

2,4-ジクロロ-1-ニトロベンゼンのマウスを用いた
経口投与による 13 週間毒性試験(混餌試験)報告書

試験番号：0410

TABLES

TABLES

- TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 3 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 5 HEMATOLOGY OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 6 HEMATOLOGY OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 7 BIOCHEMISTRY OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 8 BIOCHEMISTRY OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 9 URINALYSIS OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 10 URINALYSIS OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 11 ORGAN WEIGHTS OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE
- TABLE 12 ORGAN WEIGHTS OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

TABLES (Continued)

TABLE 13 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE
13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

TABLE 14 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE
13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE
IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Week on Study	Control		500ppm			1000ppm			2000ppm			3000ppm			4000ppm		
	Av. Wt. <10>	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.
0	22.9 (10)	10 / 10	22.9 (10)	100	10 / 10	22.9 (10)	100	10 / 10	22.9 (10)	100	10 / 10	22.9 (10)	100	10 / 10	22.9 (10)	100	10 / 10
1	23.8 (10)	10 / 10	23.6 (10)	99	10 / 10	23.4 (10)	98	10 / 10	23.1 (10)	97	10 / 10	22.4 (10)	94	10 / 10	20.5 (10)	86	10 / 10
2	24.7 (10)	10 / 10	24.6 (10)	100	10 / 10	24.1 (10)	98	10 / 10	24.4 (10)	99	10 / 10	23.7 (10)	96	10 / 10	22.0 (10)	89	10 / 10
3	24.5 (10)	10 / 10	24.7 (10)	101	10 / 10	25.0 (10)	102	10 / 10	24.6 (10)	100	10 / 10	24.3 (10)	99	10 / 10	22.8 (10)	93	10 / 10
4	25.4 (10)	10 / 10	25.2 (10)	99	10 / 10	25.7 (10)	101	10 / 10	25.7 (10)	101	10 / 10	24.8 (10)	98	10 / 10	23.6 (10)	93	10 / 10
5	25.8 (10)	10 / 10	26.1 (10)	101	10 / 10	26.4 (10)	102	10 / 10	26.6 (10)	103	10 / 10	26.0 (10)	101	10 / 10	25.2 (10)	98	10 / 10
6	26.8 (10)	10 / 10	27.1 (10)	101	10 / 10	27.1 (10)	101	10 / 10	27.1 (10)	101	10 / 10	26.4 (10)	99	10 / 10	25.7 (10)	96	10 / 10
7	27.9 (10)	10 / 10	27.8 (10)	100	10 / 10	28.0 (10)	100	10 / 10	28.0 (10)	100	10 / 10	27.3 (10)	98	10 / 10	26.2 (10)	94	10 / 10
8	28.3 (10)	10 / 10	28.5 (10)	101	10 / 10	28.5 (10)	101	10 / 10	28.7 (10)	101	10 / 10	27.7 (10)	98	10 / 10	26.7 (10)	94	10 / 10
9	29.1 (10)	10 / 10	28.8 (10)	99	10 / 10	29.2 (10)	100	10 / 10	29.3 (10)	101	10 / 10	28.2 (10)	97	10 / 10	26.9 (10)	92	10 / 10
10	29.8 (10)	10 / 10	29.8 (10)	100	10 / 10	30.1 (10)	101	10 / 10	30.1 (10)	101	10 / 10	28.7 (10)	96	10 / 10	27.6 (10)	93	10 / 10
11	29.4 (10)	10 / 10	30.2 (10)	103	10 / 10	30.3 (10)	103	10 / 10	30.0 (10)	102	10 / 10	29.0 (10)	99	10 / 10	27.8 (10)	95	10 / 10
12	31.2 (10)	10 / 10	31.4 (10)	101	10 / 10	31.2 (10)	100	10 / 10	31.3 (10)	100	10 / 10	29.7 (10)	95	10 / 10	28.3 (10)	91	10 / 10
13	32.1 (10)	10 / 10	32.0 (10)	100	10 / 10	31.6 (10)	98	10 / 10	31.9 (10)	99	10 / 10	30.0 (10)	93	10 / 10	28.4 (10)	88	10 / 10

< > : No.of effective animals, () : No.of measured animals Av.Wt.:g

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE
IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Week on Study	Control		1000ppm			2000ppm			4000ppm			6000ppm			8000ppm		
	Av. Wt. <10>	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.	Av. Wt. <10>	% of cont.	No. of Surviv.
0	18.5 (10)	10 / 10	18.5 (10)	100	10 / 10	18.6 (10)	101	10 / 10	18.5 (10)	100	10 / 10	18.5 (10)	100	10 / 10	18.6 (10)	101	10 / 10
1	18.8 (10)	10 / 10	18.9 (10)	101	10 / 10	18.6 (10)	99	10 / 10	17.2 (10)	91	10 / 10	15.5 (10)	82	10 / 10	13.3 (10)	71	10 / 10
2	19.4 (10)	10 / 10	19.3 (10)	99	10 / 10	19.0 (10)	98	10 / 10	18.7 (10)	96	10 / 10	17.3 (10)	89	10 / 10	13.8 (10)	71	10 / 10
3	19.4 (10)	10 / 10	19.4 (10)	100	10 / 10	19.4 (10)	100	10 / 10	19.4 (10)	100	10 / 10	18.4 (10)	95	10 / 10	14.5 (10)	75	10 / 10
4	20.5 (10)	10 / 10	20.6 (10)	100	10 / 10	19.1 (10)	93	10 / 10	19.4 (10)	95	10 / 10	19.2 (10)	94	10 / 10	14.2 (10)	69	10 / 10
5	20.1 (10)	10 / 10	20.7 (10)	103	10 / 10	20.8 (10)	103	10 / 10	20.3 (10)	101	10 / 10	20.3 (10)	101	10 / 10	15.7 (10)	78	10 / 10
6	20.6 (10)	10 / 10	21.0 (10)	102	10 / 10	20.1 (10)	98	10 / 10	20.4 (10)	99	10 / 10	20.1 (10)	98	10 / 10	16.5 (10)	80	10 / 10
7	21.2 (10)	10 / 10	21.0 (10)	99	10 / 10	20.8 (10)	98	10 / 10	20.6 (10)	97	10 / 10	20.1 (10)	95	10 / 10	16.6 (10)	78	10 / 10
8	21.4 (10)	10 / 10	21.2 (10)	99	10 / 10	21.2 (10)	99	10 / 10	21.1 (10)	99	10 / 10	20.1 (10)	94	10 / 10	16.4 (10)	77	10 / 10
9	22.0 (10)	10 / 10	21.9 (10)	100	10 / 10	21.0 (10)	95	10 / 10	21.4 (10)	97	10 / 10	20.5 (10)	93	10 / 10	16.4 (10)	75	10 / 10
10	21.8 (10)	10 / 10	22.2 (10)	102	10 / 10	21.9 (10)	100	10 / 10	21.9 (10)	100	10 / 10	20.9 (10)	96	10 / 10	16.5 (10)	76	10 / 10
11	22.5 (10)	10 / 10	22.5 (10)	100	10 / 10	22.0 (10)	98	10 / 10	21.9 (10)	97	10 / 10	20.8 (10)	92	10 / 10	16.1 (10)	72	10 / 10
12	22.3 (10)	10 / 10	22.5 (10)	101	10 / 10	22.1 (10)	99	10 / 10	21.6 (10)	97	10 / 10	20.9 (10)	94	10 / 10	16.7 (10)	75	10 / 10
13	22.7 (10)	10 / 10	23.2 (10)	102	10 / 10	22.5 (10)	99	10 / 10	22.3 (10)	98	10 / 10	21.4 (10)	94	10 / 10	16.9 (10)	74	10 / 10

< > : No.of effective animals, () : No.of measured animals Av.Wt.:g

TABLE 3 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Week on Study	Control		500ppm			1000ppm			2000ppm			3000ppm			4000ppm		
	Av. Fc. <10>	No. of Surviv. 10 / 10	Av. Fc. <10>	% of cont. <10>	No. of Surviv. 10 / 10	Av. Fc. <10>	% of cont. <10>	No. of Surviv. 10 / 10	Av. Fc. <10>	% of cont. <10>	No. of Surviv. 10 / 10	Av. Fc. <10>	% of cont. <10>	No. of Surviv. 10 / 10	Av. Fc. <10>	% of cont. <10>	No. of Surviv. 10 / 10
1	3.7 (10)	10 / 10	3.6 (10)	97	10 / 10	3.6 (10)	97	10 / 10	3.6 (10)	97	10 / 10	3.0 (10)	81	10 / 10	2.3 (10)	62	10 / 10
2	3.5 (10)	10 / 10	3.5 (10)	100	10 / 10	3.4 (10)	97	10 / 10	3.6 (10)	103	10 / 10	3.4 (10)	97	10 / 10	3.3 (10)	94	10 / 10
3	3.6 (10)	10 / 10	3.6 (10)	100	10 / 10	3.8 (10)	106	10 / 10	3.6 (10)	100	10 / 10	3.5 (10)	97	10 / 10	3.1 (10)	86	10 / 10
4	3.7 (10)	10 / 10	3.4 (10)	92	10 / 10	3.6 (10)	97	10 / 10	3.6 (10)	97	10 / 10	3.4 (10)	92	10 / 10	3.0 (10)	81	10 / 10
5	3.9 (10)	10 / 10	4.1 (10)	105	10 / 10	4.1 (10)	105	10 / 10	4.0 (10)	103	10 / 10	3.8 (10)	97	10 / 10	3.6 (10)	92	10 / 10
6	3.9 (10)	10 / 10	4.0 (10)	103	10 / 10	4.0 (10)	103	10 / 10	4.0 (10)	103	10 / 10	3.8 (10)	97	10 / 10	3.5 (10)	90	10 / 10
7	4.0 (10)	10 / 10	4.0 (10)	100	10 / 10	4.0 (10)	100	10 / 10	4.0 (10)	100	10 / 10	3.8 (10)	95	10 / 10	3.4 (10)	85	10 / 10
8	3.9 (10)	10 / 10	4.0 (10)	103	10 / 10	3.9 (10)	100	10 / 10	3.9 (10)	100	10 / 10	3.8 (10)	97	10 / 10	3.4 (10)	87	10 / 10
9	3.9 (10)	10 / 10	3.8 (10)	97	10 / 10	4.1 (10)	105	10 / 10	3.8 (10)	97	10 / 10	3.7 (10)	95	10 / 10	3.5 (10)	90	10 / 10
10	4.0 (10)	10 / 10	4.1 (10)	103	10 / 10	4.2 (10)	105	10 / 10	4.1 (10)	103	10 / 10	3.9 (10)	98	10 / 10	3.6 (10)	90	10 / 10
11	3.4 (10)	10 / 10	3.7 (10)	109	10 / 10	3.9 (10)	115	10 / 10	3.5 (10)	103	10 / 10	3.6 (10)	106	10 / 10	3.4 (10)	100	10 / 10
12	4.4 (10)	10 / 10	4.2 (10)	95	10 / 10	4.2 (10)	95	10 / 10	4.3 (10)	98	10 / 10	4.0 (10)	91	10 / 10	3.6 (10)	82	10 / 10
13	4.0 (10)	10 / 10	3.9 (10)	98	10 / 10	4.0 (10)	100	10 / 10	3.9 (10)	98	10 / 10	3.8 (10)	95	10 / 10	3.4 (10)	85	10 / 10

< > : No.of effective animals, () : No.of measured animals Av.Fc.:g

TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Week on Study	Control		1000ppm			2000ppm			4000ppm			6000ppm			8000ppm		
	Av. Fc. <10>	No. of Surviv.	Av. Fc. <10>	% of cont.	No. of Surviv.	Av. Fc. <10>	% of cont.	No. of Surviv.	Av. Fc. <10>	% of cont.	No. of Surviv.	Av. Fc. <10>	% of cont.	No. of Surviv.	Av. Fc. <10>	% of cont.	No. of Surviv.
1	3.3 (10)	10 / 10	3.2 (10)	97	10 / 10	2.8 (10)	85	10 / 10	2.4 (10)	73	10 / 10	1.8 (10)	55	10 / 10	1.2 (10)	36	10 / 10
2	3.2 (10)	10 / 10	3.0 (10)	94	10 / 10	2.8 (10)	88	10 / 10	3.1 (10)	97	10 / 10	2.8 (10)	88	10 / 10	2.4 (10)	75	10 / 10
3	3.3 (10)	10 / 10	3.2 (10)	97	10 / 10	3.2 (10)	97	10 / 10	2.8 (10)	85	10 / 10	2.7 (10)	82	10 / 10	2.5 (9)	76	10 / 10
4	3.5 (10)	10 / 10	3.4 (10)	97	10 / 10	2.6 (10)	74	10 / 10	2.7 (10)	77	10 / 10	2.7 (10)	77	10 / 10	2.1 (10)	60	10 / 10
5	3.3 (10)	10 / 10	3.3 (10)	100	10 / 10	3.6 (10)	109	10 / 10	3.1 (10)	94	10 / 10	2.9 (10)	88	10 / 10	2.5 (8)	76	10 / 10
6	3.5 (10)	10 / 10	3.5 (10)	100	10 / 10	3.2 (10)	91	10 / 10	3.0 (10)	86	10 / 10	2.7 (10)	77	10 / 10	2.4 (9)	69	10 / 10
7	3.6 (10)	10 / 10	3.5 (10)	97	10 / 10	3.5 (9)	97	10 / 10	3.0 (10)	83	10 / 10	2.7 (10)	75	10 / 10	2.2 (8)	61	10 / 10
8	3.5 (10)	10 / 10	3.5 (10)	100	10 / 10	3.5 (9)	100	10 / 10	3.2 (10)	91	10 / 10	2.7 (10)	77	10 / 10	2.1 (9)	60	10 / 10
9	3.7 (10)	10 / 10	3.6 (10)	97	10 / 10	3.5 (9)	95	10 / 10	3.1 (10)	84	10 / 10	2.7 (10)	73	10 / 10	1.9 (9)	51	10 / 10
10	3.5 (10)	10 / 10	3.7 (10)	106	10 / 10	3.6 (9)	103	10 / 10	3.2 (10)	91	10 / 10	2.8 (10)	80	10 / 10	1.9 (9)	54	10 / 10
11	3.7 (10)	10 / 10	3.6 (10)	97	10 / 10	3.5 (9)	95	10 / 10	3.1 (10)	84	10 / 10	2.8 (10)	76	10 / 10	1.8 (9)	49	10 / 10
12	3.7 (10)	10 / 10	3.7 (10)	100	10 / 10	3.6 (9)	97	10 / 10	3.1 (10)	84	10 / 10	2.8 (10)	76	10 / 10	2.2 (9)	59	10 / 10
13	3.7 (10)	10 / 10	3.7 (10)	100	10 / 10	3.5 (10)	95	10 / 10	3.2 (10)	86	10 / 10	2.9 (10)	78	10 / 10	2.1 (9)	57	10 / 10

< > : No.of effective animals, () : No.of measured animals Av.Fc.:g

TABLE 5 HEMATOLOGY OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	500 ppm	1000 ppm	2000 ppm	3000 ppm	4000 ppm
No. of examined animals	10	10	10	8	10	8
Red blood cell ($10^6/\mu\text{L}$)	10.49 \pm 0.29	10.09 \pm 0.36	10.09 \pm 0.41	9.86 \pm 0.22 **	9.74 \pm 0.39 **	9.79 \pm 0.34 **
Hemoglobin (g/dL)	15.5 \pm 0.4	14.9 \pm 0.5 *	15.0 \pm 0.5 *	14.6 \pm 0.3 **	14.7 \pm 0.6 **	14.6 \pm 0.4 **
Hematocrit (%)	48.4 \pm 1.3	47.1 \pm 1.5	47.2 \pm 1.8	46.3 \pm 1.1 *	46.5 \pm 1.8	46.0 \pm 1.8 *
MCV (fL)	46.1 \pm 0.6	46.7 \pm 0.7	46.8 \pm 1.1	47.0 \pm 0.4 *	47.8 \pm 0.6 **	46.9 \pm 0.4
MCH (pg)	14.8 \pm 0.3	14.8 \pm 0.1	14.8 \pm 0.3	14.8 \pm 0.1	15.1 \pm 0.1 **	14.9 \pm 0.2

Mean \pm S.D.
Significant difference, *: $p < 0.05$ ** $p < 0.01$ (Test of Dunnett)

TABLE 6 HEMATOLOGY OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	1000 ppm	2000 ppm	4000 ppm	6000 ppm	8000 ppm
No. of examined animals	10	9	8	8	9	6
Red blood cell ($10^6/\mu\text{L}$)	10.46 \pm 0.40	10.47 \pm 0.17	10.27 \pm 0.88	10.01 \pm 0.38	9.77 \pm 0.39 **	9.81 \pm 0.26 *
Hemoglobin (g/dL)	15.5 \pm 0.5	15.5 \pm 0.3	15.0 \pm 2.0	14.9 \pm 0.7	14.6 \pm 0.4 **	14.4 \pm 0.4 *
Hematocrit (%)	47.6 \pm 1.8	48.4 \pm 1.0	47.0 \pm 5.6	46.8 \pm 2.0	45.8 \pm 1.7	44.3 \pm 1.1 *
MCV (fL)	45.5 \pm 0.4	46.2 \pm 0.7	45.6 \pm 2.1	46.7 \pm 0.6 *	46.9 \pm 1.0 **	45.1 \pm 0.9
MCHC (g/dL)	32.6 \pm 0.5	32.1 \pm 0.4	31.9 \pm 0.8 *	31.9 \pm 0.4 *	31.8 \pm 0.4 **	32.6 \pm 0.4

Mean \pm S.D.
Significant difference, *: $p < 0.05$ ** $p < 0.01$ (Test of Dunnett)

TABLE 7 BIOCHEMISTRY OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	500 ppm	1000 ppm	2000 ppm	3000 ppm	4000 ppm
No. of examined animals	10	10	10	8	10	8
Albumin (g/dL)	3.0 ± 0.2	3.0 ± 0.1	3.0 ± 0.1	3.1 ± 0.1	3.0 ± 0.1	3.2 ± 0.1 *
T-Cholesterol (mg/dL)	74 ± 6	80 ± 11	84 ± 6 *	100 ± 8 **	103 ± 11 **	123 ± 7 **
Phospholipid (mg/dL)	170 ± 10	171 ± 21	180 ± 11	203 ± 12 **	212 ± 21 **	246 ± 13 **
CPK (IU/L)	55 ± 16	62 ± 22	57 ± 14	72 ± 36	82 ± 22	84 ± 28 *

Mean ± S.D.
Significant difference, *: p<0.05 **p<0.01 (Test of Dunnett)

TABLE 8 BIOCHEMISTRY OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	1000 ppm	2000 ppm	4000 ppm	6000 ppm	8000 ppm
No. of examined animals	10	9	9	9	10	6
Total protein (g/dL)	4.9 ± 0.1	5.0 ± 0.3	4.9 ± 0.3	5.0 ± 0.2	5.2 ± 0.2 *	5.3 ± 0.3 **
Albumin (g/dL)	3.2 ± 0.1	3.4 ± 0.1	3.3 ± 0.1	3.4 ± 0.2 *	3.7 ± 0.1 **	3.8 ± 0.3 **
A/G ratio	1.9 ± 0.2	2.1 ± 0.4	2.0 ± 0.4	2.3 ± 0.5	2.6 ± 0.4 **	2.6 ± 0.5 **
T-Bilirubin (mg/dL)	0.14 ± 0.01	0.15 ± 0.01	0.14 ± 0.02	0.15 ± 0.04	0.17 ± 0.04	0.17 ± 0.02 *
Glucose (mg/dL)	178 ± 30	184 ± 13	181 ± 29	191 ± 29	191 ± 27	119 ± 18 **
T-Cholesterol (mg/dL)	65 ± 6	81 ± 7	99 ± 19 *	105 ± 10 **	129 ± 8 **	162 ± 16 **
Phospholipid (mg/dL)	144 ± 12	174 ± 18 **	202 ± 30 **	212 ± 20 **	256 ± 16 **	316 ± 20 **
GPT (IU/L)	18 ± 3	18 ± 4	21 ± 5	18 ± 3	17 ± 2	23 ± 4 *
LDH (IU/L)	232 ± 54	235 ± 54	259 ± 45	225 ± 48	271 ± 92	398 ± 79 **
ALP (IU/L)	198 ± 17	174 ± 23	179 ± 27	182 ± 16	197 ± 20	245 ± 18 **
CPK (IU/L)	71 ± 65	107 ± 85	197 ± 289	82 ± 38	110 ± 71	186 ± 93 **
Urea Nitrogen(mg/dL)	20.0 ± 1.5	20.6 ± 3.3	24.2 ± 5.6	25.0 ± 2.8 **	25.1 ± 3.2 **	29.0 ± 6.4 **
Chloride (mEq/L)	121 ± 1	121 ± 3	120 ± 1	120 ± 2	120 ± 2	117 ± 3 **
Inorganic phosphorus (mg/dL)	6.0 ± 0.9	6.9 ± 1.6	6.5 ± 1.9	7.0 ± 1.3	7.4 ± 1.2	8.8 ± 0.6 **

Mean ± S.D.
Significant difference, *: p<0.05 **p<0.01 (Test of Dunnett)

TABLE 9 URINALYSIS OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group		Control	500 ppm	1000 ppm	2000 ppm	3000 ppm	4000 ppm
Number of examined animals		10	10	10	10	10	10
Grade							
Protein	-	0	0	0	0	0	0 **
	±	1	4	1	4	5	8
	+	9	6	9	6	5	2
	2+	0	0	0	0	0	0
	3+	0	0	0	0	0	0
	4+	0	0	0	0	0	0
Significant difference * : p<0.05 ** : p<0.01 Chi square test							

TABLE 10 URINALYSIS OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group		Control	1000 ppm	2000 ppm	4000 ppm	6000 ppm	8000 ppm
Number of examined animals		10	10	10	10	10	10
Grade							
Protein	-	0	0	0	0 **	2 **	7 **
	±	1	2	4	9	8	3
	+	7	8	6	1	0	0
	2+	2	0	0	0	0	0
	3+	0	0	0	0	0	0
	4+	0	0	0	0	0	0
Ketone body	-	1	2	2	6 *	8 **	10 **
	±	9	8	8	3	2	0
	+	0	0	0	1	0	0
	2+	0	0	0	0	0	0
	3+	0	0	0	0	0	0
	4+	0	0	0	0	0	0
Significant difference * : p<0.05 ** : p<0.01 Chi square test							

TABLE 11 ORGAN WEIGHTS OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	500 ppm	1000 ppm	2000 ppm	3000 ppm	4000 ppm
No. of examined animals	10	10	10	10	10	10
Body weight (g)	29.3 ± 2.0	29.5 ± 2.1	28.9 ± 2.0	29.4 ± 2.0	27.5 ± 1.8	25.8 ± 1.6 **
Lungs (g)	0.160 ± 0.009	0.159 ± 0.006	0.163 ± 0.011	0.161 ± 0.007	0.161 ± 0.011	0.154 ± 0.007
Lungs (%)	0.547 ± 0.037	0.541 ± 0.039	0.565 ± 0.043	0.548 ± 0.036	0.587 ± 0.041	0.599 ± 0.032 *
Kidneys (g)	0.403 ± 0.027	0.399 ± 0.020	0.623 ± 0.640	0.422 ± 0.037	0.425 ± 0.027	0.409 ± 0.024
Kidneys (%)	1.379 ± 0.110	1.358 ± 0.086	2.188 ± 2.320	1.439 ± 0.103	1.549 ± 0.063 **	1.588 ± 0.096 **
Spleen (g)	0.047 ± 0.007	0.050 ± 0.005	0.050 ± 0.007	0.060 ± 0.008 **	0.069 ± 0.012 **	0.070 ± 0.011 **
Spleen (%)	0.159 ± 0.021	0.169 ± 0.006	0.174 ± 0.023	0.204 ± 0.023 *	0.250 ± 0.032 **	0.273 ± 0.046 **
Liver (g)	1.073 ± 0.062	1.134 ± 0.056	1.165 ± 0.084 *	1.264 ± 0.094 **	1.263 ± 0.081 **	1.254 ± 0.068 **
Liver (%)	3.669 ± 0.150	3.857 ± 0.169	4.042 ± 0.206 **	4.312 ± 0.256 **	4.599 ± 0.109 **	4.865 ± 0.249 **
Brain (g)	0.450 ± 0.013	0.451 ± 0.015	0.448 ± 0.013	0.446 ± 0.013	0.447 ± 0.013	0.449 ± 0.015
Brain (%)	1.542 ± 0.116	1.538 ± 0.111	1.557 ± 0.087	1.523 ± 0.099	1.632 ± 0.116	1.744 ± 0.111 **

Mean ± S.D.
Significant difference *: p<0.05 **p<0.01 (Test of Dunnett)

TABLE 12 ORGAN WEIGHTS OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group Name	Control	1000 ppm	2000 ppm	4000 ppm	6000 ppm	8000 ppm
No. of examined animals	10	10	10	10	10	10
Body weight (g)	20.5 ± 0.7	20.7 ± 0.9	20.2 ± 1.5	19.8 ± 1.0	19.2 ± 0.9 *	15.5 ± 1.0 **
Thymus (g)	0.043 ± 0.005	0.043 ± 0.008	0.040 ± 0.006	0.039 ± 0.007	0.040 ± 0.007	0.030 ± 0.010 **
Thymus (%)	0.212 ± 0.021	0.209 ± 0.034	0.197 ± 0.019	0.194 ± 0.032	0.211 ± 0.037	0.196 ± 0.057
Adrenals (g)	0.013 ± 0.003	0.012 ± 0.002	0.013 ± 0.002	0.010 ± 0.002 *	0.010 ± 0.001 **	0.009 ± 0.001 **
Adrenals (%)	0.063 ± 0.011	0.059 ± 0.009	0.062 ± 0.011	0.052 ± 0.008 *	0.053 ± 0.005	0.057 ± 0.010
Ovarys (g)	0.027 ± 0.005	0.027 ± 0.007	0.026 ± 0.005	0.024 ± 0.005	0.024 ± 0.004	0.017 ± 0.003 **
Ovarys (%)	0.129 ± 0.022	0.132 ± 0.033	0.128 ± 0.021	0.121 ± 0.023	0.123 ± 0.024	0.112 ± 0.020
Heart (g)	0.118 ± 0.009	0.121 ± 0.006	0.128 ± 0.009 *	0.117 ± 0.009	0.109 ± 0.008	0.101 ± 0.008 **
Heart (%)	0.578 ± 0.051	0.584 ± 0.026	0.640 ± 0.107	0.592 ± 0.028	0.567 ± 0.037	0.654 ± 0.032 **
Lungs (g)	0.150 ± 0.013	0.154 ± 0.015	0.151 ± 0.013	0.144 ± 0.009	0.143 ± 0.012	0.122 ± 0.008 **
Lungs (%)	0.731 ± 0.050	0.745 ± 0.060	0.750 ± 0.048	0.727 ± 0.041	0.745 ± 0.070	0.791 ± 0.047
Kidneys (g)	0.271 ± 0.009	0.278 ± 0.011	0.311 ± 0.086	0.265 ± 0.015	0.254 ± 0.009	0.212 ± 0.017 **
Kidneys (%)	1.324 ± 0.055	1.347 ± 0.028	1.579 ± 0.648	1.338 ± 0.050	1.321 ± 0.058	1.368 ± 0.064
Spleen (g)	0.048 ± 0.004	0.048 ± 0.004	0.053 ± 0.007	0.058 ± 0.008 **	0.070 ± 0.005 **	0.042 ± 0.009
Spleen (%)	0.236 ± 0.018	0.235 ± 0.021	0.265 ± 0.040	0.291 ± 0.034 *	0.365 ± 0.025 **	0.271 ± 0.047
Liver (g)	0.813 ± 0.040	0.878 ± 0.045	0.922 ± 0.084 **	0.932 ± 0.075 **	0.988 ± 0.038 **	0.899 ± 0.068 *
Liver (%)	3.979 ± 0.235	4.254 ± 0.252	4.588 ± 0.197 **	4.710 ± 0.207 **	5.144 ± 0.179 **	5.823 ± 0.361 **
Brain (g)	0.460 ± 0.018	0.466 ± 0.016	0.460 ± 0.017	0.451 ± 0.012	0.438 ± 0.019 *	0.397 ± 0.018 **
Brain (%)	2.249 ± 0.078	2.256 ± 0.102	2.285 ± 0.171	2.285 ± 0.121	2.280 ± 0.140	2.572 ± 0.153 **

Mean ± S.D.
Significant difference *: p<0.05 **p<0.01 (Test of Dunnett)

TABLE 13 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group		Control	500 ppm	1000 ppm	2000 ppm	3000 ppm	4000 ppm
Number of examined animals		10	10	10	10	10	10
Organ	Grade of non-neoplastic finding						
Findings							
Nasal cavity							
Eosinophilic change: respiratory epithelium	1+	0	0	2	8 **	9 **	10 **
	2+	0	0	0	1	1	0
Eosinophilic change: olfactory epithelium	1+	0	0	0	2	9 **	10 **
Atrophy: olfactory epithelium	1+	0	0	0	4	8 **	7 **
Respiratory metaplasia: olfactory epithelium	1+	0	0	0	0	5 *	9 **
Respiratory metaplasia:gland	1+	0	0	0	0	5 *	8 **
Nasopharynx							
Eosinophilic change	1+	0	0	0	3	6 **	0 **
	2+	0	0	0	0	4	10
Liver							
Hepatocellular hypertrophy: central	1+	0	0	0	0	9 **	2 **
	2+	0	0	0	0	1	8
Deposit of hemosiderin	1+	0	0	0	0	10 **	10 **
Spleen							
Deposit of hemosiderin	1+	10	10	10	1 **	0 **	0 **
	2+	0	0	0	9	10	8
	3+	0	0	0	0	0	2
Extramedullary hematopoiesis	1+	10	10	10	1 **	0 **	0 **
	2+	0	0	0	9	10	10
Heart							
Vacuolic change	1+	0	0	0	0	2	2
Grade	1+: Slight	2+: Moderate	3+: Marked	4+: Severe			
Significant difference	* : p<0.05	** : p<0.01	Chi square test for non-neoplastic lesion				

TABLE 14 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE 13-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Group		Control	1000 ppm	2000 ppm	4000 ppm	6000 ppm	8000 ppm
Number of examined animals		10	10	10	10	10	10
Organ	Grade of non-neoplastic finding						
Findings							
Nasal cavity							
Eosinophilic change: respiratory epithelium	1+	1	8 **	4 **	3 **	9 **	5
	2+	0	1	6	7	1	0
Eosinophilic change: olfactory epithelium	1+	0	0	6 *	6 **	0 **	0 **
	2+	0	0	0	4	10	4
	3+	0	0	0	0	0	6
Atrophy: olfactory epithelium	1+	0	0	8 **	10 **	0 **	0 **
	2+	0	0	0	0	10	10
Respiratory metaplasia: olfactory epithelium	1+	0	0	1	9 **	10 *	10 **
	2+	0	0	0	1	0	0
Respiratory metaplasia:gland	1+	0	0	2	4 **	0 **	0 **
	2+	0	0	0	6	10	10
Nasopharynx							
Eosinophilic change	1+	0	1	4 **	0 **	0 **	0 **
	2+	0	0	4	9	5	3
	3+	0	0	0	1	5	7
Liver							
Hepatocellular hypertrophy: central	1+	0	0	0	9 **	1 **	0 **
	2+	0	0	0	0	9	10
Deposit of hemosiderin	1+	0	0	0	10 **	10 **	10 **
Increase in mitosis	1+	0	0	0	0	1	3
Spleen							
Deposit of hemosiderin	1+	10	10	0 **	0 **	0 **	0 **
	2+	0	0	10	8	0	0
	3+	0	0	0	2	10	10
Extramedullary hematopoiesis	1+	10	10	8	0 **	0 **	0 **
	2+	0	0	2	10	10	10
Heart							
Vacuolic change	1+	0	0	0	0	0	0
	2+	0	0	0	0	0	1
Grade	1+: Slight	2+: Moderate	3+: Marked	4+: Severe			
Significant difference	*: p<0.05	** : p<0.01	Chi square test for non-neoplastic lesion				