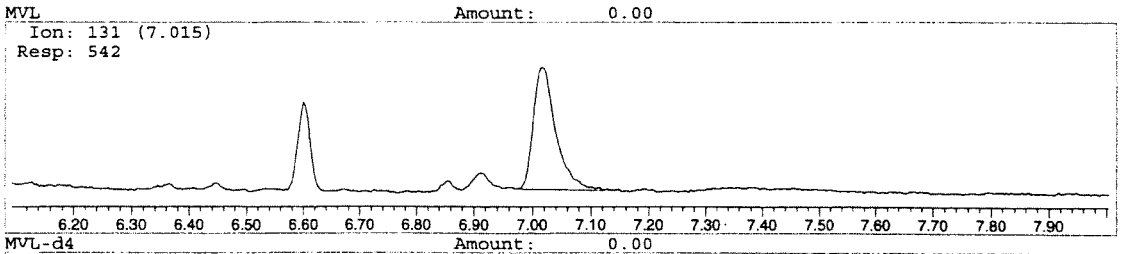
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

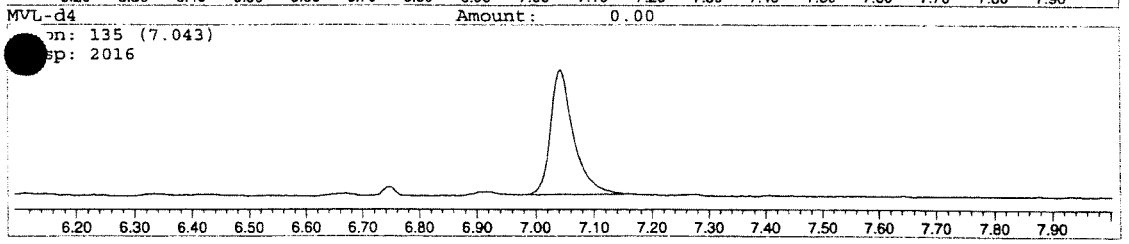
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471076.D Vial: 76
Acq On : 3 Jan 2001 12:50 Operator:
Sample : 11037-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11038-GROUP11-F0
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 13:10
Operator:

Data File Name: 0471077.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 77

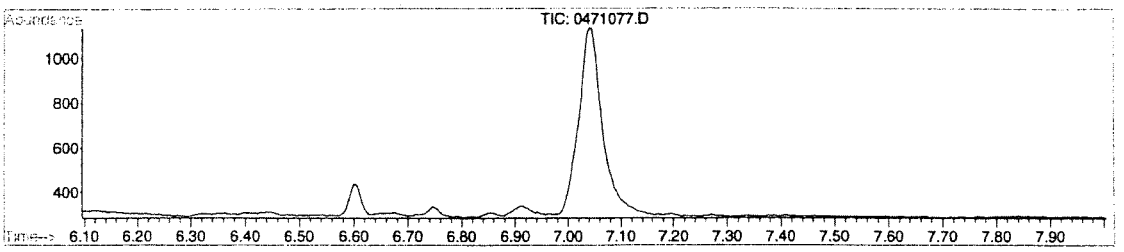
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	602		300.0E-3
2)	MVL-d4	7.04	135	2007		

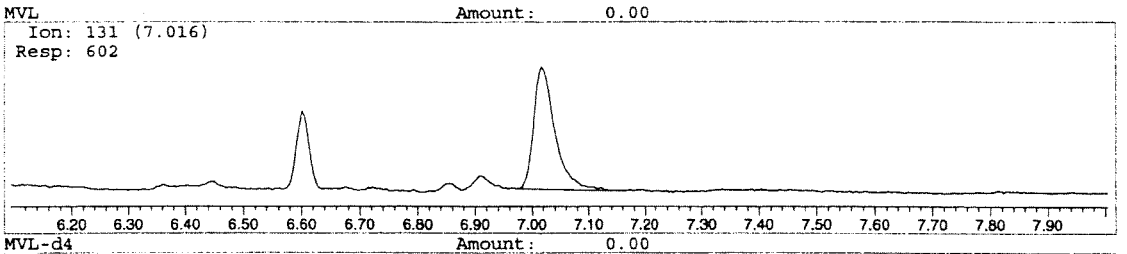
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

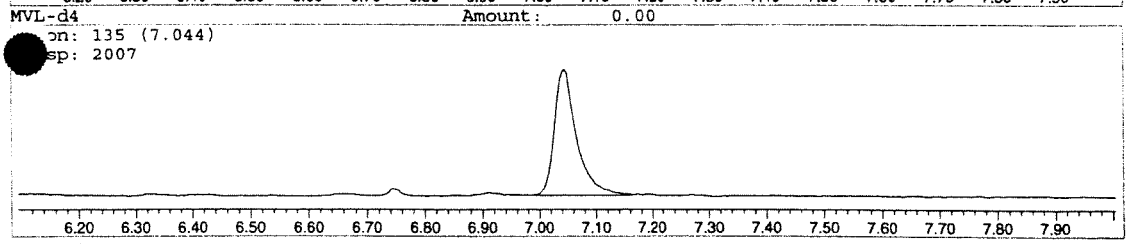
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471077.D Vial: 77
Acq On : 3 Jan 2001 13:10 Operator:
Sample : 11038-GROUP11-F0 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11029-GROUP11-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 13:30
Operator:

Data File Name: 0471078.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 78

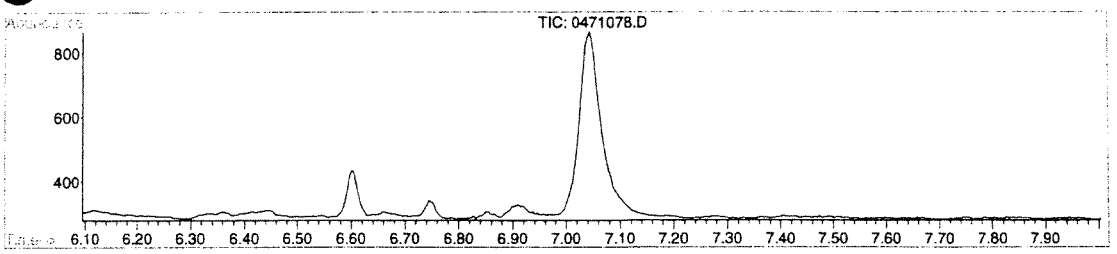
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	189		130.5E-3
2)	MVL-d4	7.04	135	1448		

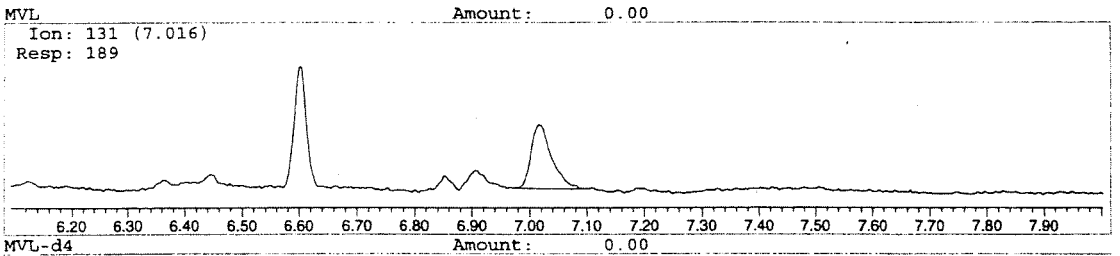
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

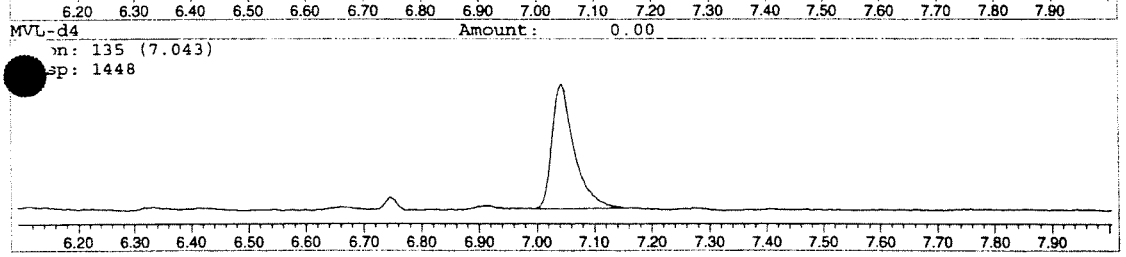
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471078.D Vial: 78
Acq On : 3 Jan 2001 13:30 Operator:
Sample : 11029-GROUP11-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11031-GROUP11-F1
Notebook Reference: PABX-BBA-1-047
Date Acquired: 1/3/01 13:49
Operator:

Data File Name: 0471079.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA
Instrument Name: MS7
Instrument Vial Number: 79

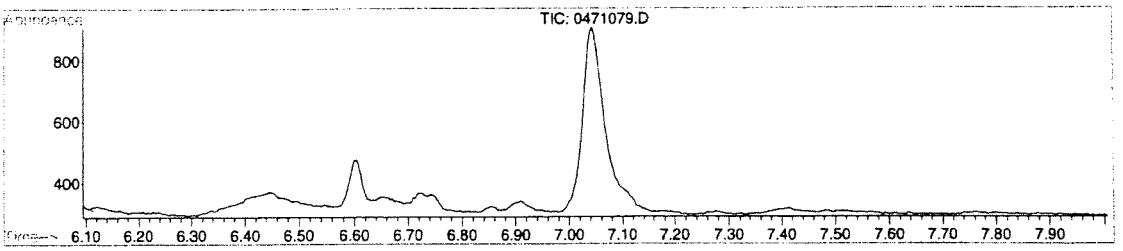
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	146		902.9E-4
2)	MVL-d4	7.04	135	1617		

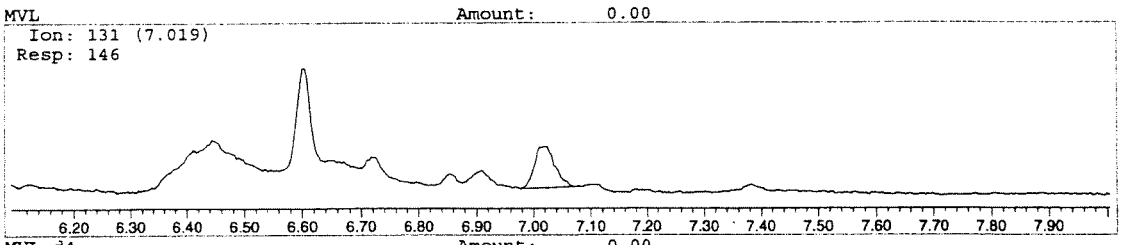
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

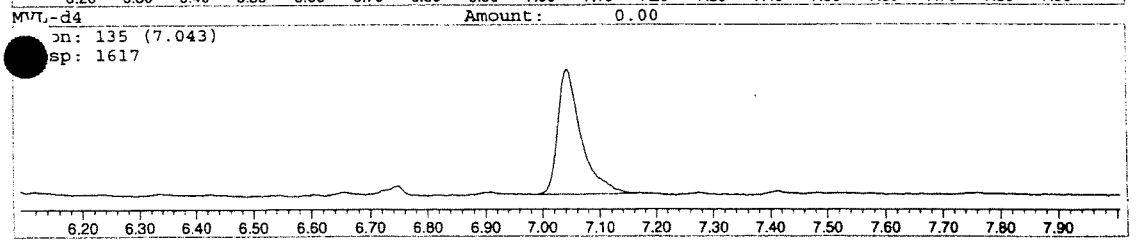
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471079.D Vial: 79
Acq On : 3 Jan 2001 13:49 Operator:
Sample : 11031-GROUP11-F1 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11033-GROUP11-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 14:09
Operator:

Data File Name: 0471080.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 80

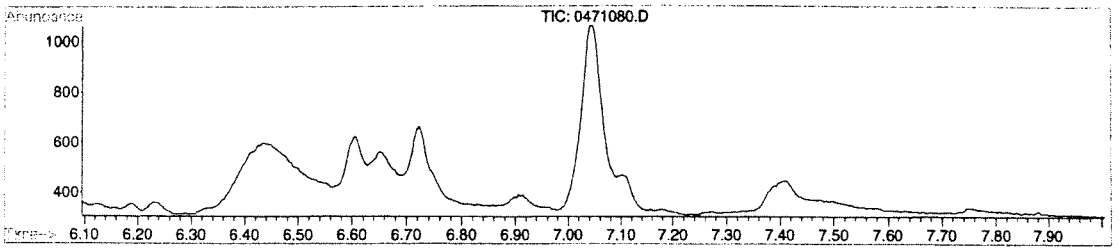
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	293		149.7E-3
2)	MVL-d4	7.04	135	1957		

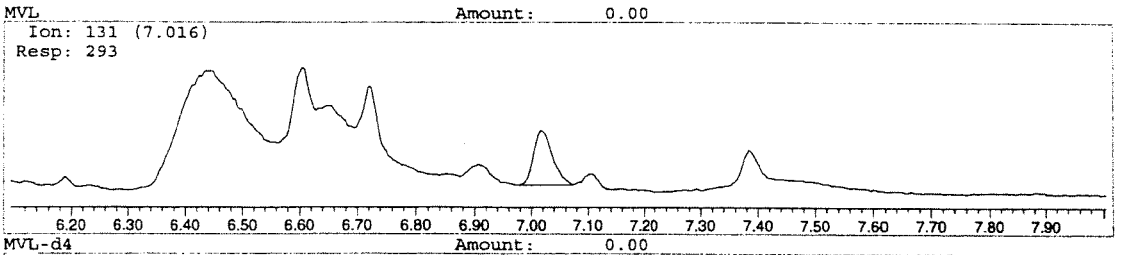
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

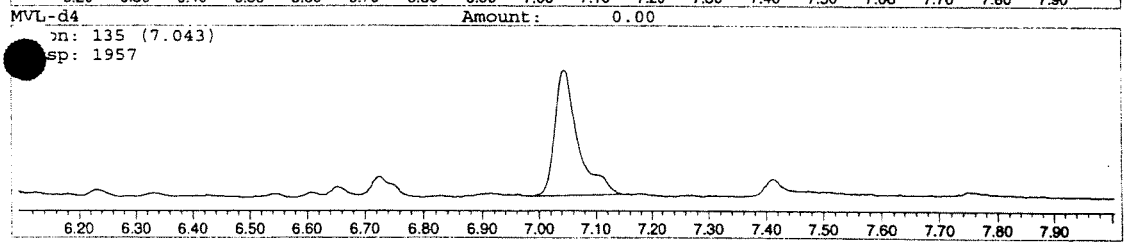
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471080.D Vial: 80
Acq On : 3 Jan 2001 14:09 Operator:
Sample : 11033-GROUP11-F1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 11036-GROUP11-F1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 14:29
Operator:

Data File Name: 0471081.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 81

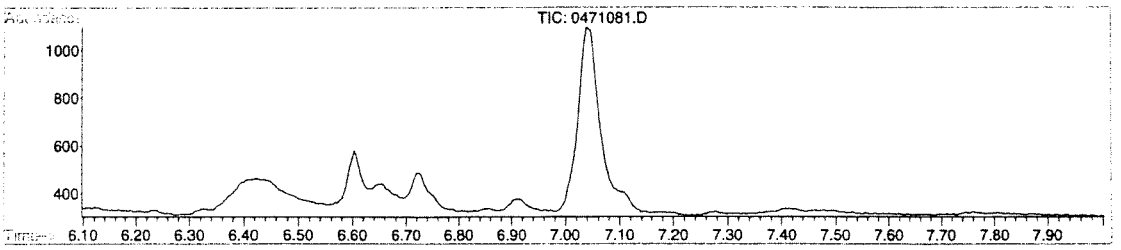
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	260		133.8E-3
2)	MVL-d4	7.04	135	1943		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

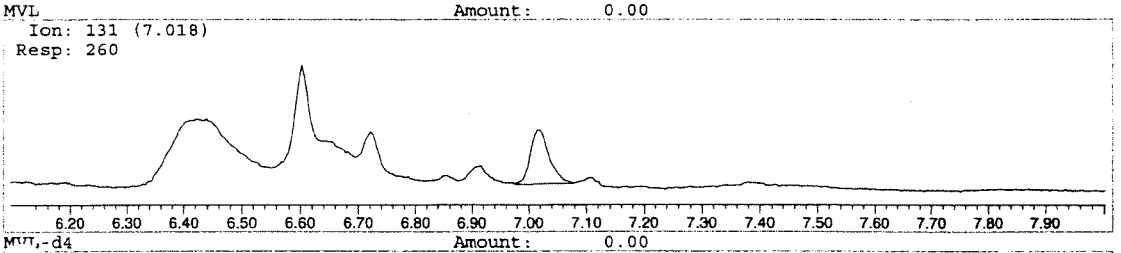
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471081.D Vial: 81
Acq On : 3 Jan 2001 14:29 Operator:
Sample : 11036-GROUP11-F1 Inst : MS7
Misc :

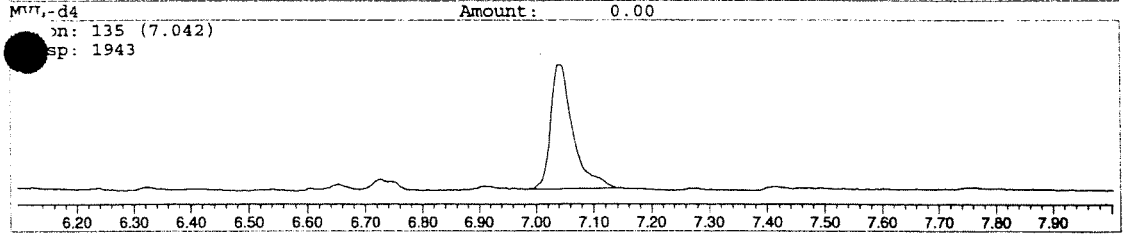
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.018)
Resp: 260



MVL-d4 Amount: 0.00
Ion: 135 (7.042)
Resp: 1943



Peak Area Report

Sample Name: 11037-GROUP11-F1 **Date Acquired:** 1/3/01 14:49
Notebook Reference: PABX-BBA-1-047 **Operator:**

Data File Name: 0471082.D **Instrument Name:** MS7
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\ **Instrument Vial Number:** 82
Instrument Method Name: PABX_BBA

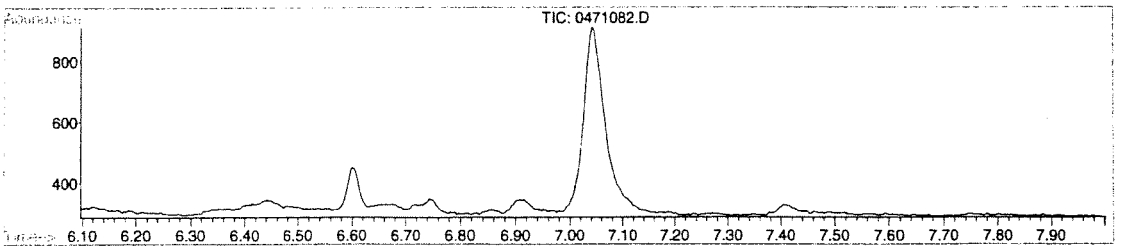
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	187		119.7E-3
2)	MVL-d4	7.04	135	1562		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

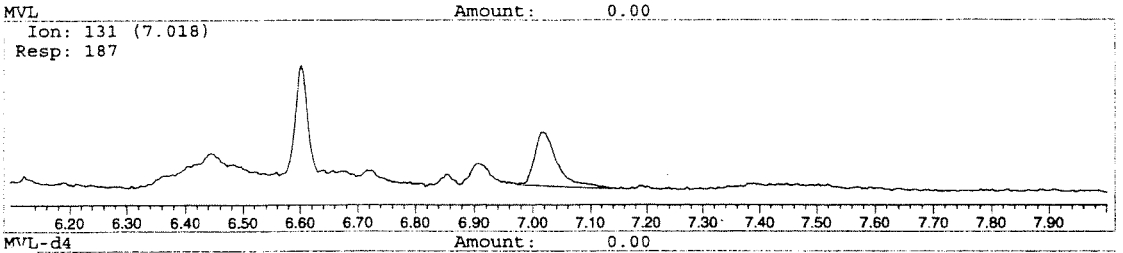
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471082.D Vial: 82
Acq On : 3 Jan 2001 14:49 Operator:
Sample : 11037-GROUP11-F1 Inst : MS7
Misc :

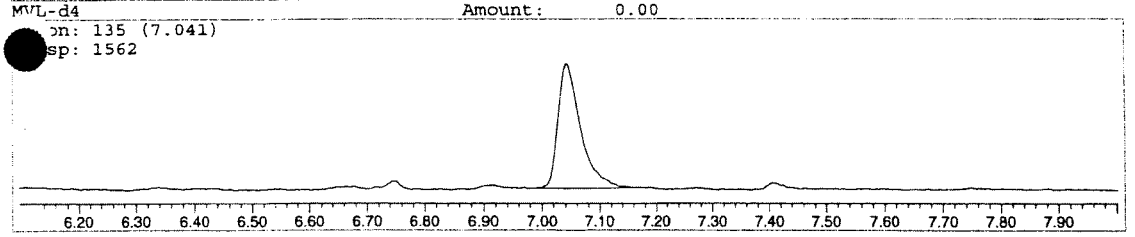
3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.018)
Resp: 187



MVL-d4 Amount: 0.00
on: 135 (7.041)
sp: 1562



Peak Area Report

Sample Name: 2 X QC HIGH
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 15:09
Operator:

Data File Name: 0471011.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 11

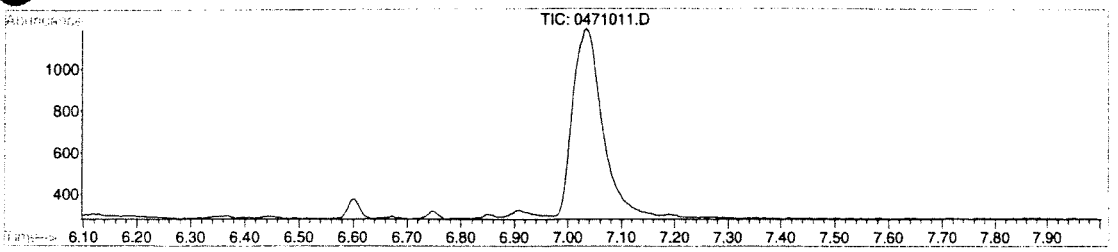
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1874		125.1E-2
2)	MVL-d4	7.04	135	1498		

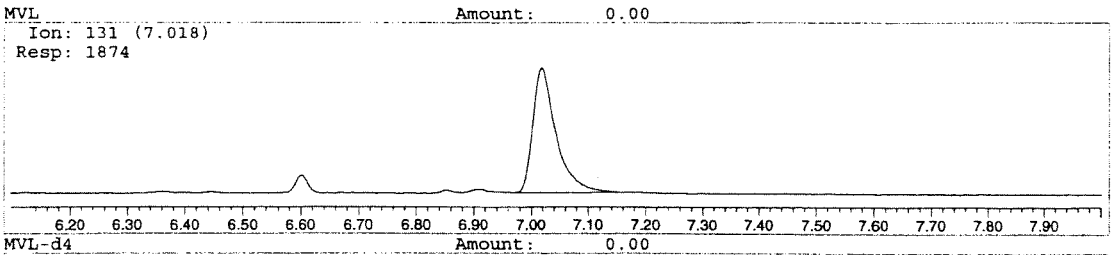
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

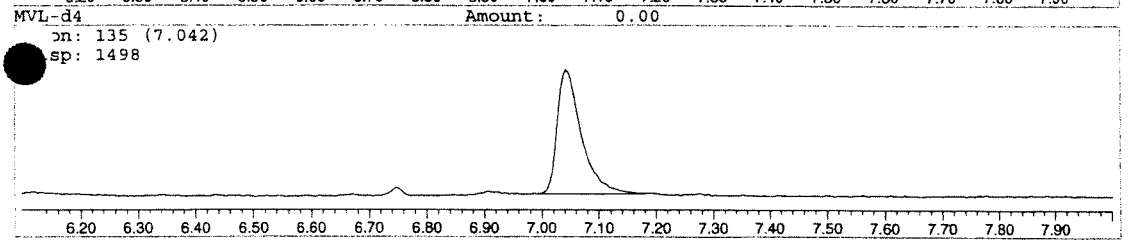
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471011.D Vial: 11
Acq On : 3 Jan 2001 15:09 Operator:
Sample : 2 X QC HIGH Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X BLANK
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 15:29
Operator:

Data File Name: 0471016.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 16

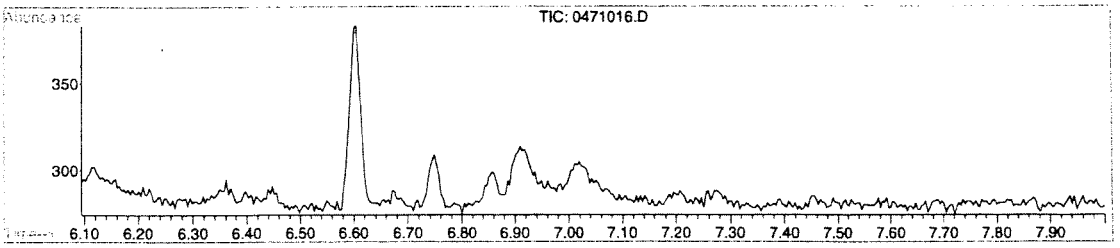
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		#DIV/0!
2)	MVL-d4	0.00	135	0		

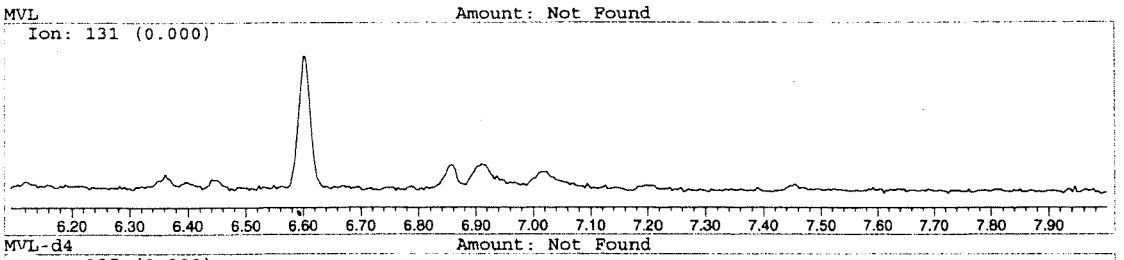
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

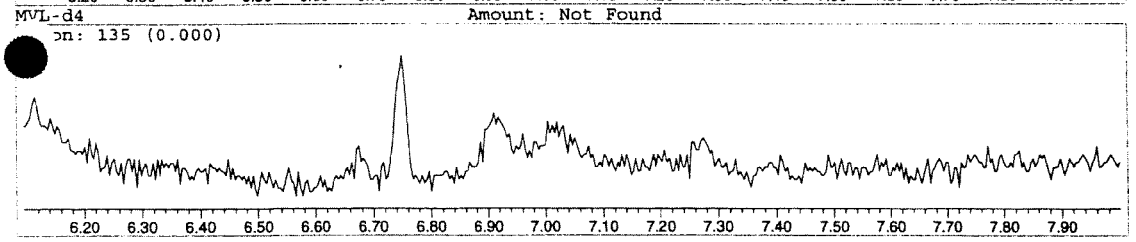
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471016.D Vial: 16
Acq On : 3 Jan 2001 15:29 Operator:
Sample : 2 X BLANK Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X CONTROL
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 15:49
Operator:

Data File Name: 0471017.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 17

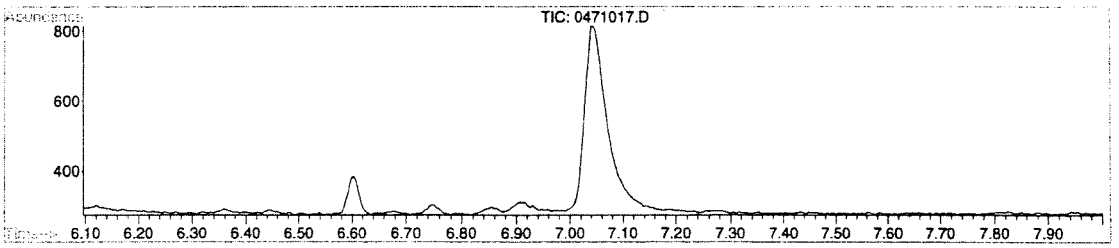
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	0.00	131	0		000.0E-3
2)	MVL-d4	7.04	135	1533		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

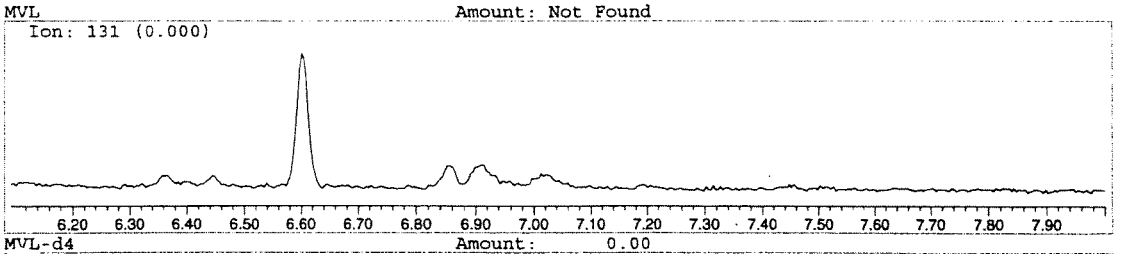
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471017.D Vial: 17
Acq On : 3 Jan 2001 15:49 Operator:
Sample : 2 X CONTROL Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: Not Found



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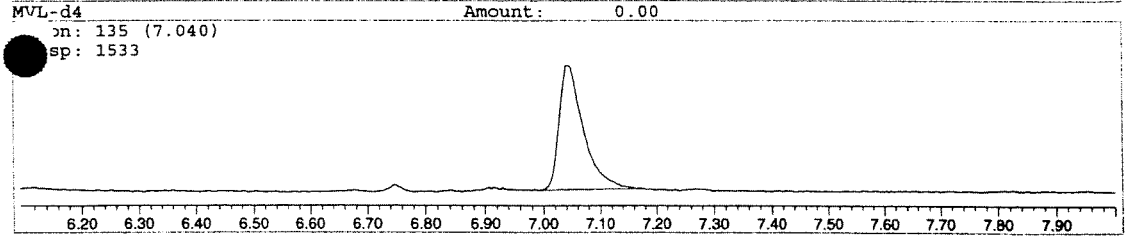


Peak Area Report

Sample Name: 2 X STD 1
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 16:09
Operator:

Data File Name: 0471018.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 18

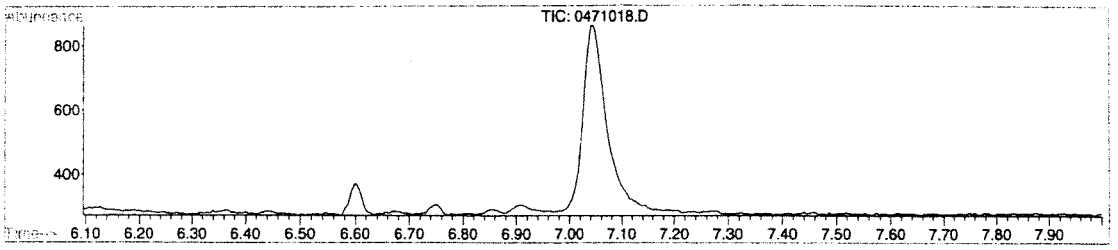
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	138		817.5E-4
2)	MVL-d4	7.04	135	1688		

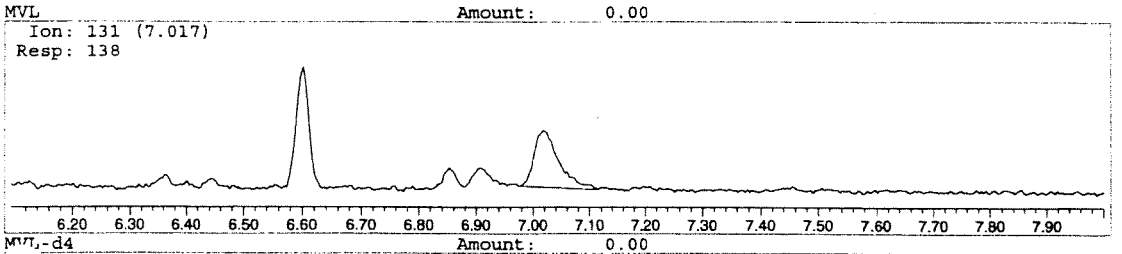
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

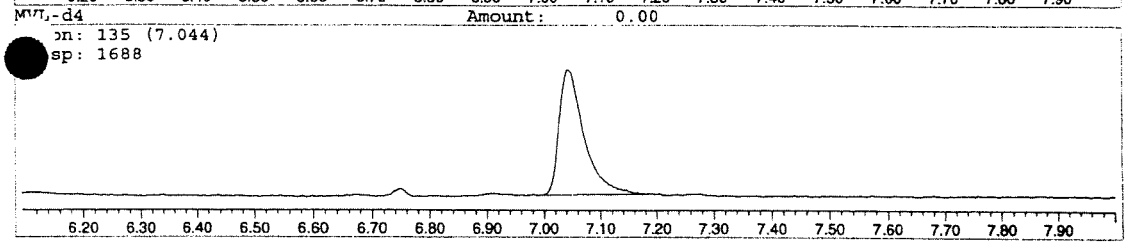
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471018.D Vial: 18
Acq On : 3 Jan 2001 16:09 Operator:
Sample : 2 X STD 1 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X STD 2
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 16:29
Operator:

Data File Name: 0471019.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 19

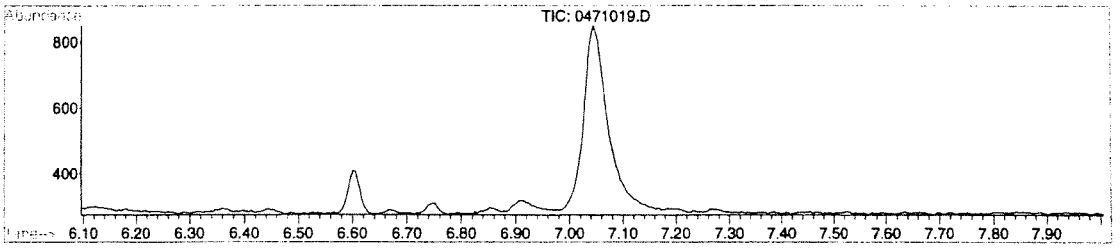
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	228		148.2E-3
2)	MVL-d4	7.04	135	1538		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

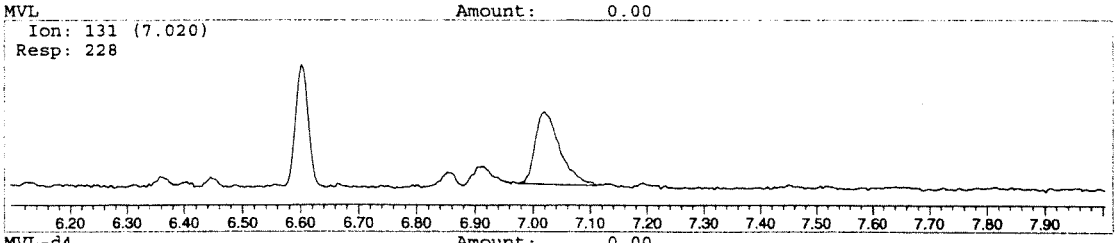
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471019.D Vial: 19
Acq On : 3 Jan 2001 16:29 Operator:
Sample : 2 X STD 2 Inst : MS7
Misc :

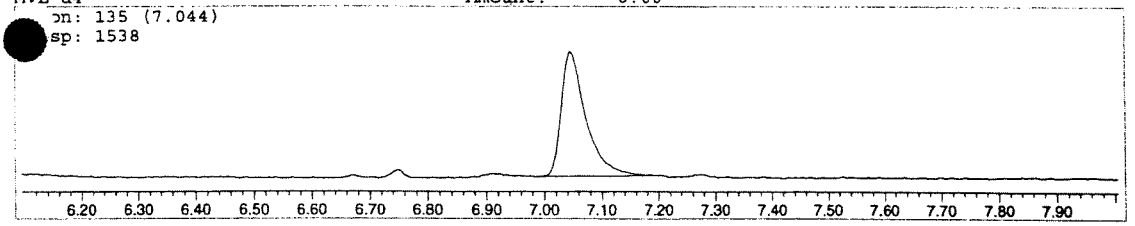
3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.020)
Resp: 228



MVL-d4 Amount: 0.00
on: 135 (7.044)
sp: 1538



Peak Area Report

Sample Name: 2 X STD 3
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 16:49
Operator:

Data File Name: 0471020.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 20

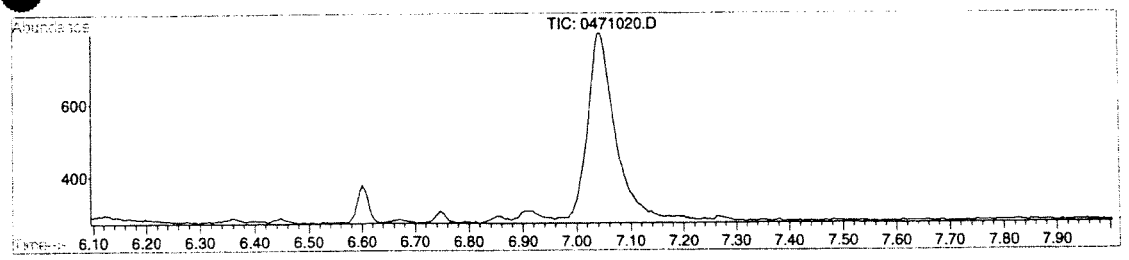
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	386		294.4E-3
2)	MVL-d4	7.04	135	1311		

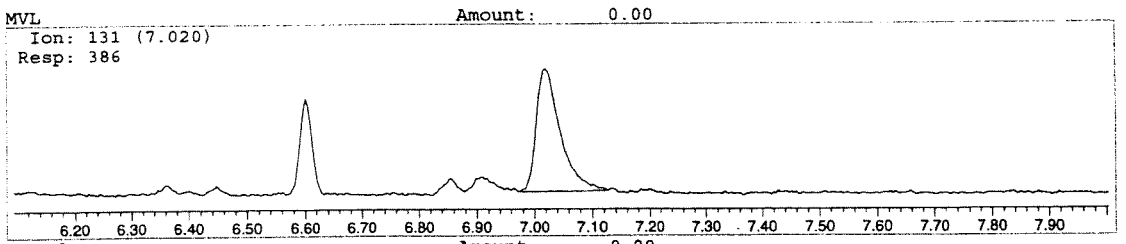
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

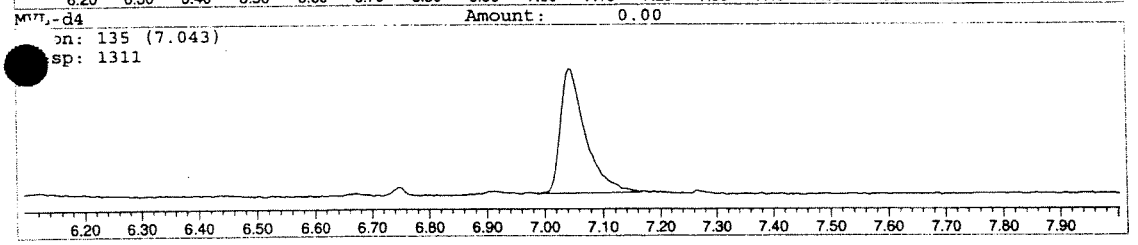
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471020.D Vial: 20
Acq On : 3 Jan 2001 16:49 Operator:
Sample : 2 X STD 3 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X STD 4
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 17:09
Operator:

Data File Name: 0471021.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 21

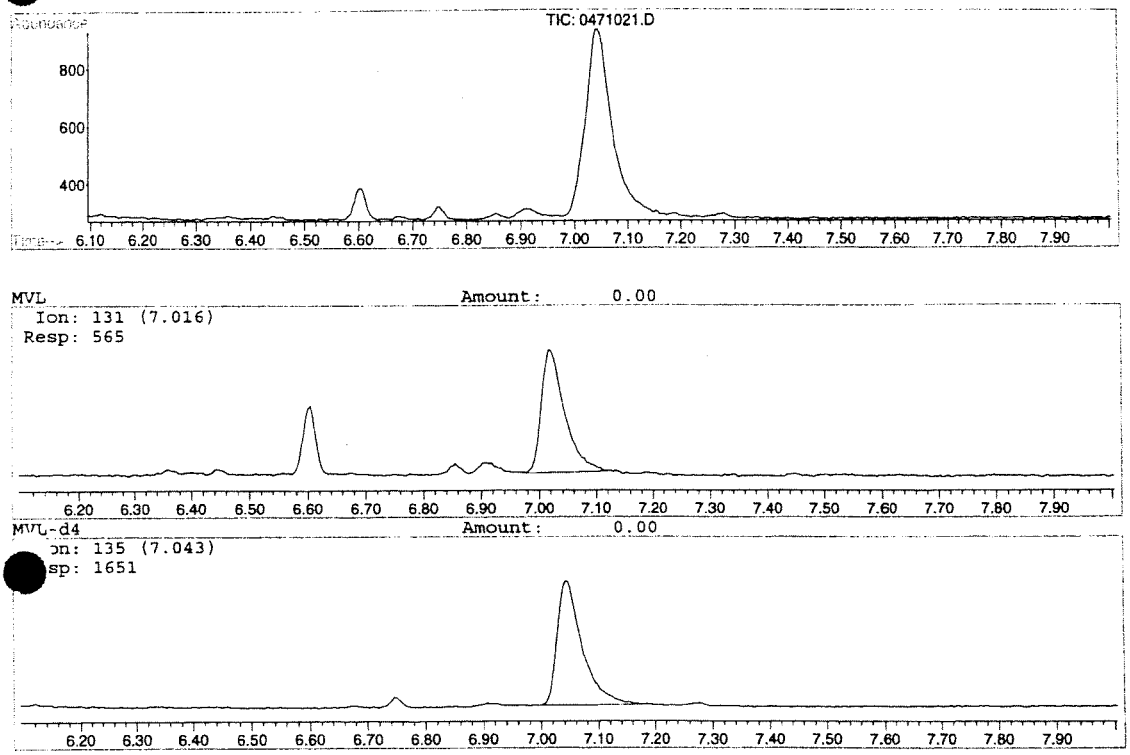
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	565		342.2E-3
2)	MVL-d4	7.04	135	1651		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471021.D Vial: 21
Acq On : 3 Jan 2001 17:09 Operator:
Sample : 2 X STD 4 Inst : MS7
Misc :

3 Integration Params: RTEINT.P
uant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



Peak Area Report

Sample Name: 2 X STD 5
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 17:29
Operator:

Data File Name: 0471022.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 22

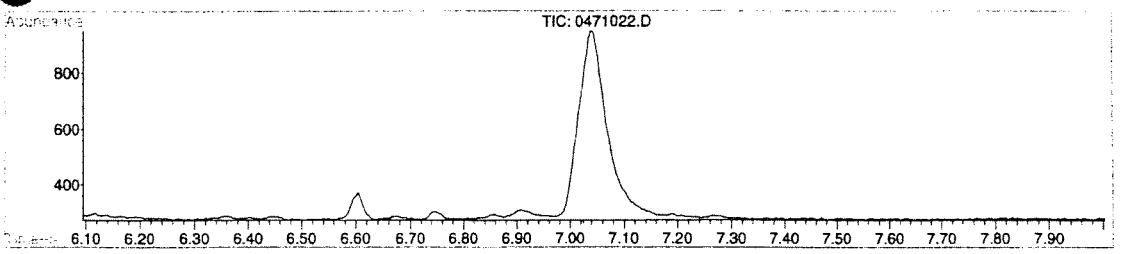
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	936		629.0E-3
2)	MVL-d4	7.04	135	1488		

M* = The letter "m" in this column indicates that manual integration was performed on that compound.

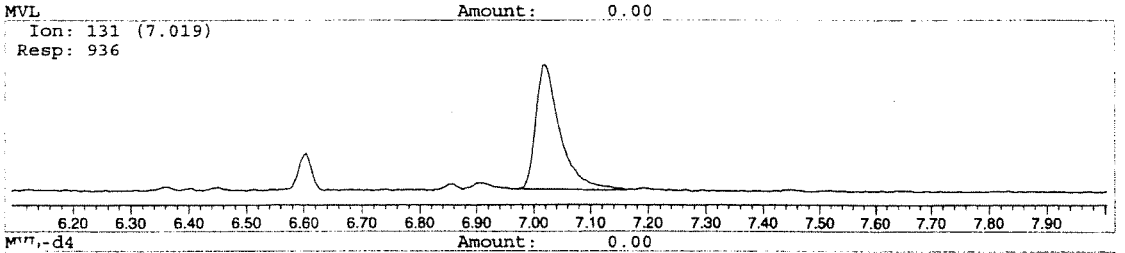
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471022.D Vial: 22
Acq On : 3 Jan 2001 17:29 Operator:
Sample : 2 X STD 5 Inst : MS7
Misc :

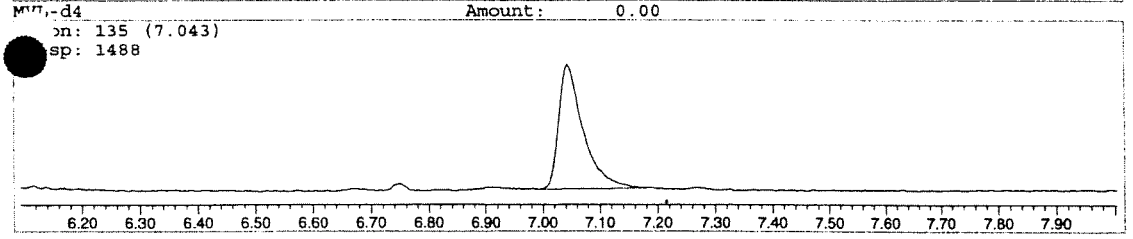
Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)



MVL Amount: 0.00
Ion: 131 (7.019)
Resp: 936



MVL-d4 Amount: 0.00
Ion: 135 (7.043)
Resp: 1488



Peak Area Report

Sample Name: 2 X STD 6
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 17:48
Operator:

Data File Name: 0471023.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 23

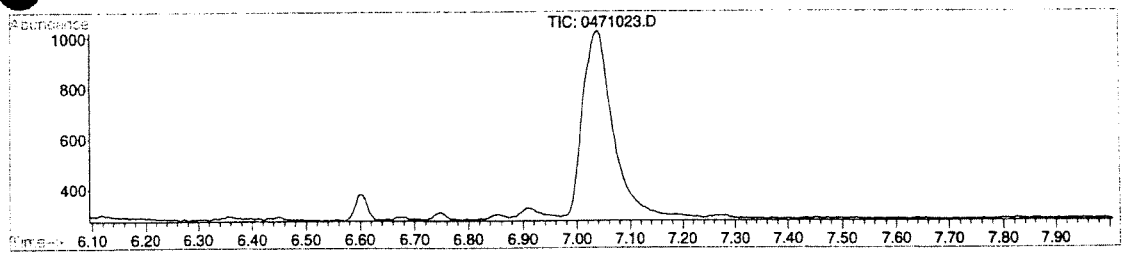
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	1415		101.9E-2
2)	MVL-d4	7.04	135	1389		

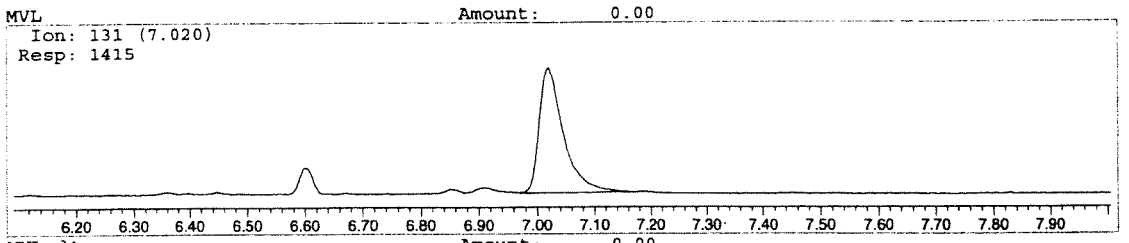
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

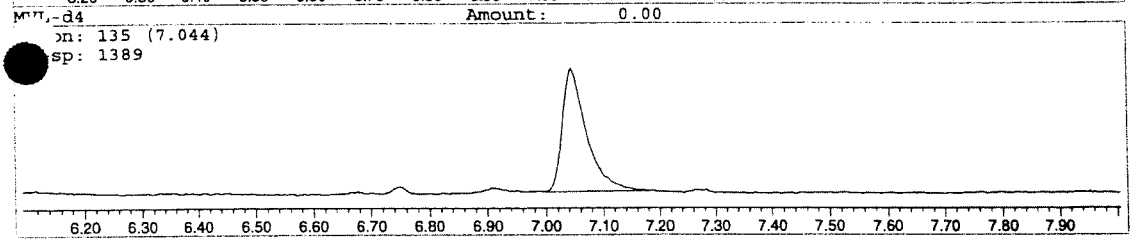
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471023.D Vial: 23
Acq On : 3 Jan 2001 17:48 Operator:
Sample : 2 X STD 6 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







Peak Area Report

Sample Name: 2 X STD 7
Notebook Reference: PABX-BBA-1-047

Date Acquired: 1/3/01 18:08
Operator:

Data File Name: 0471024.D
Data File Path: D:\MSD_DATA\PAB\PABX-BBA\1-047-1\
Instrument Method Name: PABX_BBA

Instrument Name: MS7
Instrument Vial Number: 24

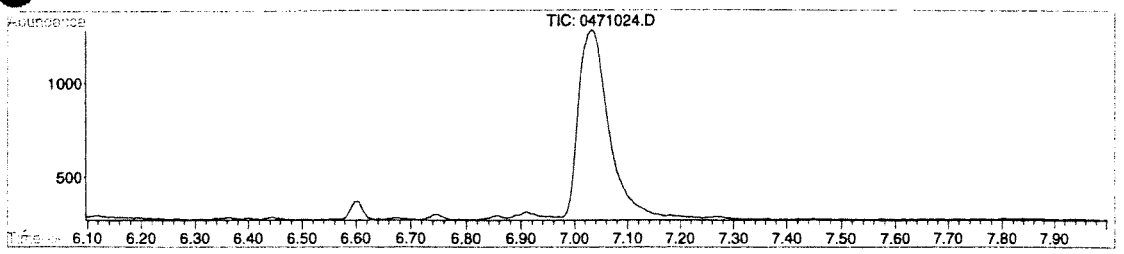
Compound #	Compound Name	Retention Time (Min.)	Ion	Peak Area	M*	Peak Area Ratio
1)	MVL	7.02	131	2396		165.9E-2
2)	MVL-d4	7.04	135	1444		

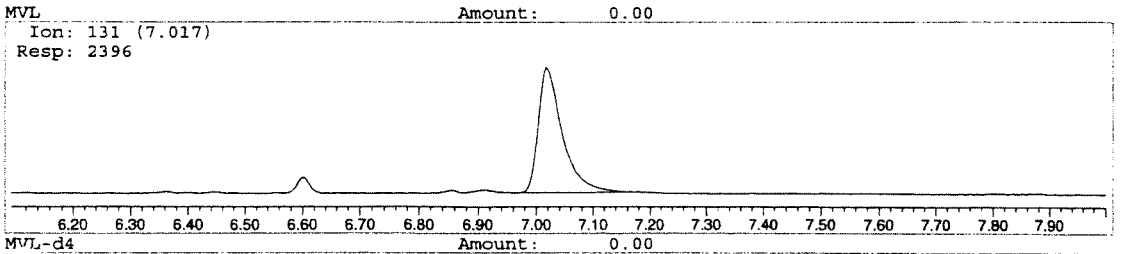
M* = The letter "m" in this column indicates that manual integration was performed on that compound.

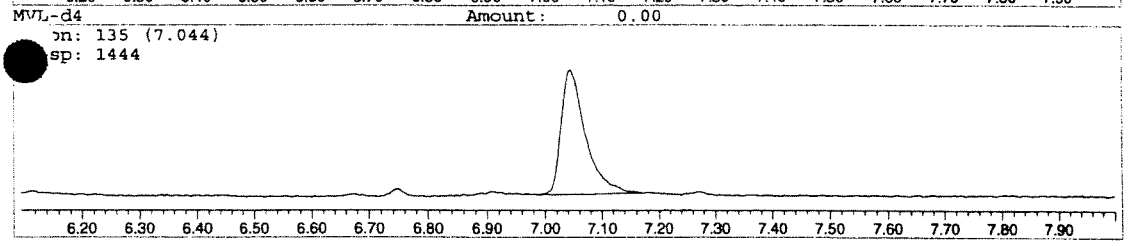
Quantitation Report (QT Reviewed)

Data File : D:\MSD DATA\PAB\PABX-BBA\1-047-1\0471024.D Vial: 24
Acq On : 3 Jan 2001 18:08 Operator:
Sample : 2 X STD 7 Inst : MS7
Misc :

Integration Params: RTEINT.P
Quant Method : D:\HPCHEM\1\METHODS\PABX_BBA.M (RTE Integrator)







3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Study Title

Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) in the Mevalonic Acid/Cholesterol Challenge and NOEL Investigation Study in Rats

Analytical Laboratory Report Title

Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) Fluorochemical in Rat Sera Samples

Data Requirement

Not Applicable

Author

3M Environmental Laboratory

Study Completion Date

July 06, 2001

Performing Laboratories

Sera Analyses

3M Environmental Laboratory
Building 2-3E-09, 935 Bush Avenue
St. Paul, MN 55106

Sera Extractions

Pace Analytical Services, Inc.—Tier2
1700 Elm Street SE, Suite 100
Minneapolis, MN 55414

Project Identification

3M Medical Department Study: T-6295.25
Argus In-Life Study: 418-018
Analytical Report: FACT TOX-169
3M Laboratory Request No. E01-0180

Total Number of Pages

68

3M Medical Department Study: T-6295.25

Analytical Report: FACT TOX-169
LRN-E01-0180

This page has been reserved for specific country requirements.

3M Environmental Laboratory

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3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

GLP Compliance Statement

Analytical Laboratory Report Title: Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) Fluorochemical in Rat Sera Samples

Study Identification Numbers: T-6295.25, FACT TOX-169, LRN-E01-0180

This study was conducted in compliance with United States Food and Drug Administration (FDA) Good Laboratory Practice (GLP) Regulations 21 CFR Part 58, with the exceptions in the bulleted list below.

Exceptions to GLP compliance:

- There were two study directors for this study; one for the in-life phase and one for the analytical phase. The in-life study phase was considered to end at the generation and shipment of specimens. The analytical study phase was considered to start at the receipt of these specimens for analysis. Since the technical performance of each phase was entirely separate, no effect is expected from this exception.
- Automated data collection systems have not been validated as required according to 21 CFR 58.130(c). The hard copy printout is considered the raw data.
- The stability of the reference standard and internal standard were not determined.

Deanna J. Luebker, M.S., *Study Director* — Date 6/6/01

Marvin T. Case, D.V.M., Ph.D., *Sponsor Representative* — Date 6 June 2001

Kristen J. Hansen, Ph.D., *Principal Analytical Investigator* — Date June 6, 2001

William K. Reagen, Ph.D., *Laboratory Manager* — Date 06/05/01

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3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

GLP Study—Quality Assurance Statement

Analytical Laboratory Report Title: Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) Fluorochemical in Rat Sera Samples

Study Identification Numbers: T-6295.25, FACT TOX-169, LRN-E01-0180

This study has been inspected by the 3M Environmental Laboratory Quality Assurance Unit (QAU) as indicated in the following table. The findings were reported to the study director and laboratory management.

Inspection Dates	Phase	Date Reported to	
		Management	Study Director
2/14/01	In-phase	2/16/01	2/16/01
2/28/01	In-phase	2/28/01	2/28/01
3/12/01–3/13/01	Data	3/14/01	3/14/01
4/20/01, 4/23/01–4/24/01	Data	4/24/01	4/24/01
5/22/01–5/24/01	Draft report	5/24/01	5/24/01

Ken Litt 6-11-01

QAU Representative Date

3M Environmental Laboratory *Page 4*

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

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Analytical Report: FACT TOX-169
LRN-E01-0180

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3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Study Personnel and Contributors

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Marvin T. Case, D.V.M., Ph.D., *Sponsor Representative*

Analytical Chemistry Laboratories

Sera Analyses
3M Environmental Laboratory (3M Lab)
Kristen J. Hansen, Ph.D., *Principal Analytical Investigator*

Sera Extractions
Pace Analytical Services, Inc. Tier2 Facility

3M Lab Contributing Personnel

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Rhonda Dick*
Marlene M. Heying*
Harold O. Johnson
Kelly J. (Kuehlwein) Swartout*
Bob W. Wynne*

*Contract lab professional service employees

Location of Archives

All original raw data, protocol, and analytical report have been archived at the 3M Environmental Laboratory. The test article and analytical reference standard reserve samples, as well as the specimens pertaining to the analytical phase of this study are archived at the 3M Environmental Laboratory. Reserve samples of the control article and vehicle components are stored at the testing facility (Argus).

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Introduction and Purpose

The purpose of the study is to determine the presence and concentration of perfluorooctanesulfonate (PFOS) in rat sera samples taken in accordance with the 3M protocol, "Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) in the Mevalonic Acid/Cholesterol Challenge and NOEL Investigation Study in Rats." Female F0 generation rats were given PFOS by oral gavage and maternal and offspring serum samples were collected for analysis at specified intervals. The intent of the study was to determine the maternal and fetal effect of the co-administration of mevalonic acid or cholesterol given with PFOS doses, as well as to better define the PFOS 'no observed effect level' (NOEL). This study was initiated 31 January 2001.

Test System

Thirteen groups of female rats were used as the test system. Group 1, Group 2 and Group 5 were control groups that were given either Tween 80, mevalonic acid, or cholesterol only. Groups 3, 4, and 6 —13 were administered PFOS doses in 0.5% Tween 80 (test article), either alone or in combination with mevalonic acid or cholesterol. Female rats were given the test article beginning 42 days prior to cohabitation, and continuing through day 20 of presumed gestation (Caesarean section group), day 24 of presumed gestation (rats assigned to natural delivery that do not deliver a litter) or day 4 postpartum (rats that deliver a litter).

The test system species and strain selected was the Crl:CD®(SD) IGS BR VAF/Plus® rat received from Charles River Laboratories, Inc., permanently identified using a Monel® self-piercing ear tag. Only F0 generation rats were identified with ear tags. F1 generation rats were identified and evaluated as part of litters, but were not individually tagged, and all parameters were evaluated in terms of the litter (see Table 1).

Table 1. Female Rat F0 Population Demographics for Study (Argus 418-018)

Dosage Groups	Population Selected for Study	Dosage
Vehicle Control Group 1	28	0.5% Tween 80
Mevalonic Acid Control Group 2	28	mevalonic acid
Group 3	28	1.6 mg/kg PFOS + mevalonic acid
Group 4	28	2 mg/kg PFOS + mevalonic acid
Cholesterol Control Group 5	28	cholesterol
Group 6	28	1.6 mg/kg PFOS + cholesterol
Group 7	28	2 mg/kg PFOS + cholesterol
Group 8	20	0.4 mg/kg PFOS
Group 9	20	0.8 mg/kg PFOS
Group 10	20	1 mg/kg PFOS
Group 11	20	1.2 mg/kg PFOS
Group 12	28	1.6 mg/kg PFOS
Group 13	28	2 mg/kg PFOS

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LRN-E01-0180

Specimen Collection and Analysis

In the analytical study reported here, 235 sera specimens collected from female F0 rats and F1 pooled rat litters were sent to the 3M Environmental Laboratory and analyzed for PFOS. The number of sera specimens collected for analyses in the analytical phase of this study are presented below.

Specimens Collected from Study Groups 1 through 13:
Sera Specimens—54 specimens (F0 Females, GD21, Caesarean section)
Sera Specimens—54 specimens (F1 pooled litter, GD21, Caesarean section)
Sera Specimens—78 specimens (F0 females, day 5 of lactation, natural delivery)
Sera Specimens—49 specimens (F1 pooled litter, day 5 of lactation, natural delivery)

Blood specimens were centrifuged. Serum was then harvested and shipped to the 3M Environmental Laboratory frozen and on dry ice.

Sera samples were extracted beginning on 05 February 2001 using an ion pairing reagent and methyl-*tert*-butyl ether (MtBE). Sample extracts were analyzed using high-pressure liquid chromatography-electrospray/tandem mass spectrometry (HPLC-ESMSMS) in the multiple response monitoring mode. PFOS levels were quantitated by external calibration versus an extracted curve. Analytical details are included in this report.

Specimen Receipt and Maintenance

The 3M Environmental Laboratory received rat serum specimens collected at Argus Research Labs. All specimens were received frozen in good condition on dry ice and were immediately transferred to storage at -20°C ±10°C. Specimens were transported to Pace Tier2 frozen on ice packs. After extraction at Tier2, the specimens and the extracts were returned cold on ice packs.

Control matrices used in sera analyses performed during TOX-169 were obtained from commercial sources and are presented in Appendix A (see Table 5). Samples analyzed at the 3M Environmental Laboratory will be maintained for a period of 10 years and will be stored at the laboratory at -20°C ±10°C.

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LRN-E01-0180

Chemical Characterization of the Reference Standard

Potassium
Perfluorooctanesulfonate
(KPFOS)
CAS Number: 2795-39-3

Chemical Formula: $C_8F_{17}SO_3^-K^+$ Molecular Weight: 537.9

Chemical characterization information on the reference substance potassium perfluorooctanesulfonate used in this study is presented in tabular form below.

Table 2. Characterization of the Analytical Reference Substance in Study FACT TOX-169

	Reference Substances	
Chemical Name	KPFOS (Potassium Perfluorooctanesulfonate)*	THPFOS (Tetrahydroperfluorooctanesulfonic acid) TCF00017-055
Source	3M Corporate Toxicology, Medical Department	SynQuest Labs
Expiration Date	8/31/01	2005
Storage Conditions	Frozen ≤ -10°C	-20°C
Chemical Lot Number	217	Q75-91
Physical Description	White crystalline powder	White powder
Purity	86.9%	TBD*

*Target analyte is PFOS, $C_8F_{17}SO_3^-$
TBD—To be determined

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Method Summaries

Following is a brief description of the methods used during this analytical study by the 3M Environmental Laboratory. Detailed descriptions of the methods used in this study are located in Appendix C.

3M Environmental Laboratory

PREPARATORY METHOD

- **ETS-8-4.2,** "Extraction of Fluorochemical Compounds from Serum for Analysis using HPLC-Electrospray/Mass Spectrometry"

  Analytical serum samples were extracted using an ion-pairing extraction procedure. An ion-pairing reagent was added to a laboratory sample and the analyte-ion pair was partitioned into MtBE. The MtBE extract was then removed and put onto a nitrogen evaporator until dry. Each extracted laboratory sample was reconstituted in 1.0 mL of methanol and filtered through a 3 mL plastic syringe attached to a 0.2 µm nylon filter into glass autovials.

ANALYTICAL METHOD

- **ETS-8-5.2,** "Analysis of Potassium Perfluorooctane-sulfonate or other Fluorochemicals in Serum Extracts Using HPLC-Electrospray/Mass Spectrometry"

  The analyses were performed by monitoring one product ion selected from a single primary ion characteristic of a particular fluorochemical using HPLC-ESMSMS. For example, molecular ion 499, selected as the primary ion for PFOS ($C_8F_{17}SO_3$-) analysis, was fragmented to produce ion 99 (FSO_3-). The characteristic ion 99 was monitored for quantitative analysis.

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

ANALYTICAL EQUIPMENT

The following is representative of the settings used during the analytical phase of this study.

Liquid Chromatograph: Hewlett-Packard® Series 1100 Liquid Chromatograph system
Analytical column: Keystone® Betasil™ C_{18} 2x50 mm (5 µm)
Column temperature: Ambient
Mobile phase components:
Component A: 2mM ammonium acetate
Component B: methanol
Flow rate: 300 µL/min
Injection volume: 10 µL
Solvent Gradient: 10.0 minutes

Time (minutes)	*%B*
0.0	10%
1.0	10%
5.5	95%
7.5	95%
8.0	10%

Mass Spectrometer: Micromass® API/Mass Spectrometer Quattro II™ Triple Quadrupole system
Software: Mass Lynx™ 3.4
Cone Voltage: 60 V
Collision Gas Energy: 40–45 eV
Mode: Electrospray Negative
Source Block Temperature: 150°C ±10°C
Electrode: Z-spray
Analysis Type: Multiple Reaction Monitoring (MRM)

Table 3. Target Ions Monitored in 3M Laboratory Analyses

Target Analyte	Primary Ion (AMU)	Product Ion (AMU)
PFOS	499.0	99.0
THPFOS	427.0	80.0

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LRN-E01-0180

Deviations

Deviations from the original protocol and methods are included in the Appendix B.

Data Quality Objectives and Data Integrity

The following data quality objectives (DQOs) were indicated in the protocol for this study:

- **Linearity:** The coefficient of determination (r^2) equal to or greater than 0.990 using 1/x weighting.
- **Limits of Quantitation (LOQ):** The LOQ is equal to the lowest acceptable standard in the calibration curve, defined as the lowest standard that is both two times the matrix blank and is calculated within ±30% of the expected concentration.
- **Acceptable Precision:** Quality control samples are required to meet 25% precision standards, provided they are quantitated within the selected calibration range.
- **Confirmatory Methods:** If a confirmatory method is used, an amendment to this protocol should be written.
- **Demonstration of Specificity:** PFOS identification will be substantiated by chromatographic retention time (approximately 7.3 minutes), by the characteristic primary ion (499) and the characteristic product ion (99).

Data Summary, Analyses, and Results

Data quality objectives for the analytical phase of this study outlined in the 3M Environmental Laboratory protocol for FACT TOX-169 (see Appendix B) were met with the exceptions noted in this report.

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LRN-E01-0180

Summary of Quality Control Analyses Results

- **Linearity:** The coefficient of determination (r^2) of the standard curve was ≥0.990.
- **Calibration Standards:** Quantitation of the target analytes was based on linear regression analysis (1/x weighted) of an extracted rat sera matrix curve run prior to each group of samples. High or low points on the curve may have been deactivated to provide a better linear fit over the curve range most appropriate to the data. Low curve points with peak areas less than two times that of the extraction blanks were deactivated to disqualify a data range that may have been significantly affected by background levels of the analyte. Occasionally, a single mid-range curve point that was an obvious outlier may have been deactivated. Quantitation of each analyte was based on the response of one specific product ion using the multiple response-monitoring mode of the instrument (see Appendix C, Analytical Methods).
- **Limits of Quantitation (LOQ):** The LOQ is equal to the lowest acceptable standard in the calibration curve (defined as the lowest valid standard within ±30% of the theoretical value), and is at least two times the analyte peak area detected in the matrix blanks. (See below.)

Table 4. Determinations of the LOQ in the Analyses of PFOS Extracts

Analyte	Method LOQ
PFOS	0.00494 µg /mL

- **Blanks:** All blanks were below the lower limit of quantitation for the compounds of interest.
- **Precision:** Precision was determined by analysis of extracted calibration check standards, which were reproducible to within ±25% over the valid linear range.
- **Instrument Precision:** Instrumental precision was determined by replicate (n=7) injections of a single serum extract. Peak area was reproducible to within 2%.
- **Internal Standards:** The internal standard (THPFOS) was added to all samples and standards. THPFOS was not used for quantitation, but was used to monitor for gross instrument failure. The surrogate response of each analytical run was verified to determine that it did not vary more than ±50% from the mean within each analytical run. Samples with deviant internal standard response were confirmed by reanalysis and are marked in the table of results.

Statement of Data Quality

It is not possible to verify true recovery of endogenous analyte from tissues without radio-labeled reference material. The only measurement of accuracy available at this time, extracted calibration curves and multi-level continuing calibration verifications (CCVs), indicate that the sera data are quantitative to ±25% or greater.

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Summary of Sample Results

PFOS results have been corrected for purity of the analytical reference material.

- **Samples from Control Animals:** Low levels of PFOS were often detected in the sera of the control animals. These levels were significantly lower than those found in the low dose test animals.
- **Samples from Dosed Animals:** In general, PFOS levels found in the sera of the test animals increased with dose level. Detailed sample data tables are presented in Appendices D and E.

Statistical Methods and Calculations

Statistical methods were limited to the calculation of means and standard deviations. See Appendix F for example calculations used to generate the serum sample data in FACT TOX-169.

Statement of Conclusion

Under the conditions of the present studies, the fluorochemical PFOS was observed in the sera of all F0 generation rats dosed with the test article and in all F1 generation rats from F0 dosed rats.

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3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Appendix A: Control Matrices and Test Article

Table 5. Characterization of the Control Matrices Used for Sera Analyses in Study FACT TOX-169

Control Matrix	Rat Serum	Rat Serum	Rat Serum	Rat Serum
Source	Sigma Chemicals	Sigma Chemicals	Sigma Chemicals	Sigma Chemicals
TCR #	99062-9	99062-31	99131-9	99131-11
Expiration Date	01/01/2010	01/01/2010	01/01/2010	01/01/2010
Storage Conditions	Frozen -20°C	Frozen -20°C	Frozen -20°C	Frozen -20°C
Chemical Lot #	17H9306	17H9306	19H89291	19H89291
Physical Description	Rat Serum	Rat Serum	Rat Serum	Rat Serum

Table 6. Characterization of the Test Article in Study FACT TOX-169

Location	3M Laboratory
Test Article	Potassium Perfluorooctanesulfonate
Source	3M Corporate Toxicology, Medical Department
Expiration Date	8/31/01
Storage Conditions	Frozen ≤ -10°C
Chemical Lot Number	217
Physical Description	White crystalline powder
Purity	86.9%

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LRN-E01-0180

Appendix B: Protocol and Deviations

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3M Medical Department Study: T-6295.25
3M Environmental Technology and Services
PO Box 33331
St. Paul, MN 55133-3331
612 778 6442

3M

Phase Title

Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) in the Mevalonic Acid/Cholesterol Challenge and NOEL Investigation Study in Rats

PHASE PROTOCOL

Performing Laboratories

3M Environmental Technology & Safety Services
3M Environmental Laboratory
935 Bush Avenue
St. Paul, MN 55106

Pace Analytical Services, Inc.
1700 Elm Street SE, Suite 100
Minneapolis, MN 55414

Laboratory Project Identification

FACT-TOX Number TOX-169
3M Toxicology Study Number T6295.25
Argus In-life Study Number 418-018

Study Identification

Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) in the Mevalonic Acid/Cholesterol Challenge and NOEL Investigation Study in Rats

Sponsor	3M Corporate Toxicology 3M Medical Department Building 220-2E-02 St. Paul, MN 55144
Sponsor Representative	Marvin T. Case D.V.M., Ph.D. 3M Corporate Toxicology 3M Medical Department Building 220-2E-02 St. Paul, MN 55144 Telephone: (651) 733-5180
Study Director	Deanna J. Luebker M.S. 3M Corporate Toxicology 3M Medical Department Building 220-2E-02 St. Paul, MN 55144 Telephone: (651) 737-1374
Phase Locations	
Principal Analytical Investigator (PAI)	Kristen J. Hansen, Ph.D.
Analytical Testing Laboratories	3M Environmental Laboratory Building 2-3E-09 935 Bush Avenue St. Paul, MN55106 Pace Analytical Services, Inc. 1700 Elm Street SE, Suite 100 Minneapolis, MN 55414
Proposed Phase Timetable	
Analyses Start Date	January 20, 2001
Analyses Termination Date	February 28, 2001

1. STUDY

Determination of the Presence and Concentration of Perfluorooctanesulfonate (PFOS) in the Mevalonic Acid/Cholesterol Challenge and NOEL Investigation Study in Rats

2. PURPOSE

The analytical phase of this study is designed to evaluate levels of PFOS in sera specimens of F0 generation female rats exposed and F1 generation rat pups potentially exposed to PFOS in Argus In-life Study 418-018. All sera samples will be extracted at Pace Analytical Services Inc. Tier II facility. All sera samples will be analyzed at the 3M Environmental Laboratory. Data quality objectives for this study are indicated in section 12.

3. REGULATORY COMPLIANCE

This study will be conducted in accordance the United States Food and Drug Administration Good Laboratory Practice Regulations for Non-clinical Laboratory Studies, Final Rule 21 CFR Part 58.

4. QUALITY ASSURANCE

The 3M Environmental Laboratory Quality Assurance Unit will audit the study conduct, raw data, and final report to determine compliance with Good Laboratory Practice Regulations, this protocol, and 3M Environmental Laboratory Standard Operating Procedures.

5. REFERENCE STANDARD FOR FACT-TOX-169

Potassium Perfluorooctanesulfonate (KPFOS), $C_8F_{17}SO_3K$, CAS 2795-39-3

6. TEST SYSTEM

Thirteen dose groups of female rats were given the test article by oral (gavage) route. Within each group, one blood sample was collected from six female F0 on day 21 of gestation (at Caesarean sectioning), from six female F0 on day 5 of lactation (after natural delivery), from six F1 pooled litters on day 21 of gestation (at Caesarean sectioning), and from six F1 pooled litters from day 5 of lactation (after natural delivery). There are 312 sera specimens sent to the 3M Environmental Laboratory. See following table for a description of all samples received.

Number of Specimens per Dosage group and Dosage Levels

Dosage Group and Level		F0 Rats from Caesarean Section Day 21	F1 Rat Pups from Caesarean Section Day 21	F0 Rats from Lactation Day 5	F1 Rat Pups from Lactation Day 5
1	Vehicle Control	6	6	6	6
2	Mevalonic Acid Control	6	6	6	6
3	1.6 mg/kg PFOS + Mevalonic Acid	6	6	6	6
4	2.0 mg/kg PFOS + Mevalonic Acid	6	6	6	6
5	Cholesterol Control	6	6	6	6
6	1.6 mg/kg PFOS + Cholesterol	6	6	6	6
7	2.0 mg/kg PFOS + Cholesterol	6	6	6	6
8	0.4 mg/kg PFOS	6	6	6	6
9	0.8 mg/kg PFOS	6	6	6	6
10	1.0 mg/kg PFOS	6	6	6	6
11	1.2 mg/kg PFOS	6	6	6	6
12	1.6 mg/kg PFOS	6	6	6	6
13	2.0 mg/kg PFOS	6	6	6	6

7. *SPECIMEN RECEIPT*

Sera specimens will be received from Argus Research Laboratories, Inc. at the end of the in-life phase on January 2001 (estimated). Sera specimens were shipped by overnight courier and were received frozen on dry ice. Specimens were identified with sample numbers (lab request numbers or numbers assigned by Argus Research Laboratories, Inc.) upon receipt, registered with the 3M Environmental Laboratory and transferred to a freezer for storage. All specimens sent to the 3M Environmental Laboratory were received and tracked according to the Sample Tracking System Standard Operating Procedure. Details of specimen inspection for damage, receipt, storage, identification, chain of custody protocols, and data will be presented in the phase report.

8. *PREPARATORY METHODS*

ETS-8-4, "Extraction of Potassium Perfluorooctanesulfonate or other Fluorochemicals Compounds from Serum for analysis using HPLC-Electrospray/Mass Spectrometry"

Analytical samples are extracted using an ion-pairing extraction procedure. An ion-pairing reagent is added to a laboratory sample and the analyte ion pair is partitioned into MtBE. The MtBE extract is then removed and put onto a nitrogen evaporator until dry. Each extracted laboratory sample is reconstituted in 1.0 mL of methanol and filtered through a 3 cm^3 plastic syringe attached to a 0.2 µm nylon filter into glass autovials.

9. ANALYTICAL METHODS

ETS-8-5, "Analysis of Potassium Perfluorooctanesulfonate or other Fluorochemicals in Serum Extracts using HPLC-Electrospray/Mass Spectrometry"

Analysis is performed by monitoring one or more product ions selected from a single primary ion characteristic of a particular fluorochemical using HPLC-ESMSMS. For example, molecular ion 499, selected as the primary ion for PFOS ($C_8F_{17}SO_3$-) analysis, is fragmented further to produce ion 99 (FSO_3-). The characteristic ion 99 is monitored for quantitative analysis.

Minor modifications to the preparatory and analytical methods may be implemented at the discretion of the PAI.

10. DATA QUALITY OBJECTIVES

10.1 Linearity

The coefficient of determination (r^2) of the standard curve must be equal to or greater than 0.990 using 1/x weighting.

10.2 Limits of Quantitation (LOQ)

The LOQ will be equal to the lowest acceptable standard in the calibration curve, defined as the lowest standard that is both 2 times the matrix blank and is calculated within ± 30% of the expected concentration.

10.3 Acceptable Precision

Quality control samples are required to meet ± 25% precision, provided they are quantitated within the selected calibration range.

10.4 Use of Confirmatory Methods

If a confirmatory method is used, an amendment to this protocol will be written.

10.5 Demonstration of Specificity, etc.

PFOS identification will be substantiated by chromatographic retention time (approximately 7.3 minutes), by the characteristic primary ion (499) and the characteristic product ion (99).

Minor modifications to the Data Quality Objectives may be implemented at the discretion of the PAI.

11. SUB-CONTRACTED ANALYSIS

Pace Analytical Services, Inc. (Tier II Facility) will be performing the extraction of serum specimens for analyses. All extracted samples will be shipped to the 3M Environmental Laboratory for analysis. Pace Analytical Services, Inc. will follow all applicable 3M Environmental Laboratory Standard Operating Procedures and the following Pace Analytical Inc. Standard Operating Procedures.

PSS-Admin-01	Quality System
PSS-DC-05	Lab Notebooks, Logbooks, and Phone Logs
PSS-OPS-01	Use and Maintenance of Ultra-Turrax T25 Homogenizer
PSS-OPS-02	Raw Data
PSS-OPS-03	Hazardous Waste Disposal
PSS-OPS-04	Use and Maintenance of N-Evap Analytical Evaporator
PSS-OPS-05	Use of Compressed Gases in the Laboratory
PSS-OPS-06	Use and Maintenance of NANOpure II Water Purification System
PSS-OPS-07	Cleaning Non-disposable Volumetric Pipettes
PSS-OPS-08	Laboratory Calculations
PSS-OPS-13	Use and Maintenance of Lab Refrigerators, Freezers, and Ovens
PSS-OPS-15	Glassware Cleaning
PSS-OPS-16	Use and Maintenance of the Fisher Scientific Isotemp Freezer
PSS-OPS-31	Use and Maintenance of Shakers
PSS-OPS-32	Operation, Maintenance and Calibration of Laboratory
ETS-9-40	Operation and Maintenance of Shakers and Vortex Mixers (3M SOP)
PSS-OPS-37	Operation, Maintenance, and Calibration of pH Meters and pH Electrodes
PSS-MTR-01	Calibration of Certified Weight Set
PSS-MTR-02	Calibration of Certified Thermometers/Thermocouples
PSS-MTR-06	Verification of Calibration of the Eppendorf Pipettor
PSS-MTR-08	Verification of Calibration and Use of Analytical Balances
PSS-MC-01	Purchasing of Laboratory Supplies
PSS-ARC-02	Disposition of Archive Materials
PSS-DM-03	Statistical Evaluation of Data

12. STATISTICAL ANALYSIS

Statistical methods will be limited to the calculation of means and standard deviations. Examples of the calculations used in the analyses will be included in the phase report.

13. REPORT

A report of the analyte results will be prepared by 3M Environmental Laboratory. The report will include, but not be limited to, the following, when applicable:

13.1 Name and address of the facility performing the phase.

13.2 Dates upon which the phase was initiated and completed.

13.3 A statement of compliance by the PAI addressing any exceptions to Good Laboratory Practice Standards.

13.4 Objectives and procedures as stated in the approved phase protocol, including any amendments to the original phase protocol.

13.5 Identity, purity, stability and the solubility of the reference standard under the conditions of administration.

13.6 A description of the methods used to conduct the test(s).

13.7 A description of the specimens.

13.8 A description of any circumstances that may have affected the quality or the integrity of the data.

13.9 The name of the PAI and the names of other scientists, professionals, and supervisory personnel involved in the phase.

13.10 A description of the transformations, calculations, or operations performed on the data, a summary and analysis of the analytical chemistry data, and a statement of the conclusions drawn from the analyses.

13.11 Statistical methods used to evaluate the data, if applicable.

13.12 The signed and dated reports of each of the individual scientists or other professionals involved in the phase, if applicable.

13.13 The location where raw data and the phase report are to be stored.

13.14 A statement prepared by the Quality Assurance Unit listing the dates that study inspections and audits were made and the dates of any findings reported to the Study Director and Management.

13.15 If it is necessary to make corrections or additions to a final report after it has been accepted, the changes will be made in the form of an amendment issued by the Study Director. The amendment will clearly identify the part of the final report that is being amended, the reasons for the amendment, and will be signed by the Study Director.

14. LOCATION OF RAW DATA, RECORDS, AND FINAL REPORT

Original data or copies thereof, will be available at 3M Environmental Laboratory to facilitate audits of the study during its progress and before acceptance of the phase report. When the phase report is completed, all original paper data, including those items listed below will be retained in the archives of 3M Environmental Laboratory. All corresponding training records, calibration records, instrument maintenance logs, standard operating procedures, equipment procedures, and methods will be retained in the archives of the 3M Environmental Laboratory.

14.1 The following raw data and records will be retained in the study folder in the archives according to 3M Environmental Laboratory Standard Operating Procedures.

- ***14.1.1*** Approved protocol and amendments
- ***14.1.2*** Study correspondence
- ***14.1.3*** Shipping records
- ***14.1.4*** Raw data
- ***14.1.5*** Approved final report (original signed copy)
- ***14.1.6*** Electronic copies of data

14.2 The following supporting records will be retained separately from the study folder in the archives according to 3M Environmental Laboratory Standard Operating Procedures:

14.2.1 Training records
14.2.2 Calibration records
14.2.3 Instrument maintenance logs
14.2.4 Standard Operating Procedures, Equipment Procedures, and Methods

15. DATA / SAMPLE RETENTION

All sera specimens remaining after the analytical phase is completed will be sent to and maintained by:

Dave Ehresman
3M Corporate Toxicology
3M Center Bldg 236-0C-148
St. Paul, MN 55144
Telephone (651) 733-5070
Fax (651) 737-4754

16. PROTOCOL AMENDMENTS AND DEVIATIONS

Planned changes to the protocol will be in the form of written amendments signed by the Study Director and the Sponsor's Representative. Amendments will be considered as part of the protocol and will be attached to the final protocol. All changes to the protocol will be indicated in the phase report. Any other changes will be in the form of written deviations, signed by the Study Director and filed with the raw data.

17. ATTACHMENTS

17.1 Attachment A:

Material Safety Data Sheets (MSDS) for Reference Standard

18. SIGNATURES

Marvin T Case — 31 Jan 2001
Marvin T. Case, D.V.M., Ph.D., Sponsor Representative — Date

Deanna J. Luebker — 1/31/01
Deanna J. Luebker, M.S., Study Director — Date

Kristen Hansen — 01/29/01
Kristen J. Hansen, Ph.D., Principal Analytical Investigator — Date

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Record of Deviation

I. Identification

Study / Project No.
FACT-TOX-169, Lims # E01-0180, Argus 418-018

Deviation Type (Check one): ☐ SOP ☐ Method ☐ Equipment Procedure X Protocol ☐ Other:

Document Number	Date(s) of occurrence
FACT-TOX-169	02/01/01

II. Description:

Required Procedure/process:
The protocol states that 312 specimens will be received at the Environmental Laboratory.

Actual Procedure/process:
235 specimens were received at the Environmental Laboratory.

III. Actions Taken:

(such as amendment issued, SOP revision, etc.)

This deviation was written.

Recorded By: Lisa A Clemer — Date: 05/24/01

IV. Impact on Study / Project

No adverse impact on the outcome of this study.

Kjh 05/24/01

Authorized By *(Study Director / Project Lead)*: Deanna J Luebker — Date: 5/29/01

Study Director: Deanna Luebker
Sponsor Representative: Marvin Case Marvin T Case 31 May 2001

3M Environmental Laboratory
Form ETS-4-8.0

Deviation No. ____1____
(assigned by Study Director or Project Lead at the end of study or project)

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Record of Deviation

I. Identification

Study / Project No.
FACT-TOX-169, Lims # E01-0180, Argus 418-018

Deviation Type (*Check one*): ☐ SOP ■ Method ☐ Equipment Procedure ☐ Protocol ☐ Other:

Document Number	Date(s) of occurrence
ETS-8-4.2	2/15/01 – 2/21/01

II. Description:

Required Procedure/process:

1) Section 10.1.2 and 10.1.3.2 Prepare two water blanks and two matrix blanks for each study.
2) Section 11.1.4 Prepare and spike one standard curve for each study.
3) Section 11.1.2 Do not extract less than 0.5mL of matrix.
4) Section 11.1.2 If most sample volumes are less than 1.0 mL, extract standards with matrix volumes equal to the sample volumes.

Actual Procedure/process:

1) Six water blanks and six method blanks were added due to the large number of samples.
2) Four extracted curves were prepared - three with initial and final volumes of 0.5 mL and one with initial and final volumes of 1.0 mL.
3) Many samples were extracted with an initial volume less than 0.5 mL. Refer to the attached Sample volume/weight sheet for initial volume information.
4) For most samples, <0.5 mL of sera was available. However, curves were not prepared with an initial or final volume under 0.5 mL.

III. Actions Taken:

(such as amendment issued, SOP revision, etc.)

This deviation was written.

Recorded By	Date
Kelly Swartout Kelly Swartout	02/21/01 2/22/01

IV. Impact on Study / Project

1 & 2) Additional QC is an improvement and will not adversely affect this study.
3) Because the method is not characterized for volumes <0.5 mL, samples with initial volumes less than 0.5 mL will be flagged in the data.
4) This course of action was taken because the method has not been characterized for extractions <0.5mL. Robustness of the curves will not be adversely affected.

kjh 02/22/01

Authorized By *(Study Director / Project Lead)*	Date

3M Environmental Laboratory
Form ETS-4-8.0

Deviation No. 2
(assigned by Study Director or Project Lead at the end of study or project)

Study Director: Kris Deanna Luebker (Reviewed) 02/22/01 Deanna Luebker 2/27/01

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Record of Deviation

I. Identification

Study / Project No. TOX 169

Deviation Type (Check one): ☐ SOP ☒ Method ☐ Equipment Procedure ☐ Protocol ☐ Other:

Document Number	Date(s) of occurrence
ETS 8-5.2	3-30-01

II. Description:

Required Procedure/process:

According to 14.3.7, a calibration curve must contain at least five active points. In 14.3, if there is to be 2 linear ranges to the curve there must not be more than 1 point in common between them.

Actual Procedure/process:

To give rats a higher linear range curve to accomodate sample 11031 F, the curve contained 4 points, two of which were in common with the lower linear range curve.

III. Actions Taken:

(such as amendment issued, SOP revision, etc.)

Deviation was written. It is noted on the DRS form that higher linear range curve will only be used for 11031 F.

Recorded By: Marlene Date: 4-2-01

IV. Impact on Study / Project

No adverse effects. kjn 04/02/01

Authorized By *(Study Director / Project Lead)* Date

Sponsor Representative: Marv Case
3M Environmental Laboratory
Marvin T Case 9 April 2001

Study Director: Deanna Luebker Deanna Luebker 4/4/01

Deviation No. 3
(assigned by Study Director or Project Lead at the end of study or project)

Form ETS-4-8.0

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Appendix C: Extraction and Analytical Methods

This appendix includes the following methods:

ETS-8-4.2, Extraction of Fluorochemical Compounds from Serum for Analysis Using HPLC-Electrospray/Mass Spectrometry, (15 pages)

ETS-8-5.2, Analysis of Potassium Perfluorooctanesulfonate or Other Fluorochemicals in Serum Extracts Using HPLC-Electrospray/Mass Spectrometry, (11 pages)

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

3M ENVIRONMENTAL LABORATORY

METHOD

EXTRACTION OF FLUOROCHEMICAL COMPOUNDS FROM SERUM FOR ANALYSIS USING HPLC-ELECTROSPRAY/MASS SPECTROMETRY

Method Number: ETS-8-4.2

Adoption Date: 03/01/99

Effective Date: 2/2/01

Approved By:

02/02/01
Laboratory Manager — Date

02/02/01
Group Leader — Date

1.0 SCOPE AND APPLICATION

1.1 **Scope:** This method is for the extraction of fluorochemical compounds from serum.

1.2 **Applicable compounds:** Fluorochemical surfactants or other fluorinated compounds.

1.3 **Matrices:** Rabbit, rat, bovine, monkey, and human serum or other fluids as designated in the validation report.

Exact Copy of Original
Initial BSD
Date 4/5/01

2.0 SUMMARY OF METHOD

2.1 This performance-based method describes the procedure for extracting perfluorooctane-sulfonate (PFOS) or other fluorochemical surfactants from serum, or other fluids, using an ion pairing reagent and methyl-*tert*-butyl ether (MtBE). An ion pairing reagent is added to the sample and the analyte-ion pair is partitioned into MtBE. The MtBE extract is removed and put onto a nitrogen evaporator until dry. Each extract is reconstituted in 1.0 mL of methanol, then filtered through a 0.2 µm nylon filter using a 3-mL plastic

syringe into glass autovials. (Application of this method to seven fluorochemicals was demonstrated: PFOS, PFOSA, PFOSAA, EtFOSE-OH, PFOSEA, M556, and a surrogate standard {see *3.0* ***Definitions***}).

2.2 These sample extracts are analyzed following method ETS-8-5.2 or other appropriate method.

3.0 Definitions

3.1 PFOS: perfluorooctanesulfonate (anion of potassium salt) $C_8F_{17}SO_3^-$

3.2 PFOSA: perfluorooctane sulfonylamide $C_8F_{17}SO_2NH_2$

3.3 PFOSAA: perfluorooctane sulfonylamido (ethyl)acetate $C_8F_{17}SO_2N(CH_2CH_3)CH_2CO_2^-$

3.4 EtFOSE-OH: 2(N-ethylperfluorooctane sulfonamido)-ethyl alcohol $C_8F_{17}SO_2N(CH_2CH_3)CH_2CH_2OH$

3.5 PFOSEA: perfluorooctane sulfonyl ethylamide $C_8F_{17}SO_2N(CH_2CH_3)H$

3.6 M556: $C_8F_{17}SO_2N(H)(CH_2COOH)$

3.7 Surrogate standard THPFOS: 1H-1H-2H-2H perfluorooctane sulfonic acid

4.0 Warnings and Cautions

4.1 Health and safety warnings

4.1.1 Use universal precautions, especially laboratory coats, goggles, and gloves when handling animal tissue, which may contain pathogens.

5.0 Interferences

5.1 There are no interferences known at this time.

6.0 Equipment

6.1 The following equipment is used while performing this method. Equivalent equipment is acceptable.

6.1.1 Vortex mixer, VWR, Vortex Genie 2

6.1.2 Centrifuge, Mistral 1000 or IEC

6.1.3 Shaker, Eberbach or VWR

6.1.4 Nitrogen evaporator, Organomation

6.1.5 Balance (± 0.100 g)

7.0 Su and Materials

7.1 Gloves

7.2 Eppendorf or disposable pipettes, plastic or glass (or equivalent)

7.3 Polypropylene bottles, capable of holding 250 mL and 1 L (Nalgene or equivalent)

7.4 Volumetric flasks, glass, type A

7.5 40 mL glass vials (I-CHEM or equivalent)

7.6 Centrifuge tubes, polypropylene, 15 mL

7.7 Labels

7.8 Bottle-top Dispenser – 3.0 to 10.0 mL or a 5–10 mL graduated pipette, glass

7.9 Syringes, capable of measuring 5 µL to 50 µL

7.10 Graduated pipettes

7.11 Syringes, disposable plastic, 3 mL (B&D or equivalent)

7.12 Syringe filters, nylon, 0.2 µm, 25 mm

7.13 Timer

7.14 Crimp cap glass autovials and caps

7.15 Crimpers

Note: Prior to using glassware and bottles, rinse 3 times with methanol and 3 times with water. Rinse syringes a minimum of 9 times with methanol, 3 rinses from 3 separate vials.

8.0 Reagents and Standards

8.1 Reagent grade water, Milli-Q™, Nanopure II or equivalent

8.2 Sodium hydroxide (NaOH), J.T Baker or equivalent

8.3 Tetrabutylammonium hydrogen sulfate(TBA), Kodak or equivalent

8.4 Sodium carbonate (Na_2CO_3), J.T. Baker or equivalent

8.5 Sodium bicarbonate ($NaHCO_3$), J.T. Baker or equivalent

8.6 Methyl-T-Butyl Ether, Omnisolv, glass distilled or HPLC grade

8.7 Methanol, Omnisolv, glass distilled or HPLC grade

8.8 Serum or blood, frozen from supplier

8.9 **Fluorochemical standards**

8.9.1 KPFOS (PFOS) (3M Specialty Chemical Division), molecular weight = 538

8.9.2 PFOSA (3M Specialty Chemical Division), molecular weight = 499

8.9.3 PFOSAA+H (PFOSAA) (3M Specialty Chemical Division), molecular weight = 585

8.9.4 EtFOSE-OH (3M Specialty Chemical Division), molecular weight = 570

8.9.5 PFOSEA (3M Specialty Chemical Division), molecular weight = 527

8.9.6 M556 (3M Specialty Chemical Division), molecular weight = 557

8.9.7 Surrogate standard: 4-H, perfluorooctane sulfonic acid (1-H,1-H, 2-H, 2-H $C_8F_{13}SO_3H$, [THPFOS]), molecular weight = 428

8.9.8 Other fluorochemicals, as appropriate

8.10 Reagent preparation

NOTE: When preparing different volumes than listed in reagent, standard, or surrogate preparation, adjust accordingly.

8.10.1 10 N sodium hydroxide (NaOH): Weigh approximately 200 g NaOH. Pour into a 1000 mL beaker containing 500 mL water, mix until all solids are dissolved. Store in a 1 L polypropylene (or equivalent) bottle.

8.10.2 1 N sodium hydroxide (NaOH): Dilute 10 N NaOH 1:10. Measure 10 mL of 10 N NaOH solution into a 100 mL volumetric flask and bring to volume using water. Store in a 125 mL polypropylene (or equivalent) bottle.

8.10.3 0.5 M tetrabutylammonium hydrogen sulfate (TBA): Weigh approximately 169 g of TBA into a 1 L volumetric containing 500 mL water. Adjust to pH 10 using approximately 44 to 54 mL of 10 N NaOH. (Add the last 1.0 mL of NaOH slowly, as the pH changes abruptly.) Dilute to volume with water. Store in a 1 L polypropylene (or equivalent) bottle.

8.10.3.1 TBA requires a check prior to each use to ensure pH = 10. Adjust as needed using 1 N NaOH solution.

8.10.4 0.25 M sodium carbonate/sodium bicarbonate buffer ($Na_2CO_3/NaHCO_3$): Weigh approximately 26.5 g of sodium carbonate (Na_2CO_3) and 21.0 g of sodium bicarbonate ($NaHCO_3$) into a 1 L volumetric flask and bring to volume with water. Store in a 1 L polypropylene (or equivalent) bottle.

8.11 Standards preparation

8.11.1 Prepare PFOS standards for the standard curve.

8.11.2 Prepare other fluorochemical standards, as appropriate. Multicomponent fluorochemical standards are acceptable (for example, one working standard solution containing approximately 1.00 µg/mL of PFOS, PFOSA, PFOSAA, PFOSEA, M556 and EtFOSE-OH).

8.11.3 Weigh approximately 100 mg of PFOS into a 100 mL volumetric flask and record the actual weight. For standards with K^+ or other salts, multiply by a correction factor. For example, the molecular weight of KPFOS = 538, and the molecular weight of PFOS = 499. Calculate the correction factor by using the following equation:

$$\frac{molecular\ wt.\ PFOS\ (499)}{molecular\ wt.\ KPFOS\ (538)} = 0.9275 \quad (Correction\ factor)$$

8.11.4 Bring to volume with methanol for a stock standard of approximately 1000 µg/mL.

8.11.5 Dilute the stock solution with methanol for a working standard 1 solution of approximately 50 µg/mL.

$$\left(\frac{1000\ \mu g/mL \times 5\ mL}{100\ mL}\right) = 50\ \mu g/mL$$

8.11.6 Dilute working standard 1 with methanol for a working standard 2 solution of approx. 5.0 µg/mL.

$$\left(\frac{50\ \mu g/mL \times 10\ mL}{100\ mL}\right) = 5.0\ \mu g/mL$$

8.11.7 Dilute working standard 1 with methanol for a working standard 3 solution of approx. 0.50 µg/mL.

$$\left(\frac{50\ \mu g/mL \times 1.0\ mL}{100\ mL}\right) = 0.500\ \mu g/mL$$

8.12 Surrogate THPFOS stock standard preparation

8.12.1 Weigh approximately 50-60 mg of surrogate standard 1-H,1-H, 2-H, 2-H, $C_8F_{13}SO_3H$ (THPFOS) into a 50 mL volumetric flask and record the actual weight.

8.12.2 Bring to volume with methanol for a surrogate stock of approximately 1000-1200 µg/mL.

8.12.3 Prepare a surrogate working standard. Transfer approximately 1 mL of surrogate stock to a 10 mL volumetric flask and bring to volume with methanol for a working standard of 100 µg/mL. Record the actual volume transferred.

9.0 Sample Handling

9.1 All samples are received frozen and must be kept frozen until the extraction is performed.

9.2 Allow samples to thaw at room temperature or in lukewarm water prior to extraction.

10.0 Quality Control

10.1 Solvent Blanks, Method Blanks and Matrix Blanks

10.1.1 Solvent Blanks: An aliquot of 1.0 mL methanol is used as a solvent blank.

10.1.2 Method Blanks: Following this procedure, extract two 1.0 mL aliquots of water and use as method blanks.

10.1.3 Matrix Blanks: Matrix blanks are prepared from one of three sources: 1) a study control matrix from a study control animal received with each sample set; 2) a commercially obtained sample of the same species as the study animals; or 3) a surrogate matrix, also obtained commercially, but of a different species than the study animal (e.g. if rabbit is used to generate standard curves and CCVs for a monkey or rat sera study). The matrix to use depends on what matrix is used for the curve.

10.1.3.1 Study control matrix curve—If the study control matrix is used for the curve, prepare two (2) matrix blanks using the study control matrix.

10.1.3.2 Commercially obtained (same species) matrix curve—If the curve is prepared using commercially obtained matrix in the same species as the study animal, prepare two matrix blanks using this same commercially available matrix.

10.1.3.3 Surrogate matrix curve—If a surrogate matrix is used for the curve and continuing calibration verification samples:

a) prepare two (2) matrix blanks using the surrogate matrix.

b) Also, prepare a matrix blank with each set of matrix spikes (a set is a matrix spike/matrix spike duplicate at one level) using a commercially available matrix of the same species as the study animals.

10.2 Matrix spikes

10.2.1 Study Control Matrix Curve

No matrix spikes are prepared.

10.2.2 Commercially obtained matrix curve (same species)

No matrix spikes are prepared.

10.2.3 Surrogate matrix curve

Matrix spikes are necessary if matrix is not available in the same species as the study animal and a surrogate matrix is used for the curve and CCV samples (e.g., rabbit sera may be used to generate standard curves for a monkey sera study, due to measurable levels of endogenous analyte in the monkey sera). Prepare and analyze matrix spike and matrix spike duplicate samples to verify the accuracy of the extraction for target analytes.

10.2.4 Prepare each MS and MSD at two (2) levels (usually a low and mid-range concentration) using a sample chosen by the analyst, typically sera from a control group animal received with each sample set.

10.2.4.1 If there is not sufficient sera available from the control group, prepare matrix spikes using commercially available matrix from the same species as the study animal.

10.2.5 Prepare one matrix spike and matrix spike duplicate at each level listed in **10.2.4** per 20 samples, with a minimum of 2 matrix spikes per level per batch. If a batch includes more than 20 samples, additional spikes may be prepared at the same, low, or high range levels.

10.2.6 If more than 25% of the samples are ≤LOQ, two matrix spikes should be prepared at approximately 2–5 times the expected LOQ.

10.2.7 If the majority of the samples are at or above the high range of the curve, additional matrix spikes should be prepared to approximate sample concentrations.

10.3 Continuing calibration verifications (CCVs)

10.3.1 Prepare continuing calibration verification samples for instrument stability verification during analysis. Prepare and analyze CCVs for every assay run, regardless of the matrix type used to prepare the standard curve.

10.3.2 Prepare each continuing calibration verification from the same matrix used to prepare the initial curve (i.e., either the study control matrix, commercial matrix of same species, or surrogate matrix).

10.3.3 The expected concentrations of the CCVs will fall within the range of the initial calibration curve; typically, the low to mid-range of the curve.

10.3.4 Prepare, at a minimum, two continuing calibration verifications, each at a different concentration, per group of 10 samples. For example, if a sample set = 34, eight (8) checks are prepared; four (4) at a low range and four (4) at a mid-range concentration.

10.3.5 Additional continuing calibration verifications may be included at the same, low, mid or high-range concentration.

11.0 CALIBRATION AND STANDARDIZATION

11.1 Prepare matrix calibration standards

11.1.1 Transfer 1 mL of appropriate serum to a 15 mL centrifuge tube. If commercially available sera is used, prepare two matrix blanks, using the volume of sera available for most study animals.

11.1.1.1 Depending upon study goals or if analyte-free commercial sera is not available, a surrogate matrix may be used for generation of the calibration standard. For example, rabbit sera may be used as a surrogate matrix for rat studies if quantitation of extremely low levels of the analyte is required.

11.1.2 If most sample volumes are less than 1.0 mL, extract standards with matrix volumes equal to the sample volumes. Do not extract less than 0.50 mL of matrix. Record each sample volume on the extraction sheet.

11.1.3 While preparing a total of thirteen aliquots in 15-mL centrifuge tubes, mix or shake sera between aliquots.

11.1.4 Two 1-mL aliquots, or other appropriate volume, serve as curve matrix blanks. Typically use the standard concentrations and spiking amounts listed in Table 1 at the end of this section to spike one standard curve, for a total of nine standards, two matrix blanks, and two method blanks.

11.1.5 Refer to validation report **ETS-8-4.0 & ETS-8-5.0-V-1,** which lists the working ranges and the Linear Calibration Range (LCR) for calibration curves.

11.1.6 See Section **13.0** to calculate actual concentrations of PFOS in calibration standards.

11.2 To each standard, blank, continuing check, and sample add an appropriate amount of surrogate working standard to achieve a constant concentration that falls within the calibration curve range of 2.5 ng/mL–1000 ng/mL. Usually, samples are spiked for a constant concentration in all samples at approximately 500 ng/mL or other concentration as determined by the analyst.

11.3 Extract spiked matrix standards following **12.6-12.16** of this method. Use these standards to establish each initial curve on the mass spectrometer.

Table 1 Approximate spiking amounts for standards and spikes Using 1.0 mL of matrix		
Working standard (approx. conc.)	µL	Approx. final conc. of analyte in matrix
-	-	Blank
0.500 ppm	10	0.005 ppm
0.500 ppm	20	0.010 ppm
5.00 ppm	5	0.025 ppm
5.00 ppm	10	0.050 ppm
5.00 ppm	20	0.100 ppm
50.0 ppm	5	0.250 ppm
50.0 ppm	10	0.500 ppm
50.0 ppm	15	0.750 ppm
50.0 ppm	20	1.00 ppm

*ppm=µg/mL

12.0 PROCEDURE

12.1 Obtain frozen samples and allow to thaw at room temperature or in lukewarm water.

12.2 Label a 15 mL polypropylene centrifuge tube with the study number, sample ID, date and analyst initials. See attached worksheet (Attachment A or similar worksheet) for documenting the remaining steps.

12.3 Vortex mix for 15 seconds, then transfer 1.0 mL or other appropriate volume to the 15 mL polypropylene centrifuge tube.

12.4 Return unused samples to freezer after extraction amounts have been removed.

12.5 Record the initial volume on the extraction worksheet (Attachment A or similar worksheet).

12.6 Spike all samples, blanks and standards, that are ready for extraction with surrogate standard as described in **11.2**.

12.7 Spike each calibration standard matrix with the appropriate amount of standard as described in **11.1**, or **Table 1** in that section, for the calibration curve standards. Also prepare matrix spikes if necessary and continuing calibration standards.

12.8 Vortex mix the standard curve samples, matrix spike samples, and continuing calibration samples for 15 seconds.

12.9 Check to ensure the 0.5 M TBA reagent is at pH 10. If not, adjust accordingly.

12.10 To each sample, add 1 mL 0.5 M TBA and 2 mL of 0.25M sodium carbonate/sodium bicarbonate buffer.

12.11 Using an bottle top dispenser or 5–10 mL graduated glass pipette, add 5 mL methyl-*tert*-butyl ether.

12.12 Cap each sample and put on the shaker at a setting of 300 rpm for 20 minutes.

12.13 Centrifuge for 20 to 25 minutes at a setting of 3500 rpm or until layers are well separated.

12.14 Label a fresh 15 mL centrifuge tube with the same information as in **12.5**.

12.15 Remove 4.0 mL of the organic (top) layer to this clean 15 mL centrifuge tube.

12.16 Put each sample on the analytical nitrogen evaporator until dry, approximately 1 to 2 hours.

12.17 Add 1.0 mL of methanol to each centrifuge tube using a graduated pipette.

12.18 Vortex mix for 30 seconds, or longer if needed.

12.19 Label a 1.5 mL glass autovial (or low-volume autovial when necessary) with the study number, animal number and gender, sample timepoint, matrix, final solvent, extraction date, and analyst(s) performing the extraction.

12.20 Attach a 25 mm, 0.2 µm nylon mesh filter to a 3 mL syringe and transfer the sample from step 12.18 to this syringe. Filter into the labeled autovial.

12.21 Cap and store extracts at room temperature or at approximately 4 °C until analysis.

12.22 Complete the extraction worksheet (Attachment A or similar worksheet) and include in the study binder.

13.0 Data Analysis and Calculations

13.1 Calculations

13.1.1 Calculate actual concentrations of PFOS, or other applicable fluorochemical, in calibration standards using the following equation:

$$\frac{mL\ of\ std \times concentration\ of\ std\ (\mu g / mL)}{mL\ of\ std + mL\ of\ surrogate\ std + initial\ matrix\ volume\ (mL)} = Final\ concentration\ (\mu g / mL)\ of\ PFOS\ in\ matrix$$

14.0 Method Performance

14.1 The method detection limit (MDL) is analyte and matrix specific. Refer to MDL report for specific MDL and limit of quantitation (LOQ) values (see **Attachments B and C**). At the discretion of the PAI, MDL may not be defined for some studies.

14.2 The following quality control samples are extracted with each batch of samples to evaluate the quality of the extraction and analysis.

14.2.1 Method blanks and matrix blanks.

14.2.2 If surrogate matrix is used for curve and QC, matrix spike and matrix spike duplicate samples to verify extraction efficiency.

14.2.3 Continuing calibration check samples to determine the continued accuracy of the initial calibration curve.

14.3 Refer to section 14 of ETS-8-5.2 for method performance criteria.

15.0 Pollution Prevention and Waste Management

15.1 Dispose of sample waste, flammable solvent waste and used glass pipette waste using proper methods and by placing each in their designated waste container.

16.0 Records

16.1 Complete the extraction worksheet attached to this method (or a similar worksheet), and include in the study binder.

17.0 Attachments

17.1 Attachment A, Extraction worksheet (a similar worksheet may be substituted for Attachment A)

17.2 Attachment B, MDL/LOQ values and summary

17.3 Attachment C, Ion Pair Standard Curves worksheet (a similar worksheet may be substituted for Attachment C)

18.0 References

18.1 The validation report associated with this method is **ETS-8-4.0 & 5.0-V-1**.

18.2 FACT-M-3.1, "Analysis of Serum or Other Fluid Extracts for Fluorochemicals using HPLC-Electrospray Mass Spectrometry"

18.3 ETS-8-5.2, "Analysis of Potassium Perfluorooctanesulfonate or Other Fluorochemicals in Serum Extracts Using HPLC-Electrospray/Mass Spectrometry"

19.0 Affected Documents

19.1 ETS-8-5.2, "Analysis of Potassium Perfluorooctanesulfonate or Other Fluorochemicals in Serum Extracts Using HPLC-Electrospray/Mass Spectrometry"

20.0 Revisions

Revision Number	Reason For Revision	Revision Date
1	Section 12.21 Changed to include sample storage at room temperature. Section 12.13 Added the shaker speed. Section 12.17 Final volume is 1.0 mL; not adjusted for initial volumes less than 1.0 mL.	04/02/99
2	Section 1.1, 2.1 Eliminate 'potassium' from perfluorooctanesulfonate 8.9.1 Add K to PFOS 8.9.3 Add H to PFOSAA 10.2-10.2.4, 14.2.2 Add information about using surrogate matrix, clarify control matrix and spiking the curve, change spikes to every 20 samples 10.3 Clarify purpose of continuing calibration checks 11.1 Added wording about control animal sera, using and not using commercially available tissue In general, make less specific for equipment/supplies. Substitute water for Milli-Q, Nalgene or equivalent bottle may be used.	

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Extraction Worksheet ETS-8-4.2

Study #_____ Matrix_____ Box #_____ Wk/Day_____ Date Spiked/ Analyst:	Surrogate Std actual µg/mL #_____	FC-Mix approx. 0.5 µg/mL #_____	FC-Mix approx. 5 µg/mL #_____	FC-Mix approx. 50 µg/mL #_____	Comments	Verified by:
MS						
MSD						
		-	-	-		
		-	-	-		
		-	-	-		
		-	-	-		
		-	-	-		
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		-	-	-		
		-	-	-		

Blank ID # amount = mL	
Serum Extraction Method : **Date & Initials**	
Vortex 15 sec.	
Pipette Matrix, spike with appropriate surrogate or FCMix Volume mL	
Pipette 1 mL of 0.5 M TBA, pH 10. pH = Std. #	
Pipette 2 mL of 0.25 Na_2CO_3/0.25M $NaHCO_3$ buffer Std. #	
Dispense/pipette 5 mL of methyl-t-butyl ether TN-A-	
Dispenser ID #:	
Shake 20 min. Shaker ID #: Shaker speed:	
Centrifuge 20-25 min. Centrifuge ID#: Centrifuge speed:	
Remove a 4 mL aliquot of organic layer	
Put on Nitrogen Evaporator to dryness	
Add methanol Volume mL TN-A-	
Vortex 30 sec.	
Filter using a 3mL B-D syringe with a 0.2um filter into a 1.5 mL autosample vial	

Cont. Cal. Verifications used same matrix as for std curve.

MDL/LOQ values for rabbit serum

Compound	MDL (ng/mL)	LOQ (ng/mL)	Linear Calibration Range (LCR) Approximate concentrations to be used for preparing the Standard Calibration Curve
PFOS	1.74	5.55	5 ng/mL–1000 ng/mL
PFOSA	1.51	4.79	5 ng/mL–1000 ng/mL
PFOSAA	3.46	20.5	5 ng/mL–1000 ng/mL
EtFOSE-OH	11.4	36.2	5 ng/mL–1000 ng/mL
M556	6.03	19.2	5 ng/mL–1000 ng/mL
PFOSEA	5.71	18.2	5 ng/mL–1000 ng/mL

MDL/LOQ values in rat, bovine, monkey, and human serum, and monkey plasma were not statistically determined. Two curves in each of these matrices were extracted and analyzed with the rabbit serum curves to determine equivalence. Responses in the rat, bovine, monkey, and human were equivalent to the rabbit responses, therefore, their MDL and LOQ will be the same values as determined in rabbit serum.

Please see LOQ Summary and MDL study in ETS-8-4.0 & 5.0-V-1 for further information.

Compound: PFOS

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.995 - 978	24.8 - 978	83-108	4.67-11.0
Low Curve	4.94 - 248	4.94 - 248	85-104	5.34-12.0
High curve	97.8 - 978	97.8 – 978	85-106	4.84-9.80
1/X	0.995 - 978	4.94 - 978	94-111	4.60-10.5

Compound: PFOSA

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.993 - 976	4.93 - 976	88-103	5.10-14.7
Low Curve	4.93 - 97.6	4.93 - 97.6	87-105	9.85-14.7
High curve	24.8 - 976	24.8 - 978	93-102	5.08-13.9
1/X	0.993 - 976	4.93 - 976	94-103	5.10-14.5

Compound: PFOSAA

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.991 - 974	24.7 - 974	81-111	4.18-10.6
Low Curve	4.92 - 247	9.74 - 247	97-107	6.38-21.8
High curve	49.2 - 974	97.4 - 974	85-108	4.33-12.5
1/X	0.991 - 974	9.74 - 974	95-115	4.11-23.2

Compound: EtFOSE-OH

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.993 - 976	49.3 - 976	77-110	11.2-25.5
Low Curve	4.93 – 97.6	9.76 – 97.6	97-107	14.1-21.3
High curve	49.3 - 976	97.6 - 976	90-109	11.5-19.6
1/X	0.993 - 493	9.76 - 976	86-111	11.1-21.2

Compound: PFOSEA

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.993 - 976	24.8 - 976	96-106	10.1-16.2
Low Curve	4.93 - 248	9.76 - 248	91-110	11.8-19.5
High curve	49.3 - 976	49.3 - 976	86-106	10.2-18.2
1/X	0.993 - 976	9.76 - 976	95-117	10.1-19.1

Compound: M556

Rabbit Serum	Prepared range of standards (ng/mL)	LCR from curve (ng/mL)	% Recovery Range	RSD Range
Full Range	0.993 - 976	24.8 - 976	88-106	4.82-17.9
Low Curve	4.93 - 97.6	9.76 – 97.6	100-105	5.95-18.2
High curve	97.6 - 976	97.6 - 976	81-111	5.11-9.74
1/X	0.993 - 976	9.76 - 976	97-110	4.77-19.5

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EXAMPLE

Ion Pair Standard Curves – Fluids

Analyst(s)
Prep date(s):
Analyte(s):

Study number:
Final solvent and TN:
Blank fluid/identifier: {Record matrix used to prepare curves, (e.g., 'Rabbit,' ID #XXX)}

Study Animal Matrix :
Method/revision:
Target analyte(s):
FC mix std approx. 0.500 ppm:
FC mix std approx. 5.00 ppm:
FC mix std approx. 50.0 ppm:
Surrogate std approx. 100 ppm:

{Record the standards used to prepare the extracted curves.}

Actual concentrations of standards in the FC mix in methanol

PFOS Std conc µg/mL	PFOSA Std conc µg/mL	PFOSAA Std conc µg/mL	EtFOSE Std conc µg/mL	PFOSEA Std conc µg/mL	M556 Std conc µg/mL	All Am't spiked mL	All Final vol mL
0.500	0.507	0.532	0.501	0.521	0.501	0.010	1.015
0.500	0.507	0.532	0.501	0.521	0.501	0.020	1.025
5.00	5.07	5.32	5.01	5.21	5.01	0.005	1.010
5.00	5.07	5.32	5.01	5.21	5.01	0.010	1.015
5.00	5.07	5.32	5.01	5.21	5.01	0.020	1.025
50.0	50.1	53.2	50.1	52.1	50.1	0.005	1.010
50.0	50.1	53.2	50.1	52.1	50.1	0.010	1.015
50.0	50.1	53.2	50.1	52.1	50.1	0.015	1.020
50.0	50.1	53.2	50.1	52.1	50.1	0.020	1.025

Example

Calculated concentrations of standards in the sera matrix: Rabbit

PFOS Final conc ng/mL	PFOSA Final conc ng/mL	PFOSAA Final conc ng/mL	EtFOSE Final conc ng/mL	PFOSEA Final conc ng/mL	M556 Final conc ng/mL	Surrogate Std conc ng/mL	All Am't spiked mL
4.93	5.00	5.24	4.94	5.01	5.13	100	0.005
9.76	9.89	10.4	9.78	9.93	10.2		
24.8	25.1	26.3	24.8	25.2	25.8	**Surrogate**	
49.3	50.0	52.4	49.4	50.1	51.3	Final conc	
97.6	98.9	104	97.8	99.3	102	ng/mL	
248	251	263	248	252	258	500	
493	500	524	494	501	513		
735	746	782	737	749	766		
976	989	1038	978	993	1017		

Example

Validated ranges – approximate concentrations

Serum	PFOS	PFOSA	PFOSAA	EtFOSE-OH	PFOSEA	M556
Rabbit	5.00-1000 ng/mL	5.00-1000 ng/mL	5.00-1000 ng/mL	5.00-1000 ng/mL	5.00-1000 ng/mL	5.00-1000 ng/mL
Bovine	Estimates only. Use values for rabbit.					
Rat	Estimates only. Use values for rabbit.					
Monkey & Plasma	Estimates only. Use values for rabbit.					
Human	Estimates only. Use values for rabbit.					

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Analytical Report: FACT-TOX-169
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3M ENVIRONMENTAL LABORATORY

METHOD

ANALYSIS OF POTASSIUM PERFLUOROOCTANESULFONATE OR OTHER FLUOROCHEMICALS IN SERUM EXTRACTS USING HPLC-ELECTROSPRAY/MASS SPECTROMETRY

Method Number: ETS-8-5.2

Adoption Date: 03/01/99

Revision Date: 2/1/01

Author: Lisa Clemen, Kris Hansen

Approved By:

Laboratory Manager	02/01/01 Date
Group Leader	02/01/01 Date
Technical Reviewer	02.01.01 Date

Exact Copy of Original
Initial RSD
Date 6/5/01

1.0 SCOPE AND APPLICATION

1.1 Scope: This method describes the analysis of serum extracts for fluorochemical surfactants using HPLC-electrospray/mass spectrometry.

1.2 Applicable Compounds: Fluorochemical surfactants or other fluorinated compounds, or other ionizable compounds.

1.3 Matrices: Rabbit, rat, bovine, monkey, and human serum, or other fluids as designated in the validation report.

2.0 SUMMARY OF METHOD

2.1 Although supported by a validation for most commonly used matrices, this is a performance-based method. Careful attention should be paid to method QC as there is great variability in sera. This method describes the analysis of fluorochemical surfactants extracted from serum or other fluids, using HPLC-electrospray/mass spectrometry, or similar system as appropriate. The analysis is performed by monitoring a single ion characteristic of a particular fluorochemical, such as the perfluorooctanesulfonate (PFOS) anion, m/z= 499. Additionally, samples may be analyzed using a tandem mass spectrometer to further verify the identity of a compound by detecting daughter ions of the parent ion.

3.0 DEFINITIONS

3.1 Atmospheric Pressure Ionization (API): The Micromass Quattro II and Ultima triple quadrupole systems allow for various methods of ionization by utilizing various sources, probes, and interfaces. These include but are not limited to: Electrospray Ionization (ESI), Atmospheric Pressure chemical Ionization (APcI), Thermospray, etc. The ionization process in these techniques occurs at atmospheric pressure (i.e., not under a vacuum).

3.2 Electrospray Ionization (ES, ESI): a method of ionization performed at atmospheric pressure, whereby ions in solution are transferred to the gas phase via tiny charged droplets. These charged droplets are produced by the application of a strong electrical field.

3.3 Mass Spectrometry, Mass Spectrometer (MS), Tandem Mass Spectrometer (MS/MS): The API Quattro II and Ultima triple quadrupole systems are equipped with quadrupole mass selective detectors. Ions are selectively discriminated by mass to charge ratio (m/z) and subsequently detected. A single MS may be employed for ion detection or a series (MS/MS) for more specific fragmentation information.

3.4 Conventional vs. Z-spray probe interface: The latest models of Micromass triple quadrupole systems (post 1998) utilize a "Z-spray" conformation. The spray emitted from a probe is orthogonal to the cone aperture. In the conventional conformation it is aimed directly at the cone aperture, after passing through a tortuous pathway in the counter electrode. Though the configuration is different, the methods of operation, cleaning, and maintenance are the same. However, Z-spray components and conventional components are not compatible with one another, but only with similar systems (i.e., Z-spray components are compatible with some other Z-spray systems, etc.)

3.5 Mass Lynx Software: System software designed for the specific operation of these Quattro II triple quadrupole systems. Currently MassLynx has Windows 95 and WindowsNT 4.0 versions. All versions are similar. For more details see the manual specific to the instrument (Micromass Quattro II or Ultima triple quadrupole MassLynx or MassLynx NT User's Guide).

4.0 WARNINGS AND CAUTIONS

4.1 Health and Safety Warnings:

4.1.1 Use caution with the voltage cables for the probe. When engaged, the probe employs a voltage of approximately 5000 Volts.

4.1.2 When handling samples or solvents wear appropriate protective gloves, eyewear, and clothing.

4.2 Cautions:

4.2.1 Do not operate solvent pumps above capacity of 400 bar (5800 psi) back pressure. If the back pressure exceeds 400 bar, the HPLC will initiate automatic shutdown.

4.2.2 Do not run solvent pumps to dryness.

5.0 INTERFERENCES

5.1 To minimize interferences when analyzing samples, Teflon should not be used for sample storage or any part of instrumentation that comes in contact with the sample or extract.

6.0 EQUIPMENT

6.1 Equipment listed below may be modified in order to optimize the system. Document any modifications in the raw data as method deviations.

6.1.1 Micromass Quattro II or Ultima triple quadrupole Mass Spectrometer equipped with an electrospray ionization source

6.1.2 HP1100 or Agilent low pulse solvent pumping system, solvent degasser, column compartment, and autosampler

7.0 SUPPLIES AND MATERIALS

7.1 Supplies

7.1.1 High purity grade nitrogen gas regulated to approximately 100 psi (House air or nitrogen system)

7.1.2 HPLC analytical column, specifics to be determined by the analyst and documented in the raw data.

7.1.3 Capped autovials and capped 15 mL centrifuge tubes

8.0 REAGENTS AND STANDARDS

8.1 Reagents

8.1.1 Methanol, HPLC grade or equivalent

8.1.2 Milli-Q™ water, all water used in this method should be Milli-Q™ water or equivalent, and may be provided by a Milli-Q TOC Plus system or other vendor

8.1.3 Ammonium acetate, reagent grade or equivalent

8.2 Standards

8.2.1 Typically two method blanks, two matrix blanks, and eighteen matrix standards are prepared during the extraction procedure. See **ETS-8-4.2**.

9.0 Sample Handling

9.1 Fresh matrix standards are prepared with each analysis. Extracted standards and samples are stored in capped autovials or capped 15 mL centrifuge tubes until analysis.

9.2 If analysis will be delayed, extracted standards and samples can be refrigerated at approximately 4° C, or at room temperature, until analysis can be performed.

10.0 Quality Control

10.1 Solvent Blanks, Method Blanks and Matrix Blanks

10.1.1 Solvent blanks, method blanks and matrix blanks are prepared and analyzed at least once during the course of the study to determine if contamination occurred during sample prep.

10.1.2 Analyze at least one solvent blank prior to each calibration curve.

10.1.3 Matrix blanks should be analyzed with each sample list that includes undiluted extracts.

10.2 Matrix Spikes

10.2.1 If curves and method QC are prepared in a surrogate matrix (e.g. curves in rabbit sera, samples are monkey sera), matrix spikes and matrix spike duplicates are prepared in blank sample matrix (e.g., monkey sera) and analyzed to verify extraction efficiency.

10.2.2 If curves and method QC are prepared in the same matrix as samples, no additional matrix spikes are required.

10.3 Continuing Calibration Verifications (CCVs)

10.3.1 Continuing calibration verifications are analyzed to verify the continued accuracy of the calibration curve.

10.3.2 Analyze two calibration standards (one at each of 2 levels) after every one to ten samples, with a minimum of two per batch and always finishing an injection sequence with at least two calibration standards.

11.0 Calibration and Standardization

11.1 Analyze the extracted matrix calibration standards prior to each set of extracts. The curve will be plotted by linear regression, weighted 1/x, not forced through zero, using MassLynx or other suitable software.

11.2 If the curve does not meet requirements, perform routine maintenance, reextract samples, or reanalyze the standard curve.

11.3 For purposes of accuracy when quantitating levels of analyte at the limits of the curve range, it may be necessary to use either the low end or the high end of the calibration curve rather than the full range of the standard curve. Example: when attempting to quantitate approximately 10 ppb of analyte, it may be beneficial to generate a calibration curve consisting of the standards from 5 ppb to 100 ppb rather than the full range of the curve (5 ppb to 1000 ppb). This will reduce inaccuracy attributed to linear regression weighting of

high concentration standards. It is also acceptable to break the linear range into a low curve and a high curve. If this is done, no more than one point should be used in common between the curves. For example, the low curve may include the following points: 1, 5, 25, 100, 250 ppb and the high curve may include the points: 250, 500, 750, 1000, 1250 ppb.

12.0 PROCEDURES

12.1 Acquisition Set up

12.1.1 On the MassLynx main page, set up a sample list name. Save the list as instrument designator letter, last 2 digits of test year-mo-day, and a letter that will increase through the alphabet with each additional list for that day.

Example Sample List: IYYMMDDa or D010712a

I=instrument name (D for "Davey")
YY=year of test (01)
MM=month of test (07)
DD=day of test (12)
a=first sample list (run) of the day (the next sample list will end with 'b,' the next 'c' and so on.)

12.1.2 Assign a filename using the instrument designator letter, the last 2 digits of year-mo-day, and a 3-digit sequential file number that starts with 1 and increases by one for each filename.

Example File Name: IYYMMDD### or D010712001

I=instrument name (D for "Davey")
YY=year of test (01)
MM=month of test (07)
DD=day of test (12)
###=3-digit sequential file number starting with 1 through 999 (001)

Also, as part of the sample list, assign a method (MS) for acquiring, an inlet file, a bottle number, an injection volume and sample descriptions.

12.1.3 To create a method, click on Method Editor button in the MS Status Pane and select SIR (Single Ion Recording) or MRM (Multiple Reaction Monitoring). Set Ionization Mode as appropriate and mass to 499 or other appropriate masses. Also set the acquisition start and stop times. Save acquisition method. If MS/MS instruments are employed, additional product ion fragmentation information may be collected. See Micromass MassLynx GUIDE TO DATA ACQUISITION for additional information and MRM.

12.1.4 Typically the analytical batch run sequence begins with solvent blanks and a set of extracted matrix standards.

12.1.5 Sample extracts are analyzed with two CCVs injected every one to ten samples. Solvent blanks should be analyzed periodically to monitor possible analyte carryover and are not considered sample extracts but may be included as such.

12.2 Using the HPLC

12.2.1 Set up sample tray according to the sample list prepared in Section **12.1.1**.

12.2.2 Set-up the HPLC to the following conditions or at conditions the analyst considers appropriate for optimal response. Record actual conditions in the instrument logbook:

12.2.2.1 Sample size = 10 µL injection

12.2.2.2 Inject/sample = 1

12.2.2.3 Cycle time = 10.0 minutes

12.2.2.4 Flow rate = 300 µL/min

12.2.2.5 Mobile Phase (program)

Time	MeOH	2.0 mM Ammonium acetate (in H_2O)
0.00 min.	10%	90%
1.00 min.	10%	90%
5.50 min.	95%	5%
7.50 min.	95%	5%
8.00 min.	10%	90%

12.3 Instrument Set-up

12.3.1 Refer to **ETS-9-24** for more details.

12.3.2 Check the solvent level in reservoirs and refill if necessary.

12.3.3 Check the stainless steel capillary at the end of the probe. Use an eyepiece to check the tip. The tip should be flat with no jagged edges. If the tip is found to be unsatisfactory, disassemble the probe and replace the stainless steel capillary. The probe should be checked weekly.

12.3.4 Set HPLC pump to "On". Set the flow to 10 - 500 µL/min or as appropriate. Observe droplets coming out of the tip of the probe.

12.3.5 Turn on the nitrogen. A fine mist should be expelled with no nitrogen leaking around the tip of the probe. Readjust the tip of the probe if no mist is observed.

12.3.6 The instrument uses these parameters at the following settings. These settings may change in order to optimize the response:

12.3.6.1 Drying gas 250-400 liters/hour

12.3.6.2 ESI nebulizing gas 10-15 liters/hour

12.3.6.3 HPLC constant flow mode, flow rate 10 – 500 µL/min

12.3.6.4 Pressure <400 bar (This parameter is not set, it is a guide to ensure the HPLC is operating correctly.)

12.3.7 Carefully guide the probe into the opening. Insert probe until it will not go any further. Connect the voltage cables to the probe.

12.3.8 Print the tune page, MS file, HPLC parameters, sample list and the Microsoft Word summary page and store in the study binder with a copy taped into the instrument log.

12.3.9 Click on start button in the MassLynx main page (this may vary among MassLynx versions, see appropriate MassLynx USER'S GUIDE). Ensure start and end sample number includes all samples to be analyzed.

13.0 Data Analysis and Calculations

13.1 Calculations:

13.1.1 Calculate matrix spike percent recoveries using the following equation:

$$\%\ Recovery = \frac{Observed\ Result - Matrix\ Blank\ Result}{Spiking\ Level} \times 100$$

13.1.2 Calculate percent difference using the following equation:

$$\%\ Difference = \frac{Expected\ Conc. - Calculated\ Conc.}{Expected\ Conc.} \times 100$$

13.1.4 Calculate actual concentration of PFOS, or other fluorochemical, in matrix (µg/mL):

$$\frac{(Conc.\ of\ PFOS\ Calc.\ from\ Std.\ Curve\ (ng/mL) \times Dilution\ Factor)}{\left\{\frac{(Initial\ Volume\ of\ Matrix\ (mL) + mL\ of\ Surrogate\ Standard)}{Final\ Volume\ (mL)}\right\}} \times \frac{1\ \mu g}{1000\ ng}$$

14.0 Method Performance

14.1 Method Detection Limit (MDL) and Limit of Quantitation (LOQ) are method, analyte, and matrix specific. Please see **ETS-8-4.2, Attachment B,** for a listing of current validated MDL and LOQ values.

14.2 Solvent Blanks, Method Blanks, and Matrix Blanks

14.2.1 Solvent blanks, method blanks, and matrix blanks values must be below the lowest active standard in the calibration curve.

14.3 Calibration Curves

14.3.1 The coefficient of determination value for the calibration curve must be 0.990 or better.

14.3.2 All active calibration curve points must be within 25% of the theoretical value with the exception of the LOQ point, which may deviate up to 30%.

14.3.3 Calibration standards with peak areas less than two times the curve matrix blank must be deactivated to disqualify a data range that may be affected by background levels of the analyte.

14.3.4 Low or high curve points may be deactivated to optimize a linear range appropriate to the data.

14.3.5 Not including low or high points dropped to optimize the linear range, curve points may be deactivated if they deviate more than 25% from the theoretical value when the curve is evaluated over a linear range appropriate to the data.

14.3.6 One point below the LOQ may remain active even if it deviates more than ±30% or has a peak area less than two times the matrix blank; however, the LOQ will be defined at the lowest point with acceptable deviation.

14.3.7 A valid calibration curve must contain at least 5 active points above and including the LOQ.

14.4 Matrix Spikes

14.4.1 The average matrix spike percent recoveries should be within ± 30% of the spiked concentration. Recoveries outside of this range should be discussed in the report.

14.5 Continuing Calibration Verifications (CCVs)

14.5.1 Continuing calibration samples within the linear range of the run must show a percent recovery within ±25% of the spiked concentration. If a CCV is outside of this recovery, subsequent data should not be accepted. Acceptable data must be bracketed by the curve and passing CCVs.

14.6 If criteria listed in this method performance section isn't met, maintenance may be performed on the system and samples reanalyzed or other actions as determined by the analyst. Document all actions in the appropriate logbook.

14.7 If data are to be reported when performance criteria have not been met, the data must be footnoted on tables and discussed in the text of the report.

15.0 Pollution Prevention and Waste Management

15.1 Sample extract waste and flammable solvent is disposed in high BTU containers, and glass pipette waste is disposed in broken glass containers located in the laboratory.

16.0 Records

16.1 The first page of each data packet generated for a study must have the following information included either in the header, in the footer or hand written on the page: study or project number, instrument, sample matrix and time point, date, and analyst.

16.2 A data packet includes the following: data review summary form, MassLynx quantify compound summary report for each target analyte, quantify calibration report for each target analyte (curve), method report, Word document listing set-up parameters, tune

method report, MassLynx scanning method report, HPLC method report, sample list, and quantity sample report (chromatogram).

16.3 For each analysis, after printing the tune method report, Word document listing, set-up parameters, MassLynx scanning method report, and sample list, copy and tape into the instrument runlog. The original is maintained in the data packet.

16.4 On each page of the quantify compound report, quantify calibration report (curve), and quantify sample report (chromatogram), the following information must be included either in the header, the footer, or hand written on the page: study or project number, instrument, method, calibration (the method and calibration are usually assigned the same name), analyst, and date.

16.5 The analyst must date and initial the first page in a packet as long as their initials and date are electronically included on each page. If initials and date are not electronically included, they must date and initial each page.

16.6 Summarize data using suitable software (e.g., Excel) for inclusion in the final report. See **Attachment A** for an example of a summary spreadsheet.

16.7 Back up electronic data to appropriate medium. Record the file name and location of backup electronic data in instrument log book.

17.0 TABLES, DIAGRAMS, FLOWCHARTS, AND VALIDATION DATA

17.1 Attachment A: Data summary spreadsheet.

18.0 REFERENCES

18.1 FACT-M-4.1, "Extraction of Potassium Perfluorooctanesulfonate or Other Fluorochemical compounds from Serum for Analysis Using HPLC-Electrospray/Mass Spectrometry

18.2 ETS-9-24.0, "Operation and Maintenance of the Micromass Atmospheric Pressure Ionization/Mass Spectrometer Quattro II triple quadrupole Systems"

18.3 The validation report associated with this method is **ETS-8-4.0 & 5.0-V-1**.

19.0 AFFECTED DOCUMENTS

19.1 ETS-8-4.2, "Extraction of Potassium Perfluorooctanesulfonate or Other Fluorochemical Compounds from Serum for Analysis Using HPLC-Electrospray/Mass Spectrometry"

20.0 REVISIONS

Revision Number.	Reason For Revision	Revision Date
1	Section 6.1.2 Clarification of HP1100 system components. Section 11.1 Average of two curves, not standard values, are used for plotting linear regression and added the 1/x weighting of the curve. Section 12.2.2.4 Clarification of solvent ramp. Section 17.1 Changed from attachment B to A.	04/02/99
2	10.1 Clarified when blanks are run. 10.2 Added instructions for when surrogate matrix is used. 10.3 Specify requirements for CCVs. 11.1 Requires only a calibration curve before the samples. 11.2 Clarify what to do if curve does not meet requirements. 11.3 Allow to truncate the curve. 12.1.1 Clarify sample list ID. 12.1.3 Clarify typical run. 12.2 Changes to mobile phase gradient and specify flow rate. 14.3 Change acceptable limits. Add specifics for acceptance of calibration curve. 14.3.3 When to deactivate calibration standards based on blank response. 14.3.5 When to deactivate calibration standards within the linear range. 14.4 Modifies evaluation and use of matrix spikes. 14.5 Describes evaluation and use of CCVs. 14.5.1 Evaluation of CCVs. 16.0 Add requirements for records and documentation.	

Laboratory Study

Study:
Test Material:
Matrix/Final Solvent:
Method/Revision:
Analytical Equipment System Number:
Instrument Software/Version:
Filename:
R-Squared Value:
Slope:
Y Intercept:
Date of Extraction/Analyst:
Date of Analysis/Analyst:

Group Dose	Sample#	Concentration ug/mL	Initial Vol. mL	Dilution Factor	Final Conc. ug/mL

Slope: Taken from linear regression equation.
Group/Dose: Taken from the study folder.
Sample#: Taken from the study folder.
Concentration (ug/mL): Taken from the MassLynx integration summary.
Initial Volume (mL): Taken from the study folder.
Dilution Factor: Taken from the study folder.
Final Conc. (ug/mL): Calculated by dividing the initial volume from the concentration

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Appendix D: Data Summary Tables

Table 7. TOX 169 Data Summary of PFOS Concentration—Rat Serum (µg/mL)

Timepoint	Female F0 Gestation Day 21	Pups F1 Gestation Day 21	Female F0 Lactation Day 5	Pups F1 Lactation Day 5
Group				
Group 1 0.5% Tween 80	0.00706 ± 0.00280 (n=6)	<LOQ[a] (n=6)	0.0184 ± 0.00869 (n=6)	0.0299 ± 0.0198 (n=6)
Group 2 mevalonic acid	0.0183 ± 0.0234 (n=6)	0.0782 ± 0.0836 (n=6)	12.7 ± 27.4 (n=6)	3.33 ± 3.14 (n=6)
Group 3 1.6 mg/kg PFOS + mevalonic acid	55.8 ± 8.87 (n=6)	207 ± 25.6 (n=6)	127 ± 24.7 (n=6)	124 ± 18.7 (n=3)
Group 4 2 mg/kg PFOS + mevalonic acid	82.4 ± 22.6 (n=6)	251 ± 55.9 (n=6)	189 ± 48.2 (n=6)	N/A
Group 5 cholesterol	0.0251 ± 0.00396 (n=6)	0.0828 ± 0.0315 (n=6)	0.688 ± 1.62 (n=6)	0.188 ± 0.199 (n=6)
Group 6 1.6 mg/kg PFOS + cholesterol	79.9 ± 15.5 (n=6)	154 ± 32.2 (n=6)	104 ± 14.6 (n=6)	109 ± 7.85 (n=2)
Group 7 2 mg/kg PFOS + cholesterol	371 ± 214 (n=6)	166 ± 50.4 (n=6)	145 ± 7.59 (n=6)	155 (n=1)
Group 8 0.4 mg/kg PFOS	N/A	N/A	27.2 ± 18.7 (n=6)	36.2 ± 3.84 (n=6)
Group 9 0.8 mg/kg PFOS	N/A	N/A	42.6 ± 6.92 (n=6)	53.1 ± 27.7 (n=6)
Group 10 1 mg/kg PFOS	N/A	N/A	52.3 ± 26.0 (n=6)	84.4 ± 17.5 (n=6)
Group 11 1.2 mg/kg PFOS	N/A	N/A	86.0 ± 10.2 (n=6)	147 ± 162 (n=6)
Group 12 1.6 mg/kg PFOS	142 ± 24.5 (n=6)	142 ± 33.2 (n=6)	169 ± 32.1 (n=6)	N/A
Group 13 2 mg/kg PFOS	125 ± 19.8 (n=6)	170 ± 38.1 (n=6)	134 ± 26.6 (n=6)	138 (n=1)

[a]LOQ—Limit of Quantitation = 0.00494 µg/mL
N/A—Not applicable
NOTE: Results are expressed as group averages ± the standard deviation associated with the group.
NOTE: It is not possible to verify true recovery of endogenous analyte from tissues without radio-labeled reference material. The only measurement of accuracy available at this time, extracted calibration curves and multi-level continuing calibration verifications (CCVs), indicate that the sera data are quantitative to ±25%.

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Appendix E: Data Spreadsheets

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FACT-TOX-169
Argus 418-018

Analytical Report: FACT-TOX-169
LRN-E01-0180

Study: E01-0180
Product Number(Test Substance): NA
Matrix: Rat Sera
Method/Revision: ETS-8-4.2 & ETS-8-5.2
Analytical Equipment System Number: Soup 020199, Amelia 062498
Instrument Software/Version: Masslynx 3.4
Filename: See Below
R-Squared Value: See Attachments
Slope: See Attachments
Y-Intercept: See Attachments
Dates of Extraction/Analyst: 02/15/01-02/20/01 RWW/KJS
Dates of Analysis/Analyst: 02/27/01, 03/15/01, 03/26/01 MMH
Date of Data Reduction/Analyst: 02/28/01, 03/16/01, 03/27/01 MMH
Sample Data Box #01-005A-E

FACT-TOX-169, Argus 418-018, One Generation Reproduction Study of PFOS-Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats

RAT SERA F0 GD21

Group Dose	Sample #	Initial Vol. mL	THPFOS Verified	PFOS Dilution Factor	PFOS Conc. ng/mL	Filename	Concentration of PFOS ug/mL or % Rec	Mean PFOS ug/mL	RSD Std. Dev. MS/MSD RPD
Group 1	10901F	0.70	NA	1	8.36	S010227020	0.0119		
0.5% Tween 80 Control	10902F	0.50	NA	1	2.10	S010227021	<LOQ (0.00494 ug/mL)		
	10903F	0.72	NA	1	6.03	S010227022	0.00838		
	10904F*	0.45	NA	1	2.25	S010227023	<LOQ (0.00494 ug/mL)		
	10905F*	0.45	NA	1	3.73	S010227024	<LOQ (0.00494 ug/mL)		39.6
	10907F	0.73	NA	1	5.26	S010227025	0.00721	0.00706	0.00280
Group 2	10915F	0.60	NA	1	39.3	S010227029	0.0655		
Mevalonic Acid Control	10916F*	0.48	NA	1	5.97	S010227030	0.0124		
	10917F	0.55	NA	1	6.24	S010227031	0.0113		
	10918F	0.73	NA	1	4.45	S010227032	<LOQ (0.00494 ug/mL)		
	10919F	0.53	NA	1	4.31	S010227033	<LOQ (0.00494 ug/mL)		128
	10920F	0.60	NA	1	6.34	S010227034	0.0106	0.0183	0.0234
Group 3	10930F*	0.30	NA	400	53.0	A010315020	70.7		
1.6 mg/kg PFOS	10931F	0.50	NA	400	69.3	A010315021	55.5		
+ Mevalonic Acid	10932F	0.55	NA	400	75.0	A010315022	54.5		
	10933F	0.63	Confirmed Low	400	69.0	A010315023	43.8		
	10934F	0.69	NA	400	88.9	A010315024	51.5		15.9
	10935F*	0.36	Confirmed Low	400	52.9	A010315025	58.7	55.8	8.87
Group 4	10945F	0.70	Confirmed Low	1000	62.9	A010315029	89.8		
2 mg/kg PFOS	10946F	0.71	Confirmed Low	1000	38.2	A010315030	53.9		
+ Mevalonic Acid	10947F*	0.10	Confirmed Low	1000	7.15	A010315031	71.5		
	10949F	0.61	Confirmed Low	1000	73.9	A010315032	121		
	10950F	0.65	Confirmed Low	1000	48.3	A010315033	74.3		27.4
	10951F	0.55	Confirmed Low	1000	46.2	A010315034	83.9	82.4	22.6
Group 5	10958F	0.58	NA	1	19.2	S010227035	0.0330		
Cholesterol Control	10959F	0.50	NA	1	11.8	S010227036	0.0235		
	10960F*	0.37	NA	1	9.16	S010227037	0.0248		
	10961F*	0.29	NA	1	6.59	S010227038	0.0227		
	10962F*	0.43	NA	1	9.78	A010315018	0.0227		15.8
	10963F*	0.47	NA	1	11.2	A010315019	0.0238	0.0251	0.00396
Group 6	10972F*	0.45	Confirmed Low	1000	44.4	A010315035	98.7		
1.6 mg/kg PFOS	10974F*	0.38	Confirmed Low	1000	24.3	A010315036	63.9		
+ Cholesterol	10975F	0.53	Confirmed Low	1000	51.9	A010315037	98.0		
	10976F	0.55	Confirmed Low	1000	43.8	A010315038	79.6		
	10978F	0.52	Confirmed Low	1000	38.6	A010315042	74.2		19.4
	10980F	0.72	Confirmed Low	1000	46.7	A010315043	64.8	79.9	15.5
Group 7	10985F	0.71	Confirmed Low	1000	71.6	A010315044	101		
2 mg/kg PFOS	10987F*	0.20	Confirmed Low	1000	87.1	A010315045	436		
+ Cholesterol	10988F	0.64	Confirmed Low	1000	78.8	A010315046	123		
	10989F	0.51	NA	5000	64.6	A010326016	633		
	10990F	0.63	NA	5000	64.6	A010326017	513		57.8
	10991F	0.67	NA	5000	56.2	A010326018	419	371	214
Group 12	11040F*	0.39	Confirmed Low	1000	70.0	A010315050	179		
1.6 mg/kg PFOS	11044F*	0.43	Confirmed Low	1000	64.7	A010315051	150		
	11045F*	0.40	Confirmed Low	1000	61.5	A010315055	154		
	11046F	0.65	Confirmed Low	1000	71.3	A010315056	110		
	11047F	0.56	Confirmed Low	1000	75.5	A010315057	135		17.2
	11050F	0.63	Confirmed Low	1000	78.7	A010315058	125	142	24.5
Group 13	11053F	0.64	Confirmed Low	1000	74.2	A010315059	116		
2 mg/kg PFOS	11054F	0.81	Confirmed Low	1000	92.0	A010315060	114		
	11056F	0.70	Confirmed Low	1000	77.8	A010315061	111		
	11058F	0.75	Confirmed Low	1000	84.3	A010315062	112		
	11060F	0.58	Confirmed Low	1000	77.8	A010315063	134		15.9
	11062F*	0.43	Confirmed Low	1000	69.3	A010315064	161	125	19.8

PFOS = Perfluorooctanesulfonate

* Estimated concentrations, initial volume below 0.5 mL. LAC 02/22/01

Date Entered/By: 03/01/01, 03/22/01 LAC / 03/28/01 KJH
Date Verified/ By: 04/06/01 hoj

3M Medical Department Study: T-6295.25 Analytical Report: FACT-TOX-169

FACT-TOX-169
Argus 418-018

LRN-E01-0180

Study: E01-0180 FACT-TOX-169, Argus 418-018, One Generation Reproduction Study of PFOS-Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats
Product Number(Test Substance): NA
Matrix: Rat Sera
Method/Revision: ETS-8-4.2 & ETS-8-5.2
Analytical Equipment System Number: Soup 020199, Amelia 062498
Instrument Software/Version: Masslynx 3.4
Filename: See Below
R-Squared Value: See Attachments
Slope: See Attachments
Y-Intercept: See Attachments
Dates of Extraction/Analyst: 02/15/01-02/20/01 RWW/KJS
Dates of Analysis/Analyst: 02/28/01, 03/20/01, 03/28/01 MMH
Date of Data Reduction/Analyst: 03/01/01, 03/21/01, 03/29/01 MMH
Sample Data Box #01-005A-E

RAT SERA PUPS F1 GD21

Group Dose	Sample #	Initial Vol. mL	THPFOS Verified	PFOS Dilution Factor	PFOS Conc. ng/mL	Filename	Concentration of PFOS ug/mL or % Rec	Mean PFOS ug/mL	RSD Std. Dev. MS/MSD RPD
Group 1	10901P*	0.14	NA	1	2.96	S010228112	<LOQ (0.00494 ug/mL)		
0.5% Tween 80 Control	10902P*	0.08	NA	1	0.470	S010228113	<LOQ (0.00494 ug/mL)		
	10903P*	0.13	NA	1	4.20	S010228114	<LOQ (0.00494 ug/mL)		
	10904P*	0.05	NA	1	0.00	S010228115	<LOQ (0.00494 ug/mL)		
	10905P*	0.18	NA	1	3.75	S010228116	<LOQ (0.00494 ug/mL)		NA
	10907P*	0.06	NA	1	1.77	S010228117	<LOQ (0.00494 ug/mL)	<LOQ	NA
Group 2	10915P*	0.24	NA	1	40.4	S010228121	0.168		
Mevalonic Acid Control	10916P*	0.10	NA	1	1.30	S010228122	<LOQ (0.00494 ug/mL)		
	10917P*	0.18	NA	1	19.6	S010228123	0.109		
	10918P*	0.06	NA	1	3.62	S010228124	<LOQ (0.00494 ug/mL)		
	10919P*	0.09	NA	1	15.9	S010228125	0.177		107
	10920P*	0.05	NA	1	0.00	S010228126	<LOQ (0.00494 ug/mL)	0.0782	0.0836
Group 3	10930P*	0.19	NA	400	102	A010320016	214		
1.6 mg/kg PFOS	10931P*	0.23	NA	400	99.1	A010320017	172		
+ Mevalonic Acid	10932P*	0.22	2nd analysis OK	400	120	A010328016	219		
	10933P*	0.15	2nd analysis OK	400	90.7	A010328017	242		
	10934P*	0.19	NA	400	102	A010320020	214		12.37
	10935P*	0.21	NA	400	95.4	A010320021	182	207	25.6
Group 4	10945P*	0.18	2nd analysis OK	400	119	A010328018	265		
2 mg/kg PFOS	10946P*	0.16	Confirmed Low	400	90.5	A010320023	226		
+ Mevalonic Acid	10947P*	0.13	Confirmed Low	400	83.3	A010320024	256		
	10949P*	0.07	Confirmed Low	400	60.4	A010320025	345		
	10950P*	0.30	2nd analysis OK	400	131	A010328019	175		22.3
	10951P*	0.23	2nd analysis OK	400	137	A010328020	239	251	55.9
Group 5	10958P*	0.10	NA	1	14.0	S010228127	0.140		
Cholesterol Control	10959P*	0.21	NA	1	11.5	S010228128	0.054		
	10960P*	0.11	NA	1	9.88	S010228129	0.089		
	10961P*	0.28	NA	1	20.8	S010228130	0.074		
	10962P*	0.28	NA	1	23.1	S010228134	0.082		38.0
	10963P*	0.31	NA	1	17.1	S010228135	0.055	0.0828	0.0315
Group 6	10972P*	0.13	Confirmed Low	400	45.5	A010320031	140		
1.6 mg/kg PFOS	10974P*	0.26	Confirmed Low	400	85.2	A010320032	131		
+ Cholesterol	10975P*	0.09	Confirmed Low	400	44.0	A010320033	196		
	10976P*	0.16	Confirmed Low	400	57.9	A010320034	145		
	10978P*	0.16	Confirmed Low	400	48.5	A010320035	121		20.9
	10980P*	0.07	Confirmed Low	400	33.9	A010320036	194	154	32.2
Group 7	10985P*	0.24	Confirmed Low	400	75.3	A010320037	126		
2 mg/kg PFOS	10987P*	0.18	Confirmed Low	400	67.3	A010320038	150		
+ Cholesterol	10988P*	0.21	NA	400	85.1	A010320042	162		
	10989P*	0.06	Confirmed Low	400	39.6	A010320043	264		
	10990P*	0.14	Confirmed Low	400	55.4	A010320044	158		30.4
	10991P*	0.24	Confirmed Low	400	80.2	A010320045	134	166	50.4
Group 12	11040P*	0.08	Confirmed Low	400	39.2	A010320046	196		
1.6 mg/kg PFOS	11044P*	0.18	Confirmed Low	400	57.1	A010320047	127		
	11045P*	0.15	Confirmed Low	400	47.7	A010320048	127		
	11046P*	0.25	Confirmed Low	400	69.8	A010320049	112		
	11047P*	0.11	Confirmed Low	400	46.4	A010320050	169		23.4
	11050P*	0.21	Confirmed Low	400	62.8	A010320051	120	142	33.2
Group 13	11053P*	0.11	Confirmed Low	400	41.7	A010320055	152		
2 mg/kg PFOS	11054P*	0.05	Confirmed Low	400	28.4	A010320056	227		
	11056P*	0.08	NA	400	39.4	A010320057	197		
	11058P*	0.29	Confirmed Low	400	91.3	A010320058	126		
	11060P*	0.17	Confirmed Low	400	59.3	A010320059	140		22.4
	11062P*	0.20	Confirmed Low	400	88.7	A010320060	177	170	38.1

PFOS = Perfluorooctanesulfonate * Estimated concentrations, initial volume below 0.5 mL. LAC 02/22/01

Date Entered/By: 03/07/01, 03/23/01 LAC / 04/03/01 KJH
Date Verified/ By: 04/06/01 hoj

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

FACT-TOX-169
Argus 418-018

Study: E01-0180	FACT-TOX-169, Argus 418-018, One Generation Reproduction Study of PFOS-Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats
Product Number(Test Substance):	NA
Matrix:	Rat Sera
Method/Revision:	ETS-8-4.2 & ETS-8-5.2
Analytical Equipment System Number:	Amelia 062498, Soup 020199
Instrument Software/Version:	Masslynx 3.4
Filename:	See Below
R-Squared Value:	See Attachments
Slope:	See Attachments
Y-Intercept:	See Attachments
Dates of Extraction/Analyst:	02/15/01-02/20/01 RWW/KJS
Dates of Analysis/Analyst:	03/01/01, 03/16/01, 03/26/01, 03/28/01, 03/30/01 MMH
Date of Data Reduction/Analyst:	03/02/01, 03/19/01, 03/27/01, 03/29/01, 04/02/01 MMH
Sample Data	Box #01-005A-E

RAT SERA F0 LD5

Group Dose	Sample #	Initial Vol. mL	THPFOS Verified	PFOS Dilution Factor	PFOS Conc. ng/mL	Filename	Concentration of PFOS ug/mL or % Rec	Mean PFOS ug/mL	RSD Std. Dev. MS/MSD RPD
Group 1	10906F*	0.36	NA	1	7.48	S010301020	0.0208		
0.5% Tween 80 Control	10909F	0.62	NA	1	13.7	S010301021	0.0220		
	10911F*	0.39	NA	1	4.42	S010301022	<LOQ (0.00494 ug/mL)		
	11501F*	0.45	NA	1	14.0	S010301023	0.0311		
	11502F	0.52	NA	1	8.85	S010301024	0.0170		47.2
	11503F*	0.36	NA	1	5.25	S010301025	0.0146	0.0184	0.00869
Group 2	10921F	0.53	NA	1	27.6	A010316018	0.0520		
Mevalonic Acid Control	10922F*	0.44	NA	500	60.2	A010326019	68.5		
	10923F*	0.43	NA	1	6.66	A010316019	0.0155		
	11515F*	0.32	NA	20	44.5	A010316029	2.78		
	11516F*	0.13	NA	20	15.8	A010316030	2.42		216
	11517F*	0.23	NA	20	27.3	A010316031	2.38	12.7	27.4
Group 3	10929F*	0.44	NA	1250	36.2	A010326020	103		
1.6 mg/kg PFOS	10938F	0.50	NA	1250	64.9	A010326021	162		
+ Mevalonic Acid	10942F*	0.39	NA	1250	31.7	A010326022	102		
	11536F	0.65	NA	1250	69.6	A010326023	134		
	11537F*	0.18	2nd analysis OK	250	82.6	A010328022	115		19.5
	11538F*	0.48	NA	1250	56.1	A010326024	146	127	24.7
Group 4	11544F	0.58	NA	1250	60.8	A010326025	131		
2 mg/kg PFOS	11545F	1.00	NA	2500	79.5	A010326029	199		
+ Mevalonic Acid	11546F*	0.44	NA	1250	58.8	A010326030	167		
	11547F*	0.10	2nd analysis OK	250	108	A010328023	270		
	11549F	0.66	NA	2500	42.5	A010326031	161		25.5
	11550F*	0.21	NA	1250	34.8	A010326032	207	189	48.2
Group 5	10966F*	0.49	NA	1	11.2	A010316020	0.0228		
Cholesterol Control	10967F*	0.14	NA	1	1.71	A010316021	0.0122		
	10968F*	0.43	NA	1	10.9	A010316022	0.0253		
	11558F	0.65	Confirmed High	50	51.8	A010316047	3.99		
	11559F	0.50	NA	1	29.6	A010316023	0.0592		235
	11561F*	0.45	NA	1	10.1	A010316024	0.0225	0.688	1.62
Group 6	10977F	0.55	NA	1250	49.5	A010326033	112		
1.6 mg/kg PFOS	10979F	0.55	NA	1250	35.0	A010326034	79.6		
+ Cholesterol	10983F*	0.31	2nd analysis OK	250	124	A010328025	100		
	11572F*	0.37	NA	1250	35.7	A010326035	121		
	11573F	0.55	NA	1250	49.8	A010326036	113		14.0
	11574F	0.60	NA	1250	48.0	A010326037	100	104	14.6
Group 7	10995F*	0.40	NA	1250	46.0	A010326038	144		
2 mg/kg PFOS	10997F*	0.40	NA	1250	43.2	A010326042	135		
+ Cholesterol	11586F	0.64	NA	1250	80.3	A010326043	157		
	11587F*	0.46	NA	1250	54.1	A010326044	147		
	11588F*	0.40	NA	1250	44.4	A010326045	139		5.24
	11589F	1.00	NA	1250	118	A010326046	147	145	7.59
Group 8	10999F	0.55	2nd analysis OK	1000	9.61	A010328029	17.5		
0.4 mg/kg PFOS	11000F*	0.47	2nd analysis OK	1000	7.89	A010328030	16.8		
	11003F	0.55	2nd analysis OK	1000	10.4	A010328031	18.9		
	11600F*	0.29	2nd analysis OK	1000	18.8	A010328032	64.9		
	11602F	0.65	2nd analysis OK	1000	16.3	A010328033	25.1		69.0
	11603F*	0.37	2nd analysis OK	1000	7.31	A010328034	19.8	27.2	18.7
Group 9	11009F	0.64	2nd analysis OK	1000	23.3	A010328035	36.3		
0.8 mg/kg PFOS	11012F	0.53	Confirmed Low	1000	21.2	A010316073	40.0		
	11013F*	0.48	2nd analysis OK	1000	23.4	A010328037	48.8		
	11612F	0.80	2nd analysis OK	1000	36.0	A010328038	45.0		
	11614F	0.78	2nd analysis OK	1000	40.2	A010330017	51.5		16.2
	11617F	0.63	2nd analysis OK	1000	21.6	A010330018	34.2	42.6	6.92
Group 10	11019F*	0.48	2nd analysis OK	1000	28.1	A010330019	58.5		
1 mg/kg PFOS	11021F*	0.38	2nd analysis OK	1000	19.8	A010330020	52.0		
	11023F*	0.35	2nd analysis OK	1000	26.7	A010330021	76.2		
	11621F*	0.33	2nd analysis OK	1000	20.3	A010330022	61.5		
	11624F*	0.48	NA	50	16.2	A010326047	1.69		49.8
	11625F*	0.45	2nd analysis OK	1000	28.7	A010330023	63.7	52.3	26.0
Group 11	11031F*	0.38	2nd analysis OK	1000	34.0	A010330024	89.4		
1.2 mg/kg PFOS	11032F*	0.27	2nd analysis OK	1000	26.2	A010330025	97.0		
	11033F	0.53	2nd analysis OK	1000	40.4	A010330026	76.3		
	11630F	0.52	2nd analysis OK	1000	48.6	A010330030	93.5		
	11634F*	0.28	2nd analysis OK	1000	24.9	A010330031	88.9		11.9
	11639F*	0.13	2nd analysis OK	1000	9.20	A010330032	70.8	86.0	10.2
Group 12	11041F	0.59	2nd analysis OK	1000	82.4	A010330033	140		
1.6 mg/kg PFOS	11049F*	0.32	2nd analysis OK	1000	62.3	A010330034	195		
	11640F*	0.11	2nd analysis OK	1000	20.1	A010330035	182		
	11641F*	0.12	2nd analysis OK	1000	24.1	A010330036	201		
	11642F	1.00	2nd analysis OK	1000	120	A010330037	120		19.0
	11643F	0.56	2nd analysis OK	1000	98.5	A010330038	176	169	32.1
Group 13	11059F	0.53	2nd analysis OK	2000	37.7	A010330039	142		
2 mg/kg PFOS	11654F	0.52	2nd analysis OK	2000	42.2	A010330043	162		
	11655F*	0.31	2nd analysis OK	2000	14.3	A010330044	92.3		
	11656F*	0.41	2nd analysis OK	2000	22.8	A010330045	111		
	11657F*	0.15	2nd analysis OK	2000	11.1	A010330046	148		19.9
	11658F	0.72	2nd analysis OK	2000	53.7	A010330047	149	134	26.6

PFOS = Perfluorooctanesulfonate

* Estimated concentrations, initial volume below 0.5 mL. LAC 02/22/01

Date Entered/By: 03/06/01, 03/22/01 LAC / 03/28/01, 04/03/01 KJH
Date Verified/ By: 04/06/01 hoj

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

FACT-TOX-169
Argus 418-018

Study: E01-0180	FACT-TOX-169, Argus 418-018, One Generation Reproduction Study of PFOS-Mevalonic Acid/Cholesterol Challenge and NOEL Investigation in Rats
Product Number(Test Substance):	NA
Matrix:	Rat Sera
Method/Revision:	ETS-8-4.2 & ETS-8-5.2
Analytical Equipment System Number:	Soup 020199
Instrument Software/Version:	Masslynx 3.4
Filename:	See Below
R-Squared Value:	See Attachments
Slope:	See Attachments
Y-Intercept:	See Attachments
Dates of Extraction/Analyst:	02/15/01-02/20/01 RWW/KJS
Dates of Analysis/Analyst:	03/08/01, 03/21/01, 03/26/01, 03/28/01, 03/30/01 MMH
Date of Data Reduction/Analyst:	03/13/01, 03/22/01, 03/27/01, 03/29/01, 04/02/01 MMH
Sample Data	Box #01-005A-E

RAT SERA PUPS F1 LD5

Group Dose	Sample #	Initial Vol. mL	THPFOS Verified	PFOS Dilution Factor	PFOS Conc. ng/mL	Filename	Concentration of PFOS ug/mL or % Rec	Mean PFOS ug/mL	RSD Std. Dev. MS/MSD RPD
Group 1	10906F*	0.30	NA	1	11.0	S010308018	0.0366		
0.5% Tween 80 Control	10909F*	0.04	2nd Analysis OK	1	0.00	A010321019	<LOQ (0.00494 ug/mL)		
	10911F*	0.08	NA	1	0.00	S010308020	<LOQ (0.00494 ug/mL)		
	11501/6F	0.95	NA	1	38.8	S010308021	0.0408		
	11502/7F	0.50	NA	1	24.9	S010308022	0.0497		66.2
	11503/8F	0.64	NA	1	27.1	S010308023	0.0423	0.0299	0.0198
Group 2	10921F*	0.20	NA	1	20.6	S010308024	0.103		
Mevalonic Acid Control	10922F*	0.31	NA	1	6.62	S010308025	0.0214		
	10923F*	0.06	2nd Analysis OK	1	1.78	A010321029	<LOQ (0.00494 ug/mL)		
	11515/24F	1.00	NA	100	49.8	A010321036	4.98		
	11516/21F*	0.43	NA	100	30.5	A010321037	7.09		94.4
	11517/20F	0.76	NA	100	33.7	A010321038	4.43	3.33	3.14
Group 3	10929F*	0.10	NA	200	51.6	A010321042	103		
1.6 mg/kg PFOS	10942F*	0.05	NA	200	34.8	A010321043	139		15.1
+ Mevalonic Acid	11536/37F*	0.10	NA	200	64.7	A010321044	129	124	18.7
Group 5	10966F*	0.13	NA	1	2.96	A010321030	<LOQ (0.00494 ug/mL)		
Cholesterol Control	10967F*	0.23	NA	1	18.1	S010308034	0.0787		
	10969F*	0.10	NA	1	7.84	S010308035	0.0784		
	11558/69F	0.66	NA	1	355	S010308036	0.538		
	11559/70F	1.00	NA	1	166	S010308037	0.166		106
	11561/68F	1.00	NA	1	80.5	S010308038	0.0805	0.188	0.199
Group 6	10979F*	0.11	NA	200	62.8	A010321045	114		7.22
1.6 mg/kg PFOS + Chol.	10983F*	0.12	NA	200	61.8	A010321046	103	109	7.85
Group 7 2 mg/kg 9 + Chol.	10997F*	0.30	NA	500	93.3	A010321047	155	NA	NA
Group 8	10999F*	0.11	NA	200	17.7	A010326048	32.1		
0.4 mg/kg PFOS	11000F*	0.23	NA	200	48.4	A010326049	42.1		
	11003F*	0.09	NA	200	17.3	A010326050	38.4		
	11600/8F*	0.47	NA	200	75.4	A010321051	32.1		
	11602/9F*	0.28	NA	200	50.1	A010321055	35.8		10.6
	11603/4F*	0.17	NA	200	31.2	A010326051	36.7	36.2	3.84
Group 9	11009F*	0.06	NA	200	18.9	A010326055	18.9		
0.8 mg/kg PFOS	11012F*	0.15	NA	200	53.2	A010321058	70.9		
	11013F*	0.07	NA	200	21.1	A010326056	21.1		
	11612/13F	0.50	NA	400	73.6	A010321060	58.9		
	11614/16F*	0.35	NA	400	52.8	A010321061	60.4		52.1
	11617/19F*	0.21	NA	400	46.3	A010321062	88.2	53.1	27.7
Group 10	11019F*	0.28	NA	1000	27.0	A010326057	96.3		
1 mg/kg PFOS	11021F*	0.20	NA	1000	13.0	A010326058	65.0		
	11023F*	0.26	NA	1000	22.9	A010326059	88.2		
	11621/22F*	0.34	NA	1000	31.0	A010326060	91.0		
	11624/29F*	0.14	NA	100	85.8	A010321070	61.3		20.7
	11625/28F	0.70	NA	1000	73.3	A010326061	105	84.4	17.5
Group 11	11031F*	0.08	NA	100	382	A010330048	477 a		
1.2 mg/kg PFOS	11032F*	0.16	NA	1000	10.5	A010326063	65.4		
	11033F*	0.30	NA	1000	28.8	A010326064	96.0		
	11036F*	0.15	NA	1000	9.05	A010326068	60.3		
	11037F*	0.17	NA	1000	15.7	A010326069	92.5		111
	11634/39F*	0.31	NA	1000	27.5	A010326070	88.8	147	162
Group 13 2 mg/kg PFOS	11059F*	0.09	NA	200	62.3	A010326071	138	NA	NA

PFOS = Perfluorooctanesulfonate

* Estimated concentrations, initial volume below 0.5 mL. LAC 02/22/01

a = 4 point curve was used for quantitation. KJH 04/03/01

Date Entered/By: 03/22/01, 03/23/01 LAC / 03/28/01, 04/03/01 KJH

Date Verified/ By: 04/06/01 hoj

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Appendix F: Example Calculations

Formula Used for Sera Analyses in Study FACT TOX-169

$$\text{AR (ng/mL)} \times \text{DF} \times \frac{\text{FV (mL)}}{\text{EV (mL)}} \times \frac{1.0\ \mu g}{1000\ ng} = \textbf{Reported Concentration (µg/mL)}$$

Calculation Used for Group 3, F0, GD21, Animal ID 10930F

$$53.0\ \text{ng/mL} \times 400 \times \frac{1.0\ \text{mL}}{0.3\ \text{mL}} \times \frac{1.0\ \mu g}{1000\ ng} = \textbf{70.7 µg/mL}$$

AR— Analytical result from MassLynx summary
DF— Dilution factor
FV—Final extract volume (1.0 mL unless otherwise noted)
EV—Volume of sera extracted

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Appendix G: Interim Certificate of Analysis

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Centre Analytical Laboratories, Inc.
3048 Research Drive State College, PA 16801
Phone: (814) 231-8032 Fax: (814) 231-1253 or (814) 231-1580

INTERIM CERTIFICATE OF ANALYSIS

Revision 1(9/7/00)

Centre Analytical Laboratories COA Reference #: 023-018A
3M Product: PFOS, Lot 217
Reference #: SD-018
Purity: 86.9%

Test Name	Specifications	Result
Purity[1]		**86.9%**
Appearance	White Crystalline Powder	Conforms
Identification NMR		Positive
Metals (ICP/MS) 1. Calcium 2. Magnesium 3. Sodium 4. Potassium[2] 5. Nickel 6. Iron 7. Manganese		1. 0.005 wt./wt.% 2. 0.001 wt./wt.% 3. 1.439 wt./wt.% 4. 6.849 wt./wt.% 5. <0.001 wt./wt.% 6. 0.005 wt./wt.% 7. <0.001 wt./wt.%
Total % Impurity (NMR)		1.93 wt./wt.%
Total % Impurity (LC/MS)		8.41 wt./wt.%
Total % Impurity (GC/MS)		None Detected
Related Compounds – POAA		0.33 wt./wt.%
Residual Solvents (TGA)		None Detected
Purity by DSC		Not Applicable[3]
Inorganic Anions (IC) 1. Chloride 2. Fluoride 3. Bromide 4. Nitrate 5. Nitrite 6. Phosphate 7. Sulfate[4]		1. <0.015 wt./wt.% 2. 0.59 wt./wt.% 3. <0.040 wt./wt.% 4. <0.009 wt./wt.% 5. <0.006 wt./wt.% 6. <0.007 wt./wt.% 7. 8.76 wt./wt.%
Organic Acids [5] (IC) 1. TFA 2. PFPA 3. HFBA 4. NFPA		1. <0.1 wt./wt.% 2. <0.1 wt./wt.% 3. 0.10 wt./wt.% 4. 0.28 wt./wt.%
Elemental Analysis[6]: 1. Carbon 2. Hydrogen 3. Nitrogen 4. Sulfur 5. Fluorine	1. Theoretical Value = 17.8% 2. Theoretical Value = 0% 3. Theoretical Value = 0% 4. Theoretical Value = 5.95% 5. Theoretical Value = 60%	1. 12.48 wt./wt.% 2. 0.244 wt./wt.% 3. 1.74 wt./wt.% 4. 8.84 wt./wt.% 5. 54.1 wt./wt.%

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Centre Analytical Laboratories, Inc.
3048 Research Drive State College, PA 16801
Phone: (814) 231-8032 Fax: (814) 231-1253 or (814) 231-1580

INTERIM CERTIFICATE OF ANALYSIS

Centre Analytical Laboratories COA Reference #: 023-018A

Date of Last Analysis: 08/31/00

Expiration Date: 08/31/01

Storage Conditions: Frozen ≤-10°C

Re-assessment Date: 08/31/01

[1]Purity = 100% - (sum of metal impurities, 1.45% +LC/MS impurities, 8.41%+Inorganic Fluoride, 0.59%+NMR impurities, 1.93%+organic acid impurities, 0.38%+POAA, 0.33%)

Total impurity from all tests = 13.09%
Purity = 100% - 13.09% = 86.9%

[2]Potassium is expected in this salt form and is therefore not considered an impurity.

[3]Purity by DSC is generally not applicable to materials of low purity. No endotherm was observed for this sample.

[4]Sulfur in the sample appears to be converted to SO_4 and hence detected using the inorganic anion method conditions. The anion result agrees well with the sulfur determination in the elemental analysis, lending confidence to this interpretation. Based on the results, the SO_4 is not considered an impurity.

[5]TFA	Trifluoroacetic acid
HFBA	Heptafluorobutyric acid
NFPA	Nonofluoropentanoic acid
PFPA	Pentafluoropropanoic acid

[6]Theoretical value calculations based on the empirical formula, $C_8F_{17}SO_3K^+$ (MW=538)

This work was conducted under EPA Good Laboratory Practice Standards (40 CFR 160).

3M Medical Department Study: T-6295.25

Analytical Report: FACT-TOX-169
LRN-E01-0180

Centre Analytical Laboratories, Inc.
3048 Research Drive State College, PA 16801
Phone: (814) 231-8032 Fax: (814) 231-1253 or (814) 231-1580

INTERIM CERTIFICATE OF ANALYSIS

Centre Analytical Laboratories COA Reference #: 023-018A

LC/MS Purity Profile:

Impurity	wt./wt. %
C4	1.22
C5	1.33
C6	4.72
C7	1.14
Total	**8.41**

Note: The C4 and C6 values were calculated using the C4 and C6 standard calibration curves, respectively. The C5 value was calculated using the average response factors from the C4 and C6 standard curves. Likewise, the C7 value was calculated using the average response factors from the C6 and C8 standard curves.

Prepared By: _____ 9/10/00
David S. Bell Date
Scientist, Centre Analytical Laboratories

Reviewed By: _____ 9/11/00
John Flaherty Date
Laboratory Manager, Centre Analytical Laboratories

3M Medical Department Study: T-6295.25 Analytical Report: FACT TOX-169
LRN-E01-0180

Appendix H: Report Signature Page

Deanna J. Luebker, M.S., *Study Director* — Date: 6/6/01

Marvin T. Case, D.V.M., Ph.D., *Sponsor Representative* — Date: 6 June 2001

Kristen J. Hansen, Ph.D., *Principal Analytical Investigator* — Date: June 6, 2001

William K. Reagen, Ph.D., *Laboratory Manager* — Date: 06/05/01

PFOS Concentrations in Rat Livers

Southern Research Institute
Study A344.1.4

Methods

We first prepared control tissue homogenate by homogenizing rat liver from control rats 1:5 (by weight) with DI water. This was used to prepare the calibration standards. We spiked in known amounts of test article (PFOS) and internal standard (PFOC) into aliquotes of the blank tissue homogneate. A blank + int. std. and a blank - int. std were prepared with each calibration curve.

The samples were also homogenized (1:5) by weight with DI water. Dilutions made to any of these samples were with unspiked blank control liver homogenate prepared above. Then an equal amount of internal stanard (PFOC) was add to each sample.

Then to both the samples and standards we added 1 mL of DI water, 1 mL of 0.25/0.25 M carbonate/bicarbonate buffer, and 500 µL of ion pairing reagent (0.5 M tetrabutylammonium hydroxide) adjusted to pH 10.5 with sodium hydroxide. The solution was mixed briefly and the we added 2.5 mL of ethyl acetate. This mixture was shaken for 1 hr on a platform mixer. After an hour the samples are taken off and centrifuged at 2500 rpm for 5 min. The ethyl acetate layer is removed and evaporated to dryness under dry nitrogen. The residue is reconstitued and filtered through a syringe filter into autosampler vial for analysis.

We then perform HPLC MS/MS using a MRM experiment on the samples and standards.

Southern Research Insitiute
Study A344.1.4

PFOS in Rat Livers

File Name	Sample Name	Measured Conc. (ng/mL)	Calculated Conc. (ng/g)
6/28/2004	F0 10906 control	-5.582	BQL
6/28/2005	F0 10909 control	1.553	BQL
6/28/2006	F0 10913 control	-3.786	BQL
6/28/2007	F0 11501 control	-0.2463	BQL
6/28/2008	F0 11504 control	10.29	1,265
6/28/2009	F0 11505 control	15.86	2,001
6/28/2010	F1 10906 control	-9.268	BQL
6/28/2011	F1 10909 control	-10.07	BQL
6/28/2012	F1 10911 control	-8.904	BQL
6/28/2013	F1 11501 control	-1.42	BQL
6/28/2014	F1 11502 control	-10.5	BQL
6/28/2015	F1 11503 control	-10.27	BQL
6/28/2017	F1 10999 0.4 mg/kg	157.5	29,745
6/28/2018	F1 11000 0.4 mg/kg	273.7	96,373
6/28/2019	F1 11001 0.4 mg/kg	168.4	101,752
6/28/2021	F1 11600 0.4 mg/kg	139.7	43,318
6/28/2022	F1 11602 0.4 mg/kg	215	71,429
6/28/2054	F1 11601 0.4 mg/kg	327.9	98,027
6/28/2024	F1 11049 1.6 mg/kg	1245	116,800*
6/28/2025	F1 11640 1.6 mg/kg	541.7	191,752
6/28/2026	F1 11641 1.6 mg/kg	601.9	477,698
6/28/2028	F1 11642 1.6 mg/kg	539	148,895
6/28/2029	F1 11644 1.6 mg/kg	592.7	302,398
6/28/2030	F1 11648 1.6 mg/kg	650.1	249,080
6/28/2032	F1 11059 2 mg/kg	660.3	143,232
6/28/2033	F1 11654 2 mg/kg	632.2	356,169
6/28/2034	F1 11655 2 mg/kg	665.2	199,460
6/28/2036	F1 11656 2 mg/kg	604.6	281,865
6/28/2037	F0 11004 0.4 mg/kg	510.2	54,801
6/28/2038	F0 11600 0.4 mg/kg	388.2	42,824
6/28/2040	F0 11601 0.4 mg/kg	496.5	45,509
6/28/2041	F0 11603 0.4 mg/kg	455	48,533
6/28/2043	F0 11640 1.6 mg/kg	921	122,230
6/28/2044	F0 11643 1.6 mg/kg	1342	113,249
6/28/2045	F0 11642 1.6 mg/kg	1025	87,086
6/28/2047	F0 11645 1.6 mg/kg	989.4	113,921
6/28/2048	F0 11646 1.6 mg/kg	964.2	114,581
6/28/2050	F0 11659 2 mg/kg	1389	159,015
6/28/2051	F0 11664 2 mg/kg	1087	159,034
6/28/2052	F0 11657 2 mg/kg	1196	133,931
6/28/2053	F0 11658 2 mg/kg	1356	151,171
6/28/2055	F0 11059 2 mg/kg	1080	110,148
6/28/2056	F0 11654 2 mg/kg	1162	161,501

*Pup and Dam samples were mixed together during preparation

BQL = below quantitation limit, < 12.5 ng/mL OR ng/g

APPENDIX J

HISTOPATHOLOGY REPORT

RESEARCH PATHOLOGY SERVICES, INC.

438 East Butler Avenue, New Britain, PA 18901
Phone: 215-345-7070 • Fax: 215-345-4326

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS PROTOCOL 418-018 SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

SUBMITTED TO:

Raymond G. York, Ph.D. , D.A.B.T.
Associate Director of Research
Argus Research Laboratories, Inc.
905 Sheehy Drive, Building A
Horsham, PA 19044

SUBMITTED BY:

W. Ray Brown Dec. 13, 2002

W. Ray Brown, D.V.M., Ph.D.
Veterinary Pathologist

December 13, 2002

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS PROTOCOL 418-018 SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

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ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS PROTOCOL 418-018 SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

METHOD:

Microscopic examination was made of the heart and thyroid of two male and two female F1 generation Crl:CD®(SD) IGS BR VAF/Plus® pups of a one-generation reproduction study. The dosage group identification and treatment of the groups of rats are listed below.

Group	Identification	Number of Animals	1st Dosage	2nd Dosage ½ hr ± 10 minutes after 1st	3rd Dosage 5 hr ± 30 minutes after 2nd
1	Vehicle Control	28	RODI H_2O	0.5% Tween 80	RODI H_2O
2	Mevalonic Acid Control	28	500 mg/kg Mevalonic Acid	0.5% Tween 80	500 mg/kg Mevalonic Acid
3	1.6 mg/kg PFOS + Mevalonic Acid	28	500 mg/kg Mevalonic Acid	1.6 mg/kg PFOS	500 mg/kg Mevalonic Acid
4	2 mg/kg PFOS + Mevalonic Acid	28	500 mg/kg Mevalonic Acid	2 mg/kg PFOS	500 mg/kg Mevalonic Acid
5	Cholesterol Control	28	500 mg/mg Cholesterol	0.5% Tween 80	NA
6	1.6 mg/kg PFOS + Cholesterol	28	500 mg/mg Cholesterol	1.6 mg/kg PFOS	NA
7	2 mg/kg PFOS + Cholesterol	28	500 mg/mg Cholesterol	2 mg/kg PFOS	NA
8	0.4 mg/kg PFOS	20	NA	0.4 mg/kg PFOS	NA
9	0.8 mg/kg PFOS	20	NA	0.8 mg/kg PFOS	NA
10	1 mg/kg PFOS	20	NA	1 mg/kg PFOS	NA
11	1.2 mg/kg PFOS	20	NA	1.2 mg/kg PFOS	NA
12	1.6 mg/kg PFOS	28	NA	1.6 mg/kg PFOS	NA
13	2 mg/kg PFOS	28	NA	2 mg/kg PFOS	NA

The test and control articles were considered 100% pure for the purpose of dosage calculations. Mevalonic acid was dosed twice daily.

The F0 generation female rats were given the test article daily beginning 42 days before cohabitation (maximum 14 days) and continuing through Day 20 of presumed gestation (rats assigned to Caesarean-sectioning), Day 24 of presumed

ONE GENERATION REPRODUCTION STUDY OF
PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE
AND NOEL INVESTIGATION IN RATS
PROTOCOL 418-018
SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

gestation (rats assigned to natural delivery that do not deliver a litter) or Day 4 post-partum (rats that deliver a litter). Rats in the process of delivering were not given the test/control article. Male rats were used only as breeders and were not considered part of the test system. F1 generation pups were not directly given the test article, but were possibly exposed to the test article during maternal gestation (*in utero* exposure) or via maternal milk during the lactation period. Dosages of the F0 generation rats were adjusted for the most recently recorded body weight and given at approximately the same times each day.

On Day 5 postpartum, pups were sacrificed and the heart and thyroid were collected and preserved in 10% neutral buffered formalin. The in-life portion of the study, necropsies, and recording of the gross observations at necropsy were performed by the staff of Argus Research Laboratories, Inc.

Representative sections of the heart and thyroid of one male and one female F1 generation pup from the vehicle control group (Group 1) and 2 mg/kg PFOS group (Group 13) were routinely processed, embedded in paraffin, sectioned, and stained with hematoxylin and eosin for microscopic examination.

Upon completion of the project, all raw data (remaining wet tissue, paraffin blocks, microscopic slides and histology records) will be returned to Argus Research Laboratories, Inc. for archiving.

ONE GENERATION REPRODUCTION STUDY OF
PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE
AND NOEL INVESTIGATION IN RATS
PROTOCOL 418-018
SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

RESULTS:

The type and incidence of the histomorphologic observations in the heart and thyroid of the male and female pups from dams of the vehicle control and 2 mg/kg PFOS dosage groups are shown below.

Dose Group:	1	13	1	13
Sex:	M	M	F	F
Dam Number:	10909	11059	10909	11059
Number of Pups Examined:	1	1	1	1
THYROID:				
No. Examined	1	1	1	1
No. Normal	1	1	1	1
HEART:				
No. Examined	1	1	1	1
No. Normal	1	1	1	1

No microscopic changes were observed in the heart or thyroid of the male and female pups exposed to 2 mg/kg of PFOS. The sections examined were all within normal histologic limits.

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS
PROTOCOL 418-018
SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

SUMMARY:

Microscopic examination was made of the heart and thyroid from one male and one female F1 generation pup from dams of each of the vehicle control group (Group 1) and 2 mg/kg PFOS group (Group 13).

No microscopic changes were seen in the heart or thyroid of the male and female pups exposed to 2 mg/kg of PFOS.

ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS PROTOCOL 418-018 SPONSOR'S STUDY NUMBER: T-6295.25

HISTOPATHOLOGY REPORT

QUALITY ASSURANCE UNIT STATEMENT

All aspects of the tissue processing, microscopic slide preparation, histopathologic evaluation and report preparation for the study listed above have been performed according to the Standard Operating Procedures of Research Pathology Services, Inc. and were audited in accordance with the procedures established by the Quality Assurance Unit of Research Pathology Services, Inc. in compliance with the Good Laboratory Practice regulations specified in the protocol.

Study Design as Modification of: US Food and Drug Administration)1994). Internation Conference on Harmonisation; Guideline on detection of toxicity to reproduction for medicinal products. *Federal Register*, September 22, 1994, Vol. 59, No. 183.

US Food and Drug Administration. Good Laboratory Practice Regulations: Final Rule. 21 CFR Part 58.

European Economic Community (1989). *Council decision on 28 July 1989 on the acceptance by the European Economic Community of an OECD decision/recommendation on compliance with principles of good laoratory practive.* Official Journal of the European Communities: Legislation. 32 (No. L 315; 28 October): 1-17.

Japanese Ministry of Health and Welfare (1997). *Good Laboratory Practice Standard for Safety Studies on Drugs*, MHW Ordinance Number 21, March 26, 1997.

Quality Assurance Unit study-based inspections were performed as shown below. There were no deviations from the protocol, Standard Operating Procedures and/or appropriate Good Laboratory Practice regulations noted during the conduct of the study. The summary report of QA inspections is included in the final report submitted to the Study Director on December 13, 2002.

Dates of Inspection	Study Phase	Dates Reported to Management	Date Reported to Study Director
04/09/01	Master Schedule	04/30/01	12/13/02
04/09/01	Pre-initiation	04/30/01	12/13/02
04/24/01	Trimming	04/30/01	12/13/02
05/01/01	Embedding	05/31/01	12/13/02
06/07/01	Microtomy	06/30/01	12/13/02
06/08/01	Staining	06/30/01	12/13/02
07/13/01	Histopathology	07/31/01	12/13/02
07/17/01	Data Entry	07/31/01	12/13/02
07/25/01	Data Verification	07/31/01	12/13/02
07/27/01	Data Processing	07/31/01	12/13/02
07/30/01	Report Preparation	07/31/01	12/13/02
08/03/01	Pre-submission Audit	08/08/01	12/13/02
08/08/01, 10/17/01	Draft report	08/08/01, 10/17/01	12/13/02
12/13/02	Final report	12/13/02	12/13/02

Karen W Harkins BS 12-13-02

Karen W. Harkins, BS — Date
Quality Assurance Unit

APPENDIX K

HISTORICAL CONTROL DATA

SUMMARY OF REPRODUCTIVE INDICES
Crl:CD(SD)IGS BR RATS
DAY 21 C-SECTION

PERIOD	JUNE 1998 - SEPTEMBER 1999
NUMBER OF STUDIES	13
NUMBER OF RATS:	
TESTED	252
PREGNANT	235
FOUND DEAD	1
ABORTED	0
DELIVERED	0
NUMBER OF RATS PREGNANT AT CAESAREAN-SECTIONING	234
NUMBER OF RATS WITH SINGLE CONCEPTUS LITTER:	
LIVE	0
RESORBED	0
ABORTED	0

	MEAN or %	RANGE/STUDY MEAN or %
% PREGNANT	93.4	(87.5-100)
AVERAGE # CORPORA LUTEA	17.6	(16.4-19.1)
AVERAGE # IMPLANTATIONS	14.9	(14.0-16.3)
AVERAGE LITTER SIZE		
AVERAGE # LIVE FETUSES	14.5	(13.6-15.9)
AVERAGE # DEAD FETUSES	0.0	--
AVERAGE # RESORPTIONS	0.5	(0.1-1.4)
AVERAGE # EARLY RESORPTIONS	0.5	(0.1-1.4)
AVERAGE # LATE RESORPTIONS	0.0	(0-0.1)

SUMMARY OF REPRODUCTIVE INDICES
Crl:CD(SD)IGS BR RATS
DAY 21 C-SECTION

	MEAN or %	RANGE/STUDY MEAN or %
AVERAGE % DAMS WITH ANY RESORPTIONS	39.3	(12.5-71.4)
AVERAGE % DAMS WITH ALL CONCEPTUSES RESORBED	0.0	--
AVERAGE % DAMS WITH ONE OR MORE LIVE FETUSES	100.0	--
AVERAGE SEX RATIO, (% MALES/LITTER)	49.4	(43.0-57.0)
AVERAGE FETAL BODY WEIGHT (G)	5.28	(5.10-5.48)
AVERAGE FOR MALES (G)	5.40	(5.15-5.63)
AVERAGE FOR FEMALES (G)	5.12	(4.92-5.29)
AVERAGE % DEAD OR RESORBED CONCEPTUSES/LITTER	3.3	(0.8-8.8)

SUMMARY OF MATERNAL NECROPSY OBSERVATIONS
Crl:CD(SD)IGS BR RATS - DAY 21 C-SECTION

PERIOD JUNE 1998 - SEPTEMBER 1999

# STUDIES	13
# RATS TESTED	252
# RATS PREGNANT	235
# RATS DIED	1
# RATS ABORTED	0
# RATS DELIVERED	0
# RATS WITH 100% RESORPTION	0

OBSERVATIONS			RANGE / STUDY	
	N	%	N	%
LIVER				
Left lateral lobe, tan area	1	0.40	0-1	(0-4.0)
UTERUS				
Moderate hydrometra	1	0.40	0-1	(0-4.2)
INGUINAL AREA				
Subcutaneous, tan mass on right side	1	0.40	0-1	(0-4.5)

SUMMARY OF FETAL GROSS EXTERNAL ALTERATIONS
Crl:CD(SD)IGS BR RATS - DAY 21 C-SECTION

PERIOD JUNE 1998 - SEPTEMBER 1999

# STUDIES INCLUDED	13
# LITTERS EXAMINED	234
# LIVE FETUSES EXAMINED	3383

ALTERATION			N	%	RANGE N	/STUDY %
EYE(S)						
	Eye bulges depressed	L	1	0.43	0-1	(0-4.2)
		F	1	0.03	0-1	(0-0.3)
JAWS						
	Micrognathia	L	1	0.43	0-1	(0-4.2)
		F	1	0.03	0-1	(0-0.3)
HINDPAW						
	Extra digit present	L	1	0.43	0-1	(0-4.5)
		F	1	0.03	0-1	(0-0.3)
TAIL						
	Threadlike	L	1	0.43	0-1	(0-4.3)
		F	1	0.03	0-1	(0-0.3)

L: LITTER INCIDENCE
F: FETAL INCIDENCE

SUMMARY OF FETAL SOFT TISSUE ALTERATIONS
Crl:CD(SD)IGS BR RATS
DAY 21 C-SECTION

PERIOD JUNE 1998 - SEPTEMBER 1999
STUDIES INCLUDED 8
LITTERS EXAMINED 180
FETUSES EXAMINED 1245

					RANGE/STUDY	
	ALTERATION		N	%	N	%
BRAIN						
	Dilation of lateral ventricles	L	2	1.11	0-2	(0-8.3)
		F	2	0.16	0-2	(0-1.2)
HEART						
	Septal defect	L	1	0.56	0-1	(0-4.2)
		F	1	0.08	0-1	(0-0.6)
VESSELS						
	Umbilical artery, descends	L	3	1.67	0-2	(0-9.1)
	to left of urinary bladder	F	3	0.24	0-2	(0-1.2)
	Innominate artery, absent	L	2	1.11	0-2	(0-8.3)
		F	2	0.16	0-2	(0-1.2)
	Aorta passes dorsal to the	L	1	0.56	0-1	(0-4.2)
	trachea and esophagus	F	1	0.08	0-1	(0-0.6)
	Left carotid rises to the	L	1	0.56	0-1	(0-4.2)
	right of the right carotid	F	1	0.08	0-1	(0-0.6)
	Right carotid rises to the					
	right of the right sub-	L	1	0.56	0-1	(0-4.2)
	clavian	F	1	0.08	0-1	(0-0.6)
	Pulmonary artery, small	L	1	0.56	0-1	(0-4.2)
		F	1	0.08	0-1	(0-0.6)
	Semilunar valve, small	L	1	0.56	0-1	(0-4.2)
		F	1	0.08	0-1	(0-0.6)
	Ductus arteriosis attached	L	1	0.56	0-1	(0-4.2)
	to the left subclavian	F	1	0.08	0-1	(0-0.6)
	Great vessels, transposed	L	2	1.11	0-1	(0-4.3)
		F	2	0.16	0-1	(0-0.7)
LUNGS						
	Apical and cardiac lobes,	L	1	0.56	0-1	(0-4.2)
	absent	F	1	0.08	0-1	(0-0.6)
KIDNEY(S)						
	Pelvis, slight dilation	L	1	0.56	0-1	(0-4.5)
		F	1	0.08	0-1	(0-0.7)
	Pelvis, marked dilation	L	1	0.56	0-1	(0-4.5)
		F	1	0.08	0-1	(0-0.7)

L: LITTER INCIDENCE
F: FETAL INCIDENCE

SUMMARY OF FETAL SKELETAL ALTERATIONS
Crl:CD(SD)IGS BR RATS - DAY 21 C-SECTION

PERIOD	JUNE 1998 - SEPTEMBER 1999
# STUDIES INCLUDED	8
# LITTERS EXAMINED	180
# FETUSES EXAMINED	1332

ALTERATION		N	%	RANGE / STUDY N	%
SKULL					
Eye socket: small	L	1	0.56	0-1	(0-4.2)
	F	1	0.08	0-1	(0-0.6)
Mandibles: short	L	1	0.56	0-1	(0-4.2)
	F	1	0.08	0-1	(0-0.6)
VERTEBRAE					
Thoracic: Centrum, bifid	L	4	2.22	0-1	(0-4.8)
	F	4	0.30	0-1	(0-0.6)
: Centrum, fused to arch	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)
: 4 present	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)
Lumbar: Fused	L	2	1.11	0-1	(0-4.8)
	F	2	0.15	0-1	(0-0.6)
: 8 present	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)
: Centrum, fused to arches	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)
RIBS					
Cervical Rib(s) present	L	12	6.67	0-5	(0-20.8)
	F	14	1.05	0-6	(0-3.5)
One or more, wavy	L	6	3.33	0-2	(0-9.5)
	F	8	0.60	0-3	(0-1.8)
One or more, incompletely ossified (hypoplastic), or not ossified	L	2	1.11	0-2	(0-9.1)
	F	3	0.22	0-3	(0-1.8)
Fused	L	1	0.56	0-1	(0-4.2)
	F	1	0.08	0-1	(0-0.6)
4 present	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)

L: LITTER INCIDENCE
F: FETAL INCIDENCE

SUMMARY OF FETAL SKELETAL ALTERATIONS
Crl:CD(SD)IGS BR RATS - DAY 21 C-SECTION

ALTERATION		N	%	RANGE / STUDY N	%
MANUBRIUM					
Duplicated	L	1	0.56	0-1	(0-4.5)
	F	1	0.08	0-1	(0-0.6)
STERNEBRAE					
One or more incompletely	L	4	2.22	0-2	(0-9.1)
ossified or not ossified	F	4	0.30	0-2	(0-1.2)
Asymmetric	L	2	1.11	0-1	(0-4.5)
	F	2	0.15	0-1	(0-0.6)
Duplicated	L	1	0.56	0-1	(0-4.5)
	F	1	0.08	0-1	(0-0.6)
XIPHOID					
Duplicated	L	1	0.56	0-1	(0-4.5)
	F	1	0.08	0-1	(0-0.6)
HINDLIMB					
Extra digit present	L	1	0.56	0-1	(0-4.5)
	F	1	0.08	0-1	(0-0.6)
Femur, bent	L	1	0.56	0-1	(0-4.8)
	F	1	0.08	0-1	(0-0.6)

L: LITTER INCIDENCE
F: FETAL INCIDENCE

SUMMARY OF FETAL OSSIFICATION SITES
SKELETAL AVERAGES
Crl:CD(SD)IGS BR RATS
DAY 21 C-SECTION

PERIOD:	JUNE 1998 - SEPTEMBER 1999
# STUDIES INCLUDED	8
# LITTERS EXAMINED	180
# FETUSES EXAMINED	1331

SKELETAL AVERAGES	FETUS/LITTER MEAN	RANGE/STUDY
HYOID	0.99	(0.96-1.00)
VERTEBRAE		
CERVICAL	7.00	--
THORACIC	13.07	(13.03-13.14)
LUMBAR	5.92	(5.85-5.97)
SACRAL	3.00	--
CAUDAL	7.44	(7.11-7.63)
RIBS (pairs)	13.05	(13.02-13.12)
STERNUM		
MANUBRIUM	1.00	--
STERNAL CENTERS	3.99	(3.98-4.00)
XIPHOID	1.00	--
FOREPAWS (Calculated as average per limb)		
CARPALS	0.00	--
METACARPALS	4.00	(3.99-4.00)
DIGITS	5.00	--
PHALANGES	8.28	(8.04-8.52)
HINDPAWS (Calculated as average per limb)		
TARSALS	0.02	(0-0.07)
METATARSALS	4.80	(4.73-4.87)
DIGITS	5.00	--
PHALANGES	6.21	(5.81-6.54)

APPENDIX L

STATEMENT OF THE STUDY DIRECTOR

PRIMEDICA

Argus Research Laboratories, Inc.
905 Sheehy Drive, Building A
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Telephone: (215) 443-8710
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PROTOCOL 418-018: ONE GENERATION REPRODUCTION STUDY OF PFOS - MEVALONIC ACID/CHOLESTEROL CHALLENGE AND NOEL INVESTIGATION IN RATS

SPONSOR'S STUDY NUMBER: T-6295.25

STATEMENT OF THE STUDY DIRECTOR

This final report accurately reflects the raw data obtained during the performance of the study. No deviations from the U.S. Food and Drug Administration (FDA) Good Laboratory Practice Regulations; Final Rule[a], the Japanese Ministry of Health and Welfare (MHW) *Good Laboratory Practice Standard for Safety Studies on Drugs*[b] and the Organisation for Economic Co-operation and Development (OECD). *The Revised OECD Principles of Good Laboratory Practices*[c] occurred that affected the quality or integrity of the study, with the exceptions in the bulleted list bellow:

- There were two study directors for this study; one for the in-life phase and one for the analytical phase. The in-life study phase was considered to end at the generation and shipment of specimens. The analytical study phase was considered to start at the receipt of these specimens for analysis. Since the technical performance of each phase was entirely separate, no effect is expected from this exception.
- Automated data collection systems have not been validated as required according to 21 CFR 58.130(c). The hard copy printout is considered the raw data.
- The stability of the reference standard and internal standard were not determined.

16 DEC 2002

Raymond G. York, Ph.D., DABT Date
Associate Director of Research
and Study Director
Argus Research Laboratories, Inc.

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a. U.S. Food and Drug Administration. *Good Laboratory Practice Regulations; Final Rule*. 21 CFR Part 58.
b. Japanese Ministry of Health and Welfare (1997). *Good Laboratory Practice Standard for Safety Studies on Drugs*. Ordinance No. 21, March 26, 1997, Japan.
c. Organisation for Economic Cooperation and Development (1998). *The Revised OECD Principles of Good Laboratory Practices* [C(97)186/Final].

APPENDIX M

QUALITY ASSURANCE STATEMENT

PRIMEDICA

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QUALITY ASSURANCE STATEMENT

Argus Protocol: 418-018

Study Director: Raymond G. York, Ph.D., DABT

Sponsor's Study Number: T-6295.25

The protocol, critical phases, raw data and final report were inspected by the Quality Assurance Unit (QAU), to assure conformance with:

U.S. Food and Drug Administration. Good Laboratory Practice Regulations; Final Rule. 21 CFR Part 58.

Japanese Ministry of Health and Welfare (1997). *Good Laboratory Practice Standard for Safety Studies on Drugs*, MHW Ordinance Number 21, March 26, 1997.

European Economic Community (1989). *Council decision on 28 July 1989 on the acceptance by the European Economic Community of an OECD decision/recommendation on compliance with principles of good laboratory practice.* Official Journal of the European Communities: Legislation. 32 (No. L 315; 28 October): 1-17.

The undersigned indicate that the report is an accurate representation of the raw data. Data provided by the Sponsor or a subcontractor were not audited by the Primedica Argus Quality Assurance Unit.

The draft protocol for this study was audited for adherence to the appropriate regulations(s), as stated above, on 27 JUN 00, 31 JUL 00, 15 AUG 00 and 21 AUG 00.

The QAU inspection and report audit dates are listed below:

Inspection Phase	Inspection Date(s)	Date(s) Findings Submitted to Study Director	Date(s) Findings Submitted to Management
Test Article Preparation	04 OCT 00	11 OCT 00	11 OCT 00
Blood Collection	31 OCT 00	31 OCT 00	31 OCT 00
Caesarean-Sectioning	31 OCT 00	03 NOV 00	03 NOV 00
Tissue Collection	31 OCT 00	03 NOV 00	03 NOV 00
Natural Delivery/Litter	02 NOV 00	03 NOV 00	03 NOV 00
Dam/Litter Sacrifice	06 NOV 00	08 NOV 00	08 NOV 00
Milk Collection	06 NOV 00	08 NOV 00	08 NOV 00

Observations

Inspection Phase	Inspection Date(s)	Date(s) Findings Submitted to Study Director	Date(s) Findings Submitted to Management
In-Life Raw Data	18 JAN 01, 19 JAN 01, 22 JAN 01 to 26 JAN 01 and 29 JAN 01 to 31 JAN 01	01 FEB 01	01 FEB 01
	01 FEB 01, 05 FEB 01, 07 FEB 01 to 09 FEB 01 and 12 FEB 01 to 19 FEB 01	19 FEB 01	19 FEB 01
Formulations Raw Data	25 FEB 01 to 28 FEB 01	01 MAR 01	01 MAR 01
Report Tables	25 FEB 01 to 26 FEB 01 and 23 MAR 01 to 29 MAR 01	29 MAR 01	29 MAR 01
Report Text	17 MAR 01, 30 MAR 01 and 02APR 01 to 03 APR 01 to	03 APR 01	03 APR 01
	10 APR 01, 12 APR 01, 13 APR 01 and	16 APR 01	16 APR 01
	16 APR 01 and 17 APR 01	17 APR 01	17 APR 01
	18 APR 01	18 APR 01	18 APR 01
	04 MAY 01 and 07 MAY 01	07 MAY 01	07 MAY 01
Revised Report	17 JUL 01	17 JUL 01	17 JUL 01
	10 OCT 01	10 OCT 01	10 OCT 01
	30 OCT 01	31 OCT 01	31 OCT 01
	31 JAN 02	31 JAN 02	31 JAN 02
	04 FEB 02	04 FEB 02	04 FEB 02
	27 MAR 02	27 MAR 02	27 MAR 02
	10 DEC 02	10 DEC 02	10 DEC 02

Matthew J. Vaneman 16 DEC 02

Matthew J. Vaneman, B.S. Date
Manager, Regulatory Compliance

for Maureen O'Brien 16 DEC 02

Cynthia M. Kelsch Date
Quality Assurance Associate and
Principal Auditor