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TITLE: PCB CONTENT OF MONKEY TISSUE

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ABSTRACT: A subacute feeding study to determine the effects of polychlorinated biphenyls (PCBs) on reproduction of adult Rhesus monkeys was carried out by Monsanto Industrial Chemicals Company. Monsanto Research Corporation, Dayton Laboratory, carried out the analysis of various biological samples (fat, skin, milk, placenta, blood) for PCBs. This report documents the analytical techniques utilized and the data obtained on over seven hundred individual samples.

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1. INTRODUCTION

This study is designed to determine the effects of polychlorinated biphenyl (PCB) compounds on the reproductive abilities of adult Rhesus monkeys and to determine effects on infants. In the course of that study, analyses were conducted for PCB residues in a series of materials.

An existing procedure for detecting PCBs in animal lipids (Kaley, et al., Bull. Env. Cont. & Tox., 15(6)1976] provided the basic methodology for PCB tissue analyses in this study. However, the following must be considered in reviewing and interpreting the reported tissue PCB concentrations. Although the original methodology had been used extensively for tissue analysis, it cannot be considered fully validated for the present application. It was necessary to modify extraction procedures for the variety of monkey tissues involved and the small sample sizes precluded statistical evaluation of the accuracy (recovery) and precision of the PCB determinations in the various matrixes. Thus, it is extremely difficult to determine whether variations in PCB tissue concentrations for an individual animal, or between different animals, are significant differences or the result of analytical variability. The limited size of the samples introduces its own difficulties. On a relative basis, it tends to increase analytical variability, particularly as the concentration of the material sought decreases. Small sample sizes also increase the probability of inhomogeneity, which contributes more variability.

2. ANALYSIS OF SAMPLES FOR PCB'S

2.1 COLLECTION OF SAMPLES

Forty-eight adult Rhesus monkeys were involved in a feeding study in which they were fed Aroclor 1254 (a PCB compound composed of 12 carbon atoms and 54% chlorine per molecule) for a period of one year. Fat biopsies were analyzed for PCB content approximately every two months during the study, which included both the one-year feeding program, and an eight-month relaxation period. The initial samples in the study, approximately one hundred adult fat samples, were analyzed by the Monsanto Industrial Chemicals (MIC) Company in St. Louis, Missouri. All subsequent analyses were performed at Monsanto Research Corporation (MRC), Dayton Laboratory. The feeding studies, including excision of tissue samples, were carried out by Litton Bionetics, Kensington, Maryland.

The animals were divided into four groups consisting of twelve monkeys each (eight females and four males) for the purpose of this study. One group of animals was used as a control group, and received no PCB's. The remaining three groups were fed low, medium, and high dosages of PCB (5 µg PCB per kg of body weight per day, 25 µg/kg per day, and 100 µg/kg per day, respectively). The animal sample identifications for the individual animals within each group are presented in Table 1. The PCB's administered to the animals were fed as a dietary supplement. Corn oil spiked with Aroclor 1254 was mixed with applesauce and then fed to the monkeys in addition to their normal daily diet of monkey chow. MIC has analyzed portions of each individual batch of corn oil used; this data is presented in Table A-1 in Appendix A. A representative sample of the monkey chow fed as a regular dietary staple was also analyzed for any background PCB levels present. These data are presented in Table B-1 in Appendix B.

TABLE 1. SAMPLE IDENTIFICATIONS DESIGNATED FOR
RHESUS MONKEYS USED IN THE FEEDING PROGRAM

<u>Control Group</u>		<u>Low Group</u>	
764-E	Female	309-I	Female
618-I	Female	483-F	Female
604-I	Female	646-E	Female
578-H	Female	701-E	Female
274-F	Female	839-H	Female
569-H	Female	284-I	Female
200-F	Female	605-F	Female
87-F	Female	624-I	Female
227-G	Male	516-G	Male
739-F	Male	119-H	Male
426-G	Male	432-J	Male
418-J	Male	428-J	Male

<u>Medium Group</u>		<u>High Group</u>	
273-I	Female	152-F	Female
540-H	Female	486-H	Female
841-H	Female	226-F	Female
281-G	Female	269-I	Female
763-E	Female	312-I	Female
307-I	Female	287-I	Female
757-I	Female	770-I	Female
762-E	Female	338-I	Female
599-I	Male	706-E	Male
20-I	Male	425-J	Male
46-I	Male	427-J	Male
595-I	Male	600-I	Male

In addition to the adult fat samples analyzed for PCB content, numerous infant Rhesus monkeys born to the female adults were biopsied and analyzed for PCB's they may have accumulated both during gestation, and after birth as a result of nursing. These baby monkeys (enumerated in Table 2) were biopsied on an intermittent basis, and in most cases, skin samples were analyzed rather than fat tissue.

TABLE 2. SAMPLE DESIGNATIONS FOR INFANT MONKEYS AND
PCB DOSE LEVELS OF THEIR MOTHERS

<u>Animal Designation</u>	<u>Mother Dose Level</u>
B-8483	Control
B-8518	Control
B-8532	Control
B-8533	Control
B-8557	Control
B-8574	Control
B-8621	Control
B-8527	Low
B-8562	Low
B-8604	Low
B-8754	Low
B-8815	Low
B-8511	Medium
B-8546	Medium
B-8559	Medium
B-8560	Medium
B-8592	Medium
B-8603	Medium
B-8860	Medium
B-8542	High

Throughout the program, various types of additional samples were analyzed on an "as provided" basis. Several milk (colostrum) samples taken from nursing mothers, placental samples, and blood serum samples were submitted on an irregular basis. Many of these samples required special processing techniques due to small sample sizes and/or matrix effects. All modifications developed to the established procedure are outlined in the Experimental Procedures section.

2.2 EXPERIMENTAL PROCEDURES

2.2.1 Summary of the Analytical Procedure

The procedure used to analyze monkey tissue is taken primarily from the article entitled "Tissue Residues from Subacute Oral Feeding of Polychlorinated Biphenyl Dielectric Fluids," by Kaley,

et al, appearing in the Bulletin of Environmental Contamination and Toxicology, Vol. 15, No. 6, 1976. Briefly, the method is as follows: the entire sample (the sample size for an adult fat sample averages 0.5 to 2 grams instead of 10-gram sample size suggested in the procedure) received is accurately weighed and homogenized three times with three 25-ml portions of hexane. The combined supernatants and washings are filtered through a bed of anhydrous sodium sulfate (that has previously been dried at 400°C), and diluted to 100 ml in a volumetric flask. A 25 ml aliquot of the solution is evaporated to determine the lipid weight of the sample. A separate 25 ml portion of the sample is pipetted onto an adsorption column prepared by placing a plug of glass wool (previously dried at 400°C) in a chromatography column followed by a 15-20 cm bed of alumina (dried at 400°C and then deactivated to 5% with distilled water) and then a 2-3 cm bed of anhydrous sodium sulfate. The PCB's are eluted with approximately 150 ml of pesticide grade hexane. The eluate is transferred to a 500 ml Kuderna-Danish evaporative concentrator fitted with a three-ball Snyder column and reduced on a steam bath to approximately 5 ml. The resulting concentrate is analyzed by gas chromatography utilizing an electron capture detector. The gas chromatographic conditions are listed in Table 3.

TABLE 3. GAS CHROMATOGRAPHIC CONDITIONS

Instrument:	Varian Model 3700 Gas Chromatograph with Ni-63 Electron Capture Detector
Column:	2 m x 1/4 in. glass column packed with 4% XE-60 on 80/100 mesh Chromosorb W-HF
Injection Port Temp:	220°C
Detector Temperature:	350°C
Column Temperature:	200°C isothermal
Carrier Gas:	High Purity Nitrogen
Carrier Gas Flow Rate:	40 ml/min

2.2.2 Modifications to the Procedure

The procedure, as written, can be easily applied to the analysis of adult fat, skin, omentum, liver, and placenta, and to baby liver samples due to the relatively large sample sizes supplied. However, several modifications to the procedure are necessary to accommodate the reduced sample sizes of the baby monkey skin fat, and muscle samples, and the special handling problems encountered with the minute sample sizes of the milk and blood serum samples. In addition, the project requires the development of an analysis scheme for the determination of PCB in the monkey chow samples.

2.2.1.1 Modifications Required for Baby Skin, Fat, and Muscle Samples--

Baby monkey samples submitted for analysis are analyzed following the procedure by Kaley, et al, with volumes reduced when possible due to the smaller sample sizes received. The entire sample received is homogenized three times with separate 5 ml portions of hexane. No attempt is made to remove hair or other extraneous matter from the skin samples. The combined supernatants and washings are filtered through sodium sulfate and diluted to 25 ml in a volumetric flask. A 10 ml portion of the resulting solution is evaporated to determine the lipid weight of the sample. A separate 10 ml portion is placed through an adsorption column composed of approximately 7 cm of alumina and 2 cm of anhydrous sodium sulfate. The PCB's are eluted with about 100 ml of hexane. The column eluate is collected and placed in a Kuderna-Danish evaporative concentrator and reduced to a volume of approximately 3-5 ml. The resulting concentrate is then analyzed by gas chromatography.

2.2.2.2 Modifications Required for Milk (Colostrum) and Blood Serum Samples--

Due to the minute milk and blood serum samples received, micro techniques for PCB analysis are required. A 100 μ l syringe is

accurately weighed containing approximately 100 μ l of monkey milk or blood serum. The sample is then discharged to the top of an adsorption column prepared by placing a small glass wool plug in a disposable, graduated, 10 ml pyrex pipette cut to approximately 150 mm in length, followed by 60 cm of alumina and 20 cm of anhydrous sodium sulfate. The syringe is weighed again to determine the weight of sample by difference. The sample is washed through the column by 7 ml of hexane and collected in a vial. The hexane eluate is then placed under a gentle stream of purified dry nitrogen and reduced to approximately 100 μ l. The resulting solution is analyzed by gas chromatography.

2.2.2.3 Modifications Required for Monkey Chow Samples--

A special handling scheme was devised for the analysis of the monkey chow pellets. Approximately 50 grams (10-15 pellets) of monkey chow is finely ground with a mortar and pestle. The monkey chow is thoroughly mixed, and a 10-gram sample is accurately weighed and placed in a 33 mm x 94 mm single thickness cellulose extraction thimble inside a medium sized (85 ml capacity of the tube to the top of the siphon) Soxhlet extraction apparatus. Two hundred ml of hexane is added to a 300-ml round-bottomed flask which is fitted to the Soxhlet extractor. The solution is allowed to reflux for 12 hours, and is then cooled to room temperature. The resulting solution is reduced to approximately 10 ml in a Kuderna-Danish evaporative concentrator. This concentrate is then eluted through the alumina/sodium sulfate chromatography column system with 200 ml of hexane. The hexane eluate is then again reduced in volume in a Kuderna-Danish concentrator to approximately 5 ml. The resulting concentrate is subsequently analyzed by gas chromatography.

3. ANALYSIS AND RESULTS

3.1 ANALYSIS BY GAS CHROMATOGRAPHY OF THE EXTRACTED TISSUE SAMPLES

All sample extracts are analyzed by electron capture gas chromatography utilizing the Varian Model 3700 GC with a Ni-63 detector. Peak area integration is accomplished by the Hewlett-Packard Model 3350 Laboratory Automation Computer Data System. Aroclor 1254 standards are prepared monthly, and five to seven standards are analyzed daily. From these standards (Figures 1 and 2 give two representative standard chromatograms), a daily calibration curve is prepared. All sample extracts analyzed are compared to the daily curves. Figures 3 through 6 are typical chromatograms obtained for a control, low, medium, and high dose adult animal fat tissue extract, respectively.

For purposes of quantification, only eight characteristic Aroclor 1254 peaks are used. These eight peaks, which have been marked in Figures 1 and 2, were chosen because they give good linearity over the working concentration range, and little, if any, interference was found in this retention time window. Interferences do occur earlier in the chromatograms of the monkey tissue samples. These interferences most likely result from EC active substances found in tissue that are not removed by the alumina column clean-up procedure.

3.2 RESULTS OBTAINED IN THE STUDY

3.2.1 Adult Rhesus Monkey Fat Samples

Due to the extremely large number of adult Rhesus monkey fat samples analyzed, a large volume of data has been generated. In order to present the data in a manageable fashion, two tables compiling the final PCB values for the entire project are included. These tables include the PCB values obtained by both

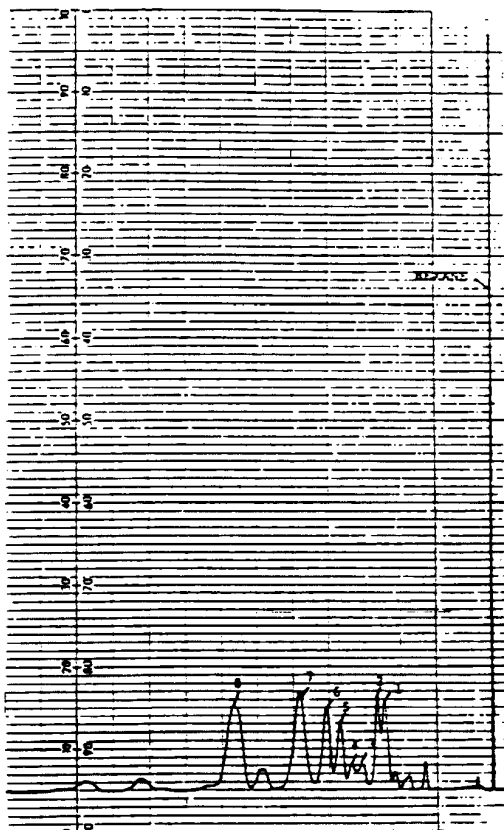


Figure 1. Chromatogram of 0.216 mg/l Aroclor 1254 standard solution.

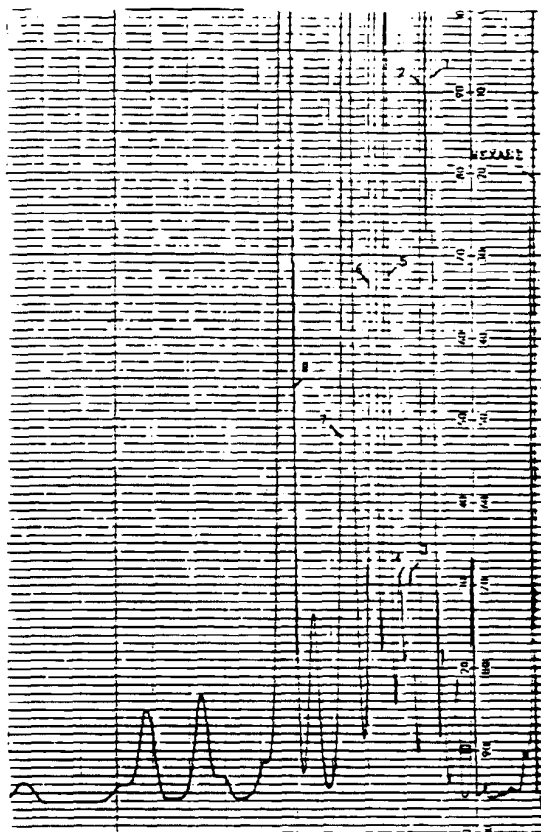


Figure 2. Chromatogram of 1.360 mg/l Aroclor 1254 standard solution.

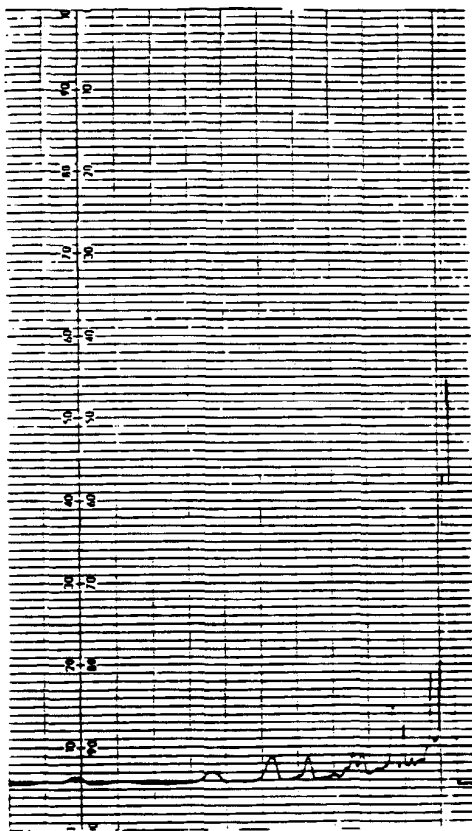


Figure 3. Chromatogram obtained from the analysis of a control dose adult fat tissue extract.

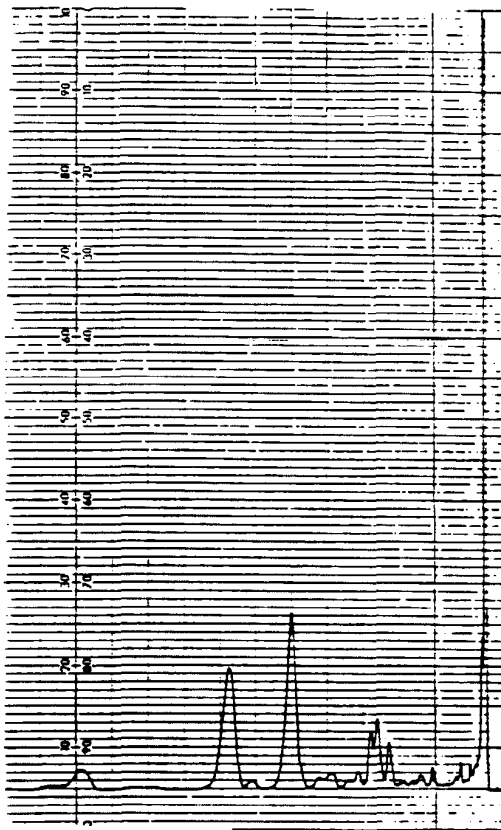


Figure 4. Chromatogram obtained from the analysis of a low dose adult fat tissue extract.

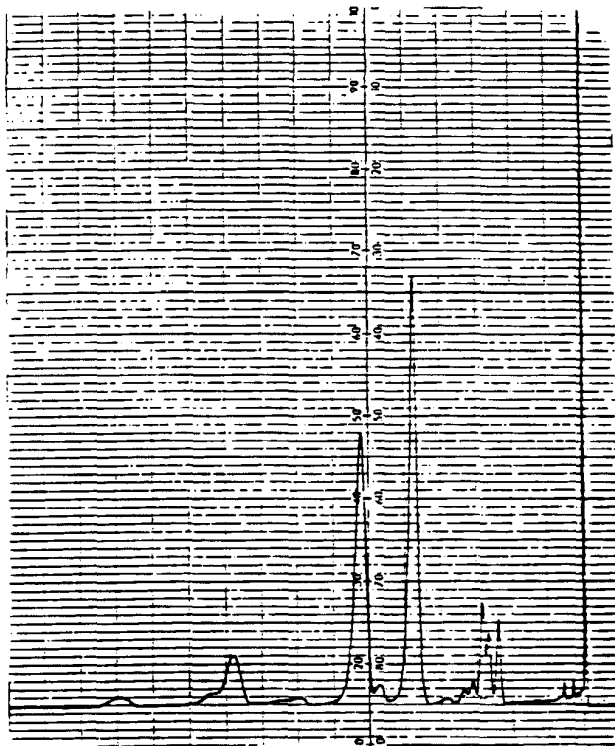


Figure 5. Chromatogram obtained from the analysis of a medium dose adult fat tissue extract.

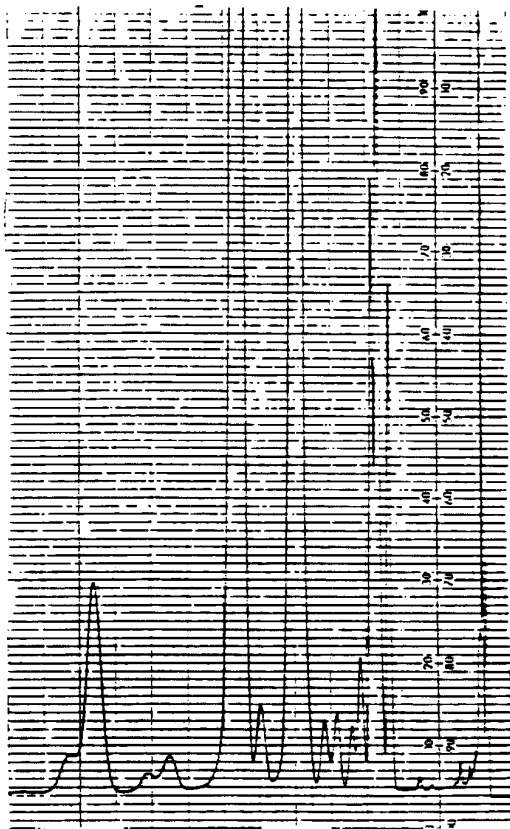


Figure 6. Chromatogram obtained from the analysis of a high dose adult fat tissue extract.

MIC and by MRC. Table 4 tabulates the PCB values found in the monkey fat tissue samples on a lipid weight basis. Table 5 lists those values on a wet weight basis. The values presented in both tables are in terms of μg of PCB per g of weight (lipid or wet).

For a more thorough review of the data generated during this project, Tables 6 through 19 can be found to give complete data for each individual sampling date. Data entries of each sample included in these tables are sample identification and type, the date the sample was shipped, the date it was excised from the animal, the dose level (control, low, medium, or high), the number of ng of PCB in the sample analyzed, the wet weight of the sample, the lipid weight, the percent of the total weight represented by the lipid weight, and the $\mu\text{g}/\text{g}$ of PCB on both a wet weight and lipid weight basis.

Sampling dates in the study include a predrug sample (Table 6), samples taken during the feeding portion of the study (Tables 7 through 13), and those samples taken after the oral administration of PCB had ceased (Tables 14 through 19). Feeding dates for the adult animals commenced on 4 April 1977 for all animals except 483-F, for which the first day of drug administration was 19 April 1977. Feeding of PCB's to the animals continued through April 1978. The animals were then monitored through December 1978 to examine the rate at which PCB's are expelled from the tissue.

The following key can be used to identify sample types in all subsequent tables in this report.

B = Baby Skin Sample	L = Liver Sample (Adult Animal)
Bf = Baby Fat Sample	m = Male
Bl = Baby Liver Sample	M = Milk (Colostrum) Sample
Bm = Baby Muscle Sample	O = Omentum Sample (Adult Animal)
C = Monkey Chow Sample	P = Placenta Sample
f = Female	S = Skin Sample (Adult Animal)
F = Fat Sample (Adult Animal)	Se = Blood Serum Sample

TABLE 4. CUMULATIVE PCB VALUES FOR ADULT FAT SAMPLES ON A LIPID WEIGHT BASIS (ug/g)

Sample I.D.	Dose Level	Pre-Drug	5/77	7/77	9/77	9/77	11/77	12/77	1/78	5/78	6/78	8/78	11/78	Final 12/78
766-E f	Control	0.59	0.65	0.71	1.06	0	0.15	5.31	0.28	#	0.16	0.32	1.42	0.63
610-I f	Control	0.77	0.46	4.52	0.79	0	0.29	0.79	0.52	#	0.09	0.08	1.90	0.30
606-I f	Control	1.00	0.84	1.45	0.98	0	0.49	0.39	0.27	#	0.89	0.48	0.96	0.31
578-II f	Control	1.69	0.84	2.79	3.00	0	0.19	0.54	0.32	#	1.10	0.45	6.11*	3.18
274-P f	Control	0.56	1.11	1.20	0.21	0	0.27	2.40	0.76	#	0.13	0.16	0.48*	0.43
568-H f	Control	0.72	0.61	0.70	0.18	0	0.24	0.42	0.35	0.20	0.06	0.22	0.93	0.14
200-F f	Control	0.49	0.36	0.76	0.20	0	0.13	0.76	0.65	#	#	0.25	6.81	0.57
87-F f	Control	0.20	Least 0	0.77	0.30	0	0.13	0.14	0.41	0.27*	-	-	-	-
227-G m	Control	Least 0	0.15	0.57	0.77	0	0.29	0.89	0.55	0.20	0.02	0.45	0.32	0.62
719-P m	Control	0.91	0.50	1.03	1.39	0	0.40	4.18	0.61	0.67	0.49	0.33	2.36	0.85
426-G m	Control	14.0	0.52	2.72	2.40	0	0.79	1.33*	10.2*	2.45*	2.36	0.21	8.90	63.2
418-J m	Control	0.70	0.50	1.26	0.01	0	1.10*	1.33	1.35	1.69*	0.49	0.51	0.40	0.56
107-I f	Low	0.49	0.51	2.39	0.15	0	1.51	2.76	2.93	2.26	#	#	4.33	2.50
481-P f	Low	0.42	1.49	4.74	0.92*	0	5.72	9.86*	0.81*	13.8*	#	#	7.25	2.44
646-E f	Low	0.34	0.22	1.19	0.33	0	1.40	1.18	2.13	2.37	2.27	2.22	5.33	2.43
701-E f	Low	2.31	1.29	1.84	0.35	0	3.36	1.48	2.96	#	#	3.11	7.71*	2.09
019-H f	Low	0.36	0.99	0.67	1.64	0	1.26	2.70	2.65	3.19	2.85	1.69	5.13	2.10
284-I f	Low	2.22	4.19	3.55	14.8*	0	4.85	1.14	6.47	5.62	#	#	4.25	4.41
605-P f	Low	0.19	0.40	1.89	0.91	0	1.47	2.96	2.44	#	2.40	3.47	4.01	5.53
624-I f	Low	1.10	0.53	1.59	0.12	0	1.65	1.97	2.31	#	1.11	1.89	2.91	1.60
516-G m	Low	0.73	1.89	1.85	0.29	0	5.75	0.89	17.0	18.1	7.94	5.18	7.08	3.13
119-H m	Low	1.52	0.82	2.99	2.92	0	5.41	10.7	20.2	8.27	7.84	5.14	5.78	5.08
432-J m	Low	1.67	4.78	1.50	0.92	0	1.63	5.17	17.1*	8.05*	3.73	1.65	4.38	2.17
438-J m	Low	0.38	1.19	3.19	0.12	0	6.64	7.18	10.0	10.1	5.41	5.74	5.07	3.14

lipid weight determinations lost for these samples.

#No sample received.

analyzed by NCI.

minimum samples.

†Terminal animal.

*Reported only on a wet weight basis by NCI.

TABLE 4 (continued)
(µg/g)

Sample I.D.	Dose Level	Pre-Drug 1/17	5/17	7/17	8/17	9/17	11/17	12/18	1/78	5/78	6/78	8/78	11/78	Final 12/78
273-I f	Medium	0.79	4.19	7.74	12.1	Lost**	15.6	10.9	11.9	°	12.6	13.8	15.7	14.8
540-H f	Medium	1.16	3.82	6.79	14.0	Lost**	11.9	21.0	20.2	°	29.1	20.4	45.2	33.0
841-H f	Medium	0.89	3.59	15.7	19.7	Lost**	32.2*	21.1	19.1	°	51.6	39.2	48.6	°
281-G f	Medium	0.69	Lost*	9.73	10.4	Lost**	15.5	11.4	21.3	35.9	35.8	27.1	°	10.3
763-E f	Medium	0.71	2.99	4.33	8.78	Lost**	8.48	8.72	12.0	°	18.3	24.9	27.0	13.6
387-I f	Medium	0.51	0.69	2.89	4.50	Lost**	5.79	10.0	37.6	15.7	18.7	19.7	26.7	10.4
757-I f	Medium	2.09	6.36	19.1*	8.69	Lost**	31.5	43.8	28.0	°	44.9	70.3	57.6*	34.9
762-E f	Medium	0.36	1.53	4.76	6.33	Lost**	12.7	18.2	31.2	°	58.1	8.02*	143*	9.90
599-I m	Medium	3.74	4.30	7.75	10.4	°	7.27	30.3	11.6	26.8	35.1	20.1	18.6	18.2
20-I m	Medium	0.49	1.86	4.89	6.56	°	11.4	18.2	23.4	39.4	27.9	31.5	42.1	32.3
46-I m	Medium	0.36	0.52	2.69	3.22	°	4.34	6.05	10.5	10.4	13.1	9.45	9.66	6.99
595-I m	Medium	3.20	7.20	13.49	14.3	°	8.74	57.0	71.1	94.4	92.9	37.4	51.9	38.1
152-F f	High	0.64	°	49.8	74.99	°	170.69	474*	464*	-	-	-	-	-
486-H f	High	1.72	°	65.4	47.20	°	69.1	51.0	156*	238*	-	-	-	-
226-F f	High	1.63	16.8	19.8	17.49	°	25.64	41.0	51.1	70.4	52.7	89.7	299*	346
269-I f	High	0.39	4.55	19.8	40.0	°	14.18	254*	148*	174	165	58.4	78.3*	50.3
312-I f	High	0.29	°	20.7	21.6	°	10.3	28.5	18.0	°	71.7	79.8	131	41.2
287-I f	High	0.99	°	69.1	81.0	°	62.99	85.0	90.6	190	146	46.9	97.0*	50.7
770-I f	High	0.46	10.4	27.2	25.59	°	53.9	192	297	475*	-	-	-	-
338-I f	High	0.99	°	63.8	80.8	°	25.0	91.9	99.5	163	146	8.57	1,401	°
706-E m	High	0.46	30.5	40.3	43.09	°	Lost	145	161	350*	167	723	°	°
425-J m	High	2.16	26.2	35.2	40.89	°	37.49	74.5	16.0	138*	87.6	10.7	46.8*	28.3
427-J m	High	1.59	°	11.0	13.8	°	22.89	47.5	111*	92.1	50.4	14.3	20.7	30.7
600-I m	High	0.59	12.8	19.7	26.3	°	25.5	139	100	114	146	27.3	207	79.7

° Lipid weight determinations lost for these samples.

*No sample received.

° Analyzed by NIC.

*Omentum samples.

° Terminal animal.

° Reported only on a wet weight basis by NIC.

TABLE 5. CUMULATIVE PCB VALUES FOR ADULT FAT SAMPLES ON A WET WEIGHT BASIS
(µg/g)

Sample I.D.	Dose Level	Pre-Drug 3/77	5/77	7/77	8/77	9/77	11/77	3/78	5/78	6/78	8/78	11/78	Final 12/78	
764-E f	Control	*	0.56	0.58	*	Lost*	0.11	4.51	0.27	*	0.12	0.12	0.81	0.50
618-I f	Control	0.64	0.44	1.89	*	Lost*	*	0.26	0.44	*	0.08	0.03	0.09	0.27
604-I f	Control	0.67	0.56	0.81	*	Lost*	*	0.30	0.22	*	0.62	0.14	0.93	0.17
578-H f	Control	0.78	0.57	2.23	2.02	Lost*	*	0.44	0.25	*	0.43	0.17	0.40*	0.77
274-F f	Control	*	0.86	0.93	0.09	Lost*	0.70	1.46	0.56	*	0.12	0.17	0.17*	0.21
569-H f	Control	0.59	0.49	0.60	0.15	Lost*	*	0.16	0.28	0.17	0.06	0.07	0.70	0.10
280-F f	Control	*	0.29	0.64	0.16	Lost*	0.11	0.65	0.52	*	0.11	0.60	0.51	
87-F f	Control	*	Lost*	0.63	*	Lost*	0.11	0.29	0.32	0.19†	-	-	-	-
227-G m	Control	Lost*	0.12	0.47	0.22	0.49	0.24	0.72	0.47	0.16	0.02	0.13	0.26	0.56
739-F m	Control	0.74	0.33	0.75	*	1.16	0.29	1.67	0.31	0.32	0.13	0.16	1.46	0.73
426-G m	Control	1.21	0.23	0.74	*	1.09	*	0.55*	0.75*	0.16*	0.37	0.06	0.56	0.49
418-J m	Control	*	0.34	0.92	0.24	1.18	*	1.94	0.46	0.68*	0.25	0.16	0.17	0.44
309-I f	Low	0.35	0.42	*	0.13	1.18	1.42	1.51	2.42	1.80	*	*	3.24	2.24
483-F f	Low	0.46	*	1.61	0.38*	7.33*	3.01	5.12*	5.61*	5.54*	*	*	3.09	2.44
446-E f	Low	0.31	0.18	*	0.18	1.89	1.69	2.88	1.85	1.76	1.82	1.84	4.03	2.15
701-E f	Low	0.51	*	1.17	0.24	4.70	2.86	2.62	2.20	*	*	2.25	2.26*	1.51
839-H f	Low	0.38	*	0.57	2.98	1.86	1.83	1.96	2.20	2.69	2.10	1.47	4.19	1.93
284-I f	Low	1.36	*	1.38	6.42*	5.79*	2.82	2.53	4.71	3.42	*	*	2.75	2.91
605-P f	Low	0.32	0.31	*	0.76	2.30	1.94	2.61	1.98	*	2.04	2.88	3.18	4.96
624-I f	Low	0.61	0.43	*	0.27	2.20	2.15	1.74	4.87	*	1.03	3.00	2.46	1.44
516-G m	Low	0.51	*	1.26	0.20	5.10	3.40	4.30	6.60	7.42	3.53	3.20	3.09	2.63
119-H m	Low	1.17	0.59	*	2.39	3.50	4.40	5.81	9.37	1.87	2.72	3.51	3.59	3.95
432-J m	Low	0.70	*	0.43	0.27	2.69	1.27	1.89	5.83*	4.01*	1.88	1.03	1.67	1.62
428-J m	Low	0.26	0.95	*	0.09	4.40	7.16	5.17	5.57	6.00	3.83	4.23	3.80	2.72

*Reported only on a lipid weight basis by MIC.

†No sample received.

*Omentum samples.

†Analyzed by MIC.

†Terminal animal.

TABLE 5 (continued)
($\mu\text{g/g}$)

Sample I.D.	Dose Level	Pre-Drug 3/77	5/77	7/77	8/77	9/77	11/77	1/78	3/78	5/78	6/78	8/78	11/78	Final 12/78
273-I f	Medium	0.50	•	6.22	10.5	8.5*	13.0	9.75	9.63	•	8.60	11.7	13.0	9.93
540-H f	Medium	0.50	2.74	•	10.8	14.3*	10.7	16.0	16.5	•	22.2	8.62	21.9	19.2
841-H f	Medium	0.90	•	10.1	12.4	19.6*	22.4*	13.4	14.0	•	38.8	14.3	13.7	•
201-G f	Medium	0.51	Lost*	7.82	7.54	12.4*	10.4	7.46	22.9	29.7	20.8	21.5	•	9.09
763-E f	Medium	0.34	•	3.49	7.48	6.9*	7.09	7.39	10.5	•	13.0	18.1	15.7	10.4
307-I f	Medium	0.43	0.68	•	12.7	6.0*	4.80	8.19	14.0	13.2	14.8	16.2	20.9	18.1
757-I f	Medium	1.99	0.74	•	4.60	22.7*	19.9	33.2	20.4	•	29.2	5.94	36.1*	28.0
762-E f	Medium	0.21	1.34	•	4.47	6.7*	8.79	15.3	21.5	•	21.4	2.04*	22.3*	5.55
599-I m	Medium	0.64	•	6.13	7.82	14.3*	5.12	17.7	25.0	18.8	21.4	11.1	5.34	16.5
20-I m	Medium	0.43	•	4.41	5.66	7.3*	9.03	13.4	20.0	31.5	18.2	13.6	20.9	27.0
46-I m	Medium	0.31	0.44	•	2.74	3.6*	3.21	4.92	8.40	7.83	10.4	8.30	1.77	6.27
595-I m	Medium	1.34	4.91	•	11.8	13.9*	4.84	24.0	26.5	37.0	3.32	27.9	12.3	29.8
152-F f	High	0.50	17.5	36.0	•	47.7*	•	41.7*	4.04†	-	-	-	-	-
486-H f	High	1.06	16.4	42.8	•	27.3*	32.9	22.6	61.8*	6.97†	-	-	-	-
226-F f	High	1.13	13.1	16.4	•	21.0*	•	31.9	45.9	56.6	42.8	13.7	106*	41.8
269-I f	High	•	2.85	15.6	27.8	28.9*	•	52.7*	77.4*	115	43.3	27.4	55.5*	39.0
312-I f	High	•	5.35	17.4	18.5	24.5*	8.44	24.0	30.3	•	55.0	39.6	71.8	31.3
287-I f	High	•	18.4	33.3	32.1	24.5*	•	47.3	56.1	125	17.7	3.47	55.6*	30.8
770-I f	High	0.35	0.64	19.3	•	38.0*	33.5	79.3	35.9	152†	-	-	-	-
330-I f	High	•	12.0	39.9	51.1	36.6*	18.5	67.3	80.1	122	87.0	1.97	103	•
786-E m	High	0.37	16.1	37.5	•	36.8*	Lost	37.8	61.4	125*	23.1	172	•	•
425-J m	High	1.37	10.5	11.4	•	12.1*	•	29.8	5.15	82.9*	47.3	12.7	24.6*	21.8
427-J m	High	•	13.7	8.67	11.3	10.1*	•	17.3	64.9*	55.3	33.9	6.01	11.6	21.6
600-I m	High	•	10.6	16.7	22.1	21.8*	20.1	88.0	136	125	74.9	13.1	41.6	50.4

*Reported only on a lipid weight basis.

†No sample received.

*Umentum samples.

*Analysed

†Terminal animal.

TABLE 6. PCB CONTENT OF ADULT FAT SAMPLES RECEIVED WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978 (PRE-DRUG SAMPLES)

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing. Assoc. 1254	Wet Weight (g)	PPM on Wet Wt. Basis (pp/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (pp/g)	Lipid Wt. Wet Wt. x 1000 (%)
604-I F*	F	3/27/70	3/28/77	Control	400.2	0.5981	0.67	0.1944	1.00	67
570-H F	F	3/27/70	3/28/77	Control	<247.9	0.1176	-0.78	0.1664	<1.49	52
569-H F	F	3/27/70	3/28/77	Control	<205.1	0.1405	-0.59	0.2060	<0.72	82
610-I F	F	3/27/70	3/28/77	Control	279.1	0.4154	0.64	0.1648	0.77	84
739-F M	F	3/27/70	3/30/77	Control	413.8	0.5569	0.74	0.4568	0.91	
626-G M	F	3/27/70	3/30/77	Control	<231.2	0.1919	-1.21	0.0068	<34.0	1.5
284-I F	F	3/27/70	3/28/77	Low	<211.9	0.1586	<1.34	0.0956	<2.22	60
605-F F	F	3/27/70	3/28/77	Low	<203.2	0.6181	<0.12	0.5156	<0.39	81
403-F F	F	3/27/70	4/14/77**	Low	103.9	0.2279	0.46	0.2468	0.42	100
309-I F	F	3/27/70	3/28/77	Low	144.5	0.4000	0.35	0.2960	0.49	73
646-E F	F	3/27/70	3/28/77	Low	<212.6	0.7510	-0.11	0.4028	<0.34	91
819-H F	F	3/27/70	3/28/77	Low	<224.5	0.7416	-0.10	0.6292	<0.36	05
624-I F	F	3/27/70	3/28/77	Low	<231.6	0.1786	<0.61	0.2108	<1.10	56
701-F F	F	3/27/70	3/28/77	Low	<223.4	0.4402	-0.51	0.0968	<2.31	22
428-J M	F	3/27/70	3/30/77	Low	<275.0	1.0404	-0.26	0.722	<0.38	69
432-J M	F	3/27/70	3/30/77	Low	<245.2	0.3520	-0.70	0.1460	<1.87	42
119-H M	F	3/27/70	3/30/77	Low	645.4	0.5503	1.17	0.4252	1.52	
516-G M	F	3/27/70	3/30/77	Low	915.9	1.0217	0.51	1.2892	0.73	71
20-I M	F	3/27/70	3/30/77	Medium	1,022	2.3742	0.43	2.0776	0.49	80
595-I M	F	3/27/70	3/30/77	Medium	851.8	0.6167	1.34	0.2660	3.20	42
46-I M	F	3/27/70	3/30/77	Medium	<241.1	0.7866	<0.31	0.6640	<0.36	06
599-I M	F	3/27/70	3/30/77	Medium	<235.1	0.3653	-0.64	0.6628	<1.74	17
281-G F	F	3/27/70	3/27/77	Medium	468.7	0.9645	0.51	1.100	0.69	74
757-I F	F	3/27/70	3/29/77	Medium	<276.1	0.3908	<1.99	0.2512	<3.09	64
762-E F	F	3/27/70	3/29/77	Medium	<228.9	1.1040	-0.21	0.8764	<0.26	79
107-I F	F	3/27/70	3/29/77	Medium	233.0	0.5386	0.43	0.4604	0.51	85
763-E F	F	3/27/70	3/29/77	Medium	<256.4	0.4735	-0.54	0.3604	<0.71	76
843-H F	F	3/27/70	3/29/77	Medium	<282.4	0.2867	-0.90	0.3168	<0.89	110
540-H F	F	3/27/70	3/29/77	Medium	<251.4	0.4594	-0.50	0.2168	<1.16	41
213-I F	F	3/27/70	3/29/77	Medium	<62.2	0.4491	0.58	0.1304	0.79	74
706-E M	F	3/27/70	3/30/77	High	664.7	1.8033	0.37	1.5052	0.44	83
226-F F	F	3/27/70	3/29/77	High	752.4	0.6654	1.13	0.4674	1.63	69
486-H F	F	3/27/70	3/29/77	High	672.3	0.6149	1.06	0.3900	1.72	61
770-I F	F	3/27/70	3/29/77	High	<221.4	0.6126	-0.35	0.5084	<0.44	80
152-F F	F	3/27/70	3/27/77	High	462.8	0.9295	0.50	0.7176	0.64	77
475-J M	F	3/27/70	3/30/77	High	635.1	0.4646	1.17	0.2940	2.16	63

**Marked "substitute" on sample package.

TABLE 7. PCB CONTENT OF ADULT FAT SAMPLES RECEIVED WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. Wet Wt. x 100% (%)
739-F m	F	3/27/78	5/2/77	Control	168.4	0.5055	0.33	0.2880	0.50	57
426-G m	F	3/27/78	5/2/77	Control	<115.5	0.4961	<0.23	0.2216	<0.52	45
227-G m	F	3/27/78	5/2/77	Control	<181.4	1.4535	<0.12	1.2476	<0.15	86
418-J m	F	3/27/78	5/2/77	Control	<164.0	0.4772	<0.34	0.3308	<0.50	69
646-E f	F	3/27/78	5/3/77	Low	125.9	0.6898	0.18	0.5696	0.22	83
605-F f	F	3/27/78	5/3/77	Low	426.8	1.3727	0.31	1.0588	0.40	77
119-H m	F	3/27/78	5/3/77	Low	657.6	1.1062	0.59	0.8832	0.82	73
428-J m	F	3/27/78	5/3/77	Low	1,621	1.7126	0.95	1.3676	1.19	80
624-I f	F	3/27/78	5/3/77	Low	453.7	1.0507	0.43	0.8560	0.53	81
389-I f	F	3/27/78	5/3/77	Low	444.7	1.0540	0.42	0.8680	0.51	82
307-I f	F	3/27/78	5/3/77	Medium	803.2	1.3458	0.60	1.1628	0.69	86
757-I f	F	3/27/78	5/3/77	Medium	706.0	0.2794	0.74	0.0324	6.36	12
46-I m	F	3/27/78	5/4/77	Medium	527.2	1.2044	0.44	1.0232	0.52	85
762-E f	F	3/27/78	5/3/77	Medium	2,836	1.5172	1.34	1.3340	1.53	80
540-H f	F	3/27/78	5/3/77	Medium	4,244	1.5490	2.74	1.1124	3.82	72
595-I f	F	3/27/78	5/4/77	Medium	2,400	0.4893	4.91	0.3332	7.20	68
770-I f	F	3/27/78	5/4/77	High	7,499	0.8677	8.64	0.7204	10.4	83
600-I m	F	3/27/78	5/4/77	High	12,500	1.1740	10.6	0.9768	12.8	83
249-I f	F	3/27/78	5/4/77	High	2,492	0.8750	2.85	0.5480	4.55	63
706-E m	F	3/27/78	5/4/77	High	13,070	0.6880	16.1	0.3632	30.5	53
425-J m	F	3/27/78	5/4/77	High	7,673	0.7300	10.5	0.2932	26.2	40
226-F f	F	3/27/78	5/4/77	High	13,540	1.0331	13.1	0.8044	16.0	78
427-J m	F	3/27/78	5/4/77	High	7,490	0.5486	13.7	-	-	-
152-F f	F	3/27/78	5/4/77	High	11,320	0.6463	17.5	-	-	-
330-I f	F	3/27/78	5/4/77	High	15,360	1.2033	12.8	-	-	-
287-I f	F	3/27/78	5/4/77	High	11,320	0.6159	18.4	-	-	-
312-I f	F	3/27/78	5/4/77	High	8,620	1.6097	5.35	-	-	-
486-H f	F	3/27/78	5/4/77	High	23,560	1.4350	16.4	-	-	-

*Lipid weight determinations for these samples were destroyed.

TABLE 8. PCB CONTENT OF ADULT SAMPLES PROCESSED BY MIC AND CHROMATOGRAPHED BY MRC: SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing. Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (pg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (pg/g)	Lipid Wt. x 100% Wet Wt. (%)
200-F f	*	3/27/78	5/2/77	Control	333.1	1.1545	0.29	0.9201	0.36	80
274-F f	*	3/27/78	5/2/77	Control	384.2	0.4477	0.86	0.3469	1.11	77
569-M f	*	3/27/78	5/2/77	Control	511.9	1.0364	0.49	0.8400	0.61	81
570-M f	*	3/27/78	5/2/77	Control	241.2	0.4230	0.53	0.2879	0.85	68
604-I f	*	3/27/78	5/2/77	Control	482.1	0.8210	0.56	0.5482	0.84	67
610-I f	*	3/27/78	5/2/77	Control	439.8	1.4690	0.44	1.4055	0.46	96
764-E f	*	3/27/78	5/2/77	Control	493.1	0.0046	0.56	0.7553	0.65	85
87-F f	*	**	**							

*Sample type not indicated on vials received from MIC.

**Instructions from MIC stated to discard this sample due to partial spillage.

TABLE 9. PCB CONTENT OF ADULT FAT SAMPLES RECEIVED WITH
ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Wt. Met Wt. x 1000 (%)
426-G	m	f	3/27/78	7/1/77	Control	445.4	0.6809	0.74	0.1636	2.72
764-E	f	f	3/27/78	7/5/77	Control	271.5	0.4667	0.58	0.3789	0.73
227-G	m	f	3/27/78	7/1/77	Control	529.9	1.1283	0.47	0.9308	0.57
410-J	m	f	3/27/78	7/1/77	Control	541.9	0.5891	0.92	0.4312	1.26
739-F	m	f	3/27/78	7/1/77	Control	359.0	0.4796	0.75	0.3480	1.03
610-I	f	f	3/27/78	7/5/77	Control	2,881	0.7406	3.89	0.6366	4.52
280-F	f	f	3/27/78	7/5/77	Control	316.9	0.4929	0.64	0.4188	0.76
684-I	f	f	3/27/78	7/5/77	Control	306.5	0.3775	0.81	0.2112	1.45
274-F	f	f	3/27/78	7/5/77	Control	512.6	0.5520	0.93	0.4260	1.20
578-H	f	f	3/27/78	7/5/77	Control	1,141	0.5123	2.23	0.4092	2.79
569-H	f	f	3/27/78	7/5/77	Control	381.3	0.5028	0.60	0.4304	0.70
87-F	f	f	3/27/78	7/5/77	Control	228.1	0.3628	0.63	0.2972	0.77
839-H	f	f	3/27/78	7/5/77	Low	341.3	0.5991	0.57	0.5060	0.67
781-E	f	f	3/27/78	7/5/77	Low	428.7	0.3675	1.17	0.2332	1.84
284-I	f	f	3/27/78	7/5/77	Low	350.3	0.2537	1.38	0.0908	3.55
483-F	f	f	3/27/78	7/5/77	Low	1,218	0.7544	1.61	0.2572	4.74
516-G	m	f	3/27/78	7/1/77	Low	630.8	0.4998	1.26	0.3412	1.85
432-J	m	f	3/27/78	7/1/77	Low	166.2	0.3887	0.43	0.1180	1.50
281-G	f	f	3/27/78	7/6/77	Medium	3,982	0.5094	7.82	0.4092	9.73
841-H	f	f	3/27/78	7/6/77	Medium	5,096	0.5030	18.1	0.3236	15.7
763-E	f	f	3/27/78	7/6/77	Medium	6,351	0.3820	3.49	0.3872	4.43
273-I	f	f	3/27/78	7/6/77	Medium	2,777	0.4469	6.22	0.3580	7.74
599-I	m	f	3/27/78	"	Medium	4,759	0.7761	6.13	0.6144	7.75
20-I	m	f	3/27/78	"	Medium	3,327	0.7537	4.41	0.6880	4.89
486-H	f	f	3/27/78	7/6/77	High	26,830	0.6269	42.8	0.4100	65.4
338-I	f	f	3/27/78	7/6/77	High	23,540	0.5981	39.9	0.3688	63.8
287-I	f	f	3/27/78	7/6/77	High	6,851	0.5153	13.3	0.0992	69.1
770-I	f	f	3/27/78	7/6/77	High	10,290	0.5344	19.3	0.3780	27.2
152-F	f	f	3/27/78	7/6/77	High	23,610	0.6556	36.0	0.4744	49.8
226-F	f	f	3/27/78	7/6/77	High	12,200	0.7429	16.4	0.6164	19.8
312-I	f	f	3/27/78	7/6/77	High	9,601	0.5516	17.4	0.4648	20.7
289-I	f	f	3/27/78	7/6/77	High	6,778	0.4335	15.6	0.3428	19.8
706-E	m	f	3/27/78	"	High	30,500	0.6136	37.5	0.6308	48.3
680-I	m	f	3/27/78	"	High	33,420	2.0000	16.7	1.6548	19.7
427-J	m	f	3/27/78	"	High	7,778	0.8971	8.67	0.7084	11.0
425-J	m	f	3/27/78	"	High	8,689	0.7557	11.4	0.2440	35.2

*No excision date listed on sample package.

TABLE 10. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES RECEIVED
WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Inq Aroclor 1254	Net Weight (g)	PPM on Net Wt. Range (μg/g)	Lipid Weight (g)	PPM on Lipid Wt. Range (μg/g)	Lipid Wt. x 1001 Net Wt. (%)
418-J m	F	3/27/78	8/4/77	Control	114.1	0.4789	0.24	0.1412	0.81	29
227-G m	F	3/27/78	8/4/77	Control	209.1	0.9695	0.22	0.7812	0.27	81
208-F f	F	3/27/78	8/1/77	Control	318.1	2.0117	0.16	1.6108	0.20	80
569-H f	F	3/27/78	8/1/77	Control	425.2	2.8871	0.15	2.1368	0.18	81
274-F f	F	3/27/78	8/1/77	Control	175.0	2.0102	0.09	0.8500	0.21	62
578-H f	F	3/27/78	8/1/77	Control	1,179	0.5051	2.02	0.1928	1.00	67
516-G m	F	3/27/78	8/4/77	Low	160.6	0.7921	0.20	0.5540	0.29	70
119-H m	F	3/27/78	8/4/77	Low	2,748	1.1477	2.39	0.9264	2.97	81
428-J m	F	3/27/78	8/4/77	Low	85.05	0.9319	0.09	0.7144	0.12	77
432-J m	F	3/27/78	8/4/77	Low	169.1	0.6189	0.27	0.1840	0.92	28
605-F f	F	3/27/78	8/1/77	Low	1,669	1.4141	0.76	1.1744	0.91	83
284-L f	O	3/27/78	8/1/77	Low	10,450	1.6271	6.42	0.7060	14.0	43
839-H f	F	3/27/78	8/1/77	Low	4,026	1.3508	2.98	1.1052	3.64	82
446-E f	F	3/27/78	8/1/77	Low	83.93	0.8102	0.10	0.6504	0.13	80
483-F f	O	3/27/78	8/1/77	Low	160.9	0.4190	0.38	0.1744	0.92	42
109-L f	F	3/27/78	8/1/77	Low	204.1	1.5778	0.13	1.3240	0.15	64
201-E f	F	3/27/78	8/1/77	Low	160.1	0.6808	0.24	0.4584	0.15	67
624-L f	F	3/27/78	8/1/77	Low	156.1	0.5039	0.27	0.4888	0.32	84
273-L f	F	3/27/78	8/2/77	Medium	6,168	0.5898	10.5	0.5088	12.1	86
841-H f	F	3/27/78	8/2/77	Medium	7,218	0.5817	12.4	0.3672	19.7	63
540-H f	F	3/27/78	8/2/77	Medium	8,335	0.7741	10.8	0.5916	14.0	77
281-G f	F	3/27/78	8/2/77	Medium	8,069	1.0700	7.54	0.7728	10.4	72
757-L f	F	3/27/78	8/2/77	Medium	1,624	0.3529	4.60	0.1868	8.69	53
163-E f	F	3/27/78	8/2/77	Medium	4,962	0.6613	7.48	0.5648	8.78	85
107-J f	F	3/27/78	8/2/77	Medium	5,587	0.4416	12.7	1.2408	4.50	281
162-E f	F	3/27/78	8/2/77	Medium	5,103	1.1405	4.47	0.8188	6.23	72
46-L m	F	3/27/78	8/4/77	Medium	3,661	1.3345	2.74	1.1360	3.22	85
595-L m	F	3/27/78	8/4/77	Medium	12,590	1.0648	11.8	0.8804	14.3	83
20-L m	F	3/27/78	8/4/77	Medium	8,595	1.5176	5.66	1.3108	6.56	86
599-L m	F	3/27/78	8/4/77	Medium	3,527	0.4512	7.82	0.3404	10.4	75
312-L f	F	3/27/78	8/2/77	High	24,050	1.3080	18.5	1.1120	21.6	86
427-J m	F	3/27/78	8/4/77	High	16,650	1.4727	11.1	1.2092	13.8	82
287-L f	F	3/27/78	8/2/77	High	16,680	0.5190	12.1	0.2060	81.0	40
138-L f	F	3/27/78	8/2/77	High	36,830	0.7052	51.1	0.4440	80.0	63
269-L f	F	3/27/78	8/2/77	High	20,190	0.7275	27.8	0.5052	40.0	69
600-L m	F	3/27/78	8/4/77	High	10,230	1.3647	22.1	1.1488	26.3	84

TABLE 11. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES RECEIVED
WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Eqg Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Aroclor (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Aroclor (µg/g)	Lipid Wt. x 1000 Net Wt. (g)
87-F f	F	3/27/78	11/1/77	Control	90.29	0.8016	0.11	0.7848	0.11	88
274-F f	F	3/27/78	11/1/77	Control	140.1	0.6876	0.20	0.5160	0.27	75
200-F f	F	3/27/78	11/1/77	Control	70.62	0.6326	0.11	0.5112	0.13	84
764-E f	F	3/27/78	11/1/77	Control	116.0	1.0184	0.11	0.7948	0.15	78
227-G m	F	3/27/78	10/31/77	Control	156.4	0.8745	0.24	0.6884	0.29	83
739-F m	F	3/27/78	10/31/77	Control	210.2	0.7257	0.29	0.4404	0.48	61
428-J m	F	3/27/78	10/31/77	Low	5,958	0.8117	7.16	0.8972	6.64	108
516-G m	F	3/27/78	10/31/78	Low	2,591	0.7626	3.40	0.4504	5.75	59
309-I f	F	3/27/78	11/1/77	Low	1,139	0.8014	1.42	0.7556	1.51	94
605-F f	F	3/27/78	11/1/77	Low	2,409	1.2016	1.94	1.6440	1.47	132
624-L f	F	3/27/78	11/1/77	Low	2,834	1.3185	2.15	1.7132	1.65	130
119-H m	F	3/27/78	10/31/77	Low	3,995	0.9082	4.40	0.7388	5.41	81
432-J m	F	3/27/78	10/31/77	Low	1,033	0.8151	1.27	0.6320	1.63	70
483-F f	F	3/27/78	11/1/77	Low	1,694	0.5623	3.01	0.2816	5.97	50
284-L f	F	3/27/78	11/1/77	Low	1,562	0.5531	2.82	0.3220	4.85	58
646-E f	F	3/27/78	11/1/77	Low	1,222	0.7250	1.69	0.8744	1.40	121
781-E f	F	3/27/78	11/1/77	Low	1,464	0.5117	2.86	0.4360	3.36	85
839-H f	F	3/27/78	11/1/77	Low	2,626	1.4358	1.83	2.0816	1.26	145
207-L f	F	3/27/78	11/2/77	Medium	3,080	0.6419	4.80	0.5324	5.79	83
540-N f	F	3/27/78	"	Medium	6,672	0.6254	10.7	0.5600	11.9	90
757-L f	F	3/27/78	11/2/77	Medium	10,720	0.5396	19.9	0.3400	31.5	63
841-N f	O	3/27/78	11/2/77	Medium	13,880	0.6180	22.4	0.4316	32.2	70
763-E f	F	3/27/78	11/2/77	Medium	6,355	0.8963	7.09	0.7496	8.48	84
273-L f	F	3/27/78	11/2/77	Medium	8,509	0.6520	13.0	0.5448	15.6	83
281-G f	F	3/27/78	11/2/77	Medium	8,724	0.8363	10.4	0.5644	15.5	67
762-E f	F	3/27/78	11/2/77	Medium	5,099	0.5799	8.79	0.4004	12.7	69
46-L m	F	3/27/78	10/31/77	Medium	3,809	1.1884	3.21	0.8776	4.34	74
20-L m	F	3/27/78	10/31/77	Medium	8,930	0.9884	9.03	0.7812	11.4	79
595-L m	F	3/27/78	10/31/77	Medium	3,687	0.7618	4.84	0.4216	8.74	55
599-L m	F	3/27/78	10/31/77	Medium	4,409	0.8614	5.12	0.6064	7.27	70
600-L m	F	3/27/78	10/31/77	High	17,160	0.8524	20.1	0.6736	25.5	79
706-F m	F	3/27/78	10/31/77	High	"	"	"	"	"	"
170-L f	F	3/27/78	11/2/77	High	17,000	0.5079	33.5	0.3156	53.9	62
312-L f	F	3/27/78	11/2/77	High	9,950	1.1262	6.84	0.9700	10.3	86
110-L f	F	3/27/78	11/2/77	High	13,470	0.7294	18.5	0.5192	25.0	74
486-H f	F	3/27/78	11/2/77	High	23,650	0.7194	32.9	0.3420	69.1	48

* No excision date listed on sample package.

**Sample destroyed.

TABLE 12. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES RECEIVED WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Exp. Anorectic 1/54	Net Weight (g)	PPM on Wet Wt. Basis (μg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (μg/g)	Lipid Wt. Wet Wt. (%)
426-G m	0	3/27/78	1/5/78	Control	1,998	3.5996	0.55	1.4994	2.31	42
227-G m	F	3/27/78	1/5/78	Control	4,35.2	0.8863	0.72	0.7160	0.89	81
418-J m	F	3/27/78	1/10/78	Control	718.6	0.1665	1.94	0.2112	3.31	50
719-F m	F	3/27/78	1/5/78	Control	957.8	0.5716	1.67	0.2288	6.18	40
274-F m	F	3/27/78	1/3/78	Control	738.3	0.8811	1.64	0.2948	2.48	63
764-E m	F	3/27/78	1/3/78	Control	2,116	0.5112	6.51	0.8052	5.33	70
604-I m	F	3/27/78	1/3/78	Control	212.5	0.7800	0.40	0.5956	0.19	76
569-H m	F	3/27/78	1/3/78	Control	311.7	0.8757	0.16	0.7444	0.42	85
208-F m	F	3/27/78	1/3/78	Control	477.4	0.7152	0.65	0.6296	0.76	86
87-F m	F	3/27/78	1/3/78	Control	372.5	1.1012	0.79	1.1000	0.14	86
610-I m	F	3/27/78	1/3/78	Control	227.1	0.6901	0.76	0.7904	0.29	89
578-H m	F	3/27/78	1/3/78	Control	389.4	0.8782	0.44	0.7160	0.54	82
781-E m	F	3/27/78	1/3/78	Low	1,989	0.7281	2.62	0.5484	3.48	75
284-I m	F	3/27/78	1/3/78	Low	1,440	0.5686	2.53	0.4588	3.14	81
685-F m	F	3/27/78	1/3/78	Low	1,960	0.7510	2.61	0.6620	2.96	80
610-I m	F	3/27/78	1/3/78	Low	2,300	1.3216	3.74	1.1680	3.97	80
389-I m	F	3/27/78	1/3/78	Low	1,618	1.0781	1.51	0.9180	1.74	86
446-E m	F	3/27/78	1/3/78	Low	2,578	0.8964	2.88	0.7612	1.38	85
483-F m	0	3/27/78	1/3/78	Low	5,786	1.0716	5.32	0.5788	9.06	54
019-H m	F	3/27/78	1/3/78	Low	1,897	0.9678	1.96	0.8600	2.20	89
420-J m	F	3/27/78	1/10/78	Low	2,999	0.5882	5.17	0.4376	7.18	72
546-G m	F	3/27/78	1/5/78	Low	2,212	0.5162	6.30	0.7188	0.89	48
115-H m	F	3/27/78	1/5/78	Low	1,482	0.5835	5.83	0.3192	10.3	55
432-J m	F	3/27/78	1/5/78	Low	1,203	0.6371	1.89	0.2240	5.37	35
381-I m	F	3/27/78	1/4/78	Medium	9,914	1.2174	8.19	0.9920	10.0	82
763-E m	F	3/27/78	1/4/78	Medium	6,001	0.9312	7.39	0.7880	0.72	85
20-I m	F	3/27/78	1/5/78	Medium	9,461	0.6917	13.6	0.5196	18.2	75
041-H m	F	3/27/78	1/4/78	Medium	5,241	0.1915	13.6	0.2464	21.3	63
363-I m	F	3/27/78	1/4/78	Medium	28,040	0.4056	17.2	0.6400	43.8	86
14-I m	F	3/27/78	1/5/78	Medium	5,856	1.1893	4.92	0.5648	6.05	81
273-I m	F	3/27/78	1/4/78	Medium	9,384	0.9620	9.75	0.8572	10.9	89
595-I m	F	3/27/78	1/10/78	Medium	13,990	0.5818	26.0	0.2652	57.0	42
762-E m	F	3/27/78	1/4/78	Medium	13,590	1.4305	35.3	1.5044	18.2	69
599-I m	F	3/27/78	1/5/78	Medium	15,240	0.8872	17.7	0.5200	30.3	59
281-G m	F	3/27/78	1/4/78	Medium	3,794	0.5086	7.46	0.1124	11.4	65
540-H m	F	3/27/78	1/4/78	Medium	11,110	0.6944	16.0	0.5280	21.0	76
369-I m	0	3/27/78	1/4/78	High	22,420	0.4253	52.7	0.0884	254	21
130-I m	0	3/27/78	1/4/78	High	51,730	0.7690	67.3	0.5508	93.9	72
152-F m	0	3/27/78	1/4/78	High	109,900	2.6380	41.7	0.2420	474	8
287-I m	F	3/27/78	1/4/78	High	41,510	0.8781	67.3	0.4884	85.0	56
276-F m	F	3/27/78	1/4/78	High	13,310	1.8880	31.9	0.8172	41.0	70
710-I m	F	3/27/78	1/2/78	High	31,280	0.3941	70.1	0.1632	192.5	41
412-I m	F	3/27/78	1/2/78	High	29,690	1.2265	26.8	1.8168	28.5	50
425-J m	F	3/27/78	1/10/78	High	15,700	0.5261	38.8	0.3188	74.5	50
072-J m	F	3/27/78	1/2/78	High	11,610	0.4227	17.1	0.2440	47.5	36
486-H m	F	3/27/78	1/2/78	High	0,943	0.1963	22.6	0.1552	54.0	61
766-I m	F	3/27/78	1/2/78	High	14,860	0.1934	31.8	0.1824	145	26
600-I m	F	3/27/78	1/5/78	High	55,910	0.6375	88.0	0.4912	149	63

TABLE 13. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES RECEIVED
WITH ORIGINAL SHIPMENT SHIPPED 27 MARCH 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Date Level	Eng Arcelor 1254	Net Weight [g]	PPM on Wet Wt. Basis [ug/g]	Lipid Weight [g]	PPM on Lipid Wt. Basis [ug/g]	Lipid Wt. Wet Wt. [g]	x 1001 [g]
618-I f	F	3/27/78	3/6/78	Control	<418.8	1.0113	<0.44	0.8612	<0.52	85	
214-F f	F	3/27/78	3/6/78	Control	<418.8	0.7187	<0.54	0.5452	<0.76	74	
164-H f	F	3/27/78	3/6/78	Control	318.6	1.4168	0.22	1.1512	0.20	70	
604-I f	F	3/27/78	3/6/78	Control	261.2	1.2174	0.22	0.9448	0.27	79	
87-F f	F	3/27/78	3/6/78	Control	<313.6	0.9444	<0.12	0.7400	<0.41	79	
569-H f	F	3/27/78	3/6/78	Control	<276.0	0.9980	<0.20	0.7968	<0.25	80	
570-H f	F	3/27/78	3/6/78	Control	212.0	0.9401	0.25	0.6636	0.32	79	
108-F f	F	3/27/78	3/6/78	Control	<413.2	0.8192	<0.52	0.6472	<0.65	79	
418-J m	F	3/27/78	3/6/78	Control	380.0	0.8772	0.46	0.2872	1.35	74	
227-G m	F	3/27/78	3/6/78	Control	418.4	0.8693	0.47	0.7416	0.55	85	
735-F m	F	3/27/78	3/6/78	Control	332.0	1.0879	0.31	0.5412	0.61	59	
426-G m	O	3/27/78	3/6/78	Control	<680.8	0.5320	<0.75	0.0392	<18.2	7.4	
781-E f	F	3/27/78	3/6/78	Low	2,080	0.9440	2.30	0.7032	2.96	74	
284-I f	F	3/27/78	3/6/78	Low	3,224	0.7863	4.71	0.5136	6.47	73	
839-H f	F	3/27/78	3/6/78	Low	1,851	0.8433	2.20	0.6380	2.65	83	
605-F f	F	3/27/78	3/6/78	Low	3,580	1.0157	1.98	1.4688	2.44	81	
483-F f	O	3/27/78	3/6/78	Low	4,064	0.7241	5.61	0.4616	8.01	64	
624-I f	F	3/27/78	3/6/78	Low	3,280	0.6727	4.81	1.4192	2.31	710	
648-E f	F	3/27/78	3/6/78	Low	2,310	1.2160	1.85	1.0052	2.13	87	
389-E f	F	3/27/78	3/6/78	Low	1,744	0.7210	2.42	0.5956	2.93	83	
119-H m	F	3/27/78	3/6/78	Low	7,025	0.7483	9.37	0.3476	26.2	46	
412-J m	O	3/27/78	3/6/78	Low	4,200	0.7144	5.03	0.2500	17.1	74	
518-G m	F	3/27/78	3/6/78	Low	3,627	0.5089	6.40	0.2040	32.0	88	
478-J m	F	3/27/78	3/6/78	Low	5,170	1.0364	5.57	0.5364	10.8	57	
782-E f	F	3/27/78	3/6/78	Medium	19,030	0.6844	21.5	0.5733	33.2	65	
307-I f	F	3/27/78	3/6/78	Medium	11,480	0.8116	14.0	0.3022	37.6	37	
841-H f	F	3/27/78	3/6/78	Medium	8,430	0.6750	14.0	0.4800	19.3	72	
271-I f	F	3/27/78	3/6/78	Medium	10,150	1.0515	9.63	0.8536	11.9	81	
763-H f	F	3/27/78	3/6/78	Medium	11,670	1.2217	18.3	1.2600	32.0	88	
540-H f	F	3/27/78	3/6/78	Medium	14,320	1.1112	16.5	0.7072	20.2	81	
751-I f	F	3/27/78	3/6/78	Medium	18,720	0.9667	20.4	0.7040	28.0	73	
281-G f	F	3/27/78	3/6/78	Medium	25,530	1.2146	22.9	0.9340	27.1	84	
20-I m	F	3/27/78	3/6/78	Medium	35,000	1.7560	20.0	1.4944	23.4	85	
599-I f	F	3/27/78	3/6/78	Medium	23,190	0.9175	25.0	0.7140	31.6	79	
595-I f	F	3/27/78	3/6/78	Medium	21,020	0.8153	26.5	0.3040	71.1	37	
46-I m	F	3/27/78	3/6/78	Medium	9,190	1.0956	0.40	0.8724	10.5	80	
486-H m	O	1/27/78	3/7/78	High	33,670	0.5452	61.0	0.2156	156	40	
710-I f	F	3/27/78	3/6/78	High	17,960	0.5803	35.0	0.0604	297	17	
310-I f	F	3/27/78	3/6/78	High	87,120	1.0085	60.1	0.8760	99.5	81	
287-I f	F	3/27/78	3/6/78	High	30,310	0.6032	56.1	0.4220	90.6	82	
226-F f	F	3/27/78	3/6/78	High	63,160	0.9407	45.9	0.8124	51.1	86	
265-F f	O	3/27/78	3/6/78	High	61,510	0.5621	77.4	0.2940	148	52	
112-I f	F	3/27/78	3/6/78	High	57,870	1.9100	30.3	1.5216	34.0	89	
423-J m	F	1/27/78	3/6/78	High	4,175	0.8804	5.15	0.4824	14.0	71	
412-J m	O	3/27/78	3/6/78	High	35,640	0.5520	64.0	0.1240	111	59	
680-J m	F	3/27/78	3/6/78	High	144,000	1.2212	134	0.5540	300	45	
704-E f	F	3/27/78	3/6/78	High	46,890	0.7621	42.4	0.2994	161	30	
152-F f	F	3/27/78	1/21/78	High	2,415	0.5972	4.00	0.0052	444	1.0	

TABLE 14. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES SHIPPED 4 MAY 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Net Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Wt. x 1000 (g)
569-H f	F	5/4/78	5/1/78	Control	<218.0	1.2703	<0.17	1.0668	<0.20	84
739-F m	F	5/4/78	4/28/78	Control	<157.2	0.4981	<0.12	0.2356	<0.67	47
227-G m	F	5/4/78	4/28/78	Control	162.4	0.9901	0.16	0.7948	0.20	80
418-J m	O	5/4/78	4/28/78	Control	388.0	0.5714	0.68	0.2296	1.69	40
426-G m	O	5/4/78	4/28/78	Control	<252.4	0.6992	<0.36	0.1032	<2.45	15
839-H f	F	5/4/78	5/1/78	Low	3,797	1.4089	2.69	1.1904	3.19	84
309-I f	F	5/4/78	5/1/78	Low	1,650	0.9167	1.80	0.7296	2.26	80
446-E f	F	5/4/78	5/1/78	Low	1,006	0.5729	1.76	0.4252	2.37	74
428-J m	F	5/4/78	4/28/78	Low	3,506	0.5846	6.00	0.3468	10.1	59
432-J m	O	5/4/78	4/28/78	Low	2,867	0.7158	4.01	0.3560	8.05	50
516-G m	F	5/4/78	4/28/78	Low	4,608	0.6212	7.42	0.2516	18.1	41
119-II m	F	5/4/78	4/28/78	Low	2,371	0.5355	1.87	0.2868	8.27	54
284-I f	F	5/4/78	5/1/78	Low	1,282	0.3747	3.42	0.2280	5.62	61
483-F f	O	5/4/78	5/1/78	Low	1,655	0.2986	5.54	0.1196	13.8	40
281-G f	F	5/4/78	5/1/78	Medium	33,600	1.1296	29.7	0.9356	35.9	83
595-I m	F	5/4/78	4/27/78	Medium	10,800	0.5738	18.8	0.4028	24.8	78
595-I m	F	5/4/78	4/27/78	Medium	18,950	0.5008	37.8	0.2008	94.4	40
46-I m	F	5/4/78	4/27/78	Medium	7,305	0.9110	7.81	0.7056	10.4	76
70-I m	F	5/4/78	4/27/78	Medium	14,110	1.0815	31.5	0.8652	39.4	80
101-I f	F	5/4/78	5/1/78	Medium	15,400	1.1630	13.2	0.9824	15.7	84
706-F m	O	5/4/78	4/27/78	High	131,400	1.0518	125	0.3756	350	36
427-J f	F	5/4/78	4/27/78	High	27,430	0.4958	55.3	0.2940	94.1	60
600-I f	F	5/4/78	4/27/78	High	46,960	0.5166	125	0.2004	314	32
425-J m	O	5/4/78	4/27/78	High	127,400	1.5356	82.9	0.4700	138	60
283-I f	F	5/4/78	4/27/78	High	83,260	0.6675	125	0.4176	190	66
118-I f	F	5/4/78	4/27/78	High	106,300	0.8718	122	0.6512	163	75
226-F f	F	5/4/78	4/27/78	High	74,690	1.3196	56.6	1.0616	70.4	80
265-I f	F	5/4/78	4/27/78	High	49,050	0.4271	115	0.2824	174	66

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TABLE 15. CONTENT OF ADULT FAT SAMPLES SHIPPED 15 JUNE 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basia (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basia (µg/g)	Lipid Wt. x 1000 Wt. Wt. (g)
604-I f	F	6/15/78	5/24/78	Control	320	0.5140	0.62	0.3612	0.89	70
618-I f	F	6/15/78	6/6/78	Control	80.8	1.0416	0.08	0.8716	0.09	84
764-E f	F	6/15/78	5/24/78	Control	68.4	0.5686	0.12	0.4372	0.16	77
274-F f	F	6/15/78	5/24/78	Control	69.2	0.5875	0.12	0.4084	0.17	70
569-H f	F	6/15/78	6/6/78	Control	68.0	1.1526	0.06	1.1080	0.06	96
426-G m	F	6/15/78	6/6/78	Control	72.8	0.1960	0.37	0.8108	2.36	16
739-F m	F	6/15/78	6/6/78	Control	38.4	0.1023	0.13	0.0716	0.49	26
418-J m	F	6/15/78	6/6/78	Control	80.0	0.3210	0.25	0.1644	0.49	51
227-G m	F	6/15/78	6/6/78	Control	36.0	1.6467	0.02	1.5036	0.02	94
605-P f	F	8/15/78	6/6/78	Low	1,856	0.9093	2.04	0.7120	2.60	78
646-E f	F	6/15/78	6/6/78	Low	1,318	0.7248	1.82	0.5792	2.27	80
624-I f	F	6/15/78	5/24/78	Low	950.4	0.9182	1.03	0.7232	1.31	79
839-H f	F	6/15/78	6/9/78	Low	2,120	1.0091	2.10	0.7476	2.85	74
516-G m	F	6/15/78	6/6/78	Low	1,292	0.3655	1.53	0.1620	7.94	45
119-H m	F	6/15/78	6/6/78	Low	1,832	0.6730	2.72	0.2336	7.84	35
432-J m	F	6/15/78	6/6/78	Low	686.8	0.3657	1.88	0.0808	7.73	24
428-J m	F	6/15/78	6/6/78	Low	1,862	0.4866	3.83	0.3444	5.41	71
763-E f	F	6/15/78	6/5/78	Medium	7,135	0.5487	13.0	0.3896	18.3	71
273-I f	F	6/15/78	6/5/78	Medium	4,947	0.5700	8.68	0.3920	12.6	69
281-G f	F	6/15/78	6/5/78	Medium	8,474	0.4069	20.8	0.2364	35.8	50
841-H f	F	6/15/78	5/34/78	Medium	19,810	0.5105	38.8	0.3696	53.6	72
757-I f	F	6/15/78	6/5/78	Medium	14,530	0.4977	29.2	0.3240	44.9	65
387-I f	F	6/15/78	6/5/78	Medium	12,870	0.8562	14.8	0.6792	18.7	79
762-E f	F	6/15/78	6/5/78	Medium	12,000	0.5619	21.4	0.2064	50.3	37
540-H f	F	6/15/78	6/5/78	Medium	6,580	0.3837	22.2	0.2924	29.1	76
46-I m	F	6/15/78	6/6/78	Medium	8,052	0.7769	10.4	0.6156	13.1	79
595-I m	F	6/15/78	6/6/78	Medium	743.2	0.2237	3.32	0.0880	92.9	3.6
599-I m	F	6/15/78	6/6/78	Medium	20,680	0.9645	21.4	0.5896	35.1	61
20-I m	F	6/15/78	6/6/78	Medium	13,200	0.7243	18.2	0.4732	27.9	65
312-I f	F	6/15/78	6/5/78	High	35,400	0.6441	55.0	0.4940	71.7	77
269-I f	F	6/15/78	6/5/78	High	21,410	0.4947	43.3	0.1296	165	27
387-I f	F	6/15/78	6/5/78	High	6,375	0.3611	17.7	0.0184	346	5.1
236-P f	F	6/15/78	6/5/78	High	18,470	0.4216	42.8	0.3504	52.7	81
338-I f	F	6/15/78	6/5/78	High	33,800	0.3884	87.0	0.2036	166	52
425-J m	F	6/15/78	6/5/78	High	16,220	0.3431	47.3	0.1852	87.6	54
427-J m	F	6/15/78	6/5/78	High	20,830	0.5900	33.9	0.3976	50.4	67
688-I m	F	6/15/78	6/5/78	High	19,730	0.5105	74.9	0.2712	146	51
706-E m	F	6/15/78	6/5/78	High	7,500	0.3243	23.1	0.0448	167	14

TABLE 16. PCB CONTENT OF ADULT FAT SAMPLES SHIPPED 24 AUGUST 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Eqg Aroclor 1254	Net Weight (g)	PPM on Net Wt. basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. basis (µg/g)	Lipid Wt. x 100% Net Wt. (%)
578-II f	F	8/24/78	8/14/78	Control	106.8	0.2461	0.41	0.0968	1.1	39
764-E f	F	8/24/78	7/31/78	Control	73.2	0.6101	0.12	0.2298	0.12	18
578-H f	F	8/24/78	7/31/78	Control	56.0	0.1256	0.17	0.1248	0.45	38
604-I f	F	8/24/78	7/31/78	Control	58.8	0.4217	0.14	0.1228	0.48	29
618-I f	F	8/24/78	7/11/78	Control	27.0	0.7790	0.03	0.2764	0.08	35
549-II f	F	8/24/78	7/11/78	Control	69.2	0.9992	0.07	0.3196	0.22	32
274-F f	F	8/24/78	7/11/78	Control	59.6	0.3471	0.17	0.1640	0.16	47
200-F f	F	8/24/78	7/11/78	Control	90.4	0.8250	0.11	0.1604	0.25	44
719-P m	F	8/24/78	8/1/78	Control	75.6	0.4742	0.16	0.2284	0.11	48
227-G m	F	8/24/78	8/1/78	Control	89.2	0.6718	0.13	0.1996	0.45	30
418-J m	F	8/24/78	8/1/78	Control	62.4	0.3834	0.18	0.1172	0.53	31
426-G m	F	8/24/78	8/1/78	Control	17.6	0.2642	0.06	0.0844	0.21	32
273-I f	F	8/24/78	8/1/78	Medium	9,632	0.8217	11.7	0.6971	13.8	85
757-I f	F	8/24/78	8/1/78	Medium	1,771	0.2980	5.94	0.0252	70.3	8.4
763-E f	F	8/24/78	7/11/78	Medium	18,800	0.5970	18.1	0.4344	24.9	72
841-II f	F	8/24/78	8/1/78	Medium	5,220	0.1646	14.3	0.1332	39.2	16
540-H f	F	8/24/78	8/1/78	Medium	1,710	0.4127	8.62	0.1824	20.4	42
281-G f	F	8/24/78	8/1/78	Medium	15,940	0.7411	21.5	0.5888	27.1	79
307-I f	F	8/24/78	8/1/78	Medium	11,420	0.7069	16.2	0.5792	19.7	82
599-I m	F	8/24/78	8/2/78	Medium	4,098	0.3688	11.1	0.2016	20.1	55
595-I m	F	8/24/78	8/2/78	Medium	8,910	0.7198	22.9	0.2380	17.4	74
20-I m	F	8/24/78	8/2/78	Medium	6,680	0.4897	11.6	0.2124	31.5	43
46-I m	F	8/24/78	8/2/78	Medium	8,110	1.0042	8.10	0.1674	9.65	86
287-I f	F	8/24/78	8/6/78	High	1,144	0.1301	3.47	0.0744	46.9	7.4
312-I f	F	8/24/78	8/1/78	High	11,460	0.2895	19.6	0.1418	79.8	50
249-I f	F	8/24/78	8/1/78	High	15,100	0.5580	27.4	0.2670	58.4	47
226-I f	F	8/24/78	8/1/78	High	1,983	0.2911	11.7	0.0444	89.7	15
118-I f	F	8/24/78	8/1/78	High	400.0	0.2442	1.97	0.0560	8.57	23
427-J m	F	8/24/78	8/2/78	High	7,851	0.4147	6.01	0.2000	14.3	42
600-I m	F	8/24/78	8/2/78	High	7,626	0.5828	11.1	0.2792	27.3	68
425-J m	F	8/24/78	8/2/78	High	5,850	0.4591	12.7	0.1908	10.7	42

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TABLE 17. PCB CONTENT OF ADULT SKIN, OMENTUM, AND
FAT SAMPLES SHIPPED 24 AUGUST 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Eng Aroclor 1254	Net Weight (g)	PPM on Net Wt. Basin (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basin (ug/g)	Lipid Wt. Net Wt. x 1000 (%)
701-E f	F	8/24/78	7/31/78	Low	1,394	0.6204	2.25	0.4488	3.11	72
516-G m	F	8/24/78	8/2/78	Low	1,574	0.4918	3.20	0.3840	5.18	62
428-J m	F	8/24/78	8/2/78	Low	2,486	0.5881	4.23	0.4332	5.74	74
119-H m	F	8/24/78	8/2/78	Low	1,392	0.3965	3.51	0.2708	5.14	68
432-J m	F	8/24/78	8/2/78	Low	333.6	0.1244	1.03	0.2016	1.65	62
605-P f	F	8/24/78	7/31/78	Low	2,369	0.8237	2.88	0.6532	3.47	79
646-B f	F	8/24/78	8/1/78	Low	1,049	0.5706	1.84	0.4716	2.22	83
839-H f	F	8/24/78	7/31/78	Low	1,095	0.7468	1.47	0.6492	1.69	87
624-I f	F	8/24/78	7/31/78	Low	2,642	0.8667	3.00	0.6800	3.89	78
762-E	O	8/24/78	7/31/78	Medium	673.7	0.3308	2.04	0.0840	8.02	25
706-E m	F	8/24/78	7/19/78	High	547,800	1.1830	172	0.7574	733	24
706-E m	S	8/24/78	7/19/78	High	2,221	0.8703	2.55	0.0304	73.1	3.5

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TABLE 10. PCB CONTENT OF ADULT FAT AND OMENTUM SAMPLES SHIPPED 1 NOVEMBER 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Eng Aroclor 1254	Wet Weight (g)	PPM on Wet ML Basis (µg/g)	Lipid Weight (g)	PPM on Lipid ML Basis (µg/g)	Lipid ML x 100s Wet ML (%)
604-I	F	11/1/78	10/4/78	Control	353.3	0.1791	0.93	0.1672	0.96	97
200-F	F	11/1/78	10/4/78	Control	<137.7	0.5462	<0.60	0.0496	<0.61	8.8
578-H	F	11/1/78	10/4/78	Control	<201.7	0.4692	<0.60	0.0420	<0.71	9.0
569-H	F	11/1/78	10/4/78	Control	511.4	0.7260	0.70	0.5480	0.93	75
764-E	F	11/1/78	10/4/78	Control	612.6	0.7574	0.81	0.4300	1.42	57
274-F	F	11/1/78	10/4/78	Control	257.6	1.4951	0.17	0.5400	0.48	36
618-I	F	11/1/78	10/4/78	Control	<205.5	2.4073	<0.09	2.0700	<1.00	86
739-F	F	11/1/78	10/6/78	Control	735.3	0.5043	1.46	0.3112	2.36	62
426-G	F	11/1/78	10/6/78	Control	195.9	0.3486	0.56	0.0220	8.90	6.3
227-G	F	11/1/78	10/6/78	Control	400.6	1.5158	0.26	1.2456	0.32	82
418-J	F	11/1/78	10/6/78	Control	153.2	0.9027	0.17	0.3832	0.40	42
483-F	F	11/1/78	10/6/78	Low	1,117	0.3620	3.09	0.1540	7.25	43
309-I	F	11/1/78	10/6/78	Low	2,322	0.7158	3.24	0.5652	4.11	79
674-I	F	11/1/78	10/4/78	Low	2,638	1.0764	2.46	0.9064	2.91	84
646-E	F	11/1/78	10/4/78	Low	3,587	0.8906	4.03	0.4748	5.32	76
819-H	F	11/1/78	10/4/78	Low	9,816	2.3452	4.19	1.9120	5.13	82
605-F	F	11/1/78	10/4/78	Low	5,702	1.7908	3.18	1.4144	4.03	79
284-I	F	11/1/78	10/4/78	Low	1,778	0.6471	2.75	0.4180	4.25	65
701-E	F	11/1/78	10/4/78	Low	1,221	0.5402	2.26	0.1500	7.73	29
516-G	F	11/1/78	10/6/78	Low	1,435	0.4640	1.09	0.2028	7.08	44
412-J	F	11/1/78	10/6/78	Low	593.3	0.3543	1.67	0.1356	4.38	38
119-H	F	11/1/78	10/6/78	Low	1,321	0.3676	3.59	0.2288	5.78	62
428-J	F	11/1/78	10/6/78	Low	3,962	1.0431	3.80	0.7816	5.07	75
757-I	F	11/1/78	10/4/78	Medium	26,480	0.7332	36.1	0.4596	57.6	63
273-I	F	11/1/78	10/5/78	Medium	9,565	0.7379	13.0	0.6100	15.7	81
763-E	F	11/1/78	10/5/78	Medium	9,224	0.5865	15.7	0.4004	23.0	68
307-I	F	11/1/78	10/5/78	Medium	18,790	0.8971	20.9	0.7040	26.7	78
540-H	F	11/1/78	10/5/78	Medium	8,806	0.4030	21.9	0.1948	45.2	48
762-E	F	11/1/78	10/5/78	Medium	10,110	0.4532	22.3	0.0116	743	1.0
599-I	F	11/1/78	10/6/78	Medium	2,063	0.3862	5.34	0.1108	18.6	29
595-I	F	11/1/78	10/6/78	Medium	5,020	0.4094	12.3	0.0968	51.9	24
46-I	F	11/1/78	10/6/78	Medium	10,060	1.2946	7.77	1.0408	9.66	80
20-I	F	11/1/78	10/6/78	Medium	14,730	0.7054	20.9	0.1500	42.1	50
226-F	F	11/1/78	10/5/78	High	66,220	0.6268	106	0.2216	299	35
267-I	F	11/1/78	10/5/78	High	10,540	0.5505	55.5	0.3900	78.3	71
287-I	F	11/1/78	10/5/78	High	81,890	1.5083	55.6	0.8644	97.0	57
312-I	F	11/1/78	10/5/78	High	16,420	0.5074	71.8	0.2180	131	55
600-I	F	11/1/78	10/6/78	High	8,200	0.1971	41.6	0.0196	207	20
427-I	F	11/1/78	10/6/78	High	9,016	0.7821	11.6	0.1148	28.7	40
425-J	F	11/1/78	10/6/78	High	13,380	1.1472	24.8	0.7256	66.0	54

TABLE 19. PCB CONTENT OF ADULT FAT SAMPLES
SHIPPED 6 FEBRUARY 1979

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Org Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Base	Lipid Weight (g)	PPM on Lipid Wt. Base	Lipid Wt. Wet Wt. x 100 (%)
569-H f	f	2/6/79	12/4/78	Control	250.4	0.8272	0.30	0.7364	0.34	89
418-J m	f	2/6/79	12/5/78	Control	255.3	0.5861	0.44	0.4548	0.56	78
200-F f	f	2/6/79	12/6/78	Control	215.3	0.4220	<0.51	0.3792	<0.57	90
604-I f	f	2/6/79	12/8/78	Control	264.3	0.7076	0.37	0.5136	0.51	73
764-E f	f	2/6/79	12/5/78	Control	257.6	0.5148	<0.50	0.4104	<0.63	80
618-I f	f	2/6/79	12/8/78	Control	231.2	0.8704	0.27	0.7828	0.30	90
227-G m	f	2/6/79	12/11/78	Control	266.1	0.4715	<0.56	0.4282	<0.62	91
274-F f	f	2/6/79	12/7/78	Control	257.5	1.2216	0.21	0.6208	0.41	51
578-H f	f	2/6/79	12/6/78	Control	268.8	0.3490	<0.77	0.0844	<1.18	24
739-F m	f	2/6/79	12/6/78	Control	405.2	0.5534	0.73	0.4772	0.85	86
426-G m	f	2/6/79	12/7/78	Control	227.6	0.4670	<0.49	0.0036	<63.2	0.8
428-J m	f	2/6/79	12/5/78	Low	1,870	0.6866	2.72	0.5603	3.34	82
646-E f	f	2/6/79	12/6/78	Low	1,706	0.7934	2.15	0.7012	2.43	88
483-F f	f	2/6/79	12/11/78	Low	1,016	0.4170	2.44	0.2788	3.64	67
516-G m	f	2/6/79	12/7/78	Low	2,094	0.7955	2.63	0.6728	3.11	85
829-H f	f	2/6/79	12/8/78	Low	1,568	0.8126	1.93	0.7468	2.10	92
119-H m	f	2/6/79	12/7/78	Low	3,656	0.9507	3.85	0.7200	5.08	76
625-F f	f	2/6/79	12/6/78	Low	4,489	0.9059	4.96	0.8124	5.53	90
412-J m	f	2/6/79	12/11/78	Low	1,367	0.8431	1.62	0.6292	2.17	75
701-E f	f	2/6/79	12/8/78	Low	434.1	0.2879	1.51	0.2076	2.09	72
329-I f	f	2/6/79	12/7/78	Low	743.3	0.3315	2.24	0.2968	2.53	90
624-I f	f	2/6/79	12/5/78	Low	1,227	0.8371	1.44	0.7540	1.60	90
284-I f	f	2/6/79	12/6/78	Low	1,285	0.6395	2.01	0.2916	4.41	46
46-I m	f	2/6/79	12/7/78	Medium	5,542	0.8838	6.27	0.7928	6.99	90
757-I f	f	2/6/79	12/7/78	Medium	12,590	0.4490	28.0	0.3240	38.9	72
281-G f	f	2/6/79	12/11/78	Medium	3,906	0.4299	9.09	0.3804	10.3	89
763-E f	f	2/6/79	12/7/78	Medium	5,033	0.4826	10.4	0.3988	12.6	83
540-H f	f	2/6/79	12/8/78	Medium	10,672	0.5571	19.2	0.4636	23.0	83
599-I m	f	2/6/79	12/7/78	Medium	12,410	0.7506	16.5	0.6812	16.2	91
20-I m	f	2/6/79	12/5/78	Medium	7,306	0.2705	27.0	0.2272	32.2	84
595-I m	f	2/6/79	12/11/78	Medium	17,570	0.6067	29.0	0.4612	38.1	76
273-I f	f	2/6/79	12/6/78	Medium	5,631	0.5669	9.93	0.5104	11.0	90
762-E f	f	2/6/79	12/6/78	Medium	2,319	0.4180	5.55	0.2324	9.98	56
307-I f	f	2/6/79	12/5/78	Medium	24,000	1.3237	18.1	1.1788	20.4	89
269-I f	f	2/6/79	12/6/78	High	26,200	0.6720	39.0	0.4508	58.1	67
427-J m	f	2/6/79	12/7/78	High	14,900	0.6845	21.8	0.4852	30.7	71
425-J m	f	2/6/79	12/8/78	High	14,040	0.6444	21.8	0.4796	29.3	74
226-F f	f	2/6/79	12/5/78	High	36,580	0.8751	41.8	0.1056	34.6	12
287-I f	f	2/6/79	12/6/78	High	28,470	0.9230	30.8	0.5616	50.7	61
620-I m	f	2/6/79	12/5/78	High	35,390	0.7024	50.4	0.4440	79.7	63
212-I f	f	2/6/79	12/7/78	High	26,780	0.8546	31.3	0.6492	41.2	76

3.2.2 Infant Rhesus Monkey Skin and Fat Samples

Baby Rhesus monkey tissue samples were taken on an intermittent basis to determine the PCB levels the monkeys may have accumulated both during gestation, and after birth as a result of nursing. Since the babies were not sampled on a regular basis, presentation of the data in a cumulative manner would not facilitate interpretation. Therefore, the data entries for the baby monkey tissue samples are given in Tables 20 through 26, in which complete data histories are enumerated.

3.2.3 Liver Biopsy Samples

Liver biopsy samples were obtained during the final sacrifice of the Rhesus monkeys in December 1978. Levels of PCB's in the liver tissue were determined to examine whether PCB's accumulate in the liver, an organ that commonly detoxifies the body of many foreign substances. Table 27 lists the PCB levels found in the adult Rhesus monkey liver tissues, and Table 28 gives the PCB values observed in the infant liver tissue samples.

3.2.4 Miscellaneous Samples Analyzed on an Intermittent Basis

Several additional samples were analyzed on an intermittent basis. These samples include milk, blood serum, and tissue samples from terminal animals. Any modifications necessary for analysis (i.e., for milk and blood serum samples) are outlined in the section on "Experimental Procedures."

Table 29 lists the PCB content found in fat and muscle tissue of several terminal animals. Tables 30 and 31 present the data obtained for milk samples collected from nursing mothers and one blood serum sample taken from an adult male. Table 32 gives the PCB values found in the placenta of several female adults.

TABLE 20. PCB CONTENT OF ADULT PLACENTA AND BABY SKIN AND FAT SAMPLES SHIPPED 4 MAY 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basia (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basia (ug/g)	Lipid Wt. x 1000 (g)
764-E f	P	5/4/78	4/25/78	Control	2,280	4.2315	0.54	0.0144	158	0.34
B-8518 m	B	5/4/78	4/19/78	Control	*	--	--	--	--	--
B-8532 f	B	5/4/78	4/25/78	Control	*	--	--	--	--	--
B-8533 f	B	5/4/78	4/26/78	Control	*	--	--	--	--	--
B-8527 f	BF	5/4/78	4/25/78	Low	442.2	0.1415	3.13	0.0205	21.6	14
B-8542 f	B	5/4/78	5/2/78	High	1,465	0.1002	14.6	0.0078	189	7.7

*Samples lost due to contamination problems encountered.

TABLE 21. PCB CONTENT OF BABY SKIN AND FAT SAMPLES SHIPPED 23 MAY 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basia (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basia (ug/g)	Lipid Wt. x 1000 (g)
B-8557 m	B	5/23/78	5/8/78	Control	4,485	0.1677	0.03	0.0305	0.15	18
B-8574 m	B	5/23/78	5/15/78	Control	5,761	0.1697	0.03	0.0268	0.21	16
B-8562 f	B	5/23/78	5/12/78	Low	33.44	0.1635	0.21	0.0350	0.98	21
B-8546 f	B	5/23/78	5/3/78	Medium	131.9	0.2280	0.58	0.0208	6.36	9.1
B-8560 m	B	5/23/78	5/12/78	Medium	28.11	0.1130	0.25	0.0085	3.31	7.5
B-8592 f	BF	5/23/78	5/23/78	Medium	51.94	0.1111	0.47	0.0155	3.35	14

TABLE 22. PCB CONTENT OF BABY SKIN SAMPLES SHIPPED 15 JUNE 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Wt. x 100s Wet Wt. (%)
B-0532 f	B	6/15/78	5/24/78	Control	n.d.	0.1371	n.d.	0.0153	n.d.	11
B-0510 m	B	6/15/78	5/24/78	Control	24.26	0.1183	0.21	0.0135	1.80	11
B-0533 f	B	6/15/78	5/24/78	Control	4.16	0.2141	0.02	0.0433	0.10	16
B-0557 m	B	6/15/78	6/6/78	Control	16.98	0.2120	0.07	0.0543	0.31	23
B-0621 f	B	6/15/78	6/8/78	Control	25.50	0.1616	0.16	0.0423	0.60	26
B-0527 f	B	6/15/78	5/24/78	Low	16.88	0.1121	0.13	0.0105	0.55	23
B-0604 m	B	6/15/78	5/30/78	Low	7.62	0.1210	0.06	0.0095	0.90	7.8
B-0562 f	B	6/15/78	6/6/78	Low	5.94	0.2116	0.03	0.0503	0.12	24
B-0603	B	6/15/78	5/30/78	Medium	81.83	0.1500	0.55	0.0043	19.3	2.9
B-0546 f	B	6/15/78	6/5/78	Medium	433.2	0.1612	2.69	0.0173	25.0	11
B-0559 m	B	6/15/78	6/9/78	Medium	199.7	0.0958	2.09	0.0143	14.0	15
B-0560	B	6/15/78	6/9/78	Medium	172.8	0.1201	1.44	0.0051	32.9	4.4
B-0542 f	B	6/15/78	6/5/78	High	276.2	0.1510	1.02	0.0045	61.4	3.0

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TABLE 23. PCB CONTENT OF BABY SKIN AND FAT SAMPLES SHIPPED 24 AUGUST 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Wt. x 100s Wet Wt. (%)
B-0533 f	Bf	8/24/78	6/26/78	Control	1,480	1.6380	0.90	1.0716	1.38	65
B-0533 f	B	8/24/78	6/26/78	Control	419.6	0.9700	0.43	0.2232	1.88	23
B-0532 f	Bf	8/24/78	6/26/78	Control	962.4	0.6825	1.41	0.3912	2.46	57
B-0532 f	B	8/24/78	6/26/78	Control	114.8	0.4052	0.33	0.094	1.43	23
B-0510 m	Bf	8/24/78	6/19/78	Control	987.6	1.0986	0.90	0.6580	1.50	60
B-0510 m	B	8/24/78	6/19/78	Control	220.0	0.4989	0.44	0.0544	4.04	11
B-0604 m	B	8/24/78	6/27/78	Low	301.6	0.2780	1.31	0.0280	10.8	10
B-0527 f	Bf	8/24/78	6/23/78	Low	1,802	0.8873	2.03	0.5768	3.12	65
B-0527 f	B	8/24/78	6/23/78	Low	2,116	0.5001	4.63	0.2764	8.38	55
B-0511 m	Bf	8/24/78	6/19/78	Medium	223.6	0.7883	0.92	0.4484	1.41	57
B-0511 m	B	8/24/78	6/19/78	Medium	80.0	0.1954	0.41	0.0480	1.67	25
B-0601	B	8/24/78	6/27/78	Medium	1,181	0.2081	6.61	0.0280	49.1	11
B-0542 f	B	8/24/78	6/23/78	Medium	1,102	0.1479	9.11	0.0160	16.2	26
B-0542 f	B	8/24/78	6/30/78	High	2,058	0.1476	11.8	0.0212	88.7	16

TABLE 24. PCB CONTENT OF BABY SKIN AND FAT SAMPLES SHIPPED 24 AUGUST 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. x 1000 / Wet Wt. (%)
B-0574 m	B	8/24/78	7/14/78	Control	<348.4	0.4519	<0.77	0.0376	<9.27	8.3
B-0574 m	Bf	8/24/78	7/27/78	Control	520.8	0.5670	0.92	0.2256	2.31	40
B-0557 m	B	8/24/78	7/6/78	Control	<167.2	0.2994	<0.56	0.0732	<2.28	24
B-0557 m	Bf	8/24/78	7/6/78	Control	392.4	0.7307	0.54	0.5140	0.76	78
B-0621 f	B	8/24/78	7/10/78	Control	<267.2	0.2050	<1.30	0.0720	<3.71	35
B-0604 m	B	8/24/78	7/27/78	Low	1,128	0.6951	1.62	0.0740	15.2	11
B-0604 m	Bf	8/24/78	7/27/78	Low	0,734	0.9564	9.13	0.5604	15.4	59
B-0562 f	B	8/24/78	7/10/78	Low	1,085	0.3015	1.60	0.0700	15.5	23
B-0562 f	Bf	8/24/78	7/10/78	Low	14,760	1.1809	12.5	0.7112	20.7	60
B-0546 f	B	8/24/78	7/5/78	Medium	1,398	0.2010	6.96	0.0116	121	5.8
B-0546 f	B	8/24/78	7/28/78	Medium	9,697	0.4862	19.9	0.0284	341	5.8
B-0546 f	Bf	8/24/78	7/28/78	Medium	30,410	0.1670	182	0.0652	466	39
B-0603	B	8/24/78	7/27/78	Medium	17,774	0.4895	36.3	0.0324	569	6.6
B-0603	Bf	8/24/78	7/27/78	Medium	72,660	0.4514	160	0.2320	313	51
B-0559	B	8/24/78	7/10/78	Medium	16,150	0.6512	24.4	0.1624	99.4	25
B-0559	Bf	8/24/78	7/10/78	Medium	60,560	0.9981	60.7	0.6944	87.2	70
B-0559	Bf	8/24/78	7/25/78	Medium	17,720	0.5905	30.0	0.2092	84.7	35
B-0592 f	B	8/24/78	7/10/78	Medium	97,310	1.8572	52.4	1.1716	83.0	63
B-0592 f	Bf	8/24/78	7/25/78	Medium	1,270	0.0947	13.4	0.0012	1,050	5.1
B-0560 f	B	8/24/78	7/10/78	Medium	4,397	0.0403	109	0.0008	5,496	2.0
B-0542 f	B	8/24/78	7/31/78	High						

TABLE 25. PCB CONTENT OF ADULT SKIN AND FAT SAMPLES AND BABY SKIN AND FAT SAMPLES SHIPPED 1 NOVEMBER 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. x 100 (%)
B-8621	f	11/1/78	8/8/78	Control	246.2	0.1810	0.65	0.1244	1.98	33
B-8621	bf	11/1/78	8/8/78	Control	755.2	1.1135	0.61	1.0760	0.74	82
B-8754	f	11/1/78	8/10/78	Low	2,410	0.1708	14.2	0.0456	51.3	27
B-8754	f	11/1/78	9/11/78	Low	1,486	0.2709	5.48	0.0496	21.3	26
B-8754	f	11/1/78	10/10/78	Low	1,154	0.2818	4.10	0.0772	14.9	27
B-8754	bf	11/1/78	10/10/78	Low	11,380	1.2588	9.04	0.7480	14.8	61
B-8560	f	11/1/78	8/10/78	Medium	8,532	0.0992	86.0	0.0020	4,770	2.0
B-8560	f	11/1/78	9/11/78	Medium	2,769	0.3151	8.79	0.0192	144	4.1
B-8560	f	11/1/78	10/10/78	Medium	550.3	0.1892	2.91	0.0060	91.7	1.2
B-8542	bf	11/1/78	8/5/78	High	4,128	0.1052	39.2	0.0008	5,160	0.8
841-H	f	11/1/78	8/31/78	Medium	3,357	0.6907	4.86	0.0496	67.7	7.2
841-H	f	11/1/78	9/31/78	Medium	39,000	2.8477	11.7	0.8028	48.6	28
338-I	f	11/1/78	8/21/78	High	84,630	0.8202	103	0.0604	1,401	7.4

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TABLE 26. PCB CONTENT OF BABY SKIN AND FAT SAMPLES SHIPPED 6 FEBRUARY 1979

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. x 100 (%)
B-8815	B	2/6/79	10/27/78	Low	<232.1	0.1194	<1.94	0.0184	<12.6	15
B-8815	B	2/6/79	11/27/78	Low	<272.6	0.2278	<1.20	0.0736	<3.70	32
B-8815	bf	2/6/79	12/6/78	Low	333.1	0.4389	0.76	0.3492	0.95	80
B-8860	m	2/6/79	11/10/78	Medium	1,053	0.0831	12.7	0.0060	175	7.2
B-8860	m	2/6/79	12/11/78	Medium	4,623	0.2914	15.9	0.0956	48.4	33
B-8560	f	2/6/79	11/9/78	Medium	1,230	0.1790	6.10	0.0104	67.3	10
B-8560	f	2/6/79	12/11/78	Medium	7,990	0.4423	18.1	0.1400	57.1	32

TABLE 27. PCB CONTENT OF ADULT LIVER
SAMPLES SHIPPED 7 MARCH 1979

Sample		Date	Date	Dose	Org	Wet	PPM on	Lipid	PPM on	Lipid
I.D.	Type	Shipped	Sample	Level	Arclor	Weight	Wet Wt.	Weight	Lipid Wt.	Wet Wt.
I.D.	Type	Shipped	Sample	Level	1254	(g)	(ug/g)	(g)	(ug/g)	= 100 (%)
470-G m	L	3/7/79	12/7/78	Control	341.7	3.4094	0.10	0.3560	0.96	10
274-F f	L	3/7/79	12/7/78	Control	443.8	5.0514	0.09	0.2524	1.76	5.0
227-G m	L	3/7/79	12/11/78	Control	2,381	3.3836	0.70	0.2720	8.75	8.0
739-F m	L	3/7/79	12/7/78	Control	449.6	1.8402	0.24	0.0456	9.88	2.3
764-E f	L	3/7/79	12/5/78	Control	33.95	1.6080	0.03	0.0392	1.38	2.4
418-I f	L	3/7/79	12/6/78	Control	49.24	1.7371	0.03	0.0420	1.17	2.4
578-M f	L	3/7/79	12/6/78	Control	48.66	3.2057	0.02	0.0632	0.77	2.0
200-F f	L	3/7/79	12/6/78	Control	1,014	3.5207	0.29	0.0796	12.7	2.3
589-H f	L	3/7/79	12/6/78	Control	46.97	2.0941	0.02	0.0576	0.82	2.8
604-I f	L	3/7/79	12/6/78	Control	48.81	2.0862	0.02	0.0740	0.66	3.5
416-J m	L	3/7/79	12/5/78	Control	224.0	1.7383	0.13	0.0488	4.59	2.8
516-G m	L	3/7/79	12/7/78	Low	290.0	0.5580	0.52	0.0184	15.8	3.3
701-E f	L	3/7/79	12/8/78	Low	208.6	0.5097	0.41	0.0216	8.84	4.6
329-I f	L	3/7/79	12/7/78	Low	309.6	0.7773	0.40	0.0332	9.33	4.3
674-I f	L	3/7/79	12/5/78	Low	212.3	0.7100	0.30	0.0300	7.08	4.2
428-I f	L	3/7/79	12/5/78	Low	471.1	1.4088	0.33	0.0776	6.07	5.5
432-I f	L	3/7/79	12/11/78	Low	337.3	0.7466	0.45	0.0552	6.11	7.4
483-F f	L	3/7/79	12/11/78	Low	471.2	0.6035	0.78	0.0320	14.7	5.3
646-E f	L	3/7/79	12/6/78	Low	437.2	0.9416	0.46	0.0392	11.2	4.2
119-M m	L	3/7/79	12/7/78	Low	3,017	6.6065	0.46	0.2272	13.3	3.4
819-M f	L	3/7/79	12/6/78	Low	1,493	5.0535	0.30	0.2796	5.34	5.5
784-I f	L	3/7/79	12/6/78	Low	2,291	5.7247	0.40	0.1368	16.7	2.4
625-F f	L	3/7/79	12/6/78	Low	1,520	6.8907	0.22	0.1488	10.2	2.2
273-I f	L	3/7/79	12/6/78	Medium	2,876	1.5861	1.81	0.0388	74.1	2.4
596-I m	L	3/7/79	12/7/78	Medium	2,859	1.8454	1.55	0.0784	36.5	4.2
20-I m	L	3/7/79	12/5/78	Medium	4,424	1.1850	3.73	0.0592	74.7	5.0
540-M f	L	3/7/79	12/6/78	Medium	5,730	4.7500	1.21	0.1108	51.7	2.3
762-E f	L	3/7/79	12/6/78	Medium	5,507	6.3887	0.86	0.2076	26.5	3.2
46-I m	L	3/7/79	12/7/78	Medium	2,896	4.8087	0.62	0.1800	16.6	3.7
595-I m	L	3/7/79	12/11/78	Medium	691.0	6.2946	0.11	0.1468	4.71	2.3
281-G f	L	3/7/79	12/11/78	Medium	583.4	6.8619	0.09	0.2760	2.11	4.0
307-I f	L	3/7/79	12/5/78	Medium	14,730	5.3315	2.76	0.3500	42.1	6.6
763-E f	L	3/7/79	12/7/78	Medium	900.5	1.5024	0.60	0.0620	14.5	4.1
757-I f	L	3/7/79	12/7/78	Medium	1,836	2.0260	0.91	0.0500	36.7	2.5
600-I m	L	3/7/79	12/5/78	High	18,340	3.6173	5.07	0.1348	136	3.7
425-J m	L	3/7/79	12/8/78	High	5,610	5.3986	1.04	0.1136	49.4	2.1
269-I f	L	3/7/79	12/6/78	High	16,150	5.9640	2.71	0.1684	95.9	2.8
287-I f	L	3/7/79	12/6/78	High	15,230	4.8081	3.17	0.1780	85.6	1.7
326-F f	L	3/7/79	12/5/78	High	46,030	4.6220	9.96	0.1476	312	3.2
313-I f	L	3/7/79	12/7/78	High	17,670	5.5463	3.19	0.1912	92.4	3.4
427-J m	L	3/7/79	12/7/78	High	706.1	2.0258	0.35	0.0828	8.53	4.1

TABLE 28. PCB CONTENT OF BABY LIVER SAMPLES SHIPPED 7 MARCH 1979

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. Wet Wt. x 100 (%)
B-8815	DI	3/7/79	12/6/78	Low	273.7	3.5904	0.08	0.1400	1.95	3.9
B-8860	DI	3/7/79	12/11/78	Medium	3,093	1.2537	2.47	0.0236	131	1.9
B-8560	DI	3/7/79	12/11/78	Medium	1,233	1.5803	0.78	0.0344	35.8	2.2

TABLE 29. PCB CONTENT OF BABY AND ADULT FAT AND MUSCLE TISSUE OF TERMINAL ANIMALS SHIPPED 18 APRIL 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (ug/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (ug/g)	Lipid Wt. Wet Wt. x 100%
B-8483 f	Im	4/18/78	3/29/78	Control	576.6	1.4580	0.40	0.0100	53.4	1.0
B-8481 f	Im	4/18/78	3/29/78	Control	<457.7	0.4186	<1.09	0.0064	<71.4	1.5
B-7-F f	F	4/18/78	3/11/78	Control	<381.7	1.9918	<0.19	1.3960	<0.27	70
486-H f	F	4/18/78	3/22/78	High	5,568	0.7992	6.97	0.0236	216	3.0
770-1 f	F	4/18/78	4/1/78	High	140,700	2.2461	152	0.1168	475	12

TABLE 30. PCB CONTENT OF MILK SAMPLES
SHIPPED 2 MAY AND 23 MAY 1978

Sample I.D.	Type	Date Shipped	Dose Level	#ng Aroclor 1254	Weight of Milk Analyzed (g)	PPM on Weight Basis (ug/g)
604-I f	M	5/2/78	Control	8.0	0.0992	0.08
618-I f	M	5/23/78	Control	0.6	0.1039	0.01
764-E f	M	5/23/78	Control	3.1	0.1041	0.03
274-F f	M	5/23/78	Control	21.1	0.1075	0.20
624-I f	M	5/23/78	Low	22.5	0.1037	0.22
540-H f	M	5/23/78	Medium	43.6	0.1048	0.42
273-I f	M	5/23/78	Medium	60.9	0.1063	0.51
757-I f	M	5/23/78	Medium	49.0	0.1074	0.46
312-I f	M	5/23/78	High	100.1	0.1055	0.95

TABLE 31. PCB CONTENT OF MILK AND BLOOD
SERUM SAMPLES SHIPPED 7 MARCH 1979

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	#ng Aroclor 1254	Weight of Sample Analyzed (g)	PPM on Weight Basis (ug/g)
605-F f	M	3/7/79	5/9/78	Control	<1.1	0.0622	<0.018
200-F f	M	3/7/79	6/8/78	Control	3.1	0.1006	0.031
701-E f	M	3/7/79	5/27/78	Low	<1.1	0.1028	<0.010
483-F f	M	3/7/79	9/28/78	Low	1.1	0.1029	0.011
763-E f	M	3/7/79	5/23/78	Medium	44.3	0.0984	0.450
600-I m	Se	3/7/79	9/27/78	High	<1.2	0.0998	<0.012

TABLE 32. PCB CONTENT OF PLACENTA SAMPLES SHIPPED 23 MAY 1978

Sample I.D.	Type	Date Shipped	Date Sample Taken	Dose Level	Ing Aroclor 1254	Wet Weight (g)	PPM on Wet Wt. Basis (µg/g)	Lipid Weight (g)	PPM on Lipid Wt. Basis (µg/g)	Lipid Wt. x 1000 Wet Wt. (%)
578-H f	P	5/23/78	5/15/78	Control	17.14	3.2464	0.0053	0.0176	0.97	0.54
605-F f	P	5/23/78	5/9/78	Low	n.d.	16.2450	n.d.	0.0144	n.d.	0.08
757-1 f	P	5/23/78	5/3/78	Medium	14.62	6.4375	0.0026	0.0376	0.44	0.58
273-1 f	P	5/23/78	5/9/78	Medium	21.08	7.1279	0.0034	0.0340	0.78	0.47
763-E f	P	5/23/78	5/21/78	Medium	22.53	5.4291	0.0042	0.0244	0.66	0.44

n.d. = not detected

APPENDIX A

ANALYSIS OF CORN OIL FOR AROCLOR 1254

Several individual batches of corn oil were spiked with Aroclor 1254 by MIC in St. Louis, Missouri. Each batch was analyzed for PCB content prior to shipment to Litton Bionetics for dosing. Litton then returned any unused portions of corn oil to MIC for subsequent reanalysis.

MIC analyzed the corn oil by dilution with Nanograde® hexanes followed by analysis by electron capture gas chromatography. Dilution factors used for the analysis of the oils are 1:100 for T III, 1:25 for T II, and 1:10 for T I and the controls.

Results of the analyses are presented in Table A-1.

TABLE A-1. LEVELS OF AROCLOR 1254 FOR CORN OIL (ppm)

Date	Feed Code	Analysis of Spiked Oil (ppm)	Analysis of Returned Oil (ppm)	Month Fed
3/25/77*	T III	219.2	215.4	April 1977
	T II	46.7	52.9	May 1977
	T I	11.1	11.9	
4/26/77	T III	199.1	■	June 1977
	T II	52.5	■	
	T I	10.7	■	
6/25/77*	T III	211	214	July 1977
	T II	46.7	45.4	August 1977
	T I	9.2	12.0	
	Control	<0.6	0.1	
7/26/77	T III	236	245.5	September 1977
	T II	49	■	
	T I	11.1	12.8	
	Control	1.1	■	
8/24/77	T III	Analysis	192.9	October 1977
	T II	Data	54.9	
	T I	Lost	■	
	Control		0.6	
9/27/77	T III	218	207.0	November 1977
	T II	55.7	49.6	
	T I	12.5	■	
	Control	0.1	0.2	
10/27/77	T III	209.4	228.8	December 1977
	T II	46.4	56.4	
	T I	9.8	10.2	
	Control	0.6	0.2	
11/21/77	T III	179.2	154.4	January 1978
	T II	46.6	36.5	
	T I	13.0	9.8	
	Control	0.1	<0.1	
12/20/77	T III	180.3	178.0	February 1978
	T II	65.5	45.7	
	T I	10.3	8.8	
	Control	<0.2	■	

(continued)

TABLE A-1 (continued)

Date	Feed Code	Analysis of Spiked Oil (ppm)	Analysis of Returned Oil (ppm)	Month Fed
1/25/78	T III	201.5	196	March 1978
	T II	60.1	60.6	
	T I	14.5	17.1	
	Control	0.2	0.9	
2/24/78	T III	161	176	
	T II	48.3	46.5	
	T I	9.6	10.5	
	Control	<0.7	0.1	
3/22/78	T III	180	226.0	April 1978
	T II	61	56.0	
	T I	14.7	13.0	
	Control	0.2	0.3	
4/20/78	T III	199.1	189	
	T II	63.8	59.1	
	T I	16.5	11.8	
5/23/78	T III	196	†	
	T II	50.1	†	
	T I	12.1	†	
	Control	0.2	†	

*Double batch prepared.

•Batch completely used up; none returned for analysis.

†Batch returned unused.

APPENDIX B

ANALYSIS OF RALSTON PURINA MONKEY CHOW

Three individual portions of monkey chow, fed as a daily dietary staple, were analyzed to determine any background PCB levels the monkeys may have received. The analysis methodology is delineated in the "Experimental Procedures" section of this report. Values obtained for PCB's in the monkey chow are given in Table B-1. In all three samples, the PCB level was less than 0.05 ug PCB per gram of monkey chow.

TABLE B-1. AROCLOR 1254 ANALYSIS OF RALSTON
PURINA MONKEY CHOW SAMPLES

Sample I.D.	Sample Weight (g)	ug	
		Aroclor 1254	ug PCB/g Sample
Monkey Chow #1	10.0804	<0.50	<0.05
Monkey Chow #2	10.0042	<0.50	<0.05
Monkey Chow #3	10.0196	<0.50	<0.05

APPENDIX C

STATISTICAL ANALYSIS OF PCB
CONTENT OF MONKEY TISSUE

Statistical Analysis of PCB Content of Monkey Tissue

INTRODUCTION

This report covers the statistical analysis of analytical data collected from a subacute feeding study on the concentrative effects of polychlorinated biphenyls on adult Rhesus monkeys and their offspring. (Report MDA-041, "PCB Content of Monkey Tissue" - Beverly J. Warner, 7 May 1979). The following description of the study is the introduction from that report.

"This study is designed to determine the concentrative effects of polychlorinated biphenyl (PCB) compounds in a subacute feeding program involving forty-eight adult Rhesus monkeys and their subsequent offspring.

The Rhesus monkeys were fed Aroclor 1254 (a PCB compound composed of 12 carbon atoms and 54% chlorine per PCB molecule) as a supplement to their diet. The feeding study was conducted by Litton Bionetics, Kensington, Maryland, for a period of one year. Fat tissue biopsies of the adult animals were taken by the Litton Laboratory and shipped to MRC for the analysis of PCB content periodically during the feeding study (approximately every two months) and during an eight-month relaxation period following the feeding study. In addition to the adult fat samples analyzed, numerous infant skin and fat samples, and colostrum (milk), placenta, and blood serum samples were analyzed on an intermittent basis. At the termination of the project, liver biopsies were also provided for all adult animals and several infants. In all, in excess of seven hundred individual analyses were performed for PCB by various extraction techniques followed by electron capture gas chromatography (EC-GC). The analysis techniques utilized and the data accumulated are presented in the following sections of this report."

The statistical analysis centers primarily on the adult fat and adult liver samples which had relatively complete and well-balanced data. No samples were excluded. Data were not complete for the baby skin, baby fat and milk samples, but these are presented for inspection, with statistical analyses where applicable.

All the data treated were assumed to be log-normally distributed, and averages and confidence limits were calculated on this basis and converted back to the original scale.

SUMMARY OF RESULTS

Adult Fat Samples (male and female)

PCB level in adult fat samples for animals fed the highest amount of PCB is significantly higher than control from one month through 20 months. Average PCB in tissues for this period is 28.2 PPM (wet weight basis) and 53.5 PPM (lipid weight basis).

PCB level in adult fat samples for animals fed the medium level of PCB is significantly higher than control from 4 months through 20 months. Average PCB in tissues for this period is 13.2 PPM (wet weight basis) and 20.5 PPM (lipid weight basis).

PCB level in adult fat samples for animals fed the low level of PCB is significantly higher than control from 7 months through 20 months. Average PCB in tissues for this period is 2.8 PPM (wet weight basis) and 4.2 PPM (lipid weight basis).

PCB level in adult fat samples for control animals (no PCB fed) averaged 0.30 PPM (wet weight basis) and 0.55 PPM (lipid weight basis) for the period from 1 to 20 months.

Adult Liver Samples - 20 Months (male and female)

PCB level in adult liver samples increased in proportion to the amount fed. On a wet weight basis, the control samples averaged 0.076 PPM, low level samples averaged 0.4 PPM, medium level samples 0.81 PPM and high level samples 2.43 PPM. On a lipid weight basis, these results were 2.2 PPM, 10 PPM, 23 PPM and 75 PPM respectively.

Baby Skin Samples

PCB levels found in baby skin samples increased with increasing PCB in parents' diet, and with sampling time up to 7/31/78 (insufficient data for statistical analyses).

Baby Fat Samples

PCB levels found in baby fat samples increased with increasing PCB in parents' diet, and with sampling time up to 7/31/78 (insufficient data for statistical analysis).

Milk Samples

There was a significant increase of PCBs in milk as a function of the PCB level in the feed. The data were too widely scattered to determine what kind of model best fit the data. The linear model gave the following equation:

Amt. PCB in milk = $0.094 + 0.0097$ (amt. PCB fed). The correlation coefficient was 0.92, significant at 99.9% $P < 0.001$.

DESCRIPTION OF STATISTICAL APPROACH

Adult Fat Samples - Wet Weight and Lipid Weight Basis

Table I shows the output from a computer program which calculates the 95% confidence limits of the mean of the amount PCB found in the adult fat samples. The program converts the data to logarithms, calculates the mean

and standard deviation of PCB found for each level fed at each sampling time. It then calculates 95% confidence limits of the means of the logarithms. This information is converted back to PPM, and 95% confidence limits of the mean are reported in PPM and as percent of the mean.

Table II is a summary of the averages by month for each level of PCB fed. Table III gives specific statistical conclusions by month.

Figures 1a and 1b are composite plots of the means and 95% confidence limits of PCB found for each level fed vs. sampling time. The test for significance was based on the degree to which the 95% confidence limits of the means overlapped. The least significant difference (95% level) between the means is approximately 2.828 standard deviations. When there is no overlap of the 95% confidence limits, the means are approximately 4 standard deviations apart. The individual comparisons can be confirmed using Students' t test.

Adult Liver Samples - End of Study

The procedure for calculating confidence limits of the means is the same as in Adult Fat Samples. Figures 2a and 2b show the means and confidence limits of the means for PCBs found at each level of PCB fed.

Least squares lines were determined for the average PCBs found vs. amount PCB fed. For lipid weight samples

$$\begin{aligned}\text{PPM found (lipid)} &= 4.6 + 0.71 \text{ (PPM in feed). For wet weight} \\ \text{samples PPM found (wet)} &= 0.20 + 0.022 \text{ (PPM in feed).}\end{aligned}$$

Both these equations were significant at 99.9% ($p < 0.001$)

Baby Skin Samples

Table IV shows average PPM found on wet weight basis in baby skin as related to level fed to parents, and sampling time. Lipid weight results are not shown because of extreme variation in lipid weight to sample weight ratio.

Baby Fat Samples

Table IV shows average PPM on wet basis, presented as indicated in paragraph under Adult Fat Samples.

Milk Samples

Table V shows the average PPM found in milk samples, presented as related to PCBs consumed.

DISCUSSION

The foregoing analysis of the data is an attempt to describe the effects of various levels of PCB in the diet on the resulting amount of PCB found in the animal tissues. No attempt was made to fit any sort of theoretical model, but the adult fat data may be sufficiently consistent to support such an approach. In addition, we have not tried to relate PCB levels to toxicology data, but recommend that this be done when the latter are available.

ACKNOWLEDGMENT

The assistance of J. L. Davis (Environmental Sciences) in running the computer calculations of means and confidence limits is gratefully appreciated.

TABLE 1
Calculation of Confidence Limits

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TABLE 6 CONTROL WET

MEAN = 740093
95% (2 SIGMA) CONFIDENCE LIMITS ARE 572997 TO 927911
95% LIMITS AS $\pm$ OF MEAN ARE 76492 $\pm$ TO 130733 $\pm$

TABLE 6 LOW WET

MEAN = 495098
95% (2 SIGMA) CONFIDENCE LIMITS ARE 3534 TO 693611
95% LIMITS AS $\pm$ OF MEAN ARE 713797 $\pm$ TO 140096 $\pm$

TABLE 6 MEDIUM WET

MEAN = 585043
95% (2 SIGMA) CONFIDENCE LIMITS ARE 395058 TO 864421
95% LIMITS AS $\pm$ OF MEAN ARE 676802 $\pm$ TO 147754 $\pm$

TABLE 6 HIGH WET

MEAN = 688215
95% (2 SIGMA) CONFIDENCE LIMITS ARE 3634 TO 130334
95% LIMITS AS $\pm$ OF MEAN ARE 529032 $\pm$ TO 189382 $\pm$

TABLE 6 CONTROL LIPID

MEAN = 171628
95% (2 SIGMA) CONFIDENCE LIMITS ARE 361068 TO 815809
95% LIMITS AS $\pm$ OF MEAN ARE 210378 $\pm$ TO 475335 $\pm$

TABLE 6 LOW LIPID

MEAN = 76315
95% (2 SIGMA) CONFIDENCE LIMITS ARE 471852 TO 123428
95% LIMITS AS $\pm$ OF MEAN ARE 618298 $\pm$ TO 161735 $\pm$

TABLE 6 MEDIUM LIPID

MEAN = 915273
95% (2 SIGMA) CONFIDENCE LIMITS ARE 524646 TO 150474
95% LIMITS AS $\pm$ OF MEAN ARE 573213 $\pm$ TO 174455 $\pm$

TABLE 6 HIGH LIPID

MEAN = 953255
95% (2 SIGMA) CONFIDENCE LIMITS ARE 443374 TO 20495
95% LIMITS AS $\pm$ OF MEAN ARE 485116 $\pm$ TO 215 $\pm$

TABLE 7 CONTROL WET

MEAN = 235899
95% (2 SIGMA) CONFIDENCE LIMITS ARE 109157 TO 509798
95% LIMITS AS $\pm$ OF MEAN ARE 46273 $\pm$ TO 216109 $\pm$

TABLE 7 LOW WET

MEAN = 422009
95% (2 SIGMA) CONFIDENCE LIMITS ARE 233391 TO 763059
95% LIMITS AS $\pm$ OF MEAN ARE 553049 $\pm$ TO 180816 $\pm$

TABLE 7 MEDIUM WET

MEAN = 123347
95% (2 SIGMA) CONFIDENCE LIMITS ARE 461048 TO 329998
95% LIMITS AS $\pm$ OF MEAN ARE 373782 $\pm$ TO 267536 $\pm$

TABLE 7 HIGH WET

MEAN = 189144
95% (2 SIGMA) CONFIDENCE LIMITS ARE 721151 TO 154531
95% LIMITS AS $\pm$ OF MEAN ARE 706417 $\pm$ TO 141559 $\pm$

TABLE 7 CONTROL LIPID

MEAN = 387814
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 140902 TO 1 0674
 95% LIMITS AS % OF MEAN ARE 36.3325 % TO 275.236 %

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TABLE 7 LOW LIPID

MEAN = 534091
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 289713 TO 984604
 95% LIMITS AS % OF MEAN ARE 54.2442 % TO 184.351 %

TABLE 7 MEDIUM LIPID

MEAN = 2 13993
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 463289 TO 7 00961
 95% LIMITS AS % OF MEAN ARE 30.5285 % TO 327.563 %

TABLE 7 HIGH LIPID

MEAN = 14 1806
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 6 8624 TO 29 303
 95% LIMITS AS % OF MEAN ARE 48.3929 % TO 206.642 %

TABLE 8 CONTROL WET

MEAN = 515025
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 380366 TO 697355
 95% LIMITS AS % OF MEAN ARE 73.654 % TO 135.402 %

TABLE 8 CONTROL LIPID

MEAN = 654461
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 458312 TO 934557
 95% LIMITS AS % OF MEAN ARE 70.029 % TO 142.793 %

TABLE 9 CONTROL WET

MEAN = 881472
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 598965 TO 1 29722
 95% LIMITS AS % OF MEAN ARE 67.951 % TO 147.165 %

TABLE 9 LOW WET

MEAN = 964053
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 558077 TO 1 48958
 95% LIMITS AS % OF MEAN ARE 57.6589 % TO 175.258 %

TABLE 9 MEDIUM WET

MEAN = 5 99341
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 4 01158 TO 8 95433
 95% LIMITS AS % OF MEAN ARE 66.9331 % TO 149.403 %

TABLE 9 HIGH WET

MEAN = 20 0999
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 14 3207 TO 28 2113
 95% LIMITS AS % OF MEAN ARE 71.2475 % TO 140.356 %

TABLE 9 CONTROL LIPID

MEAN = 1 21991
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 818999 TO 1 87713
 95% LIMITS AS % OF MEAN ARE 66.0533 % TO 151.393 %

TABLE 9 LOW LIPID

MEAN = 1 94966
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 95496 TO 4 04372
 95% LIMITS AS % OF MEAN ARE 48.5936 % TO 205.786 %

TABLE 9 MEDIUM LIPID

MEAN = 7.60867

95% (2 SIGMA) CONFIDENCE LIMITS ARE 4.6515 TO 12.4459

95% LIMITS AS % OF MEAN ARE 61.1343 % TO 163.574 %

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TABLE 9 HIGH LIPID

MEAN = 32.8339

95% (2 SIGMA) CONFIDENCE LIMITS ARE 21.8312 TO 47.005

95% LIMITS AS % OF MEAN ARE 66.1501 % TO 146.735 %

TABLE 10 CONTROL WET

MEAN = 247594

95% (2 SIGMA) CONFIDENCE LIMITS ARE 8792724 TO 773315

95% LIMITS AS % OF MEAN ARE 32.6172 % TO 312.332 %

TABLE 10 LOW WET

MEAN = 440966

95% (2 SIGMA) CONFIDENCE LIMITS ARE 180674 TO 1.07627

95% LIMITS AS % OF MEAN ARE 40.972 % TO 244.269 %

TABLE 10 MEDIUM WET

MEAN = 7.45852

95% (2 SIGMA) CONFIDENCE LIMITS ARE 5.48193 TO 10.1478

95% LIMITS AS % OF MEAN ARE 73.4349 % TO 136.057 %

TABLE 10 HIGH WET

MEAN = 24.8933

95% (2 SIGMA) CONFIDENCE LIMITS ARE 14.2319 TO 41.8095

95% LIMITS AS % OF MEAN ARE 58.3437 % TO 171.399 %

TABLE 10 CONTROL LIPID

MEAN = 412867

95% (2 SIGMA) CONFIDENCE LIMITS ARE 127852 TO 1.3319

95% LIMITS AS % OF MEAN ARE 30.9595 % TO 323.803 %

TABLE 10 LOW LIPID

MEAN = 877588

95% (2 SIGMA) CONFIDENCE LIMITS ARE 262462 TO 1.74929

95% LIMITS AS % OF MEAN ARE 38.7349 % TO 259.165 %

TABLE 10 MEDIUM LIPID

MEAN = 8.85754

95% (2 SIGMA) CONFIDENCE LIMITS ARE 6.38239 TO 12.2906

95% LIMITS AS % OF MEAN ARE 72.0673 % TO 138.757 %

TABLE 10 HIGH LIPID

MEAN = 25.4485

95% (2 SIGMA) CONFIDENCE LIMITS ARE 16.7222 TO 75.7958

95% LIMITS AS % OF MEAN ARE 66.9885 % TO 213.181 %

TABLE 11 CONTROL WET

MEAN = 182068

95% (2 SIGMA) CONFIDENCE LIMITS ARE 102031 TO 259342

95% LIMITS AS % OF MEAN ARE 52.7234 % TO 159.43 %

TABLE 11 LOW WET

MEAN = 2.50308

95% (2 SIGMA) CONFIDENCE LIMITS ARE 1.82661 TO 3.43067

95% LIMITS AS % OF MEAN ARE 72.9746 % TO 137.834 %

TABLE 11 MEDIUM WET

MEAN = 8.48146
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 5.83161 TO 12.3354
 95% LIMITS AS Z OF MEAN ARE 68.7572 % TO 145.439 %

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TABLE 11 HIGH WET

MEAN = 20.5028
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 10.4364 TO 40.2786
 95% LIMITS AS Z OF MEAN ARE 50.9023 % TO 196.455 %

TABLE 11 CONTROL LIPID

MEAN = 213713
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 122103 TO 374053
 95% LIMITS AS Z OF MEAN ARE 57.1344 % TO 175.026 %

TABLE 11 LOW LIPID

MEAN = 2.77841
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 1.80326 TO 4.29089
 95% LIMITS AS Z OF MEAN ARE 64.9027 % TO 154.077 %

TABLE 11 MEDIUM LIPID

MEAN = 11.5644
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 7.65842 TO 17.0182
 95% LIMITS AS Z OF MEAN ARE 67.9533 % TO 147.16 %

TABLE 11 HIGH LIPID

MEAN = 30.0384
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 11.8534 TO 76.09
 95% LIMITS AS Z OF MEAN ARE 39.4775 % TO 253.309 %

TABLE 12 CONTROL WET

MEAN = 728571
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 467622 TO 130222
 95% LIMITS AS Z OF MEAN ARE 55.9482 % TO 178.737 %

TABLE 12 LOW WET

MEAN = 2.88638
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.14402 TO 3.88577
 95% LIMITS AS Z OF MEAN ARE 74.2808 % TO 134.624 %

TABLE 12 LOW WET

MEAN = 2.88638
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.14402 TO 3.88577
 95% LIMITS AS Z OF MEAN ARE 74.2808 % TO 134.624 %

TABLE 12 MEDIUM WET

MEAN = 12.4318
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 8.79351 TO 17.5755
 95% LIMITS AS Z OF MEAN ARE 70.7339 % TO 141.375 %

TABLE 12 HIGH WET

MEAN = 39.9365
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 28.8245 TO 55.3724
 95% LIMITS AS Z OF MEAN ARE 72.1757 % TO 138.551 %

TABLE 12 CONTROL LIPID

MEAN = 1.0385
 95% (2 SIGMA) CONFIDENCE LIMITS ARE .536677 TO 2.03229
 95% LIMITS AS Z OF MEAN ARE 51.1002 % TO 195.804 %

TABLE 11 LOW LIPID

MEAN = 4.20031

95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.7913 TO 6.32059

95% LIMITS AS % OF MEAN ARE 66.4545 % TO 150.479 %

TABLE 12 MEDIUM LIPID

MEAN = 17.3316

95% (2 SIGMA) CONFIDENCE LIMITS ARE 11.3194 TO 26.538

95% LIMITS AS % OF MEAN ARE 65.3096 % TO 153.117 %

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TABLE 12 HIGH LIPID

MEAN = 97.9947

95% (2 SIGMA) CONFIDENCE LIMITS ARE 58.0866 TO 165.322

95% LIMITS AS % OF MEAN ARE 59.2752 % TO 168.705 %

TABLE 13 CONTROL WET

MEAN = 171632

95% (2 SIGMA) CONFIDENCE LIMITS ARE 1288679 TO 478911

95% LIMITS AS % OF MEAN ARE 77.6341 % TO 128.801 %

TABLE 13 LOW WFT

MEAN = 3.84438

95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.70744 TO 5.51542

95% LIMITS AS % OF MEAN ARE 70.0432 % TO 142.728 %

TABLE 13 MEDIUM WFT

MEAN = 16.3533

95% (2 SIGMA) CONFIDENCE LIMITS ARE 12.776 TO 20.9298

95% LIMITS AS % OF MEAN ARE 78.1944 % TO 127.993 %

TABLE 13 HIGH WFT

MEAN = 38.9255

95% (2 SIGMA) CONFIDENCE LIMITS ARE 19.5701 TO 77.8304

95% LIMITS AS % OF MEAN ARE 50.5327 % TO 197.892 %

TABLE 13 CONTROL LIPID

MEAN = 632762

95% (2 SIGMA) CONFIDENCE LIMITS ARE 337241 TO 1,18724

95% LIMITS AS % OF MEAN ARE 53.2967 % TO 187.629 %

TABLE 13 LOW WET LIPID

MEAN = 5.6438

95% (2 SIGMA) CONFIDENCE LIMITS ARE 3.20953 TO 9.92435

95% LIMITS AS % OF MEAN ARE 56.8682 % TO 175.845 %

TABLE 13 MEDIUM LIPID

MEAN = 33.5652

95% (2 SIGMA) CONFIDENCE LIMITS ARE 16.6111 TO 33.4706

95% LIMITS AS % OF MEAN ARE 70.4899 % TO 141.664 %

TABLE 13 HIGH LIPID

MEAN = 118.285

95% (2 SIGMA) CONFIDENCE LIMITS ARE 62.6862 TO 208.357

95% LIMITS AS % OF MEAN ARE 54.8507 % TO 182.313 %

TABLE 14 CONTROL WET

MEAN = 292217

95% (2 SIGMA) CONFIDENCE LIMITS ARE 139416 TO 612492

95% LIMITS AS % OF MEAN ARE 47.7056 % TO 209.601 %

TABLE 14 LOW WET

MEAN = 3.35533

95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.19354 TO 5.13245

95% LIMITS AS % OF MEAN ARE 65.3748 % TO 152.964 %

TABLE 14 MEDIUM WET

MEAN = 20.2384

95% (2 SIGMA) CONFIDENCE LIMITS ARE 10.7382 TO 38.1434

95% LIMITS AS % OF MEAN ARE 53.0587 % TO 198.471 %

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TABLE 14 HIGH WET

MEAN = 95.8265

95% (2 SIGMA) CONFIDENCE LIMITS ARE 70.9561 TO 129.414

95% LIMITS AS % OF MEAN ARE 74.0465 % TO 135.05 %

TABLE 14 CONTROL LIPID

MEAN = 644225

95% (2 SIGMA) CONFIDENCE LIMITS ARE 151198 TO 274491

95% LIMITS AS % OF MEAN ARE 23.4698 % TO 426.079 %

TABLE 14 LOW LIPID

MEAN = 6.32952

95% (2 SIGMA) CONFIDENCE LIMITS ARE 3.53561 TO 11.3312

95% LIMITS AS % OF MEAN ARE 55.8561 % TO 179.022 %

TABLE 14 MEDIUM LIPID

MEAN = 58.9138

95% (2 SIGMA) CONFIDENCE LIMITS ARE 12.8817 TO 64.8987

95% LIMITS AS % OF MEAN ARE 44.5522 % TO 224.456 %

TABLE 14 HIGH LIPID

MEAN = 165.63

95% (2 SIGMA) CONFIDENCE LIMITS ARE 103.773 TO 264.04

95% LIMITS AS % OF MEAN ARE 62.8913 % TO 159.512 %

TABLE 15 CONTROL WET

MEAN = 129589

95% (2 SIGMA) CONFIDENCE LIMITS ARE 899196 TO 283489

95% LIMITS AS % OF MEAN ARE 45.8799 % TO 218.915 %

TABLE 15 LOW WET

MEAN = 2.20322

95% (2 SIGMA) CONFIDENCE LIMITS ARE 1.55393 TO 3.1238

95% LIMITS AS % OF MEAN ARE 70.5301 % TO 141.784 %

TABLE 15 MEDIUM WET

MEAN = 15.8502

95% (2 SIGMA) CONFIDENCE LIMITS ARE 10.5148 TO 23.893

95% LIMITS AS % OF MEAN ARE 66.3385 % TO 150.742 %

TABLE 15 HIGH WET

MEAN = 42.3203

95% (2 SIGMA) CONFIDENCE LIMITS ARE 28.537 TO 62.7609

95% LIMITS AS % OF MEAN ARE 67.431 % TO 148.3 %

TABLE 15 CONTROL LIPID

MEAN = 22586

95% (2 SIGMA) CONFIDENCE LIMITS ARE 8727345 TO 694186

95% LIMITS AS % OF MEAN ARE 32.3276 % TO 309.333 %

TABLE 15 LOW LIPID

MEAN = 3.93305

95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.21305 TO 6.99384

95% LIMITS AS % OF MEAN ARE 56.2552 % TO 177.761 %

TABLE 15 MEDIUM LIPID

MEAN = 10.847

95% (2 SIGMA) CONFIDENCE LIMITS ARE 20.8718 TO 45.654
95% LIMITS AS % OF MEAN ARE 67.6146 % TO 147.897 %

TABLE 15 HIGH LIPID

MEAN = 11.1175

95% (2 SIGMA) CONFIDENCE LIMITS ARE 71.1216 TO 189.767
95% LIMITS AS % OF MEAN ARE 61.2196 % TO 163.347 %

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TABLE 16 CONTROL WET

MEAN = 120773

95% (2 SIGMA) CONFIDENCE LIMITS ARE 0794903 TO 183494
95% LIMITS AS % OF MEAN ARE 65.8181 % TO 151.934 %

TABLE 16 LOW WET

MEAN = 13.0617

95% (2 SIGMA) CONFIDENCE LIMITS ARE 9.65428 TO 17.6717
95% LIMITS AS % OF MEAN ARE 73.913 % TO 135.294 %

TABLE 16 HIGH WET

MEAN = 10.0199

95% (2 SIGMA) CONFIDENCE LIMITS ARE 4.30186 TO 23.3385
95% LIMITS AS % OF MEAN ARE 42.933 % TO 232.921 %

TABLE 16 CONTROL LIPID

MEAN = 3349

95% (2 SIGMA) CONFIDENCE LIMITS ARE 223398 TO 502053
95% LIMITS AS % OF MEAN ARE 66.7061 % TO 149.911 %

TABLE 16 MEDIUM LIPID

MEAN = 24.9736

95% (2 SIGMA) CONFIDENCE LIMITS ARE 17.3947 TO 35.8546
95% LIMITS AS % OF MEAN ARE 69.6533 % TO 143.57 %

TABLE 16 HIGH LIPID

MEAN = 14.5144

95% (2 SIGMA) CONFIDENCE LIMITS ARE 17.3062 TO 69.8334
95% LIMITS AS % OF MEAN ARE 58.1419 % TO 199.434 %

TABLE 18 CONTROL WET

MEAN = 434785

95% (2 SIGMA) CONFIDENCE LIMITS ARE 243576 TO 776894
95% LIMITS AS % OF MEAN ARE 56.0322 % TO 179.501 %

TABLE 18 LOW WET

MEAN = 3.82133

95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.55449 TO 3.57349
95% LIMITS AS % OF MEAN ARE 64.5484 % TO 118.275 %

TABLE 18 MEDIUM WET

MEAN = 15.5034

95% (2 SIGMA) CONFIDENCE LIMITS ARE 18.3717 TO 23.1741
95% LIMITS AS % OF MEAN ARE 66.8946 % TO 149.478 %

TABLE 18 HIGH WET

MEAN = 43.2059

95% (2 SIGMA) CONFIDENCE LIMITS ARE 21.0233 TO 85.1495
95% LIMITS AS % OF MEAN ARE 50.7413 % TO 197.078 %

TABLE 18 CONTROL LIPID

MEAN = 1.48024

95% (2 SIGMA) CONFIDENCE LIMITS ARE 6696 TO 3.27131
95% LIMITS AS % OF MEAN ARE 45.2493 % TO 220.982 %

TABLE 18 LOW LIPID

MEAN = 5.588
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 4.22527 TO 6.95045
 95% LIMITS AS % OF MEAN ARE 83.4284 % TO 117.863 %

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TABLE 18 MEDIUM LIPID

MEAN = 19.588
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 16.5027 TO 22.6744
 95% LIMITS AS % OF MEAN ARE 84.284 % TO 117.863 %

TABLE 18 HIGH LIPID

MEAN = 47.0257
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 45.5477 TO 48.5037
 95% LIMITS AS % OF MEAN ARE 96.9149 % TO 103.152 %

TABLE 19 CONTROL WET

MEAN = 332376
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 332376 TO 332376
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 LOW WET

MEAN = 1.82315
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 1.82315 TO 1.82315
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 MEDIUM WET

MEAN = 14.8178
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 14.8178 TO 14.8178
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 HIGH WET

MEAN = 24.127
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 24.127 TO 24.127
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 CONTROL LIPID

MEAN = 332653
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 332653 TO 332653
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 LOW LIPID

MEAN = 2.30055
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 2.30055 TO 2.30055
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 MEDIUM LIPID

MEAN = 11.6183
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 11.6183 TO 11.6183
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

TABLE 19 HIGH LIPID

MEAN = 31.0827
 95% (2 SIGMA) CONFIDENCE LIMITS ARE 31.0827 TO 31.0827
 95% LIMITS AS % OF MEAN ARE 100.000 % TO 100.000 %

FIGURE 1a

PCB in Adult Fat Samples - Wet Weight Basis

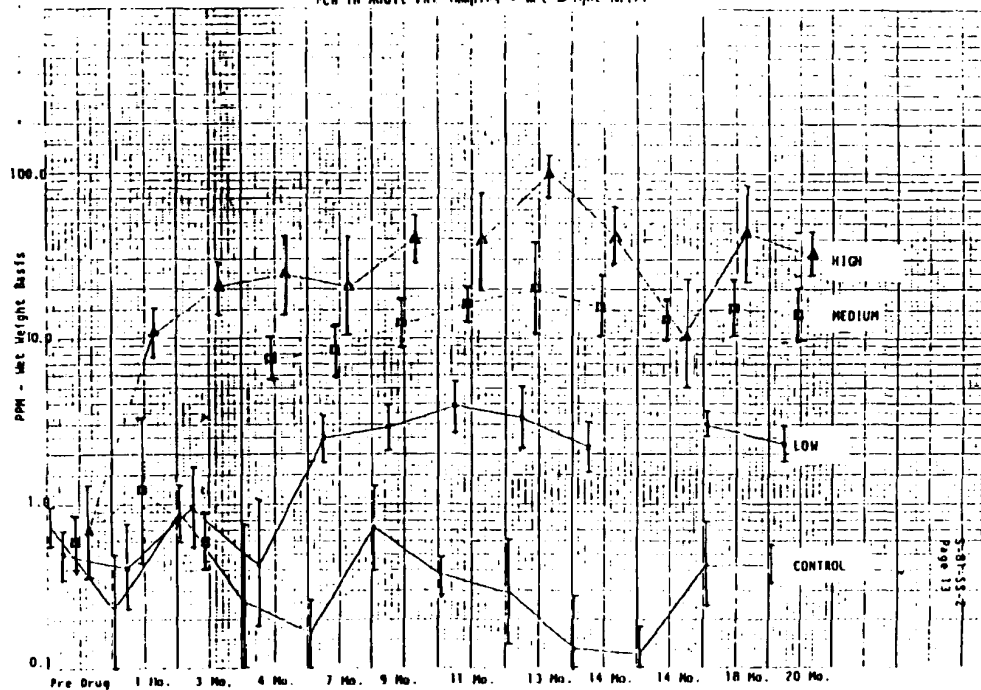


FIGURE 1b

PCB in Adult Fat Samples - Lipid Weight Basis

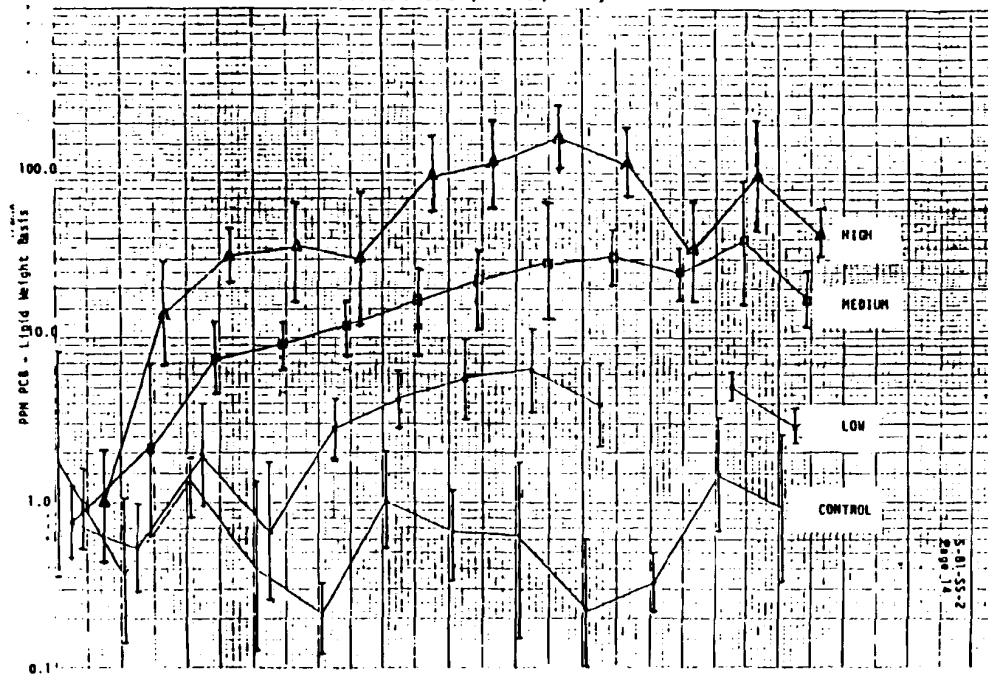


TABLE II

Averages (log basis) - Treatments and Control

PPM	Table 6 Initial	Table 7 1 Mo.	Table 9 3 Mo.	Table 10 4 Mo.	Table 11 7 Mo.	Table 12 9 Mo.	Table 13 11 Mo.	Table 14 13 Mo.	Table 15 14 Mo.	Table 16 16 Mo.	Table 18 18 Mo.	Table 19 20 Mo.
<u>Net Wt. Basis</u>												
Control	0.749	0.236	0.881	0.248	0.163	0.729	0.372	0.297	0.130	0.121	0.435	0.436
Low	0.495	0.422	0.964	0.441	2.503	2.886	3.064	3.355	2.203	--	3.021	2.300
Medium	0.585	1.233	5.993	7.459	8.481	12.437	16.352	20.238	15.850	13.061	15.503	14.018
High	0.688	10.916	20.100	24.393	20.503	39.937	38.926	95.827	42.320	10.020	43.210	32.420
<u>Lipid Wt. Basis</u>												
Control	1.716	0.388	1.240	0.413	0.214	1.039	0.633	0.644	0.255	0.335	1.480	0.931
Low	0.753	0.534	1.965	0.678	2.778	4.200	5.644	6.330	3.934	--	5.065	2.950
Medium	0.915	2.140	7.609	8.858	11.564	17.332	23.565	28.914	30.869	24.974	38.589	17.283
High	0.953	14.181	32.034	35.649	30.038	97.995	114.285	165.530	116.175	34.514	97.086	43.612

TABLE IIIIndividual Statistical ComparisonsAdult Fat SamplesPCB Found - Wet Weight Basis

- | | |
|-----------------------------|--|
| 1. Pre Drug | - No significant differences found. |
| 2. 1 Month | - Control significantly lower than pre drug control.
- High level significantly higher than all others. |
| 3. 3 Month | - Control significantly higher than 1 month control.
- High level significantly higher than all others. |
| 4. 4 Month | - High level significantly higher than all others.
- Medium level significantly higher than low and control.
- Medium level significantly higher than 1 and 3 months medium. |
| 5. 7 Months | - All levels differ significantly from one another.
- Low level significantly higher than 4 months low. |
| 6. 9 Months to
20 Months | - Levels remain significantly different except for sharp drop in 16 Month high level data. No further increase in amount found. |

PCB Found - Lipid Weight Basis

- | | |
|-----------------------------|---|
| 1. Pre Drug | - No significant differences found. |
| 2. 1 Month | - High level significantly higher than low and control. |
| 3. 3 Month | - High, medium and low significantly different from one another. High and medium significantly higher than control. |
| 4. 4 Month | - Same as 3 Month. |
| 5. 7 Months | - High and medium significantly higher than low and control.
Low significantly higher than control. |
| 6. 9 Months | - All levels significantly different from one another. |
| 7. 9 Months to
20 Months | - High and medium differ significantly from low and control.
- High significantly higher than medium except 18 and 20 months.
- Low significantly higher than control except 20 months. |

Figure 2a

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Adult Liver Samples - Wet Wt. Basis

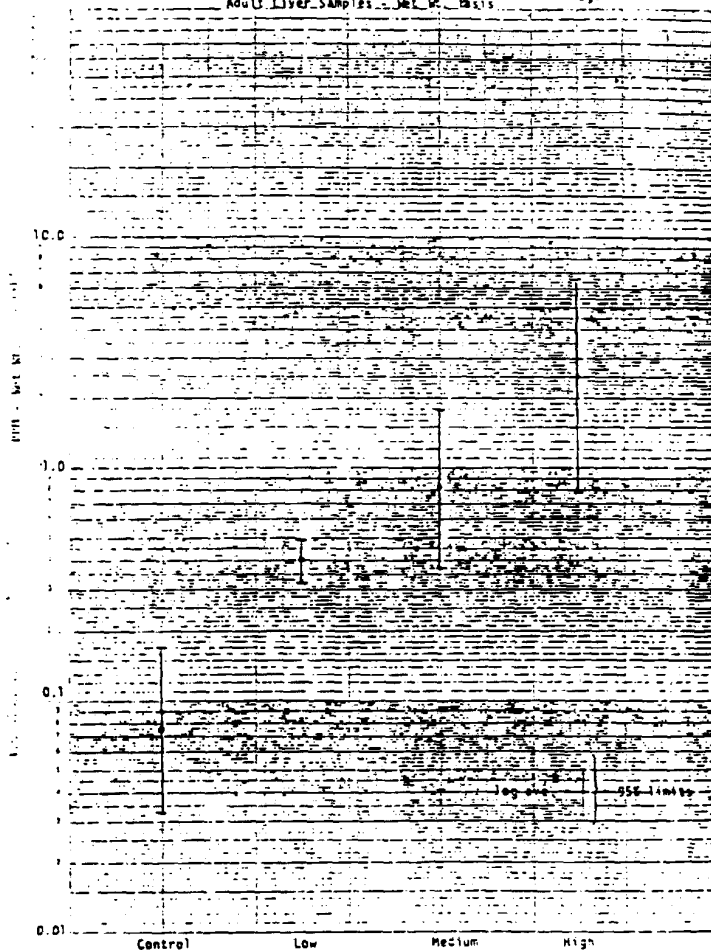


Figure 2b
Adult Liver Samples - Lipid Wt. Basis

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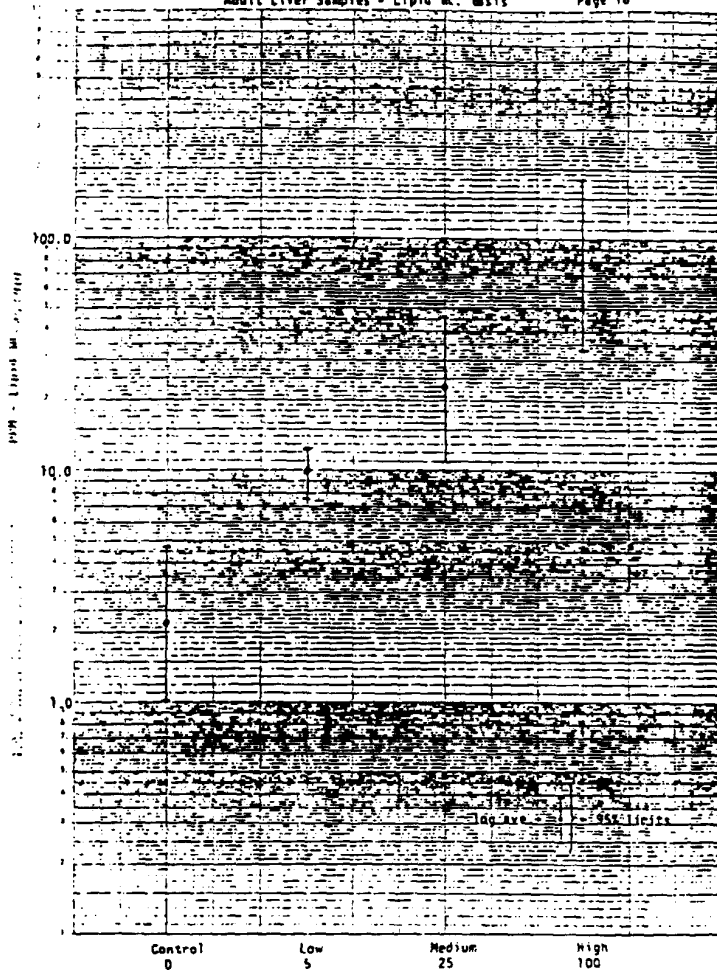


TABLE IVBaby Skin - Wet Weight Basis - Averages (PPM)Level Fed

<u>Sample Taken</u>	<u>Control</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>
5/24-6/9/78	.083	.175	1.45	1.82
6/19-6/30/78	.396	2.26	2.92	13.80
7/6-7/31/78	.826	2.42	16.60	--
8/8-10/10/78	.650	6.84	13.84	--
10/27-12/11/78	--	1.53	12.59	--

Baby Fat - Wet Weight Basis - Averages (PPM)Level Fed

<u>Sample Taken</u>	<u>Control</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>
6/19-6/30/78	1.04	2.03	8.32	--
7/6-7/31/78	0.70	10.69	98.17	108.89
8/8-10/10/78	0.61	9.04	--	38.90
10/27-12/11/78	--	0.76	18.11	--

TABLE V
PPM PCB Found in Milk Samples

<u>Level Fed</u>	<u>PCB Found</u>
Control (0.00)	.08
	.01
	.03
	.20
	.02
	.03
Low (5 PPM)	0.22
	0.01
	0.01
Medium (25 PPM)	
	0.42
	0.51
	0.46
	0.45
High (100 PPM)	0.95

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