APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	EPIDIDYMID WT. (G)	EPIDIDYMID ORG/TBW (X 1000)	EPIDIDYMID ORG/BRN (X 10)	TESTES WT. (G)	TESTES ORG/TBW (X 1000)	TESTES ORG/BRN (X 1)
GROUP I - 0 PPM							
1031	511.1	1.5015	2.94	7.04	3.921	7.67	1.84
1032	494.6	1.4652	2.96	6.63	3.689	7.46	1.67
1033	570.8	1.6422	2.88	7.31	3.521	6.17	1.57
1035	530.6	1.3356	2.52	5.76	3.330	6.28	1.44
1037	413.6	1.3697	3.31	6.84	3.100	7.50	1.55
1039	446.6	.8429	1.89	3.59	1.813	4.06	.77
1041	404.6	1.2828	3.17	6.68	2.925	7.23	1.52
1043	451.8	1.3140	2.91	5.82	3.322	7.35	1.47
1045	491.2	1.6937	3.45	7.74	3.445	7.01	1.57
1047	447.7	1.3248	2.96	6.24	3.933	8.78	1.85
1048	413.7	1.3384	3.24	6.13	3.293	7.96	1.51
1052	470.3	1.6338	3.47	8.18	3.190	6.78	1.60
1054	504.3	1.3814	2.74	6.61	2.741	5.44	1.31
1056	454.8	1.5093	3.32	7.07	3.749	8.24	1.76
1057	480.3	1.5060	3.14	6.88	3.259	6.79	1.49
MEAN	472.4	1.4094	2.99	6.57	3.282	6.98	1.53
S.D.	46.3	.2039	.40	1.05	.529	1.17	.26
N	15	15	15	15	15	15	15
MIN.	404.6	.8429	1.89	3.59	1.813	4.06	.77
MAX.	570.8	1.6937	3.47	8.18	3.933	8.78	1.85

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	THYMUS WT. (G)	ORG/TBW (X 10000)	ORG/BRN (X 10)
GROUP I - 0 PPM				
1031	511.1	.234	4.58	1.10
1032	494.6	.181	3.66	.82
1033	570.8	.317	5.55	1.41
1035	530.6	.245	4.62	1.06
1037	413.6	.281	6.79	1.40
1039	446.6	.158	3.54	.67
1041	404.6	.261	6.45	1.36
1043	451.8	.271	6.00	1.20
1045	491.2	.290	5.90	1.32
1047	447.7	.287	6.41	1.35
1048	413.7	.248	5.99	1.14
1052	470.3	.230	4.89	1.15
1054	504.3	.246	4.88	1.18
1056	454.8	.276	6.07	1.29
1057	480.3	.182	3.79	.83
MEAN	472.4	.247	5.28	1.15
S.D.	46.3	.045	1.08	.23
N	15	15	15	15
MIN.	404.6	.158	3.54	.67
MAX.	570.8	.317	6.79	1.41

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP II - 10 PPM							
2031	452.7	2.041	4.51	1.00	.0755	1.67	3.70
2033	652.4	2.289	3.51	1.00	.0892	1.37	3.90
2034	488.6	2.355	4.82	1.00	.0883	1.81	3.75
2036	614.4	2.374	3.86	1.00	.0692	1.13	2.91
2037	537.7	2.321	4.32	1.00	.0559	1.04	2.41
2038	446.0	2.245	5.03	1.00	.0405	.91	1.80
2040	405.1	2.174	5.37	1.00	.0505	1.25	2.32
2042	473.4	2.115	4.47	1.00	.0459	.97	2.17
2044	464.9	2.265	4.87	1.00	.0597	1.28	2.64
2046	510.0	2.236	4.38	1.00	.0623	1.22	2.79
2048	520.1	2.378	4.57	1.00	.0948	1.82	3.99
2050	501.1	2.225	4.44	1.00	.0711	1.42	3.20
2052	381.2	2.053	5.39	1.00	C	-	-
2054	486.6	2.237	4.60	1.00	.0664	1.36	2.97
2056	550.1	2.314	4.21	1.00	.0601	1.09	2.60
MEAN	499.0	2.241	4.56	1.00	.0664	1.31	2.94
S.D.	71.3	.107	.50	.00	.0163	.29	.68
N	15	15	15	15	14	14	14
MIN.	381.2	2.041	3.51	1.00	.0405	.91	1.80
MAX.	652.4	2.378	5.39	1.00	.0948	1.82	3.99

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP II - 10 PPM							
2031	452.7	3.948	8.72	1.93	11.936	2.64	5.85
2033	652.4	4.974	7.62	2.17	20.812	3.19	9.09
2034	488.6	4.574	9.36	1.94	13.240	2.71	5.62
2036	614.4	5.149	8.38	2.17	19.094	3.11	8.04
2037	537.7	4.555	8.47	1.96	16.053	2.99	6.92
2038	446.0	3.948	8.85	1.76	13.403	3.01	5.97
2040	405.1	3.034	7.49	1.40	12.781	3.16	5.88
2042	473.4	4.069	8.60	1.92	13.900	2.94	6.57
2044	464.9	4.381	9.42	1.93	14.077	3.03	6.22
2046	510.0	4.027	7.90	1.80	16.505	3.24	7.38
2048	520.1	4.407	8.47	1.85	16.450	3.16	6.92
2050	501.1	3.929	7.84	1.77	14.403	2.87	6.47
2052	381.2	3.186	8.36	1.55	10.950	2.87	5.33
2054	486.6	4.727	9.71	2.11	14.303	2.94	6.39
2056	550.1	4.889	8.89	2.11	18.177	3.30	7.86
MEAN	499.0	4.253	8.54	1.89	15.072	3.01	6.70
S.D.	71.3	.609	.65	.22	2.742	.19	1.03
N	15	15	15	15	15	15	15
MIN.	381.2	3.034	7.49	1.40	10.950	2.64	5.33
MAX.	652.4	5.149	9.71	2.17	20.812	3.30	9.09

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	PROSTATE WT. (G)	PROSTATE ORG/TBW (X 1000)	PROSTATE ORG/BRN (X 10)
GROUP II - 10 PPM							
2031	452.7	1.560	3.45	7.64	.866	1.91	4.24
2033	652.4	2.073	3.18	9.06	1.435	2.20	6.27
2034	488.6	2.016	4.13	8.56	.868	1.78	3.69
2036	614.4	1.967	3.20	8.29	1.085	1.77	4.57
2037	537.7	1.980	3.68	8.53	.758	1.41	3.27
2038	446.0	1.510	3.39	6.73	.897	2.01	4.00
2040	405.1	1.538	3.80	7.07	.728	1.80	3.35
2042	473.4	1.806	3.81	8.54	.596	1.26	2.82
2044	464.9	1.814	3.90	8.01	.967	2.08	4.27
2046	510.0	1.574	3.09	7.04	.408	.80	1.82
2048	520.1	1.953	3.76	8.21	1.050	2.02	4.42
2050	501.1	1.619	3.23	7.28	.732	1.46	3.29
2052	381.2	1.382	3.63	6.73	.989	2.59	4.82
2054	486.6	2.042	4.20	9.13	.627	1.29	2.80
2056	550.1	2.250	4.09	9.72			
MEAN	499.0	1.806	3.63	8.04	.858	1.74	3.83
S.D.	71.3	.258	.37	.93	.251	.46	1.08
N	15	15	15	15	14	14	14
MIN.	381.2	1.382	3.09	6.73	.408	.80	1.82
MAX.	652.4	2.250	4.20	9.72	1.435	2.59	6.27

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SEMIN VESI WT. (G)	SEMIN VESI ORG/TBW (X 1000)	SEMIN VESI ORG/BRN (X 1)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)
GROUP II - 10 PPM							
2031	452.7	2.1472	4.74	1.05	.735	1.62	3.60
2033	652.4	2.1508	3.30	.94	1.130	1.73	4.94
2034	488.6	2.4449	5.00	1.04	.766	1.57	3.25
2036	614.4	2.5329	4.12	1.07	.770	1.25	3.24
2037	537.7	1.6337	3.04	.70	.794	1.48	3.42
2038	446.0	1.5075	3.38	.67	.568	1.27	2.53
2040	405.1	1.9104	4.72	.88	.617	1.52	2.84
2042	473.4	2.4999	5.28	1.18	.845	1.78	4.00
2044	464.9	2.7441	5.90	1.21	.673	1.45	2.97
2046	510.0	2.8180	5.53	1.26	.586	1.15	2.62
2048	520.1	2.9327	5.64	1.23	.704	1.35	2.96
2050	501.1	1.9890	3.97	.89	.675	1.35	3.03
2052	381.2	.9535	2.50	.46	.746	1.96	3.63
2054	486.6	2.9977	6.16	1.34	.889	1.83	3.97
2056	550.1	2.9209	5.31	1.26	1.334	2.43	5.76
MEAN	499.0	2.2789	4.57	1.01	.789	1.58	3.52
S.D.	71.3	.5992	1.13	.25	.204	.33	.88
N	15	15	15	15	15	15	15
MIN.	381.2	.9535	2.50	.46	.568	1.15	2.53
MAX.	652.4	2.9977	6.16	1.34	1.334	2.43	5.76

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	EPIDIDYMID WT. (G)	EPIDIDYMID ORG/TBW (X 1000)	EPIDIDYMID ORG/BRN (X 10)	TESTES WT. (G)	TESTES ORG/TBW (X 1000)	TESTES ORG/BRN (X 1)
GROUP II - 10 PPM							
2031	452.7	1.5752	3.48	7.72	3.428	7.57	1.68
2033	652.4	1.3679	2.10	5.98	3.353	5.14	1.46
2034	488.6	1.7404	3.56	7.39	3.795	7.77	1.61
2036	614.4	1.5357	2.50	6.47	3.831	6.24	1.61
2037	537.7	1.3614	2.53	5.87	3.401	6.33	1.47
2038	446.0	1.4678	3.29	6.54	3.494	7.83	1.56
2040	405.1	1.3757	3.40	6.33	3.135	7.74	1.44
2042	473.4	1.4488	3.06	6.85	3.461	7.31	1.64
2044	464.9	1.6135	3.47	7.12	3.299	7.10	1.46
2046	510.0	1.4306	2.81	6.40	3.746	7.35	1.68
2048	520.1	1.6206	3.12	6.81	3.585	6.89	1.51
2050	501.1	1.2787	2.55	5.75	3.118	6.22	1.40
2052	381.2	1.2908	3.39	6.29	2.888	7.58	1.41
2054	486.6	1.7032	3.50	7.61	3.551	7.30	1.59
2056	550.1	1.5068	2.74	6.51	3.112	5.66	1.34
MEAN	499.0	1.4878	3.03	6.64	3.413	6.93	1.52
S.D.	71.3	.1426	.46	.61	.272	.83	.11
N	15	15	15	15	15	15	15
MIN.	381.2	1.2787	2.10	5.75	2.888	5.14	1.34
MAX.	652.4	1.7404	3.56	7.72	3.831	7.83	1.68

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP II - 10 PPM				
2031	452.7	.190	4.20	.93
2033	652.4	.284	4.35	1.24
2034	488.6	.283	5.79	1.20
2036	614.4	.355	5.78	1.50
2037	537.7	.338	6.29	1.46
2038	446.0	.208	4.66	.93
2040	405.1	.212	5.23	.98
2042	473.4	.243	5.13	1.15
2044	464.9	.257	5.53	1.13
2046	510.0	.199	3.90	.89
2048	520.1	.379	7.29	1.59
2050	501.1	.445	8.88	2.00
2052	381.2	.313	8.21	1.52
2054	486.6	.360	7.40	1.61
2056	550.1	.378	6.87	1.63
MEAN	499.0	.296	5.97	1.32
S.D.	71.3	.078	1.50	.33
N	15	15	15	15
MIN.	381.2	.190	3.90	.89
MAX.	652.4	.445	8.88	2.00

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP III - 100 PPM							
3031	580.1	2.214	3.82	1.00	.0465	.80	2.10
3032	546.3	2.284	4.18	1.00	.0672	1.23	2.94
3033	433.2	2.042	4.71	1.00	.0409	.94	2.00
3034	459.7	2.111	4.59	1.00	.0608	1.32	2.88
3035	496.8	2.309	4.65	1.00	.0672	1.35	2.91
3037	503.8	2.308	4.58	1.00	.0755	1.50	3.27
3039	444.4	2.207	4.97	1.00	.0573	1.29	2.60
3041	501.7	2.335	4.65	1.00	.0691	1.38	2.96
3042	491.6	2.179	4.43	1.00	.0647	1.32	2.97
3043	518.9	2.129	4.10	1.00	.0721	1.39	3.39
3045	475.8	2.260	4.75	1.00	.0634	1.33	2.81
3046	478.1	2.223	4.65	1.00	.0714	1.49	3.21
3047	512.3	2.157	4.21	1.00	.0633	1.24	2.93
3048	548.2	2.128	3.88	1.00	.0702	1.28	3.30
3049	508.4	2.241	4.41	1.00	.0600	1.18	2.68
MEAN	500.0	2.208	4.44	1.00	.0633	1.27	2.86
S.D.	39.5	.084	.33	.00	.0094	.19	.40
N	15	15	15	15	15	15	15
MIN.	433.2	2.042	3.82	1.00	.0409	.80	2.00
MAX.	580.1	2.335	4.97	1.00	.0755	1.50	3.39

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP III - 100 PPM							
3031	580.1	4.426	7.63	2.00	19.282	3.32	8.71
3032	546.3	4.139	7.58	1.81	16.360	2.99	7.16
3033	433.2	3.706	8.55	1.81	13.984	3.23	6.85
3034	459.7	3.676	8.00	1.74	12.790	2.78	6.06
3035	496.8	4.128	8.31	1.79	16.399	3.30	7.10
3037	503.8	3.978	7.90	1.72	16.560	3.29	7.18
3039	444.4	3.887	8.75	1.76	14.132	3.18	6.40
3041	501.7	4.057	8.09	1.74	14.625	2.92	6.26
3042	491.6	4.132	8.41	1.90	19.275	3.92	8.85
3043	518.9	4.159	8.02	1.95	18.319	3.53	8.60
3045	475.8	4.780	10.05	2.12	17.538	3.69	7.76
3046	478.1	4.443	9.29	2.00	16.455	3.44	7.40
3047	512.3	4.900	9.56	2.27	20.482	4.00	9.50
3048	548.2	5.311	9.69	2.50	18.421	3.36	8.66
3049	508.4	4.017	7.90	1.79	14.657	2.88	6.54
MEAN	500.0	4.249	8.51	1.93	16.619	3.32	7.54
S.D.	39.5	.453	.79	.22	2.265	.36	1.08
N	15	15	15	15	15	15	15
MIN.	433.2	3.676	7.58	1.72	12.790	2.78	6.06
MAX.	580.1	5.311	10.05	2.50	20.482	4.00	9.50

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	PROSTATE WT. (G)	PROSTATE ORG/TBW (X 1000)	PROSTATE ORG/BRN (X 10)
GROUP III - 100 PPM							
3031	580.1	1.686	2.91	7.62	.551	.95	2.49
3032	546.3	2.303	4.22	10.08	.602	1.10	2.64
3033	433.2	1.623	3.75	7.95	.554	1.28	2.71
3034	459.7	1.894	4.12	8.97	1.184	2.58	5.61
3035	496.8	1.890	3.80	8.19	.613	1.23	2.65
3037	503.8	1.588	3.15	6.88	.793	1.57	3.44
3039	444.4	1.606	3.61	7.28	.787	1.77	3.57
3041	501.7	2.134	4.25	9.14	.887	1.77	3.80
3042	491.6	1.736	3.53	7.97	.847	1.72	3.89
3043	518.9	2.073	3.99	9.74	1.423	2.74	6.68
3045	475.8	1.847	3.88	8.17	.822	1.73	3.64
3046	478.1	1.817	3.80	8.17	1.128	2.36	5.07
3047	512.3	1.808	3.53	8.38	.817	1.59	3.79
3048	548.2	1.830	3.34	8.60	1.043	1.90	4.90
3049	508.4	1.823	3.59	8.13	.793	1.56	3.54
MEAN	500.0	1.844	3.70	8.35	.856	1.72	3.89
S.D.	39.5	.200	.38	.86	.248	.51	1.20
N	15	15	15	15	15	15	15
MIN.	433.2	1.588	2.91	6.88	.551	.95	2.49
MAX.	580.1	2.303	4.25	10.08	1.423	2.74	6.68

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SEMIN VESI WT. (G)	SEMIN VESI ORG/TBW (X 1000)	SEMIN VESI ORG/BRN (X 1)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)
GROUP III - 100 PPM							
3031	580.1	2.8737	4.95	1.30	1.129	1.95	5.10
3032	546.3	1.4407	2.64	.63	1.546	2.83	6.77
3033	433.2	2.5208	5.82	1.23	.677	1.56	3.32
3034	459.7	2.2408	4.87	1.06	.791	1.72	3.75
3035	496.8	2.2838	4.60	.99	.782	1.57	3.39
3037	503.8	2.0022	3.97	.87	.919	1.82	3.98
3039	444.4	1.9718	4.44	.89	.761	1.71	3.45
3041	501.7	2.3692	4.72	1.01	.777	1.55	3.33
3042	491.6	2.5255	5.14	1.16	.882	1.79	4.05
3043	518.9	3.0409	5.86	1.43	.883	1.70	4.15
3045	475.8	2.7585	5.80	1.22	.801	1.68	3.54
3046	478.1	2.3833	4.98	1.07	.792	1.66	3.56
3047	512.3	2.3363	4.56	1.08	.915	1.79	4.24
3048	548.2	2.6049	4.75	1.22	.980	1.79	4.61
3049	508.4	1.7142	3.37	.76	.882	1.73	3.94
MEAN	500.0	2.3378	4.70	1.06	.901	1.79	4.08
S.D.	39.5	.4271	.88	.21	.209	.31	.90
N	15	15	15	15	15	15	15
MIN.	433.2	1.4407	2.64	.63	.677	1.55	3.32
MAX.	580.1	3.0409	5.86	1.43	1.546	2.83	6.77

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	EPIDIDYMID WT. (G)	EPIDIDYMID ORG/TBW (X 1000)	EPIDIDYMID ORG/BRN (X 10)	TESTES WT. (G)	TESTES ORG/TBW (X 1000)	TESTES ORG/BRN (X 1)
GROUP III - 100 PPM							
3031	580.1	1.2965	2.23	5.86	3.158	5.44	1.43
3032	546.3	1.4290	2.62	6.26	3.328	6.09	1.46
3033	433.2	1.1813	2.73	5.79	3.057	7.06	1.50
3034	459.7	1.4550	3.17	6.89	3.506	7.63	1.66
3035	496.8	1.4460	2.91	6.26	3.044	6.13	1.32
3037	503.8	1.2608	2.50	5.46	3.259	6.47	1.41
3039	444.4	1.1497	2.59	5.21	2.963	6.67	1.34
3041	501.7	1.4530	2.90	6.22	3.373	6.72	1.44
3042	491.6	1.5672	3.19	7.19	3.393	6.90	1.56
3043	518.9	1.5310	2.95	7.19	3.607	6.95	1.69
3045	475.8	1.4678	3.08	6.49	3.756	7.89	1.66
3046	478.1	1.3673	2.86	6.15	3.898	8.15	1.75
3047	512.3	1.6734	3.27	7.76	4.143	8.09	1.92
3048	548.2	1.4861	2.71	6.98	4.060	7.41	1.91
3049	508.4	1.4098	2.77	6.29	3.412	6.71	1.52
MEAN	500.0	1.4116	2.83	6.40	3.464	6.95	1.57
S.D.	39.5	.1415	.28	.70	.366	.78	.19
N	15	15	15	15	15	15	15
MIN.	433.2	1.1497	2.23	5.21	2.963	5.44	1.32
MAX.	580.1	1.6734	3.27	7.76	4.143	8.15	1.92

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

AN NO	TERMINAL BODY WT. (G)	INDIVIDUAL VALUES THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP III - 100 PPM				
3031	580.1	.271	4.67	1.22
3032	546.3	.276	5.05	1.21
3033	433.2	.192	4.43	.94
3034	459.7	.207	4.50	.98
3035	496.8	.262	5.27	1.13
3037	503.8	.290	5.76	1.26
3039	444.4	.334	7.52	1.51
3041	501.7	.377	7.51	1.61
3042	491.6	.261	5.31	1.20
3043	518.9	.217	4.18	1.02
3045	475.8	.170	3.57	.75
3046	478.1	.242	5.06	1.09
3047	512.3	.229	4.47	1.06
3048	548.2	.318	5.80	1.49
3049	508.4	.370	7.28	1.65
MEAN	500.0	.268	5.36	1.21
S.D.	39.5	.062	1.22	.26
N	15	15	15	15
MIN.	433.2	.170	3.57	.75
MAX.	580.1	.377	7.52	1.65

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP IV - 1100 PPM							
4031	544.8	2.275	4.18	1.00	b	-	-
4033	497.0	2.440	4.91	1.00	.0522	1.05	2.14
4035	561.4	2.119	3.77	1.00	.0917	1.63	4.33
4037	575.2	2.192	3.81	1.00	.0589	1.02	2.69
4039	497.8	2.295	4.61	1.00	.0683	1.37	2.98
4041	488.4	2.099	4.30	1.00	.0806	1.65	3.84
4043	483.5	2.226	4.60	1.00	.0572	1.18	2.57
4045	494.8	2.106	4.26	1.00	.0501	1.01	2.38
4046	482.7	2.106	4.36	1.00	.0769	1.59	3.65
4047	486.6	2.291	4.71	1.00	.0648	1.33	2.83
4049	514.7	2.299	4.47	1.00	.0792	1.54	3.44
4050	490.5	1.945	3.97	1.00	.0649	1.32	3.34
4052	487.2	2.329	4.78	1.00	.0733	1.50	3.15
4054	462.9	2.218	4.79	1.00	.0769	1.66	3.47
4056	487.2	2.108	4.33	1.00	.0630	1.29	2.99
MEAN	503.6	2.203	4.39	1.00	.0684	1.37	3.13
S.D.	31.8	.124	.35	.00	.0119	.24	.60
N	15	15	15	15	14	14	14
MIN.	462.9	1.945	3.77	1.00	.0501	1.01	2.14
MAX.	575.2	2.440	4.91	1.00	.0917	1.66	4.33

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP IV - 1100 PPM							
4031	544.8	4.446	8.16	1.95	18.645	3.42	8.20
4033	497.0	3.999	8.05	1.64	16.533	3.33	6.78
4035	561.4	4.336	7.72	2.05	18.976	3.38	8.96
4037	575.2	4.657	8.10	2.12	19.946	3.47	9.10
4039	497.8	4.451	8.94	1.94	16.646	3.34	7.25
4041	488.4	4.081	8.36	1.94	15.341	3.14	7.31
4043	483.5	4.047	8.37	1.82	16.077	3.33	7.22
4045	494.8	4.679	9.46	2.22	17.479	3.53	8.30
4046	482.7	4.073	8.44	1.93	17.951	3.72	8.52
4047	486.6	4.265	8.76	1.86	17.023	3.50	7.43
4049	514.7	4.775	9.28	2.08	17.708	3.44	7.70
4050	490.5	3.910	7.97	2.01	15.797	3.22	8.12
4052	487.2	4.466	9.17	1.92	16.620	3.41	7.14
4054	462.9	3.944	8.52	1.78	16.346	3.53	7.37
4056	487.2	3.413	7.01	1.62	14.109	2.90	6.69
MEAN	503.6	4.236	8.42	1.93	17.013	3.38	7.74
S.D.	31.8	.361	.64	.17	1.494	.19	.75
N	15	15	15	15	15	15	15
MIN.	462.9	3.413	7.01	1.62	14.109	2.90	6.69
MAX.	575.2	4.775	9.46	2.22	19.946	3.72	9.10

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	PROSTATE WT. (G)	PROSTATE ORG/TBW (X 1000)	PROSTATE ORG/BRN (X 10)
GROUP IV - 1100 PPM							
4031	544.8	1.874	3.44	8.24	1.003	1.84	4.41
4033	497.0	2.139	4.30	8.77	.425	.86	1.74
4035	561.4	2.220	3.95	10.48	1.082	1.93	5.11
4037	575.2	2.132	3.71	9.73	1.220	2.12	5.57
4039	497.8	1.834	3.68	7.99	.881	1.77	3.84
4041	488.4	1.915	3.92	9.12	.993	2.03	4.73
4043	483.5	1.770	3.66	7.95	.558	1.15	2.51
4045	494.8	2.000	4.04	9.50	.728	1.47	3.46
4046	482.7	2.105	4.36	10.00	1.100	2.28	5.22
4047	486.6	1.842	3.79	8.04	.767	1.58	3.35
4049	514.7	1.597	3.10	6.95	1.058	2.06	4.60
4050	490.5	1.595	3.25	8.20	.882	1.80	4.53
4052	487.2	1.784	3.66	7.66	.639	1.31	2.74
4054	462.9	1.589	3.43	7.16	1.021	2.21	4.60
4056	487.2	1.450	2.98	6.88	1.019	2.09	4.83
MEAN	503.6	1.856	3.69	8.44	.892	1.77	4.08
S.D.	31.8	.233	.40	1.12	.225	.41	1.11
N	15	15	15	15	15	15	15
MIN.	462.9	1.450	2.98	6.88	.425	.86	1.74
MAX.	575.2	2.220	4.36	10.48	1.220	2.28	5.57

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SEMIN VESI WT. (G)	SEMIN VESI ORG/TBW (X 1000)	SEMIN VESI ORG/BRN (X 1)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)
GROUP IV - 1100 PPM							
4031	544.8	3.1406	5.76	1.38	.969	1.78	4.26
4033	497.0	2.5453	5.12	1.04	1.273	2.56	5.22
4035	561.4	2.6035	4.64	1.23	.949	1.69	4.48
4037	575.2	2.0727	3.60	.95	.951	1.65	4.34
4039	497.8	1.5318	3.08	.67	1.342	2.70	5.85
4041	488.4	1.6065	3.29	.77	.847	1.73	4.04
4043	483.5	1.9450	4.02	.87	.808	1.67	3.63
4045	494.8	2.4959	5.04	1.19	1.620	3.27	7.69
4046	482.7	1.9460	4.03	.92	.927	1.92	4.40
4047	486.6	2.1381	4.39	.93	1.074	2.21	4.69
4049	514.7	1.8817	3.66	.82	.874	1.70	3.80
4050	490.5	2.3152	4.72	1.19	.865	1.76	4.45
4052	487.2	2.4456	5.02	1.05	.827	1.70	3.55
4054	462.9	1.2807	2.77	.58	.755	1.63	3.40
4056	487.2	1.4616	3.00	.69	.725	1.49	3.44
MEAN	503.6	2.0940	4.14	.95	.987	1.96	4.48
S.D.	31.8	.5071	.90	.23	.246	.50	1.11
N	15	15	15	15	15	15	15
MIN.	462.9	1.2807	2.77	.58	.725	1.49	3.40
MAX.	575.2	3.1406	5.76	1.38	1.620	3.27	7.69

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	EPIDIDYMID WT. (G)	EPIDIDYMID ORG/TBW (X 1000)	EPIDIDYMID ORG/BRN (X 10)	TESTES WT. (G)	TESTES ORG/TBW (X 1000)	TESTES ORG/BRN (X 1)
GROUP IV - 1100 PPM							
4031	544.8	1.4564	2.67	6.40	3.372	6.19	1.48
4033	497.0	1.2880	2.59	5.28	3.060	6.16	1.25
4035	561.4	1.6885	3.01	7.97	3.460	6.16	1.63
4037	575.2	1.3653	2.37	6.23	3.509	6.10	1.60
4039	497.8	1.4459	2.90	6.30	3.306	6.64	1.44
4041	488.4	1.5775	3.23	7.52	3.461	7.09	1.65
4043	483.5	1.4360	2.97	6.45	3.141	6.50	1.41
4045	494.8	.6551	1.32	3.11	1.714	3.46	.81
4046	482.7	1.6071	3.33	7.63	3.275	6.78	1.56
4047	486.6	1.4006	2.88	6.11	3.128	6.43	1.37
4049	514.7	1.3446	2.61	5.85	3.324	6.46	1.45
4050	490.5	1.4926	3.04	7.67	3.304	6.74	1.70
4052	487.2	1.2744	2.62	5.47	4.430	9.09	1.90
4054	462.9	1.5443	3.34	6.96	3.487	7.53	1.57
4056	487.2	1.2914	2.65	6.13	3.519	7.22	1.67
MEAN	503.6	1.3912	2.77	6.34	3.299	6.57	1.50
S.D.	31.8	.2378	.49	1.21	.540	1.15	.25
N	15	15	15	15	15	15	15
MIN.	462.9	.6551	1.32	3.11	1.714	3.46	.81
MAX.	575.2	1.6885	3.34	7.97	4.430	9.09	1.90

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - MALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	THYMUS WT. (G)	ORG/TBW (X 10000)	ORG/BRN (X 10)
GROUP IV - 1100 PPM				
4031	544.8	.433	7.95	1.90
4033	497.0	.215	4.33	.88
4035	561.4	.415	7.39	1.96
4037	575.2	.358	6.22	1.63
4039	497.8	.314	6.31	1.37
4041	488.4	.294	6.02	1.40
4043	483.5	.269	5.56	1.21
4045	494.8	.519	10.49	2.46
4046	482.7	.422	8.74	2.00
4047	486.6	.183	3.76	.80
4049	514.7	.320	6.22	1.39
4050	490.5	.115	2.34	.59
4052	487.2	.246	5.05	1.06
4054	462.9	.269	5.81	1.21
4056	487.2	.153	3.14	.73
MEAN	503.6	.302	5.96	1.37
S.D.	31.8	.113	2.14	.54
N	15	15	15	15
MIN.	462.9	.115	2.34	.59
MAX.	575.2	.519	10.49	2.46

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP I - 0 PPM							
1531	260.3	2.184	8.39	1.00	.0719	2.76	3.29
1533	303.4	2.068	6.82	1.00	.0749	2.47	3.62
1538	306.4	2.059	6.72	1.00	.0592	1.93	2.88
1540	281.1	1.831	6.51	1.00	.0610	2.17	3.33
1541	234.8	2.169	9.24	1.00	.0631	2.69	2.91
1543	198.9	2.194	11.03	1.00	.0785	3.95	3.58
1551	320.4	2.230	6.96	1.00	.0660	2.06	2.96
1553	323.8	2.120	6.55	1.00	.0902	2.79	4.25
1555	277.1	1.957	7.06	1.00	.0557	2.01	2.85
1557	266.8	2.090	7.83	1.00	.0686	2.57	3.28
1558	280.1	2.069	7.39	1.00	.0877	3.13	4.24
1563	257.6	1.994	7.74	1.00	.0651	2.53	3.26
1568	261.5	2.062	7.89	1.00	.0826	3.16	4.01
1574	273.9	2.014	7.35	1.00	.0739	2.70	3.67
1578	265.4	1.957	7.37	1.00	.0756	2.85	3.86
MEAN	274.1	2.067	7.66	1.00	.0716	2.65	3.47
S.D.	32.2	.106	1.19	.00	.0103	.52	.48
N	15	15	15	15	15	15	15
MIN.	198.9	1.831	6.51	1.00	.0557	1.93	2.85
MAX.	323.8	2.230	11.03	1.00	.0902	3.95	4.25

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP I - 0 PPM							
1531	260.3	2.551	9.80	1.17	10.671	4.10	4.89
1533	303.4	2.774	9.14	1.34	7.963	2.62	3.85
1538	306.4	2.555	8.34	1.24	12.722	4.15	6.18
1540	281.1	2.577	9.17	1.41	10.118	3.60	5.53
1541	234.8	2.055	8.75	.95	6.948	2.96	3.20
1543	198.9	2.520	12.67	1.15	10.622	5.34	4.84
1551	320.4	2.601	8.12	1.17	9.317	2.91	4.18
1553	323.8	3.011	9.30	1.42	11.159	3.45	5.26
1555	277.1	2.368	8.55	1.21	9.344	3.37	4.77
1557	266.8	2.384	8.94	1.14	10.102	3.79	4.83
1558	280.1	2.344	8.37	1.13	9.076	3.24	4.39
1563	257.6	2.048	7.95	1.03	8.117	3.15	4.07
1568	261.5	2.047	7.83	.99	10.011	3.83	4.85
1574	273.9	2.269	8.28	1.13	9.136	3.34	4.54
1578	265.4	2.282	8.60	1.17	8.534	3.22	4.36
MEAN	274.1	2.426	8.92	1.18	9.589	3.54	4.65
S.D.	32.2	.272	1.17	.14	1.433	.66	.71
N	15	15	15	15	15	15	15
MIN.	198.9	2.047	7.83	.95	6.948	2.62	3.20
MAX.	323.8	3.011	12.67	1.42	12.722	5.34	6.18

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	OVARIES WT. (G)	OVARIES ORG/TBW (X 10000)	OVARIES ORG/BRN (X 100)
GROUP I - 0 PPM							
1531	260.3	1.541	5.92	7.06	.1353	5.20	6.20
1533	303.4	1.243	4.10	6.01	.1042	3.43	5.04
1538	306.4	1.267	4.14	6.15	.0901	2.94	4.38
1540	281.1	a	-	-	.1328	4.72	7.25
1541	234.8	1.229	5.23	5.67	.0714	3.04	3.29
1543	198.9	1.449	7.29	6.60	.1271	6.39	5.79
1551	320.4	1.335	4.17	5.99	.1134	3.54	5.09
1553	323.8	1.494	4.61	7.05	.1406	4.34	6.63
1555	277.1	1.231	4.44	6.29	.0968	3.49	4.95
1557	266.8	1.298	4.87	6.21	.1170	4.39	5.60
1558	280.1	1.293	4.62	6.25	.1140	4.07	5.51
1563	257.6	1.147	4.45	5.75	.0687	2.67	3.45
1568	261.5	1.388	5.31	6.73	.1219	4.66	5.91
1574	273.9	1.230	4.49	6.11	.0978	3.57	4.86
1578	265.4	1.194	4.50	6.10	.0842	3.17	4.30
MEAN	274.1	1.310	4.87	6.28	.1077	3.98	5.22
S.D.	32.2	.117	.86	.43	.0226	.99	1.10
N	15	14	14	14	15	15	15
MIN.	198.9	1.147	4.10	5.67	.0687	2.67	3.29
MAX.	323.8	1.541	7.29	7.06	.1406	6.39	7.25

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)	THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP I - 0 PPM							
1531	260.3	.547	2.10	2.50	.196	7.53	.90
1533	303.4	.614	2.02	2.97	.188	6.20	.91
1538	306.4	.565	1.84	2.74	.238	7.77	1.16
1540	281.1	.504	1.79	2.75	.458	16.29	2.50
1541	234.8	.535	2.28	2.47	.161	6.86	.74
1543	198.9	.538	2.70	2.45	.236	11.87	1.08
1551	320.4	.561	1.75	2.52	.323	10.08	1.45
1553	323.8	.642	1.98	3.03	.266	8.21	1.25
1555	277.1	.486	1.75	2.48	.162	5.85	.83
1557	266.8	.689	2.58	3.30	.329	12.33	1.57
1558	280.1	.538	1.92	2.60	.180	6.43	.87
1563	257.6	.394	1.53	1.98	.174	6.75	.87
1568	261.5	.959	3.67	4.65	.344	13.15	1.67
1574	273.9	.608	2.22	3.02	.190	6.94	.94
1578	265.4	.505	1.90	2.58	.295	11.12	1.51
MEAN	274.1	.579	2.14	2.80	.249	9.16	1.22
S.D.	32.2	.126	.53	.60	.086	3.14	.47
N	15	15	15	15	15	15	15
MIN.	198.9	.394	1.53	1.98	.161	5.85	.74
MAX.	323.8	.959	3.67	4.65	.458	16.29	2.50

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

AN NO	TERMINAL BODY WT. (G)	INDIVIDUAL VALUES UTERUS WT. (G)	UTERUS ORG/TBW (X 1000)	UTERUS ORG/BRN (X 10)
GROUP I - 0 PPM				
1531	260.3	.929	3.57	4.25
1533	303.4	.630	2.08	3.05
1538	306.4	.573	1.87	2.78
1540	281.1	.772	2.75	4.22
1541	234.8	.995	4.24	4.59
1543	198.9	.584	2.94	2.66
1551	320.4	.743	2.32	3.33
1553	323.8	1.131	3.49	5.33
1555	277.1	.661	2.39	3.38
1557	266.8	.595	2.23	2.85
1558	280.1	.795	2.84	3.84
1563	257.6	.656	2.55	3.29
1568	261.5	.607	2.32	2.94
1574	273.9	.484	1.77	2.40
1578	265.4	.677	2.55	3.46
MEAN	274.1	.722	2.66	3.49
S.D.	32.2	.177	.68	.81
N	15	15	15	15
MIN.	198.9	.484	1.77	2.40
MAX.	323.8	1.131	4.24	5.33

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP II - 10 PPM							
2532	295.5	2.014	6.82	1.00	.0713	2.41	3.54
2533	288.3	1.971	6.84	1.00	.0752	2.61	3.82
2536	302.9	2.227	7.35	1.00	.0867	2.86	3.89
2538	279.7	2.061	7.37	1.00	.0773	2.76	3.75
2540	285.7	2.038	7.13	1.00	.0572	2.00	2.81
2543	295.6	2.056	6.96	1.00	.0699	2.36	3.40
2544	268.6	2.234	8.32	1.00	.0662	2.46	2.96
2546	302.7	2.270	7.50	1.00	.0377	1.25	1.66
2550	253.5	2.007	7.92	1.00	.0767	3.03	3.82
2552	266.5	1.880	7.05	1.00	.0853	3.20	4.54
2553	292.4	2.077	7.10	1.00	.0713	2.44	3.43
2554	296.2	2.146	7.25	1.00	.0799	2.70	3.72
2558	282.4	2.027	7.18	1.00	.0744	2.63	3.67
2569	272.6	1.857	6.81	1.00	.0671	2.46	3.61
2575	276.6	2.048	7.40	1.00	.0820	2.96	4.00
MEAN	283.9	2.061	7.27	1.00	.0719	2.54	3.51
S.D.	14.4	.119	.41	.00	.0122	.47	.66
N	15	15	15	15	15	15	15
MIN.	253.5	1.857	6.81	1.00	.0377	1.25	1.66
MAX.	302.9	2.270	8.32	1.00	.0867	3.20	4.54

APPENDIX U (CONT.)

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP II - 10 PPM							
2532	295.5	2.379	8.05	1.18	9.115	3.08	4.53
2533	288.3	2.466	8.55	1.25	10.796	3.74	5.48
2536	302.9	2.218	7.32	1.00	8.901	2.94	4.00
2538	279.7	2.503	8.95	1.21	9.407	3.36	4.56
2540	285.7	2.795	9.78	1.37	7.960	2.79	3.91
2543	295.6	2.563	8.67	1.25	9.393	3.18	4.57
2544	268.6	2.634	9.81	1.18	10.303	3.84	4.61
2546	302.7	2.599	8.59	1.14	9.656	3.19	4.25
2550	253.5	2.082	8.21	1.04	8.107	3.20	4.04
2552	266.5	2.201	8.26	1.17	7.843	2.94	4.17
2553	292.4	2.481	8.48	1.19	10.312	3.53	4.96
2554	296.2	2.498	8.43	1.16	9.418	3.18	4.39
2558	282.4	2.380	8.43	1.17	9.273	3.28	4.57
2569	272.6	2.421	8.88	1.30	11.346	4.16	6.11
2575	276.6	2.465	8.91	1.20	11.351	4.10	5.54
MEAN	283.9	2.446	8.62	1.19	9.545	3.37	4.65
S.D.	14.4	.181	.62	.09	1.117	.42	.63
N	15	15	15	15	15	15	15
MIN.	253.5	2.082	7.32	1.00	7.843	2.79	3.91
MAX.	302.9	2.795	9.81	1.37	11.351	4.16	6.11

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	OVARIES WT. (G)	OVARIES ORG/TBW (X 10000)	OVARIES ORG/BRN (X 100)
GROUP II - 10 PPM							
2532	295.5	1.371	4.64	6.81	.0972	3.29	4.83
2533	288.3	1.355	4.70	6.87	.0872	3.02	4.42
2536	302.9	1.352	4.46	6.07	.1395	4.61	6.26
2538	279.7	1.443	5.16	7.00	.0990	3.54	4.80
2540	285.7	1.286	4.50	6.31	.0840	2.94	4.12
2543	295.6	1.395	4.72	6.79	.0655	2.22	3.19
2544	268.6	1.369	5.10	6.13	.1335	4.97	5.98
2546	302.7	1.487	4.91	6.55	.1050	3.47	4.63
2550	253.5	1.058	4.17	5.27	.0813	3.21	4.05
2552	266.5	1.390	5.22	7.39	.0676	2.54	3.60
2553	292.4	1.539	5.26	7.41	.1059	3.62	5.10
2554	296.2	1.403	4.74	6.54	.1198	4.04	5.58
2558	282.4	1.382	4.89	6.82	.0791	2.80	3.90
2569	272.6	1.242	4.56	6.69	.0968	3.55	5.21
2575	276.6	1.458	5.27	7.12	.0894	3.23	4.37
MEAN	283.9	1.369	4.82	6.65	.0967	3.40	4.67
S.D.	14.4	.113	.33	.55	.0216	.73	.86
N	15	15	15	15	15	15	15
MIN.	253.5	1.058	4.17	5.27	.0655	2.22	3.19
MAX.	302.9	1.539	5.27	7.41	.1395	4.97	6.26

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)	THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP II - 10 PPM							
2532	295.5	.453	1.53	2.25	.257	8.70	1.28
2533	288.3	.432	1.50	2.19	.224	7.77	1.14
2536	302.9	.611	2.02	2.74	.184	6.07	.83
2538	279.7	.499	1.78	2.42	.169	6.04	.82
2540	285.7	.502	1.76	2.46	.209	7.32	1.03
2543	295.6	.620	2.10	3.02	.168	5.68	.82
2544	268.6	.491	1.83	2.20	.200	7.45	.90
2546	302.7	.546	1.80	2.41	.295	9.75	1.30
2550	253.5	.438	1.73	2.18	.261	10.30	1.30
2552	266.5	.607	2.28	3.23	.208	7.80	1.11
2553	292.4	.550	1.88	2.65	.177	6.05	.85
2554	296.2	.560	1.89	2.61	.248	8.37	1.16
2558	282.4	.573	2.03	2.83	.195	6.91	.96
2569	272.6	.675	2.48	3.63	.201	7.37	1.08
2575	276.6	.510	1.84	2.49	.262	9.47	1.28
MEAN	283.9	.538	1.90	2.62	.217	7.67	1.06
S.D.	14.4	.072	.26	.42	.039	1.43	.19
N	15	15	15	15	15	15	15
MIN.	253.5	.432	1.50	2.18	.168	5.68	.82
MAX.	302.9	.675	2.48	3.63	.295	10.30	1.30

APPENDIX U (CONT.)

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	UTERUS WT. (G)	UTERUS ORG/TBW (X 1000)	UTERUS ORG/BRN (X 10)
GROUP II - 10 PPM				
2532	295.5	.599	2.03	2.97
2533	288.3	.614	2.13	3.12
2536	302.9	.680	2.24	3.05
2538	279.7	.852	3.05	4.13
2540	285.7	1.249	4.37	6.13
2543	295.6	.589	1.99	2.86
2544	268.6	.651	2.42	2.91
2546	302.7	.650	2.15	2.86
2550	253.5	.643	2.54	3.20
2552	266.5	.446	1.67	2.37
2553	292.4	.553	1.89	2.66
2554	296.2	.700	2.36	3.26
2558	282.4	1.300	4.60	6.41
2569	272.6	.422	1.55	2.27
2575	276.6	.959	3.47	4.68
MEAN	283.9	.727	2.56	3.53
S.D.	14.4	.259	.92	1.27
N	15	15	15	15
MIN.	253.5	.422	1.55	2.27
MAX.	302.9	1.300	4.60	6.41

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP III - 100 PPM							
3531	292.7	1.958	6.69	1.00	.0786	2.69	4.01
3532	286.5	1.984	6.92	1.00	.0889	3.10	4.48
3533	261.5	1.523	5.82	1.00	.0730	2.79	4.79
3534	275.6	1.871	6.79	1.00	.0702	2.55	3.75
3535	282.0	2.152	7.63	1.00	.0696	2.47	3.23
3536	275.6	2.086	7.57	1.00	.0671	2.43	3.22
3541	260.4	1.904	7.31	1.00	.0577	2.22	3.03
3543	282.3	2.038	7.22	1.00	.0849	3.01	4.17
3555	282.0	2.053	7.28	1.00	.0510	1.81	2.48
3556	240.3	1.862	7.75	1.00	.0490	2.04	2.63
3557	270.4	2.048	7.57	1.00	.0828	3.06	4.04
3559	329.2	2.238	6.80	1.00	.0882	2.68	3.94
3560	325.2	2.088	6.42	1.00	.0869	2.67	4.16
3562	320.2	2.146	6.70	1.00	.0709	2.21	3.30
3564	306.7	2.166	7.06	1.00	.0848	2.76	3.92
MEAN	286.0	2.008	7.04	1.00	.0736	2.57	3.68
S.D.	25.2	.174	.52	.00	.0132	.38	.67
N	15	15	15	15	15	15	15
MIN.	240.3	1.523	5.82	1.00	.0490	1.81	2.48
MAX.	329.2	2.238	7.75	1.00	.0889	3.10	4.79

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP III - 100 PPM							
3531	292.7	2.394	8.18	1.22	9.171	3.13	4.68
3532	286.5	2.694	9.40	1.36	9.482	3.31	4.78
3533	261.5	2.230	8.53	1.46	9.621	3.68	6.32
3534	275.6	2.274	8.25	1.22	9.614	3.49	5.14
3535	282.0	2.919	10.35	1.36	12.573	4.46	5.84
3536	275.6	2.473	8.97	1.19	9.917	3.60	4.75
3541	260.4	2.253	8.65	1.18	9.557	3.67	5.02
3543	282.3	2.597	9.20	1.27	10.982	3.89	5.39
3555	282.0	2.613	9.27	1.27	9.449	3.35	4.60
3556	240.3	2.372	9.87	1.27	10.386	4.32	5.58
3557	270.4	2.190	8.10	1.07	8.173	3.02	3.99
3559	329.2	2.928	8.89	1.31	10.264	3.12	4.59
3560	325.2	2.501	7.69	1.20	12.007	3.69	5.75
3562	320.2	2.821	8.81	1.31	9.870	3.08	4.60
3564	306.7	2.660	8.67	1.23	12.663	4.13	5.85
MEAN	286.0	2.528	8.86	1.26	10.249	3.60	5.13
S.D.	25.2	.246	.70	.09	1.285	.45	.64
N	15	15	15	15	15	15	15
MIN.	240.3	2.190	7.69	1.07	8.173	3.02	3.99
MAX.	329.2	2.928	10.35	1.46	12.663	4.46	6.32

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	OVARIES WT. (G)	OVARIES ORG/TBW (X 10000)	OVARIES ORG/BRN (X 100)
GROUP III - 100 PPM							
3531	292.7	1.260	4.30	6.44	.1133	3.87	5.79
3532	286.5	1.292	4.51	6.51	.1223	4.27	6.16
3533	261.5	1.193	4.56	7.83	.0589	2.25	3.87
3534	275.6	1.310	4.75	7.00	.1114	4.04	5.95
3535	282.0	1.329	4.71	6.18	.1127	4.00	5.24
3536	275.6	1.287	4.67	6.17	.1214	4.40	5.82
3541	260.4	1.254	4.82	6.59	.0994	3.82	5.22
3543	282.3	1.214	4.30	5.96	.1390	4.92	6.82
3555	282.0	1.405	4.98	6.84	.0926	3.28	4.51
3556	240.3	1.178	4.90	6.33	.0866	3.60	4.65
3557	270.4	1.329	4.91	6.49	.0668	2.47	3.26
3559	329.2	1.578	4.79	7.05	.1070	3.25	4.78
3560	325.2	1.422	4.37	6.81	.1122	3.45	5.37
3562	320.2	1.887	5.89	8.79	.0883	2.76	4.11
3564	306.7	1.419	4.63	6.55	.0968	3.16	4.47
MEAN	286.0	1.357	4.74	6.77	.1019	3.57	5.07
S.D.	25.2	.180	.38	.72	.0211	.73	.96
N	15	15	15	15	15	15	15
MIN.	240.3	1.178	4.30	5.96	.0589	2.25	3.26
MAX.	329.2	1.887	5.89	8.79	.1390	4.92	6.82

APPENDIX U (CONT.)

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)	THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP III - 100 PPM							
3531	292.7	.602	2.06	3.07	.234	7.99	1.20
3532	286.5	.656	2.29	3.31	.222	7.75	1.12
3533	261.5	.424	1.62	2.78	.337	12.89	2.21
3534	275.6	.571	2.07	3.05	.291	10.56	1.56
3535	282.0	.501	1.78	2.33	.261	9.26	1.21
3536	275.6	.502	1.82	2.41	.201	7.29	.96
3541	260.4	.473	1.82	2.48	.266	10.22	1.40
3543	282.3	.672	2.38	3.30	.228	8.08	1.12
3555	282.0	.552	1.96	2.69	.254	9.01	1.24
3556	240.3	.560	2.33	3.01	.236	9.82	1.27
3557	270.4	.459	1.70	2.24	.344	12.72	1.68
3559	329.2	.564	1.71	2.52	.377	11.45	1.68
3560	325.2	.744	2.29	3.56	.224	6.89	1.07
3562	320.2	.684	2.14	3.19	.266	8.31	1.24
3564	306.7	.599	1.95	2.77	.236	7.69	1.09
MEAN	286.0	.571	1.99	2.85	.265	9.33	1.34
S.D.	25.2	.091	.25	.40	.051	1.91	.33
N	15	15	15	15	15	15	15
MIN.	240.3	.424	1.62	2.24	.201	6.89	.96
MAX.	329.2	.744	2.38	3.56	.377	12.89	2.21

APPENDIX U (CONT.)

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	UTERUS WT. (G)	UTERUS ORG/TBW (X 1000)	UTERUS ORG/BRN (X 10)
GROUP III - 100 PPM				
3531	292.7	.678	2.32	3.46
3532	286.5	.854	2.98	4.30
3533	261.5	.711	2.72	4.67
3534	275.6	.570	2.07	3.05
3535	282.0	.617	2.19	2.87
3536	275.6	.584	2.12	2.80
3541	260.4	.859	3.30	4.51
3543	282.3	1.089	3.86	5.34
3555	282.0	.531	1.88	2.59
3556	240.3	.762	3.17	4.09
3557	270.4	.945	3.49	4.61
3559	329.2	.626	1.90	2.80
3560	325.2	.587	1.81	2.81
3562	320.2	.549	1.71	2.56
3564	306.7	.633	2.06	2.92
MEAN	286.0	.706	2.51	3.56
S.D.	25.2	.164	.69	.93
N	15	15	15	15
MIN.	240.3	.531	1.71	2.56
MAX.	329.2	1.089	3.86	5.34

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	BRAIN WT. (G)	BRAIN ORG/TBW (X 1000)	BRAIN ORG/BRN (X 1)	ADRENALS WT. (G)	ADRENALS ORG/TBW (X 10000)	ADRENALS ORG/BRN (X 100)
GROUP IV - 1100 PPM							
4531	305.1	2.227	7.30	1.00	.0791	2.59	3.55
4538	303.5	2.013	6.63	1.00	.0738	2.43	3.67
4545	231.2	1.838	7.95	1.00	.0600	2.60	3.26
4546	268.3	2.034	7.58	1.00	.0763	2.84	3.75
4549	316.2	2.100	6.64	1.00	.0722	2.28	3.44
4555	276.9	1.974	7.13	1.00	.0729	2.63	3.69
4556	281.0	1.978	7.04	1.00	.0707	2.52	3.57
4557	293.0	2.029	6.92	1.00	.0731	2.49	3.60
4558	293.6	2.151	7.33	1.00	.0768	2.62	3.57
4560	324.7	2.039	6.28	1.00	.0920	2.83	4.51
4562	270.1	2.208	8.17	1.00	.0662	2.45	3.00
4563	243.4	1.914	7.86	1.00	.0720	2.96	3.76
4566	305.0	2.065	6.77	1.00	.0867	2.84	4.20
4574	254.5	1.920	7.54	1.00	.0661	2.60	3.44
4577	228.5	1.663	7.28	1.00	.0656	2.87	3.94
MEAN	279.7	2.010	7.23	1.00	.0736	2.64	3.66
S.D.	30.2	.144	.54	.00	.0082	.19	.36
N	15	15	15	15	15	15	15
MIN.	228.5	1.663	6.28	1.00	.0600	2.28	3.00
MAX.	324.7	2.227	8.17	1.00	.0920	2.96	4.51

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	KIDNEYS WT. (G)	KIDNEYS ORG/TBW (X 1000)	KIDNEYS ORG/BRN (X 1)	LIVER WT. (G)	LIVER ORG/TBW (X 100)	LIVER ORG/BRN (X 1)
GROUP IV - 1100 PPM							
4531	305.1	2.628	8.61	1.18	11.930	3.91	5.36
4538	303.5	2.792	9.20	1.39	11.307	3.73	5.62
4545	231.2	2.323	10.05	1.26	8.836	3.82	4.81
4546	268.3	2.427	9.05	1.19	11.437	4.26	5.62
4549	316.2	2.901	9.17	1.38	10.844	3.43	5.16
4555	276.9	2.354	8.50	1.19	10.025	3.62	5.08
4556	281.0	2.405	8.56	1.22	11.194	3.98	5.66
4557	293.0	2.532	8.64	1.25	10.555	3.60	5.20
4558	293.6	2.262	7.70	1.05	9.652	3.29	4.49
4560	324.7	2.917	8.98	1.43	12.037	3.71	5.90
4562	270.1	2.287	8.47	1.04	9.248	3.42	4.19
4563	243.4	2.005	8.24	1.05	8.352	3.43	4.36
4566	305.0	2.378	7.80	1.15	10.397	3.41	5.03
4574	254.5	2.275	8.94	1.18	9.663	3.80	5.03
4577	228.5	2.391	10.46	1.44	10.853	4.75	6.53
MEAN	279.7	2.458	8.83	1.23	10.422	3.74	5.20
S.D.	30.2	.254	.74	.13	1.108	.38	.62
N	15	15	15	15	15	15	15
MIN.	228.5	2.005	7.70	1.04	8.352	3.29	4.19
MAX.	324.7	2.917	10.46	1.44	12.037	4.75	6.53

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	LUNGS WT. (G)	LUNGS ORG/TBW (X 1000)	LUNGS ORG/BRN (X 10)	OVARIES WT. (G)	OVARIES ORG/TBW (X 10000)	OVARIES ORG/BRN (X 100)
GROUP IV - 1100 PPM							
4531	305.1	1.353	4.43	6.08	.1000	3.28	4.49
4538	303.5	1.597	5.26	7.93	.1090	3.59	5.41
4545	231.2	1.375	5.95	7.48	.0736	3.18	4.00
4546	268.3	1.239	4.62	6.09	.1075	4.01	5.29
4549	316.2	1.507	4.77	7.18	.1646	5.21	7.84
4555	276.9	1.255	4.53	6.36	.0984	3.55	4.98
4556	281.0	1.288	4.58	6.51	.1147	4.08	5.80
4557	293.0	1.470	5.02	7.24	.1012	3.45	4.99
4558	293.6	1.295	4.41	6.02	.0959	3.27	4.46
4560	324.7	1.330	4.10	6.52	.0464	1.43	2.28
4562	270.1	1.576	5.83	7.14	.1221	4.52	5.53
4563	243.4	1.319	5.42	6.89	.0662	2.72	3.46
4566	305.0	1.381	4.53	6.69	.1179	3.87	5.71
4574	254.5	1.251	4.92	6.52	.0950	3.73	4.95
4577	228.5	1.272	5.57	7.65	.1010	4.42	6.07
MEAN	279.7	1.367	4.93	6.82	.1009	3.62	5.02
S.D.	30.2	.118	.56	.60	.0268	.87	1.26
N	15	15	15	15	15	15	15
MIN.	228.5	1.239	4.10	6.02	.0464	1.43	2.28
MAX.	324.7	1.597	5.95	7.93	.1646	5.21	7.84

APPENDIX U (CONT.)

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	SPLEEN WT. (G)	SPLEEN ORG/TBW (X 1000)	SPLEEN ORG/BRN (X 10)	THYMUS WT. (G)	THYMUS ORG/TBW (X 10000)	THYMUS ORG/BRN (X 10)
GROUP IV - 1100 PPM							
4531	305.1	.632	2.07	2.84	.362	11.86	1.63
4538	303.5	.594	1.96	2.95	.180	5.93	.89
4545	231.2	.469	2.03	2.55	.176	7.61	.96
4546	268.3	.588	2.19	2.89	.164	6.11	.81
4549	316.2	.718	2.27	3.42	.234	7.40	1.11
4555	276.9	.501	1.81	2.54	.323	11.66	1.64
4556	281.0	.552	1.96	2.79	.175	6.23	.88
4557	293.0	.656	2.24	3.23	.245	8.36	1.21
4558	293.6	.708	2.41	3.29	.234	7.97	1.09
4560	324.7	.641	1.97	3.14	.244	7.51	1.20
4562	270.1	.674	2.50	3.05	.301	11.14	1.36
4563	243.4	.570	2.34	2.98	.302	12.41	1.58
4566	305.0	.665	2.18	3.22	.193	6.33	.93
4574	254.5	.505	1.98	2.63	.223	8.76	1.16
4577	228.5	.582	2.55	3.50	.162	7.09	.97
MEAN	279.7	.604	2.16	3.00	.235	8.43	1.16
S.D.	30.2	.076	.22	.30	.063	2.25	.28
N	15	15	15	15	15	15	15
MIN.	228.5	.469	1.81	2.54	.162	5.93	.81
MAX.	324.7	.718	2.55	3.50	.362	12.41	1.64

APPENDIX U (CONT.)
VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION
REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

TERMINAL ORGAN AND BODY WEIGHTS,
ORGAN/BODY WEIGHT AND ORGAN/BRAIN WEIGHT RATIOS
TERMINAL SACRIFICE - P2 GENERATION - FEMALES

INDIVIDUAL VALUES

AN NO	TERMINAL BODY WT. (G)	UTERUS WT. (G)	UTERUS ORG/TBW (X 1000)	UTERUS ORG/BRN (X 10)
GROUP IV - 1100 PPM				
4531	305.1	.612	2.01	2.75
4538	303.5	.551	1.82	2.74
4545	231.2	.351	1.52	1.91
4546	268.3	.635	2.37	3.12
4549	316.2	.775	2.45	3.69
4555	276.9	.612	2.21	3.10
4556	281.0	.627	2.23	3.17
4557	293.0	.596	2.03	2.94
4558	293.6	.651	2.22	3.03
4560	324.7	.856	2.64	4.20
4562	270.1	1.138	4.21	5.15
4563	243.4	.741	3.04	3.87
4566	305.0	.842	2.76	4.08
4574	254.5	.620	2.44	3.23
4577	228.5	.696	3.05	4.19
MEAN	279.7	.687	2.47	3.41
S.D.	30.2	.175	.64	.79
N	15	15	15	15
MIN.	228.5	.351	1.52	1.91
MAX.	324.7	1.138	4.21	5.15

APPENDIX V

	Terminal Organ and Body Weights and Organ/Body Weight Ratios - Terminal Sacrifice - Pups	Appendix V

Key to Abbreviations

TBW = Terminal Body Weight
ORG/TBW = Organ/Terminal Body Weight Ratio

General

Due to technician error, greater than 15 pups were processed in some groups.

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group I - 0 ppm																
1501	2	62.3	0.0223	0.3579	1.4305	2.2961	0.8362	1.3422	2.6186	4.2032	0.3014	0.4838	0.3310	0.5313	0.2342	0.3759
1505	4	54.2	0.0183	0.3376	1.4801	2.7308	0.7630	1.4077	2.1530	3.9723	0.3663	0.6758	0.2510	0.4631	0.2112	0.3897
1506	2	58.3	0.0185	0.3173	1.4328	2.4576	0.9100	1.5609	2.9605	5.0780	0.3571	0.6125	0.2652	0.4549	0.2008	0.3444
1508	3	58.2	0.0188	0.3230	1.5695	2.6967	0.8690	1.4931	2.6056	4.4770	0.2924	0.5024	0.3146	0.5405	0.2202	0.3784
1510	3	48.9	0.0227	0.4642	1.2965	2.6513	0.7664	1.5673	2.3539	4.8137	0.4134	0.8454	0.2651	0.5421	0.1881	0.3847
1514	7	58.5	0.0201	0.3436	1.5871	2.7130	0.8837	1.5106	2.8784	4.9203	0.2967	0.5072	0.3083	0.5270	0.2330	0.3983
1516	2	58.3	0.0144	0.2470	1.4860	2.5489	0.7333	1.2578	2.6093	4.4756	0.3024	0.5187	0.2651	0.4547	0.2381	0.4084
1517	3	45.0	0.0100	0.2222	1.4647	3.2549	0.6273	1.3940	1.8964	4.2142	0.2768	0.6151	0.2105	0.4678	0.1986	0.4413
1518	3	46.2	0.0181	0.3918	1.5207	3.2916	0.7210	1.5606	2.0633	4.4660	0.2288	0.4952	0.2395	0.5184	0.1511	0.3271
1519	1	57.0	0.0271	0.4754	1.4836	2.6028	0.7691	1.3493	2.2307	3.9135	0.3815	0.6693	0.2753	0.4830	0.2045	0.3588
1520	2	45.7	0.0141	0.3085	1.5613	3.4164	0.6812	1.4906	2.7290	5.9716	0.2402	0.5256	0.2309	0.5053	0.1694	0.3707
1521	8	50.0	0.0187	0.3740	1.4805	2.9610	0.7139	1.4278	2.2357	4.4714	0.2580	0.5160	0.2757	0.5514	0.2093	0.4186
1522	3	62.6	0.0234	0.3738	1.6183	2.5851	0.9168	1.4645	2.9369	4.6915	0.3888	0.6211	0.3319	0.5302	0.2832	0.4524
1524	7	61.3	0.0155	0.2529	1.6386	2.6731	0.8907	1.4530	2.7975	4.5636	0.3002	0.4897	0.3096	0.5051	0.2545	0.4152
1525	3	45.8	0.0078	0.1703	1.4689	3.2072	0.7255	1.5841	2.1364	4.6646	0.2811	0.6138	0.1769	0.3862	0.2291	0.5002
1528	2	70.2	0.0214	0.3048	1.6558	2.3587	1.0384	1.4792	3.2573	4.6400	0.3817	0.5437	0.4046	0.5764	0.2693	0.3836
1529	5	54.9	0.0173	0.3151	1.5050	2.7413	0.7750	1.4117	2.3862	4.3464	0.3129	0.5699	0.2693	0.4905	0.2000	0.3643

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group II - 10 ppm																
2503	4	54.0	0.0188	0.3481	1.5498	2.8700	0.7778	1.4404	2.1145	3.9157	0.2900	0.5370	0.2328	0.4311	0.2127	0.3939
2504	2	60.9	0.0177	0.2906	1.5118	2.4824	0.8484	1.3931	2.5660	4.2135	0.3422	0.5619	0.2694	0.4424	0.2634	0.4325
2506	9	62.6	0.0106	0.1693	1.5454	2.4687	0.9084	1.4511	3.1826	5.0840	0.3063	0.4893	0.3826	0.6112	0.2480	0.3962
2510	1	59.2	0.0302	0.5101	1.5528	2.6230	0.9026	1.5247	2.7993	4.7285	0.2637	0.4454	0.3181	0.5373	0.1772	0.2993
2515	11	54.9	0.0203	0.3698	1.4896	2.7133	0.8032	1.4630	2.4118	4.3931	0.3405	0.6202	0.2419	0.4406	0.2475	0.4508
2516	2	58.7	0.0266	0.4532	1.5605	2.6584	0.8158	1.3898	2.7395	4.6670	0.4099	0.6983	0.2949	0.5024	0.2483	0.4230
2518	3	64.3	0.0227	0.3530	1.5390	2.3935	0.9364	1.4563	2.9362	4.5664	0.2563	0.3986	0.3099	0.4820	0.1897	0.2950
2522	12	50.6	0.0117	0.2312	1.4909	2.9464	0.7291	1.4409	2.2227	4.3927	0.2942	0.5814	0.2805	0.5543	0.1883	0.3721
2523	4	55.5	0.0187	0.3369	1.4718	2.6519	0.7502	1.3517	2.4552	4.4238	0.2645	0.4766	0.3590	0.6468	0.1875	0.3378
2524	2	59.3	0.0181	0.3052	1.4510	2.4469	0.8135	1.3718	2.7424	4.6246	0.2863	0.4828	0.3773	0.6363	0.2894	0.4880
2525	3	47.0	0.0226	0.4809	1.4758	3.1400	0.7411	1.5768	2.1621	4.6002	0.1874	0.3987	0.2496	0.5311	0.1729	0.3679
2527	4	50.4	0.0339	0.6726	1.5107	2.9974	0.7057	1.4002	2.3223	4.6077	0.2573	0.5105	0.2503	0.4966	0.1958	0.3885
2528	6	61.0	0.0189	0.3098	1.5862	2.6003	0.9052	1.4839	2.8987	4.7520	0.3301	0.5411	0.3087	0.5061	0.2521	0.4133
2530	5	51.7	0.0288	0.5571	1.5416	2.9818	0.6910	1.3366	2.3562	4.5574	0.2560	0.4952	0.2818	0.5451	0.2107	0.4075
2531	7	61.0	0.0162	0.2656	1.5903	2.6070	0.8601	1.4100	2.4501	4.0166	0.3745	0.6139	0.2896	0.4748	0.2972	0.4872

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X100)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group III - 100 ppm																
3502	1	59.7	0.0135	0.2261	1.4267	2.3898	0.8595	1.4397	2.6355	4.4146	0.3567	0.5975	0.3570	0.5980	0.2255	0.3777
3506	2	60.4	0.0194	0.3212	1.5227	2.5210	0.8980	1.4868	3.1553	5.2240	0.3382	0.5599	0.3440	0.5695	0.2395	0.3965
3507	2	39.4	0.0127	0.3223	1.3371	3.3937	0.6083	1.5439	1.7052	4.3279	0.2842	0.7213	0.1531	0.3886	0.1951	0.4952
3509	6	66.3	0.0092	0.1388	1.6463	2.4831	0.9211	1.3893	3.1098	4.6905	0.3293	0.4967	0.3518	0.5306	0.2932	0.4422
3511	1	69.2	0.0166	0.2399	1.6121	2.3296	0.9222	1.3327	3.3301	4.8123	0.3563	0.5149	0.4199	0.6068	0.3021	0.4366
3512	4	70.8	0.0183	0.2585	1.6549	2.3374	0.9981	1.4097	3.2219	4.5507	0.3422	0.4833	0.3613	0.5103	0.3229	0.4561
3515	1	48.1	0.0164	0.3410	1.5013	3.1212	0.7617	1.5836	2.3497	4.8850	0.3064	0.6370	0.2436	0.5064	0.2064	0.4291
3516	3	63.3	0.0187	0.2954	1.6836	2.6597	0.8848	1.3978	3.2332	5.1077	0.4026	0.6360	0.2773	0.4381	0.2282	0.3605
3517	3	61.7	0.0197	0.3193	1.6016	2.5958	0.8861	1.4361	2.6983	4.3733	0.3077	0.4987	0.3647	0.5911	0.3160	0.5122
3518	2	56.3	0.0177	0.3144	1.5216	2.7027	0.7788	1.3833	2.3090	4.1012	0.3374	0.5993	0.2637	0.4684	0.2534	0.4501
3519	5	70.0	0.0209	0.2986	1.5913	2.2733	1.1382	1.6260	3.5341	5.0487	0.3442	0.4917	0.4025	0.5750	0.3328	0.4754
3521	7	56.3	0.0246	0.4369	1.6126	2.8643	0.7860	1.3961	2.3950	4.2540	0.2997	0.5323	0.2447	0.4346	0.2172	0.3858
3523	6	46.1	0.0142	0.3080	1.5632	3.3909	0.6695	1.4523	1.6902	3.6664	0.2616	0.5675	0.2184	0.4738	0.2017	0.4375
3524	2	72.5	0.0181	0.2497	1.7474	2.4102	0.9890	1.3641	3.9753	5.4832	0.2854	0.3937	0.4686	0.6463	0.3163	0.4363
3528	7	60.0	0.0263	0.4383	1.4738	2.4563	0.8686	1.4477	2.6058	4.3430	0.3644	0.6073	0.3552	0.5920	0.2365	0.3942

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X100)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group IV - 1100 ppm																
4501	2	62.7	0.0176	0.2807	1.6097	2.5673	0.8700	1.3876	2.7832	4.4389	0.4045	0.6451	0.3122	0.4979	0.3970	0.6332
4502	2	56.6	0.0134	0.2367	1.5286	2.7007	0.8132	1.4367	2.8104	4.9654	0.3360	0.5936	0.2522	0.4456	0.2687	0.4747
4503	2	38.3	0.0150	0.3916	1.3623	3.5569	0.5233	1.3663	1.3766	3.5943	0.1724	0.4501	0.1892	0.4940	0.1877	0.4901
4504	2	55.9	0.0183	0.3274	1.4380	2.5725	0.8413	1.5050	2.8006	5.0100	0.2339	0.4184	0.2598	0.4648	0.2249	0.4023
4506	9	54.0	0.0155	0.2870	1.6007	2.9643	0.8754	1.6211	2.5741	4.7669	0.3357	0.6217	0.2160	0.4000	1.9555	3.6213
4509	3	60.8	0.0279	0.4589	1.6784	2.7605	0.8527	1.4025	2.8924	4.7572	0.4063	0.6683	0.3583	0.5893	0.2615	0.4301
4511	5	57.1	0.0202	0.3538	1.6106	2.8207	0.8011	1.4030	2.5014	4.3807	0.3320	0.5814	0.2760	0.4834	0.2394	0.4193
4512	2	72.5	0.0305	0.4207	1.7145	2.3648	1.1625	1.6034	3.2616	4.4988	0.3991	0.5505	0.3976	0.5484	0.2410	0.3324
4515	2	56.0	0.0247	0.4411	1.5930	2.8446	0.7839	1.3998	2.3558	4.2068	0.2206	0.3939	0.3483	0.6220	0.2287	0.4084
4518	6	64.2	0.0227	0.3536	1.5887	2.4746	0.9646	1.5025	3.3276	5.1832	0.3390	0.5280	0.3470	0.5405	0.2881	0.4488
4519	5	47.1	0.0131	0.2781	1.5202	3.2276	0.6757	1.4346	1.9845	4.2134	0.2655	0.5637	0.2306	0.4896	0.1716	0.3643
4521	4	76.3	0.0373	0.4889	1.7400	2.2805	1.1036	1.4464	3.9687	5.2014	0.3846	0.5041	0.3938	0.5161	0.2563	0.3359
4522	1	50.9	0.0173	0.3399	1.3701	2.6917	0.7216	1.4177	2.2481	4.4167	0.3217	0.6320	0.2231	0.4383	0.1843	0.3621
4524	1	65.7	0.0254	0.3866	1.5238	2.3193	0.9741	1.4826	3.2112	4.8877	0.3677	0.5597	0.3382	0.5148	0.2298	0.3498
4528	2	51.5	0.0190	0.3689	1.4940	2.9010	0.7683	1.4918	2.1060	4.0893	0.2893	0.5617	0.2394	0.4649	0.2082	0.4043
4529	3	33.7	0.0192	0.5697	1.3667	4.0555	0.5120	1.5193	1.2345	3.6632	0.1763	0.5231	0.1138	0.3377	0.1500	0.4451
4530	5	50.2	0.0182	0.3625	1.5558	3.0992	0.7649	1.5237	2.2144	4.4112	0.2795	0.5568	0.2433	0.4847	0.2231	0.4444

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group 1 - 0 ppm																
1501	3	57.5	0.0186	0.3235	1.4092	2.4508	0.8546	1.4863	2.5134	4.3711	0.0213	0.0370	0.3074	0.5346	0.2747	0.4777
1505	7	45.1	0.0160	0.3548	1.4118	3.1304	0.7364	1.6328	2.1767	4.8264	0.0253	0.0561	0.2624	0.5818	0.2142	0.4749
1506	13	58.7	0.0233	0.3969	1.4080	2.3986	0.9002	1.5336	2.9315	4.9940	0.0479	0.0816	0.3700	0.6303	0.2342	0.3990
1508	7	55.6	0.0185	0.3327	1.4502	2.6083	0.8612	1.5489	2.7498	4.9457	0.0300	0.0540	0.2784	0.5007	0.1461	0.2628
1510	10	42.6	0.0129	0.3028	1.2906	3.0296	0.6549	1.5373	1.9900	4.6714	0.0176	0.0413	0.3235	0.7594	0.2246	0.5272
1513	4	59.7	0.0150	0.2513	1.4646	2.4533	0.8508	1.4251	2.2876	3.8318	0.0144	0.0241	0.2677	0.4484	0.2717	0.4551
1514	14	57.2	0.0244	0.4266	1.4830	2.5927	0.8758	1.5311	3.0669	5.3617	0.0186	0.0325	0.5648	0.9874	0.2986	0.5220
1516	12	42.4	0.0211	0.4976	1.4631	3.4507	0.6032	1.4226	1.8530	4.3703	0.0209	0.0493	0.2558	0.6033	0.1998	0.4712
1517	10	50.2	0.0161	0.3207	1.5817	3.1508	0.7119	1.4181	2.3659	4.7129	0.0193	0.0384	0.3374	0.6721	0.2287	0.4556
1518	11	42.0	0.0183	0.4357	1.3767	3.2779	0.6485	1.5440	1.8108	4.3114	0.0117	0.0279	0.2107	0.5017	0.0155	0.0369
1519	9	49.7	0.0241	0.4849	1.3857	2.7881	0.6580	1.3239	2.4982	5.0266	0.0183	0.0368	0.2591	0.5213	0.2135	0.4296
1520	9	48.2	0.0192	0.3983	1.4414	2.9905	0.7300	1.5145	2.1068	4.3710	0.0157	0.0326	0.2144	0.4448	0.2165	0.4492
1521	14	42.3	0.0104	0.2459	1.4642	3.4615	0.6748	1.5953	2.1657	5.1199	0.0170	0.0402	0.2376	0.5617	0.1496	0.3537
1522	9	55.6	0.0101	0.1817	1.5965	2.8714	0.8152	1.4662	2.4240	4.3597	0.0220	0.0396	0.3038	0.5464	0.3118	0.5608
1524	8	56.4	0.0143	0.2535	1.6360	2.9007	0.9048	1.6043	2.6811	4.7537	0.0193	0.0342	0.2890	0.5124	0.2798	0.4961
1525	14	48.6	0.0125	0.2572	1.4760	3.0370	0.8474	1.7436	2.4675	5.0772	0.0186	0.0383	0.3447	0.7093	0.2749	0.5656
1528	5	57.0	0.0200	0.3509	1.6248	2.8505	0.8605	1.5096	2.7833	4.8830	0.0217	0.0381	0.2963	0.5198	0.2661	0.4668
1529	7	48.9	0.0134	0.2740	1.4691	3.0043	0.6406	1.3100	1.9712	4.0311	0.0281	0.0575	0.2080	0.4254	0.2217	0.4534

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group II - 10 ppm																
2503	7	54.8	0.0096	0.1752	1.3425	2.4498	0.8323	1.5188	2.6008	4.7460	0.0189	0.0345	0.3608	0.6584	0.2772	0.5058
2504	8	44.6	0.0129	0.2892	1.3615	3.0527	0.7127	1.5980	1.8458	4.1386	0.0037	0.0083	0.3181	0.7132	0.1839	0.4123
2506	10	57.9	0.0158	0.2729	1.6082	2.7775	0.8916	1.5399	3.2997	5.6990	0.0224	0.0387	0.2562	0.4425	0.2653	0.4582
2510	10	57.6	0.0199	0.3455	1.4463	2.5109	0.9028	1.5674	2.7478	4.7705	0.0389	0.0675	0.2994	0.5198	0.2324	0.4035
2515	13	43.5	0.0170	0.3908	1.5552	3.5752	0.6433	1.4789	1.8668	4.2915	0.0155	0.0356	0.3032	0.6970	0.1957	0.4499
2516	6	53.1	0.0190	0.3578	1.4293	2.6917	0.7421	1.3976	2.3362	4.3996	0.0213	0.0401	0.2784	0.5243	0.2341	0.4409
2518	6	66.8	0.0281	0.4207	1.5321	2.2936	0.9400	1.4072	3.5616	5.3317	0.0344	0.0515	0.3289	0.4924	0.2455	0.3675
2522	13	50.4	0.0063	0.1250	1.4919	2.9601	0.7391	1.4665	2.3690	4.7004	0.0175	0.0347	0.2819	0.5593	0.2217	0.4399
2523	12	49.4	0.0149	0.3016	1.3834	2.8004	0.6557	1.3273	1.9216	3.8899	0.0141	0.0285	0.2587	0.5237	0.2102	0.4255
2524	7	53.3	0.0121	0.2270	1.3892	2.6064	0.7296	1.3689	2.3714	4.4492	0.0217	0.0407	0.2510	0.4709	0.2978	0.5587
2525	11	45.8	0.0236	0.5153	1.2930	2.8231	0.6794	1.4834	2.0743	4.5290	0.0196	0.0428	0.1951	0.4260	0.2030	0.4432
2527	6	62.6	0.0357	0.5703	1.5885	2.5375	0.9825	1.5695	3.0526	4.8764	0.0231	0.0369	0.3020	0.4824	0.2752	0.4396
2528	8	57.1	0.0203	0.3555	1.4376	2.5177	0.8914	1.5611	2.8528	4.9961	0.0387	0.0678	0.2650	0.4641	0.2626	0.4599
2530	13	53.7	0.0131	0.2439	1.5359	2.8601	0.8376	1.5598	2.5064	4.6674	0.0203	0.0378	0.2594	0.4831	0.2307	0.4296
2531	12	59.5	0.0158	0.2655	1.5191	2.5531	0.8515	1.4311	2.5569	4.2973	0.0230	0.0387	0.3167	0.5323	0.2806	0.4716

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group III - 100 ppm																
3502	14	55.6	0.0153	0.2752	1.5336	2.7583	0.7950	1.4299	2.6815	4.8228	0.0325	0.0585	0.2897	0.5210	0.2398	0.4313
3506	13	50.2	0.0365	0.7271	1.4328	2.8542	0.7360	1.4661	2.6635	5.3058	0.0225	0.0448	0.2117	0.4217	0.2280	0.4542
3507	10	41.2	0.0194	0.4709	1.3277	3.2226	0.6382	1.5490	1.7363	4.2143	0.0175	0.0425	0.2648	0.6427	0.2259	0.5483
3509	10	53.9	0.0187	0.3469	1.5638	2.9013	0.7980	1.4805	2.7005	5.0102	0.0222	0.0412	0.2554	0.4738	0.2375	0.4406
3511	8	61.1	0.0147	0.2406	1.4778	2.4187	0.7924	1.2969	2.9106	4.7637	0.0279	0.0457	0.2134	0.3493	0.1928	0.3155
3512	7	63.0	0.0127	0.2016	1.5848	2.5156	0.8695	1.3802	2.9656	4.7073	0.0103	0.0163	0.3870	0.6143	0.3108	0.4933
3515	9	54.0	0.0171	0.3167	1.4964	2.7711	0.7936	1.4696	2.7168	5.0311	0.0206	0.0381	0.2996	0.5548	0.2570	0.4759
3516	10	56.6	0.0139	0.2456	1.5660	2.7668	0.7637	1.3493	3.1270	5.5247	0.0236	0.0417	0.3494	0.6173	0.2692	0.4756
3517	11	50.7	0.0106	0.2091	1.5328	3.0233	0.6975	1.3757	2.7311	5.3868	0.0159	0.0314	0.2222	0.4383	0.2351	0.4637
3518	14	57.5	0.0200	0.3478	1.5180	2.6400	0.7494	1.3033	2.4714	4.2981	0.0258	0.0449	0.3335	0.5800	0.2379	0.4137
3519	7	62.9	0.0175	0.2782	1.5449	2.4561	1.0843	1.7238	3.1425	4.9960	0.0193	0.0307	0.2908	0.4623	0.3150	0.5008
3521	8	60.6	0.0351	0.5792	1.5717	2.5936	0.8433	1.3916	2.5540	4.2145	0.0265	0.0437	0.3669	0.6054	0.2994	0.4941
3523	9	59.5	0.0201	0.3378	1.5730	2.6437	0.8621	1.4489	2.5920	4.3563	0.0206	0.0346	0.3331	0.5598	0.2779	0.4671
3524	8	64.9	0.0150	0.2311	1.6362	2.5211	0.9319	1.4359	3.5279	5.4359	0.0201	0.0310	0.2161	0.3330	0.2972	0.4579
3528	13	55.6	0.0058	0.1043	1.5782	2.8385	0.8641	1.5541	2.3337	4.1973	0.0179	0.0322	0.3750	0.6745	0.2387	0.4293

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F1 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group IV - 1100 ppm																
4501	7	53.8	0.0186	0.3457	1.4681	2.7288	0.7157	1.3303	2.4296	4.5160	0.0132	0.0245	0.2899	0.5388	0.3443	0.6400
4502	14	61.1	0.0165	0.2700	1.5170	2.4828	0.9294	1.5211	2.8671	4.6925	0.0241	0.0394	0.3171	0.5190	0.2901	0.4748
4503	9	37.3	0.0104	0.2788	1.2372	3.3169	0.4964	1.3308	1.7630	4.7265	0.0153	0.0410	0.1585	0.4249	0.1563	0.4190
4504	8	64.5	0.0196	0.3039	1.3812	2.1414	0.9823	1.5229	3.7228	5.7718	0.0259	0.0402	0.2614	0.4053	0.2040	0.3163
4506	12	44.8	0.0095	0.2121	1.4231	3.1766	0.6651	1.4846	2.3008	5.1357	0.0096	0.0214	0.3501	0.7815	0.1695	0.3783
4509	13	54.5	0.0136	0.2495	1.4828	2.7207	0.8400	1.5413	2.6502	4.8628	0.0290	0.0532	0.3580	0.6569	0.2317	0.4251
4511	7	57.7	0.0146	0.2530	1.5323	2.6556	0.8516	1.4759	2.7127	4.7014	0.0202	0.0350	0.2922	0.5064	0.2790	0.4835
4512	5	67.5	0.0271	0.4015	1.5775	2.3370	1.0867	1.6099	3.4626	5.1298	0.0536	0.0794	0.3798	0.5627	0.3140	0.4652
4515	12	52.1	0.0171	0.3282	1.4696	2.8207	0.7560	1.4511	2.3814	4.5708	0.0240	0.0461	0.2058	0.3950	0.2227	0.4274
4518	7	60.2	0.0212	0.3522	1.4880	2.4718	0.9995	1.6603	3.6231	6.0184	0.0202	0.0336	0.3035	0.5042	0.2916	0.4844
4519	13	50.3	0.0072	0.1431	1.4785	2.9394	0.7099	1.4113	2.1952	4.3642	0.0142	0.0282	0.2736	0.5439	0.2078	0.4131
4521	7	65.1	0.0263	0.4040	1.6233	2.4935	1.0241	1.5731	3.0690	4.7143	0.0220	0.0338	0.3220	0.4946	0.2510	0.3856
4522	13	44.6	0.0107	0.2399	1.3971	3.1325	0.6050	1.3565	1.8901	4.2379	0.0124	0.0278	0.2933	0.6576	0.1868	0.4188
4524	12	57.3	0.0245	0.4276	1.3652	2.3825	0.8095	1.4127	2.5689	4.4832	0.0297	0.0518	0.2677	0.4672	0.2298	0.4010
4528	9	44.6	0.0205	0.4596	1.3710	3.0740	0.6413	1.4379	1.8363	4.1173	0.0220	0.0493	0.2406	0.5395	0.1485	0.3330
4529	8	32.0	0.0180	0.5625	1.2387	3.8709	0.4971	1.5534	1.2031	3.7597	0.0116	0.0363	0.1455	0.4547	0.1289	0.4028

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group I - 0 ppm																
1535	9	47.9	0.0180	0.3758	1.5380	3.2109	0.8221	1.7163	2.6870	5.6096	0.2220	0.4635	0.2163	0.4516	0.2591	0.5409
1537	4	23.4	0.0073	0.3120	1.3373	5.7150	0.3730	1.5940	0.9669	4.1321	0.0552	0.2359	0.0833	0.3560	0.0733	0.3132
1538	5	46.2	0.0138	0.2987	1.5687	3.3955	0.6909	1.4955	2.1872	4.7342	0.2493	0.5396	0.1995	0.4318	1.2150	2.6299
1540	2	46.9	0.0116	0.2473	1.5415	3.2868	0.7215	1.5384	2.4812	5.2904	0.1836	0.3915	0.1818	0.3876	0.1991	0.4245
1542	7	40.6	0.0168	0.4138	1.5671	3.8599	0.5408	1.3320	1.6145	3.9766	0.1458	0.3591	0.1806	0.4448	0.1909	0.4702
1543	4	39.2	0.0134	0.3418	1.5102	3.8526	0.5297	1.3513	1.2803	3.2661	0.0902	0.2301	0.1481	0.3778	0.1070	0.2730
1551	3	40.8	0.0150	0.3676	1.5191	3.7233	0.6602	1.6181	1.8760	4.5980	0.1447	0.3547	0.1884	0.4618	0.1878	0.4603
1553	6	31.5	0.0132	0.4190	1.3866	4.4019	0.4295	1.3635	1.2141	3.8543	0.1303	0.4137	0.1190	0.3778	0.1572	0.4990
1558	2	36.6	0.0156	0.4262	1.4489	3.9587	0.5359	1.4642	1.6136	4.4087	0.1465	0.4003	0.1608	0.4393	0.1217	0.3325
1561	1	38.7	0.0143	0.3695	1.5714	4.0605	0.5602	1.4475	1.6716	4.3194	0.3313	0.8561	0.1687	0.4359	0.1367	0.3532
1565	3	42.8	0.0201	0.4696	1.4407	3.3661	0.6333	1.4797	1.9363	4.5241	0.1692	0.3953	0.1978	0.4621	0.1328	0.3103
1570	5	45.4	0.0141	0.3106	1.6119	3.5504	0.6258	1.3784	1.8290	4.0286	0.1723	0.3795	0.2104	0.4634	0.1730	0.3811
1572	7	47.8	0.0206	0.4310	1.5101	3.1592	0.6804	1.4234	1.8616	3.8946	0.2014	0.4213	0.2055	0.4299	0.2598	0.5435
1578	3	41.4	0.0123	0.2971	1.4167	3.4220	0.5809	1.4031	1.6201	3.9133	0.1559	0.3766	0.1574	0.3802	0.1388	0.3353
1580	1	38.1	0.0133	0.3491	1.5221	3.9950	0.5968	1.5664	1.7342	4.5517	0.1040	0.2730	0.1449	0.3803	0.1027	0.2696

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group II - 10 ppm																
2532	3	48.3	0.0200	0.4141	1.4950	3.0952	0.6906	1.4298	2.1063	4.3609	0.2301	0.4764	0.2074	0.4294	0.1848	0.3826
2534	1	40.2	0.0082	0.2040	1.3541	3.3684	0.6055	1.5062	1.9932	4.9582	0.1360	0.3383	0.1627	0.4047	0.1070	0.2662
2541	1	47.3	0.0156	0.3298	1.5075	3.1871	0.5653	1.1951	1.8062	3.8186	0.2031	0.4294	0.2278	0.4816	0.1586	0.3353
2543	5	31.8	0.0158	0.4969	1.3441	4.2267	0.3883	1.2211	1.1684	3.6742	0.0963	0.3028	0.1277	0.4016	0.1060	0.3333
2544	8	38.6	0.0126	0.3264	1.4459	3.7459	0.5149	1.3339	1.3499	3.4972	0.1272	0.3295	0.1697	0.4396	0.1464	0.3793
2546	1	41.7	0.0194	0.4652	1.5008	3.5990	0.6014	1.4422	1.9162	4.5952	0.1625	0.3897	0.1778	0.4264	0.1885	0.4520
2548	7	49.7	0.0175	0.3521	1.5021	3.0223	0.6703	1.3487	1.9133	3.8497	0.1983	0.3990	0.2020	0.4064	0.1561	0.3141
2550	7	37.6	0.0245	0.6516	1.4556	3.8713	0.5362	1.4261	1.4528	3.8638	0.1294	0.3441	0.1617	0.4301	0.1269	0.3375
2552	1	32.7	0.0113	0.3456	1.3865	4.2401	0.4201	1.2847	1.1819	3.6144	0.0889	0.2719	0.1367	0.4180	0.1122	0.3431
2554	3	48.3	0.0121	0.2505	1.5728	3.2563	0.7045	1.4586	2.4094	4.9884	0.1710	0.3540	0.1239	0.2565	0.1374	0.2845
2555	6	42.4	0.0066	0.1557	1.5568	3.6717	0.5260	1.2406	1.8409	4.3417	0.1654	0.3901	0.1366	0.3222	0.1609	0.3795
2559	2	45.1	0.0166	0.3681	1.5263	3.3843	0.6253	1.3865	1.8230	4.0421	0.1834	0.4067	0.1878	0.4164	0.1711	0.3794
2563	3	43.7	0.0144	0.3295	1.4973	3.4263	0.6051	1.3847	2.2212	5.0828	0.2040	0.4668	0.1706	0.3904	0.1760	0.4027
2566	4	44.6	0.0126	0.2825	1.4582	3.2695	0.6028	1.3516	1.8347	4.1137	0.1610	0.3610	0.1722	0.3861	0.1188	0.2664
2575	3	45.1	0.0107	0.2373	1.4503	3.2157	0.6357	1.4095	2.0493	4.5439	0.2203	0.4885	0.1656	0.3672	0.1297	0.2876

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group III - 100 ppm																
3533	2	50.2	0.0160	0.3187	1.4966	2.9813	0.7526	1.4992	2.2327	4.4476	0.2280	0.4542	0.2114	0.4211	0.2752	0.5482
3534	2	44.5	0.0142	0.3191	1.4291	3.2115	0.6262	1.4072	1.9026	4.2755	0.1912	0.4297	0.1784	0.4009	0.2008	0.4512
3536	2	46.9	0.0140	0.2985	1.5796	3.3680	0.6831	1.4565	2.2119	4.7162	0.1976	0.4213	0.1924	0.4102	0.1790	0.3817
3537	1	35.9	0.0218	0.6072	1.4427	4.0187	0.5069	1.4120	1.4007	3.9017	0.0875	0.2437	0.1646	0.4585	0.1987	0.5535
3538	1	43.4	0.0153	0.3525	1.4846	3.4207	0.5431	1.2514	1.7575	4.0495	0.1750	0.4032	0.1779	0.4099	0.1986	0.4576
3543	2	41.5	0.0140	0.3373	1.5036	3.6231	0.6118	1.4742	1.8664	4.4973	0.1289	0.3106	0.2007	0.4836	0.1983	0.4778
3545	2	44.8	0.0176	0.3929	1.3923	3.1078	0.6196	1.3830	1.9141	4.2725	0.1854	0.4138	0.2099	0.4685	0.1387	0.3096
3547	1	41.4	0.0155	0.3744	1.4533	3.5104	0.6191	1.4954	1.7517	4.2312	0.1527	0.3688	0.1909	0.4611	0.1641	0.3964
3549	7	34.8	0.0120	0.3448	1.3271	3.8135	0.4574	1.3144	1.3172	3.7851	0.1107	0.3181	0.1570	0.4511	0.0983	0.2825
3551	1	37.2	0.0125	0.3360	1.3769	3.7013	0.5483	1.4739	1.5159	4.0750	0.1328	0.3570	0.1669	0.4487	0.1565	0.4207
3555	5	49.2	0.0203	0.4126	1.3758	2.7963	0.7023	1.4274	2.1714	4.4134	0.2092	0.4252	0.1862	0.3785	0.1726	0.3508
3557	7	41.5	0.0173	0.4169	1.4079	3.3925	0.5622	1.3547	1.6676	4.0183	0.1237	0.2981	0.1544	0.3720	0.1486	0.3581
3564	2	32.5	0.0148	0.4554	1.3842	4.2591	0.4770	1.4677	1.3800	4.2462	0.1245	0.3831	0.1534	0.4720	0.1335	0.4108
3565	5	27.9	0.0101	0.3620	1.4800	5.3047	0.4235	1.5179	1.2377	4.4362	0.0907	0.3251	0.1214	0.4351	0.0865	0.3100
3568	4	28.4	0.0118	0.4155	1.3761	4.8454	0.3958	1.3937	1.0161	3.5778	0.1078	0.3796	0.0928	0.3268	0.1668	0.5873

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Male Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Testes Weight (g)	Testes/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group IV - 1100 ppm																
4531	7	43.7	0.0155	0.3547	1.5198	3.4778	0.5930	1.3570	1.9245	4.4039	0.2013	0.4606	0.1839	0.4208	0.1817	0.4158
4535	2	41.4	0.0100	0.2415	1.5192	3.6696	0.5705	1.3780	1.7620	4.2560	0.1495	0.3611	0.1660	0.4010	0.1572	0.3797
4542	7	53.7	0.0179	0.3333	1.6129	3.0035	0.7566	1.4089	2.5416	4.7330	0.3308	0.6160	0.2113	0.3935	0.1825	0.3399
4548	1	44.9	0.0130	0.2895	1.4517	3.2332	0.5676	1.2641	1.8943	4.2189	0.1668	0.3715	0.1880	0.4187	0.1730	0.3853
4551	9	34.1	0.0150	0.4399	1.5325	4.4941	0.5030	1.4751	1.2053	3.5346	0.1034	0.3032	0.1212	0.3554	0.1159	0.3399
4554	2	42.4	0.0182	0.4292	1.4215	3.3526	0.5843	1.3781	1.7323	4.0856	0.1447	0.3413	0.1872	0.4415	0.1397	0.3295
4555	3	52.9	0.0170	0.3214	1.5621	2.9529	0.6742	1.2745	2.2573	4.2671	0.1720	0.3251	0.1952	0.3690	0.2250	0.4253
4556	1	43.2	0.0098	0.2269	1.4643	3.3896	0.5913	1.3688	2.1617	5.0039	0.2231	0.5164	0.1872	0.4333	0.1198	0.2773
4557	5	42.7	0.0158	0.3700	1.5038	3.5218	0.6098	1.4281	1.8778	4.3977	0.1960	0.4590	0.1767	0.4138	0.1270	0.2974
4564	6	35.5	0.0154	0.4338	1.3777	3.8808	0.5545	1.5620	1.7072	4.8090	0.1410	0.3972	0.1428	0.4023	0.1208	0.3403
4566	8	37.9	0.0144	0.3799	1.3927	3.6747	0.4841	1.2773	1.4774	3.8982	0.1389	0.3665	0.1239	0.3269	0.1559	0.4113
4568	2	30.9	0.0167	0.5405	1.1827	3.8275	0.4364	1.4123	1.2177	3.9408	0.1014	0.3282	0.1310	0.4239	0.1050	0.3398
4575	4	37.1	0.0133	0.3585	1.5263	4.1140	0.6171	1.6633	1.5326	4.1310	0.1518	0.4092	0.1585	0.4272	0.1436	0.3871
4577	6	32.9	0.0102	0.3100	1.3549	4.1182	0.4935	1.5000	1.2452	3.7848	0.1000	0.3040	0.1196	0.3635	0.1541	0.4684
4579	3	44.1	0.0180	0.4082	1.5408	3.4939	0.6255	1.4184	2.0171	4.5739	0.2614	0.5927	0.1640	0.3719	0.1512	0.3429

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group 1 - 0 ppm																
1535	15	48.2	0.0127	0.2635	1.5278	3.1697	0.7273	1.5089	2.4504	5.0838	0.0173	0.0359	0.2335	0.4844	0.1971	0.4089
1537	9	24.2	0.0077	0.3182	1.1128	4.5983	0.3748	1.5488	0.9628	3.9785	0.0037	0.0153	0.0777	0.3211	0.0913	0.3773
1538	10	43.4	0.0169	0.3894	1.4808	3.4120	0.6607	1.5224	2.0097	4.6306	0.0139	0.0320	0.2580	0.5945	0.2105	0.4850
1540	7	43.0	0.0100	0.2326	1.4529	3.3788	0.6160	1.4326	1.7664	4.1079	0.0151	0.0351	0.1948	0.4530	0.1878	0.4367
1542	14	37.5	0.0146	0.3893	1.4446	3.8523	0.4958	1.3221	1.4380	3.8347	0.0170	0.0453	0.1726	0.4603	0.1973	0.5261
1543	8	43.6	0.0149	0.3417	1.5191	3.4842	0.6903	1.5833	2.0102	4.6106	0.0113	0.0259	0.1979	0.4539	0.1419	0.3255
1551	16	40.3	0.0166	0.4119	1.4206	3.5251	0.6005	1.4901	1.7639	4.3769	0.0147	0.0365	0.1913	0.4747	0.1662	0.4124
1553	14	32.3	0.0098	0.3034	1.4079	4.3588	0.4536	1.4043	1.4268	4.4173	0.0116	0.0359	0.1224	0.3789	0.1458	0.4514
1558	6	37.2	0.0139	0.3737	1.4435	3.8804	0.5857	1.5745	1.5834	4.2565	0.0137	0.0368	0.1115	0.2997	0.1513	0.4067
1561	14	32.9	0.0129	0.3921	1.4692	4.4657	0.5472	1.6632	1.5208	4.6225	0.0120	0.0365	0.1301	0.3954	0.1178	0.3581
1565	12	45.2	0.0167	0.3695	1.4816	3.2779	0.6339	1.4024	1.8858	4.1721	0.0227	0.0502	0.2217	0.4905	0.2028	0.4487
1570	14	42.1	0.0138	0.3278	1.4687	3.4886	0.7045	1.6734	2.1447	5.0943	0.0109	0.0259	0.2067	0.4910	0.1664	0.3952
1572	11	47.8	0.0188	0.3933	1.4670	3.0690	0.7443	1.5571	2.2165	4.6370	0.0175	0.0366	0.2143	0.4483	0.2247	0.4701
1578	10	45.8	0.0138	0.3013	1.5145	3.3068	0.6201	1.3539	1.9303	4.2146	0.0186	0.0406	0.0778	0.1699	0.1825	0.3985
1580	4	43.2	0.0177	0.4097	1.5746	3.6449	0.7158	1.6569	2.3735	5.4942	0.0179	0.0414	0.1600	0.3704	0.1455	0.3368

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group II - 10 ppm																
2532	8	50.8	0.0238	0.4685	1.4536	2.8614	0.7638	1.5035	2.1316	4.1961	0.0212	0.0417	0.2609	0.5136	0.2595	0.5108
2534	8	42.9	0.0152	0.3543	1.4745	3.4371	0.7000	1.6317	2.2113	5.1545	0.0161	0.0375	0.1807	0.4212	0.1616	0.3767
2541	15	50.1	0.0137	0.2735	1.5142	3.0224	0.6645	1.3263	2.1171	4.2257	0.0125	0.0250	0.2638	0.5265	0.1863	0.3719
2543	17	36.5	0.0167	0.4575	1.3867	3.7992	0.5186	1.4208	1.4818	4.0597	0.0119	0.0326	0.1549	0.4244	0.1793	0.4912
2544	10	42.6	0.0152	0.3568	1.4528	3.4103	0.5608	1.3164	1.5746	3.6962	0.0113	0.0265	0.1164	0.2732	0.1516	0.3559
2546	14	32.5	0.0139	0.4277	1.3313	4.0963	0.4988	1.5348	1.4336	4.4111	0.0106	0.0326	0.1270	0.3908	0.1862	0.5729
2548	10	44.5	0.0167	0.3753	1.4022	3.1510	0.6474	1.4548	1.7564	3.9470	0.0167	0.0375	0.1863	0.4187	0.1777	0.3993
2550	10	34.3	0.0155	0.4519	1.2490	3.6414	0.4637	1.3519	1.2593	3.6714	0.0145	0.0423	0.1347	0.3927	0.1685	0.4913
2552	11	34.6	0.0110	0.3179	1.3742	3.9717	0.4697	1.3575	1.3456	3.8890	0.0070	0.0202	0.1332	0.3850	0.1160	0.3353
2554	12	45.1	0.0090	0.1996	1.4721	3.2641	0.6942	1.5392	2.0956	4.6466	0.0104	0.0231	0.1785	0.3958	0.1568	0.3477
2555	15	39.4	0.0164	0.4162	1.3884	3.5239	0.4814	1.2218	1.8456	4.6843	0.0064	0.0162	0.1451	0.3683	0.1585	0.4023
2559	8	45.8	0.0229	0.5000	1.5660	3.4192	0.6328	1.3817	1.9408	4.2376	0.0179	0.0391	0.2134	0.4659	0.1408	0.3074
2563	12	41.9	0.0130	0.3103	1.4409	3.4389	0.6088	1.4530	1.8378	4.3862	0.0114	0.0272	0.1842	0.4396	0.1683	0.4017
2566	7	39.9	0.0115	0.2882	1.3084	3.2792	0.5542	1.3890	1.9122	4.7925	0.0071	0.0178	0.1662	0.4165	0.1548	0.3880
2575	11	50.3	0.0133	0.2644	1.3709	2.7254	0.7496	1.4903	2.3836	4.7388	0.0171	0.0340	0.3014	0.5992	0.2001	0.3978

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group III - 100 ppm																
3533	13	47.7	0.0120	0.2516	1.4362	3.0109	0.7903	1.6568	2.2751	4.7696	0.0157	0.0329	0.2432	0.5099	0.2664	0.5585
3534	8	45.0	0.0155	0.3444	1.4438	3.2084	0.6100	1.3556	2.0296	4.5102	0.0135	0.0300	0.2264	0.5031	0.1678	0.3729
3536	7	44.6	0.0093	0.2085	1.4236	3.1919	0.6953	1.5590	2.0246	4.5395	0.0084	0.0188	0.1859	0.4168	0.1758	0.3942
3537	9	35.1	0.0168	0.4786	1.3083	3.7274	0.5681	1.6185	1.3778	3.9254	0.0019	0.0054	0.1329	0.3786	0.1667	0.4749
3538	9	39.7	0.0170	0.4282	1.4068	3.5436	0.5733	1.4441	1.7292	4.3557	0.0087	0.0219	0.1502	0.3783	0.1649	0.4154
3543	4	42.1	0.0120	0.2850	1.4326	3.4029	0.6394	1.5188	1.8845	4.4762	0.0140	0.0333	0.1392	0.3306	0.1850	0.4394
3545	10	47.9	0.0198	0.4134	1.4133	2.9505	0.6638	1.3858	1.9031	3.9731	0.0233	0.0486	0.1625	0.3392	0.1551	0.3238
3547	10	43.7	0.0185	0.4233	1.4085	3.2231	0.5757	1.3174	1.7507	4.0062	0.0154	0.0352	0.1268	0.2902	0.1667	0.3815
3549	9	43.0	0.0111	0.2581	1.3746	3.1967	0.6318	1.4693	1.8746	4.3595	0.0144	0.0335	0.2081	0.4840	0.2304	0.5358
3551	6	34.5	0.0134	0.3884	1.2747	3.6948	0.4702	1.3629	1.5040	4.3594	0.0134	0.0388	0.1213	0.3516	0.1695	0.4913
3555	12	39.4	0.0138	0.3503	1.2721	3.2287	0.6067	1.5398	1.7715	4.4962	0.0162	0.0411	0.1507	0.3825	0.1862	0.4726
3557	7	41.5	0.0198	0.4771	1.4944	3.6010	0.5470	1.3181	1.5781	3.8027	0.0134	0.0323	0.1505	0.3627	0.2037	0.4908
3564	13	22.6	0.0099	0.4381	1.2146	5.3743	0.3563	1.5765	1.0042	4.4434	0.0079	0.0350	0.0693	0.3066	0.0968	0.4283
3565	11	43.2	0.0156	0.3611	1.4636	3.3880	0.6922	1.6023	2.1045	4.8715	0.0050	0.0116	0.1412	0.3269	0.2525	0.5845
3568	6	33.8	0.0131	0.3876	1.3664	4.0426	0.5058	1.4964	1.2519	3.7038	0.0107	0.0317	0.1021	0.3021	0.1673	0.4950

Terminal Organ and Body Weights and Organ/Body Weight Ratios

Terminal Sacrifice - F2 Female Pups

Female No.	Pup No.	Terminal Body Weight (g)	Adrenal Weight (g)	Adrenal/ TBW (X1000)	Brain Weight (g)	Brain/ TBW (X100)	Kidneys Weight (g)	Kidneys/ TBW (X100)	Liver Weight (g)	Liver/ TBW (x100)	Ovaries Weight (g)	Ovaries/ TBW (x100)	Spleen Weight (g)	Spleen/ TBW (x100)	Thymus Weight (g)	Thymus/ TBW (x100)
Group IV - 1100 ppm																
4531	9	44.1	0.0129	0.2925	1.5231	3.4537	0.7115	1.6134	1.9081	4.3268	0.0098	0.0222	0.1977	0.4483	0.2350	0.5329
4535	10	46.6	0.0188	0.4034	1.4749	3.1650	0.6518	1.3987	2.2046	4.7309	0.0152	0.0326	0.1948	0.4180	0.2284	0.4901
4542	9	50.9	0.0230	0.4519	1.5945	3.1326	0.7634	1.4998	2.1955	4.3134	0.0205	0.0403	0.2375	0.4666	0.1779	0.3495
4548	9	43.2	0.0163	0.3773	1.4308	3.3120	0.6542	1.5144	2.0272	4.6926	0.0169	0.0391	0.2004	0.4639	0.1625	0.3762
4549	2	21.7	0.0108	0.4977	1.2359	5.6954	0.3327	1.5332	0.8532	3.9318	0.0140	0.0645	0.0611	0.2816	0.0652	0.3005
4551	11	36.1	0.0147	0.4072	1.2722	3.5241	0.5201	1.4407	1.4235	3.9432	0.0180	0.0499	0.1058	0.2931	0.1237	0.3427
4554	6	44.4	0.0155	0.3491	1.4812	3.3360	0.7282	1.6401	2.1211	4.7773	0.0105	0.0236	0.1631	0.3673	0.1962	0.4419
4555	13	44.6	0.0162	0.3632	1.4443	3.2383	0.6115	1.3711	2.0122	4.5117	0.0166	0.0372	0.1648	0.3695	0.1926	0.4318
4556	12	46.1	0.0109	0.2364	1.2891	2.7963	0.6770	1.4685	2.4884	5.3978	0.0139	0.0302	0.1965	0.4262	0.2123	0.4605
4557	12	41.9	0.0203	0.4845	1.4311	3.4155	0.5932	1.4158	1.8800	4.4869	0.0210	0.0501	0.1733	0.4136	0.2237	0.5339
4564	12	46.0	0.0224	0.4870	1.4769	3.2107	0.6552	1.4243	2.1163	4.6007	0.0185	0.0402	0.2225	0.4837	0.2405	0.5228
4566	12	35.9	0.0137	0.3816	1.3753	3.8309	0.5128	1.4284	1.4185	3.9513	0.0141	0.0393	0.1630	0.4540	0.1440	0.4011
4568	7	40.5	0.0176	0.4346	1.4628	3.6119	0.6305	1.5568	1.7056	4.2114	0.0215	0.0531	0.1455	0.3593	0.1345	0.3321
4575	9	42.4	0.0139	0.3278	1.5011	3.5403	0.6553	1.5455	1.9915	4.6969	0.0230	0.0542	0.1758	0.4146	0.1708	0.4028
4577	11	26.4	0.0070	0.2652	1.2844	4.8652	0.4040	1.5303	1.0004	3.7894	0.0042	0.0159	0.0780	0.2955	0.1225	0.4640
4579	11	47.6	0.0155	0.3256	1.5439	3.2435	0.6793	1.4271	2.1238	4.4618	0.0191	0.0401	0.2504	0.5261	0.1867	0.3922

APPENDIX W

APPENDIX W

SPERM ANALYSIS REPORT

FOR

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

HLS STUDY NUMBER: 96-4080

PREPARED FOR

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Sperm Analysis Report

Vinyl Chloride Combined Inhalation Two-Generation Reproduction and Developmental Toxicity Study in CD Rats

HLS Study Number: 96-4080

QUALITY ASSURANCE STATEMENT

This sperm analysis project has been inspected and audited by the PAI Quality Assurance Unit (QAU) as required by the Good Laboratory Practice (GLP) regulations promulgated by the U.S. Food and Drug Administration (FDA), Environmental Protection Agency (EPA) and the Organization for Economic Co-operation and Development (OECD). The sperm analysis report is an accurate reflection of the recorded data. The following table is a record of the inspections/audits performed and reported by the QAU.

Date of Inspection	Phase Inspected	Date Findings Reported to Management/ Study Teratologist
05/09/97	Sperm Motility	05/09/97
11/24,25/97	Study Data and Supporting Documentation	11/25/97
11/24,25/97	Draft Sperm Analysis Report	11/25/97

Sharon E. Abel
Quality Assurance Specialist

November 26, 1997
Date

I. RESERVED FOR QUALITY ASSURANCE STATEMENT

Vinyl Chloride Combined Inhalation Two-Generation Reproduction and Developmental Toxicity Study in CD Rats

II. MATERIALS AND METHODS

A. Sample Collection

After the last F_1 and F_2 litters were delivered, the first 15 surviving P_1 and P_2 males, respectively, were euthanized by carbon dioxide asphyxiation followed by exsanguination. The P_1 males were sacrificed on April 28-29, 1997, and the P_2 males were sacrificed on September 15-16, 1997. For all animals, the abdominal cavity was opened and the reproductive organs exposed. For motility assessment, the right vas deferens was dissected away from the testis and immediately placed in a petri dish containing 10 ml of a solution consisting of 1% Bovine Serum Albumin dissolved in Phosphate Buffered Saline. The solution was prewarmed to a temperature of approximately 38°C. A minimum 3 minute period was allowed for the sperm to swim out.

The right epididymis was then removed and placed on dry ice. The frozen epididymides were then transferred to Pathology Associates International, Frederick, MD. and stored frozen at -70°C or lower until evaluation for total sperm count.

B. Sperm Motility Evaluation

Following the swim out period, a sperm sample was obtained using a 100 µm deep cannula. The cannula was immediately loaded into the prewarmed stage of the Hamilton Thorne IVOS automated sperm analyzer. Five fields were automatically selected by the analyzer and each motion image was recorded and stored on an optical disk. The images were subsequently analyzed and the percent motility determined for each animal.

C. Total Sperm Count Determination

Each frozen epididymis was removed from the freezer, thawed and the caudal section was trimmed and weighed. The cauda epididymis was homogenized and the suspension was transferred to a plastic test tube and vortexed. A 100 µl sample was transferred to a vial containing a dye which uniquely stains the head of the sperm. A sample of the stained sperm was placed into a 20 µm deep glass slide which was loaded into the analyzer. Twenty fields were automatically selected by the analyzer for each animal and total sperm counts determined. The counts were reported adjusted for caudal epididymal weight.

D. Sperm Morphology Evaluation

Two Eosin stained slides were prepared for each animal from the caudal epididymis total count preparation. The slides were evaluated and a minimum of 200 sperm cells/animal were examined for morphological development.

E. Statistical Analyses

The means and standard deviations for the sperm motility, total count and sperm morphology data were calculated and compared across groups using the Kruskal-Wallis nonparametric ANOVA test. If a significant effect occurred ($p<0.05$), the Wilcoxon (Mann-Whitney U) test was used for pair-wise comparisons of each treated group to the control group. Statistical analyses were performed using an IBM™ compatible computer with SAS computer programs (SAS/STAT User's Guide, 1989).

III. RESULTS

A. Sperm Motility

Table 1 (P_1 Summary Data)
Table 2 (P_2 Summary Data)
Appendix A (P_1 Individual Data)
Appendix B (P_2 Individual Data)

No apparent treatment-related effects were observed for the sperm motility data in either the P_1 or P_2 males. Group mean values were comparable between the study groups. Group mean values ranged from 88.5% to 96.5% and 89.3% to 97.3% for the P_1 and P_2 males, respectively. No evidence of reduced motility due to treatment with Vinyl Chloride was observed in either generation.

B. Total Sperm Count

Table 1 (P_1 Summary Data)
Table 2 (P_2 Summary Data)
Appendix A (P_1 Individual Data)
Appendix B (P_2 Individual Data)

The number of sperm/gram of cauda epididymis was comparable between the study groups. Mean values ranged from 819.9 to 947.2 and 850.1 to 1063.9 million sperm/gram for the P_1 and P_2 males,

respectively. No treatment-related differences were observed.

C. Sperm Morphology

Table 1 (P_1 Summary Data)
Table 2 (P_2 Summary Data)
Appendix C (P_1 Individual Data)
Appendix D (P_2 Individual Data)

A low incidence of head/tail abnormalities was observed for animals in all treatment groups. Group mean values ranged from 0.03 to 5.13 and 0.07 to 0.27 percent abnormal sperm for the P_1 and P_2 males, respectively. No treatment related differences were observed.

IV. DISCUSSION AND CONCLUSIONS

Mean percent motility, total sperm count and morphology were not affected by treatment with Vinyl Chloride in either generation at dosage levels of 0, 10, 100 and 1100 ppm. No biologically meaningful differences were observed between the study groups.

_____ Date: _____

Michael D. Mercieca, B.S.
Reproductive Toxicologist
Pathology Associates International

V. REFERENCES

SAS Institute Inc., SAS/STAT User's Guide, Version 6, Fourth Edition, Cary, NC:SAS Institute Inc., 1989. Vol. 2 p. 1195-1210.

TABLE 1

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

SUMMARY OF P_1 SPERM ANALYSIS PARAMETERS

MOTILITY (PERCENT)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	91.5	88.5	96.5	91.4
SD	11.4	24.9	2.9	14.9
N	15	15	15	14

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TOTAL SPERM COUNT (MILLION SPERM/GRAM)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	826.5	947.2	872.2	819.9
SD	197.9	313.8	222.2	313.5
N	15	15	16	15

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL.

SPERM MORPHOLOGY (PERCENT ABNORMAL)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	0.03	0.23	5.13	0.86
SD	0.13	0.50	19.70	2.65
N	15	15	16	14

MEAN AND STANDARD DEVIATIONS WERE CALCULATED USING THE TOTAL NUMBER OF ABNORMAL SPERM AS A PERCENTAGE OF THE NUMBER OF SPERM EXAMINED.
NONE SIGNIFICANTLY DIFFERENT FROM CONTROL.

TABLE 2

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

SUMMARY OF P_2 SPERM ANALYSIS PARAMETERS

MOTILITY (PERCENT)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	96.2	97.3	94.5	89.3
SD	2.3	1.9	9.0	17.8
N	13	15	15	13

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TOTAL SPERM COUNT (MILLION SPERM/GRAM)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	1063.9	1053.1	850.1	1025.4
SD	231.1	340.1	223.2	396.1
N	15	15	15	15

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL.

SPERM MORPHOLOGY (PERCENT ABNORMAL)

Group:	1	2	3	4
Level: VINYL CHLORIDE (PPM)	0	10	100	1100
Mean	0.07	0.27	0.20	0.23
SD	0.18	0.46	0.41	0.65
N	14	15	15	15

MEAN AND STANDARD DEVIATIONS WERE CALCULATED USING THE TOTAL NUMBER OF ABNORMAL SPERM AS A PERCENTAGE OF THE NUMBER OF SPERM EXAMINED.
NONE SIGNIFICANTLY DIFFERENT FROM CONTROL.

APPENDIX A

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MOTILITY AND TOTAL COUNT DATA

Group 1: 0 PPM (VINYL CHLORIDE)

Animal No.	% Motility	Total Count (million sperm/gram)
1001	94	759.8
1002	89	1004.1
1003	98	678.5
1004	74	1048.8
1005	97	626.8
1006	97	921.4
1007	94	729.0
1008	90	904.2
1009	96	1235.4
1010	97	1033.4
1011	57	844.2
1012	98	479.4
1013	94	651.3
1023	99	732.8
1027	98	748.5

Group 2: 10 PPM (VINYL CHLORIDE)

2001	97	784.6
2002	98	1254.1
2003	88	529.4
2004	96	1025.9
2005	97	942.2
2006	83	821.5
2007	97	1753.4
2008	97	718.1
2009	96	752.1
2010	88	903.3
2011	100[a]	1085.3
2012	98	658.3
2013	0[a]	640.0
2014	98	1276.4
2020	94	1062.8

[a]=ONLY 4 SPERM PRESENT FOR MOTILITY EVALUATION.

HLS STUDY NO.: 96-4080

APPENDIX A

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MOTILITY AND TOTAL COUNT DATA

Group 3: 100 PPM (VINYL CHLORIDE)

Animal No.	% Motility	Total Count (million sperm/gram)
3001	94	961.0
3002	97	1091.8
3003	95	790.7
3004	99	1105.7
3005	88	654.2
3006	98	1009.8
3007	99	646.4
3008	98	1179.0
3009	99	531.5
3010	96	869.6
3014	96	574.6
3020	98	908.7
3022	99	1136.4
3026	97	731.1
3029	95	1123.5
3030	a	641.7

a=NO SPERM PRESENT FOR MOTILITY EVALUATION.

Group 4: 1100 PPM (VINYL CHLORIDE)

4001	79	782.7
4002	99	1310.1
4003	95	981.7
4004	93	764.3
4005	95	719.4
4006	94	1015.2
4007	98	671.9
4008	a	154.3
4009	93	1028.5
4010	98	1094.8
4011	99	603.3
4012	98	723.2
4013	43[b]	451.8
4014	98	1325.0
4027	98	657.9

a=NO SPERM PRESENT FOR MOTILITY EVALUATION.
[b]=ONLY 7 SPERM PRESENT FOR MOTILITY EVALUATION.

APPENDIX B

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MOTILITY AND TOTAL COUNT DATA

Group 1: 0 PPM (VINYL CHLORIDE)

Animal No.	% Motility	Total Count (million sperm/gram)
1031	94	841.5
1032	92	1247.1
1033	97	1065.9
1035	95	1033.9
1037	98	1161.7
1039	a	400.5
1041	93	1077.0
1043	95	1360.7
1045	97	1295.9
1047	98	1148.5
1048	100	930.7
1058	a	1148.8
1068	96	920.8
1071	97	1164.1
1078	98	1160.9

a=NO SPERM PRESENT FOR ANALYSIS.

Group 2: 10 PPM (VINYL CHLORIDE)

2031	98	770.2
2033	99	1182.8
2034	99	759.8
2036	96	1198.1
2037	94	1492.2
2038	99	806.6
2040	99	972.0
2042	98	1034.1
2044	97	1434.0
2046	95	1152.8
2048	99	820.5
2050	95	754.0
2052	94	1851.3
2054	99	978.3
2066	98	590.5

APPENDIX B

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MOTILITY AND TOTAL COUNT DATA

Group 3: 100 PPM (VINYL CHLORIDE)

Animal No.	% Motility	Total Count (million sperm/gram)
3031	99	740.5
3032	98	425.6
3033	63[a]	870.3
3034	93	763.7
3035	96	698.5
3037	100	769.9
3039	94	1015.7
3041	99	993.1
3042	98	1191.4
3043	95	699.8
3045	99	847.2
3046	96	747.7
3047	93	1364.6
3048	99	850.0
3049	95	772.8

[a]=ONLY 7 SPERM PRESENT FOR MOTILITY EVALUATION.

Group 4: 1100 PPM (VINYL CHLORIDE)

4031	94	1208.5
4033	96	1370.2
4035	98	1120.1
4037	94	1099.2
4039	98	907.6
4041	98	710.0
4043	a	654.0
4045	a	315.6
4046	97	1406.3
4047	100	1148.2
4049	33[b]	606.5
4050	90	765.7
4052	97	1660.2
4054	84	1654.2
4056	82	754.4

a=NO SPERM PRESENT FOR ANALYSIS.
[b]=ONLY 12 SPERM PRESENT FOR MOTILITY EVALUATION.

HLS STUDY NO.: 96-4080

APPENDIX C

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MORPHOLOGY DATA

GROUP 1: 0 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
1001	200	0	0	0	0	0	0	0	0
1002	200	0	0	0	0	0	0	0	0
1003	200	0	0	0	0	0	0	0	0
1004	200	0	0	0	0	0	0	0	0
1005	200	0	0	0	0	0	0	0	0
1006	200	0	0	0	0	0	0	0	0
1007	200	0	0	0	0	0	0	0	0
1008	200	0	0	0	0	0	0	0	0
1009	200	0	0	0	0	0	0	0	0
1010	199	1	0	0	0	0	0	0	0
1011	200	0	0	0	0	0	0	0	0
1012	200	0	0	0	0	0	0	0	0
1013	200	0	0	0	0	0	0	0	0
1023	200	0	0	0	0	0	0	0	0
1027	200	0	0	0	0	0	0	0	0

HLS STUDY NO.: 96-4080

APPENDIX C

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MORPHOLOGY DATA

GROUP 2: 10 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
2001	200	0	0	0	0	0	0	0	0
2002	200	0	0	0	0	0	0	0	0
2003	200	0	0	0	0	0	0	0	0
2004	198	2	0	0	0	0	0	0	0
2005	200	0	0	0	0	0	0	0	0
2006	197	3	0	0	0	0	0	0	0
2007	200	0	0	0	0	0	0	0	0
2008	200	0	0	0	0	0	0	0	0
2009	200	0	0	0	0	0	0	0	0
2010	198	2	0	0	0	0	0	0	0
2011	200	0	0	0	0	0	0	0	0
2012	200	0	0	0	0	0	0	0	0
2013	200	0	0	0	0	0	0	0	0
2014	200	0	0	0	0	0	0	0	0
2020	200	0	0	0	0	0	0	0	0

APPENDIX C

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MORPHOLOGY DATA

GROUP 3: 100 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
3001	200	0	0	0	0	0	0	0	0
3002	200	0	0	0	0	0	0	0	0
3003	199	0	0	0	0	1	0	0	0
3004	200	0	0	0	0	0	0	0	0
3005	200	0	0	0	0	0	0	0	0
3006	200	0	0	0	0	0	0	0	0
3007	200	0	0	0	0	0	0	0	0
3008	200	0	0	0	0	0	0	0	0
3009	199	1	0	0	0	0	0	0	0
3010	199	0	0	0	0	0	1	0	0
3014	200	0	0	0	0	0	0	0	0
3020	200	0	0	0	0	0	0	0	0
3022	200	0	0	0	0	0	0	0	0
3026	200	0	0	0	0	0	0	0	0
3029	197	1	0	0	0	0	2	0	0
3030	42	158	0	0	0	0	0	0	0

APPENDIX C

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_1 SPERM MORPHOLOGY DATA

GROUP 4: 1100 PPM (VINYL CHLORIDE)

Animal No.		Head				Tail			
	Normal	Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
4001	200	0	0	0	0	0	0	0	0
4002	200	0	0	0	0	0	0	0	0
4003	200	0	0	0	0	0	0	0	0
4004	198	2	0	0	0	0	0	0	0
4005	200	0	0	0	0	0	0	0	0
4006	199	0	0	0	0	0	1	0	0
4007	200	0	0	0	0	0	0	0	0
4008	a								
4009	200	0	0	0	0	0	0	0	0
4010	200	0	0	0	0	0	0	0	0
4011	200	0	0	0	0	0	0	0	0
4012	199	1	0	0	0	0	0	0	0
4013	b 180	20	0	0	0	0	0	0	0
4014	200	0	0	0	0	0	0	0	0
4027	200	0	0	0	0	0	0	0	0

a=Too few cells (less then 200) to evaluate.
b=Excessive fragmentation.

APPENDIX D

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MORPHOLOGY DATA

GROUP 1: 0 PPM (VINYL CHLORIDE)

Animal No.		Head				Tail			
	Normal	Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
1031	200	0	0	0	0	0	0	0	0
1032	200	0	0	0	0	0	0	0	0
1033	200	0	0	0	0	0	0	0	0
1035	200	0	0	0	0	0	0	0	0
1037	200	0	0	0	0	0	0	0	0
1039	a								
1041	200	0	0	0	0	0	0	0	0
1043	199	1	0	0	0	0	0	0	0
1045	199	0	0	0	0	1	0	0	0
1047	200	0	0	0	0	0	0	0	0
1048	200	0	0	0	0	0	0	0	0
1058	200	0	0	0	0	0	0	0	0
1068	200	0	0	0	0	0	0	0	0
1071	200	0	0	0	0	0	0	0	0
1078	200	0	0	0	0	0	0	0	0

a=Too few cells (less then 200) to evaluate.

APPENDIX D

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MORPHOLOGY DATA

GROUP 2: 10 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			Other
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	
2031	200	0	0	0	0	0	0	0	0
2033	200	0	0	0	0	0	0	0	0
2034	199	1	0	0	0	0	0	0	0
2036	200	0	0	0	0	0	0	0	0
2037	198	0	0	0	0	2	0	0	0
2038	200	0	0	0	0	0	0	0	0
2040	200	0	0	0	0	0	0	0	0
2042	199	1	0	0	0	0	0	0	0
2044	200	0	0	0	0	0	0	0	0
2046	200	0	0	0	0	0	0	0	0
2048	200	0	0	0	0	0	0	0	0
2050	200	0	0	0	0	0	0	0	0
2052	199	1	0	0	0	0	0	0	0
2054	197	3	0	0	0	0	0	0	0
2066	200	0	0	0	0	0	0	0	0

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APPENDIX D

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION
AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MORPHOLOGY DATA

GROUP 3: 100 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			Other
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	
3031	200	0	0	0	0	0	0	0	0
3032	199	1	0	0	0	0	0	0	0
3033	199	1	0	0	0	0	0	0	0
3034	197	3	0	0	0	0	0	0	0
3035	200	0	0	0	0	0	0	0	0
3037	200	0	0	0	0	0	0	0	0
3039	200	0	0	0	0	0	0	0	0
3041	200	0	0	0	0	0	0	0	0
3042	200	0	0	0	0	0	0	0	0
3043	200	0	0	0	0	0	0	0	0
3045	200	0	0	0	0	0	0	0	0
3046	199	1	0	0	0	0	0	0	0
3047	200	0	0	0	0	0	0	0	0
3048	200	0	0	0	0	0	0	0	0
3049	200	0	0	0	0	0	0	0	0

APPENDIX D

VINYL CHLORIDE COMBINED INHALATION TWO-GENERATION REPRODUCTION AND DEVELOPMENTAL TOXICITY STUDY IN CD RATS

INDIVIDUAL P_2 SPERM MORPHOLOGY DATA

GROUP 4: 1100 PPM (VINYL CHLORIDE)

Animal No.	Normal	Head				Tail			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
4031	200	0	0	0	0	0	0	0	0
4033	200	0	0	0	0	0	0	0	0
4035	195	2	0	0	0	2	1	0	0
4037	200	0	0	0	0	0	0	0	0
4039	200	0	0	0	0	0	0	0	0
4041	200	0	0	0	0	0	0	0	0
4043	200	0	0	0	0	0	0	0	0
4045	200	0	0	0	0	0	0	0	0
4046	200	0	0	0	0	0	0	0	0
4047	199	1	0	0	0	0	0	0	0
4049	200	0	0	0	0	0	0	0	0
4050	200	0	0	0	0	0	0	0	0
4052	199	1	0	0	0	0	0	0	0
4054	200	0	0	0	0	0	0	0	0
4056	200	0	0	0	0	0	0	0	0

APPENDIX X

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1. INTRODUCTION

This appendix presents the methodology for exposure atmosphere generation, monitoring and results.

2. MATERIAL AND METHODS

2.1. HUSBANDRY DURING EXPOSURE PERIODS

2.1.1. HOUSING

Animals were individually housed in stainless steel, wire mesh cages within a $6m^3$ stainless steel and glass whole-body exposure chamber. The placement of the animals in the whole-body exposure cages was rotated at each exposure to ensure uniform exposure of the animals. A description of the animal rotation is included in the raw data.

2.1.2. FOOD

None was provided during exposure.

2.1.3. WATER

Water was available without restriction via an automated watering system (Elizabethtown Water Company, Westfield, New Jersey).

2.1.4. ENVIRONMENTAL CONDITIONS

Chamber temperature and relative humidity were recorded every half-hour during exposure and maintained, to the maximum extent possible, within the ranges presented below.

Temperature

Desired:	20 to 24°C
Actual:	16 to 28°C

Relative Humidity

Desired:	40 to 60%
Actual:	29 to 79%

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2.2. TEST MATERIAL PREPARATION

The test material was used as received.

2.3. TEST MATERIAL ADMINISTRATION AND CHAMBER OPERATION

2.3.1. ROUTE OF ADMINISTRATION

Inhalation, whole body.

2.3.2. ROUTE JUSTIFICATION

The inhalation route is one of the potential routes of human exposure to this test material.

2.3.3. EXPOSURE LEVELS

10, 100 and 1100 ppm

2.3.4. FREQUENCY OF EXPOSURES

6 hours per day.

2.3.5. DURATION

Animals were exposed

2.3.6. DATES OF EXPOSURES

P_1 Generation: 7 January 1997 to 5 June 1997

F_1 Generation: 20 May 1997 to 3 October 1997

2.3.7. PRE-STUDY TRIALS

Trials were performed, prior to the start of the study, to evaluate the optimal set of conditions and equipment to generate a stable atmosphere at the targeted exposure levels.

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2.3.8. CHAMBER OPERATION

The exposure chambers were operated dynamically under slight negative pressure at a minimum airflow rate of 1200 liters per minute (Lpm). This flow rate was calculated to provide one complete air change every 5.0 minutes and a 99% equilibrium time (T99) of 23 minutes. This chamber size and airflow rate was considered adequate to maintain the animal loading factor below 5% and oxygen above 19%. The chamber was exhausted through a system consisting of a coarse filter, a HEPA filter and a MOCO fume incinerator (on days when the fume incinerator was not functioning, a charcoal filter was used along with the coarse filter and HEPA filter).

2.3.9. EXPOSURE PROCEDURE

Group I:

House supply air was fed through the turret of a $6m^3$ glass and stainless steel whole-body exposure chamber, at a rate of 1329 Lpm, with a static pressure of -0.15 in. H_2O. The airflow and static pressure were maintained at these settings throughout the 360 minute exposures. The animals remained in the chamber for a minimum of 30 minutes following the exposures to allow the chamber to clear at the same airflow rate used during exposures.

Groups II through IV:

House supply air was fed through the turret of a $6m^3$ glass and stainless steel whole-body exposure chamber at flow rates of 1267 Lpm, 1257 Lpm and 1239 Lpm for Groups II, III and IV, respectively. The airflow and static pressure were maintained at these settings throughout the 360 minute exposures. The test material was delivered from a compressed gas cylinder via ½" tubing to a Scott Specialty Gases regulator (equipped with inlet and outlet backpressure gauges). From the regulator, the test material flowed to a purge/vent system, which was attached to the inlet side of an electronic solenoid valve. The electronic solenoid valve was intended to shut-off the test material flow if electrical power or

chamber airflow was interrupted. The outlet of the solenoid valve was attached to a stainless steel cross union, from which ¼" tubing branched to the three generation flowmeters. The test material exited the flowmeters via ¼" tubing at flow rates of 12.36 mL/min, 128.3 mL/min and 1312 mL/min for Groups II, III and IV respectively, and was directed into the turret of each of the $6m^3$ exposure chambers, where it mixed with the house supply air. The generation system from the regulator through the flowmeters, was contained within a separate $6m^3$ glass and stainless steel chamber. This containment chamber was exhausted through the in-house filtering system, which consisted of a charcoal filter, a coarse filter and a HEPA filter.

All animals remained in the chamber for a minimum of 30 minutes at the end of each exposure to allow for clearing of the chamber. During this time, the chamber operated at the same airflow rate as during the exposure.

Refer to Diagram and equipment list (pages 7-9 of Appendix X) for equipment details.

2.4. EXPOSURE CHAMBER SAMPLING

2.4.1. CHAMBER SAMPLING (IR)

Measurements of airborne concentrations of the test material were made using a MIRAN® Ambient Air analyzer equipped with a strip chart recorder. The test atmosphere samples were drawn hourly during the exposures through a filter or a Drierite drying tube (Groups I and II only) and then through the MIRAN® and measurements were recorded. Samples were drawn through a filter attached to ½" tubing, and into the inlet of the MIRAN®. A vacuum pump was used to pull the chamber air through the MIRAN®. The pump was exhausted into the exhaust pipe of the $6m^3$ exposure chamber, via ¼" plastic tubing. The exposure levels were determined by comparison of the measured absorbance to a calibrated response curve constructed using the same instrument settings.

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Refer to pages 10-15 of Appendix X equipment details.

2.4.2. CHAMBER SAMPLING (GC)

GC (gas chromatography) sampling was performed twice during this study on one day per week with approximately two weeks between analysis. GC analyses of the chamber atmospheres were performed along with the IR (Miran infrared spectrophotometer) analyses in each exposure group at each hourly interval. The procedure for sampling is included in Appendix Z.

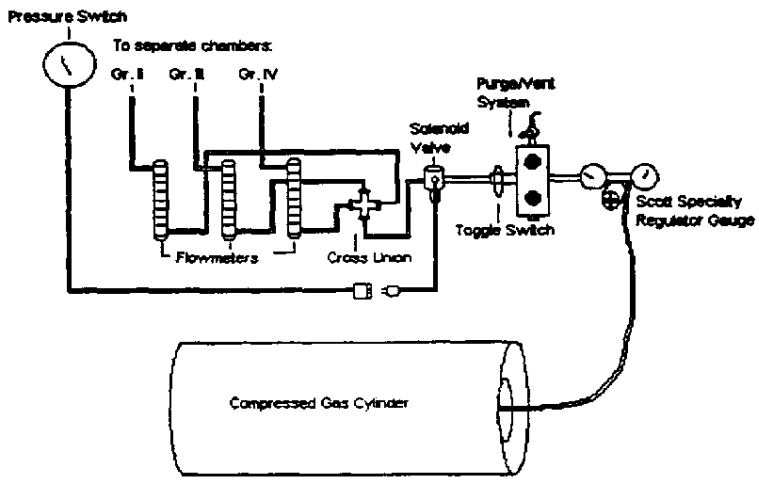
2.4.3. PARTICLE SIZE DISTRIBUTION ANALYSIS

Particle size distribution measurements were performed once weekly from the chambers and room air using a TSI Aerodynamic Particle Sizer. The samples were drawn for 20 seconds at a flowrate of 5 lpm. A computer was used to program the system to the appropriate settings prior to sampling. The mass median aerodynamic diameter, geometric standard deviation and Total Mass Concentration were calculated by the computer and printed out.

2.4.4. NOMINAL CONCENTRATION

To calculate the nominal concentrations (ppm), the flow of test material and air through the chamber was monitored using appropriate calibrated equipment. The test material (liters) consumed during the exposure was then divided by the total volume of air (liters) passing through the chamber [volumetric flow rate (L) X total exposure time (min)] X 10^6µl/L.

	Exposure Generation System	Appendix X



NOTE: The generation system, excluding the compressed gas cylinder was housed within a $6m^3$ exposure chamber.

	Equipment List	Appendix X

Exposure Chamber
Harford 6000 liter glass and stainless steel chamber.

Compound Reservoir
Compressed gas cylinder (Sponsor supplied Ton cylinder)

Flowmeters
Gilmont® Flowmeter/Micrometer, size micro (range 0-100% of scale), size 11 (range 0-250 mL/min), size 12 (range 0-2000 mL/min), Gilmont Industries, Inc. The flowmeters were calibrated prestudy with a Gilibrator® (range 1-250 cc), P/N D800287, SN6675-2 with a sensor block P/N D800290 or with a Gilibrator® (range 20 cc-6 Lpm), P/N D800286, SN 569-S with a flow cell P/N A800266; Gilian Instrument Corp.

Dwyer®, 0-20 Lpm.

Pressure/Vacuum Gauge(s)
Dwyer® Magnehelic® gauge, 0 - 2 in. and a 0 $\pm$ 1 in. (center zero)
0-30 in. Hg Gast vacuum gauge

Regulator(s)
Scott Specialty Gases regulator (equipped with a 0-100 psi inlet backpressure gauge and a 0-100 psi outlet backpressure gauge)

MG Industries stainless steel Purge/Vent System

Solenoid Valves
Allenair *6 electronic solenoid valve

Pressure Switch
Dwyer Instruments Inc. (ID# 1950-0).

Connector
Stainless steel cross union.

Tubing

	Equipment List	Appendix X

Size ¼" plastic (American Scientific Products).
Size ½" plastic (Baxter Scientific Products.
Size ¼" and ½" Teflon®.
Size ½" stainless steel.

Filters
PALL Corp. (HC9020F UP4H) filter
PTI Tecnologies (B129327044) filter

Vacuum Pumps
Thomas Industries Inc., Model 707CM 50.

Air Analyzer
Wilks, MIRAN® 1A Ambient Air Analyzer with a Fisher® Recordall® Series 5000, Model D5117-SAQ and a Micronta® LCD Benchtop Digital Multimeter No. 22-195.

Particle Sizer/Analyzer
TSI Aerodynamic Particle Sizer, Model 3310A, and a DELL computer (model #A86P125) equipped with an Epson LQ-578+ Dot matrix printer

Thermometer and Humidity Gauge
Springfield Precision Instruments, Temperature/Humidity gauges calibrated before use with a Fischer Digitial Hygrometer/Thermometer.

Chamber Air-flow Gauge
Dwyer® Magnehelic® gauge, 0-2 in. H_2O; calibrated prestudy with a Sierra Acumass Flowmeter (model 730-N8-2) with a Sierra Instruments Digital meter (model 831-N2).

Chamber Static Pressure Gauge
Dwyer® Magnehelic® gauge, 0-$\pm$ 1 in. H_2O (center zero); calibrated prestudy with a Dwyer® Mark II Manometer (model 25).

	Inhalation Report	Appendix X

Miran® Ambient Air Analyzer Procedure and Methodology

Procedure

Hourly samples for determination of the levels of exposure to Vinyl Chloride were analyzed for Groups I-IV, using a MIRAN® Ambient Air Analyzer equipped with a strip chart recorder and multimeter. The test atmospheres were drawn continuously through a glass fiber filter in a filter holder, and then through 1/4" Teflon® tubing to the inlet of the Miran. A vacuum gauge was connected to the outlet of the Miran. The gauge was connected, via 1/4" Teflon® tubing, to a flowmeter equipped with a metering valve. A pump was used to pull chamber air through the Miran. When the Miran cell was considered equilibrated, the pump was turned off and the absorbance was read off the multimeter. The absorbances and flowmeter settings were recorded. The pump was exhausted into the in-house filtering system consisting of a coarse and HEPA filters and activated charcoal. The exposure levels were determined by comparison of the measured absorbance to a calibrated response curve (see pages 14 and 15 of Appendix N) constructed using the same instrument settings.

Settings.

The instrument settings for the unit are summarized below:

wavelength, microns	11.1 (Groups I, II, III); 10.9 (Group IV)
pathlength, dial setting	11.5 (Groups I, II, III); 4.48 (Group IV)
slit width, mm	1
range, absorbance	0.25A (Groups I, II, III); 1A (Group IV)
response, seconds	1
gain	High
chart speed, cm/min	1
chart volts	1

	Inhalation Report	Appendix X

Calibrations. The MIRAN® was turned on and allowed to warm up for approximately 20 minutes. The cell was flushed with room air for approximately one minute. The loop (5.64 Liters) was closed, the unit was zeroed and the injection series was performed as shown below. The resultant data was plotted to obtain separate calibration curves for Groups I and II, for Group III and for Group IV.

Groups I, II and III:

Injection Volume (μL)	Calculated Concentration* (ppm)	ABSORBANCE Observer 1	Observer 2	Average
28	5.0[a]	0.0313	0.0321	0.0317
56	9.9[a]	0.0600	0.0610	0.0605
140	25[a,b]	0.2160	0.2265	0.2213
280	50[a,b]	0.350	0.357	0.354
560	99[b]	0.599	0.645	0.622
850	151[b]	0.833	0.923	0.878

Group IV:

Injection Volume (μL)	Calculated Concentration* (ppm)	ABSORBANCE Observer 1	Observer 2	Average
560	99	0.0680	0.0666	0.0673
2800	496	0.312	0.306	0.309
4500	798	0.472	0.464	0.468
6200	1099	0.626	0.612	0.619
7500	1330	0.730	0.731	0.731

*ppm = Volume of Vinyl Chloride(μL) / Volume of Air (L)
[a] These concentrations were used to prepare the calibration curve for Groups I and II.
[b] These concentrations were used to prepare the calibration curve for Group III.

	Inhalation Report	Appendix X

Calibration Checks. A three-point calibration check of the MIRAN® was performed for each trial/exposure day prior to sampling the chambers as shown below:

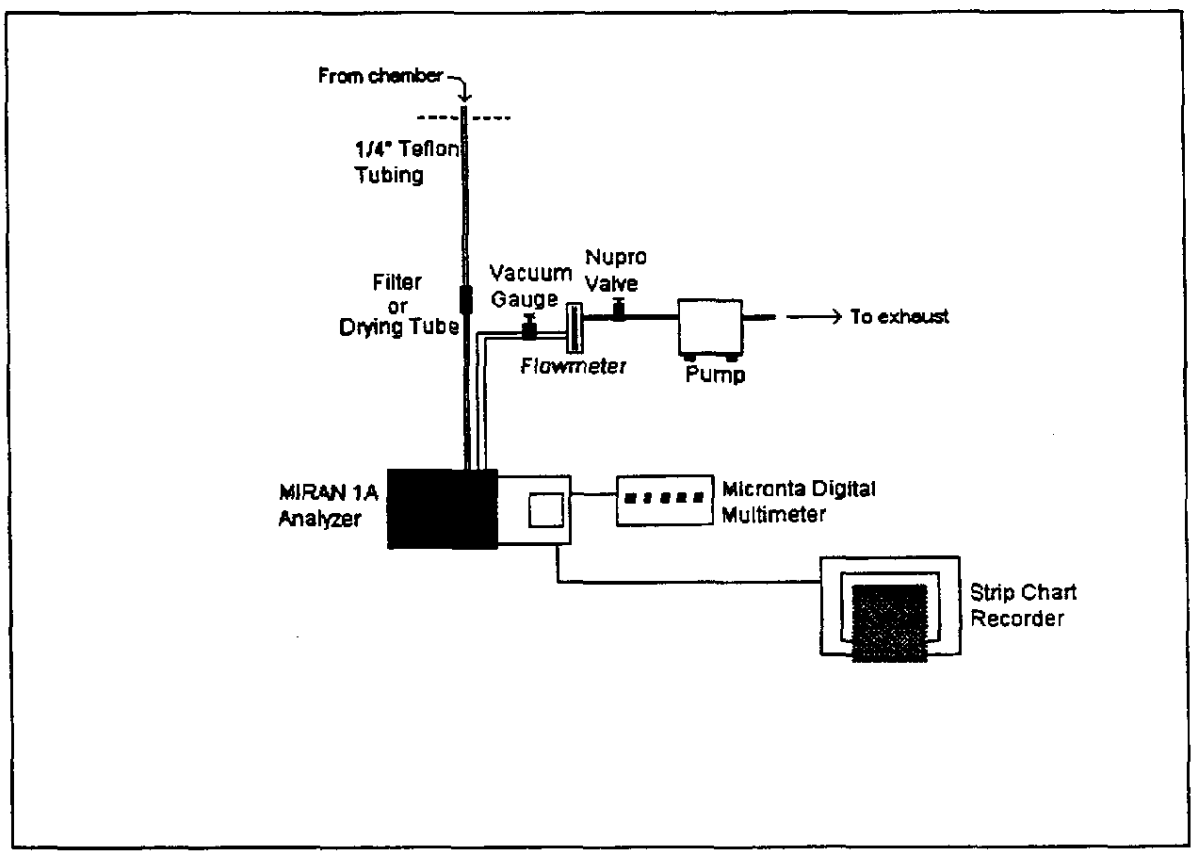
INJECTION VOLUME	CALCULATED CONCENTRATION	EXPECTED ABSORBANCE READING	ACCEPTABLE ABSORBANCE RANGE
(µL)	(ppm)	(v)	(v)
56	9.9	0.0605	0.0514 - 0.0696
560	99	0.622	0.529- 0.715
6200	1099	0.619	0.526 - 0.712

Injections were made with a 100 µL Precision Sampling Corp. syringe, a 1000 µL Hamilton syringe or a 10 mL Hamilton syringe (model 1001 and 1010). The absorbance was recorded after each injection. The absorbance must be within 15% of the original calibrations series. If any of the absorbance values fell outside the 15% range, the injection was rechecked as follows: the volume for the value that was out of range was reinjected twice. The two closer pair of the three injections were averaged and the results compared with the original curve. If the value of the average was outside the 15% range, the Study Director or Inhalation Toxicologist decided if a new graph was to be prepared.

Significant Figures. Sample concentrations and daily means were reported to two significant figures.

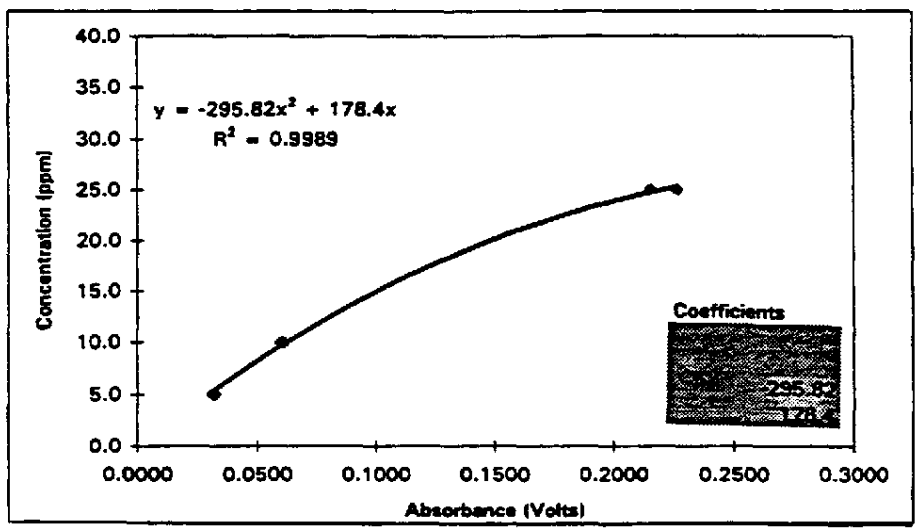
	Inhalation Report	Appendix X

Miran® Ambient Analyzer Setup

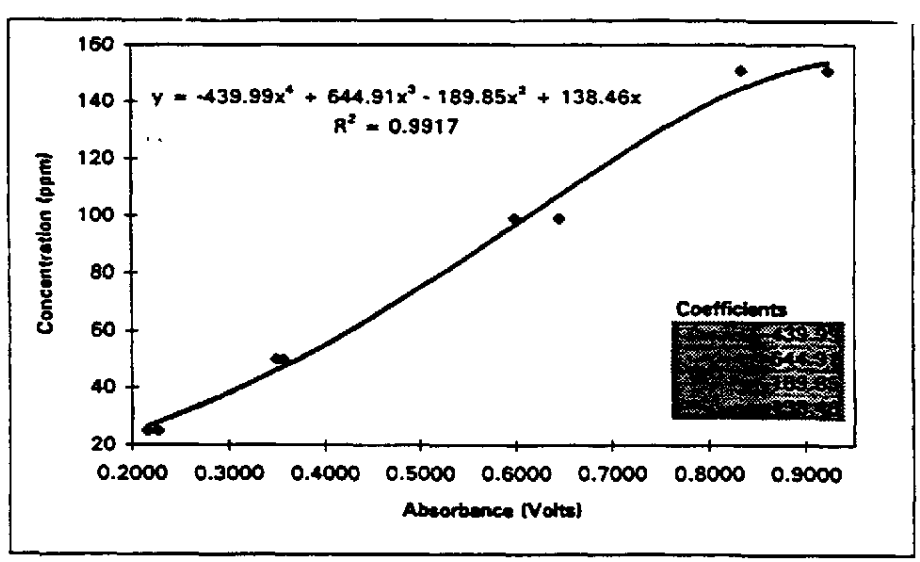


	Inhalation Report	Appendix X

Calibration Curve - Groups I and II



Calibration Curve - Group III



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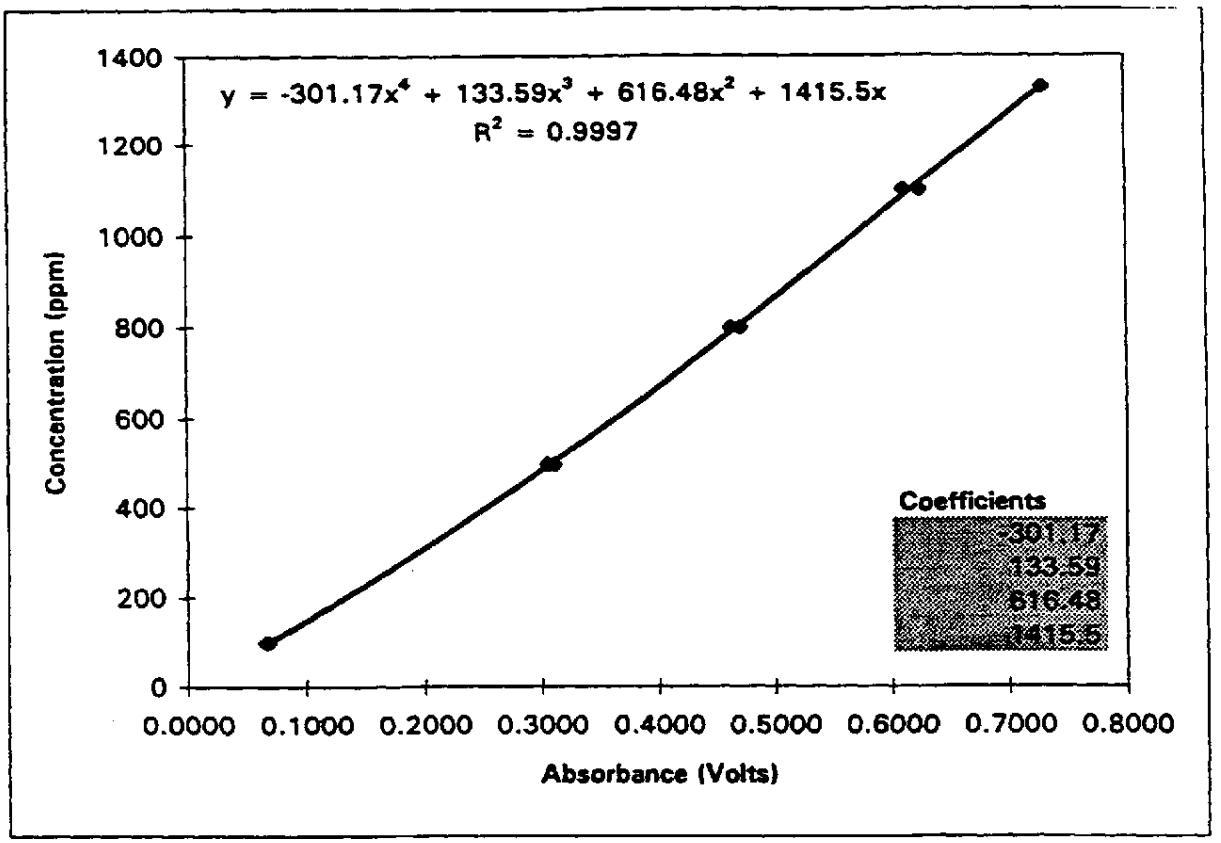
Calibration Curve - Group IV



SUMMARY OF DISTRIBUTION TRIAL SAMPLES

DATE	SAMPLE NUMBER	PORT I.D.	ANALYTICAL (IR) CONCENTRATION (PPM)	RATIO DISTRIBUTION SAMPLE/H-1
GROUP II				
23 Dec 96	223	H-1	10	-
23 Dec 96	223	H-4	11	1.10
23 Dec 96	223	H-6	10	1.00
23 Dec 96	223	H-7	11	1.10
23 Dec 96	224	H-1	11	-
23 Dec 96	224	H-9	11	1.00
23 Dec 96	224	H-12	11	1.00
23 Dec 96	224	H-14	11	1.00
23 Dec 96	225	H-1	11	-
23 Dec 96	225	H-15	10	0.91
23 Dec 96	225	H-17	11	1.00
GROUP III				
23 Dec 96	322	H-1	100	-
23 Dec 96	322	H-4	110	1.10
23 Dec 96	322	H-6	100	1.00
23 Dec 96	323	H-1	100	-
23 Dec 96	323	H-12	100	1.00
23 Dec 96	323	H-14	100	1.00
23 Dec 96	324	H-1	100	-
23 Dec 96	324	H-15	97	0.97
23 Dec 96	324	H-17	95	0.97
23 Dec 96	325	H-1	100	-
23 Dec 96	325	H-7	100	1.00
23 Dec 96	325	H-9	100	1.00
GROUP IV				
23 Dec 96	422	H-1	1100	-
23 Dec 96	422	H-4	1100	1.00
23 Dec 96	422	H-6	1100	1.00
23 Dec 96	423	H-1	1100	-
23 Dec 96	423	H-12	1100	1.00
23 Dec 96	423	H-14	1100	1.00
23 Dec 96	423	H-7	1100	1.00
23 Dec 96	424	H-1	1100	-
23 Dec 96	424	H-9	1100	1.00
23 Dec 96	424	H-5	1200	1.09
23 Dec 96	425	H-1	1100	-
23 Dec 96	425	H-17	1100	1.00

	Cumulative Exposure Records Preface	Appendix X

Footnotes:

[a] Bold values indicate GC confirmation of IR sample.
[b] Due to equipment problems, GC sample was not taken.
[c] Sample taken before a leak in the sample line or a fitting was repaired.
[d] Due to equipment problems, Miran sample was not taken.
[e] Due to elevated chamber humidity, a valid Miran sample could not be taken.
[f] Due to equipment problems, accurate temperature readings could not be taken.
[g] A second exposure (4-hours) was run on this date to expose animals that were erroneously not loaded in the morning.
[h] Sample not taken due to technician error.
[i] Mean and SD of all individual IR samples.
[j] Mean and SD of all individual GC samples.

<LOQ = Less than the limits of quantification.

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
1	7-Jan-97	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	41
	8-Jan-97	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.114	1.714	5.41E-04	22	39
	9-Jan-97	3	0.0/0.90	0.0/1.2	0.0/1.2	0.0[b]	0.0[b]	0.0/1.2	0.0/0.0				23	42
	10-Jan-97	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	49
	13-Jan-97	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	48
2	14-Jan-97	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	41
	15-Jan-97	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.812	2.271	1.29E-03	22	40
	16-Jan-97	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	53
	17-Jan-97	9	0.0/0.099	0.0/0.593[c]	0.0/0.0[c]	0.0/0.0[c]	0.0/0.0[c]	0.0/0.0	0.0/0.0				22	42
	20-Jan-97	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	39
3	21-Jan-97	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	38
	22-Jan-97	12	0.0	0.0	0.0	0.0	d	d	d	3.798	2.192	2.00E-03	23	40
	23-Jan-97	13	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				23	42
	24-Jan-97	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	34
	27-Jan-97	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	34
4	28-Jan-97	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	45
	29-Jan-97	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.101	2.014	1.19E-03	21	34
	30-Jan-97	18	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				20	32
	31-Jan-97	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	37
	3-Feb-97	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	40

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
5	4-Feb-97	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	39
	5-Feb-97	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.641	2.072	3.42E-04	20	39
	6-Feb-97	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	39
	7-Feb-97	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	41
	10-Feb-97	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	41
6	11-Feb-97	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	42
	12-Feb-97	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.851	2.128	2.58E-03	21	35
	13-Feb-97	28	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				21	33
	14-Feb-97	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	47
	17-Feb-97	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	40
7	18-Feb-97	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	41
	19-Feb-97	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.843	1.878	1.37E-03	22	39
	20-Feb-97	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	40
	21-Feb-97	34	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	47
	24-Feb-97	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	39
8	25-Feb-97	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	41
	26-Feb-97	37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9951	1.945	4.46E-03	22	46
	27-Feb-97	38	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				25	62
	28-Feb-97	39	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	50
	3-Mar-97	40	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	48

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
9	4-Mar-97	41	0.0	0.0	0.0	0.0	0.0	e	e				21	49
	5-Mar-97	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9153	1.314	9.97E-03	21	50
	6-Mar-97	43	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	54
	7-Mar-97	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	39
	10-Mar-97	45	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	53
10	11-Mar-97	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	54
	12-Mar-97	47	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	1.740	1.847	1.81E-03	19	51
	13-Mar-97	48	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	46
	14-Mar-97	49	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	54
	17-Mar-97	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	51
11	18-Mar-97	51	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	52
	19-Mar-97	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.218	1.509	2.40E-03	20	55
	20-Mar-97	53	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	58
	21-Mar-97	54	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	57
	22-Mar-97	55	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	61
	23-Mar-97	56	0.0	0.0	0.0	0.0	0.0	0.0	0.0				16	50
	24-Mar-97	57	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	48
12	25-Mar-97	58	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	46
	26-Mar-97	59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.748	1.922	1.89E-03	21	51
	27-Mar-97	60	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				21	51
	28-Mar-97	61	0.0	0.0	0.0	e	e	e	e				21	47
	29-Mar-97	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	53
	30-Mar-97	63	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	49
	31-Mar-97	64	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	64

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Mean Temperature (°C)	Mean Humidity (%)
13	1-Apr-97	65	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	54
	2-Apr-97	66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.633	1.794	3.96E-03	18	49
	3-Apr-97	67	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	53
	4-Apr-97	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	55
	5-Apr-97	69	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	55
	6-Apr-97	70	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	58
	7-Apr-97	71	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	63
14	8-Apr-97	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	54
	9-Apr-97	73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.257	1.365	5.28E-04	21	48
	10-Apr-97	74	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				21	52
	11-Apr-97	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	48
	12-Apr-97	76	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	54
	13-Apr-97	77	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	62
	14-Apr-97	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	36
15	15-Apr-97	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	42
	16-Apr-97	80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.025	2.161	2.45E-03	22	44
	17-Apr-97	81	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	46
	18-Apr-97	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	44
	19-Apr-97	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	43
	20-Apr-97	84	0.0	<LOQ	0.0	0.0	0.0	0.0	0.0				21	43
	21-Apr-97	85	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	42

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
16	22-Apr-97	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	46
	23-Apr-97	87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.769	1.710	7.48E-03	20	46
	24-Apr-97	88	0.0/0.0	0.0/0.0	0.0/0.0	0.0/<LOQ	0.0/0.0	0.0/0.0	0.0/0.0				20	45
	25-Apr-97	89	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	44
	26-Apr-97	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	40
	27-Apr-97	91	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	36
	28-Apr-97	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	54
17	29-Apr-97	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	42
	30-Apr-97	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.175	2.57	1.73E-03	22	54
	1-May-97	95	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	50
	2-May-97	96	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	38
	3-May-97	97	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	55
	4-May-97	98	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	43
	5-May-97	99	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	37
18	6-May-97	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	44
	7-May-97	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.335	1.59	5.67E-03	19	36
	8-May-97	102	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				19	42
	9-May-97	103	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	51
	10-May-97	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	55
	11-May-97	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	46
	12-May-97	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	50

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Mean Temperature (°C)	Mean Humidity (%)
19	13-May-97	107	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	54
	14-May-97	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.278	2.58	2.63E-03	19	58
	15-May-97	109	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	55
	16-May-97	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	50
	17-May-97	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	57
	18-May-97	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	51
	19-May-97	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	62
20	20-May-97	114	0.0	0.0	0.0	0.0	0.0	0.0	0.0				19	62
	21-May-97	115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.949	2.74	1.81E-03	18	55
	22-May-97	116	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				19	49
	23-May-97	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	52
	26-May-97	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0				f	63
21	27-May-97	121	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	49
	28-May-97	122	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.058	2.53	1.36E-03	20	47
	29-May-97	123	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	47
	30-May-97	124	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	56
	2-Jun-97	125	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	62
22	3-Jun-97	126	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				22	58
	4-Jun-97	127	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.796	2.34	1.39E-03	22	54
	5-Jun-97	128	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	52
	6-Jun-97	129	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	59
	9-Jun-97	130	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	53

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
23	10-Jun-97	131	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	55
	11-Jun-97	132	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.100	2.01	1.52E-03	24	54
	12-Jun-97	133	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	58
	13-Jun-97	134	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	58
	16-Jun-97	135	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	51
24	17-Jun-97	136	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				21	58
	18-Jun-97	137	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.990	1.62	8.00E-03	22	56
	19-Jun-97	138	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	60
	20-Jun-97	139	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	57
	23-Jun-97	140	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	60
25	24-Jun-97	141	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	63
	25-Jun-97	142	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.665	1.32	5.22E-03	23	66
	26-Jun-97	143	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	68
	27-Jun-97	144	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	65
	30-Jun-97	145	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	63
26	1-Jul-97	146	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	63
	2-Jul-97	147	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	1.513	2.41	2.93E-03	24	67
	3-Jul-97	148	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	67
	4-Jul-97	149	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	65
	7-Jul-97	150	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	64

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Mean Temperature (°C)	Mean Humidity (%)
27	8-Jul-97	151	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	69
	9-Jul-97	152	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.724	1.42	1.69E-02	26	68
	10-Jul-97	153	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	70
	11-Jul-97	154	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	66
	14-Jul-97	155	0.0	0.0	0.0	0.0	0.0	0.0	0.0				26	70
28	15-Jul-97	156	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	71
	16-Jul-97	157	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.650	1.76	1.71E-02	23	76
	17-Jul-97	158	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	70
	18-Jul-97	159	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	69
	21-Jul-97	160	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	73
29	22-Jul-97	161	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	76
	23-Jul-97	162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.103	1.62	8.09E-04	22	70
	24-Jul-97	163	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	68
	25-Jul-97	164	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	70
	28-Jul-97	165	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	65
30	29-Jul-97	166	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	59
	30-Jul-97	167	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.410	1.74	3.44E-04	24	52
	31-Jul-97	168	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	57
	1-Aug-97	169	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0				23	58
	2-Aug-97	170	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	62
	3-Aug-97	171	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	64
	4-Aug-97	172	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	64

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment Mean	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Temperature (°C)	Humidity (%)
31	5-Aug-97	173	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	64
	6-Aug-97	174	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.488	1.74	9.70E-04	22	65
	7-Aug-97	175	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	69
	8-Aug-97	176	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	67
	9-Aug-97	177	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	72
	10-Aug-97	178	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	73
	11-Aug-97	179	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	68
32	12-Aug-97	180	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	65
	13-Aug-97	181	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.823	2.40	4.41E-02	21	69
	14-Aug-97	182	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	66
	15-Aug-97	183	0.0/**0.0**	0.0/**0.0**	0.0/**0.0**	0.0/**0.0**	0.0/**0.0**	0.0/**0.0**	0.0/**0.0**				21	63
	16-Aug-97	184	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	72
	17-Aug-97	185	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	70
	18-Aug-97	186	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	63
33	19-Aug-97	187	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	62
	19-Aug-97[g]	187	0.0	0.0	0.0	0.0	0.0	-	-				23	54
	20-Aug-97	188	0.0	0.0	0.0	0.0	0.0	0.0	0.0	h	h	h	23	66
	21-Aug-97	189	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	69
	22-Aug-97	190	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	65
	23-Aug-97	191	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	65
	24-Aug-97	192	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	64
	25-Aug-97	193	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	73

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[a]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Mean Temperature (°C)	Mean Humidity (%)
34	26-Aug-97	194	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	73
	27-Aug-97	195	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.363	2.47	6.17E-03	24	74
	28-Aug-97	196	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	79
	29-Aug-97	197	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	72
	30-Aug-97	198	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	71
	31-Aug-97	199	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	74
	1-Sep-97	200	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	79
35	2-Sep-97	201	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	74
	3-Sep-97	202	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	3.302	3.21	1.22E-03	22	62
	4-Sep-97	203	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	58
	5-Sep-97	204	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	60
	6-Sep-97	205	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	65
	7-Sep-97	206	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	67
	8-Sep-97	207	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	69
36	9-Sep-97	208	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	71
	10-Sep-97	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.821	1.33	6.78E-03	24	68
	11-Sep-97	210	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	76
	12-Sep-97	211	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	71
	13-Sep-97	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	67
	14-Sep-97	213	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	63
	15-Sep-97	214	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	61

Group I - 0 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Miran (IR)[A]							Particle Size Determinations			Chamber Environment	
			Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
37	16-Sep-97	218	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	59
	17-Sep-97	219	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	1.014	3.81	2.01E-03	23	62
	18-Sep-97	220	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	64
	19-Sep-97	221	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	64
	20-Sep-97	222	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	69
	21-Sep-97	223	0.0	0.0	0.0	0.0	0.0	0.0	0.0				24	50
	22-Sep-97	224	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	47
38	23-Sep-97	225	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	54
	24-Sep-97	226	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.573	1.90	6.13E-04	20	50
	25-Sep-97	227	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	48
	26-Sep-97	228	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	55
	27-Sep-97	229	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	49
	28-Sep-97	230	0.0	0.0	0.0	0.0	0.0	0.0	0.0				21	55
	29-Sep-97	231	0.0	0.0	0.0	0.0	0.0	0.0	0.0				23	66
39	30-Sep-97	232	0.0	0.0	0.0	0.0	0.0	0.0	0.0				22	58
	1-Oct-97	233	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.605	1.77	4.85E-04	20	56
	2-Oct-97	234	0.0	0.0	0.0	0.0	0.0	0.0	0.0				20	49
	3-Oct-97	235	0.0	0.0	0.0	0.0	0.0	0.0	0.0				25	48
		Mean:			0.00[I]		0.036[J]			2.1	2.0	4.6E-03	22	55
		SD:			0.00		0.197			1.8	-	7.7E-03	1.6	11

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment Mean	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
1	7-Jan-97	1	9.8	10	11	11	11	9.9	9.1	8.2				21	42
	8-Jan-97	2	9.8	9.7	9.2	9.8	9.7	11	9.0	9.4	1.755	1.887	2.21E-04	22	42
	9-Jan-97	3	9.8	9.5/14	9.4[b]	9.3/14	9.2/13	9.7/14	10/13	9.2/14				22	42
	10-Jan-97	4	9.8	10	9.3	9.9	9.4	11	11	10				22	42
	13-Jan-97	5	9.8	10	10	10	10	10	10	11				22	42
2	14-Jan-97	6	9.8	9.7	9.3	9.9	10	10	9.6	9.6				22	42
	15-Jan-97	7	9.8	10	11	9.9	10	10	10	10	2.152	2.555	1.29E-03	22	42
	16-Jan-97	8	9.8	10	9.6	11	10	10	10	10				22	42
	17-Jan-97	9	9.4	9.5/7.6	7.2/0.95[c]	8.0/2.7[c]	11/2.9[c]	11/13	10/12	10/14				22	42
	20-Jan-97	10	9.8	10	11	11	9.7	10	10	11				22	33
3	21-Jan-97	11	9.7	12	12	11	12	10	13	12				24	33
	22-Jan-97	12	9.8	12	10	14	11	d	d	d	1.654	2.049	1.31E-03	22	41
	23-Jan-97	13	9.8	11/14	12/14	11/14	11/14	11/13	11/13	11/13				25	42
	24-Jan-97	14	9.8	11	11	11	11	11	11	11				25	35
	27-Jan-97	15	9.8	10	8.8	11	11	10	11	11				24	36
4	28-Jan-97	16	9.8	11	10	11	11	11	11	11				24	45
	29-Jan-97	17	9.8	11	11	11	11	10	10	10	1.616	1.647	1.72E-04	25	35
	30-Jan-97	18	9.8	11/12	11/11	12/13	11/13	11/13	11/10	10/12				24	35
	31-Jan-97	19	9.8	11	11	11	11	11	11	11				27	29
	3-Feb-97	20	9.8	11	9.6	12	11	11	11	11				25	38

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Temperature (°C)	Humidity (%)
5	4-Feb-97	21	9.8	11	11	10	10	11	10	11				26	32
	5-Feb-97	22	9.8	11	12	12	10	10	12	11	1.088	1.307	6.04E-05	26	39
	6-Feb-97	23	9.8	11	12	11	11	11	11	11				21	45
	7-Feb-97	24	9.8	10	10	10	10	11	11	10				21	44
	10-Feb-97	25	9.8	11	10	11	11	11	10	10				21	43
6	11-Feb-97	26	9.8	10	10	11	10	11	10	10				21	41
	12-Feb-97	27	9.8	11	11	10	11	11	11	11	1.217	1.953	1.71E-03	21	38
	13-Feb-97	28	9.8	11/14	11/14	12/14	11/15	11/13	11/14	11/15				21	32
	14-Feb-97	29	9.8	12	11	12	12	11	12	12				22	44
	17-Feb-97	30	9.8	11	9.3	11	12	12	11	11				21	35
7	18-Feb-97	31	9.8	11	11	12	11	10	11	10				22	41
	19-Feb-97	32	9.9	11	10	11	11	11	11	11	3.677	1.877	6.87E-04	26	35
	20-Feb-97	33	10	10	10	11	10	10	11	10				24	35
	21-Feb-97	34	10	11	11	11	11	11	11	11				25	43
	24-Feb-97	35	10	10	8.9	11	11	10	10	11				25	38
8	25-Feb-97	36	10	12	12	12	12	11	11	11				24	52
	26-Feb-97	37	10	11	10	10	11	12	10	10	1.037	2.103	3.24E-03	25	36
	27-Feb-97	38	10	11/13	11/13	12/13	11/13	11/12	11/12	10/13				28	44
	28-Feb-97	39	10	11	11	11	11	11	12	11				25	48
	3-Mar-97	40	10	12	11	11	12	12	12	12				25	50

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
9	4-Mar-97	41	10	12	12	12	12	12	12	13				25	51
	5-Mar-97	42	10	12	14	12	12	12	12	12	0.9201	1.428	9.91E-03	25	55
	6-Mar-97	43	10	11	10	11	11	11	11	11				25	45
	7-Mar-97	44	9.8	11	11	11	11	11	11	11				24	43
	10-Mar-97	45	9.8	11	10	11	12	12	11	11				24	60
10	11-Mar-97	46	9.8	11	10	11	11	11	11	11				25	56
	12-Mar-97	47	9.8	11	10	10	11	11	11	12	1.429	1.622	1.28E-03	25	54
	13-Mar-97	48	9.8	11/9.1	13/9.1	13/8.8	12/9.2	9.8/8.6	9.6/9.1	10/9.7				25	38
	14-Mar-97	49	9.8	11	10	11	10	10	10	12				25	41
	17-Mar-97	50	9.8	9.7	9.1	9.9	10	9.9	9.4	10				25	35
11	18-Mar-97	51	9.8	10	10	10	10	10	10	10				25	39
	19-Mar-97	52	9.8	10	10	10	10	10	9.9	10	1.334	1.527	2.52E-03	24	40
	20-Mar-97	53	9.8	10	8.2	10	10	11	11	10				24	44
	21-Mar-97	54	9.8	10	10	9.9	10	10	10	11				24	40
	22-Mar-97	55	9.8	10	11	10	10	10	10	10				25	46
	23-Mar-97	56	9.8	11	10	11	11	11	11	11				25	36
	24-Mar-97	57	9.8	11	10	8.8	10	12	12	13				23	34
12	25-Mar-97	58	9.8	12	11	12	12	12	12	12				22	60
	26-Mar-97	59	9.8	12	12	12	12	12	13	13	16.95	2.588	7.27E-03	20	44
	27-Mar-97	60	9.8	11/10	11/9.7	11/11	11/9.7	12/11	12/11	11/10				21	35
	28-Mar-97	61	9.1	12	11	12	12	13	11	11				22	38
	29-Mar-97	62	8.1	11	14	11	10	10	10	9.3				21	44
	30-Mar-97	63	7.9	9.1	8.7	8.9	9.1	9.2	8.9	9.5				21	44
	31-Mar-97	64	8.1	11	12	12	11	10	10	11				20	54

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
13	1-Apr-97	65	8.8	12	13	12	11	11	11	12				20	51
	2-Apr-97	66	8.7	10	12	10	9.6	10	9.9	10	2.643	1.837	2.57E-03	18	48
	3-Apr-97	67	9.2	12	10	11	12	12	12	12				19	50
	4-Apr-97	68	9.2	10	10	10	10	10	10	10				20	50
	5-Apr-97	69	9.2	10	11	11	10	9.6	10	9.2				19	51
	6-Apr-97	70	9.2	10	10	10	11	10	10	9.7				20	54
	7-Apr-97	71	9.2	11	11	11	11	11	10	10				22	54
14	8-Apr-97	72	9.2	12	11	12	12	12	12	11				21	47
	9-Apr-97	73	9.2	11	11	11	11	11	12	11	1.259	1.499	5.91E-04	20	44
	10-Apr-97	74	9.2	12/12	11/11	12/12	12/12	12/12	12/12	12/12				20	38
	11-Apr-97	75	9.2	11	11	12	12	11	11	11				21	38
	12-Apr-97	76	8.2	11	13	12	11	11	9.7	11				21	48
	13-Apr-97	77	7.8	9.3	9.5	9.8	8.0	9.3	9.4	9.7				22	58
	14-Apr-97	78	9.2	11	11	12	11	11	11	12				20	34
15	15-Apr-97	79	9.2	11	11	11	12	11	11	11				21	36
	16-Apr-97	80	9.2	11	10	11	10	11	11	11	1.116	1.445	1.21E-03	21	42
	17-Apr-97	81	9.2	10	9.9	10	9.8	11	10	10				21	42
	18-Apr-97	82	9.2	10	9.9	10	10	9.9	10	10				21	42
	19-Apr-97	83	9.2	10	11	11	10	10	10	10				21	39
	20-Apr-97	84	8.5	11	11	12	11	9.9	11	10				22	40
	21-Apr-97	85	10	12	12	12	12	12	12	12				21	40

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
16	22-Apr-97	86	9.8	12	11	12	12	12	11	11				22	43
	23-Apr-97	87	9.8	11	11	12	11	11	11	11	0.775	1.710	7.88E-03	20	42
	24-Apr-97	88	9.6	12/10	12/11	12/11	12/11	11/9.4	11/9.4	11/9.9				20	41
	25-Apr-97	89	9.6	12	11	12	12	12	12	11				20	41
	26-Apr-97	90	10	11	11	11	11	12	11	12				20	40
	27-Apr-97	91	10	9.9	10	9.7	10	9.6	10	10				20	45
	28-Apr-97	92	9.5	12	12	13	13	12	11	11				22	59
17	29-Apr-97	93	9.8	11	11	11	11	10	10	10				23	43
	30-Apr-97	94	9.6	11	11	11	10	11	11	11	1.241	2.12	2.07E-03	23	44
	1-May-97	95	9.5	11	13	11	11	11	11	11				24	49
	2-May-97	96	9.5	11	11	12	11	10	11	10				23	35
	3-May-97	97	9.5	11	11	12	11	12	11	11				24	53
	4-May-97	98	9.5	11	11	12	12	9.8	11	11				23	42
	5-May-97	99	9.5	10	11	10	10	10	11	10				21	34
18	6-May-97	100	9.6	12	12	12	12	12	11	11				20	49
	7-May-97	101	9.1	10	10	11	10	10	10	10	1.862	2.75	8.26E-04	20	30
	8-May-97	102	9.1	11/12	11/12	10/12	10/11	11/12	11/12	11/12				20	32
	9-May-97	103	9.4	11	11	12	12	11	11	11				20	48
	10-May-97	104	10	11	11	11	10	11	11	12				21	43
	11-May-97	105	10	11	11	10	11	11	10	10				21	40
	12-May-97	106	9.1	11	11	12	11	10	11	11				22	42

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
19	13-May-97	107	9.1	11	11	11	12	11	11	11				22	43
	14-May-97	108	8.8	11	12	11	11	12	11	11	11.024	5.27	7.38E-03	21	45
	15-May-97	109	8.7	12	11	12	11	12	12	12				20	47
	16-May-97	110	9.1	11	12	11	11	11	11	10				22	39
	17-May-97	111	9.5	11	11	10	10	11	10	11				22	40
	18-May-97	112	9.5	10	11	10	10	8.0	11	9.9				22	38
	19-May-97	113	9.1	11	11	11	12	11	12	11				23	54
20	20-May-97	114	9.1	11	10	11	11	10	11	10				20	54
	21-May-97	115	9.1	11	11	11	11	12	11	11	1.397	1.83	4.17E-04	21	40
	22-May-97	116	8.8	12/11	11/12	12/12	12/12	11/10	11/11	12/11				20	37
	23-May-97	117	8.5	11	10	11	11	10	11	10				21	39
	26-May-97	118	8.9	11	9.7	11	11	11	12	12				f	56
21	27-May-97	119	8.5	11	10	11	11	10	11	10				21	43
	28-May-97	120	8.5	10	10	11	10	10	10	10	1.458	1.84	8.12E-04	21	48
	29-May-97	121	8.5	9.8	9.5	10	10	10	10	9.3				20	47
	30-May-97	122	8.5	11	10	11	11	11	11	10				20	54
	2-Jun-97	123	8.5	11	11	10	11	12	11	11				21	61
22	3-Jun-97	124	8.5	12/10	12/10	12/9.8	12/11	11/9.4	12/9.6	12/10				21	55
	4-Jun-97	125	8.5	10	10	10	10	10	9.7	10	1.250	2.01	8.61E-04	21	46
	5-Jun-97	126	8.5	10	10	10	10	10	10	10				20	49
	6-Jun-97	127	8.5	10	10	11	10	9.4	10	10				19	50
	9-Jun-97	128	8.5	11	11	11	12	11	12	11				21	55

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
23	10-Jun-97	129	8.5	12	10	12	12	12	11	12				21	54
	11-Jun-97	130	8.5	10	10	11	10	10	10	10	1.089	2.16	1.60E-03	23	52
	12-Jun-97	131	8.5	10	10	11	11	10	10	10				21	56
	13-Jun-97	132	8.5	10	10	11	10	10	10	11				21	56
	16-Jun-97	133	8.5	11	10	11	11	11	11	10				21	50
24	17-Jun-97	134	8.5	12/11	11/10	11/9.9	11/11	12/11	12/11	12/11				20	56
	18-Jun-97	135	8.5	11	10	11	11	11	11	11	1.028	1.67	9.70E-03	21	56
	19-Jun-97	136	8.5	10	12	10	9.7	10	10	10				21	60
	20-Jun-97	137	8.5	11	11	11	10	11	11	11				21	56
	23-Jun-97	138	8.5	10	10	10	10	9.9	11	10				22	56
25	24-Jun-97	139	8.5	10	10	11	10	10	10	10				22	61
	25-Jun-97	140	8.5	9.7	9.8	10	10	10	8.2	10	0.668	1.34	5.51E-03	22	64
	26-Jun-97	141	8.5	10	9.8	10	10	10	10	10				23	67
	27-Jun-97	142	8.5	9.9	9.7	10	9.9	10	10	9.5				21	62
	30-Jun-97	143	8.5	9.7	8.6	10	10	10	10	9.7				22	60
26	1-Jul-97	144	8.5	10	10	10	10	11	10	10				23	60
	2-Jul-97	145	8.5	10/11	10/10	11/11	10/11	11/11	10/10	10/12	1.227	1.74	1.09E-03	22	64
	3-Jul-97	146	8.5	11	10	11	10	10	11	11				21	75
	4-Jul-97	147	8.9	9.8	9.7	10	9.2	10	10	10				21	60
	7-Jul-97	148	8.5	10	8.9	10	10	10	10	11				22	60

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
27	8-Jul-97	149	8.5	10	10	10	10	10	11	10				25	67
	9-Jul-97	150	8.9	11	10	11	11	11	11	10	0.718	1.22	1.61E-02	26	68
	10-Jul-97	151	8.9	10	11	11	10	10	10	10				23	68
	11-Jul-97	152	8.9	10	10	10	10	11	11	10				25	63
	14-Jul-97	153	8.9	9.8	8.0	11	10	10	10	10				26	70
28	15-Jul-97	154	8.9	10	10	10	10	10	11	10				23	70
	16-Jul-97	155	8.9	10/8.9	10/8.4	10/8.9	10/9.6	10/8.7	10/9.3	9.8/8.4	0.662	1.95	2.31E-02	22	76
	17-Jul-97	156	8.9	9.9	9.6	10	10	9.7	10	10				22	70
	18-Jul-97	157	8.9	10	9.6	10	10	10	11	10				20	68
	21-Jul-97	158	8.9	9.8	8.6	10	10	10	10	10				21	73
29	22-Jul-97	159	8.9	10	10	10	10	10	10	10				21	74
	23-Jul-97	160	8.9	10	9.6	11	10	10	10	10	1.147	1.61	7.31E-04	21	72
	24-Jul-97	161	8.9	10	10	10	10	10	10	9.8				20	70
	25-Jul-97	162	8.9	10	8.8	10	10	11	10	10				20	71
	28-Jul-97	163	8.9	9.6	8.8	9.5	9.4	10	9.7	10				21	61
30	29-Jul-97	164	8.5	10	10	10	9.9	10	9.8	10				20	55
	30-Jul-97	165	8.5	10	10	10	10	10	10	10	1.678	2.17	5.47E-04	23	47
	31-Jul-97	166	8.5	9.8	10	10	10	10	9.4	9.3				24	54
	1-Aug-97	167	8.5	9.8/9.9	9.7/10	9.6/9.7	10/10	10/10	10/10	9.6/9.5				21	56
	2-Aug-97	168	8.9	9.9	8.4	11	10	10	10	10				21	61
	3-Aug-97	169	8.9	9.7	8.5	9.5	10	10	10	10				22	61
	4-Aug-97	170	8.9	10	10	10	10	10	10	10				22	63

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
31	5-Aug-97	171	8.5	10	10	10	10	10	11	10				21	60
	6-Aug-97	172	8.5	10	10	10	10	10	10	10	1.393	2.24	7.54E-04	22	62
	7-Aug-97	173	8.5	10	9.0	10	10	11	10	10				21	64
	8-Aug-97	174	8.5	10	10	10	10	10	10	10				21	63
	9-Aug-97	175	8.9	10	9.8	10	10	10	10	10				21	68
	10-Aug-97	176	8.9	9.7	8.7	8.6	11	10	10	10				21	72
	11-Aug-97	177	8.5	10	11	10	10	10	10	10				21	65
32	12-Aug-97	178	8.5	11	10	11	11	10	11	10				21	62
	13-Aug-97	179	8.5	10	10	11	10	10	9.9	10	0.767	1.33	2.34E-02	22	68
	14-Aug-97	180	8.5	9.9	10	10	10	9.4	10	9.8				21	64
	15-Aug-97	181	8.5	10/11	10/11	10/11	10/11	10/10	10/12	10/12				21	61
	16-Aug-97	182	8.9	9.8	9.7	10	9.9	9.9	9.6	9.8				22	71
	17-Aug-97	183	8.9	9.8	9.9	9.7	10	9.6	9.7	10				21	69
	18-Aug-97	184	8.5	9.5	10	9.0	9.7	9.4	9.6	9.5				21	59
33	19-Aug-97	185	8.5	9.9	10	10	9.4	10	10	10				22	56
	19-Aug-97[a]	185	8.9	10	11	10	10	10	-	-				23	54
	20-Aug-97	186	8.5	10	10	10	10	10	10	10	h	h	h	22	68
	21-Aug-97	187	8.5	10	10	10	10	10	10	10				22	73
	22-Aug-97	188	8.5	10	10	10	10	10	10	10				20	70
	23-Aug-97	189	8.9	9.2	10	9.5	10	9.0	9.5	7.1				22	65
	24-Aug-97	190	8.9	10	10	9.8	12	9.7	11	9.7				22	61
	25-Aug-97	191	8.5	9.9	10	10	10	9.4	10	10				22	66

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (μm)	GSD	TMC (mg/m^3)	Temperature (°C)	Humidity (%)
34	26-Aug-97	192	8.5	10	10	10	10	10	10	10				21	69
	27-Aug-97	193	8.5	10	10	10	10	10	10	10	0.776	2.11	2.70E-03	22	69
	28-Aug-97	194	8.5	10	9.7	10	10	10	10	10				23	79
	29-Aug-97	195	8.5	9.9	10	10	10	10	9.5	10				22	71
	30-Aug-97	196	8.9	10	10	10	10	10	10	10				21	71
	31-Aug-97	197	8.9	10	10	10	9.8	10	10	10				21	72
	1-Sep-97	198	8.9	10	11	11	10	12	9.1	9.8				22	73
35	2-Sep-97	199	8.5	9.9	10	10	10	9.5	10	10				21	76
	3-Sep-97	200	8.5	10/9.8	10/9.7	10/9.6	10/9.9	10/10	10/10	10/9.7	1.551	2.48	6.25E-04	21	60
	4-Sep-97	201	8.5	9.9	9.6	10	10	10	10	10				21	52
	5-Sep-97	202	8.5	10	10	10	10	10	10	10				21	58
	6-Sep-97	203	8.3	10	12	11	9.4	11	9.1	7.6				22	65
	7-Sep-97	204	8.2	9.6	9.7	9.8	8.7	9.4	11	8.8				22	71
	8-Sep-97	205	8.5	10	10	11	9.0	10	10	10				22	68
36	9-Sep-97	206	8.5	10	10	11	10	10	10	10				23	67
	10-Sep-97	207	8.5	9.8	10	10	8.9	10	10	10	0.796	1.34	6.98E-03	22	66
	11-Sep-97	208	8.5	10	10	10	10	10	10	11				23	76
	12-Sep-97	209	8.5	10	10	11	10	10	11	10				23	74
	13-Sep-97	210	8.9	9.9	9.4	10	10	10	10	10				22	67
	14-Sep-97	211	8.9	10	10	10	10	11	9.6	10				22	61
	15-Sep-97	212	8.5	10	10	10	10	10	10	10				22	61

Group II - 10 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
37	16-Sep-97	218	8.5	10	10	10	10	10	10	10				21	62
	17-Sep-97	219	8.5	10/8.7	10/7.4	10/8.9	10/9.1	9.6/9.2	11/8.5	10/8.8	0.870	1.71	2.27E-03	22	63
	18-Sep-97	220	8.5	9.9	9.6	10	10	10	10	10				22	64
	19-Sep-97	221	8.5	9.9	9.3	9.8	10	10	10	10				23	67
	20-Sep-97	222	8.9	9.3	9.2	9.5	9.8	8.5	9.2	9.5				22	72
	21-Sep-97	223	8.9	9.4	9.6	9.0	9.3	9.4	9.7	9.4				22	51
	22-Sep-97	224	8.5	10	10	10	10	10	10	10				20	43
38	23-Sep-97	225	8.5	9.8	9.6	10	10	9.3	10	10				20	57
	24-Sep-97	226	8.5	9.9	9.2	10	10	10	10	10	1.918	2.10	6.70E-04	19	43
	25-Sep-97	227	8.5	9.9	10	10	10	10	10	9.6				18	47
	26-Sep-97	228	8.9	10	10	10	10	10	10	10				20	59
	27-Sep-97	229	8.9	10	10	11	9.4	9.4	11	10				19	49
	28-Sep-97	230	8.9	10	9.7	9.3	11	11	10	9.3				20	57
	29-Sep-97	231	8.5	10	10	10	10	10	10	10				22	65
39	30-Sep-97	232	8.5	10	10	10	10	10	10	10				21	58
	1-Oct-97	233	8.9	10	10	10	10	10	10	10	1.622	1.98	5.36E-04	19	54
	2-Oct-97	234	8.9	10	9.8	10	10	11	11	10				19	45
	3-Oct-97	235	9.1	10	10	10	10	9.9	10	10				23	51
		Mean:	9.08			10.5[i]		10.9[j]			2.0	1.9	4.0E-03	22	52
		SD:	0.58			0.85		2.2			3.0	-	5.8E-03	1.8	12

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
1	7-Jan-97	1	94	97	95	95	100	96	94	100				21	40
	8-Jan-97	2	94	100	99	110	100	110	100	100	7.015	2.056	1.06E-03	20	40
	9-Jan-97	3	94	99/110	99[b]	96/110	100/110	100/110	100/110	100/120				20	41
	10-Jan-97	4	94	98	97	97	99	95	100	100				21	42
	13-Jan-97	5	94	110	110	110	110	97	100	110				22	48
2	14-Jan-97	6	94	110	110	100	100	110	110	110				23	40
	15-Jan-97	7	94	98	93	94	93	110	100	100	3.727	2.495	1.94E-03	22	39
	16-Jan-97	8	94	96	94	93	96	96	98	96				23	57
	17-Jan-97	9	95	100/63	110/50[c]	90/90[c]	110/93[c]	93/0.0[c]	100/37[c]	100/110				22	40
	20-Jan-97	10	94	100	100	100	110	110	100	100				22	40
3	21-Jan-97	11	94	110	100	110	110	100	110	110				20	39
	22-Jan-97	12	94	110	110	110	110	d	100	100	1.356	1.487	1.48E-03	21	43
	23-Jan-97	13	94	110/100	110/120	100/75[c]	100/65[c]	110/120	110/120	110/120				20	46
	24-Jan-97	14	94	99	100	98	100	99	100	98				20	44
	27-Jan-97	15	94	100	100	100	100	100	100	100				20	42
4	28-Jan-97	16	94	99	100	100	100	97	100	98				20	47
	29-Jan-97	17	94	100	100	100	100	100	99	110	3.273	1.856	4.27E-04	21	44
	30-Jan-97	18	94	110/130	110/140	100/120	110/130	110/130	110/130	100/130				20	45
	31-Jan-97	19	94	100	110	100	100	100	100	100				20	44
	3-Feb-97	20	94	100	100	100	110	100	100	100				21	44

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
5	4-Feb-97	21	91	98	100	97	100	100	83	110				21	44
	5-Feb-97	22	94	100	93	100	100	110	110	110	5.493	1.849	5.93E-04	22	45
	6-Feb-97	23	94	110	110	110	100	100	110	100				20	46
	7-Feb-97	24	94	110	98	110	120	120	110	110				20	46
	10-Feb-97	25	94	100	98	100	99	100	110	110				20	46
6	11-Feb-97	26	94	100	100	100	100	100	100	110				20	48
	12-Feb-97	27	94	100	95	100	100	100	110	110	1.349	2.187	2.55E-03	20	41
	13-Feb-97	28	94	100/120	99/120	100/120	100/120	100/120	110/120	100/120				19	41
	14-Feb-97	29	94	100	95	96	97	110	110	110				20	42
	17-Feb-97	30	94	100	96	99	100	100	100	110				19	41
7	18-Feb-97	31	94	110	110	110	110	110	120	110				20	42
	19-Feb-97	32	97	110	100	110	100	110	110	110	7.082	2.603	1.29E-03	21	50
	20-Feb-97	33	100	110	110	110	100	100	110	110				20	44
	21-Feb-97	34	100	100	110	100	100	100	100	100				20	44
	24-Feb-97	35	100	100	110	100	100	100	100	110				20	41
8	25-Feb-97	36	100	100	100	100	100	100	110	100				20	40
	26-Feb-97	37	100	100	100	100	110	110	100	100	0.9237	1.493	3.84E-03	20	45
	27-Feb-97	38	100	110/130	110/130	110/130	110/130	100/130	110/130	100/130				23	53
	28-Feb-97	39	100	100	98	100	100	100	110	100				21	45
	3-Mar-97	40	100	110	110	110	110	110	110	110				20	40

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
9	4-Mar-97	41	100	100	97	98	110	110	100	100				21	44
	5-Mar-97	42	100	100	110	99	100	100	100	100	0.9302	1.549	1.07E-02	20	46
	6-Mar-97	43	100	99	99	98	100	99	99	97				21	45
	7-Mar-97	44	100	100	100	100	100	98	100	100				21	44
	10-Mar-97	45	100	100	100	100	100	100	100	98				21	57
10	11-Mar-97	46	100	100	110	110	100	100	100	99				22	57
	12-Mar-97	47	100	100	110	100	100	99	100	100	1.396	1.560	1.72E-03	21	56
	13-Mar-97	48	100	98/95	100/91	92/92	98/93	100/100	100/96	100/99				21	58
	14-Mar-97	49	100	100	100	100	100	100	100	98				21	56
	17-Mar-97	50	100	100	110	100	110	100	100	100				20	53
11	18-Mar-97	51	100	100	110	100	110	100	100	100				21	53
	19-Mar-97	52	100	99	100	99	98	100	98	100	1.240	1.582	3.41E-03	20	53
	20-Mar-97	53	100	97	93	100	100	96	97	98				20	53
	21-Mar-97	54	100	110	110	92	100	110	110	110				21	53
	22-Mar-97	55	100	100	100	100	100	98	100	100				22	53
	23-Mar-97	56	100	100	92	100	95	100	100	110				20	54
	24-Mar-97	57	100	99	100	96	100	100	99	100				22	44
12	25-Mar-97	58	100	100	100	100	100	100	100	110				22	46
	26-Mar-97	59	100	110	100	100	110	110	110	100	0.9995	1.639	1.11E-03	22	45
	27-Mar-97	60	100	110/100	110/110	110/110	110/100	100/100	100/100	110/100				23	46
	28-Mar-97	61	100	100	100	100	100	99	100	100				24	46
	29-Mar-97	62	100	100	100	110	100	100	100	100				23	46
	30-Mar-97	63	100	98	98	95	100	100	95	100				24	45
	31-Mar-97	64	100	99	99	99	100	100	95	100				21	56

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
13	1-Apr-97	65	100	100	100	100	100	100	99	99				20	56
	2-Apr-97	66	100	98	97	100	98	100	97	98	3.122	1.875	8.66E-03	19	60
	3-Apr-97	67	100	99	100	98	97	100	100	100				19	56
	4-Apr-97	68	100	100	100	100	100	100	98	100				20	56
	5-Apr-97	69	100	100	98	110	110	99	95	91				20	57
	6-Apr-97	70	100	97	96	100	94	100	94	99				22	57
	7-Apr-97	71	96	110	85	100	130	130	100	95				23	65
14	8-Apr-97	72	97	120	150	84	87	92	140	140				21	61
	9-Apr-97	73	100	98	68	70	120	110	110	110	1.314	1.394	6.10E-04	20	52
	10-Apr-97	74	100	110/110	110/120	110/120	110/110	110/110	110/110	100/110				20	52
	11-Apr-97	75	100	100	100	110	110	97	100	100				20	52
	12-Apr-97	76	100	110	110	110	110	110	110	100				20	57
	13-Apr-97	77	100	110	120	110	110	100	100	110				22	62
	14-Apr-97	78	100	100	100	100	100	100	110	100				20	32
15	15-Apr-97	79	100	99	99	97	100	96	100	100				20	33
	16-Apr-97	80	100	100	100	110	98	110	110	100	1.453	2.059	1.67E-03	20	36
	17-Apr-97	81	100	100	99	110	110	100	110	100				21	37
	18-Apr-97	82	100	98	92	99	100	100	99	100				21	36
	19-Apr-97	83	100	100	99	98	110	110	110	100				21	34
	20-Apr-97	84	100	100	96	95	100	110	100	110				22	34
	21-Apr-97	85	100	110	110	110	110	120	96	97				22	34

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
16	22-Apr-97	86	100	100	100	110	110	98	100	110				22	36
	23-Apr-97	87	100	110	110	110	110	100	100	100	0.805	1.840	8.70E-03	20	37
	24-Apr-97	88	100	100/94	100/91	100/94	110/94	100/91	110/96	100/95				20	37
	25-Apr-97	89	100	110	110	100	110	110	110	110				20	36
	26-Apr-97	90	100	110	110	110	110	110	100	110				20	35
	27-Apr-97	91	100	100	110	100	100	100	100	100				20	34
	28-Apr-97	92	100	110	110	110	110	110	97	110				22	51
17	29-Apr-97	93	100	110	110	110	100	110	100	110				22	46
	30-Apr-97	94	100	110	110	120	110	120	110	110	1.485	3.38	2.09E-03	23	46
	1-May-97	95	100	100	110	110	100	110	100	96				23	49
	2-May-97	96	100	100	100	100	99	100	100	100				22	44
	3-May-97	97	100	100	100	100	97	100	100	100				23	48
	4-May-97	98	100	100	110	100	100	100	100	97				23	46
	5-May-97	99	100	110	100	100	110	100	110	110				22	37
18	6-May-97	100	100	110	110	120	120	110	110	110				22	46
	7-May-97	101	97	120	120	120	120	120	110	110	1.698	2.71	6.93E-04	21	37
	8-May-97	102	94	110/110	110/110	110/110	120/110	110/110	100/100	100/100				22	39
	9-May-97	103	98	100	110	110	91	110	100	100				22	45
	10-May-97	104	100	100	100	100	100	100	100	100				22	44
	11-May-97	105	100	99	97	99	100	100	98	98				22	41
	12-May-97	106	95	110	120	110	100	100	110	110				21	46

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)*										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
19	13-May-97	107	94	100	110	100	100	100	100	100				20	47
	14-May-97	108	92	110	110	110	110	120	100	110	0.873	1.96	1.78E-03	20	45
	15-May-97	109	100	120	110	120	110	110	120	120				20	48
	16-May-97	110	100	110	110	110	110	110	110	100				21	42
	17-May-97	111	96	98	99	98	96	97	98	98				21	45
	18-May-97	112	96	92	91	93	94	90	93	90				21	43
	19-May-97	113	100	100	100	100	100	100	100	100				24	54
20	20-May-97	114	100	100	92	100	99	96	110	100				22	56
	21-May-97	115	100	110	110	100	110	110	100	100	2.245	2.73	9.53E-04	22	50
	22-May-97	116	100	110/110	110/110	110/110	110/110	100/110	110/110	110/110				22	48
	23-May-97	117	94	110	110	110	100	110	110	100				22	49
	26-May-97	118	100	100	100	100	100	100	98	100				f	56
21	27-May-97	119	94	100	100	98	100	100	100	100				21	47
	28-May-97	120	94	100	100	99	100	110	110	110	1.818	2.48	9.23E-04	21	46
	29-May-97	121	94	110	110	110	110	110	110	100				21	47
	30-May-97	122	94	99	100	96	100	100	100	100				20	52
	2-Jun-97	123	94	100	110	99	100	100	100	100				22	56
22	3-Jun-97	124	94	100/95	100/90	95/97	100/97	100/97	110/97	100/92				21	53
	4-Jun-97	125	94	110	100	110	110	110	110	100	4.414	3.27	1.72E-03	21	50
	5-Jun-97	126	94	99	94	110	100	100	91	98				21	52
	6-Jun-97	127	94	99	100	97	100	98	100	100				21	52
	9-Jun-97	128	94	100	110	100	100	100	100	100				22	49

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Mean Temperature (°C)	Mean Humidity (%)
23	10-Jun-97	129	94	100	100	100	110	100	98	110				23	50
	11-Jun-97	130	94	98	100	100	96	98	100	94	1.204	2.33	1.49E-03	25	49
	12-Jun-97	131	94	100	100	110	100	97	110	100				22	52
	13-Jun-97	132	94	100	100	100	100	110	100	100				22	52
	16-Jun-97	133	94	100	100	97	100	100	100	100				21	49
24	17-Jun-97	134	94	100/99	98/98	96/97	100/100	100/100	98/99	110/100				21	52
	18-Jun-97	135	94	97	96	96	97	95	100	100	0.988	1.58	9.86E-03	21	52
	19-Jun-97	136	94	100	100	99	100	100	100	99				22	53
	20-Jun-97	137	94	100	110	100	100	100	100	100				22	51
	23-Jun-97	138	94	100	110	110	100	99	100	110				25	58
25	24-Jun-97	139	94	100	97	100	97	110	110	110				25	60
	25-Jun-97	140	94	110	110	100	110	110	110	100	0.666	1.35	5.99E-03	24	61
	26-Jun-97	141	94	97	91	100	100	95	98	100				25	61
	27-Jun-97	142	94	99	91	96	110	100	100	99				23	59
	30-Jun-97	143	94	100	100	110	100	100	100	100				23	61
26	1-Jul-97	144	94	98	94	93	89	110	100	100				23	61
	2-Jul-97	145	94	110/110	110/110	95/100	100/100	100/110	110/110	100/100	1.263	1.88	1.19E-03	23	63
	3-Jul-97	146	94	100	110	110	110	100	89	93				23	64
	4-Jul-97	147	96	96	90	95	90	98	100	100				22	63
	7-Jul-97	148	94	110	110	100	110	110	100	100				23	63

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Miran (IR)[a]											Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
27	8-Jul-97	149	94	100	100	99	100	100	99	100				24	65
	9-Jul-97	150	96	95	90	94	99	95	94	100	0.705	1.17	1.50E-02	25	64
	10-Jul-97	151	96	97	98	99	95	100	91	97				23	63
	11-Jul-97	152	96	100	100	100	100	100	100	100				24	62
	14-Jul-97	153	96	96	100	91	100	97	93	93				26	64
28	15-Jul-97	154	96	90	84	89	85	87	97	98				23	65
	16-Jul-97	155	96	97/100	98/100	95/100	95/100	97/99	100/99	98/100	0.675	2.97	2.47E-02	23	68
	17-Jul-97	156	96	95	110	98	81	90	95	94				22	65
	18-Jul-97	157	96	96	96	100	100	100	91	91				20	63
	21-Jul-97	158	96	95	100	96	100	90	90	93				22	66
29	22-Jul-97	159	96	98	92	100	100	100	100	98				20	68
	23-Jul-97	160	96	97	100	100	96	92	95	97	1.127	1.57	5.82E-04	21	66
	24-Jul-97	161	96	99	95	96	100	100	100	100				20	65
	25-Jul-97	162	96	99	100	94	100	100	100	97				21	67
	28-Jul-97	163	96	96	95	99	100	94	96	94				22	64
30	29-Jul-97	164	94	98	96	100	100	98	95	100				21	63
	30-Jul-97	165	94	110	110	110	110	120	120	110	1.411	1.74	4.76E-04	24	58
	31-Jul-97	166	94	110	110	110	110	110	110	98				25	60
	1-Aug-97	167	94	100/100	98/110	99/100	100/100	110/100	110/110	100/100				22	63
	2-Aug-97	168	96	94	91	90	93	93	98	98				22	66
	3-Aug-97	169	96	94	95	80	97	95	100	99				22	67
	4-Aug-97	170	96	93	85	86	94	100	97	96				21	62

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (μm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
31	5-Aug-97	171	94	100	100	100	100	100	100	100				22	60
	6-Aug-97	172	94	100	100	100	100	100	100	100	1.528	1.99	8.36E-04	22	63
	7-Aug-97	173	94	110	110	110	100	100	110	110				22	63
	8-Aug-97	174	94	100	100	100	100	100	100	100				21	61
	9-Aug-97	175	96	97	91	95	95	98	100	100				22	64
	10-Aug-97	176	96	97	96	96	98	94	99	99				22	66
	11-Aug-97	177	94	100	83	100	100	100	110	110				22	64
32	12-Aug-97	178	94	100	100	100	100	100	100	100				22	62
	13-Aug-97	179	94	100	110	100	100	100	100	110	0.754	1.25	2.20E-02	22	66
	14-Aug-97	180	94	100	110	110	100	100	100	100				22	63
	15-Aug-97	181	94	100/100	100/110	100/100	99/100	98/100	100/100	110/100				22	62
	16-Aug-97	182	96	88	90	91	86	86	90	87				23	67
	17-Aug-97	183	96	88	83	87	89	90	88	91				22	65
	18-Aug-97	184	94	100	130	93	98	95	100	110				21	63
33	19-Aug-97	185	94	110	120	120	110	110	100	100				21	67
	19-Aug-97[g]	185	96	99	100	100	100	94	-	-				23	62
	20-Aug-97	186	94	99	95	100	100	100	100	100	h	h	h	23	67
	21-Aug-97	187	94	110	110	110	110	110	100	100				22	68
	22-Aug-97	188	94	100	110	100	100	100	100	100				21	68
	23-Aug-97	189	99	95	91	87	99	95	100	98				23	65
	24-Aug-97	190	99	92	89	94	89	97	90	92				23	64
	25-Aug-97	191	94	100	100	100	100	110	110	100				23	69

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
34	26-Aug-97	192	94	100	100	110	110	91	97	100				23	69
	27-Aug-97	193	94	100	110	100	100	98	97	100	0.759	2.01	3.32E-03	23	69
	28-Aug-97	194	94	110	110	110	110	100	110	110				24	74
	29-Aug-97	195	94	100	100	100	100	110	110	100				23	69
	30-Aug-97	196	96	93	91	91	89	90	100	99				22	69
	31-Aug-97	197	96	100	100	100	100	98	100	100				22	72
	1-Sep-97	198	96	96	98	95	100	93	90	97				22	73
35	2-Sep-97	199	94	100	100	97	110	98	100	100				21	72
	3-Sep-97	200	94	100/110	100/110	100/110	100/110	100/110	100/110	98/100	1.959	2.41	7.96E-04	20	65
	4-Sep-97	201	94	110	100	110	110	110	120	120				20	61
	5-Sep-97	202	94	100	100	100	120	100	100	100				20	64
	6-Sep-97	203	96	97	92	98	99	100	96	95				20	67
	7-Sep-97	204	96	100	92	96	100	110	110	95				22	69
	8-Sep-97	205	94	97	100	95	92	96	97	100				22	69
36	9-Sep-97	206	94	100	110	100	100	97	100	100				22	68
	10-Sep-97	207	94	100	100	100	100	100	100	100	0.802	1.27	7.11E-03	22	69
	11-Sep-97	208	94	110	110	110	110	100	100	100				23	72
	12-Sep-97	209	94	100	100	100	100	100	100	100				22	72
	13-Sep-97	210	96	99	98	99	97	100	97	100				22	68
	14-Sep-97	211	96	96	100	100	100	90	96	90				21	67
	15-Sep-97	212	94	100	100	100	100	100	100	100				22	60

Group III - 100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
37	16-Sep-97	218	94	100	100	100	100	100	100	100				21	61
	17-Sep-97	219	94	110/110	100/110	100/100	100/110	110/110	110/110	110/110	0.896	2.04	2.58E-03	22	61
	18-Sep-97	220	94	110	110	110	110	110	110	110				22	62
	19-Sep-97	221	94	100	100	100	100	97	100	110				24	60
	20-Sep-97	222	96	89	94	87	90	86	88	89				22	65
	21-Sep-97	223	96	91	91	87	92	87	96	91				22	52
	22-Sep-97	224	94	100	110	100	100	100	100	100				20	42
38	23-Sep-97	225	94	100	100	100	100	99	100	110				20	49
	24-Sep-97	226	94	100	100	100	100	100	100	100	1.573	1.98	4.67E-04	19	44
	25-Sep-97	227	94	100	100	100	99	100	100	110				19	47
	26-Sep-97	228	96	99	87	94	94	100	100	120				20	49
	27-Sep-97	229	96	94	93	92	93	95	97	95				19	46
	28-Sep-97	230	96	95	98	93	97	95	93	95				20	52
	29-Sep-97	231	94	100	98	99	100	100	100	100				23	69
39	30-Sep-97	232	94	100	100	100	100	100	100	100				22	66
	1-Oct-97	233	96	98	87	95	97	100	97	110	1.308	1.72	2.77E-04	21	66
	2-Oct-97	234	96	97	92	93	100	100	99	98				20	60
	3-Oct-97	235	100	110	110	100	100	100	110	110				24	61
		Mean:	96.41		102[1]		105[1]				1.9	2.0	4.1E-03	22	54
		SD:	2.69		7.0		17.5				1.6	-	5.8E-03	1.4	10

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
1	7-Jan-97	1	1100	1100	1200	1100	1100	1100	1100	1100				20	45
	8-Jan-97	2	1100	1100	1100	1100	1200	1200	1100	1100	1.544	1.357	2.27E-04	20	45
	9-Jan-97	3	1100	1200/1100	1100 [b]	1200/1200	1100/760	1200/1200	1200/1100	1100/1200				20	45
	10-Jan-97	4	1100	1100	1100	1100	1100	1100	1100	1100				20	45
	13-Jan-97	5	1100	1100	1200	1200	1100	1100	1100	1100				20	46
2	14-Jan-97	6	1100	1100	1100	1100	1100	1100	1200	1100				20	45
	15-Jan-97	7	1100	1100	1100	1100	1100	1100	1100	1100	1.227	1.345	7.05E-04	20	39
	16-Jan-97	8	1100	1100	1100	1100	1100	1100	1100	1100				20	42
	17-Jan-97	9	1100	1200/1300	1100/890[c]	1100/1300	1300/1400	1200/1300	1200/1400	1200/1300				20	42
	20-Jan-97	10	1100	1200	1200	1200	1200	1200	1100	1200				21	43
3	21-Jan-97	11	1100	1100	1100	1100	1100	1200	1200	1100				20	42
	22-Jan-97	12	1100	1100	1100	1100	1100	1100	1200	1100	1.404	1.837	1.79E-03	21	48
	23-Jan-97	13	1100	1100/1300	1200/1400	1100/1300	1100/1300	1100/1300	1100/1300	1100/1300				21	52
	24-Jan-97	14	1100	1100	1100	1100	1100	1100	1100	1100				20	47
	27-Jan-97	15	1100	1100	1100	1100	1100	1100	1100	1100				20	47
4	28-Jan-97	16	1100	1100	1100	1100	1100	1100	1100	1100				21	53
	29-Jan-97	17	1100	1100	1100	1100	1100	1100	1100	1100	1.325	1.336	2.37E-04	21	47
	30-Jan-97	18	1100	1100/1400	1100/1500	1100/1400	1200/1500	1100/1400	1100/1400	1100/1400				20	53
	31-Jan-97	19	1100	1100	1100	1100	1100	1100	1100	1100				21	49
	3-Feb-97	20	1100	1100	1100	1100	1100	1100	1200	1200				21	49

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
5	4-Feb-97	21	1100	1100	1100	1100	1100	1100	1100	1100				21	51
	5-Feb-97	22	1100	1100	1100	1100	1100	1100	1200	1100	1.197	1.296	1.50E-04	21	49
	6-Feb-97	23	1100	1100	1100	1200	1100	1200	1100	1100				20	49
	7-Feb-97	24	1100	1100	1100	1100	1100	1100	1100	1100				21	48
	10-Feb-97	25	1100	1100	1100	1100	1100	1100	1100	1100				20	45
6	11-Feb-97	26	1100	1100	1100	1100	1100	1100	1100	1100				20	47
	12-Feb-97	27	1100	1100	1100	1100	1100	1100	1100	1100	1.372	2.280	2.94E-03	20	44
	13-Feb-97	28	1100	1100/1400	1100/1400	1100/1400	1100/1400	1100/1400	1100/1500	1100/1500				20	39
	14-Feb-97	29	1100	1100	1100	1100	1100	1100	1100	1200				20	48
	17-Feb-97	30	1100	1100	1100	1100	1100	1200	1100	1100				20	46
7	18-Feb-97	31	1100	1200	1100	1200	1200	1100	1200	1200				21	48
	19-Feb-97	32	1100	1200	1200	1100	1100	1200	1200	1200	2.322	1.910	9.55E-04	22	58
	20-Feb-97	33	1100	1200	1200	1200	1100	1200	1200	1200				20	57
	21-Feb-97	34	1100	1200	1200	1100	1100	1200	1100	1200				21	57
	24-Feb-97	35	1100	1100	1100	1100	1100	1100	1100	1100				21	48
8	25-Feb-97	36	1100	1100	1100	1100	1100	1100	1100	1100				20	49
	26-Feb-97	37	1100	1200	1100	1100	1200	1200	1200	1200	0.9406	1.844	5.15E-03	20	54
	27-Feb-97	38	1100	1200/1500	1200/1500	1200/1500	1200/1500	1100/1400	1100/1500	1200/1500				22	62
	28-Feb-97	39	1100	1100	1100	1100	1100	1200	1100	1100				20	53
	3-Mar-97	40	1100	1100	1100	1100	1100	1100	1100	1000				20	45

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
9	4-Mar-97	41	1100	1200	1200	1200	1200	1100	1100	1200				20	54
	5-Mar-97	42	1100	1100	1300	1100	1100	1100	1100	1100	0.9226	1.307	1.02E-02	20	49
	6-Mar-97	43	1100	1100	1100	1200	1100	1100	1100	1100				20	46
	7-Mar-97	44	1100	1100	1100	1100	1100	1100	1100	1100				20	43
	10-Mar-97	45	1100	1200	1100	1100	1200	1200	1200	1100				21	56
10	11-Mar-97	46	1100	1100	1100	1100	1100	1100	1100	1100				21	56
	12-Mar-97	47	1100	1100	1100	1100	1100	1100	1100	1100	7.226	2.695	3.32E-03	21	54
	13-Mar-97	48	1100	1100/1100	1100/1100	1100/1000	1100/1100	1100/1100	1100/1100	1200/1200				21	53
	14-Mar-97	49	1100	1100	1100	1100	1100	1100	1100	1100				21	57
	17-Mar-97	50	1100	1200	1100	1200	1200	1100	1100	1200				21	52
11	18-Mar-97	51	1100	1100	1100	1200	1100	1100	1200	1100				21	53
	19-Mar-97	52	1100	1100	1100	1100	1100	1100	1100	1100	1.234	1.573	2.90E-03	20	57
	20-Mar-97	53	1100	1100	1000	1100	1200	1200	1100	1100				20	57
	21-Mar-97	54	1100	1100	1100	1100	1100	1100	1200	1100				21	54
	22-Mar-97	55	1100	1100	1100	1100	1100	1100	1100	1100				21	59
	23-Mar-97	56	1100	1100	1000	1100	1100	1100	1100	1000				21	53
	24-Mar-97	57	1100	1100	1100	1000	1100	1100	1100	1100				21	39
12	25-Mar-97	58	1100	1100	1100	1100	1100	1100	1100	1100				22	41
	26-Mar-97	59	1100	1100	1100	1100	1100	1100	1100	1100	1.114	1.678	1.28E-03	22	42
	27-Mar-97	60	1100	1100/1200	1100/1200	1100/1100	1100/1100	1100/1200	1100/1100	1100/1200				22	43
	28-Mar-97	61	1100	1100	1100	1100	1100	1100	1100	1100				23	43
	29-Mar-97	62	1100	1100	1100	1100	1100	1100	1100	1100				23	47
	30-Mar-97	63	1100	1100	1100	1100	1100	1100	1100	1100				24	43
	31-Mar-97	64	1100	1100	1100	1100	1100	1200	1100	1100				20	56

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m^3)	Temperature (°C)	Humidity (%)
13	1-Apr-97	65	1100	1100	1100	1100	1100	1100	1100	1100				19	46
	2-Apr-97	66	1100	1100	1100	1100	1100	1100	1100	1100	6.444	2.699	8.67E-03	18	49
	3-Apr-97	67	1100	1100	1100	1100	1100	1100	1100	1100				19	50
	4-Apr-97	68	1100	1100	1100	1200	1100	1100	1100	1100				19	49
	5-Apr-97	69	1100	1100	1100	1200	1100	1100	1100	1200				19	50
	6-Apr-97	70	1100	1100	1100	1100	1100	1100	1100	1200				20	55
	7-Apr-97	71	1100	1100	1100	1200	1100	1100	1000	1100				21	64
14	8-Apr-97	72	1100	1200	1100	1100	1200	1200	1200	1200				20	50
	9-Apr-97	73	1100	1200	1100	1200	1100	1200	1200	1200	1.218	1.350	4.70E-04	20	50
	10-Apr-97	74	1100	1200/1300	1200/1300	1200/1300	1200/1300	1200/1200	1100/1200	1200/1300				19	57
	11-Apr-97	75	1100	1100	1100	1100	1100	1200	1200	1100				20	56
	12-Apr-97	76	1100	1100	1100	1200	1100	1100	1100	1100				19	59
	13-Apr-97	77	1100	1100	1100	1100	1200	1000	1000	1100				21	67
	14-Apr-97	78	1100	1100	1100	1100	1100	1200	1200	1100				20	40
15	15-Apr-97	79	1100	1100	1000	1100	1100	1100	1100	1100				20	43
	16-Apr-97	80	1100	1100	1100	1100	1100	1100	1100	1100	1.144	1.528	1.20E-03	20	44
	17-Apr-97	81	1100	1100	1000	1100	1100	1100	1200	1200				21	48
	18-Apr-97	82	1100	1100	1100	1100	1100	1100	1100	1100				21	47
	19-Apr-97	83	1100	1100	1000	1100	1100	1100	1100	1100				22	43
	20-Apr-97	84	1100	1100	1100	1100	1100	1100	1100	1100				23	48
	21-Apr-97	85	1100	1200	1200	1200	1100	1100	1100	1200				23	46

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment Mean	
				Miran (IR)[a]											
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
16	22-Apr-97	86	1100	1100	1100	1100	1100	1100	1100	1200				22	48
	23-Apr-97	87	1100	1200	1200	1200	1200	1100	1100	1200	0.925	7.860	1.08E-02	20	50
	24-Apr-97	88	1100	1100/1200	1100/1200	1100/1200	1100/1100	1100/1200	1100/1200	1100/1200				20	50
	25-Apr-97	89	1100	1100	1100	1100	1100	1100	1100	1200				20	48
	26-Apr-97	90	1100	1200	1200	1200	1200	1200	1200	1200				21	48
	27-Apr-97	91	1100	1100	1100	1100	1100	1100	1200	1200				20	44
	28-Apr-97	92	1100	1200	1200	1100	1200	1200	1200	1200				23	62
17	29-Apr-97	93	1100	1100	1100	1100	1100	1100	1100	1200				23	49
	30-Apr-97	94	1100	1200	1200	1200	1200	1100	1100	1100	1.302	3.04	2.12E-03	23	47
	1-May-97	95	1100	1100	1100	1200	1100	1100	1100	1000				24	53
	2-May-97	96	1100	1100	1100	1200	1100	1100	1100	1100				23	43
	3-May-97	97	1100	1100	1100	1100	1100	1100	1100	1100				24	57
	4-May-97	98	1100	1100	1200	1100	1100	1100	1100	1100				23	44
	5-May-97	99	1100	1100	1100	1100	1200	1100	1100	1200				21	40
18	6-May-97	100	1100	1100	1000	1100	1000	1100	1100	1100				21	53
	7-May-97	101	1100	1200	1300	1200	1100	1200	1100	1100	3.560	2.62	1.11E-03	21	41
	8-May-97	102	1100	1100/1200	1200/1300	1100/1200	1100/1100	1100/1200	1100/1200	1100/1100				21	43
	9-May-97	103	1100	1100	1100	1100	1100	1100	1100	1100				21	55
	10-May-97	104	1100	1100	1100	1100	1100	1100	1100	1100				21	53
	11-May-97	105	1100	1100	1100	1100	1100	1100	1100	1100				22	48
	12-May-97	106	1100	1200	1200	1100	1100	1200	1200	1100				22	50

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
19	13-May-97	107	1100	1100	1100	1100	1100	1100	1100	1100				21	53
	14-May-97	108	1100	1100	1100	1100	1100	1100	1200	1100	0.815	1.97	2.33E-03	20	59
	15-May-97	109	1100	1100	1000	1100	1000	1100	1100	1100				21	58
	16-May-97	110	1100	1100	1200	1200	1200	1100	1100	1000				21	47
	17-May-97	111	1100	1100	1100	1100	1100	1100	1100	1000				22	51
	18-May-97	112	1100	1100	1100	1100	1100	1100	1100	1000				22	50
	19-May-97	113	1100	1100	1100	1100	1100	1000	1100	1100				22	58
20	20-May-97	114	1100	1100	1000	1000	1100	1000	1100	1100				20	56
	21-May-97	115	1100	1100	1100	1100	1100	1100	1100	1100	1.361	1.85	4.89E-04	21	45
	22-May-97	116	1100	1100/1200	1100/1200	1100/1100	1100/1100	1100/1200	1100/1200	1100/1200				20	41
	23-May-97	117	1100	1100	1100	1100	1100	1100	1100	1100				20	45
	26-May-97	118	1100	1100	1000	1100	1100	1100	1100	1100				f	59
21	27-May-97	119	1100	1100	1100	1100	1100	1100	1100	1100				19	48
	28-May-97	120	1100	1100	1100	1100	1100	1200	1100	1100	1.562	1.86	7.48E-04	19	45
	29-May-97	121	1100	1100	1100	1100	1100	1100	1100	1100				19	46
	30-May-97	122	1100	1100	1100	1100	1100	1100	1100	1100				19	55
	2-Jun-97	123	1100	1100	1200	1100	1200	1100	1100	1100				20	58
22	3-Jun-97	124	1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100				20	50
	4-Jun-97	125	1100	1100	1000	1100	1100	1100	1200	1200	1.328	1.69	7.66E-04	20	44
	5-Jun-97	126	1100	1100	1100	1100	1100	1100	1100	1100				20	47
	6-Jun-97	127	1100	1100	1100	1100	1100	1100	1100	1100				20	47
	9-Jun-97	128	1100	1100	1100	1100	1100	1100	1100	1100				21	52

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
23	10-Jun-97	129	1100	1100	1100	1100	1100	1100	1100	1100				21	57
	11-Jun-97	130	1100	1100	1100	1100	1100	1100	1100	1100	1.051	2.08	1.46E-03	23	52
	12-Jun-97	131	1100	1100	1000	1100	1100	1100	1100	1000				20	60
	13-Jun-97	132	1100	1100	1100	1100	1100	1100	1100	1100				20	60
	16-Jun-97	133	1100	1100	1100	1100	1100	1100	1100	1100				21	52
24	17-Jun-97	134	1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100				21	55
	18-Jun-97	135	1100	1100	1100	1100	1100	1100	1100	1100	1.010	1.57	1.05E-02	21	55
	19-Jun-97	136	1100	1100	1100	1100	1100	1100	1100	1100				21	60
	20-Jun-97	137	1100	1100	1100	1100	1100	1100	1100	1100				21	56
	23-Jun-97	138	1100	1100	1100	1100	1100	1100	1100	1100				22	51
25	24-Jun-97	139	1100	1200	1200	1200	1100	1200	1100	1100				22	60
	25-Jun-97	140	1100	1200	1200	1200	1200	1200	1200	1100	0.658	1.22	8.76E-03	22	63
	26-Jun-97	141	1100	1100	1100	1100	1100	1200	1100	1100				22	65
	27-Jun-97	142	1100	1100	1100	1100	1100	1100	1100	1100				21	60
	30-Jun-97	143	1100	1100	1200	1100	1100	1100	1100	1100				22	59
26	1-Jul-97	144	1100	1100	1100	1100	1100	1100	1100	1100				22	61
	2-Jul-97	145	1100	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1.299	2.08	1.40E-03	22	64
	3-Jul-97	146	1100	1100	1100	1100	1100	1100	1100	1100				21	68
	4-Jul-97	147	1100	1100	1100	1100	1100	1100	1100	1100				21	65
	7-Jul-97	148	1100	1100	1100	1100	1100	1100	1100	1100				21	62

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
27	8-Jul-97	149	1100	1100	1100	1100	1100	1100	1000	1100				24	66
	9-Jul-97	150	1100	1200	1200	1200	1100	1200	1100	1200	0.736	1.69	2.21E-02	25	67
	10-Jul-97	151	1100	1100	1200	1100	1100	1200	1100	1100				23	67
	11-Jul-97	152	1100	1100	1100	1200	1100	1100	1200	1100				25	64
	14-Jul-97	153	1100	1200	1200	1200	1200	1100	1200	1200				26	69
28	15-Jul-97	154	1100	1100	1100	1100	1200	1200	1100	1100				22	71
	16-Jul-97	155	1100	1100/1200	1000/1100	1100/1100	1100/1200	1200/1200	1100/1200	1100/1100	0.711	7.45	2.90E-02	22	74
	17-Jul-97	156	1100	1100	1200	1100	1200	1100	1100	1100				22	66
	18-Jul-97	157	1100	1200	1100	1200	1200	1200	1100	1100				20	68
	21-Jul-97	158	1100	1100	1100	1200	1100	1100	1100	1100				21	73
29	22-Jul-97	159	1100	1100	1200	1100	1100	1100	1100	1100				20	75
	23-Jul-97	160	1100	1100	1100	1100	1100	1100	1100	1100	1.323	1.76	8.06E-04	20	73
	24-Jul-97	161	1100	1100	1100	1100	1100	1100	1100	1100				20	68
	25-Jul-97	162	1100	1100	1100	1100	1100	1100	1100	1100				20	67
	28-Jul-97	163	1100	1100	1100	1100	1100	1100	1100	1100				21	61
30	29-Jul-97	164	1100	1100	1000	1100	1100	1100	1100	1100				21	54
	30-Jul-97	165	1100	1100	1100	1000	1100	1100	1100	1000	2.007	1.87	7.03E-04	23	50
	31-Jul-97	166	1100	1100	970	1100	1100	1100	1100	1100				23	57
	1-Aug-97	167	1100	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1100	1100/1200				21	60
	2-Aug-97	168	1100	1100	1100	1100	1100	1100	1100	1100				20	62
	3-Aug-97	169	1100	1200	1200	1200	1100	1100	1100	1200				20	68
	4-Aug-97	170	1100	1100	1100	1100	1100	1100	1100	1100				20	62

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
			Nominal (ppm)	Miran (IR)[a] Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Mean Temperature (°C)	Mean Humidity (%)
31	5-Aug-97	171	1100	1100	1000	1000	1100	1100	1100	1000				20	64
	6-Aug-97	172	1100	1100	1100	1100	1100	1100	1100	1200	1.502	1.98	8.51E-04	22	62
	7-Aug-97	173	1100	1100	1100	1100	1100	1100	1100	1100				21	63
	8-Aug-97	174	1100	1100	1100	1100	1100	1100	1100	1100				20	64
	9-Aug-97	175	1100	1100	1200	1100	1100	1100	1100	1100				21	72
	10-Aug-97	176	1100	1100	1200	1100	1100	1100	1100	1200				21	74
	11-Aug-97	177	1100	1100	1100	1100	1100	1100	1100	1100				22	64
32	12-Aug-97	178	1100	1100	1100	1100	1100	1100	1100	1100				22	63
	13-Aug-97	179	1100	1100	1100	1100	1100	1100	1100	1100	0.744	1.21	2.21E-02	22	68
	14-Aug-97	180	1100	1100	1100	1100	1100	1100	1100	1100				22	63
	15-Aug-97	181	1100	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200				22	60
	16-Aug-97	182	1100	1100	1100	1100	1100	1000	1100	1100				23	70
	17-Aug-97	183	1100	1100	1100	1100	1100	1100	1100	1000				22	68
	18-Aug-97	184	1100	1100	1200	1100	1100	1100	1100	1000				19	60
33	19-Aug-97	185	1100	1200	1200	1200	1200	1200	1100	1100				20	59
	19-Aug-97[g]	185	1100	1100	1100	1100	1100	1100	-	-				20	55
	20-Aug-97	186	1100	1100	1100	1100	1100	1100	1100	1100	h	h	h	20	65
	21-Aug-97	187	1100	1100	1100	1100	1100	1100	1100	1100				19	70
	22-Aug-97	188	1100	1100	1100	1100	1100	1100	1100	1100				18	73
	23-Aug-97	189	1100	1200	1100	1200	1200	1200	1200	1100				20	65
	24-Aug-97	190	1100	1200	1100	1100	1200	1200	1200	1100				20	63
	25-Aug-97	191	1100	1100	1100	1100	1100	1100	1100	1100				20	68

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (µm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
34	26-Aug-97	192	1100	1100	1100	1100	1200	1100	1100	1100				20	70
	27-Aug-97	193	1100	1100	1100	1100	1200	1100	1100	1100	0.883	3.13	3.95E-03	21	69
	28-Aug-97	194	1100	1200	1200	1200	1200	1100	1100	1100				21	77
	29-Aug-97	195	1100	1100	1200	1100	1100	1100	1100	1100				21	71
	30-Aug-97	196	1100	1100	1100	1100	1100	1100	1100	1100				20	69
	31-Aug-97	197	1100	1100	1100	1100	1100	1100	1100	1100				20	71
	1-Sep-97	198	1100	1100	1100	1100	1100	1100	1000	1000				21	73
35	2-Sep-97	199	1100	1000	960	1000	1000	1100	1100	1100				21	73
	3-Sep-97	200	1100	1100/1100	1000/1100	1100/1100	1100/1200	1100/1200	1100/1100	1100/1100	1.380	2.08	5.62E-04	20	59
	4-Sep-97	201	1100	1100	1000	1100	1100	1100	1100	1100				20	51
	5-Sep-97	202	1100	1100	1100	1100	1200	1100	1100	1100				20	56
	6-Sep-97	203	1100	1200	1300	1100	1100	1200	1100	1200				21	65
	7-Sep-97	204	1100	1100	1100	1100	1100	1100	1200	1200				22	68
	8-Sep-97	205	1100	1100	1100	1100	1100	1000	1100	1100				22	68
36	9-Sep-97	206	1100	1100	1100	1100	1100	1000	1100	1100				22	66
	10-Sep-97	207	1100	1100	1100	1100	1100	1100	1100	1100	0.794	1.31	7.21E-03	22	66
	11-Sep-97	208	1100	1100	1100	1100	1100	1100	1100	1100				23	76
	12-Sep-97	209	1100	1100	1100	1100	1100	1100	1100	1100				22	71
	13-Sep-97	210	1100	1100	1100	1100	1100	1100	1100	1100				22	68
	14-Sep-97	211	1100	1100	1100	1100	1100	1100	1000	1100				21	62
	15-Sep-97	212	1100	1100	1100	1100	1100	1100	1100	1100				22	62

Group IV - 1100 ppm	Cumulative Exposure Record Chamber Monitoring Results	Appendix X

Week	Date	Exposure Number	Chamber Concentration								Particle Size Determinations			Chamber Environment	
				Miran (IR)[a]										Mean	
			Nominal (ppm)	Mean (ppm)	Individual (ppm)						MMAD (μm)	GSD	TMC (mg/m³)	Temperature (°C)	Humidity (%)
37	16-Sep-97	218	1100	1100	1100	1100	1100	1100	1100	1100				21	61
	17-Sep-97	219	1100	1100/1100	1000/1000	1100/1100	1100/1100	1100/1100	1100/1100	1100/1100	0.835	1.63	2.27E-03	21	63
	18-Sep-97	220	1100	1100	1100	1100	1100	1100	1100	1100				21	64
	19-Sep-97	221	1100	1200	1100	1100	1200	1200	1200	1100				23	67
	20-Sep-97	222	1100	1100	1100	1100	1100	1100	1100	1100				22	71
	21-Sep-97	223	1100	1100	1000	1100	1100	1100	1100	1100				22	52
	22-Sep-97	224	1100	1100	1100	1100	1100	1100	1100	1100				19	46
38	23-Sep-97	225	1100	1100	1000	1100	1100	1100	1000	1100				19	58
	24-Sep-97	226	1100	1100	1100	1100	1100	1100	1100	1100	1.498	1.64	4.01E-04	19	45
	25-Sep-97	227	1100	1100	1100	1100	1100	1100	1100	1100				18	49
	26-Sep-97	228	1100	1100	1100	1100	1100	1100	1100	1100				19	57
	27-Sep-97	229	1100	1000	1000	1000	1000	1100	1000	1000				18	49
	28-Sep-97	230	1100	1100	1000	1100	1100	1100	1100	1000				19	58
	29-Sep-97	231	1100	1100	1100	1100	1100	1100	1100	1100				20	69
39	30-Sep-97	232	1100	1200	1200	1100	1100	1200	1200	1100				20	62
	1-Oct-97	233	1100	1100	1100	1100	1100	1100	1100	1100	1.270	1.73	2.75E-04	18	58
	2-Oct-97	234	1100	1100	1100	1100	1100	1100	1100	1200				18	49
	3-Oct-97	235	1100	1100	1200	1100	1100	1100	1100	1200				22	52
		Mean:	1100			1112[j]		1212[j]			1.6	2.1	4.5E-03	21	56
		SD:	0.00			45		135			1.4	-	6.8E-03	1.3	9.3

	In-chamber Observations Preface	Appendix X

Key to Observations:

Few = < 20%
Some = 21 - 50%
Most = 51 - 99%
All = 100%

	In-chamber Observations	Appendix X

Group	Observation	Test Days 74	75	76	77	78	79	80
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some

Group	Observation	Test Days 81	82	83	84	85	86	87
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some

	In-chamber Observations	Appendix X

Group	Observation	Test Days 88	89	90	91	92	93	94
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Some	Some

Group	Observation	Test Days 95	96	97	98	99	100	101
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Some	Some	Some	Some	Some	Few	Few

	In-chamber Observations	Appendix X

Group	Observation	Test Days 102	103	104	105	106	107	108
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
	Chromodacryorrhea	-	-	Few	-	-	-	-
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

Group	Observation	Test Days 109	110	111	112	113	114	115
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

	In-chamber Observations	Appendix X

Group	Observation	Test Days 116	117	118	119	120	121	122
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

Group	Observation	Test Days 123	124	125	126	127	128	129
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Some
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Some
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Some
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Some

	In-chamber Observations	Appendix X

		Test Days						
		130	131	132	133	134	135	136
Group	**Observation**							
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

		Test Days						
		137	138	139	140	141	142	143
Group	**Observation**							
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Some	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Some	Few	Few	Few
	Red Nasal Discharge	-	-	-	Few	-	-	-
	Chromodacryorrhea	-	-	-	Few	-	-	-
	Dried Red Material Facial Area	-	-	-	Few	-	-	-
	Labored Breathing	-	-	-	Few	-	-	-
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Some	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Some	Few	Few	Few

	In-chamber Observations	Appendix X

Group	Observation	Test Days 144	145	146	147	148	149	150
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

Group	Observation	Test Days 151	153	154	155	156	157	158
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
III - 100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few
IV - 1100 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	Most
	Unobservable	Few	Few	Few	Few	Few	Few	Few

	In-chamber Observations	Appendix X

Group	Observation	Test Days 161	162	163	164	165	168	169
I - 0 ppm								
	Within Normal Limits	Most	Most	All	All	All	All	All
	Unobservable	Few	Few	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	Most	Most	All	All	All	All	All
	Unobservable	Few	Few	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	Most	Most	All	All	All	All	All
	Unobservable	Few	Few	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	Most	Most	All	All	All	All	All
	Unobservable	Few	Few	-	-	-	-	-

Group	Observation	Test Days 170	171	172	175	176	177	178
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 179	180	183	184	185	186	189
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 190	191	192	193	196	197	198
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 199	200	203	204	205	206	207
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 208	209	210	211	212	213	214
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 215	216	217	218	219	220	221
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 222	223	224	225	226	227	228
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 229	230	231	232	233	234	235
I - 0 ppm								
	Within Normal Limits	All	Most	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
	Chromodacryorrhea	-	Few	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	Most	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
	Chromodacryorrhea	-	Few	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 236	237	238	239	240	241	242
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 243	244	245	246	247	248	249
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	Most	Most	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
	Chromodacryorrhea	Few	Few	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 250	251	252	253	254	255	256
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

	In-chamber Observations	Appendix X

Group	Observation	Test Days 257	258	259	260	261	262	263
I - 0 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-

Group	Observation	Test Days 264	265	266	267	268	269	270
I - 0 ppm								
	Within Normal Limits	Most	Most	Most	Most	Most	Most	All
	Unobservable	-	-	-	-	-	-	-
	Chromodacryorrhea	Few	Few	Few	Few	Few	Few	-
	Labored Breathing	Few	Few	Few	Few	Few	-	-
	Gasping	Few	-	-	-	-	-	-
II - 10 ppm								
	Within Normal Limits	Most	Most	Most	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
	Chromodacryorrhea	Few	Few	Few	-	-	-	-
III - 100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-
IV - 1100 ppm								
	Within Normal Limits	All	All	All	All	All	All	All
	Unobservable	-	-	-	-	-	-	-