1，2 - ジクロロプロパンのラットを用いた
吸 入 に よ る 1 3 週 間 毒 性 試 験 報 告 書

試験番号：0435

TABLES

TABLES

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TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

	0ppm		125ppm			250ppm			500ppm			1000ppm			2000ppm		
Week-Day on Study	Av.Wt. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.
0-0	122 (10)	10/10	123 (10)	101	10/10	123 (10)	101	10/10	123 (10)	101	10/10	123 (10)	101	10/10	123 (10)	101	10/10
1-7	149 (10)	10/10	141 (10)	95	10/10	143 (10)	96	10/10	139 (10)	93	10/10	138 (10)	93	10/10	128 (10)	86	10/10
2-7	181 (10)	10/10	167 (10)	92	10/10	170 (10)	94	10/10	165 (10)	91	10/10	164 (10)	91	10/10	138 (10)	76	10/10
3-7	203 (10)	10/10	188 (10)	93	10/10	192 (10)	95	10/10	186 (10)	92	10/10	182 (10)	90	10/10	151 (10)	74	10/10
4-7	222 (10)	10/10	206 (10)	93	10/10	213 (10)	96	10/10	203 (10)	91	10/10	197 (10)	89	10/10	166 (10)	75	10/10
5-7	238 (10)	10/10	221 (10)	93	10/10	228 (10)	96	10/10	219 (10)	92	10/10	209 (10)	88	10/10	177 (10)	74	10/10
6-7	251 (10)	10/10	234 (10)	93	10/10	240 (10)	96	10/10	231 (10)	92	10/10	218 (10)	87	10/10	190 (10)	76	10/10
7-7	262 (10)	10/10	244 (10)	93	10/10	252 (10)	96	10/10	242 (10)	92	10/10	227 (10)	87	10/10	187 (10)	71	10/10
8-7	271 (10)	10/10	255 (10)	94	10/10	263 (10)	97	10/10	253 (10)	93	10/10	233 (10)	86	10/10	202 (10)	75	10/10
9-7	280 (10)	10/10	264 (10)	94	10/10	271 (10)	97	10/10	261 (10)	93	10/10	242 (10)	86	10/10	206 (10)	74	10/10
10-7	289 (10)	10/10	272 (10)	94	10/10	277 (10)	96	10/10	268 (10)	93	10/10	248 (10)	86	10/10	210 (10)	73	10/10
11-7	296 (10)	10/10	277 (10)	94	10/10	283 (10)	96	10/10	274 (10)	93	10/10	252 (10)	85	10/10	212 (10)	72	10/10
12-7	304 (10)	10/10	282 (10)	93	10/10	289 (10)	95	10/10	279 (10)	92	10/10	256 (10)	84	10/10	218 (10)	72	10/10
13-7	307 (10)	10/10	286 (10)	93	10/10	292 (10)	95	10/10	281 (10)	92	10/10	257 (10)	84	10/10	223 (10)	73	10/10

< > : No.of effective animals, ( ) : No.of measured animals Av.Wt. : Average body weight (Unit : g).

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Week-Day on Study	0ppm		125ppm			250ppm			500ppm			1000ppm			2000ppm		
	Av.Wt.	No.of Surviv.	Av.Wt.	% of cont.	No.of Surviv.	Av.Wt.	% of cont.	No.of Surviv.	Av.Wt.	% of cont.	No.of Surviv.	Av.Wt.	% of cont.	No.of Surviv.	Av.Wt.	% of cont.	No.of Surviv.
	<10>			<10>			<10>			<10>			<10>			<10>	
0-0	95 (10)	10/10	95 (10)	100	10/10	95 (10)	100	10/10	95 (10)	100	10/10	95 (10)	100	10/10	95 (10)	100	10/10
1-7	108 (10)	10/10	103 (10)	95	10/10	102 (10)	94	10/10	101 (10)	94	10/10	102 (10)	94	10/10	98 (10)	91	10/10
2-7	120 (10)	10/10	115 (10)	96	10/10	113 (10)	94	10/10	113 (10)	94	10/10	113 (10)	94	10/10	103 (10)	86	10/10
3-7	129 (10)	10/10	124 (10)	96	10/10	124 (10)	96	10/10	123 (10)	95	10/10	124 (10)	96	10/10	111 (10)	86	10/10
4-7	137 (10)	10/10	131 (10)	96	10/10	132 (10)	96	10/10	130 (10)	95	10/10	129 (10)	94	10/10	115 (10)	84	10/10
5-7	143 (10)	10/10	138 (10)	97	10/10	140 (10)	98	10/10	138 (10)	97	10/10	134 (10)	94	10/10	124 (10)	87	10/10
6-7	148 (10)	10/10	143 (10)	97	10/10	145 (10)	98	10/10	142 (10)	96	10/10	139 (10)	94	10/10	128 (10)	86	10/10
7-7	152 (10)	10/10	147 (10)	97	10/10	149 (10)	98	10/10	146 (10)	96	10/10	142 (10)	93	10/10	130 (10)	86	10/10
8-7	156 (10)	10/10	152 (10)	97	10/10	152 (10)	97	10/10	151 (10)	97	10/10	145 (10)	93	10/10	134 (10)	86	10/10
9-7	161 (10)	10/10	157 (10)	98	10/10	157 (10)	98	10/10	154 (10)	96	10/10	149 (10)	93	10/10	136 (10)	84	10/10
10-7	164 (10)	10/10	162 (10)	99	10/10	160 (10)	98	10/10	157 (10)	96	10/10	152 (10)	93	10/10	138 (10)	84	10/10
11-7	167 (10)	10/10	165 (10)	99	10/10	163 (10)	98	10/10	161 (10)	96	10/10	155 (10)	93	10/10	139 (10)	83	10/10
12-7	170 (10)	10/10	166 (10)	98	10/10	166 (10)	98	10/10	163 (10)	96	10/10	156 (10)	92	10/10	140 (9)	82	9/10
13-7	173 (10)	10/10	167 (10)	97	10/10	166 (10)	96	10/10	164 (10)	95	10/10	157 (10)	91	10/10	142 (9)	82	9/10

< > : No.of effective animals, ( ) : No.of measured animals Av.Wt. : Average body weight (Unit : g).

TABLE 3
FOOD CONSUMPTION CHANGES OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Week-Day on Study	0ppm Av.Fc.	0ppm No.of Surviv. <10>	125ppm Av.Fc.	125ppm % of cont. <10>	125ppm No.of Surviv.	250ppm Av.Fc.	250ppm % of cont. <10>	250ppm No.of Surviv.	500ppm Av.Fc.	500ppm % of cont. <10>	500ppm No.of Surviv.	1000ppm Av.Fc.	1000ppm % of cont. <10>	1000ppm No.of Surviv.	2000ppm Av.Fc.	2000ppm % of cont. <10>	2000ppm No.of Surviv.
1-7	14.0 (10)	10/10	11.9 (10)	85	10/10	12.0 (10)	86	10/10	11.6 (10)	83	10/10	11.0 (10)	79	10/10	8.8 (10)	63	10/10
2-7	15.0 (10)	10/10	13.4 (10)	89	10/10	13.8 (10)	92	10/10	14.2 (10)	95	10/10	14.3 (10)	95	10/10	9.7 (10)	65	10/10
3-7	16.1 (10)	10/10	14.9 (10)	93	10/10	14.7 (10)	91	10/10	14.9 (10)	93	10/10	15.0 (10)	93	10/10	12.2 (10)	76	10/10
4-7	16.0 (10)	10/10	15.6 (10)	98	10/10	15.7 (10)	98	10/10	15.5 (10)	97	10/10	16.6 (10)	104	10/10	13.9 (10)	87	10/10
5-7	15.8 (10)	10/10	15.3 (10)	97	10/10	15.5 (10)	98	10/10	15.5 (10)	98	10/10	15.6 (10)	99	10/10	13.0 (10)	82	10/10
6-7	15.5 (10)	10/10	15.2 (10)	98	10/10	15.7 (10)	101	10/10	15.5 (10)	100	10/10	16.2 (10)	105	10/10	15.3 (10)	99	10/10
7-7	15.5 (5)	10/10	14.9 (10)	96	10/10	15.2 (10)	98	10/10	15.4 (10)	99	10/10	15.6 (10)	101	10/10	11.6 (10)	75	10/10
8-7	16.2 (10)	10/10	15.6 (10)	96	10/10	15.7 (10)	97	10/10	16.2 (10)	100	10/10	16.5 (10)	102	10/10	14.9 (10)	92	10/10
9-7	15.7 (10)	10/10	15.5 (10)	99	10/10	16.0 (10)	102	10/10	16.0 (10)	102	10/10	16.2 (10)	103	10/10	13.5 (10)	86	10/10
10-7	15.7 (10)	10/10	15.5 (10)	99	10/10	15.3 (10)	97	10/10	15.7 (10)	100	10/10	15.4 (10)	98	10/10	13.8 (10)	88	10/10
11-7	15.9 (10)	10/10	15.5 (10)	97	10/10	15.3 (10)	96	10/10	15.2 (10)	96	10/10	15.4 (10)	97	10/10	13.3 (10)	84	10/10
12-7	16.0 (10)	10/10	14.9 (10)	93	10/10	15.3 (10)	96	10/10	15.3 (10)	96	10/10	15.5 (10)	97	10/10	14.7 (10)	92	10/10
13-7	15.8 (10)	10/10	14.7 (10)	93	10/10	14.7 (10)	93	10/10	14.6 (10)	92	10/10	14.4 (10)	91	10/10	14.1 (10)	89	10/10

< > : No.of effective animals, ( ) : No.of measured animals Av.Fc. : Average food consumption (Unit : g).

TABLE 4

FOOD CONSUMPTION CHANGES OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Week-Day on Study	0ppm Av.Fc.	0ppm No.of Surviv. <10>	125ppm Av.Fc.	125ppm % of cont. <10>	125ppm No.of Surviv.	250ppm Av.Fc.	250ppm % of cont. <10>	250ppm No.of Surviv.	500ppm Av.Fc.	500ppm % of cont. <10>	500ppm No.of Surviv.	1000ppm Av.Fc.	1000ppm % of cont. <10>	1000ppm No.of Surviv.	2000ppm Av.Fc.	2000ppm % of cont. <10>	2000ppm No.of Surviv.
1-7	10.1 (9)	10/10	9.0 (10)	89	10/10	8.7 (10)	86	10/10	8.5 (10)	84	10/10	8.7 (10)	86	10/10	7.1 (10)	70	10/10
2-7	10.4 (10)	10/10	9.9 (10)	95	10/10	9.7 (10)	93	10/10	10.2 (10)	98	10/10	10.3 (10)	99	10/10	7.6 (10)	73	10/10
3-7	10.7 (10)	10/10	10.1 (10)	94	10/10	10.3 (10)	96	10/10	10.1 (10)	94	10/10	10.5 (10)	98	10/10	9.1 (10)	85	10/10
4-7	10.7 (10)	10/10	10.3 (10)	96	10/10	10.3 (10)	96	10/10	10.7 (10)	100	10/10	11.2 (10)	105	10/10	9.3 (10)	87	10/10
5-7	10.7 (10)	10/10	10.3 (10)	96	10/10	10.4 (10)	97	10/10	10.6 (10)	99	10/10	10.5 (10)	98	10/10	9.9 (10)	93	10/10
6-7	10.4 (10)	10/10	10.2 (10)	98	10/10	10.4 (10)	100	10/10	10.2 (10)	98	10/10	10.8 (10)	104	10/10	9.9 (10)	95	10/10
7-7	9.8 (5)	10/10	10.1 (10)	103	10/10	10.0 (10)	102	10/10	10.2 (10)	104	10/10	10.5 (10)	107	10/10	9.3 (10)	95	10/10
8-7	10.1 (10)	10/10	10.5 (10)	104	10/10	10.1 (10)	100	10/10	10.5 (10)	104	10/10	10.8 (10)	107	10/10	10.1 (10)	100	10/10
9-7	10.4 (10)	10/10	10.5 (10)	101	10/10	10.5 (10)	101	10/10	10.7 (10)	103	10/10	10.7 (10)	103	10/10	9.3 (10)	89	10/10
10-7	10.1 (10)	10/10	10.9 (10)	108	10/10	10.3 (10)	102	10/10	10.5 (10)	104	10/10	10.8 (10)	107	10/10	9.9 (10)	98	10/10
11-7	10.4 (10)	10/10	10.7 (10)	103	10/10	10.1 (10)	97	10/10	10.3 (10)	99	10/10	10.4 (10)	100	10/10	9.4 (10)	90	10/10
12-7	10.5 (10)	10/10	10.4 (10)	99	10/10	10.1 (10)	96	10/10	10.4 (10)	99	10/10	10.5 (10)	100	10/10	10.0 (9)	95	9/10
13-7	10.4 (10)	10/10	10.0 (10)	96	10/10	10.0 (10)	96	10/10	9.8 (10)	94	10/10	10.3 (10)	99	10/10	9.0 (9)	87	9/10

< > : No.of effective animals, ( ) : No.of measured animals Av.Fc. : Average food consumption (Unit : g).

TABLE 5 URINALYSIS OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name		Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
Number of examined animals		10	10	10	10	10	10
	Grade						
pH	6.0	0	0	0	0	0	0
	6.5	0	0	0	0	0	0
	7.0	0	1	1	0	1	0
	7.5	6	3	1	3	5	4
	8.0	3	6	8	6	4	6
	8.5	1	0	0	1	0	0
	Chi square test			*			
Ketone body	−	7	10	7	9	5	1
	±	2	0	2	0	4	6
	+	1	0	1	1	1	2
	2+	0	0	0	0	0	1
	3+	0	0	0	0	0	0
	4+	0	0	0	0	0	0
	Chi square test						*

Significant difference : * : $p<0.05$ ** : $p<0.01$

TABLE 6 HEMATOLOGY OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
No. of examined animals	10	10	10	10	9	10
Red blood cell ($10^6/\mu$ L)	9.31 ± 0.21	9.36 ± 0.19	9.33 ± 0.16	8.95 ± 0.17 **	8.00 ± 0.22 **	7.58 ± 0.36 **
Hemoglobin (g/dL)	15.9 ± 0.4	16.0 ± 0.4	15.8 ± 0.4	15.4 ± 0.3 *	14.7 ± 0.2 **	14.6 ± 0.5 **
Hematocrit (%)	45.6 ± 1.2	46.1 ± 1.1	46.0 ± 0.7	45.2 ± 0.8	43.4 ± 0.8 **	43.7 ± 1.2 **
MCV (fL)	49.0 ± 0.6	49.2 ± 0.7	49.3 ± 0.5	50.5 ± 0.8 *	54.3 ± 1.6 **	57.8 ± 1.8 **
MCH (pg)	17.1 ± 0.3	17.1 ± 0.2	17.0 ± 0.2	17.2 ± 0.2	18.3 ± 0.6 **	19.3 ± 0.5 **
MCHC (g/dL)	34.9 ± 0.7	34.8 ± 0.6	34.4 ± 0.4	34.0 ± 0.5 **	33.8 ± 0.3 **	33.3 ± 0.5 **
Platelet ($10^3/\mu$ L)	780 ± 57	804 ± 39	809 ± 53	816 ± 67	925 ± 59 **	959 ± 64 **
Reticulocyte (%)	1.9 ± 0.1	1.8 ± 0.2	1.9 ± 0.2	2.3 ± 0.2	5.5 ± 0.6 **	10.5 ± 3.0 **
APTT (sec)	26.3 ± 2.7	25.8 ± 3.4	27.9 ± 5.1	27.2 ± 3.8	25.4 ± 4.1	21.0 ± 3.8 *

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 7 HEMATOLOGY OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
No. of examined animals	9	10	10	10	10	9
Red blood cell ($10^6/\mu$ L)	8.60 ± 0.21	8.59 ± 0.20	8.44 ± 0.24	8.13 ± 0.27 **	7.77 ± 0.24 **	7.18 ± 0.39 **
Hemoglobin (g/dL)	15.9 ± 0.5	15.8 ± 0.4	15.7 ± 0.4	15.4 ± 0.6	15.1 ± 0.4 **	14.3 ± 0.8 **
Hematocrit (%)	44.3 ± 0.9	44.4 ± 1.0	44.2 ± 1.0	43.7 ± 1.2	43.7 ± 1.1	42.5 ± 1.4 **
MCV (fL)	51.5 ± 0.3	51.7 ± 0.4	52.4 ± 0.5	53.7 ± 0.6 **	56.2 ± 1.2 **	59.3 ± 2.5 **
MCH (pg)	18.5 ± 0.2	18.4 ± 0.2	18.6 ± 0.1	18.9 ± 0.2	19.4 ± 0.2 **	19.9 ± 0.5 **
MCHC (g/dL)	36.0 ± 0.5	35.6 ± 0.4	35.4 ± 0.4	35.3 ± 0.5	34.6 ± 0.6 **	33.6 ± 1.0 **
Platelet ($10^3/\mu$ L)	817 ± 64	783 ± 56	825 ± 58	863 ± 78	874 ± 54	932 ± 114 **
Reticulocyte (%)	1.9 ± 0.2	1.9 ± 0.3	2.5 ± 0.3	3.5 ± 0.4 *	6.4 ± 2.7 **	11.5 ± 4.5 **
Prothrombin time (sec)	15.2 ± 0.7	15.1 ± 1.0	15.4 ± 0.8	15.5 ± 1.3	16.7 ± 1.6	18.3 ± 2.9 *

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 8 BIOCHEMISTRY OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
No. of examined animals	10	10	10	10	9	10
Total protein (g/dL)	6.6 ± 0.1	6.6 ± 0.1	6.6 ± 0.1	6.7 ± 0.1	6.8 ± 0.2 **	6.6 ± 0.1
Albumin (g/dL)	3.9 ± 0.1	3.9 ± 0.1	3.9 ± 0.1	4.0 ± 0.1	4.1 ± 0.1 **	4.0 ± 0.1 **
T-bilirubin (mg/dL)	0.13 ± 0.02	0.13 ± 0.01	0.13 ± 0.01	0.13 ± 0.01	0.14 ± 0.01	0.18 ± 0.02 **
Glucose (mg/dL)	182 ± 23	174 ± 18	182 ± 13	179 ± 17	167 ± 8	161 ± 10 *
T-cholesterol (mg/dL)	66 ± 4	63 ± 4	62 ± 4	64 ± 4	53 ± 6 **	60 ± 4 *
Triglyceride (mg/dL)	53 ± 14	36 ± 8 **	39 ± 11 *	43 ± 12	26 ± 9 **	34 ± 10 **
Phospholipid (mg/dL)	122 ± 8	116 ± 7	116 ± 8	119 ± 8	101 ± 10 **	119 ± 8
GOT (IU/L)	62 ± 16	65 ± 12	70 ± 18	61 ± 16	46 ± 3	40 ± 5 **
GPT (IU/L)	43 ± 5	43 ± 8	41 ± 8	36 ± 8	20 ± 5 **	19 ± 8 **
ALP (IU/L)	243 ± 13	250 ± 33	238 ± 31	212 ± 23	200 ± 18 **	262 ± 40
γ-GTP (IU/L)	2 ± 1	4 ± 5	3 ± 1	2 ± 1	2 ± 1	6 ± 10 *
Potassium (mEq/L)	3.6 ± 0.2	3.8 ± 0.3	3.7 ± 0.3	4.0 ± 0.3 *	4.1 ± 0.3 **	4.8 ± 0.4 **

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 9 BIOCHEMISTRY OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
No. of examined animals	9	10	10	10	10	9
Albumin (g/dL)	3.6 ± 0.1	3.6 ± 0.1	3.6 ± 0.1	3.7 ± 0.1	3.8 ± 0.1 **	3.8 ± 0.2 **
A/G ratio	1.3 ± 0.1	1.4 ± 0.1	1.4 ± 0.0	1.4 ± 0.1	1.5 ± 0.1 **	1.5 ± 0.1 **
T-bilirubin (mg/dL)	0.16 ± 0.02	0.16 ± 0.03	0.15 ± 0.03	0.16 ± 0.02	0.20 ± 0.03 *	0.25 ± 0.06 **
Glucose (mg/dL)	129 ± 12	139 ± 12	143 ± 15 *	144 ± 12 *	147 ± 10 **	151 ± 7 **
Triglyceride (mg/dL)	13 ± 4	12 ± 5	13 ± 2	16 ± 3	20 ± 7 *	25 ± 8 **
GOT (IU/L)	67 ± 10	66 ± 10	65 ± 15	53 ± 3 **	52 ± 6 **	206 ± 269
GPT (IU/L)	36 ± 14	33 ± 9	31 ± 13	21 ± 4 **	19 ± 2 **	62 ± 77
LDH (IU/L)	254 ± 153	264 ± 126	268 ± 118	254 ± 100	298 ± 130	542 ± 477
γ-GTP (IU/L)	3 ± 1	2 ± 1	3 ± 1	3 ± 1	5 ± 2 **	10 ± 2 **
Potassium (mEq/L)	3.6 ± 0.3	3.7 ± 0.2	3.9 ± 0.2	3.9 ± 0.3	4.2 ± 0.5 **	4.7 ± 0.2 **

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 10 ORGAN WEIGHTS OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm		250 ppm		500 ppm		1000 ppm		2000 ppm	
No. of examined animals	10	10		10		10		10		10	
Body weight (g)	287 ± 16	264 ± 10	**	268 ± 12	*	259 ± 12	**	237 ± 18	**	203 ± 21	**
Thymus (g)	0.248 ± 0.043	0.218 ± 0.029		0.223 ± 0.016		0.209 ± 0.018		0.204 ± 0.032		0.175 ± 0.034	**
Thymus (%)	0.086 ± 0.012	0.082 ± 0.009		0.083 ± 0.005		0.081 ± 0.006		0.086 ± 0.008		0.086 ± 0.011	
Adrenals (g)	0.051 ± 0.004	0.049 ± 0.004		0.048 ± 0.005		0.047 ± 0.005		0.044 ± 0.004	**	0.048 ± 0.005	
Adrenals (%)	0.018 ± 0.002	0.019 ± 0.001		0.018 ± 0.002		0.018 ± 0.002		0.019 ± 0.002		0.024 ± 0.003	**
Testes (g)	2.906 ± 0.212	2.953 ± 0.089		2.952 ± 0.128		2.979 ± 0.103		3.015 ± 0.201		2.902 ± 0.148	
Testes (%)	1.015 ± 0.072	1.119 ± 0.051	*	1.102 ± 0.055		1.154 ± 0.061	**	1.279 ± 0.122	**	1.437 ± 0.089	**
Heart (g)	0.878 ± 0.059	0.846 ± 0.033		0.862 ± 0.040		0.834 ± 0.048		0.800 ± 0.033	**	0.765 ± 0.055	**
Heart (%)	0.307 ± 0.014	0.320 ± 0.011		0.321 ± 0.013		0.323 ± 0.011		0.339 ± 0.017	**	0.378 ± 0.019	**
Lungs (g)	0.989 ± 0.049	0.944 ± 0.047		0.940 ± 0.045		0.898 ± 0.046	**	0.874 ± 0.067	**	0.836 ± 0.060	**
Lungs (%)	0.345 ± 0.009	0.357 ± 0.011		0.351 ± 0.010		0.348 ± 0.018		0.369 ± 0.016	**	0.413 ± 0.021	**
Kidneys (g)	1.764 ± 0.113	1.663 ± 0.066		1.726 ± 0.086		1.704 ± 0.074		1.727 ± 0.115		1.613 ± 0.149	**
Kidneys (%)	0.616 ± 0.020	0.630 ± 0.012		0.644 ± 0.021		0.659 ± 0.010	*	0.731 ± 0.044	**	0.795 ± 0.027	**
Spleen (g)	0.526 ± 0.035	0.485 ± 0.027		0.488 ± 0.031		0.501 ± 0.032		0.652 ± 0.054	**	0.731 ± 0.041	**
Spleen (%)	0.184 ± 0.009	0.184 ± 0.006		0.182 ± 0.007		0.194 ± 0.009		0.275 ± 0.018	**	0.363 ± 0.039	**
Liver (g)	7.215 ± 0.524	6.681 ± 0.405		6.939 ± 0.460		6.976 ± 0.440		6.815 ± 0.599		6.315 ± 0.651	**
Liver (%)	2.516 ± 0.063	2.527 ± 0.067		2.585 ± 0.098		2.697 ± 0.084	*	2.878 ± 0.165	**	3.112 ± 0.146	**
Brain (g)	1.872 ± 0.037	1.848 ± 0.021		1.854 ± 0.053		1.836 ± 0.032		1.795 ± 0.038	**	1.708 ± 0.045	**
Brain (%)	0.655 ± 0.027	0.700 ± 0.030		0.692 ± 0.033		0.711 ± 0.026	*	0.761 ± 0.059	**	0.847 ± 0.066	**

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 11 ORGAN WEIGHTS OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE

Group Name	Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
No. of examined animals	10	10	10	10	10	9
Body weight (g)	158 ± 8	153 ± 7	152 ± 7	149 ± 3	142 ± 4 **	129 ± 11 **
Thymus (g)	0.190 ± 0.021	0.185 ± 0.016	0.180 ± 0.012	0.173 ± 0.012	0.169 ± 0.013 *	0.146 ± 0.024 **
Thymus (%)	0.120 ± 0.012	0.121 ± 0.009	0.119 ± 0.009	0.117 ± 0.009	0.119 ± 0.009	0.113 ± 0.014
Adrenals (g)	0.051 ± 0.007	0.054 ± 0.002	0.053 ± 0.004	0.054 ± 0.005	0.053 ± 0.005	0.055 ± 0.012
Adrenals (%)	0.033 ± 0.004	0.035 ± 0.001	0.035 ± 0.002	0.036 ± 0.003 *	0.037 ± 0.004 *	0.042 ± 0.009 **
Ovaries (g)	0.090 ± 0.010	0.112 ± 0.085	0.086 ± 0.012	0.084 ± 0.011	0.079 ± 0.008	0.066 ± 0.015 **
Ovaries (%)	0.057 ± 0.006	0.074 ± 0.059	0.057 ± 0.006	0.057 ± 0.007	0.056 ± 0.006	0.051 ± 0.011
Heart (g)	0.569 ± 0.037	0.554 ± 0.016	0.566 ± 0.030	0.539 ± 0.023	0.530 ± 0.025 *	0.541 ± 0.049
Heart (%)	0.361 ± 0.021	0.364 ± 0.015	0.373 ± 0.014	0.362 ± 0.015	0.372 ± 0.018	0.419 ± 0.028 **
Lungs (g)	0.706 ± 0.035	0.713 ± 0.039	0.694 ± 0.034	0.677 ± 0.025	0.670 ± 0.027	0.636 ± 0.049 **
Lungs (%)	0.448 ± 0.017	0.468 ± 0.022	0.458 ± 0.022	0.455 ± 0.011	0.470 ± 0.011 *	0.493 ± 0.026 **
Kidneys (g)	1.062 ± 0.046	1.058 ± 0.041	1.074 ± 0.064	1.078 ± 0.060	1.112 ± 0.061	1.153 ± 0.103 *
Kidneys (%)	0.673 ± 0.028	0.694 ± 0.028	0.709 ± 0.025	0.725 ± 0.039 **	0.781 ± 0.034 **	0.893 ± 0.048 **
Spleen (g)	0.355 ± 0.022	0.341 ± 0.010	0.333 ± 0.022	0.380 ± 0.025	0.451 ± 0.053 **	0.509 ± 0.070 **
Spleen (%)	0.225 ± 0.009	0.224 ± 0.010	0.220 ± 0.010	0.256 ± 0.017	0.317 ± 0.038 **	0.394 ± 0.041 **
Liver (g)	3.777 ± 0.253	3.744 ± 0.194	3.814 ± 0.194	4.014 ± 0.119	4.406 ± 0.319 **	4.655 ± 0.678 **
Liver (%)	2.391 ± 0.119	2.453 ± 0.059	2.518 ± 0.115	2.700 ± 0.080 **	3.095 ± 0.218 **	3.588 ± 0.288 **
Brain (g)	1.754 ± 0.029	1.721 ± 0.030	1.720 ± 0.043	1.671 ± 0.045 **	1.680 ± 0.032 **	1.571 ± 0.049 **
Brain (%)	1.113 ± 0.057	1.129 ± 0.047	1.137 ± 0.064	1.124 ± 0.028	1.180 ± 0.021 *	1.224 ± 0.114 **

Mean ± S.D.

*) Significant difference, $p<0.05$ (Test of Dunnett)

**) Significant difference, $p<0.01$ (Test of Dunnett)

TABLE 12 INCIDENCES OF SELECTED LESIONS OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE (SACRIFICED ANIMALS)

Group		Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
Number of examined animals		10	10	10	10	10	10
Organ Findings	Grade						
Liver							
Swelling: central	1+	0	0	0	0	0	9
	Chi Square test						**
Necrosis : central	1+	0	0	0	0	0	1
Deposit of ceroid	1+	0	0	0	0	0	2
Nasal cavity							
Hyperplasia: respiratory epithelium	1+	0	10	7	7	1	0
	2+	0	0	3	3	8	10
	3+	0	0	0	0	1	0
	Chi Square test		**	**	**	**	**
Inflammation: respiratory epithelium	1+	0	0	2	4	6	4
	2+	0	0	0	0	2	4
	Chi Square test					**	**
Atrophy: olfactory epithelium	1+	0	10	8	5	0	0
	2+	0	0	2	5	8	3
	3+	0	0	0	0	2	7
	Chi Square test		**	**	**	**	**
Respiratory metaplasia: olfactory epithelium	1+	0	0	2	5	10	10
	Chi Square test				*	**	**
Necrosis: olfactory epithelium	1+	0	0	0	1	1	1
Disarrangement: olfactory epithelium	1+	0	2	0	0	3	0
Spleen							
Deposit of hemosiderin	1+	0	0	0	1	0	0
	2+	0	0	0	0	10	10
	Chi Square test					**	**
Increased extramedullary hematopoiesis	1+	0	0	0	0	9	5
	2+	0	0	0	0	1	5
	Chi Square test					**	**
Bone marrow							
Increased hematopoiesis	1+	0	0	0	1	9	5
	2+	0	0	0	0	1	5
	Chi Square test					**	**
Adrenal							
Fatty change	1+	0	0	0	0	0	1
Kidney							
Eosinophilic body	1+	8	10	9	10	10	0
	Chi Square test						**

Grade 1+: Slight 2+: Moderate 3+: Marked

Significant difference * : $p<0.05$ ** : $p<0.01$

TABLE 13 INCIDENCES OF SELECTED LESIONS OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE
(DEAD AND MORIBUND ANIMALS)

Group		2000 ppm
Number of examined animals		1
Organ Findings	Grade	
Liver		
Necrosis: central	2+	1
Fatty change: central	3+	1
Nasal cavity		
Hyperplasia: respiratory epithelium	2+	1
Inflammation: respiratory epithelium	1+	1
Atrophy: olfactory epithelium	1+	1
Respiratory metaplasia: olfactory epithelium	1+	1
Lung		
Congestion	3+	1
Spleen		
Deposit of hemosiderin	3+	1
Bone marrow		
Increased hematopoiesis	1+	1
Adrenal gland		
Fatty change	2+	1
Thymus		
Hemorrhage	2+	1
Grade	1+: Slight 2+: Moderate 3+: Marked	

TABLE 14 INCIDENCES OF SELECTED LESIONS OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF 1,2-DICHLOROPROPANE (SACRIFICED ANIMALS)

Group		Control	125 ppm	250 ppm	500 ppm	1000 ppm	2000 ppm
Number of examined animals		10	10	10	10	10	9
Organ Findings	Grade						
Liver							
Swelling: central	1+	0	0	0	0	1	1
	2+	0	0	0	0	0	5
	Chi Square test						**
Necrosis : central	1+	0	0	0	0	0	1
	2+	0	0	0	0	0	2
Fatty change : central	1+	0	0	0	0	0	1
Deposit of ceroid	1+	0	0	0	0	0	6
	Chi Square test						**
Nasal cavity							
Hyperplasia: respiratory epithelium	1+	0	7	10	9	8	8
	2+	0	0	0	0	2	1
	Chi Square test		**	**	**	**	**
Inflammation: respiratory epithelium	1+	0	0	0	0	0	3
	2+	0	0	0	0	3	1
Atrophy: olfactory epithelium	1+	0	10	10	9	10	2
	2+	0	0	0	1	0	4
	3+	0	0	0	0	0	3
	Chi Square test		**	**	**	**	**
Respiratory metaplasia: olfactory epithelium	1+	0	0	1	7	9	7
	Chi Square test				**	**	**
Necrosis: olfactory epithelium	1+	0	0	1	3	1	0
Disarrangement: olfactory epithelium	1+	0	0	2	1	0	0
Spleen							
Deposit of hemosiderin	1+	0	0	4	8	3	1
	2+	0	0	0	2	7	8
	Chi Square test				**	**	**
Increased extramedullary hematopoiesis	1+	0	0	0	1	6	4
	2+	0	0	0	0	2	5
	Chi Square test					**	**
Bone marrow							
Increased hematopoiesis	1+	0	0	0	0	10	6
	2+	0	0	0	0	0	2
	3+	0	0	0	0	0	1
	Chi Square test					**	**
Adrenal							
Fatty change	1+	0	0	0	0	1	3
	2+	0	0	0	0	1	6
	Chi Square test						**

Grade 1+: Slight 2+: Moderate 3+: Marked

Significant difference * : $p<0.05$ ** : $p<0.01$