PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

GLOSSARY FOR TABLES 3 AND 4

INCONTIN = INCONTINENCE
PARTUR/N = PARTURITION

SEE FREE TEXT:

F0 Males	0 ppm	Week 14:	Snout and top incisors twisted to one side. Hole in roof of mouth.
	300ppm	Week 8:	Snout elongated. Nose appears broken. Lower incisors pierced upper palate.
F1 Males	100ppm	Week 5:	Nose appears broken.
	300ppm	Week 28:	Right eye appears sore and irritated.
		Week 29:	Right eye sore, discharge. Right eyelid swollen/red/discharge.
F1 Female	100ppm	Week 6:	Nose appears broken.

URINE COLOURED:

F0 Males	0 ppm	Week 10:	Urine coloured brown/red.
	1000ppm	Weeks 11-13:	Urine coloured red.

BREATHING DEPTH:

F0 Males	300ppm	Week 8:	Increased.
F1 Females	1000ppm	Week 16:	Reduced.

The clinical findings do not include observations during exposure.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 3
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
BREATHING DEPTH								
NO. OF OBS.					2			
NO. OF ANIMALS					1			
WEEKS FROM - TO					8	8		
CHROMODACRYORRHEA								
NO. OF OBS.	1		4		2		6	
NO. OF ANIMALS	1		1		1		2	
WEEKS FROM - TO	14	14	8	11	8	8	10	19
DISTENDED ABDOMEN								
NO. OF OBS.					1			
NO. OF ANIMALS					1			
WEEKS FROM - TO					8	8		
HIND LIMB DAMAGED								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			17	17				
KILLED IN EXTREMIS								
NO. OF OBS.	1				1			
NO. OF ANIMALS	1				1			
WEEKS FROM - TO	14	14			8	8		
KILLED TERMINATION								
NO. OF OBS.	23		24		23		24	
NO. OF ANIMALS	23		24		23		24	
WEEKS FROM - TO	19	19	19	19	19	19	19	19
LEFT EAR TORN								
NO. OF OBS.							21	
NO. OF ANIMALS							2	
WEEKS FROM - TO							10	19
MALOCCLUSION								
NO. OF OBS.	5		12				28	
NO. OF ANIMALS	1		2				3	
WEEKS FROM - TO	11	14	8	19			9	19

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 3

INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
PALE								
NO. OF OBS.					2			
NO. OF ANIMALS					1			
WEEKS FROM - TO					8	8		
SALIVATION								
NO. OF OBS.							9	
NO. OF ANIMALS							3	
WEEKS FROM - TO							8	19
SCABS 1 OR MORE AREAS								
NO. OF OBS.			1		2			
NO. OF ANIMALS			1		1			
WEEKS FROM - TO			11	11	11	12		
SNUFFLES								
NO. OF OBS.	1				3			
NO. OF ANIMALS	1				2			
WEEKS FROM - TO	14	14			8	19		
STAINS AROUND NOSE								
NO. OF OBS.	1							
NO. OF ANIMALS	1							
WEEKS FROM - TO	9	9						
TAIL DAMAGED								
NO. OF OBS.	26		34		15		11	
NO. OF ANIMALS	2		3		2		1	
WEEKS FROM - TO	6	19	9	19	9	19	10	19
TEETH TRIMMED								
NO. OF OBS.	2		14				21	
NO. OF ANIMALS	1		2				3	
WEEKS FROM - TO	11	14	8	19			10	19
SEE FREE TEXT								
NO. OF OBS.	1				2			
NO. OF ANIMALS	1				1			
WEEKS FROM - TO	14	14			8	8		

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 3
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE			
	0 ppm	100 ppm	300 ppm	1000 ppm
ONE UPPER INCISOR BROKEN				
NO. OF OBS.		5		
NO. OF ANIMALS		1		
WEEKS FROM - TO		16 19		
ONE UPPER INCISOR MISSING				
NO. OF OBS.		12		
NO. OF ANIMALS		1		
WEEKS FROM - TO		9 19		
UPPER INCISORS BROKEN				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				19 19
UPPER INCISORS MISSING				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				15 15
URINE COLOURED (SEE TEXT)				
NO. OF OBS.	1			3
NO. OF ANIMALS	1			1
WEEKS FROM - TO	10 10			11 13

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 3
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE			
	0 ppm	100 ppm	300 ppm	1000 ppm
LABOURED BREATHING				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				15 15
CHROMODACRYORRHEA				
NO. OF OBS.		1		11
NO. OF ANIMALS		1		1
WEEKS FROM - TO		10 10		8 16
COLD				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				15 15
EYE BULGING				
NO. OF OBS.	6			
NO. OF ANIMALS	1			
WEEKS FROM - TO	16 21			
HAIR LOSS (GENERAL)				
NO. OF OBS.			12	12
NO. OF ANIMALS			2	2
WEEKS FROM - TO			9 18	9 14
HUNCHED				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				15 15
KILLED DIFFICULT PARTUR/N				
NO. OF OBS.		1		2
NO. OF ANIMALS		1		2
WEEKS FROM - TO		16 16		15 15

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 3
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
KILLED TERMINATION								
NO. OF OBS.	24		23		24		22	
NO. OF ANIMALS	24		23		24		22	
WEEKS FROM - TO	20	23	20	23	20	23	20	23
MALOCCLUSION								
NO. OF OBS.							32	
NO. OF ANIMALS							3	
WEEKS FROM - TO							8	23
PALE								
NO. OF OBS.	1						5	
NO. OF ANIMALS	1						4	
WEEKS FROM - TO	16	16					15	15
PILOERECTION								
NO. OF OBS.	1		1				4	
NO. OF ANIMALS	1		1				3	
WEEKS FROM - TO	16	16	16	16			15	15
SALIVATION								
NO. OF OBS.							2	
NO. OF ANIMALS							1	
WEEKS FROM - TO							9	14
SCABS 1 OR MORE AREAS								
NO. OF OBS.							1	
NO. OF ANIMALS							1	
WEEKS FROM - TO							11	11
SUBDUED								
NO. OF OBS.							2	
NO. OF ANIMALS							2	
WEEKS FROM - TO							15	15
SIGNS OF URINARY INCONTIN								
NO. OF OBS.					1			
NO. OF ANIMALS					1			
WEEKS FROM - TO					10	10		

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 3

INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F0 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
TAIL DAMAGED								
NO. OF OBS.	48				18		54	
NO. OF ANIMALS	3				2		4	
WEEKS FROM - TO	6	22			4	20	3	20
TEETH TRIMMED								
NO. OF OBS.			6		4		11	
NO. OF ANIMALS			1		1		3	
WEEKS FROM - TO			10	21	13	18	8	17
THIN								
NO. OF OBS.							2	
NO. OF ANIMALS							1	
WEEKS FROM - TO							16	17
ONE UPPER INCISOR BROKEN								
NO. OF OBS.					5		17	
NO. OF ANIMALS					1		1	
WEEKS FROM - TO					13	17	9	23
UPPER INCISORS BROKEN								
NO. OF OBS.			12					
NO. OF ANIMALS			1					
WEEKS FROM - TO			12	21				
VAGINAL BLEEDING								
NO. OF OBS.			1				4	
NO. OF ANIMALS			1				3	
WEEKS FROM - TO			18	18			15	18

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
BREATHING IRREGULAR								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			5	5				
CHROMODACRYORRHEA								
NO. OF OBS.			1		3		14	
NO. OF ANIMALS			1		1		1	
WEEKS FROM - TO			5	5	27	30	2	35
FOUND DEAD								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			3	3				
HAIR LOSS (GENERAL)								
NO. OF OBS.	10						9	
NO. OF ANIMALS	2						1	
WEEKS FROM - TO	9	35					23	31
KILLED WRONGLY SEXED								
NO. OF OBS.							1	
NO. OF ANIMALS							1	
WEEKS FROM - TO							1	1
KILLED IN EXTREMIS								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			5	5				
KILLED TERMINATION								
NO. OF OBS.	24		22		24		23	
NO. OF ANIMALS	24		22		24		23	
WEEKS FROM - TO	31	35	32	35	31	35	31	35
LACHRYMATION								
NO. OF OBS.					1			
NO. OF ANIMALS					1			
WEEKS FROM - TO					29	29		

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE			
	0 ppm	100 ppm	300 ppm	1000 ppm
LEFT EAR TORN				
NO. OF OBS.				23
NO. OF ANIMALS				1
WEEKS FROM - TO				13 - 35
MALOCCLUSION				
NO. OF OBS.			13	4
NO. OF ANIMALS			1	1
WEEKS FROM - TO			9 - 20	8 - 11
PILOERECTION				
NO. OF OBS.		2		1
NO. OF ANIMALS		2		1
WEEKS FROM - TO		5 - 24		15 - 15
SCABS 1 OR MORE AREAS				
NO. OF OBS.				7
NO. OF ANIMALS				2
WEEKS FROM - TO				12 - 17
SCABS (GENERAL)				
NO. OF OBS.	5		21	
NO. OF ANIMALS	1		2	
WEEKS FROM - TO	27 - 32		22 - 35	
SUBCUT MASS 1/MORE AREAS				
NO. OF OBS.			2	
NO. OF ANIMALS			1	
WEEKS FROM - TO			15 - 16	
SNOUT TWISTED				
NO. OF OBS.		1		
NO. OF ANIMALS		1		
WEEKS FROM - TO		5 - 5		
SNUFFLES				
NO. OF OBS.		1		
NO. OF ANIMALS		1		
WEEKS FROM - TO		5 - 5		

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: MALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE			
	0 ppm	100 ppm	300 ppm	1000 ppm
STAINS AROUND NOSE				
NO. OF OBS.		2		
NO. OF ANIMALS		2		
WEEKS FROM - TO		5 12		
TAIL DAMAGED				
NO. OF OBS.	26	3		84
NO. OF ANIMALS	2	1		3
WEEKS FROM - TO	4 32	4 5		3 35
TEETH TRIMMED				
NO. OF OBS.	5		6	13
NO. OF ANIMALS	1		1	1
WEEKS FROM - TO	30 34		13 34	8 34
SEE FREE TEXT				
NO. OF OBS.		1	8	
NO. OF ANIMALS		1	1	
WEEKS FROM - TO		5 5	28 29	
THIN				
NO. OF OBS.				8
NO. OF ANIMALS				2
WEEKS FROM - TO				22 29
ONE UPPER INCISOR BROKEN				
NO. OF OBS.	10			
NO. OF ANIMALS	1			
WEEKS FROM - TO	12 20			
UPPER INCISORS BROKEN				
NO. OF OBS.				17
NO. OF ANIMALS				1
WEEKS FROM - TO				18 35

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE			
	0 ppm	100 ppm	300 ppm	1000 ppm
LABOURED BREATHING				
NO. OF OBS.			1	
NO. OF ANIMALS			1	
WEEKS FROM - TO			33 33	
BREATHING RATE				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				16 16
BREATHING IRREGULAR				
NO. OF OBS.	1	1	1	
NO. OF ANIMALS	1	1	1	
WEEKS FROM - TO	34 34	6 6	37 37	
CHROMODACRYORRHEA				
NO. OF OBS.		1		
NO. OF ANIMALS		1		
WEEKS FROM - TO		6 6		
COAT STAINED (GENERAL)				
NO. OF OBS.		2		
NO. OF ANIMALS		1		
WEEKS FROM - TO		25 31		
FOUND DEAD				
NO. OF OBS.				1
NO. OF ANIMALS				1
WEEKS FROM - TO				30 30
HAIR LOSS (GENERAL)				
NO. OF OBS.				5
NO. OF ANIMALS				1
WEEKS FROM - TO				15 18

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
HUNCHED								
NO. OF OBS.	1				2		2	
NO. OF ANIMALS	1				2		2	
WEEKS FROM - TO	34	34			33	37	15	19
KILLED DIFFICULT PARTUR/N								
NO. OF OBS.					2		2	
NO. OF ANIMALS					2		2	
WEEKS FROM - TO					18	33	15	16
KILLED IN EXTREMIS								
NO. OF OBS.	1		1		1			
NO. OF ANIMALS	1		1		1			
WEEKS FROM - TO	34	34	6	6	37	37		
KILLED TERMINATION								
NO. OF OBS.	23		23		21		21	
NO. OF ANIMALS	23		23		21		21	
WEEKS FROM - TO	30	37	30	36	30	37	30	37
LEFT EAR TORN								
NO. OF OBS.					30		54	
NO. OF ANIMALS					1		3	
WEEKS FROM - TO					7	33	4	37
NOSE BLEEDING								
NO. OF OBS.	1							
NO. OF ANIMALS	1							
WEEKS FROM - TO	34	34						
PALE								
NO. OF OBS.	1				2		7	
NO. OF ANIMALS	1				2		7	
WEEKS FROM - TO	17	17			18	33	15	36
PILOERECTION								
NO. OF OBS.	1		2		4		3	
NO. OF ANIMALS	1		1		4		3	
WEEKS FROM - TO	34	34	16	17	18	37	15	19

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 4
INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
SNUFFLES								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			6	6				
SIDES PINCHED IN								
NO. OF OBS.					1			
NO. OF ANIMALS					1			
WEEKS FROM - TO					37	37		
STAINS AROUND NOSE								
NO. OF OBS.			1		1			
NO. OF ANIMALS			1		1			
WEEKS FROM - TO			6	6	18	18		
SIGNS OF URINARY INCONTIN								
NO. OF OBS.	1							
NO. OF ANIMALS	1							
WEEKS FROM - TO	27	27						
TAIL DAMAGED								
NO. OF OBS.	42		15		49		23	
NO. OF ANIMALS	2		1		3		1	
WEEKS FROM - TO	4	37	12	33	4	33	9	34
SEE FREE TEXT								
NO. OF OBS.			1					
NO. OF ANIMALS			1					
WEEKS FROM - TO			6	6				
THIN								
NO. OF OBS.							1	
NO. OF ANIMALS							1	
WEEKS FROM - TO							27	27
TIP TOE GAIT								
NO. OF OBS.							1	
NO. OF ANIMALS							1	
WEEKS FROM - TO							19	19

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 4

INTERGROUP COMPARISON OF CLINICAL OBSERVATIONS - F1 PARENTS

SEX: FEMALE	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	0 ppm		100 ppm		300 ppm		1000 ppm	
VAGINAL BLEEDING								
NO. OF OBS.	2		1				3	
NO. OF ANIMALS	2		1				3	
WEEKS FROM - TO	5	17	18	18			15	19
VAGINAL SWELLING								
NO. OF OBS.	4				5		1	
NO. OF ANIMALS	1				2		1	
WEEKS FROM - TO	32	37			12	30	32	32

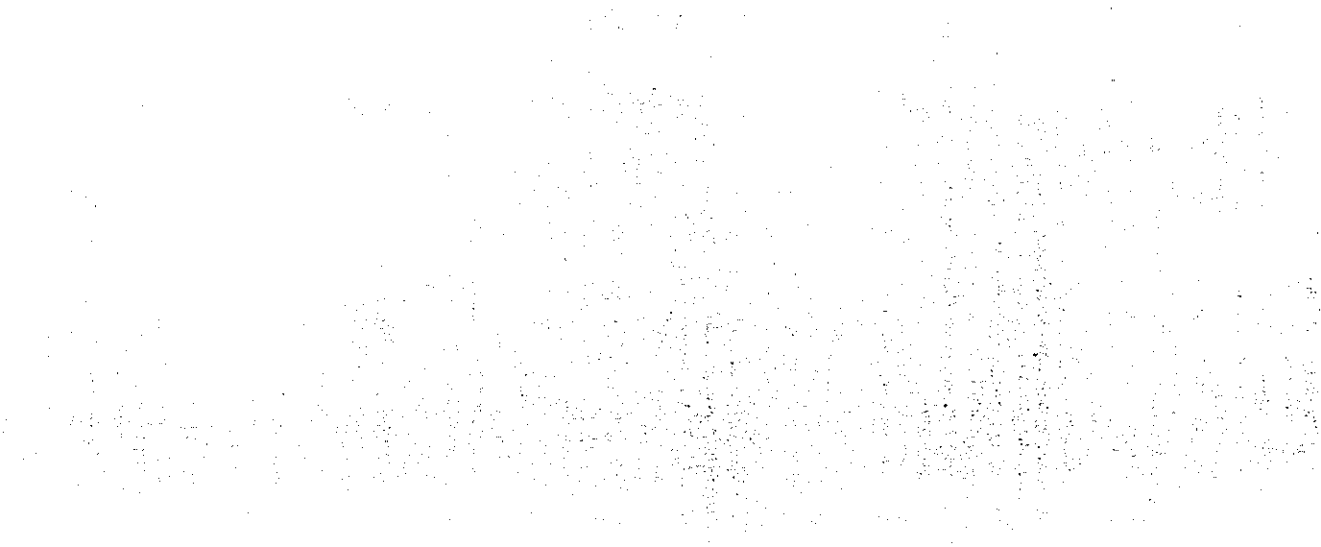
PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

GLOSSARY FOR STATISTICAL TABLES

Key to results of statistical tests:

** Statistically significant difference from the control group mean at the 1% level (analysis as detailed in Statistical Methods Section).

* Statistically significant difference from the control group mean at the 5% level (analysis as detailed in Statistical Methods Section).



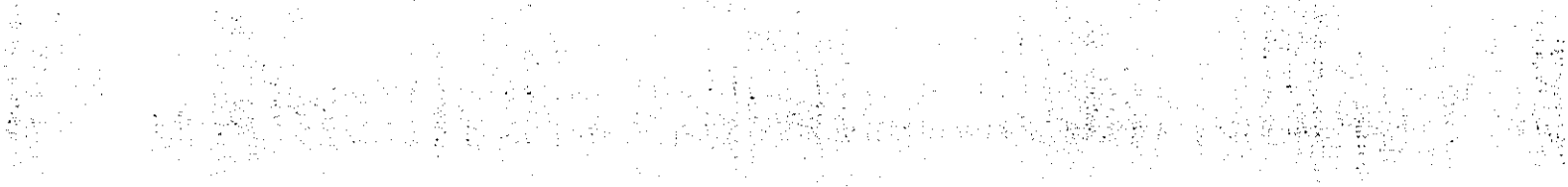
GLOSSARY FOR STATISTICAL TABLES - continued

The following were excluded from statistical analysis:

F_0 Parents:
Bodyweights - Animal 162 week 10 - 444g
Food consumption - Cage 45 week 1 - 3.2g
Pregnancy weight - Animal 191 day 15 - 259g
Pregnancy weights - Animal 175 - killed difficult parturition.
Lactation weight - Animal 45 day 5 - 344g
- Animal 87 day 16 - 269g

F_1 Parents:
Bodyweights - Animal 61 week 8 - 348g
- Animal 113 week 5 - 102g
- Animal 116 week 5 - 145g
- Animal 137 week 9 - 347g

Food consumption - Cage 2 week 7 - 19g
- Cage 5 week 2 - 6.4g
- Cage 8 week 2 - 5.6g
- Cage 11 week 1 - 3.8g
- Cage 14 week 2 - 11g
- Cage 42 week 6 - 16g
- Cage 43 week 2 - 3.3g
- Cage 45 week 2 - 8.0g
- Cage 59 week 10 - 14g
- Cage 76 week 1 - 6.1g
- Cage 84 weeks 9-11 - 50, 42, 41g
- Cage 85 weeks 10-11 - 53, 48g
- Cage 88 weeks 9-11 - 52, 51, 51g
- Cage 89 weeks 5-11 - 52, 43, 49, 55, 60, 49, 51g
- Cage 91 weeks 9-10 - 48, 52g
- Cage 95 weeks 1, 9, 10 - 3.4, 52, 42g



PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 5

INTERGROUP COMPARISON OF BODYWEIGHTS (g) - MALES

FO PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	77.5	77.0	76.8	78.3
	S.D.	6.8	7.4	6.9	7.7
	N	24	24	24	24
Week 2	MEAN	124.6	125.6	123.8	120.0
	S.D.	10.0	10.5	11.5	11.4
	N	24	24	24	24
	ADJUSTED MEAN	124.4	126.2	124.7	118.7**
Week 3	MEAN	173.8	173.8	174.7	170.9
	S.D.	13.3	12.0	14.2	13.6
	N	24	24	24	24
	ADJUSTED MEAN	173.5	174.6	175.9	169.1**
Week 4	MEAN	219.1	221.0	221.8	215.7
	S.D.	14.5	12.3	16.7	16.6
	N	24	24	24	24
	ADJUSTED MEAN	218.8	221.9	223.2*	213.6*
Week 5	MEAN	271.2	271.0	272.5	268.3
	S.D.	16.3	14.0	20.3	17.5
	N	24	24	24	24
	ADJUSTED MEAN	270.8	272.1	274.1	266.0
Week 6	MEAN	305.6	309.8	313.8	309.0
	S.D.	16.9	14.9	22.4	18.7
	N	24	24	24	24
	ADJUSTED MEAN	305.3	310.9	315.5**	306.6

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 5

INTERGROUP COMPARISON OF BODYWEIGHTS (g) - MALES

F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 7	MEAN	336.9	336.5	340.9	341.3
	S.D.	17.3	19.8	27.1	21.0
	N	24	24	24	24
	ADJUSTED MEAN	336.5	337.7	342.7	338.6
Week 8	MEAN	355.1	362.5	370.6	363.2
	S.D.	19.4	21.5	28.0	21.9
	N	24	24	24	24
	ADJUSTED MEAN	354.7	363.7	372.4**	360.6
Week 9	MEAN	379.8	380.7	389.8	387.0
	S.D.	21.0	22.0	28.4	25.9
	N	24	24	23	24
	ADJUSTED MEAN	379.5	381.9	391.4*	384.4
Week 10	MEAN	399.3	400.1	413.9	408.5
	S.D.	20.2	24.2	31.2	27.7
	N	24	24	23	23
	ADJUSTED MEAN	399.0	401.7	415.6**	405.6
Week 11	MEAN	417.1	417.8	431.9	426.0
	S.D.	21.8	26.1	33.0	29.9
	N	24	24	23	24
	ADJUSTED MEAN	416.8	419.1	433.6**	423.3
Week 12	MEAN	432.2	436.2	450.9	444.1
	S.D.	22.5	28.2	32.4	30.7
	N	24	24	23	24
	ADJUSTED MEAN	431.9	437.5	452.7**	441.5

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 6

INTERGROUP COMPARISON OF BODYWEIGHTS (g) - FEMALES

F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	73.0	71.6	72.0	71.6
	S.D.	6.8	7.4	7.0	6.8
	N	24	24	24	24
Week 2	MEAN	111.6	110.4	111.4	107.0
	S.D.	9.1	9.6	10.3	11.4
	N	24	24	24	24
	ADJUSTED MEAN	110.2	111.0	111.5	107.7*
Week 3	MEAN	141.8	139.8	143.9	138.6
	S.D.	9.5	9.2	10.4	10.4
	N	24	24	24	24
	ADJUSTED MEAN	140.4	140.4	144.0*	139.3
Week 4	MEAN	163.1	161.9	165.5	162.9
	S.D.	9.5	11.7	11.4	11.3
	N	24	24	24	24
	ADJUSTED MEAN	161.4	162.7	165.6*	163.7
Week 5	MEAN	190.4	186.7	188.8	186.5
	S.D.	11.1	13.3	13.5	13.0
	N	24	24	24	24
	ADJUSTED MEAN	188.7	187.4	188.8	187.2
Week 6	MEAN	204.6	205.8	206.5	205.5
	S.D.	10.2	16.0	12.8	14.2
	N	24	24	24	24
	ADJUSTED MEAN	202.8	206.7	206.6	206.3

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 6
INTERGROUP COMPARISON OF BODYWEIGHTS (g) - FEMALES
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Week 7	MEAN	220.0	215.0	216.7	214.4
	S.D.	12.2	16.8	14.7	13.8
	N	24	24	24	24
	ADJUSTED MEAN	218.3	215.8	216.8	215.3
Week 8	MEAN	227.5	226.9	229.0	225.8
	S.D.	13.1	16.1	12.8	14.8
	N	24	24	24	24
	ADJUSTED MEAN	226.1	227.5	229.1	226.4
Week 9	MEAN	237.4	235.0	233.7	236.4
	S.D.	13.6	17.8	15.1	15.5
	N	24	24	24	24
	ADJUSTED MEAN	235.6	235.9	233.8	237.3
Week 10	MEAN	247.4	245.5	248.0	249.4
	S.D.	14.2	18.0	13.6	17.2
	N	24	24	24	24
	ADJUSTED MEAN	246.0	246.2	248.1	250.1
Week 11	MEAN	252.9	248.2	250.2	250.9
	S.D.	14.7	16.9	14.9	15.6
	N	24	24	24	24
	ADJUSTED MEAN	251.1	249.0	250.3	251.8
Week 12	MEAN	260.8	254.5	256.8	258.8
	S.D.	16.4	18.6	13.8	16.7
	N	24	24	24	24
	ADJUSTED MEAN	259.0	255.3	256.9	259.6

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 7
INTERGROUP COMPARISON OF BODYWEIGHTS (g) DURING PREGNANCY
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Litter A					
Day 1	MEAN	266.5	260.9	265.8	265.3
	S.D.	14.8	23.1	15.7	21.4
	N	23	21	19	21
Day 8	MEAN	289.4	286.7	291.6	294.6
	S.D.	14.7	23.9	13.0	19.2
	N	23	21	19	21
	ADJUSTED MEAN	287.7	289.3	291.4	294.5** ↑
Day 15	MEAN	319.1	315.5	319.3	323.2
	S.D.	17.8	24.8	14.7	21.9
	N	23	21	19	20
	ADJUSTED MEAN	317.6	319.0	319.5	323.1* ↑
Day 22	MEAN	376.8	375.4	377.8	379.0
	S.D.	20.9	31.9	27.3	34.2
	N	23	20	17	20
	ADJUSTED MEAN	374.9	382.3	377.8	377.0

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 8
INTERGROUP COMPARISON OF BODYWEIGHTS (g) DURING LACTATION
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Litter A					
Day 1	MEAN	300.3	296.9	307.6	309.0
	S.D.	16.5	20.9	15.9	23.2
	N	21	20	19	21
Day 5	MEAN	319.6	310.1	315.9	313.9
	S.D.	13.0	21.0	17.3	23.2
	N	20	19	19	21
	ADJUSTED MEAN	322.3	315.9*	313.5**	310.3**
Day 11	MEAN	335.0	325.0	337.3	337.5
	S.D.	14.0	23.4	16.0	24.0
	N	20	20	18	19
	ADJUSTED MEAN	337.5	330.8	335.1	331.4
Day 16	MEAN	344.8	337.5	344.0	348.5
	S.D.	15.8	27.5	20.6	23.7
	N	21	18	18	17
	ADJUSTED MEAN	348.0	341.3	342.5	341.2
Day 22	MEAN	343.4	341.0	347.8	354.8
	S.D.	17.3	24.2	16.4	24.4
	N	21	20	18	19
	ADJUSTED MEAN	345.7	345.9	346.2	349.3
Day 29	MEAN	325.1	313.6	326.8	343.7
	S.D.	12.8	22.4	17.3	22.5
	N	21	20	18	19
	ADJUSTED MEAN	328.1	317.6*	325.5	338.9*

4% ↓

↑

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 9
INTERGROUP COMPARISON OF BODYWEIGHTS (g) - MALES
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000	
Week 1	MEAN	80.0	73.7*	72.7**	59.3**	
	S.D.	8.4	9.0	9.9	7.4	
	N	24	24	24	23	
Week 2	MEAN	128.6	118.2	120.9	97.8	
	S.D.	11.2	15.1	14.0	10.1	
	N	24	24	24	23	
	ADJUSTED MEAN	119.3	115.9	119.6	111.5*	6% ↓
Week 3	MEAN	182.4	174.4	170.9	140.4	
	S.D.	12.5	13.5	17.0	14.2	
	N	24	24	24	23	
	ADJUSTED MEAN	169.7	171.2	169.2	158.8**	6% ↓
Week 4	MEAN	236.2	228.0	223.3	186.6	
	S.D.	15.7	17.4	20.9	16.7	
	N	24	23	24	23	
	ADJUSTED MEAN	220.7	224.8	221.1	208.4**	6% ↓
Week 5	MEAN	285.2	278.1	273.2	234.1	
	S.D.	15.6	20.0	24.5	24.3	
	N	24	23	22	23	
	ADJUSTED MEAN	268.1	274.3	272.1	257.4	
Week 6	MEAN	322.6	315.9	310.5	270.7	
	S.D.	16.4	22.1	26.1	21.4	
	N	24	22	23	23	
	ADJUSTED MEAN	307.0	312.3	309.1	291.9*	5% ↓

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 9
INTERGROUP COMPARISON OF BODYWEIGHTS (g) - MALES
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000	
Week 7	MEAN	352.1	347.5	345.6	299.6	
	S.D.	17.9	25.3	28.4	22.3	
	N	24	22	24	23	
	ADJUSTED MEAN	336.7	344.1	343.4	321.3*	
Week 8	MEAN	378.8	370.8	373.2	323.4	
	S.D.	18.2	28.0	29.8	25.7	
	N	24	21	24	23	5% ↓
	ADJUSTED MEAN	363.8	367.4	370.9	344.3*	
Week 9	MEAN	398.0	393.1	396.3	345.3	
	S.D.	21.8	31.3	29.7	25.3	
	N	24	22	24	23	
	ADJUSTED MEAN	384.6	390.1	394.3	364.2*	5% ↓
Week 10	MEAN	415.5	407.5	416.4	364.9	
	S.D.	25.7	32.5	29.1	28.5	
	N	24	22	24	23	
	ADJUSTED MEAN	401.0	404.1	414.3	385.2	
Week 11	MEAN	432.0	422.9	432.4	380.4	
	S.D.	22.7	34.2	29.2	30.8	
	N	24	22	24	23	
	ADJUSTED MEAN	418.4	419.5	430.4	399.3	
Week 12	MEAN	443.6	432.3	446.0	387.0	
	S.D.	22.0	39.7	32.4	32.8	
	N	23	22	24	23	
	ADJUSTED MEAN	427.8	428.2	443.3	409.2	

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 10
INTERGROUP COMPARISON OF BODYWEIGHTS (g) - FEMALES
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Week 1	MEAN	76.0	70.8*	67.3**	57.5**
	S.D.	8.9	7.8	7.2	9.0
	N	24	24	24	24
Week 2	MEAN	115.4	110.7	104.8	91.4
	S.D.	12.7	10.9	8.3	12.2
	N	24	24	24	22
	ADJUSTED MEAN	105.4	107.2	105.7	105.1
Week 3	MEAN	152.8	148.6	139.8	124.1
	S.D.	11.6	12.3	9.1	14.1
	N	24	24	24	24
	ADJUSTED MEAN	143.4	145.2	140.4	136.2*
Week 4	MEAN	181.0	176.6	168.5	153.0
	S.D.	15.8	13.7	13.2	14.3
	N	24	24	24	24
	ADJUSTED MEAN	170.6	172.8	169.3	166.5
Week 5	MEAN	204.0	200.1	192.9	178.2
	S.D.	15.9	13.6	13.7	16.4
	N	24	24	24	24
	ADJUSTED MEAN	194.9	196.8	193.6	189.9
Week 6	MEAN	221.8	215.7	207.4	192.5
	S.D.	13.4	15.5	15.7	16.5
	N	24	24	24	24
	ADJUSTED MEAN	213.7	212.8	208.0	203.0*

5% ↓

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 10
INTERGROUP COMPARISON OF BODYWEIGHTS (g) - FEMALES
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Week 7	MEAN	234.0	231.2	223.5	205.3
	S.D.	16.0	15.5	18.1	21.6
	N	24	23	24	24
	ADJUSTED MEAN	225.4	227.9	224.2	216.6
Week 8	MEAN	240.1	242.6	233.9	215.1
	S.D.	20.7	16.6	18.8	20.7
	N	24	23	24	24
	ADJUSTED MEAN	231.1	239.2	234.6	226.9
Week 9	MEAN	248.5	251.9	242.1	226.1
	S.D.	16.9	18.5	18.6	20.6
	N	24	23	23	24
	ADJUSTED MEAN	239.4	248.2	243.1	237.7
Week 10	MEAN	255.9	260.4	249.6	234.6
	S.D.	21.1	17.7	19.1	21.5
	N	24	23	24	24
	ADJUSTED MEAN	245.8	256.5*		247.7
Week 11	MEAN	261.7	261.8	254.5	238.8
	S.D.	21.7	20.7	16.6	23.2
	N	24	23	24	24
	ADJUSTED MEAN	251.4	258.0	255.3	252.3
Week 12	MEAN	265.1	265.5	257.5	240.3
	S.D.	23.9	18.0	20.4	23.1
	N	24	23	24	24
	ADJUSTED MEAN	255.1	261.6	258.3	253.3

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 11

INTERGROUP COMPARISON OF BODYWEIGHTS (g) DURING PREGNANCY

F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Litter A					
Day 1	MEAN	281.9	276.9	280.3	257.4** 9% ↓
	S.D.	19.4	19.9	17.1	20.0
	N	23	22	21	19
Day 8	MEAN	308.2	304.6	306.1	288.4
	S.D.	18.0	21.2	16.3	23.7
	N	23	22	21	19
	ADJUSTED MEAN	301.6	302.3	301.0	304.8
Day 15	MEAN	340.3	333.1	334.6	314.6
	S.D.	19.7	24.3	15.9	25.8
	N	23	22	21	19
	ADJUSTED MEAN	333.3	330.4	329.1	332.3
Day 22	MEAN	412.0	408.2	406.0	384.1
	S.D.	26.2	30.6	23.9	31.2
	N	23	22	21	18
	ADJUSTED MEAN	403.6	405.0	399.4	406.2
Litter B					
Day 1	MEAN	317.0		314.8	302.7
	S.D.	22.3		20.8	27.8
	N	21		20	18
Day 8	MEAN	345.7		338.2	326.8
	S.D.	21.0		19.1	29.8
	N	21		20	18
	ADJUSTED MEAN	341.0		335.7* 1%	335.0* 2% ↓
Day 15	MEAN	378.4		369.1	350.6
	S.D.	23.3		20.3	32.0
	N	21		20	18
	ADJUSTED MEAN	373.7		366.7	359.3**
Day 22	MEAN	448.4		436.3	413.9
	S.D.	30.0		31.1	39.6
	N	21		20	18 5%
	ADJUSTED MEAN	443.8		434.3	423.0*

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 11
INTERGROUP COMPARISON OF BODYWEIGHTS (g) DURING PREGNANCY
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	1000
Litter C			
Day 1	MEAN	264.0	272.0
	S.D.	16.8	19.2
	N	20	17
Day 8	MEAN	296.0	304.5
	S.D.	19.5	20.9
	N	20	17
	ADJUSTED MEAN	300.4	300.2
Day 15	MEAN	333.7	338.7
	S.D.	18.9	20.7
	N	20	17
	ADJUSTED MEAN	337.7	334.8
Day 22	MEAN	395.8	412.3
	S.D.	26.5	25.9
	N	20	17
	ADJUSTED MEAN	400.2	407.9

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 12
INTERGROUP COMPARISON OF BODYWEIGHTS (g) DURING LACTATION
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Litter A					
Day 1	MEAN	320.6	318.4	323.2	309.9
	S.D.	18.3	22.5	17.4	26.8
	N	23	22	21	18
Day 5	MEAN	337.3	330.6	333.2	308.6
	S.D.	16.8	22.0	19.0	27.5
	N	23	22	20	14
	ADJUSTED MEAN	334.9	330.4	328.8* 2%	318.4** 5%
Day 11	MEAN	358.1	353.2	351.5	333.8
	S.D.	19.9	25.7	19.8	29.4
	N	23	22	20	13
	ADJUSTED MEAN	355.6	353.5	347.1* 3%	343.3* 4%
Day 16	MEAN	363.7	356.6	359.0	343.3
	S.D.	19.3	23.3	19.8	33.1
	N	23	22	20	13
	ADJUSTED MEAN	361.3	357.1	354.9	351.7
Day 22	MEAN	353.7	349.9	353.6	342.5
	S.D.	22.3	21.1	13.8	28.7
	N	23	22	20	13
	ADJUSTED MEAN	351.6	350.1	349.9	351.1
Day 29	MEAN	336.2	326.2	332.1	321.8
	S.D.	20.1	21.8	16.8	29.2
	N	23	22	20	13
	ADJUSTED MEAN	334.1	325.8*	328.5	330.5
Litter B					
Day 1	MEAN	360.4		357.1	337.1** 6%
	S.D.	21.4		23.9	29.4
	N	22		20	20
Day 5	MEAN	374.3		368.7	342.6
	S.D.	25.1		21.5	31.3
	N	21		19	19
	ADJUSTED MEAN	367.2		362.7	356.0** 3%

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 13
INTERGROUP COMPARISON OF FOOD CONSUMPTION (g/RAT/DAY) - MALES
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	18.9	18.8	18.4	17.2**
	S.D.	1.1	0.9	1.3	1.5
	N	12	11	12	12
Week 2	MEAN	23.9	24.3	24.0	23.7
	S.D.	1.3	1.1	1.5	2.0
	N	12	12	12	12
Week 3	MEAN	26.3	27.5	27.3	26.6
	S.D.	1.3	2.0	1.4	3.6
	N	12	12	12	12
Week 4	MEAN	30.1	30.5	30.3	31.4
	S.D.	1.6	2.2	2.1	3.1
	N	12	12	12	12
Week 5	MEAN	30.3	31.9*	31.6	32.7**
	S.D.	1.6	2.7	1.6	2.1
	N	12	12	12	12
Week 6	MEAN	31.2	31.0	31.7	33.3**
	S.D.	1.4	2.4	2.2	1.9
	N	12	12	12	12
Week 7	MEAN	30.9	31.5	32.8*	33.8**
	S.D.	1.9	2.5	2.2	2.2
	N	12	12	12	12
Week 8	MEAN	30.1	30.4	30.7	32.7**
	S.D.	1.4	2.3	2.8	2.0
	N	12	12	12	12
Week 9	MEAN	30.6	31.0	32.1	33.7**
	S.D.	1.3	2.2	2.5	2.4
	N	12	12	12	12
Week 10	MEAN	30.2	30.7	31.5	33.4**
	S.D.	1.1	2.1	2.0	2.3
	N	12	12	12	12
Week 11	MEAN	29.3	31.3*	31.6**	32.9**
	S.D.	1.1	2.6	2.0	1.8
	N	12	12	12	12

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 14

INTERGROUP COMPARISON OF FOOD CONSUMPTION (g/RAT/DAY) - FEMALES

F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	17.7	17.1	17.3	16.2**
	S.D.	1.2	1.4	1.3	1.5
	N	12	12	12	12
Week 2	MEAN	21.1	20.0	20.4	20.1
	S.D.	2.7	1.0	0.9	1.1
	N	12	12	12	12
Week 3	MEAN	21.4	21.4	21.0	21.9
	S.D.	1.3	2.6	1.3	2.5
	N	12	12	12	12
Week 4	MEAN	23.3	22.7	22.5	24.2
	S.D.	2.0	1.5	1.3	1.7
	N	12	12	12	12
Week 5	MEAN	22.3	23.8	22.8	24.3*
	S.D.	1.4	3.2	0.9	2.5
	N	12	12	12	12
Week 6	MEAN	23.1	23.1	22.6	24.0
	S.D.	1.5	2.0	1.4	2.1
	N	12	12	12	12
Week 7	MEAN	23.1	24.0	23.8	24.9*
	S.D.	1.2	2.3	0.9	2.4
	N	12	12	12	12
Week 8	MEAN	22.3	22.5	23.4	24.5**
	S.D.	1.5	1.6	1.5	2.4
	N	12	12	12	12
Week 9	MEAN	22.5	23.3	24.1*	25.8**
	S.D.	1.5	2.3	1.7	2.1
	N	12	12	12	12
Week 10	MEAN	21.7	21.4	23.3*	24.6**
	S.D.	1.2	1.6	1.5	1.9
	N	12	12	12	12
Week 11	MEAN	21.2	21.4	23.1**	22.9**
	S.D.	1.1	1.7	1.4	1.0
	N	12	12	12	12

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 15

INTERGROUP COMPARISON OF FOOD CONSUMPTION (g/RAT/DAY) - MALES

F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	19.1	19.0	18.3	16.5**
	S.D.	1.3	1.7	1.3	2.0
	N	12	12	12	12
Week 2	MEAN	24.7	25.1	24.9	21.8**
	S.D.	1.7	2.3	2.1	1.8
	N	10	11	12	12
Week 3	MEAN	28.4	28.1	28.2	26.4*
	S.D.	2.7	1.9	2.1	1.9
	N	12	12	12	12
Week 4	MEAN	30.8	31.0	31.7	31.5
	S.D.	3.5	3.7	4.7	3.7
	N	12	12	12	12
Week 5	MEAN	31.4	29.2	28.8	28.3*
	S.D.	3.0	3.4	3.1	4.2
	N	12	12	12	11
Week 6	MEAN	32.7	34.9	32.5	32.2
	S.D.	1.9	8.6	2.1	2.7
	N	12	11	12	11
Week 7	MEAN	33.5	33.8	35.0	32.6
	S.D.	1.9	2.6	4.1	3.1
	N	11	12	12	11
Week 8	MEAN	33.3	33.3	34.5	33.3
	S.D.	1.7	2.3	2.0	2.8
	N	12	12	12	11
Week 9	MEAN	33.5	32.9	34.5	34.2
	S.D.	1.8	2.4	1.9	4.9
	N	12	12	12	11
Week 10	MEAN	33.1	32.6	34.2	34.4
	S.D.	2.1	2.6	1.9	4.9
	N	12	12	12	10
Week 11	MEAN	32.3	32.4	33.9	32.7
	S.D.	2.2	2.2	2.3	4.2
	N	12	12	12	10

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 16

INTERGROUP COMPARISON OF FOOD CONSUMPTION (g/RAT/DAY) - FEMALES

F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Week 1	MEAN	17.6	17.1	16.9	15.4**
	S.D.	1.1	2.0	1.9	0.9
	N	11	12	12	10
Week 2	MEAN	22.7	22.5	20.7*	20.6*
	S.D.	2.4	2.7	1.5	1.5
	N	11	11	12	12
Week 3	MEAN	23.5	24.2	23.8	23.6
	S.D.	2.0	3.4	2.4	3.8
	N	12	12	12	12
Week 4	MEAN	25.2	24.9	27.7	28.4*
	S.D.	3.0	2.6	3.8	6.4
	N	12	12	12	12
Week 5	MEAN	24.2	23.3	23.7	24.5
	S.D.	2.0	2.9	4.2	4.4
	N	12	12	12	12
Week 6	MEAN	24.6	25.3	26.8	30.1**
	S.D.	3.7	1.3	3.0	7.1
	N	12	12	12	12
Week 7	MEAN	24.4	26.0	26.6	31.7**
	S.D.	1.5	1.5	2.6	7.1
	N	12	12	12	12
Week 8	MEAN	25.3	26.1	27.5	32.3**
	S.D.	3.5	2.0	3.3	7.5
	N	12	12	12	12
Week 9	MEAN	24.9	26.3	27.8*	29.5**
	S.D.	1.2	2.3	3.6	4.0
	N	12	12	12	8
Week 10	MEAN	25.0	25.7	26.6	28.6**
	S.D.	2.0	2.0	3.8	2.4
	N	12	12	11	8
Week 11	MEAN	24.4	23.9	26.0	32.0**
	S.D.	1.7	1.4	2.7	5.5
	N	12	12	12	10

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 17

INTERGROUP COMPARISON OF PRE-COITAL INTERVAL

F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Litter A					
Prop. 1 day		5 (17.9%)	11 (36.7%)	18** (52.9%)	12 (40.0%)
Prop. 2 day		6 (21.4%)	7 (23.3%)	5 (14.7%)	10 (33.3%)
Prop. 3 day		4 (14.3%)	3 (10.0%)	3 (8.8%)	5 (16.7%)
Prop. 4 day		3 (10.7%)	3 (10.0%)	2 (5.9%)	1 (3.3%)
Prop. >4 days		10 (35.7%)	6 (20.0%)	6 (17.6%)	2* (6.7%)
Pre-coital interval	MEAN	4.29	3.10	2.47**	2.03**
	S.D.	3.38	3.10	2.11	1.16
	N	28	30	34	30

Reduced pre-coital intervals are not adverse.

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 18

INTERGROUP COMPARISON OF PRE-COITAL INTERVAL

F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Litter A					
Prop. 1 day		6 (22.2%)	6 (22.2%)	10 (34.5%)	9 (37.5%)
Prop. 2 day		5 (18.5%)	7 (25.9%)	8 (27.6%)	5 (20.8%)
Prop. 3 day		8 (29.6%)	7 (25.9%)	3 (10.3%)	3 (12.5%)
Prop. 4 day		3 (11.1%)	5 (18.5%)	6 (20.7%)	5 (20.8%)
Prop. >4 days		5 (18.5%)	2 (7.4%)	2 (6.9%)	2 (8.3%)
Pre-coital interval	MEAN	3.11	2.85	2.76	2.58
	S.D.	1.91	1.81	2.52	1.82
	N	27	27	29	24
Litter B					
Prop. 1 day		13 (48.1%)		10 (40.0%)	10 (43.5%)
Prop. 2 day		3 (11.1%)		5 (20.0%)	3 (13.0%)
Prop. 3 day		8 (29.6%)		8 (32.0%)	7 (30.4%)
Prop. 4 day		0 (0.0%)		0 (0.0%)	2 (8.7%)
Prop. >4 days		3 (11.1%)		2 (8.0%)	1 (4.3%)
Pre-coital interval	MEAN	2.30		2.36	2.26
	S.D.	1.81		1.91	1.48
	N	27		25	23
Litter C					
Prop. 1 day		6 (28.6%)			1 (4.8%)
Prop. 2 day		8 (38.1%)			11 (52.4%)
Prop. 3 day		5 (23.8%)			5 (23.8%)
Prop. 4 day		2 (9.5%)			4 (19.0%)
Pre-coital interval	MEAN	2.14			2.57
	S.D.	0.96			0.87
	N	21			21

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 19

INTERGROUP COMPARISON OF GESTATION PERIOD

F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Litter A					
Prop. <22 days		0 (0.0%)	0 (0.0%)	1 (5.3%)	1 (4.8%)
Prop. 22 days		20 (87.0%)	17 (81.0%)	16 (84.2%)	17 (81.0%)
Prop. >22 days		3 (13.0%)	4 (19.0%)	2 (10.5%)	3 (14.3%)
Gestation length	MEAN	22.2	22.2	22.1	22.1
	S.D.	0.6	0.4	0.4	0.4
	N	23	21	19	21

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 21

INTERGROUP COMPARISON OF FERTILITY

	Atmospheric Concentration of Perchloroethylene (ppm)							
	0(Control)		100		300		1000	
Males								
F1A Litter	18/23	(78.3%)	16/21	(76.2%)	14/19	(73.7%)	17/22	(77.3%)
F2A Litter	19/22	(86.4%)	18/21	(85.7%)	18/22	(81.8%)	19/20	(95.0%)
F2B Litter	18/22	(81.8%)			20/21	(95.2%)	14/20	(70.0%)
F2C Litter	21/23	(91.3%)					16/19	(84.2%)
Females								
F1A Litter	23/24	(95.8%)	21/23	(91.3%)	19/23	(82.6%)	21/23	(91.3%)
F2A Litter	23/23	(100%)	22/23	(95.7%)	21/24	(87.5%)	20/22	(90.9%)
F2B Litter	22/24	(91.7%)			21/23	(91.3%)	20/22	(90.9%)
F2C Litter	23/24	(95.8%)					19/23	(82.6%)

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 20

INTERGROUP COMPARISON OF GESTATION PERIOD

F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Litter A					
Prop. <22 days		0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (5.3%)
Prop. 22 days		20 (87.0%)	21 (95.5%)	21 (100%)	14 (73.7%)
Prop. >22 days		3 (13.0%)	1 (4.5%)	0 (0.0%)	4 (21.1%)
Gestation length	MEAN	22.1	22.0	22.0	22.2
	S.D.	0.3	0.2	0.0	0.5
	N	23	22	21	19
Litter B					
Prop. 22 days		19 (90.5%)		18 (90.0%)	14 (77.8%)
Prop. >22 days		2 (9.5%)		2 (10.0%)	4 (22.2%)
Gestation length	MEAN	22.1		22.1	22.2
	S.D.	0.3		0.3	0.4
	N	21		20	18
Litter C					
Prop. 22 days		17 (85.0%)			16 (94.1%)
Prop. >22 days		3 (15.0%)			1 (5.9%)
Gestation length	MEAN	22.1			22.1
	S.D.	0.4			0.2
	N	20			17

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 22

INTERGROUP COMPARISON OF PUPS LIVE BORN

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F1A Litter					
Prop. of pups born live		224/226	226/230	177/179	206/222**
Percentage	MEAN	97.5	98.1	99.0	91.7*
	S.D.	10.5	8.7	3.1	15.2
	N	23	21	19	21
Prop. of litters with all pups born live		21/23	20/21	17/19	12/21*
F2A Litter					
Prop. of pups born live		264/274	256/263	213/229	165/191**
Percentage	MEAN	96.2	97.7	92.3	83.1**
	S.D.	7.9	5.5	11.8	21.2
	N	23	22	21	19
Prop. of litters with all pups born live		17/23	18/22	13/21	8/19
F2B Litter					
Prop. of pups born live		220/233		160/167	126/158**
Percentage	MEAN	94.0		95.7	78.3**
	S.D.	17.1		7.1	29.1
	N	22		20	20
Prop. of litters with all pups born live		18/22		14/20	10/20
F2C Litter					
Prop. of pups born live		218/220			201/209
Percentage	MEAN	99.2			96.9
	S.D.	2.9			5.1
	N	23			19
Prop. of litters with all pups born live		21/23			13/19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 23
INTERGROUP COMPARISON OF PUP SURVIVAL

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F1A Litter					
Days 1-5					
Prop. of pups surviving		209/224	214/226	170/177	189/206
Percentage	MEAN	90.6	93.5	92.4	87.8
	S.D.	21.9	10.3	22.9	23.1
	N	23	21	19	21
Prop. of litters with all pups surviving		14/23	12/21	14/19	11/21
Days 5-22					
Prop. of pups surviving		207/209	214/214	168/170	177/189**
Percentage	MEAN	99.0	100.0	98.9	89.2*
	S.D.	3.2	0.0	3.3	22.5
	N	22	21	18	20
Prop. of litters with all pups surviving		21/23	21/21	17/19	12/21*

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 23
INTERGROUP COMPARISON OF PUP SURVIVAL

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
F2A Litter					
Days 1-5					
Prop. of pups surviving		244/266	234/256	189/213	105/165**
Percentage	MEAN	90.1	91.6	86.0	53.7**
	S.D.	20.3	12.2	24.2	40.5
	N	23	22	21	19
Prop. of litters with all pups surviving		16/23	11/22	12/21	2/19**
Days 5-22					
Prop. of pups surviving		241/244	231/234	187/189	101/105
Percentage	MEAN	98.9	98.9	99.1	92.2**
	S.D.	3.2	4.1	2.7	26.6
	N	23	22	20	14
Prop. of litters with all pups surviving		20/23	20/22	19/21	17/19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 23

INTERGROUP COMPARISON OF PUP SURVIVAL
EXCLUDING WHOLE LITTER LOSSES

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F2A Litter					
Days 1-5					
Prop. of pups surviving		244/266	234/256	189/208	102/136**
Percentage	MEAN	90.1	91.6	90.3	75.9**
	S.D.	20.3	12.2	14.3	26.4
	N	23	22	20	13
Prop. of litters with all pups surviving		16/23	11/22	12/20	2/13**
Days 5-22					
Prop. of pups surviving		241/244	231/234	187/189	101/102
Percentage	MEAN	98.9	98.9	99.1	99.3
	S.D.	3.2	4.1	2.7	2.5
	N	23	22	20	13
Prop. of litters with all pups surviving		20/23	20/22	18/20	12/13

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 23

INTERGROUP COMPARISON OF PUP SURVIVAL

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	300	1000
F2B Litter				
Days 1-5				
Prop. of pups surviving		205/220	149/160	87/126**
Percentage	MEAN	89.2	89.7	56.7**
	S.D.	29.5	24.1	42.3
	N	22	20	20
Prop. of litters with all pups surviving		18/22	14/20	6/20**
F2C Litter				
Days 1-5				
Prop. of pups surviving		196/218		185/201
Percentage	MEAN	79.3		87.8
	S.D.	35.2		22.6
	N	23		19
Prop. of litters with all pups surviving		10/23		7/19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 24

INTERGROUP COMPARISON OF LITTER SIZE

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F1A Litter					
Day 1	MEAN	9.7	10.8	9.3	9.8
	S.D.	3.6	3.5	3.9	4.0
	N	23	21	19	21
Day 5	MEAN	9.1	10.2	8.9	9.0
	S.D.	3.5	3.5	3.8	4.1
	N	23	21	19	21
Day 11	MEAN	9.0	10.2	8.9	8.6
	S.D.	3.5	3.5	3.7	4.3
	N	23	21	19	21
Day 16	MEAN	9.0	10.2	8.9	8.5
	S.D.	3.5	3.5	3.7	4.4
	N	23	21	19	21
Day 22	MEAN	9.0	10.2	8.8	8.4
	S.D.	3.5	3.5	3.7	4.3
	N	23	21	19	21
Day 29	MEAN	9.0	10.2	8.8	8.4
	S.D.	3.5	3.5	3.7	4.3
	N	23	21	19	21

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 24

INTERGROUP COMPARISON OF LITTER SIZE
EXCLUDING WHOLE LITTER LOSSES

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F1A Litter					
Day 1	MEAN	10.1	10.8	9.8	10.6
	S.D.	3.2	3.5	3.5	3.1
	N	22	21	18	19
Day 5	MEAN	9.5	10.2	9.4	9.8
	S.D.	3.0	3.5	3.2	3.3
	N	22	21	18	19
Day 11	MEAN	9.4	10.2	9.4	9.5
	S.D.	3.0	3.5	3.1	3.4
	N	22	21	18	19
Day 16	MEAN	9.4	10.2	9.4	9.4
	S.D.	3.0	3.5	3.1	3.5
	N	22	21	18	19
Day 22	MEAN	9.4	10.2	9.3	9.3
	S.D.	3.0	3.5	3.2	3.5
	N	22	21	18	19
Day 29	MEAN	9.4	10.2	9.3	9.3
	S.D.	3.0	3.5	3.2	3.5
	N	22	21	18	19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 24
INTERGROUP COMPARISON OF LITTER SIZE

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000	
F2A Litter						
Day 1	MEAN	11.6	11.6	10.1	8.7**	25%
	S.D.	3.2	2.0	2.9	3.8	
	N	23	22	21	19	
Day 5	MEAN	10.6	10.6	9.0	5.5**	48%
	S.D.	3.7	2.3	3.7	4.3	
	N	23	22	21	19	
Day 11	MEAN	10.5	10.5	8.9	5.3**	
	S.D.	3.6	2.2	3.7	4.4	
	N	23	22	21	19	
Day 16	MEAN	10.5	10.5	8.9	5.3**	
	S.D.	3.6	2.2	3.7	4.4	
	N	23	22	21	19	
Day 22	MEAN	10.5	10.5	8.9	5.3**	
	S.D.	3.6	2.2	3.7	4.4	
	N	23	22	21	19	
Day 29	MEAN	10.5	10.5	8.9	5.3**	
	S.D.	3.6	2.2	3.7	4.4	50%
	N	23	22	21	19	

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 24

INTERGROUP COMPARISON OF LITTER SIZE

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	300	1000	
F2B Litter					
Day 1	MEAN	10.0	8.0	6.3**	37%
	S.D.	3.7	3.1	4.0	
	N	22	20	20	
Day 5	MEAN	9.3	7.5	4.4**	53%
	S.D.	4.6	3.4	4.3	
	N	22	20	20	
F2C Litter					
Day 1	MEAN	9.5		10.6	
	S.D.	5.1		3.5	
	N	23		19	
Day 5	MEAN	8.5		9.7	
	S.D.	5.3		3.6	
	N	23		19	

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 25

INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)

F1A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Males					
Day 1	MEAN	6.2	6.1	5.9	5.5**
	S.D.	0.7	0.4	0.5	0.4
	N	21	21	18	19
Day 5	MEAN	9.2	9.1	8.2	7.8
	S.D.	1.6	1.4	1.1	1.1
	N	21	20	18	18
	ADJUSTED MEAN	8.9	8.8	8.1*	8.3
Day 11	MEAN	18.4	17.5	15.8	13.3
	S.D.	2.9	2.4	2.5	2.4
	N	19	21	17	18
	ADJUSTED MEAN	18.2	17.2	15.7**	13.9**
Day 16	MEAN	26.9	25.6	23.9	19.3
	S.D.	3.6	3.6	3.4	2.7
	N	21	20	18	17
	ADJUSTED MEAN	26.6	25.4	24.0**	20.6**
Day 22	MEAN	42.4	39.4	36.8	31.4
	S.D.	6.3	6.1	5.7	5.3
	N	20	21	18	18
	ADJUSTED MEAN	41.2	39.0	36.8**	33.0**
Day 29	MEAN	79.2	74.4	71.0	59.0
	S.D.	8.8	10.0	8.7	7.8
	N	21	21	18	18
	ADJUSTED MEAN	78.1	73.9*	71.0**	61.2**

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 25

INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)

F1A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Females					
Day 1	MEAN	5.9	5.8	5.7	5.3**
	S.D.	0.9	0.3	0.6	0.5
	N	23	20	18	20
Day 5	MEAN	8.9	8.7	8.0	7.3
	S.D.	1.7	1.1	1.1	1.0
	N	22	19	17	20
	ADJUSTED MEAN	8.7	8.5	7.9**	7.7**
Day 11	MEAN	17.6	17.2	15.5	12.8
	S.D.	3.0	2.2	2.0	2.1
	N	20	20	16	19
	ADJUSTED MEAN	17.4	16.8	15.4**	13.4**
Day 16	MEAN	26.1	24.9	23.4	18.9
	S.D.	4.0	3.4	2.9	2.7
	N	22	19	17	18
	ADJUSTED MEAN	25.7	24.7	23.6**	20.3**
Day 22	MEAN	41.4	38.4	36.4	30.5
	S.D.	6.8	5.6	4.9	5.1
	N	21	20	17	19
	ADJUSTED MEAN	40.2	38.0	36.6**	32.5**
Day 29	MEAN	74.5	71.0	68.1	56.5
	S.D.	8.6	8.4	7.2	7.6
	N	22	20	17	19
	ADJUSTED MEAN	73.6	70.6	68.4**	58.9**

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 26
INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)
F2A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
Males					
Day 1	MEAN	6.1	6.1	6.0	5.5**
	S.D.	0.5	0.3	0.4	0.5
	N	23	22	21	19
Day 5	MEAN	9.1	9.2	8.6	7.1
	S.D.	1.4	0.9	0.9	1.2
	N	23	22	19	13
	ADJUSTED MEAN	9.0	9.0	8.5	7.5**
Day 11	MEAN	18.4	18.9	17.5	16.9
	S.D.	2.9	1.8	1.4	2.1
	N	23	22	18	12
	ADJUSTED MEAN	18.1	18.7	17.3	17.7
Day 16	MEAN	27.6	28.0	26.7	27.2
	S.D.	4.5	3.1	2.6	2.9
	N	23	22	19	12
	ADJUSTED MEAN	27.2	27.7	26.5	28.7
Day 22	MEAN	42.1	43.0	40.2	43.5
	S.D.	6.9	4.7	4.6	4.7
	N	23	22	19	12
	ADJUSTED MEAN	41.6	42.6	39.9	45.6
Day 29	MEAN	79.5	81.1	76.2	79.2
	S.D.	9.8	7.2	6.9	7.0
	N	23	22	19	12
	ADJUSTED MEAN	78.6	80.5	75.7	82.1

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 26

INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)

F2A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
Females					
Day 1	MEAN	5.7	5.7	5.7	5.4*
	S.D.	0.5	0.3	0.4	0.7
	N	23	22	21	17
Day 5	MEAN	8.8	8.5	8.1	6.6
	S.D.	1.2	0.9	1.1	1.1
	N	22	22	20	14
	ADJUSTED MEAN	8.7	8.3	8.0*	6.9**
Day 11	MEAN	18.3	17.6	16.9	15.7
	S.D.	2.4	1.8	1.7	1.4
	N	22	22	19	13
	ADJUSTED MEAN	18.1	17.4	16.7*	16.6*
Day 16	MEAN	27.4	26.4	25.9	26.0
	S.D.	3.9	2.7	2.7	2.2
	N	22	22	20	13
	ADJUSTED MEAN	27.2	26.0	25.7	27.4
Day 22	MEAN	41.0	40.5	38.8	41.0
	S.D.	6.3	3.9	4.5	3.7
	N	22	22	20	13
	ADJUSTED MEAN	40.6	40.0	38.4	43.4
Day 29	MEAN	74.8	74.1	71.1	72.5
	S.D.	8.0	5.7	6.5	4.7
	N	22	22	20	13
	ADJUSTED MEAN	74.2	73.4	70.5	75.7

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 27

INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)

F2B LITTER

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	300	1000
Males				
Day 1	MEAN	6.4	6.2	5.6**
	S.D.	0.6	0.6	0.6
	N	21	19	18
Day 5	MEAN	9.9	8.8	7.4
	S.D.	1.1	0.8	1.5
	N	21	19	13
	ADJUSTED MEAN	9.5	8.8*	8.0**
Females				
Day 1	MEAN	6.0	5.9	5.4**
	S.D.	0.6	0.6	0.7
	N	22	19	17
Day 5	MEAN	9.4	8.8	7.6
	S.D.	1.2	0.8	1.3
	N	21	18	12
	ADJUSTED MEAN	9.2	8.7	8.1**

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 28

INTERGROUP COMPARISON OF PUP BODYWEIGHTS (g)

F2C LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)		
		0(Control)	300	1000
Males				
Day 1	MEAN	6.1		6.1
	S.D.	0.7		0.6
	N	21		19
Day 5	MEAN	8.5		8.4
	S.D.	1.3		1.1
	N	20		18
	ADJUSTED MEAN	8.5		8.4
Females				
Day 1	MEAN	5.8		5.8
	S.D.	0.6		0.7
	N	22		18
Day 5	MEAN	8.0		8.2
	S.D.	1.4		1.4
	N	19		18
	ADJUSTED MEAN	8.1		8.1

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 29

INTERGROUP COMPARISON OF TOTAL LITTER WEIGHT (g)

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F1A Litter					
Day 1	MEAN	57.5	63.5	53.4	52.3
	S.D.	20.4	19.5	20.5	19.5
	N	23	21	19	21
Day 5	MEAN	84.2	88.1	76.0	72.0*
	S.D.	26.8	28.0	23.9	30.5
	N	22	20	18	20
Day 11	MEAN	165.9	173.0	146.5	123.6**
	S.D.	52.5	52.7	46.3	48.4
	N	20	21	17	19
Day 16	MEAN	244.2	249.1	218.9	180.5**
	S.D.	70.7	74.7	59.5	66.6
	N	22	20	18	18
Day 22	MEAN	381.0	384.5	335.1	286.3**
	S.D.	113.1	112.2	89.5	102.0
	N	21	21	18	19
Day 29	MEAN	705.6	725.8	640.3	532.2**
	S.D.	201.5	214.9	178.8	181.7
	N	22	21	18	19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 29

INTERGROUP COMPARISON OF TOTAL LITTER WEIGHT (g)

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
F2A Litter					
Day 1	MEAN	66.8	68.6	59.3	45.9**
	S.D.	16.1	11.0	17.8	19.0
	N	23	22	21	19
Day 5	MEAN	93.8	93.3	79.7	53.5**
	S.D.	31.0	18.7	29.3	26.1
	N	23	22	20	14
Day 11	MEAN	189.2	190.1	162.3	127.5**
	S.D.	57.4	34.5	50.3	50.0
	N	23	22	19	13
Day 16	MEAN	282.5	282.8	241.4*	205.1**
	S.D.	81.4	48.8	66.4	75.0
	N	23	22	20	13
Day 22	MEAN	424.4	434.1	360.9*	325.4**
	S.D.	123.3	72.0	95.7	119.1
	N	23	22	20	13
Day 29	MEAN	792.2	810.0	678.3	585.9**
	S.D.	245.5	139.8	190.7	218.7
	N	23	22	20	13

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 29
INTERGROUP COMPARISON OF TOTAL LITTER WEIGHT (g)

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	300	1000
F2B Litter				
Day 1	MEAN	60.7	48.0	34.9**
	S.D.	19.9	19.2	23.2
	N	22	20	20
Day 5	MEAN	94.7	68.6**	45.2**
	S.D.	27.7	25.9	35.2
	N	21	19	15
F2C Litter				
Day 1	MEAN	54.3		61.8
	S.D.	27.5		18.1
	N	23		19
Day 5	MEAN	79.0		85.0
	S.D.	33.3		23.2
	N	20		18

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 30

INTERGROUP COMPARISON OF WHOLE LITTER LOSSES

	Atmospheric Concentration of Perchloroethylene (ppm)							
	0(Control)		100		300		1000	
F1A Litter	1/23	(4.3%)	0/21	(0.0%)	1/19	(5.3%)	2/21	(9.5%)
F2A Litter	0/23	(0.0%)	0/22	(0.0%)	1/21	(4.8%)	6/19*	(31.6%)
F2B Litter	1/22	(4.5%)			1/20	(5.0%)	5/20	(25.0%)
F2C Litter	3/23	(13.0%)					1/19	(5.3%)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 31

CLINICAL OBSERVATIONS - F_1A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Found dead (cannibalised)				1 1 10-10
Found dead	3 2 1-2	6 3 1-2	2 2 1-1	21 12 1-7
Killed in extremis			1 1 18-18	1 1 7-7
Missing - presumed dead	16 8 5-11	11 9 5-5	9 6 5-11	21 11 5-22
Chromodacryorrhea	1 1 29-29		6 2 29-29	1 1 29-29
Discharge from eye				2 2 29-29
Cold	7 3 1-1	1 1 1-1	5 3 1-1	6 5 1-1

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

TABLE 31

CLINICAL OBSERVATIONS - F_1A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Hind limb damaged	2 1 1-1			
Pale	1 1 1-1			
Small	3 3 1-23	3 3 1-22	1 1 11-11	105 15 1-29
Tail damaged	2 2 16-22	6 2 11-29	1 1 22-22	3 2 1-11
Hind limbs/base of tail swollen	1 1 1-1			
Skin torn on left thigh			1 1 1-1	
Thin				2 2 11-20

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 31

CLINICAL OBSERVATIONS - F_1A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Breathing irregular	1 1 1-1	1 1 1-1		
Mucus secretion from nose			1 1 5-5	
Head swollen, hunched, subdued			1 1 18-18	

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 32

CLINICAL OBSERVATIONS - F_2A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Found dead (cannibalised)			2 1 3-3	1 1 3-3
Found dead	8 6 1-5	6 3 1-1	17 8 1-3	31 14 1-3
Killed investigation				4 2 4-6
Killed in extremis	4 3 1-16	1 1 1-1	6 4 1-3	16 8 1-5
Missing - presumed dead	23 9 5-11	23 10 5-11	18 8 5-11	41 13 2-11
Reduced hindlimb function			1 1 1-1	
Chromodacryorrhea		2 1 22-29	5 2 16-29	4 3 22-29

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 32

CLINICAL OBSERVATIONS - F_2A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Cold	28 8 1-1	34 8 1-1	25 6 1-1	23 9 1-1
Hind limb damaged		1 1 1-1	1 1 1-1	3 2 1-1
Hind limb swollen	2 2 1-1			
Moribund	1 1 1-1			
Pale		2 1 1-1		2 1 1-1
Small	4 3 1-22	10 3 1-22	19 5 1-29	21 7 1-22
Tail damaged	1 1 22-22			

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 32

CLINICAL OBSERVATIONS - F_2A PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Bruised	1 1 1-1	2 2 1-1		
Skin torn on left forelimb			1 1 1-1	
Hind limb malrotated			1 1 1-1	
Head swollen	1 1 16-16			
Head damaged	2 2 1-22			
Cannibalised			1 1 1-1	
Yellow skin			2 1 3-3	

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 33

CLINICAL OBSERVATIONS - F_2B PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Found dead (cannibalised)	2 2 1-1		1 1 1-1	10 5 1-5
Found dead	11 5 1-4		5 4 1-1	28 10 1-5
Killed for humane reasons			3 1 1-1	
Killed in extremis	1 1 1-1		1 1 1-1	4 2 1-1
Missing - presumed dead	6 3 3-5		11 6 3-5	29 11 2-5

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

TABLE 33

CLINICAL OBSERVATIONS - F_2B PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Cold	2 2 1-1		2 1 1-1	14 7 1-1
Moribund				4 2 1-1
Pale	1 1 1-1			
Small	3 2 1-5		3 2 1-5	7 5 1-5
Bruised			1 1 1-1	

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 34

CLINICAL OBSERVATIONS - F_2C PUPS

	Atmospheric Concentration of Perchloroethylene (ppm)			
	0 (Control)	100	300	1000
Found dead	2 2 1-1			8 6 1-1
Missing - presumed dead	22 13 5-5			16 12 5-5
Cold	4 3 1-1			2 2 1-1
Small	15 8 1-5			16 8 1-5
Nose discoloured red	1 1 1-1			

The figures are the number of observations of each clinical finding followed by the number of litters affected and the time period, in days post partum, over which the observations were seen.

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 35
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
KIDNEYS					
MALES					
Terminal Bodyweight (g)					
	MEAN	512.3	520.5	526.9	517.5
	S.D.	30.6	30.6	36.5	40.7
	N	23	24	23	24
Organ Weight (g)					
	MEAN	3.46	3.58	3.69**	4.00**
	S.D.	0.31	0.34	0.40	0.32
	N	23	24	23	24
Organ to Bodyweight Ratio (%)					
	MEAN	0.68	0.69	0.70	0.77
	S.D.	0.06	0.06	0.06	0.05
	N	23	24	23	24
Organ Weight Adjusted For Bodyweight		3.50	3.57	3.66	4.01**
FEMALES					
Terminal Bodyweight (g)					
	MEAN	306.1	298.0	308.2	320.3
	S.D.	21.3	20.1	22.2	34.4
	N	24	22	23	22
Organ Weight (g)					
	MEAN	2.61	2.51	2.49	2.65
	S.D.	0.65	0.20	0.17	0.21
	N	24	22	23	22
Organ to Bodyweight Ratio (%)					
	MEAN	0.86	0.84	0.81	0.83
	S.D.	0.23	0.05	0.04	0.07
	N	24	22	23	22
Organ Weight Adjusted For Bodyweight		2.63	2.62	2.48	2.58

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 35
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
LIVER					
MALES					
Terminal Bodyweight (g)					
	MEAN	512.3	520.5	526.9	517.5
	S.D.	30.6	30.6	36.5	40.7
	N	23	24	23	24
Organ Weight (g)					
	MEAN	20.6	21.2	21.5	22.7**
	S.D.	2.2	1.8	2.8	2.3
	N	23	24	23	24
Organ to Bodyweight Ratio (%)					
	MEAN	4.0	4.1	4.1	4.4
	S.D.	0.3	0.3	0.4	0.3
	N	23	24	23	24
Organ Weight Adjusted For Bodyweight		20.9	21.2	21.2	22.7**
FEMALES					
Terminal Bodyweight (g)					
	MEAN	306.1	298.0	308.2	320.3
	S.D.	21.3	20.1	22.2	34.4
	N	24	22	23	22
Organ Weight (g)					
	MEAN	15.8	15.8	14.8	16.1
	S.D.	3.1	2.9	2.5	2.7
	N	24	22	23	22
Organ to Bodyweight Ratio (%)					
	MEAN	5.2	5.3	4.8	5.0
	S.D.	0.8	0.8	0.6	0.6
	N	24	22	23	22
Organ Weight Adjusted For Bodyweight		16.0	16.6	14.8*	15.0

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 35
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F0 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
TESTES					
MALES					
Terminal Bodyweight (g)	MEAN	512.3	520.5	526.9	517.5
	S.D.	30.6	30.6	36.5	40.7
	N	23	24	23	24
Organ Weight (g)	MEAN	3.47	3.42	3.60*	3.53
	S.D.	0.31	0.26	0.27	0.25
	N	23	24	23	24
Organ to Bodyweight Ratio (%)	MEAN	0.68	0.66	0.69	0.68
	S.D.	0.07	0.07	0.05	0.05
	N	23	24	23	24
Organ Weight Adjusted For Bodyweight		3.48	3.42	3.57	3.53

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 36
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
KIDNEYS					
MALES					
Terminal Bodyweight (g)					
	MEAN	549.1	591.0	564.8	504.0
	S.D.	31.1	47.1	34.4	45.9
	N	24	22	24	22
Organ Weight (g)					
	MEAN	3.64	3.71	3.87	3.79
	S.D.	0.42	0.40	0.42	0.55
	N	24	22	24	22
Organ to Bodyweight Ratio (%)					
	MEAN	0.66	0.63	0.69	0.75
	S.D.	0.06	0.05	0.07	0.07
	N	24	22	24	22
Organ Weight Adjusted For Bodyweight		3.67	3.43*	3.78	4.12**
FEMALES					
Terminal Bodyweight (g)					
	MEAN	356.6	316.8	349.5	336.5
	S.D.	26.2	26.1	22.8	30.2
	N	23	23	21	20
Organ Weight (g)					
	MEAN	2.34	2.16**	2.23	2.18*
	S.D.	0.20	0.17	0.18	0.27
	N	23	23	21	20
Organ to Bodyweight Ratio (%)					
	MEAN	0.66	0.68	0.64	0.65
	S.D.	0.05	0.05	0.05	0.07
	N	23	23	21	20
Organ Weight Adjusted For Bodyweight		2.27	2.25	2.19	2.19

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 36
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
LIVER					
MALES					
Terminal Bodyweight (g)	MEAN	549.1	591.0	564.8	502.0 ~ 9% ↓
	S.D.	31.1	47.1	34.4	45.8
	N	24	22	24	23
Organ Weight (g)	MEAN	20.2	22.1*	21.1	21.3
	S.D.	2.1	2.7	3.3	3.5
	N	24	22	24	23
Organ to Bodyweight Ratio (%)	MEAN	3.7	3.7	3.7	4.2
	S.D.	0.3	0.3	0.5	0.4
	N	24	22	24	23
Organ Weight Adjusted For Bodyweight		20.3	20.2	20.4	23.7**
FEMALES					
Terminal Bodyweight (g)	MEAN	356.6	316.8	349.5	335.4 ~ 6% ↓
	S.D.	26.2	26.1	22.8	29.8
	N	23	23	21	21
Organ Weight (g)	MEAN	14.2	11.5**	14.2	13.6
	S.D.	1.3	1.6	1.5	1.4
	N	23	23	21	21
Organ to Bodyweight Ratio (%)	MEAN	4.0	3.6	4.1	4.1
	S.D.	0.3	0.3	0.3	0.3
	N	23	23	21	21
Organ Weight Adjusted For Bodyweight		13.6	12.3**	13.9	13.7

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 36
INTERGROUP COMPARISON OF ORGAN WEIGHTS
F1 PARENTS

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
TESTES					
MALES					
Terminal Bodyweight (g)					
	MEAN	549.1	591.0	564.8	502.0
	S.D.	31.1	47.1	34.4	45.8
	N	24	22	24	23
Organ Weight (g)					
	MEAN	3.43	3.36	3.23**	2.88**
	S.D.	0.24	0.29	0.23	0.22
	N	24	22	24	23
Organ to Bodyweight Ratio (%)					
	MEAN	0.63	0.57	0.57	0.58
	S.D.	0.05	0.05	0.04	0.05
	N	24	22	24	23
Organ Weight Adjusted For Bodyweight		3.43	3.29	3.21**	2.97**

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 37
INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS
F1A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
KIDNEYS					
MALES					
Terminal Bodyweight (g)	MEAN	85.6	78.8	72.3	56.1
	S.D.	10.6	11.9	12.2	7.4
	N	10	9	8	7
Organ Weight (g)	MEAN	1.03	0.93	0.89*	0.68**
	S.D.	0.15	0.13	0.14	0.09
	N	10	9	8	7
Organ to Bodyweight Ratio (%)	MEAN	1.20	1.18	1.23	1.22
	S.D.	0.08	0.06	0.07	0.04
	N	10	9	8	7
Organ Weight Adjusted For Bodyweight		0.91	0.88	0.91	0.89
FEMALES					
Terminal Bodyweight (g)	MEAN	79.0	70.2	64.9	57.4
	S.D.	6.7	7.6	6.0	6.3
	N	8	8	8	7
Organ Weight (g)	MEAN	0.92	0.86	0.82	0.71**
	S.D.	0.12	0.04	0.10	0.11
	N	8	8	8	7
Organ to Bodyweight Ratio (%)	MEAN	1.16	1.23	1.26	1.23
	S.D.	0.08	0.11	0.11	0.08
	N	8	8	8	7
Organ Weight Adjusted For Bodyweight		0.80	0.84	0.86	0.82

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 37
INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS
F1A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm) 0(Control)	100	300	1000
LIVER					
MALES					
Terminal Bodyweight (g)					
	MEAN	85.6	78.8	72.3	56.1
	S.D.	10.6	11.9	12.2	7.4
	N	10	9	8	7
Organ Weight (g)					
	MEAN	4.7	4.2	4.0*	3.1**
	S.D.	0.6	0.7	0.7	0.6
	N	10	9	8	7
Organ to Bodyweight Ratio (%)					
	MEAN	5.5	5.4	5.5	5.6
	S.D.	0.3	0.5	0.2	0.5
	N	10	9	8	7
Organ Weight Adjusted For Bodyweight		4.2	4.0	4.1	4.1
FEMALES					
Terminal Bodyweight (g)					
	MEAN	79.0	70.2	64.9	57.4
	S.D.	6.7	7.6	6.0	6.3
	N	8	8	8	7
Organ Weight (g)					
	MEAN	4.4	3.8**	3.7**	3.1**
	S.D.	0.5	0.3	0.5	0.5
	N	8	8	8	7
Organ to Bodyweight Ratio (%)					
	MEAN	5.6	5.4	5.7	5.4
	S.D.	0.4	0.4	0.4	0.4
	N	8	8	8	7
Organ Weight Adjusted For Bodyweight		3.8	3.7	3.9	3.7

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 37

INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS

F1A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
TESTES					
MALES					
Terminal Bodyweight (g)	MEAN	85.6	78.8	72.3	56.1
	S.D.	10.6	11.9	12.2	7.4
	N	10	9	8	7
Organ Weight (g)	MEAN	0.66	0.58	0.54*	0.37**
	S.D.	0.13	0.10	0.13	0.07
	N	10	9	8	7
Organ to Bodyweight Ratio (%)	MEAN	0.76	0.74	0.74	0.65
	S.D.	0.07	0.05	0.07	0.07
	N	10	9	8	7
Organ Weight Adjusted For Bodyweight		0.55	0.54	0.56	0.54

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 38
INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS
F2A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
KIDNEYS					
MALES					
Terminal Bodyweight (g)					
	MEAN	79.6	88.4	78.1	86.2
	S.D.	12.8	12.5	6.9	10.9
	N	10	9	10	11
Organ Weight (g)					
	MEAN	0.96	1.11*	0.99	1.07*
	S.D.	0.12	0.15	0.11	0.13
	N	10	9	10	11
Organ to Bodyweight Ratio (%)					
	MEAN	1.21	1.25	1.27	1.25
	S.D.	0.10	0.10	0.10	0.09
	N	10	9	10	11
Organ Weight Adjusted For Bodyweight		0.99	1.05	1.04	1.04
FEMALES					
Terminal Bodyweight (g)					
	MEAN	79.6	77.0	80.8	79.3
	S.D.	8.2	5.0	3.6	10.4
	N	10	10	9	11
Organ Weight (g)					
	MEAN	1.00	0.95	1.01	1.01
	S.D.	0.15	0.06	0.06	0.15
	N	10	10	9	11
Organ to Bodyweight Ratio (%)					
	MEAN	1.25	1.24	1.25	1.27
	S.D.	0.10	0.08	0.09	0.12
	N	10	10	9	11
Organ Weight Adjusted For Bodyweight		0.99	0.97	0.99	1.00

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 38

INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS

F2A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
LIVER					
MALES					
Terminal Bodyweight (g)	MEAN	79.6	88.4	78.1	86.2
	S.D.	12.8	12.5	6.9	10.9
	N	10	9	10	11
Organ Weight (g)	MEAN	4.4	5.0*	4.2	4.6
	S.D.	0.7	0.6	0.3	0.7
	N	10	9	10	11
Organ to Bodyweight Ratio (%)	MEAN	5.6	5.7	5.4	5.3
	S.D.	0.4	0.3	0.3	0.3
	N	10	9	10	11
Organ Weight Adjusted For Bodyweight		4.6	4.8	4.4	4.4
FEMALES					
Terminal Bodyweight (g)	MEAN	79.6	77.0	79.9	79.3
	S.D.	8.2	5.0	4.4	10.4
	N	10	10	10	11
Organ Weight (g)	MEAN	4.3	4.3	4.3	4.1
	S.D.	0.4	0.4	0.4	0.7
	N	10	10	10	11
Organ to Bodyweight Ratio (%)	MEAN	5.4	5.6	5.4	5.2
	S.D.	0.3	0.4	0.3	0.3
	N	10	10	10	11
Organ Weight Adjusted For Bodyweight		4.3	4.5	4.2	4.1

PERCHLOROETHYLENE : MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 38
INTERGROUP COMPARISON OF PUP ORGAN WEIGHTS
F2A LITTER

		Atmospheric Concentration of Perchloroethylene (ppm)			
		0(Control)	100	300	1000
TESTES					
MALES					
Terminal Bodyweight (g)					
	MEAN	79.6	88.4	78.1	86.2
	S.D.	12.8	12.5	6.9	10.9
	N	10	9	10	11
Organ Weight (g)					
	MEAN	0.64	0.73	0.61	0.65
	S.D.	0.14	0.15	0.09	0.11
	N	10	9	10	11
Organ to Bodyweight Ratio (%)					
	MEAN	0.79	0.83	0.78	0.75
	S.D.	0.08	0.10	0.09	0.06
	N	10	9	10	11
Organ Weight Adjusted For Bodyweight		0.67	0.68	0.65	0.62

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 39
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	1	0	1	0	0	1	0	2
EYE								
SUBMITTED	0	0	1	0	0	0	0	0
NO.WITH FINDINGS	0	0	1	0	0	0	0	0
Eyelid/s stained	0	0	1	0	0	0	0	0
KIDNEY								
SUBMITTED	1	0	1	0	0	1	0	2
NO.WITH FINDINGS	1	0	0	0	0	1	0	2
NO.WITHOUT FINDINGS	0	0	1	0	0	0	0	0
Pelvic dilatation	1	0	0	0	0	0	0	0
Pale	0	0	0	0	0	1	0	2
LIVER								
SUBMITTED	1	0	1	0	0	1	0	2
NO.WITH FINDINGS	0	0	0	0	0	1	0	2
NO.WITHOUT FINDINGS	1	0	1	0	0	0	0	0
Accentuated lobular pattern	0	0	0	0	0	1	0	1
Pale	0	0	0	0	0	1	0	2
Speckled	0	0	0	0	0	0	0	1
LUNG								
SUBMITTED	0	0	0	0	0	0	0	1
NO.WITH FINDINGS	0	0	0	0	0	0	0	1
Red area/s	0	0	0	0	0	0	0	1
Pale area/s	0	0	0	0	0	0	0	1
NASAL CAVITY								
SUBMITTED	0	0	1	0	0	0	0	0
NO.WITH FINDINGS	0	0	1	0	0	0	0	0
Snout twisted	0	0	1	0	0	0	0	0
ORAL CAVITY								
SUBMITTED	1	0	0	0	0	0	0	0
NO.WITH FINDINGS	1	0	0	0	0	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 39
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	1	0	1	0	0	1	0	2
ORAL CAVITY	(CONTINUED)							
Teeth maloccluded	1	0	0	0	0	0	0	0
Erosion/s	1	0	0	0	0	0	0	0
OVARY								
SUBMITTED	-	-	-	-	0	1	0	2
NO.WITH FINDINGS	-	-	-	-	0	0	0	2
NO.WITHOUT FINDINGS	-	-	-	-	0	1	0	0
Pale	-	-	-	-	0	0	0	2
PITUITARY GLAND								
SUBMITTED	1	0	1	0	0	1	0	2
NO.WITH FINDINGS	0	0	0	0	0	1	0	2
NO.WITHOUT FINDINGS	1	0	1	0	0	0	0	0
Pale	0	0	0	0	0	1	0	2
URINARY BLADDER								
SUBMITTED	0	0	1	0	0	0	0	0
NO.WITH FINDINGS	0	0	1	0	0	0	0	0
Firm deposit/s	0	0	1	0	0	0	0	0
UTERUS								
SUBMITTED	-	-	-	-	0	1	0	2
NO.WITH FINDINGS	-	-	-	-	0	1	0	2
Foetus/es present	-	-	-	-	0	1	0	2
VAGINA								
SUBMITTED	-	-	-	-	0	1	0	2
NO.WITH FINDINGS	-	-	-	-	0	0	0	2
NO.WITHOUT FINDINGS	-	-	-	-	0	1	0	0
Blood in lumen	-	-	-	-	0	0	0	2
Discharge	-	-	-	-	0	0	0	2

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 39
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
ABDOMINAL CAVITY								
SUBMITTED	0	0	0	0	0	0	0	1
NO.WITH FINDINGS	0	0	0	0	0	0	0	1
NO.WITH FINDINGS BUT NOT SUBMITTED	0	0	0	0	0	0	1	0
Mass 1	0	0	0	0	0	0	0	1
Free blood	0	0	0	0	0	0	1	0
CERVIX								
SUBMITTED	-	-	-	-	24	23	24	22
NO.WITH FINDINGS	-	-	-	-	0	0	1	0
NO.WITHOUT FINDINGS	-	-	-	-	24	23	23	22
Distended	-	-	-	-	0	0	1	0
EAR/ZYMBALS GLAND								
SUBMITTED	0	0	0	1	0	0	0	0
NO.WITH FINDINGS	0	0	0	1	0	0	0	0
Pinna/e traumatised	0	0	0	1	0	0	0	0
EYE								
SUBMITTED	0	0	0	1	1	0	0	0
NO.WITH FINDINGS	0	0	0	1	1	0	0	0
Eyelid/s stained	0	0	0	1	0	0	0	0
Bulging	0	0	0	0	1	0	0	0
KIDNEY								
SUBMITTED	23	24	23	24	24	23	24	22
NO.WITH FINDINGS	4	10	6	6	4	4	4	3
NO.WITHOUT FINDINGS	19	14	17	18	20	19	20	19
Mass 1	0	0	0	0	1	0	0	0
Pelvic dilatation	4	10	6	5	2	4	4	2
Depressed area/s	0	0	0	1	1	0	0	0
Pale area/s	0	0	0	0	0	0	0	1
LUNG								
SUBMITTED	0	0	0	0	1	0	0	1
NO.WITH FINDINGS	0	0	0	0	1	0	0	1

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 39
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
LUNG (CONTINUED)								
Red spot/s	0	0	0	0	1	0	0	1
Pale spot/s	0	0	0	0	0	0	0	1
ORAL CAVITY								
SUBMITTED	0	0	0	0	0	0	0	1
NO.WITH FINDINGS	0	0	0	0	0	0	0	1
NO.WITH FINDINGS BUT NOT SUBMITTED	0	0	0	1	0	0	0	0
Teeth malocclueded	0	0	0	0	0	0	0	1
Teeth broken	0	0	0	1	0	0	0	0
TAIL								
SUBMITTED	1	2	1	0	0	0	1	1
NO.WITH FINDINGS	1	2	1	0	0	0	1	1
Kinked	1	1	1	0	0	0	1	1
Fracture	0	1	0	0	0	0	0	0
TESTIS								
SUBMITTED	23	24	23	24	-	-	-	-
NO.WITH FINDINGS	1	0	0	0	-	-	-	-
NO.WITHOUT FINDINGS	22	24	23	24	-	-	-	-
Enlarged	1	0	0	0	-	-	-	-
URINARY BLADDER								
SUBMITTED	0	0	0	1	0	0	0	0
NO.WITH FINDINGS	0	0	0	1	0	0	0	0
Discoloured urine	0	0	0	1	0	0	0	0
UTERUS								
SUBMITTED	-	-	-	-	24	23	24	22
NO.WITH FINDINGS	-	-	-	-	24	23	24	21
NO.WITHOUT FINDINGS	-	-	-	-	0	0	0	1

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 39

INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
UTERUS	(CONTINUED)							
Implantation site/s present	-	-	-	-	23	21	19	20
Implantation site/s absent	-	-	-	-	1	1	5	0
Distended	-	-	-	-	0	1	3	0
Foetus/es present	-	-	-	-	0	1	0	1
Blood in lumen	-	-	-	-	0	1	0	0
Discoloured	-	-	-	-	0	1	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 40
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	0	2	0	0	1	1	3	3
EYE								
SUBMITTED	0	1	0	0	0	1	0	0
NO.WITH FINDINGS	0	1	0	0	0	1	0	0
Eyelid/s stained	0	1	0	0	0	1	0	0
KIDNEY								
SUBMITTED	0	2	0	0	1	1	3	3
NO.WITH FINDINGS	0	0	0	0	0	0	1	1
NO.WITHOUT FINDINGS	0	2	0	0	1	1	2	2
Pale	0	0	0	0	0	0	1	1
LIVER								
SUBMITTED	0	2	0	0	1	1	3	3
NO.WITH FINDINGS	0	0	0	0	1	0	1	2
NO.WITHOUT FINDINGS	0	2	0	0	0	1	2	1
Accentuated lobular pattern	0	0	0	0	1	0	1	1
Firm	0	0	0	0	0	0	0	1
Pale	0	0	0	0	0	0	1	1
LUNG								
SUBMITTED	0	1	0	0	0	0	1	0
NO.WITH FINDINGS	0	1	0	0	0	0	1	0
Red area/s	0	0	0	0	0	0	1	0
Dark	0	1	0	0	0	0	0	0
NASAL CAVITY								
SUBMITTED	0	1	0	0	1	1	0	0
NO.WITH FINDINGS	0	1	0	0	1	1	0	0
Nares stained	0	1	0	0	1	1	0	0
Snout twisted	0	1	0	0	0	0	0	0
Traumatised	0	0	0	0	1	1	0	0
ORAL CAVITY								
SUBMITTED	0	0	0	0	1	0	0	0
NO.WITH FINDINGS	0	0	0	0	1	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 40
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	0	2	0	0	1	1	3	3
ORAL CAVITY (CONTINUED)								
Teeth loose	0	0	0	0	1	0	0	0
TAIL								
SUBMITTED	0	1	0	0	0	0	0	0
NO.WITH FINDINGS	0	1	0	0	0	0	0	0
Kinked	0	1	0	0	0	0	0	0
URINARY BLADDER								
SUBMITTED	0	0	0	0	0	0	1	0
NO.WITH FINDINGS	0	0	0	0	0	0	1	0
Distended	0	0	0	0	0	0	1	0
UTERUS								
SUBMITTED	-	-	-	-	1	1	3	3
NO.WITH FINDINGS	-	-	-	-	1	0	3	3
NO.WITHOUT FINDINGS	-	-	-	-	0	1	0	0
Implantation site/s present	-	-	-	-	0	0	0	1
Implantation site/s absent	-	-	-	-	1	0	1	0
Distended	-	-	-	-	0	0	1	0
Foetus/es present	-	-	-	-	0	0	2	2
Contents abnormal	-	-	-	-	0	0	1	0
VAGINA								
SUBMITTED	-	-	-	-	1	1	2	3
NO.WITH FINDINGS	-	-	-	-	0	0	1	0
NO.WITHOUT FINDINGS	-	-	-	-	1	1	1	3
Distended	-	-	-	-	0	0	1	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 40
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	22	24	23	23	23	21	21
CERVIX								
SUBMITTED	-	-	-	-	23	23	21	21
NO.WITH FINDINGS	-	-	-	-	1	0	0	0
NO.WITHOUT FINDINGS	-	-	-	-	22	23	21	21
Distended		-	-	-	1	0	0	0
DIAPHRAGM								
SUBMITTED	0	0	1	0	0	0	0	0
NO.WITH FINDINGS	0	0	1	0	0	0	0	0
Hernia	0	0	1	0	0	0	0	0
EAR/ZYMBALS GLAND								
NO.WITH FINDINGS BUT NOT SUBMITTED	0	0	0	1	0	0	0	1
Pinna/e traumatized	0	0	0	1	0	0	0	1
EYE								
SUBMITTED	0	0	0	1	0	0	0	0
NO.WITH FINDINGS	0	0	0	1	0	0	0	0
Eyelid/s stained	0	0	0	1	0	0	0	0
KIDNEY								
SUBMITTED	24	22	24	23	23	23	21	21
NO.WITH FINDINGS	3	3	5	3	0	2	0	1
NO.WITHOUT FINDINGS	21	19	19	20	23	21	21	20
Mass 1	0	0	1	0	0	0	0	0
Pelvic dilatation	3	3	3	1	0	2	0	0
Reduced	0	0	0	0	0	0	0	1
Misshapen	0	0	0	0	0	0	0	1
Cyst/s	0	0	1	2	0	0	0	0
LIVER								
SUBMITTED	24	22	24	23	23	23	21	21
NO.WITH FINDINGS	0	0	2	1	0	0	0	2
NO.WITHOUT FINDINGS	24	22	22	22	23	23	21	19

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 40
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	22	24	23	23	23	21	21
LIVER	(CONTINUED)							
Mass 1	0	0	1	0	0	0	0	0
Accentuated lobular pattern	0	0	0	0	0	0	0	2
Enlarged	0	0	0	1	0	0	0	0
Lobe/s herniated	0	0	1	0	0	0	0	0
ORAL CAVITY								
SUBMITTED	0	0	0	1	0	0	0	0
NO.WITH FINDINGS	0	0	0	1	0	0	0	0
Teeth broken	0	0	0	1	0	0	0	0
OVARY								
SUBMITTED	-	-	-	-	23	23	21	21
NO.WITH FINDINGS	-	-	-	-	0	1	0	1
NO.WITHOUT FINDINGS	-	-	-	-	23	22	21	20
Cystic bursa/e	-	-	-	-	0	1	0	1
PITUITARY GLAND								
SUBMITTED	24	22	24	23	23	23	21	21
NO.WITH FINDINGS	0	0	0	0	0	0	0	1
NO.WITHOUT FINDINGS	24	22	24	23	23	23	21	20
Red spot/s	0	0	0	0	0	0	0	1
SEMINAL VESICLE								
SUBMITTED	24	22	24	23	-	-	-	-
NO.WITH FINDINGS	0	0	0	1	-	-	-	-
NO.WITHOUT FINDINGS	24	22	24	22	-	-	-	-
Enlarged	0	0	0	1	-	-	-	-
SKIN								
SUBMITTED	1	0	0	0	0	0	0	0
NO.WITH FINDINGS	1	0	0	0	0	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 40
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	22	24	23	23	23	21	21
SKIN (CONTINUED)								
Hair loss	1	0	0	0	0	0	0	0
SUBCUTANEOUS TISSUE								
SUBMITTED	0	0	1	0	0	0	0	0
NO.WITH FINDINGS	0	0	1	0	0	0	0	0
Mass 1	0	0	1	0	0	0	0	0
TAIL								
SUBMITTED	1	0	2	3	1	1	2	0
NO.WITH FINDINGS	1	0	2	3	1	1	2	0
Traumatised	0	0	0	0	0	1	0	0
Kinked	1	0	0	3	1	0	2	0
Dry sore/s	0	0	2	0	0	0	0	0
UTERUS								
SUBMITTED	-	-	-	-	23	23	21	21
NO.WITH FINDINGS	-	-	-	-	23	22	21	20
NO.WITHOUT FINDINGS	-	-	-	-	0	1	0	1
Implantation site/s present	-	-	-	-	23	21	21	19
Implantation site/s absent	-	-	-	-	0		0	1

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 41
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	1	0	1	0	0	1	0	2
KIDNEY								
EXAMINED	1	0	1	0	0	1	0	2
NO ABNORMALITIES DETECTED	0	0	1	0	0	0	0	0
Unilateral hydronephrosis (TOTAL)	1	0	0	0	0	0	0	0
slight	1	0	0	0	0	0	0	0
Intratubular microlithiasis (TOTAL)	0	0	0	0	0	1	0	2
minimal	0	0	0	0	0	1	0	1
slight	0	0	0	0	0	0	0	1
Pelvic urolithiasis (TOTAL)	0	0	0	0	0	1	0	0
minimal	0	0	0	0	0	1	0	0
LIVER								
EXAMINED	1	0	0	0	0	0	0	2
NO ABNORMALITIES DETECTED	1	0	0	0	0	0	0	0
Hepatocyte necrosis (TOTAL)	0	0	0	0	0	0	0	2
slight	0	0	0	0	0	0	0	1
moderate	0	0	0	0	0	0	0	1
ORAL CAVITY								
EXAMINED	1	0	0	0	0	0	0	0
Malocclusion (macroscopic observation)	1	0	0	0	0	0	0	0
Palatine fistula (macroscopic observation)	1	0	0	0	0	0	0	0
UTERUS								
EXAMINED	-	-	-	-	0	0	0	2
Dystocia (diagnosis based on macroscopic observations)	-	-	-	-	0	0	0	2

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 41
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
CERVIX								
EXAMINED	-	-	-	-	1	1	5	0
MISSING	-	-	-	-	0	1	0	1
NO ABNORMALITIES DETECTED	-	-	-	-	1	1	3	0
Luminal dilatation (TOTAL)	-	-	-	-	0	0	2	0
marked	-	-	-	-	0	0	2	0
KIDNEY								
EXAMINED	23	24	23	24	24	23	24	22
NO ABNORMALITIES DETECTED	3	2	3	0	0	0	0	1
Unilateral hydronephrosis (TOTAL)	10	10	13	9	2	4	3	4
minimal	0	2	3	0	0	3	1	0
slight	9	5	8	6	1	1	0	4
moderate	1	3	2	3	1	0	2	0
Bilateral hydronephrosis (TOTAL)	0	1	1	1	1	2	1	0
minimal	0	0	1	0	0	1	0	0
slight	0	1	0	1	1	1	1	0
Chronic progressive glomerulonephropathy (TOTAL)	8	8	5	14	0	4	4	2
minimal	8	8	5	14	0	4	4	2
Intratubular microlithiasis (TOTAL)	0	0	0	0	24	23	24	20
minimal	0	0	0	0	2	11	15	17
slight	0	0	0	0	14	8	2	3
moderate	0	0	0	0	8	4	7	0
Pelvic urolithiasis (TOTAL)	1	2	0	0	0	0	0	1
minimal	0	2	0	0	0	0	0	1
slight	1	0	0	0	0	0	0	0
Transitional epithelial hyperplasia (TOTAL)	2	3	4	1	1	0	0	0
minimal	1	2	3	0	1	0	0	0
slight	1	1	1	1	0	0	0	0
Tubular basophilia (TOTAL)	5	9	9	1	0	8	3	3
minimal	5	9	9	1	0	8	3	3

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 41
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
KIDNEY (CONTINUED)								
Interstitial mononuclear cell infiltration (TOTAL)	2	0	0	0	0	1	2	0
minimal	2	0	0	0	0	1	2	0
Papillitis (TOTAL)	0	0	0	0	1	0	0	0
slight	0	0	0	0	1	0	0	0
Cyst/s	0	0	0	0	0	0	1	0
Surface depression (TOTAL)	0	0	0	0	1	0	0	0
slight	0	0	0	0	1	0	0	0
Dilatation collecting ducts (TOTAL)	0	0	0	0	2	0	0	0
minimal	0	0	0	0	1	0	0	0
slight	0	0	0	0	1	0	0	0
Interstitial nephritis (TOTAL)	0	0	0	1	0	0	0	0
slight	0	0	0	1	0	0	0	0
Tubular dilatation (TOTAL)	0	1	0	0	0	0	0	0
minimal	0	1	0	0	0	0	0	0
Increase in nuclear pleomorphism (TOTAL)	0	0	0	24	0	0	0	12
minimal	0	0	0	24	0	0	0	12
LIVER								
EXAMINED	23	0	0	24	24	0	0	22
NO ABNORMALITIES DETECTED	17	0	0	21	23	0	0	21
Mononuclear cell infiltration (TOTAL)	0	0	0	1	0	0	0	0
minimal	0	0	0	1	0	0	0	0
Hepatitis (TOTAL)	6	0	0	2	1	0	0	0
minimal	6	0	0	1	1	0	0	0
slight	0	0	0	1	0	0	0	0
Subcapsular fibrosis and inflammation (TOTAL)	0	0	0	0	0	0	0	1
slight	0	0	0	0	0	0	0	1
PROSTATE GLAND								
EXAMINED	6	7	9	6	-	-	-	-
NO ABNORMALITIES DETECTED	4	6	8	5	-	-	-	-

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 41
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F0 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	24	24	24	24
ANIMALS COMPLETED	23	24	23	24	24	23	24	22
PROSTATE GLAND	(CONTINUED)							
Prostatitis (TOTAL)	2	1	1	1	-	-	-	-
minimal	2	0	1	1	-	-	-	-
slight	0	1	0	0	-	-	-	-
TESTIS								
EXAMINED	6	7	9	6	-	-	-	-
NO ABNORMALITIES DETECTED	3	7	9	6	-	-	-	-
Unilateral tubular degeneration - (TOTAL)	2	0	0	0	-	-	-	-
minimal	2	0	0	0	-	-	-	-
Tubular distension (TOTAL)	1	0	0	0	-	-	-	-
moderate	1	0	0	0	-	-	-	-
UTERUS								
EXAMINED	-	-	-	-	1	2	5	1
NO ABNORMALITIES DETECTED	-	-	-	-	1	1	2	0
Luminal dilatation (TOTAL)	-	-	-	-	0	0	3	0
moderate	-	-	-	-	0	0	1	0
marked	-	-	-	-	0	0	2	0
Placental tissue in lumen	-	-	-	-	0	1	0	1
Foetal death in utero (macroscopic observation) -	-	-	-	-	0	1	0	0
Foetuses in lumen (macroscopic observation) -	-	-	-	-	0	0	0	1

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 42
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	0	0	0	0	1	0	3	3
KIDNEY								
EXAMINED	0	0	0	0	1	0	3	3
NO ABNORMALITIES DETECTED	0	0	0	0	0	0	1	1
Chronic progressive glomerulonephropathy (TOTAL)	0	0	0	0	1	0	0	0
minimal	0	0	0	0	1	0	0	0
Intratubular microlithiasis (TOTAL)	0	0	0	0	1	0	2	0
minimal	0	0	0	0	1	0	1	0
slight	0	0	0	0	0	0	1	0
Tubular vacuolation (TOTAL)	0	0	0	0	0	0	0	1
slight	0	0	0	0	0	0	0	1
Glomerular mineralisation (TOTAL)	0	0	0	0	0	0	0	1
minimal	0	0	0	0	0	0	0	1
LIVER								
EXAMINED	0	0	0	0	1	0	0	3
NO ABNORMALITIES DETECTED	0	0	0	0	1	0	0	1
Extramedullary haemopoiesis (TOTAL)	0	0	0	0	0	0	0	1
minimal	0	0	0	0	0	0	0	1
Hepatocyte necrosis - centrilobular (TOTAL)	0	0	0	0	0	0	0	1
minimal	0	0	0	0	0	0	0	1
Hepatocyte necrosis (TOTAL)	0	0	0	0	0	0	0	1
moderate	0	0	0	0	0	0	0	1
MAMMARY GLAND								
EXAMINED	-	-	-	-	1	0	3	2
NO ABNORMALITIES DETECTED	-	-	-	-	0	0	2	2
Diffuse hyperplasia (TOTAL)	-	-	-	-	1	0	1	0
slight	-	-	-	-	1	0	1	0
NASAL CAVITY								
EXAMINED	0	0	0	0	1	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 42
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: INTERCURRENT	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	0	0	0	0	1	0	3	3
NASAL CAVITY (CONTINUED)								
Trauma (macroscopic observation).....	0	0	0	0	1	0	0	0
UTERUS								
EXAMINED.....	-	-	-	-	1	0	3	2
NO ABNORMALITIES DETECTED.....	-	-	-	-	1	0	0	0
Luminal dilatation (TOTAL).....	-	-	-	-	0	0	1	0
marked.....	-	-	-	-	0	0	1	0
Endometritis (TOTAL).....	-	-	-	-	0	0	1	0
marked.....	-	-	-	-	0	0	1	0
Placental tissue in lumen.....	-	-	-	-	0	0	1	1
Dystocia (diagnosis based on macroscopic observations).....	-	-	-	-	0	0	2	2

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 42
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	4	24	23	23	1	21	21
KIDNEY								
EXAMINED	24	1	24	23	23	0	21	21
NO ABNORMALITIES DETECTED	2	0	2	0	0	0	0	3
Unilateral hydronephrosis (TOTAL)	1	0	2	0	0	0	0	0
minimal	0	0	1	0	0	0	0	0
slight	1	0	1	0	0	0	0	0
Bilateral hydronephrosis (TOTAL)	1	0	0	0	0	0	0	0
slight	1	0	0	0	0	0	0	0
Chronic progressive glomerulonephropathy (TOTAL)	22	1	22	22	5	0	6	10
minimal	14	1	20	19	5	0	6	9
slight	8	0	2	3	0	0	0	1
Intratubular microlithiasis (TOTAL)	0	0	0	2	23	0	21	13
minimal	0	0	0	2	11	0	16	13
slight	0	0	0	0	8	0	5	0
moderate	0	0	0	0	3	0	0	0
marked	0	0	0	0	1	0	0	0
Pelvic urolithiasis (TOTAL)	2	0	0	0	0	0	0	0
minimal	1	0	0	0	0	0	0	0
slight	1	0	0	0	0	0	0	0
Transitional epithelial hyperplasia (TOTAL)	3	0	0	0	0	0	0	0
minimal	2	0	0	0	0	0	0	0
slight	1	0	0	0	0	0	0	0
Tubular basophilia (TOTAL)	0	0	0	0	1	0	1	0
minimal	0	0	0	0	1	0	1	0
Interstitial mononuclear cell infiltration (TOTAL)	0	0	0	0	1	0	0	1
minimal	0	0	0	0	1	0	0	1
Granulomatous reaction around microliths (TOTAL)	0	0	0	0	2	0	2	0
minimal	0	0	0	0	1	0	1	0
slight	0	0	0	0	0	0	1	0
moderate	0	0	0	0	1	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 42
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	4	24	23	23	1	21	21
KIDNEY (CONTINUED)								
Increase in nuclear pleomorphism -								
(TOTAL)	0	0	0	23	0	0	0	0
minimal	0	0	0	23	0	0	0	0
LIVER								
EXAMINED	24	1	24	23	23	0	0	21
NO ABNORMALITIES DETECTED	5	0	11	18	20	0	0	19
Hepatitis (TOTAL)	19	1	13	5	2	0	0	0
minimal	16	1	12	4	2	0	0	0
slight	3	0	1	1	0	0	0	0
Extramedullary haemopoiesis (TOTAL)	0	0	0	0	1	0	0	2
minimal	0	0	0	0	1	0	0	2
MAMMARY GLAND								
EXAMINED	-	-	-	-	1	1	1	3
NO ABNORMALITIES DETECTED	-	-	-	-	1	1	1	2
Diffuse hyperplasia (TOTAL)	-	-	-	-	0	0	0	1
minimal	-	-	-	-	0	0	0	1
PROSTATE GLAND								
EXAMINED	3	4	3	7	-	-	-	-
NO ABNORMALITIES DETECTED	1	2	3	4	-	-	-	-
Prostatitis (TOTAL)	2	2	0	3	-	-	-	-
minimal	2	2	0	3	-	-	-	-
SEMINAL VESICLE								
EXAMINED	3	4	3	7	-	-	-	-
NO ABNORMALITIES DETECTED	3	4	3	5	-	-	-	-
Luminal dilatation (TOTAL)	0	0	0	2	-	-	-	-
marked	0	0	0	2	-	-	-	-
Vesiculitis (TOTAL)	0	0	0	2	-	-	-	-
slight	0	0	0	2	-	-	-	-
TESTIS								
EXAMINED	24	4	3	23	-	-	-	-
NO ABNORMALITIES DETECTED	22	4	3	21	-	-	-	-

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 42
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1 PARENTS

REMOVAL REASON: TERMINAL	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
ANIMALS ON STUDY	24	24	24	24	48	24	24	48
ANIMALS COMPLETED	24	4	24	23	23	1	21	21
TESTIS	(CONTINUED)							
Unilateral tubular degeneration -								
(TOTAL)	2	0	0	2	-	-	-	-
minimal	2	0	0	1	-	-	-	-
slight	0	0	0	1	-	-	-	-
UTERUS								
EXAMINED	-	-	-	-	1	1	0	1
MISSING	-	-	-	-	0	0	1	3
NO ABNORMALITIES DETECTED	-	-	-	-	0	1	0	1
Luminal dilatation (TOTAL)	-	-	-	-	1	0	0	0
slight	-	-	-	-	1	0	0	0
Involution, implantation site/s	-	-	-	-	1	0	0	0
VAGINA								
EXAMINED	-	-	-	-	1	1	0	1
MISSING	-	-	-	-	0	0	1	3
NO ABNORMALITIES DETECTED	-	-	-	-	0	1	0	1
Luminal dilatation (TOTAL)	-	-	-	-	1	0	0	0
marked	-	-	-	-	1	0	0	0

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 43
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
FULL PM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	0(0)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
PUPS COMPLETED	0(0)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
BRAIN								
SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Enlarged cerebral hemispheres	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Soft	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
SEMINAL VESICLE								
SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	-	-	-	-
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	1 (1)	-	-	-	-
Reduced	0 (0)	0 (0)	0 (0)	1 (1)	-	-	-	-
SKULL								
NO.WITH FINDINGS BUT NOT SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Cranium domed	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
STERNUM								
SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Inverted	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
URINARY BLADDER								
SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Distended	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 43
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
FULL PM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)
PUPS COMPLETED	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)	5(5)
KIDNEY								
SUBMITTED	5 (5)	5 (5)	5 (5)	5 (5)	5 (5)	5 (5)	5 (5)	5 (5)
NO.WITH FINDINGS	1 (1)	1 (1)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITHOUT FINDINGS	4 (4)	4 (4)	4 (4)	5 (5)	5 (5)	5 (5)	5 (5)	5 (5)
Pelvic dilatation	1 (1)	1 (1)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 43
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
GROSS PM (CLINICALLY NORMAL)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	32(18)	39(20)	30(16)	29(16)	37(19)	33(17)	26(14)	29(16)
PUPS COMPLETED	32(18)	39(20)	30(16)	29(16)	37(19)	33(17)	26(14)	29(16)
KIDNEY								
SUBMITTED	2 (2)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)
NO.WITH FINDINGS	2 (2)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)
Pelvic dilatation	2 (2)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 43
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
GROSS PM (CLINICALLY ABNORMAL)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	1(1)	1(1)	4(2)	3(3)	0(0)	0(0)	2(2)	1(1)
PUPS COMPLETED	1(1)	1(1)	4(2)	3(3)	0(0)	0(0)	2(2)	1(1)
EYE								
SUBMITTED	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)
NO.WITH FINDINGS BUT NOT SUBMITTED	0 (0)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
Eyelid/s stained	0 (0)	0 (0)	3 (1)	1 (1)	0 (0)	0 (0)	2 (2)	0 (0)
HEART								
SUBMITTED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Enlarged	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
TAIL								
SUBMITTED	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
NO.WITH FINDINGS	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Traumatised	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Swollen	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 44
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F2A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
FULL PM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	10(10)	10(10)	10(10)	11(11)	10(10)	10(10)	10(10)	11(11)
PUPS COMPLETED	10(10)	10(10)	10(10)	11(11)	10(10)	10(10)	10(10)	11(11)
KIDNEY								
SUBMITTED	10 (10)	10 (10)	10 (10)	11 (11)	10 (10)	10 (10)	10 (10)	11 (11)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	1 (1)
NO.WITHOUT FINDINGS	10 (10)	10 (10)	10 (10)	11 (11)	9 (9)	10 (10)	9 (9)	10 (10)
Pelvic dilatation	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	1 (1)
LUNG								
SUBMITTED	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
Pale	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
UTERUS								
SUBMITTED	-	-	-	-	10 (10)	10 (10)	10 (10)	11 (11)
NO.WITH FINDINGS	-	-	-	-	0 (0)	1 (1)	0 (0)	0 (0)
NO.WITHOUT FINDINGS	-	-	-	-	10 (10)	9 (9)	10 (10)	11 (11)
Distended	-	-	-	-	0 (0)	1 (1)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 44
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F2A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
GROSS PM (CLINICALLY NORMAL)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	44(22)	43(22)	38(19)	22(11)	43(22)	44(22)	39(20)	21(12)
PUPS COMPLETED	44(22)	43(22)	38(19)	22(11)	43(22)	44(22)	39(20)	21(12)
HEART								
SUBMITTED	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
NO.WITH FINDINGS	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Enlarged	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
KIDNEY								
SUBMITTED	4 (4)	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)
NO.WITH FINDINGS	4 (4)	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)
Pelvic dilatation	4 (4)	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 44
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS - F2A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
GROSS PM (CLINICALLY ABNORMAL)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	0(0)	1(1)	2(2)	1(1)	0(0)	0(0)	4(4)	1(1)
PUPS COMPLETED	0(0)	1(1)	2(2)	1(1)	0(0)	0(0)	4(4)	1(1)
EYE								
SUBMITTED.....	0 (0)	1 (1)	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)	1 (1)
NO.WITH FINDINGS.....	0 (0)	1 (1)	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)	1 (1)
Eyelid/s stained.....	0 (0)	1 (1)	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)	1 (1)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 45
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
FULL PM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	0(0)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
PUPS COMPLETED	0(0)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
KIDNEY								
EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Vacuolar degeneration of proximal convoluted tubules (TOTAL)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
marked	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 45
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F1A PUPS

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
TERMINAL KILL	0	100	300	1000	0	100	300	1000
FULL PM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	5(5)	0(0)	0(0)	5(5)	5(5)	0(0)	0(0)	5(5)
PUPS COMPLETED	5(5)	0(0)	0(0)	5(5)	5(5)	0(0)	0(0)	5(5)
KIDNEY								
EXAMINED	5 (5)	0 (0)	0 (0)	5 (5)	5 (5)	0 (0)	0 (0)	5 (5)
NO ABNORMALITIES DETECTED	4 (4)	0 (0)	0 (0)	5 (5)	4 (4)	0 (0)	0 (0)	5 (5)
Unilateral hydronephrosis (TOTAL)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
slight	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Interstitial nephritis (TOTAL)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
minimal	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 46
INTERGROUP COMPARISON OF MICROSCOPIC FINDINGS - F2A PUPS

TERMINAL KILL FULL PM	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE MALES				FEMALES			
	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	10(10)	0(0)	0(0)	11(11)	10(10)	0(0)	0(0)	11(11)
PUPS COMPLETED	10(10)	0(0)	0(0)	11(11)	10(10)	0(0)	0(0)	11(11)
KIDNEY								
EXAMINED	10 (10)	0 (0)	0 (0)	11 (11)	10 (10)	0 (0)	0 (0)	11 (11)
NO ABNORMALITIES DETECTED	9 (9)	0 (0)	0 (0)	9 (9)	8 (8)	0 (0)	0 (0)	9 (9)
Unilateral hydronephrosis (TOTAL)	0 (0)	0 (0)	0 (0)	1 (1)	2 (2)	0 (0)	0 (0)	1 (1)
minimal	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
slight	0 (0)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)
Bilateral hydronephrosis (TOTAL)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
minimal	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Interstitial mononuclear cell infiltration (TOTAL)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
minimal	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Papillitis (TOTAL)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
minimal	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
LIVER								
EXAMINED	10 (10)	0 (0)	0 (0)	11 (11)	10 (10)	0 (0)	0 (0)	11 (11)
NO ABNORMALITIES DETECTED	9 (9)	0 (0)	0 (0)	10 (10)	10 (10)	0 (0)	0 (0)	11 (11)
Hepatitis (TOTAL)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
minimal	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Hepatocyte necrosis (TOTAL)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
slight	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

GLOSSARY FOR TABLES 47 - 50

NO. WITH FINDINGS BUT NOT EXAMINED: 'NOT EXAMINED' means not examined microscopically.

EV = eviscerated

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 47
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F1A OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
EVISCERATION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	2(2)	2(1)	2(2)	8(7)	2(2)	4(3)	1(1)	16(11)
PUPS COMPLETED	2(2)	2(1)	2(2)	8(7)	2(2)	4(3)	1(1)	16(11)
HEAD(EV)								
NO.WITH FINDINGS BUT NOT EXAMINED	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
DEPRESSED SKULL.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
INDENTATION.....	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
KIDNEY								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Pelvic dilatation.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
LIMB								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Swollen.....	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Discoloured.....	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
LUNG								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	2 (1)	1 (1)	2 (2)	0 (0)	1 (1)	0 (0)	6 (4)
Red area/s.....	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dark area/s.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Mottled.....	0 (0)	1 (1)	1 (1)	1 (1)	0 (0)	1 (1)	0 (0)	6 (4)
STOMACH								
NO.WITH FINDINGS BUT NOT EXAMINED	1 (1)	1 (1)	1 (1)	5 (5)	0 (0)	1 (1)	1 (1)	12 (8)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Gas filled.....	1 (1)	1 (1)	1 (1)	3 (3)	0 (0)	0 (0)	1 (1)	6 (6)
Empty.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	2 (2)
Contents fluid.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	4 (3)
Contents packed.....	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
TAIL								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Discoloured.....	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
URINARY BLADDER								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 47

INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F1A OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS EVISCERATION	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
TOTAL PUPS ON STUDY	102(22)	133(21)	94(18)	107(19)	124(23)	98(20)	86(18)	115(20)
PUPS EXAMINED	2(2)	2(1)	2(2)	8(7)	2(2)	4(3)	1(1)	16(11)
PUPS COMPLETED	2(2)	2(1)	2(2)	8(7)	2(2)	4(3)	1(1)	16(11)
URINARY BLADDER	(CONTINUED)							
Distended.....	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 48
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F2A OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
EVISCERATION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	7(4)	3(3)	16(7)	21(14)	6(6)	4(2)	9(5)	31(12)
PUPS COMPLETED	7(4)	3(3)	16(7)	21(14)	6(6)	4(2)	9(5)	31(12)
BRAIN								
NO.WITH FINDINGS BUT NOT EXAMINED	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Collapsed/flaccid/fluid leakage.....	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
KIDNEY								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	3 (2)	1 (1)	0 (0)	0 (0)	0 (0)	5 (3)
Enlarged.....	0 (0)	0 (0)	2 (1)	1 (1)	0 (0)	0 (0)	0 (0)	4 (2)
Pale.....	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
LIVER								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	1 (1)	2 (2)	0 (0)	0 (0)	0 (0)	1 (1)
Enlarged.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Pale.....	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
LUNG								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Mottled.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
SKULL								
NO.WITH FINDINGS BUT NOT EXAMINED	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Cranium domed.....	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
STOMACH								
NO.WITH FINDINGS BUT NOT EXAMINED	6 (3)	2 (2)	9 (4)	16 (12)	3 (3)	4 (2)	3 (2)	25 (12)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
Gas filled.....	1 (1)	1 (1)	3 (1)	6 (4)	1 (1)	1 (1)	2 (1)	8 (5)
Empty.....	0 (0)	0 (0)	0 (0)	8 (7)	0 (0)	1 (1)	0 (0)	12 (10)
Contents fluid.....	5 (2)	1 (1)	4 (2)	2 (1)	2 (2)	2 (1)	1 (1)	5 (4)
Contents discoloured.....	1 (1)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
URINARY BLADDER								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	3 (2)	4 (4)	0 (0)	0 (0)	0 (0)	3 (3)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 48

INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F2A OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
EVISCERATION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	146(23)	137(22)	124(21)	91(19)	131(23)	126(22)	106(21)	102(19)
PUPS EXAMINED	7(4)	3(3)	16(7)	21(14)	6(6)	4(2)	9(5)	31(12)
PUPS COMPLETED	7(4)	3(3)	16(7)	21(14)	6(6)	4(2)	9(5)	31(12)
URINARY BLADDER	(CONTINUED)							
Distended.....	0 (0)	0 (0)	3 (2)	4 (4)	0 (0)	0 (0)	0 (0)	3 (3)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 49

INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F2B OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS EVISCERATION	0 ppm	100 ppm	300 ppm	1000 ppm	0 ppm	100 ppm	300 ppm	1000 ppm
TOTAL PUPS ON STUDY	113(22)	0(0)	78(19)	74(19)	120(22)	0(0)	89(19)	78(19)
PUPS EXAMINED	7(3)	0(0)	4(4)	19(10)	7(5)	0(0)	3(3)	16(7)
PUPS COMPLETED	7(3)	0(0)	4(4)	19(10)	7(5)	0(0)	3(3)	16(7)
KIDNEY								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Pale.....	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
STOMACH								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	1 (1)	5 (4)	0 (0)	0 (0)	2 (2)	8 (7)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
Gas filled.....	0 (0)	0 (0)	0 (0)	3 (2)	0 (0)	0 (0)	1 (1)	4 (3)
Empty.....	0 (0)	0 (0)	0 (0)	2 (2)	0 (0)	0 (0)	0 (0)	4 (4)
Contents fluid.....	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
URINARY BLADDER								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
TABLE 50
INTERGROUP COMPARISON OF MACROSCOPIC FINDINGS IN PUPS FOUND DEAD UP TO AND INCLUDING 18 DAYS OF AGE - F2C OFFSPRING

	ATMOSPHERIC CONCENTRATION OF PERCHLOROETHYLENE							
	MALES				FEMALES			
INTERCURRENT DEATHS	0	100	300	1000	0	100	300	1000
EVISCERATION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TOTAL PUPS ON STUDY	104(21)	0(0)	0(0)	119(19)	116(22)	0(0)	0(0)	90(18)
PUPS EXAMINED	1(1)	0(0)	0(0)	6(4)	1(1)	0(0)	0(0)	2(2)
PUPS COMPLETED	1(1)	0(0)	0(0)	6(4)	1(1)	0(0)	0(0)	2(2)
STOMACH								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
Gas filled.....	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Empty.....	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
URINARY BLADDER								
NO.WITH FINDINGS BUT NOT EXAMINED	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Distended.....	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX A

CERTIFICATE OF ANALYSIS PRIOR TO START OF STUDY

Chemicals & Polymers

Y00207/005

H91A/90/0002

ICI Chemicals & Polymers Limited
Merseyside Operations
PO Box 9
Runcorn Cheshire WA7 4JE
Telephone (0928) 514444
Telex 94028500 ICIC G

ICI Toxicology Unit
Central Toxicology Laboratory
Alderley Park
Cheshire

FAO Mr J Ramsey

Your ref	Our ref	Direct line	Tel ext	Date
	90/744		2487	26 Oct 90

CERTIFICATE OF ANALYSIS
Perklone 'D'

I hereby certify that the material supplied to the following order is in accordance with our normal commercial quality for such a product.

Conforms to Specification BS 1593

Batch No. PD 299

ANALYSIS

Appearance	Clear Liquid Free From Visible Suspended Matter	
Colour	Hazen Units	10
Density	g/ml @ 20°C	1.623
Alkalinity (as NaOH)	ppm w'w	6
Water	ppm w'w	19
Distillation Range		
Drip		120.4°C
5%		120.6°C
95%		120.9°C
Dry		121.1°C

IMPURITIES

8-Trichloroethane	ppm w'w	49
Bromo Dichloroethylene	ppm w'w	114
Asym Tetrachloroethane	ppm w'w	831
Sym Tetrachloroethane	ppm w'w	8
Chloro Benzene	ppm w'w	113

STABILISER

Topanol	ppm w'w	102

D.T. McGann

p.p. G Barker
ANALYSIS MANAGER

Chemicals & Polymers

Y/00207/005

22.12.93

ICI Chemicals & Polymers Limited
Merseyside Operations
PO Box 9
Runcorn Cheshire WA7 4JE
Telephone (0928) 514444
Telex 94028500 ICIC G

ICI Toxicology Unit
Central Toxicology Laboratory
Alderley Park
Cheshire

FAO Mr J Ramsey

Your ref	Our ref	Direct line	Tel ext	Date
–	93/718		2487	20 Dec 93

CERTIFICATE OF ANALYSIS
Perklone D

I hereby certify that the material supplied to the following order is in accordance with our normal commercial quality for such a product.

Conforms to Specification	BS 1593	
ANALYSIS	Batch No. PD299/90	
Appearance	Clear Liquid Free From Visible Suspended Matter	
Colour	Hazen Units	17.5
Density	g/ml @ 20°C	1.623
Alkalinity as NaOH	ppm w'w	4
Water	ppm w'w	20
Distillation Range		
Drip		120.1°C
5%		120.7°C
95%		121.0°C
Dry		121.4°C
IMPURITIES		
1.1 Dichloroethylene	ppm w'w	3
1.1.1 Trichloroethane	ppm w'w	7
1.1.2 Trichloroethylene	ppm w'w	2
Bromo Dichloroethylenes	ppm w'w	86
Chlorobenzene	ppm w'w	127
Asym Tetrachloroethane	ppm w'w	1032
Sym Tetrachloroethane	ppm w'w	3
STABILISER		
Topanol	ppm w'w	94

D. T. McCann

pp G Barker
ANALYSIS MANAGER

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX C

COMPOSITION OF CT1 DIET

Manufacturer - Special Diets Services Ltd, Stepfield, Witham, Essex, UK.

Dietary constituents and a proximate analysis are given below. The diet is prepared to a constant formula, details of which are available on request.

Dietary Constituents	Proximate Analysis	%
Wheat	Crude protein	20.0
Wheat feed	Crude oil	3.4
Wheat bran	Crude fibre	3.0
Maize	Moisture	9.0
Cornflour	Ash	6.0
Soya bean meal extract	Calcium	0.96
British white fish meal	Phosphorus	0.93
Skim milk powder (spray dried)		
PCD vitamin and mineral premix		

All batches of CT1 diet complied with the following contaminants specification:

Chemical Contaminant	Maximum Permitted Concentration (ppm)	Microbiological Contaminant	Maximum Permitted
Arsenic	1.0	Total viable organisms	2×10^4/ g
Cadmium	0.5		
Lead	3.0		
Mercury	0.1	Mesophilic spores	2×10^4/ g
Selenium	0.5		
DDT (total)	0.1	Salmonella sp	None / g
Dieldrin	0.02		
Heptachlor	0.01	Faecal E coli (Type 1)	None / g
Lindane	0.1		
PCB's (total)	0.05		
		Coliforms	None / g
Fluorine	40		
Nitrite	5.0	Fungal units	200 / g
Nitrate	100		
		Antibiotic activity	None / g
Aflatoxins (total)	0.001		
Malathion	0.5		

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX D

ALLOCATION OF FIRST GENERATION (F_0) PARENT RATS
TO EXPERIMENTAL GROUPS

The animals were distributed amongst the four experimental groups after ensuring that any litters containing unhealthy individuals and litters at the extreme of the weight range were excluded from the randomisation procedure. Males and females were allocated separately. Cards were numbered 1-x where x was the number of available litters of four rats. The cards were shuffled and a card placed on the cage of each litter to give the order of allocation of the litters to the levels in each chamber.

Allocation from within the litters was also at random. This was done by numbering cards 1 to 4 ie the number groups (chambers). These cards were shuffled and a card was picked at the same time as a rat was picked out of the first litter of males at random. Th rat was then allocated to the appropriate cage and chamber on the first level after it had been ear punched with its experimental number. This procedure was carried out until all the 'male' cages on all levels contained one male rat and then repeated to allocate the second male to each cage. The same procedure was used to allocate two females to the remaining cages on each level. Records were kept of parentage, date of birth and source of each rat.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX E

ARRANGEMENT OF ANIMALS IN CHAMBERS

PRE-MATING PHASE - F0 GENERATION

CONTROLS - CHAMBER 25

Level	Males				Females			
1	1	2	3	4	25	26	27	28
2	5	6	7	8	29	30	31	32
3	9	10	11	12	33	34	35	36
4	13	14	15	16	37	38	39	40
5	17	18	19	20	41	42	43	44
6	21	22	23	24	45	46	47	48

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX E - continued

ARRANGEMENT OF ANIMALS IN CHAMBERS

PRE-MATING PHASE - FO GENERATION

100ppm - CHAMBER 21

Level	Males		Females	
1	49 50	51 52	73 74	75 76
2	53 54	55 56	77 78	79 80
3	57 58	59 60	81 82	83 84
4	61 62	63 64	85 86	87 88
5	65 66	67 68	89 90	91 92
6	69 70	71 72	93 94	95 96

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX E - continued

ARRANGEMENT OF ANIMALS IN CHAMBERS

PRE-MATING PHASE - FO GENERATION

300ppm - CHAMBER 19

Level	Males		Females	
1	97 98	99 100	121 122	123 124
2	101 102	103 104	125 126	127 128
3	105 106	107 108	129 130	131 132
4	109 110	111 112	133 134	135 136
5	113 114	115 116	137 138	139 140
6	117 118	119 120	141 142	143 144

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX E - continued

ARRANGEMENT OF ANIMALS IN CHAMBERS

PRE-MATING PHASE - FO GENERATION

1000ppm - CHAMBER 15

Level	Males		Females	
1	145 146	147 148	169 170	171 172
2	149 150	151 152	173 174	175 176
3	153 154	155 156	177 178	179 180
4	157 158	159 160	181 182	183 184
5	161 162	163 164	185 186	187 188
6	165 166	167 168	189 190	191 192

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX F

THE DETERMINATION OF PERCHLOROETHYLENE IN TEST ATMOSPHERES AND ROOM AIR SAMPLES

METHOD SUMMARY

The test atmosphere was drawn through copper tubing from chambers using an automated air sampling system. Samples were analysed automatically using a gas chromatograph equipped with a gas sampling valve and flame ionisation detector. The resultant peak area attributable to perchloroethylene was used to calculate the atmosphere concentration in parts-per-million (ppm v/v), after suitable calibration.

Where automated analysis was not possible, atmospheres were manually sampled and analysed using similar methodology.

CALIBRATION STANDARDS

Calibration standards were prepared by adding known quantities of perchloroethylene, CTL Reference Y00207/005 (purity 99.9%) to known quantities of air in gas sampling bags (Tedlar, SKC UK Ltd). Standards of concentration 50.4, 96.6, 352 and 1170 ppm perchloroethylene were routinely prepared. All standard atmospheres were prepared immediately prior to use.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX F - continued

THE DETERMINATION OF PERCHLOROETHYLENE IN TEST ATMOSPHERES AND ROOM AIR SAMPLES

PROCEDURE

(1) Gas Chromatographic Conditions (typical)

Gas Chromatograph	:	HP5890 Series II (Hewlett-Packard)
Column	:	10% OV-17 on Gas Chrom Q (100/120 mesh) (Applied Science Laboratories, Inc.)
Column dimensions	:	1.8m x 4mm ID glass
Oven temperature	:	140°C isothermal
Detector	:	Flame ionisation
Detector temperature	:	250°C
Inlet type	:	Splitless
Inlet temperature	:	190°C
Sample introduction	:	6-Port gas-sampling valve (150°C)
Injection Volume	:	Typically 0.66ml for test atmosphere samples and calibration standards
Carrier gas	:	Nitrogen (50 ml/min) (All gas flows nominal)
Fuel gases	:	Hydrogen (40 ml/min)
		Air (425 ml/min)
Atmosphere Sampling (Automated)	:	Ambient Air Sampler (ZENECA Research Engineering)
Manual sampling	:	1ml Gas-tight syringe with on/off valve (SGE)
Data Acquisition	:	(i) HP3396A Integrator (Hewlett-Packard)
		(ii) Waters 860 Networked Data System (Waters)
	(Note:	Perchloroethylene Data reported from HP3396A only)

THE DETERMINATION OF PERCHLOROETHYLENE IN TEST ATMOSPHERES AND ROOM AIR SAMPLES

PROCEDURE

(2) Calibration

The chromatographic system was calibrated using the full range of standards prior to the study start and found to give a linear response for the test substance over the range of interest. Volumes of each standard atmosphere were injected into the gas chromatograph, directly equivalent to that volume injected by the autosampler. Calibration was repeated daily for the first week of the study, and at regular intervals thereafter. Checks were undertaken periodically during the study to confirm that the precise volume of test and standard atmosphere injected by the system remained constant.

(3) Calculation of Results

The results were calculated automatically by the data acquisition system using the following equation:

Sample atmosphere concentration (ppm) = Sample peak area x Response factor

$$\text{Response factor} = \frac{Cstd}{Astd}$$

Where: Astd = Mean standard peak area

Cstd = Concentration of gaseous standard (ppm)

$$= \frac{V_1 \times D \times Mv \times 1000}{Mw \times V_2}$$

THE DETERMINATION OF PERCHLOROETHYLENE IN TEST ATMOSPHERES AND ROOM AIR SAMPLES

PROCEDURE

(3) Calculation of Results - continued

Where:

V_1 = Volume of perchloroethylene (µl)

D = Density of perchloroethylene
= 1.623

Mv = Molar gas volume @ 18-24°C
= 24 l

Mw = Perchloroethylene molecular weight
= 165.83

V_2 = Gas bag total volume (l)

DETECTION LIMIT

The limit of detection was assessed to be approximately 10 ppm v/v perchloroethylene.

THE DETERMINATION OF PERCHLOROETHYLENE IN TEST ATMOSPHERES AND ROOM AIR SAMPLES

PROCEDURE

(4) Infra-red (IR) Analysis

(Infra-red analysis used to monitor test atmospheres on 27 July 1992)

IR Instrument	: Miran 104 (Wilkes/Foxboro)
Pathlength	: 1.5m
Wavelength	: 10.9µ
Slit Width	: 1mm
Range	: 1A
Meter Response	: 4
Calibration loop vol.	: 2.54l
Data Handling	: Chart recorder (Kipp & Zonen)
Chart speed	: typically 0.1mm/sec

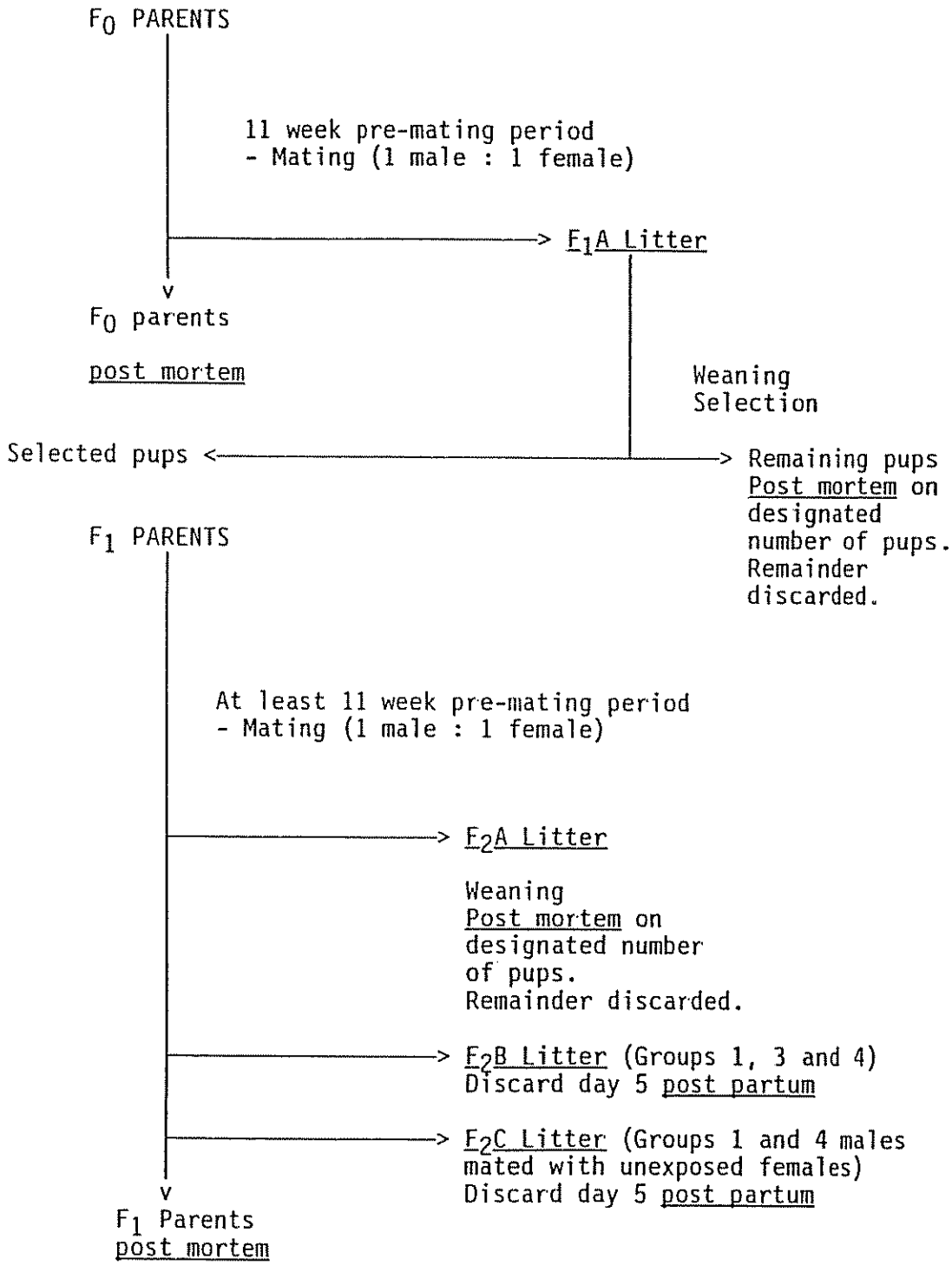
The system was calibrated prior to analysis over the range 93 to 1020ppm perchloroethylene, by adding µl quantities of perchloroethylene, CTL Reference Y00207/005 (purity 99.9%) to the instrument whilst in closed-loop mode. A calibration curve was constructed relating concentration to absorbance units, and test atmospheres analysed by direct sampling, using suitable tubing for atmosphere transfer from chamber to instrument.

Results were obtained directly from the calibration curve. Using this methodology, the limit of detection was assessed to be approximately 15ppm v/v perchloroethylene.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX G

SEQUENCE OF EVENTS

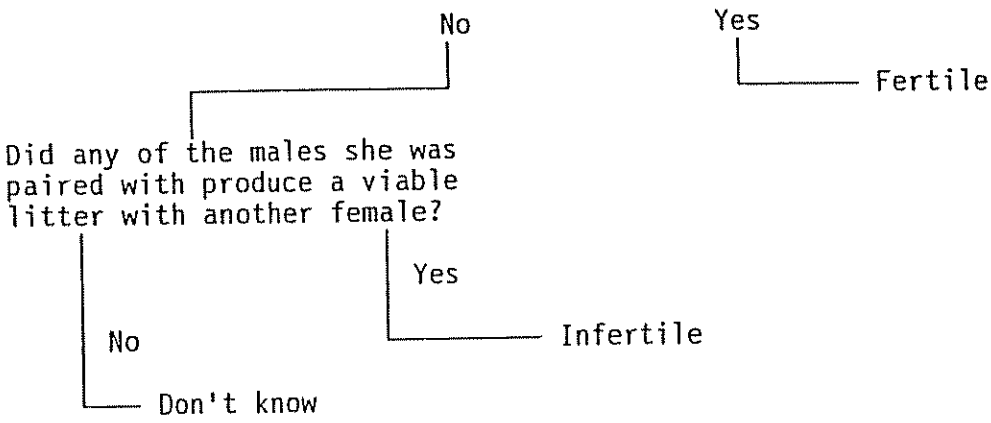


PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX H

THE DETERMINATION OF FERTILITY

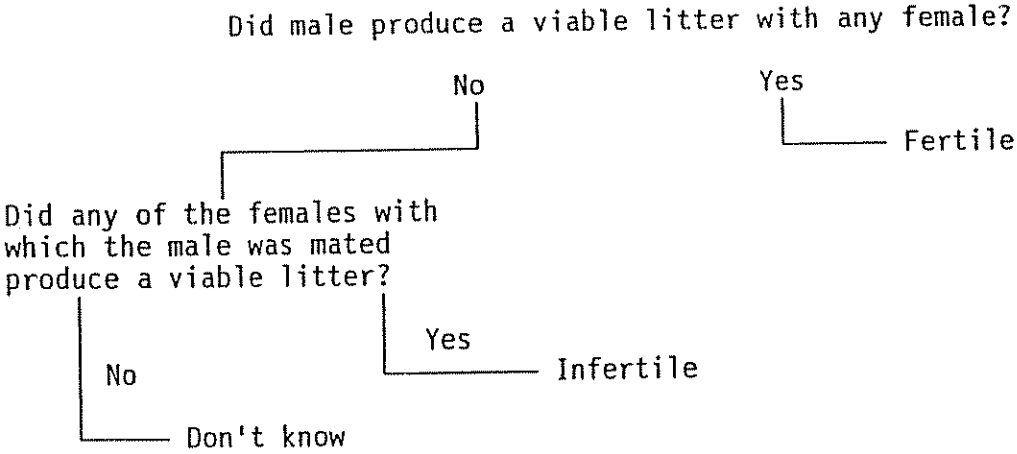
Female Fertility



The don't knows are ignored

$$\text{Female fertility index} = \frac{\text{No. fertile} \times 100}{\text{No. fertile + No. infertile}} \%$$

Male Fertility



The don't knows are ignored.

$$\text{Male fertility index} = \frac{\text{No. fertile} \times 100}{\text{No. fertile + No. infertile}} \%$$

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX I

SELECTION OF SECOND GENERATION (F_1) PARENTS

The parents of the second generation were selected from animals in the A litter of the first generation.

The animal numbers and position in the chambers remained the same for each generation but the study number suffix changed to denote the generation.

Selection of Suitable Litters

Litters of between 2 and 16 pups were used. One litter considered unlikely to survive to day 29 was excluded.

Pups were selected from as many litters as possible and a normal maximum of two males and two females was taken from any one litter.

After the number of pups of each sex to be selected from each litter was determined, each pup was allocated an experimental number. This gave the placing of selected rats in experimental cages and thus the initial pairings when these rats were mated to produce their first litter.

Therefore, the allocation of experimental numbers followed these criteria:

- sisters were not placed in the same cage.
- males were not brother to either of the females in the adjacent cage.
- the two males and their adjacent females were as close in age as possible.

The selection of individual pups from predetermined litters was at random. Runts or clinically abnormal pups were excluded. Sexes were treated separately. The selected individuals were ear-punched with the relevant experimental number. Details of the parent female number and date of selection of each pup were recorded.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX J

CRITERIA FOR DEFINING SUSPECTED INFERTILE ANIMALS FOR PATHOLOGY

The following criteria were adopted for defining suspect infertiles in the F1 generation for the purposes of pathological evaluation:

Males mated for A, B and C litters (ie groups 1 and 4) not producing a viable litter for the C mating.

Males mated for A and B litters (ie group 3) not producing a viable litter for the B mating.

Males mated for an A litter (ie group 2) not producing a viable litter.

Females mated for A and B litters (ie groups 1, 3 and 4) not producing a viable litter for the B mating. However, the uteri from all females with the exception of those not producing an A and B litter, and those found to have a macroscopically abnormal reproductive tact, were stained with Turnbull Blue to enable counting of implantation sites, and corpora lutea were also counted. In the case of females with an A but no B litter (ie suspect infertile for the B litter), the reproductive tract apart from mammary gland could not therefore be examined histologically.

Females mated for an A litter (ie group 2) not producing a viable litter.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX K

ATMOSPHERE ANALYSIS RESULTS

Perchloroethylene concentrations were determined by the procedure shown in Appendix F.

For first and second generations, results from pre-mating phase, and mating/pregnancy/lactation to termination phase (main phase), are presented. Dates relating to each specific phase of the study are given in Tables 1a and 1b.

The mean analysed atmosphere concentrations of perchloroethylene for each generation and phase are given in Table 2. Full daily results are given in Tables 3 to 6.

Some problems were experienced with test atmosphere analysis during the course of this study. The main points detailed below are also documented as footnotes to Tables 3 to 6, for completeness.

(1) On 26 and 27 July, 18 September and 11 December 1992, no chemical analysis was possible by Gas Chromatography due to instrument malfunction. Some results are available from Infra-red analysis for 27 July 1992. (Methodology relating to Infra-red analysis can be found in Appendix F.) Nominal concentration results for these dates were consistent with previous exposure days, indicating that atmosphere concentrations were close to target.

(2) On 30 and 31 July 1992, 21 August 1992, and 7 to 13 April 1993 inclusive, automated running of the analysis system was not possible due to instrumentation problems. During these periods, test atmospheres were manually sampled and subsequently analysed using methodology consistent with the automated system.

No significant amounts of perchloroethylene were detected in control group or room air atmospheres, although demonstrable sample carryover effects were noted on occasion in samples taken for room air analysis. These were typically attributable to instrumentation problems.

TABLE 1a

FIRST GENERATION STUDY DATES

Generation 1		Pre-mating Phase		Main Phase	
Chamber	Group	Start	Finish	Start	Finish
25	1	04-May-92	19-Jul-92	20-Jul-92	06-Oct-92
24	1			21-Jul-92	10-Sep-92
21	2	04-May-92	19-Jul-92	20-Jul-92	04-Oct-92
20	2			21-Jul-92	10-Sep-92
19	3	04-May-92	19-Jul-92	20-Jul-92	06-Oct-92
18	3			21-Jul-92	10-Sep-92
15	4	04-May-92	19-Jul-92	20-Jul-92	04-Oct-92
14	4			21-Jul-92	10-Sep-92

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX K

ATMOSPHERE ANALYSIS RESULTS

TABLE 1b

SECOND GENERATION STUDY DATES

Generation 2		Pre-mating Phase		Main Phase	
Chamber	Group	Start	Finish	Start	Finish
25	1	19-Oct-92	20-Dec-92	21-Dec-92	19-May-93
24	1	09-Sep-92	18-Oct-92	22-Dec-92	06-May-93
21	2	19-Oct-92	20-Dec-92	21-Dec-92	20-May-93
20	2	09-Sep-92	18-Oct-92	22-Dec-92	06-May-93
19	3	19-Oct-92	20-Dec-92	21-Dec-92	20-May-93
18	3	09-Sep-92	18-Oct-92	22-Dec-92	06-May-93
15	4	19-Oct-92	20-Dec-92	21-Dec-92	18-May-93
14	4	09-Sep-92	18-Oct-92	22-Dec-92	06-May-93

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

APPENDIX K

ATMOSPHERE ANALYSIS RESULTS

TABLE 2

RESULTS SUMMARY
(ppm v/v perchloroethylene)

Generation 1		Pre-Mating Phase	Main Phase	Overall
Chamber	Group	Mean SD	Mean SD	Mean SD
21	2	103 4	104 6	104 5
20	2		102 5	102 5
19	3	300 7	296 14	298 12
18	3		303 14	303 14
15	4	993 39	989 58	991 51
14	4		1005 51	1005 51
Generation 2		**Pre-Mating Phase**	**Main Phase**	**Overall**
Chamber	Group	Mean SD	Mean SD	Mean SD
21	2	100 5	101 5	100 5
20	2		100 5	100 5
19	3	301 12	304 12	303 12
18	3		300 14	300 14
15	4	1000 46	1004 35	1002 40
14	4		1000 33	1000 33

where SD = Sample Standard Deviation
CV = Coefficient of Variation
$= \frac{SD}{mean} \times 100\ \%$

Note: Generation 2, pre-mating phase used 2 chambers per group; results are pooled.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS

TABLE 3

FIRST GENERATION - PRE-MATING PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
04-May-92	109	2			308	37			1036	39		
05-May-92	108	5			312	17			1019	28		
06-May-92	102	5			306	18			1018	6		
07-May-92	108	6			296	13			1013	10		
08-May-92	103	7			300	12			1001	17		
11-May-92	103	5			300	13			998	16		
12-May-92	103	3			300	15			1005	14		
13-May-92	106	4			300	39			991	11		
14-May-92	103	4			301	6			993	116		
15-May-92	105	3			303	13			997	20		
18-May-92	108	8			303	4			1027	15		
19-May-92	105	3			304	14			1006	19		
20-May-92	103	5			301	6			990	18		
21-May-92	104	5			292	23			1005	13		
22-May-92	96	7			290	20			940	91		
25-May-92	101	5			302	16			1067	79		
26-May-92	103	6			304	14			1013	18		
27-May-92	105	2			299	15			1012	30		
28-May-92	100	4			298	15			1002	32		
29-May-92	101	4			302	11			988	26		
01-Jun-92	99	8			291	23			964	100		
02-Jun-92	92	16			272	45			927	168		
03-Jun-92	105	3			296	14			1035	23		
04-Jun-92	104	4			293	14			1004	19		
05-Jun-92	106	4			299	9			993	22		
08-Jun-92	98	3			280	85			1002	13		
09-Jun-92	94	5			296	2			1000	9		
10-Jun-92	100	6			295	3			1003	13		
11-Jun-92	106	4			298	5			1002	9		
12-Jun-92	102	6			294	2			999	12		
15-Jun-92	102	8			300	16			1009	10		
16-Jun-92	107	5			304	10			835	386		

Note: 11-Jun-92 : No analysis data available 10:02 to 11:09 am.
16-Jun-92 : Generation problems experienced for chamber 15.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS

TABLE 3 - continued

FIRST GENERATION - PRE-MATING PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
17-Jun-92	100	8			298	10			1003	33		
18-Jun-92	104	4			303	2			1012	17		
19-Jun-92	104	7			306	7			914	284		
22-Jun-92	104	5			294	9			990	23		
23-Jun-92	99	8			296	11			1007	12		
24-Jun-92	101	6			310	17			914	283		
25-Jun-92	104	6			306	2			1000	16		
26-Jun-92	104	6			305	4			1008	11		
29-Jun-92	105	5			308	9			999	22		
30-Jun-92	105	6			306	8			1007	10		
01-Jul-92	104	5			307	24			998	19		
02-Jul-92	104	6			305	21			1004	12		
03-Jul-92	102	9			304	6			1009	9		
06-Jul-92	104	7			298	9			998	14		
07-Jul-92	102	7			298	3			1001	17		
08-Jul-92	102	9			310	4			1005	23		
09-Jul-92	103	10			308	7			1007	13		
10-Jul-92	104	7			298	2			1012	10		
13-Jul-92	103	6			301	5			1015	18		
14-Jul-92	106	7			305	2			995	11		
15-Jul-92	102	8			302	26			855	290		
16-Jul-92	92	27			288	5			989	22		
17-Jul-92	102	4			295	30			1003	9		
Mean:	103				300				993			
SD:	4				7				39			
% CV:	3.9				2.3				3.9			
Max:	109				312				1067			
Min:	92				272				835			

Note: 19-Jun-92 : Generation problems experienced for chamber 15.
24-Jun-92 : Generation problems experienced for chamber 15.
29-Jun-92 : Group 4 exposure in chamber 14 (generation problems).
15-Jul-92 : Generation problems experienced for chamber 15.
16-Jul-92 : Generation problems experienced for chamber 21.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS

TABLE 4

FIRST GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
20-Jul-92	100	8			300	17			979	43		
21-Jul-92	108	4	108	3	301	11	318	61	1008	7	1038	8
22-Jul-92	104	7	102	1	310	1	291	2	999	7	1036	8
23-Jul-92	102	6	99	1	301	5	299	4	1037	52	995	7
24-Jul-92	103	6	101	1	292	3	291	4	975	10	1014	6
25-Jul-92	99	5	96	2	288	3	291	7	846	373	990	24
26-Jul-92												
27-Jul-92	130		105		280		350		1060		1040	
28-Jul-92	108	6	106	2	292	18	308	3	1057	31	1046	23
29-Jul-92	109	5	103	1	292	6	298	4	1002	20	998	11
30-Jul-92	108	8	91	4	273	16	276	17	943	48	988	83
31-Jul-92	99	12	93	8	274	17	281	30	918	87	1011	53
01-Aug-92	102	7	109	3	291	5	288	17	1031	16	1061	25
02-Aug-92	104	8	107	1	286	5	309	3	1003	5	1005	9
03-Aug-92	104	7	105	1	296	3	293	5	1010	15	1028	27
04-Aug-92	108	11	106	1	290	8	317	13	1011	10	1005	9
05-Aug-92	101	8	104	2	303	3	313	5	990	8	992	7
06-Aug-92	104	9	100	1	290	3	301	3	971	6	981	7
07-Aug-92	102	8	99	1	287	3	294	4	833	329	695	282
08-Aug-92	102	10	99	1	288	4	297	4	995	24	937	68
09-Aug-92	102	7	94	1	290	2	291	3	1017	8	979	9
10-Aug-92	104	9	96	1	303	2	296	3	1002	5	967	12

Note: 21-Jul-92 : Manual sampling for first part of exposures due to instrumentation problems.
25-Jul-92 : Generation problems experienced for chamber 15.
26-Jul-92 : No analysis possible due to instrumentation problems.
27-Jul-92 : Results from Infra-red analysis.
30 Jul-92 : No analysis from first 2.5 hours of exposure. Results from manual sampling/gas chromatography.
31-Jul 92 : Results from manual sampling/gas chromatography.
07-Aug-92 : Generation problems experienced for chambers 14 and 15.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS

TABLE 4 - continued

FIRST GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
11-Aug-92	105	10	96	3	288	17	293	3	994	10	972	17
12-Aug-92	108	9	99	1	292	2	297	5	1053	19	991	15
13-Aug-92	112	11	106	4	323	18	321	10	1087	36	1053	56
14-Aug-92	113	10	103	2	295	4	290	21	994	11	1041	9
15-Aug-92	102	7	105	1	286	21	298	15	997	8	1020	8
16-Aug-92	101	8	103	1	290	4	295	10	1005	7	1016	7
17-Aug-92	99	7	103	3	294	8	303	5	999	14	1011	7
18-Aug-92	105	9	104	4	288	56	284	17	987	16	989	16
19-Aug-92	101	9	97	5	312	6	308	7	982	26	989	46
20-Aug-92	99	6	96	10	273	15	298	24	980	51	986	74
21-Aug-92	108	12	96	3	291	6	308	14	1030	33	1010	66
22-Aug-92	110	8	105	2	279	2	320	3	1034	11	1053	14
23-Aug-92	98	1	107	1	287	7	317	4	1014	6	1002	9
24-Aug-92	103	5	104	2	296	3	321	11	1030	17	1005	11
25-Aug-92	107	5	106	3	297	3	296	14	1040	18	1028	11
26-Aug-92	104	3	105	1	302	5	307	10	1022	7	1036	13
27-Aug-92	107	4	104	2	302	2	320	6	1018	5	1027	6
28-Aug-92	109	4	106	3	302	1	307	9	817	242	1010	11
29-Aug-92	102	6	106	2	312	8	299	22	1015	19	1041	17
30-Aug-92	97	2	102	4	299	10	291	8	985	18	1012	27
31-Aug-92	100	2	103	1	307	1	300	13	1023	20	1021	27
01-Sep-92	107	3	104	2	314	1	316	4	1017	21	1012	17
02-Sep-92	102	3	108	2	292	13	290	33	1036	8	984	135
03-Sep-92	107	2	108	3	297	3	304	4	1009	23	987	23
04-Sep-92	106	2	103	2	302	15	329	52	1014	16	1015	16
05-Sep-92	106	2	106	2	299	3	288	21	886	391	1031	29

Note: 21-Aug-92 : No analysis possible from 09:28 to 11:02 during exposure period; manual sampling used.
22-Aug-92 : No analysis possible from 10:30 to 12:30 during exposure period.
28-Aug-92 : Generation problems experienced for chamber 15.
05-Sep-92 : Generation problems experienced for chamber 15.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT

TABLE 4 - continued

FIRST GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
06-Sep-92	114	2	110	1	311	20	305	4	1041	19	1030	10
07-Sep-92	116	1	109	2	333	3	332	3	1047	16	1035	15
08-Sep-92	101	2	88	9	286	7	316	4	1029	22	983	68
09-Sep-92	109	2	101	1	306	6	311	22	1067	40	1053	34
10-Sep-92	108	1	103	2	305	2	307	2	994	11	1002	10
11-Sep-92	107	2			310	3			991	19		
12-Sep-92	102	3			312	4			1005	26		
13-Sep-92	107	2			316	2			1007	26		
14-Sep-92	110	1			321	3			1035	23		
15-Sep-92	106	2			315	10			1027	26		
16-Sep-92	92	13			258	40			892	132		
17-Sep-92	86	8			264	28			876	101		
18-Sep-92												
19-Sep-92	97	2			287	6			949	21		
20-Sep-92	102	5			294	6			945	9		
21-Sep-92	103	4			278	13			952	13		
22-Sep-92	106	2			296	24			885	391		
23-Sep-92	104	3			253	97			975	14		
24-Sep-92	105	4			312	2			798	27		
25-Sep-92	105	4			302	3			881	30		
26-Sep-92	101	4			317	3			955	45		
27-Sep-92	96	2			296	4			1002	12		
28-Sep-92	103	4			310	4			1001	7		
29-Sep-92	103	3			299	3			976	10		

Note: 15-Sep-92 : Generation problems experienced for chamber 14.
18-Sep-92 : No analysis possible due to instrumentation problems.
22-Sep-92 : Generation problems experienced for chamber 15.
23-Sep-92 : Generation problems experienced for chamber 19.
24-Sep-92 : No analysis possible for 2 hours during exposure.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 4 - continued

FIRST GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
30-Sep-92	109	2			312	25			1029	42		
01-Oct-92	98	4			302	2			994	25		
02-Oct-92	99	6			303	2			1005	10		
03-Oct-92	106	5			285	3			1023	28		
04-Oct-92	98	4			296	4			1021	7		
05-Oct-92					295	3						
06-Oct-92					302	6						
Mean:	104		102		296		303		989		1005	
SD:	6		5		14		14		58		51	
% CV:	5.8		4.9		4.7		4.6		5.9		5.1	
Max:	130		110		333		350		1087		1061	
Min:	86		88		253		276		798		695	

Note: 05-Oct-92 : No analysis possible for last hour of exposure.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 5

SECOND GENERATION - PRE-MATING PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
09-Sep-92			101	1			311	22			1053	34
10-Sep-92			103	2			307	2			1002	10
11-Sep-92			101	1			308	2			1018	28
14-Sep-92			103	2			316	3			1025	29
15-Sep-92			105	1			297	11			758	504
16-Sep-92			92	14			321	53			1017	173
17-Sep-92			82	4			312	3			911	37
18-Sep-92												
21-Sep-92			91	1			301	6			911	34
22-Sep-92			105	1			307	16			1007	16
23-Sep-92			102	2			303	6			1002	16
24-Sep-92			98	2			309	2			997	87
25-Sep-92			100	1			310	6			1004	22
28-Sep-92			97	1			308	7			1030	23
29-Sep-92			96	1			307	5			981	20
30-Sep-92			108	2			306	18			1019	53
01-Oct-92			104	1			303	4			1003	55
02-Oct-92			108	1			307	3			1015	35
05-Oct-92			103	2			340	2			949	26
06-Oct-92			99	1			286	12			961	10
07-Oct-92			98	3			287	29			904	51
08-Oct-92			94	3			268	70			974	36
09-Oct-92			98	5			300	3			1009	30

Note: 15-Sep-92 : Generation problems experienced for chamber 14.
18-Sep-92 : No analysis possible due to instrumentation problems.
24-Sep-92 : No analysis possible for 2 hours during exposure.
05-Oct-92 : No analysis possible for last hour of exposure.
06-Oct-92 : No analysis possible for first 2 hours of exposure.
08-Oct-92 : Generation problems experienced for chamber 18.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 5 - continued

SECOND GENERATION - PRE-MATING PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
12-Oct-92			104	3			303	7			1021	41
13-Oct-92			105	3			305	6			1012	25
14-Oct-92			104	3			300	19			930	283
15-Oct-92			100	2			309	17			968	58
16-Oct-92			103	3			314	49			984	40
19-Oct-92	102	7			297	4			958	30		
20-Oct-92	96	8			286	10			978	21		
21-Oct-92	94	3			292	12			1040	43		
22-Oct-92	95	3			289	9			960	35		
23-Oct-92	97	3			295	3			994	22		
26-Oct-92	104	6			294	7			987	28		
27-Oct-92	103	5			295	5			970	25		
28-Oct-92	107	7			297	3			984	18		
29-Oct-92	98	6			290	4			998	17		
30-Oct-92	100	5			290	3			987	24		
02-Nov-92	103	4			305	3			1035	17		
03-Nov-92	96	5			297	4			1007	183		
04-Nov-92	105	4			303	4			1040	11		
05-Nov-92	97	5			293	13			1021	12		
06-Nov-92	102	4			302	13			988	7		
09-Nov-92	98	4			303	12			1016	14		
10-Nov-92	104	7			295	7			998	19		
11-Nov-92	104	9			300	4			1004	12		
12-Nov-92	101	7			306	12			1008	21		
13-Nov-92	99	7			293	4			984	17		
16-Nov-92	83	26			309	6			1027	14		

Note: 14-Oct-92 : Generation problems experienced for chamber 14.
19-Oct-92 : Change of exposure chambers.
03-Nov-92 : Generation problems experienced for chamber 15.
04-Nov-92 : Analysis aborted after 280 minutes of exposure for essential system maintenance.
13-Nov-92 : Analysis aborted after 315 minutes of exposure for essential system maintenance.
16-Nov-92 : Generation problems experienced for chamber 21.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 5 - continued

SECOND GENERATION - PRE-MATING PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
17-Nov-92	96	5			311	3			1029	11		
18-Nov-92	102	7			312	3			1020	11		
19-Nov-92	98	8			298	9			1000	14		
20-Nov-92	103	4			314	26			981	14		
23-Nov-92	98	8			313	5			1052	15		
24-Nov-92	102	6			307	3			1064	18		
25-Nov-92	102	8			313	1			1053	15		
26-Nov-92	104	7			306	4			1070	13		
27-Nov-92	103	7			315	4			1065	9		
30-Nov-92	100	4			314	2			1065	19		
01-Dec-92	99	7			314	6			1035	17		
02-Dec-92	99	3			307	3			1038	7		
03-Dec-92	95	3			311	3			1027	11		
04-Dec-92	106	6			284	5			1027	21		
07-Dec-92	102	5			284	2			1031	19		
08-Dec-92	104	6			283	3			1009	16		
09-Dec-92	103	6			285	3			996	10		
10-Dec-92	101	11			306	11			989	33		
11-Dec-92												
14-Dec-92	99	6			284	15			935	29		
15-Dec-92	103	5			283	48			1009	10		
16-Dec-92	98	9			290	32			961	19		
17-Dec-92	105	7			298	26			1012	35		
18-Dec-92	104	7			283	79			1050	13		
Mean:	100				301				1000			
SD:	5				12				46			
% CV:	5.0				4.0				4.6			
Max:	108				340				1070			
Min:	82				268				758			

Note: 09-Dec-92 : No analysis possible for 60 minutes during third hour of exposure.
11-Dec-92 : No analysis possible due to instrumentation problems.
18-Dec-92 : Generation problems experienced for chamber 19.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
21-Dec-92	93	10			286	25			974	64		
22-Dec-92	103	7	103	4	289	8	308	15	1020	45	1038	35
23-Dec-92	110	9	102	5	301	3	312	2	1029	22	1025	32
24-Dec-92	100	11	96	3	294	4	314	2	1005	12	899	103
25-Dec-92	93	2	97	1	303	3	310	3	998	10	1003	25
26-Dec-92	94	3	98	1	310	22	249	70	861	380	989	27
27-Dec-92	95	3	97	1	293	30	311	22	995	6	1009	25
28-Dec-92	98	2	99	1	299	3	280	28	1015	23	990	43
29-Dec-92	100	4	96	1	289	2	277	2	1008	7	994	32
30-Dec-92	104	4	100	1	292	3	282	10	1008	18	1079	226
31-Dec-92	105	1	101	2	300	4	294	3	1017	7	1018	54
01-Jan-93	98	1	101	1	295	3	313	6	1026	7	1031	21
02-Jan-93	105	2	98	1	306	12	297	22	1030	4	980	15
03-Jan-93	101	2	104	1	320	3	315	4	1017	14	1007	31
04-Jan-93	102	2	93	4	326	1	306	37	1024	8	1024	33
05-Jan-93	102	4	93	4	319	5	299	3	1023	7	1044	31
06-Jan-93	105	7	92	10	308	3	293	4	1030	6	1020	29
07-Jan-93	99	2	93	8	313	2	302	5	1021	7	998	14
08-Jan-93	91	7	108	3	322	3	252	111	1024	5	1012	26
09-Jan-93	101	3	105	2	301	5	297	20	1008	26	1012	27
10-Jan-93	101	2	98	2	299	18	305	16	1020	6	966	87
11-Jan-93	103	3	100	1	300	2	317	2	1016	8	996	19
12-Jan-93	101	4	99	2	285	8	316	5	975	6	984	10
13-Jan-93	97	3	92	5	294	19	320	1	977	12	986	32
14-Jan-93	97	4	106	2	300	1	303	2	974	8	966	23
15-Jan-93	94	2	106	2	277	19	315	3	987	7	990	26
16-Jan-93	103	3	103	0	313	2	312	2	976	6	975	12
17-Jan-93	102	3	104	1	309	2	318	2	868	393	982	17

Note: 26-Dec-92 : Generation problems experienced for chambers 15 and 18.
30-Dec-92 : Generation problems experienced for chamber 14.
08-Jan-93 : Generation problems experienced for chamber 18.
12-Jan-93 : All exposures terminated after 320 mins (plant failure).
17-Jan-93 : Generation problems experienced for chamber 15.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6 - continued

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
18-Jan-93	94	3	102	2	315	5	310	10	975	16	968	19
19-Jan-93	101	2	107	2	281	41	342	33	1008	9	996	23
20-Jan-93	107	3	103	1	298	3	310	10	1053	199	983	10
21-Jan-93	97	3	102	1	297	3	292	3	993	4	1004	31
22-Jan-93	102	3	104	1	297	2	301	7	986	11	991	47
23-Jan-93	108	3	96	8	299	2	301	2	1011	23	987	34
24-Jan-93	96	3	104	1	302	3	316	3	1005	10	1016	26
25-Jan-93	102	3	105	1	301	1	301	3	1014	10	1018	37
26-Jan-93	104	4	98	2	258	77	280	3	1018	12	1018	26
27-Jan-93	96	3	99	1	314	1	290	1	983	14	1048	34
28-Jan-93	108	4	109	5	319	29	288	2	995	13	967	62
29-Jan-93	105	4	93	1	315	2	289	2	987	3	994	12
30-Jan-93	97	5	94	2	291	11	284	8	1013	20	996	19
31-Jan-93	98	4	96	2	300	12	295	15	1021	15	997	43
01-Feb-93	106	3	101	1	323	3	295	6	1026	19	997	37
02-Feb-93	99	4	100	1	320	6	302	4	1008	30	1012	30
03-Feb-93	107	5	97	1	315	4	302	2	1041	13	996	10
04-Feb-93	101	6	98	1	311	2	291	4	1039	8	978	24
05-Feb-93	97	1	99	1	313	3	287	3	1028	22	863	381
06-Feb-93	95	3	98	1	289	2	314	3			991	17
07-Feb-93	97	4	99	2	298	3	317	17			1016	8
08-Feb-93	99	4	101	1	306	4	311	6			940	132
09-Feb-93	105	5	100	1	304	2	305	1			984	30
10-Feb-93	104	5	102	1	306	3	313	6			990	37
11-Feb-93	104	3	101	1	314	8	308	1			983	40
12-Feb-93	104	4	96	1	315	2	296	2			979	30
13-Feb-93	105	3	97	2	309	5	285	5			995	33
14-Feb-93	108	4	96	4	282	75	305	31			990	27
15-Feb-93	106	6	100	1	310	2	284	2			980	29

Note: 05-Feb-93 : Generation problems experienced or chamber 14.
10-Feb-93 : Extra group 2 and 3 exposures in chambers 26 and 15.
Mean results: Group 2 = 90ppm (5) (SD in parentheses)
Group 3 = 301ppm (65)

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6 - continued

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
16-Feb-93	102	3	98	2	299	14	278	2			956	45
17-Feb-93	94	0	105	1	309	1	284	1			1010	20
18-Feb-93	99	2	104	2	294	22	286	2			1008	33
19-Feb-93	98	3	103	2	293	2	282	29			916	31
20-Feb-93	98	1	107	1	287	27	302	50			1046	66
21-Feb-93	103	4	97	3	313	20	297	3			1030	53
22-Feb-93	109	7	99	1	306	23	290	3			980	34
23-Feb-93	96	4	93	3	317	23	323	15			915	24
24-Feb-93	102	5	94	1	322	6	299	2			1034	23
25-Feb-93	101	5	96	1	311	4	297	13			1039	25
26-Feb-93	101	4	96	1	303	63	279	11			985	35
27-Feb-93	101	6	97	1	304	4	288	3			1069	34
28-Feb-93	99	5	101	1	305	4	300	4			1016	35
01-Mar-93	104	8	99	1	286	41	320	3			1003	12
02-Mar-93	102	6	101	2	319	25	288	11			1037	50
03-Mar-93	105	11	105	2	305	4	308	4			999	44
04-Mar-93	98	3	97	2	313	3	293	3			1035	43
05-Mar-93	96	2	99	1	309	4	312	3			1029	34
06-Mar-93	93	7	98	1	300	3	278	65			1037	24
07-Mar-93	98	8	106	1	304	4	294	12			1008	43
08-Mar-93	96	4	102	2	321	5	294	2			974	26
09-Mar-93	96	4	100	1	320	4	309	2			994	28
10-Mar-93	99	6	98	0	312	27	323	4			981	37
11-Mar-93	96	5	98	1	304	9	316	2			1005	37
12-Mar-93	102	7	101	1	308	5	308	2			1001	18
13-Mar-93	102	4	101	1	317	2	293	1			1003	14
14-Mar-93	104	5	99	2	298	3	305	5			989	13
15-Mar-93	101	2	102	0	323	4	303	1	980	33	1000	7
16-Mar-93	101	2	101	1	318	2	306	9	1021	18	1016	33
17-Mar-93	101	3	102	1	315	2	311	2	1018	9	999	11
18-Mar-93	104	7	103	2	320	6	314	8	1022	27	1021	44
19-Mar-93	106	3	106	1	314	2	307	2	1028	33	991	32

Note: 06-Mar-93 : Generation problems experienced for chamber 18.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6 - continued

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000	m	1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	D	Mean	SD
20-Mar-93	104	1	106	1	311	2	304	4	995	19	1017	37
21-Mar-93	104	2	106	4	308	2	303	3	995	8	988	28
22-Mar-93	97	7	105	1	299	6	295	3	984	17	965	23
23-Mar-93	104	7	105	1	323	5	297	4	992	9	979	25
24-Mar-93	101	7	102	2	314	15	304	11	986	13	989	35
25-Mar-93	106	6	102	1	320	3	302	3	996	13	997	30
26-Mar-93	108	7	105	1	302	2	308	3	1043	10	1008	24
27-Mar-93	93	4	93	1	306	4	303	4	997	15	1031	45
28-Mar-93	103	2	97	1	300	12	296	5	1009	8	1081	20
29-Mar-93	106	4	100	5	313	17	299	4	1008	27	1052	49
30-Mar-93	99	3	98	1	302	3	293	2	985	9	1030	25
31-Mar-93	103	5	98	2	303	4	297	6	901	283	1026	23
01-Apr-93	103	5	100	1	302	8	302	5	1044	11	1018	32
02-Apr-93	105	6	99	1	297	19	292	3	1009	12	1022	16
03-Apr-93	102	7	96	1	314	2	302	4	982	10	1011	40
04-Apr-93	102	8	98	2	300	13	301	7	934	55	989	25
05-Apr-93	101	7	97	2	280	4	281	10	925	25	965	50
06-Apr-93	100	7	100	3	296	5	290	10	958	35	1006	35
07-Apr-93	94	17	94	8	291	16	277	18	949	40	963	62
08-Apr-93	88	5	90	2	277	15	286	54	1016	32	998	27
09-Apr-93	91	10	93	4	273	15	298	16	985	45	973	95
10-Apr-93	110	11	107	7	296	21	353	21	1033	76	1065	27
11-Apr-93	118	7	109	8	299	9	313	7	979	37	1038	47
12-Apr-93	99	14	104	7	293	6	279	5	916	93	1028	38
13-Apr-93	87	9	85	12	258	72	282	17	913	81	988	50
14-Apr-93	94	7	103	2	310	24	289	10	1001	39	1050	37

Note: 31-Mar-93 : Generation problems experienced for chamber 15.
05-Apr-93 : No analysis possible for 3rd and 4th hours of exposure due to instrumentation problems.
07-Apr-93 to 13-Apr-93 : Results from manual sampling/gas chromatography.
14-Apr-93 : No analysis possible for 2nd and 3rd hours of exposure due to instrumentation problems.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6 - continued

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
15-Apr-93	100	8	104	1	312	49	294	1	1034	15	1040	33
16-Apr-93	99	6	104	1	296	1	285	15	1033	12	1013	14
17-Apr-93	105	4	101	1	289	7	295	2	1054	15	1036	38
18-Apr-93	97	4	103	2	294	8	298	6	1028	14	1002	26
19-Apr-93	97	4	108	0	305	2	314	1	1028	14	990	29
20-Apr-93	98	4	104	2	319	2	299	2	1026	11	1017	23
21-Apr-93	100	6	104	1	317	2	286	24	1023	7	985	50
22-Apr-93	111	5	109	1	315	3	291	15	1026	9	997	21
23-Apr-93	100	6	105	1	316	3	301	1	1031	10	1045	25
24-Apr-93	96	7	105	2	317	3	283	1	1025	10	1006	19
25-Apr-93	91	4	105	1	315	2	305	2	1030	7	1011	17
26-Apr-93	107	4	109	1	303	7	308	2	1028	9	993	21
27-Apr-93	104	6	109	1	303	2	310	2	1024	7	1001	21
28-Apr-93	100	7	107	2	303	1	314	2	1028	11	999	33
29-Apr-93	107	6	109	2	307	1	313	1	1033	6	860	374
30-Apr-93	93	5	102	2	311	20	290	1	1039	7	992	10
01-May-93	98	5	101	1	303	3	317	3	1031	11	1000	26
02-May-93	95	4	93	1	304	1	317	1	1014	10	963	14
03-May-93	96	4	68	42	304	1	320	1	1005	10	968	32
04-May-93	103	8	96	1	306	3	315	3	1010	6	991	22
05-May-93	93	10	97	2	308	1	322	2	1023	9	989	20
06-May-93	101	8	104	1	310	5	314	6	1012	8	993	28
07-May-93	111	6			311	3			1009	12		
08-May-93	100	9			296	38			972	158		
09-May-93	106	10			282	17			1017	9		
10-May-93	117	45			305	2			1014	6		
11-May-93	99	6			288	16			1010	9		
12-May-93	91	6			291	34			1012	7		
13-May-93	102	7			297	2			1014	12		
14-May-93	98	5			298	5			1029	10		

Note: 29-Apr-93 : Generation problems experienced for chamber 14.
03-May-93 : Generation problems experienced for chamber 20.
08-May-93 : Generation problems experienced for chamber 15.

PERCHLOROETHYLENE: MULTIGENERATION INHALATION STUDY IN THE RAT
APPENDIX K
ATMOSPHERE ANALYSIS RESULTS
TABLE 6 - continued

SECOND GENERATION - MAIN PHASE

DAILY ANALYSED ATMOSPHERE CONCENTRATIONS
(ppm v/v PERCHLOROETHYLENE)

Chamber	21		20		19		18		15		14	
Group	2		2		3		3		4		4	
Target	100ppm		100ppm		300ppm		300ppm		1000ppm		1000ppm	
Date	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
15-May-93	98	5			300	2			1031	11		
16-May-93	100	8			308	2			1024	10		
17-May-93	99	3			317	3			1034	12		
18-May-93	100	6			271	50			912	99		
19-May-93	100	3			306	2						
20-May-93	101	8			316	2						
Mean:	101		100		304		300		1004		1000	
SD:	5		5		12		14		35		33	
% CV:	5.0		5.0		3.9		4.7		3.5		3.3	
Max:	118		109		326		353		1054		1081	
Min:	87		68		258		249		861		860	