

2-アミノ-4-クロロフェノールのラットを用いた経口投与
による 2 週間毒性試験（混餌試験）報告書

試験番号： 0482

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TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Week-Day on Study	Control		1280 ppm			3200 ppm			8000 ppm			20000 ppm			50000 ppm		
	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.
	<5>		<5>			<5>			<5>			<5>			<5>		
0-0	126 (5)	5 / 5	126 (5)	100	5 / 5	127 (5)	101	5 / 5	127 (5)	101	5 / 5	127 (5)	101	5 / 5	127 (5)	101	5 / 5
1-4	144 (5)	5 / 5	145 (5)	101	5 / 5	144 (5)	100	5 / 5	141 (5)	98	5 / 5	127 (5)	88	5 / 5	93 (5)	65	5 / 5
1-7	156 (5)	5 / 5	158 (5)	101	5 / 5	157 (5)	101	5 / 5	152 (5)	97	5 / 5	135 (5)	87	5 / 5	100 (4)	64	4 / 5
2-4	174 (5)	5 / 5	175 (5)	101	5 / 5	173 (5)	99	5 / 5	169 (5)	97	5 / 5	147 (5)	84	5 / 5	106 (4)	61	4 / 5
2-7	185 (5)	5 / 5	187 (5)	101	5 / 5	184 (5)	99	5 / 5	178 (5)	96	5 / 5	156 (5)	84	5 / 5	110 (4)	59	4 / 5

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

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Week-Day on Study	Control		1280 ppm			3200 ppm			8000 ppm			20000 ppm			50000 ppm		
	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.
	<5>		<5>			<5>			<5>			<5>			<5>		
0-0	99 (5)	5 / 5	99 (5)	100	5 / 5	99 (5)	100	5 / 5	99 (5)	100	5 / 5	99 (5)	100	5 / 5	99 (5)	100	5 / 5
1-4	107 (5)	5 / 5	107 (5)	100	5 / 5	106 (5)	99	5 / 5	106 (5)	99	5 / 5	96 (5)	90	5 / 5	77 (5)	72	5 / 5
1-7	112 (5)	5 / 5	113 (5)	101	5 / 5	114 (5)	102	5 / 5	112 (5)	100	5 / 5	101 (5)	90	5 / 5	79 (5)	71	5 / 5
2-4	119 (5)	5 / 5	119 (5)	100	5 / 5	119 (5)	100	5 / 5	117 (5)	98	5 / 5	106 (5)	89	5 / 5	83 (5)	70	5 / 5
2-7	124 (5)	5 / 5	124 (5)	100	5 / 5	123 (5)	99	5 / 5	122 (5)	98	5 / 5	111 (5)	90	5 / 5	85 (5)	69	5 / 5

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

TABLE 3 FOOD CONSUMPTION CHANGES OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Week-Day on Study	Control		1280 ppm			3200 ppm			8000 ppm			20000 ppm			50000 ppm		
	Av. Fc.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.
	<5>		<5>			<5>			<5>			<5>			<5>		
1-4	— (—)	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5
1-7	13.1 (5)	5 / 5	13.6 (5)	104	5 / 5	12.8 (5)	98	5 / 5	13.1 (5)	100	5 / 5	10.9 (5)	83	5 / 5	7.2 (4)	55	4 / 5
2-4	13.3 (5)	5 / 5	13.7 (5)	103	5 / 5	13.1 (5)	98	5 / 5	13.5 (5)	102	5 / 5	11.2 (5)	84	5 / 5	8.2 (4)	62	4 / 5
2-7	14.1 (5)	5 / 5	14.4 (5)	102	5 / 5	13.6 (5)	96	5 / 5	14.0 (5)	99	5 / 5	12.1 (5)	86	5 / 5	8.6 (4)	61	4 / 5
< > : No. of effective animals, () : No. of measured animals, Av. Fc. : Averaged food consumption (Unit : g).																	

TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Week-Day on Study	Control		1280 ppm			3200 ppm			8000 ppm			20000 ppm			50000 ppm		
	Av. Fc.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.	Av. Fc.	% of cont.	No. of Surviv.
	<5>		<5>			<5>			<5>			<5>			<5>		
1-4	— (—)	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5	— (—)	—	5 / 5
1-7	9.9 (5)	5 / 5	9.7 (5)	98	5 / 5	10.2 (5)	103	5 / 5	9.4 (5)	95	5 / 5	8.6 (5)	87	5 / 5	7.6 (5)	77	5 / 5
2-4	9.7 (5)	5 / 5	10.0 (5)	103	5 / 5	9.8 (5)	101	5 / 5	9.2 (5)	95	5 / 5	8.3 (5)	86	5 / 5	7.8 (5)	80	5 / 5
2-7	10.0 (5)	5 / 5	10.2 (5)	102	5 / 5	10.1 (5)	101	5 / 5	9.2 (5)	92	5 / 5	8.9 (5)	89	5 / 5	7.2 (5)	72	5 / 5
< > : No. of effective animals, () : No. of measured animals, Av. Fc. : Averaged food consumption (Unit : g).																	

TABLE 5 HEMATOLOGY OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	4
Red blood cell ($10^6/\mu\text{L}$)	7.97 \pm 0.14	7.96 \pm 0.28	7.89 \pm 0.10	7.57 \pm 0.19 **	6.29 \pm 0.16 **	5.20 \pm 0.04 **
Hemoglobin (g/dL)	14.6 \pm 0.3	14.6 \pm 0.4	14.4 \pm 0.2	13.7 \pm 0.3 **	12.7 \pm 0.2 **	12.2 \pm 0.1 **
Hematocrit (%)	41.6 \pm 0.8	41.3 \pm 1.1	40.6 \pm 0.5	39.8 \pm 1.0 *	37.6 \pm 0.8 **	38.1 \pm 1.0 **
MCV (fL)	52.2 \pm 0.6	52.0 \pm 0.9	51.4 \pm 0.3	52.6 \pm 0.9	59.8 \pm 0.8	73.2 \pm 2.0 *
MCH (pg)	18.4 \pm 0.1	18.3 \pm 0.3	18.2 \pm 0.1	18.1 \pm 0.2	20.2 \pm 0.2 **	23.4 \pm 0.2 **
MCHC (g/dL)	35.2 \pm 0.4	35.3 \pm 0.2	35.5 \pm 0.2	34.3 \pm 0.2	33.8 \pm 0.3 *	32.0 \pm 1.0 **
Platelet ($10^3/\mu\text{L}$)	852 \pm 94	854 \pm 88	901 \pm 48	982 \pm 107	1020 \pm 26 *	1265 \pm 156 **
Reticulocyte (%)	3.2 \pm 0.4	3.2 \pm 0.4	3.3 \pm 0.3	6.4 \pm 0.9	14.0 \pm 0.7 *	27.9 \pm 2.6 **
Methemoglobin (%)	0.3 \pm 0.0	0.4 \pm 0.2	0.3 \pm 0.0	0.3 \pm 0.1	0.9 \pm 0.5 *	2.9 \pm 1.2 **
Differential WBC (%)						
N-SEG	14 \pm 5	11 \pm 2	13 \pm 1	13 \pm 4	15 \pm 2	25 \pm 3 **
LYMPHO	82 \pm 6	85 \pm 4	84 \pm 2	84 \pm 5	81 \pm 2	72 \pm 4 **
Mean \pm S.D.						
*) Significant difference, p<0.05 (Test of Dunnett)						
**) Significant difference, p<0.01 (Test of Dunnett)						

TABLE 6 HEMATOLOGY OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	5
Red blood cell ($10^6/\mu\text{L}$)	8.10 \pm 0.47	8.43 \pm 0.17	7.99 \pm 0.23	7.59 \pm 0.08	6.25 \pm 0.22	5.28 \pm 0.20 **
Hemoglobin (g/dL)	15.0 \pm 0.9	15.5 \pm 0.4	14.6 \pm 0.4	13.7 \pm 0.2 **	12.3 \pm 0.5 **	12.4 \pm 0.4 **
Hematocrit (%)	41.2 \pm 2.7	42.9 \pm 0.9	40.4 \pm 1.0	38.8 \pm 0.4	35.7 \pm 1.5 **	38.3 \pm 0.5
MCV (fL)	50.9 \pm 0.9	50.9 \pm 0.3	50.6 \pm 0.4	51.1 \pm 0.2	57.2 \pm 0.9	72.7 \pm 2.2 *
MCH (pg)	18.5 \pm 0.3	18.4 \pm 0.2	18.3 \pm 0.2	18.1 \pm 0.2	19.7 \pm 0.3 **	23.5 \pm 0.3 **
MCHC (g/dL)	36.3 \pm 0.1	36.2 \pm 0.1	36.2 \pm 0.2	35.4 \pm 0.4	34.4 \pm 0.2 **	32.3 \pm 0.7 **
Platelet ($10^3/\mu\text{L}$)	782 \pm 48	768 \pm 45	768 \pm 40	912 \pm 42 **	1018 \pm 90 **	1272 \pm 71 **
Reticulocyte (%)	1.9 \pm 0.4	1.7 \pm 0.3	2.0 \pm 0.3	4.4 \pm 0.6	13.9 \pm 0.5 *	29.1 \pm 2.0 **
Methemoglobin (%)	0.2 \pm 0.1	0.3 \pm 0.1	0.3 \pm 0.1	0.3 \pm 0.0	0.9 \pm 0.7 *	3.0 \pm 2.5 **
WBC ($10^3/\mu\text{L}$)	4.20 \pm 1.04	4.33 \pm 0.59	3.40 \pm 1.03	4.86 \pm 1.27	6.11 \pm 1.25 *	7.05 \pm 0.60 **
Differential WBC (%)						
N-SEG	15 \pm 4	11 \pm 3	17 \pm 3	14 \pm 3	12 \pm 4	25 \pm 2 **
LYMPHO	81 \pm 4	85 \pm 4	79 \pm 2	82 \pm 3	85 \pm 3	69 \pm 4 **
Mean \pm S.D.						
*) Significant difference, p<0.05 (Test of Dunnett)						
**) Significant difference, p<0.01 (Test of Dunnett)						

TABLE 7 BIOCHEMISTRY OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	4
Total protein (g/dL)	5.4 ± 0.1	5.4 ± 0.1	5.4 ± 0.1	5.6 ± 0.2	5.7 ± 0.2 *	5.3 ± 0.3
Albumin (g/dL)	3.2 ± 0.1	3.2 ± 0.1	3.2 ± 0.1	3.2 ± 0.1	3.4 ± 0.1 **	3.2 ± 0.2
T-bilirubin (mg/dL)	0.11 ± 0.01	0.10 ± 0.01	0.11 ± 0.03	0.12 ± 0.01	0.16 ± 0.01	0.24 ± 0.04 **
Glucose (mg/dL)	204 ± 8	207 ± 12	194 ± 12	195 ± 6	177 ± 11 **	142 ± 6 **
T-cholesterol (mg/dL)	59 ± 4	58 ± 5	59 ± 5	61 ± 3	73 ± 7 **	96 ± 7 **
Phospholipid (mg/dL)	127 ± 12	127 ± 8	128 ± 2	137 ± 8	154 ± 12	200 ± 18 **
GPT (IU/L)	29 ± 2	30 ± 2	30 ± 2	34 ± 4	35 ± 0 *	35 ± 6
γ-GTP (IU/L)	1 ± 1	1 ± 0	1 ± 1	1 ± 0	2 ± 1	3 ± 1 **
Urea nitrogen (mg/dL)	18.0 ± 1.8	17.7 ± 1.2	17.1 ± 3.2	18.3 ± 2.8	20.7 ± 1.7	26.2 ± 4.5 **
Potassium (mEq/L)	3.8 ± 0.1	3.7 ± 0.4	4.0 ± 0.2	4.1 ± 0.2	4.5 ± 0.2 **	5.0 ± 0.3 **

Mean ± S.D.

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

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

TABLE 8 BIOCHEMISTRY OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	5
T-bilirubin (mg/dL)	0.13 ± 0.03	0.13 ± 0.03	0.15 ± 0.09	0.14 ± 0.02	0.16 ± 0.02	0.28 ± 0.06 **
Glucose (mg/dL)	187 ± 11	191 ± 14	190 ± 7	194 ± 15	180 ± 10	145 ± 29 **
T-cholesterol (mg/dL)	69 ± 2	70 ± 5	68 ± 2	74 ± 6	79 ± 5 **	99 ± 6 **
Phospholipid (mg/dL)	131 ± 4	135 ± 9	133 ± 10	139 ± 8	156 ± 8 **	202 ± 10 **
γ-GTP (IU/L)	1 ± 0	1 ± 1	2 ± 0	2 ± 1 *	3 ± 0 **	6 ± 1 **
Urea nitrogen (mg/dL)	18.5 ± 2.8	19.5 ± 3.6	19.8 ± 2.8	19.8 ± 3.3	20.9 ± 1.9	28.1 ± 2.9 **
Potassium (mEq/L)	3.8 ± 0.3	3.8 ± 0.3	4.0 ± 0.5	3.9 ± 0.4	4.3 ± 0.2	5.1 ± 0.4 **

Mean ± S.D.

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

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

TABLE 9 URINALYSIS OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name		Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
Number of examined animals		5	5	5	5	5	4
	Grade						
pH	5.0	0	0	0	0	0	0
	6.0	0	0	0	0	0	4
	6.5	0	0	0	0	0	0
	7.0	0	0	0	0	0	0
	7.5	0	0	0	0	0	0
	8.0	4	3	3	3	5	0
	8.5	1	2	2	2	0	0

TABLE 10 URINALYSIS OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name		Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
Number of examined animals		5	5	5	5	5	5
	Grade						
pH	5.0	0	0	0	0	0	1
	6.0	0	0	0	0	0	4
	6.5	0	0	0	0	0	0
	7.0	0	0	0	0	0	0
	7.5	0	0	0	0	0	0
	8.0	3	3	3	4	3	0
	8.5	2	2	2	1	2	0
Protein	-	0	0	1	1	1	0
	±	3	4	4	4	2	0
	+	2	1	0	0	2	2
	2+	0	0	0	0	0	3

TABLE 11 ORGAN WEIGHTS OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	4
Body weight (g)	185 ± 9	187 ± 11	184 ± 8	178 ± 6	156 ± 9	** 110 ± 7 **
Thymus (g)	0.354 ± 0.054	0.358 ± 0.018	0.360 ± 0.036	0.331 ± 0.020	0.286 ± 0.022	** 0.138 ± 0.020 **
Thymus (%)	0.191 ± 0.025	0.191 ± 0.012	0.196 ± 0.021	0.185 ± 0.010	0.183 ± 0.012	0.126 ± 0.013 **
Adrenals (g)	0.035 ± 0.004	0.032 ± 0.002	0.032 ± 0.003	0.030 ± 0.002 *	0.028 ± 0.002 **	0.030 ± 0.002 *
Adrenals (%)	0.019 ± 0.003	0.017 ± 0.001	0.017 ± 0.001	0.017 ± 0.001	0.018 ± 0.001	0.027 ± 0.002 **
Testes (g)	2.399 ± 0.072	2.452 ± 0.108	2.396 ± 0.085	2.391 ± 0.063	2.244 ± 0.101	1.038 ± 0.311 *
Testes (%)	1.301 ± 0.080	1.311 ± 0.038	1.304 ± 0.033	1.341 ± 0.023	1.444 ± 0.090	0.937 ± 0.228
Heart (g)	0.649 ± 0.036	0.648 ± 0.059	0.639 ± 0.032	0.639 ± 0.027	0.540 ± 0.040 **	0.457 ± 0.018 **
Heart (%)	0.351 ± 0.010	0.346 ± 0.013	0.349 ± 0.027	0.358 ± 0.011	0.347 ± 0.013	0.417 ± 0.022 **
Lungs (g)	0.818 ± 0.065	0.782 ± 0.051	0.789 ± 0.033	0.772 ± 0.020	0.708 ± 0.058 **	0.607 ± 0.021 **
Lungs (%)	0.442 ± 0.020	0.418 ± 0.019	0.430 ± 0.020	0.433 ± 0.015	0.454 ± 0.011	0.554 ± 0.024 **
Kidneys (g)	1.589 ± 0.383	1.596 ± 0.413	1.400 ± 0.072	1.656 ± 0.455	1.337 ± 0.112	1.208 ± 0.022 *
Kidneys (%)	0.860 ± 0.202	0.854 ± 0.226	0.762 ± 0.035	0.928 ± 0.255	0.858 ± 0.033	1.104 ± 0.078
Spleen (g)	0.455 ± 0.038	0.473 ± 0.023	0.442 ± 0.025	0.564 ± 0.052 *	0.825 ± 0.082 **	0.709 ± 0.061 **
Spleen (%)	0.246 ± 0.012	0.254 ± 0.022	0.241 ± 0.012	0.316 ± 0.023 **	0.529 ± 0.025 **	0.647 ± 0.046 **
Liver (g)	7.161 ± 0.584	7.425 ± 0.550	7.185 ± 0.578	7.547 ± 0.458	6.956 ± 0.270	5.582 ± 0.238 **
Liver (%)	3.871 ± 0.145	3.967 ± 0.201	3.906 ± 0.198	4.228 ± 0.140 *	4.471 ± 0.173 **	5.092 ± 0.167 **
Brain (g)	1.731 ± 0.037	1.760 ± 0.047	1.699 ± 0.031	1.718 ± 0.052	1.669 ± 0.017	1.624 ± 0.034 **
Brain (%)	0.938 ± 0.034	0.943 ± 0.049	0.926 ± 0.049	0.963 ± 0.026	1.074 ± 0.055 **	1.485 ± 0.108 **

Mean ± S.D.

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

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

TABLE 12 ORGAN WEIGHTS OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group name	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
No. of examined animals	5	5	5	5	5	5
Body weight (g)	124 ± 5	124 ± 4	123 ± 4	122 ± 3	111 ± 6	** 85 ± 3 **
Thymus (g)	0.260 ± 0.017	0.299 ± 0.015 *	0.287 ± 0.029	0.265 ± 0.017	0.267 ± 0.034	0.114 ± 0.013 **
Thymus (%)	0.210 ± 0.007	0.241 ± 0.010 *	0.233 ± 0.025	0.218 ± 0.014	0.240 ± 0.020 *	0.134 ± 0.011 **
Adrenals (g)	0.039 ± 0.002	0.037 ± 0.004	0.040 ± 0.003	0.035 ± 0.003	0.032 ± 0.003 **	0.030 ± 0.002 **
Adrenals (%)	0.031 ± 0.002	0.030 ± 0.002	0.033 ± 0.001	0.029 ± 0.003	0.029 ± 0.003	0.035 ± 0.003
Ovaries (g)	0.080 ± 0.002	0.075 ± 0.013	0.080 ± 0.008	0.072 ± 0.008	0.051 ± 0.007 **	0.041 ± 0.004 **
Ovaries (%)	0.065 ± 0.003	0.060 ± 0.010	0.065 ± 0.005	0.059 ± 0.008	0.046 ± 0.006 **	0.048 ± 0.005 **
Heart (g)	0.450 ± 0.012	0.451 ± 0.030	0.473 ± 0.016	0.438 ± 0.014	0.440 ± 0.029	0.376 ± 0.019 **
Heart (%)	0.363 ± 0.014	0.364 ± 0.021	0.384 ± 0.015	0.360 ± 0.014	0.398 ± 0.020 *	0.443 ± 0.020 **
Lungs (g)	0.650 ± 0.028	0.643 ± 0.041	0.648 ± 0.028	0.631 ± 0.019	0.582 ± 0.022 **	0.507 ± 0.017 **
Lungs (%)	0.524 ± 0.007	0.519 ± 0.023	0.526 ± 0.013	0.518 ± 0.024	0.526 ± 0.021	0.597 ± 0.021 **
Kidneys (g)	0.991 ± 0.019	0.957 ± 0.043	0.990 ± 0.035	0.952 ± 0.031	0.944 ± 0.034	0.937 ± 0.028
Kidneys (%)	0.800 ± 0.035	0.773 ± 0.020	0.803 ± 0.028	0.782 ± 0.025	0.853 ± 0.033	1.104 ± 0.057 **
Spleen (g)	0.353 ± 0.080	0.317 ± 0.027	0.332 ± 0.030	0.396 ± 0.022	0.587 ± 0.041 **	0.569 ± 0.052 **
Spleen (%)	0.283 ± 0.052	0.256 ± 0.016	0.269 ± 0.018	0.325 ± 0.021	0.530 ± 0.037 **	0.669 ± 0.043 **
Liver (g)	4.472 ± 0.296	4.398 ± 0.144	4.687 ± 0.273	4.707 ± 0.180	4.561 ± 0.362	4.401 ± 0.344
Liver (%)	3.604 ± 0.127	3.555 ± 0.141	3.804 ± 0.167	3.866 ± 0.166	4.114 ± 0.194 **	5.172 ± 0.222 **
Brain (g)	1.638 ± 0.039	1.613 ± 0.046	1.637 ± 0.066	1.611 ± 0.026	1.589 ± 0.034	1.545 ± 0.026 **
Brain (%)	1.321 ± 0.022	1.303 ± 0.039	1.328 ± 0.027	1.324 ± 0.031	1.436 ± 0.050 **	1.820 ± 0.060 **

Mean ± S.D.

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

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

TABLE 13 INCIDENCES OF SELECTED LESIONS OF MALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group	Number of examined animals	Organ	Findings	Grade of lesion	Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
					5	5	5	5	5	4 (1)
Bone marrow										
			Hemorrhage	3+	0	0	0	0	0	0 (1)
Thymus										
			Atrophy	1+	0	0	0	0	0	4 (0)
				2+	0	0	0	0	0	0 (0)
				3+	0	0	0	0	0	0 (1)
Spleen										
			Extramedullary hematopoiesis	1+	0	0	0	5	0	0 (0)
				2+	0	0	0	0	5	4 (0)
			Engorgement of erythrocyte	1+	0	0	0	5	0	0 (0)
				2+	0	0	0	0	5	4 (0)
Esophagus										
			Hyperplasia	1+	0	0	0	0	0	2 (0)
Stomach										
			Ulcer: forestomach	1+	0	0	0	0	1	1 (0)
				2+	0	0	0	0	0	0 (0)
				3+	0	0	0	0	0	2 (0)
			Hyperplasia: forestomach	1+	0	0	4	1	0	0 (1)
				2+	0	0	0	4	0	0 (0)
				3+	0	0	0	0	5	4 (0)
			Erosion: glandular stomach	1+	0	0	0	0	0	0 (1)
Kidney										
			Basophilic change	1+	0	0	0	0	0	1 (0)
Urinary bladder										
			Degeneration	1+	0	0	0	0	0	4 (0)
			Retention: eosinophilic material	2+	0	0	0	0	0	0 (1)
Testis										
			Germ cell necrosis	1+	0	0	0	0	0	4 (1)
Epididymis										
			Decreased: sperma	1+	0	0	0	0	0	1 (0)
				2+	0	0	0	0	0	0 (0)
				3+	0	0	0	0	0	3 (1)
			Debris of spermatic elements	1+	0	0	0	0	0	2 (1)
				2+	0	0	0	0	0	2 (0)
Grade : 1+ Slight 2+ Moderate 3+ Marked 4+ Severe										
() : Number of dead animals.										

TABLE 14 INCIDENCES OF SELECTED LESIONS OF FEMALE RATS IN THE 2-WEEK FEED STUDY OF 2-AMINO-4-CHLOROPHENOL

Group		Control	1280 ppm	3200 ppm	8000 ppm	20000 ppm	50000 ppm
Number of examined animals		<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>
Organ	Grade of lesion						
Findings							
Thymus							
Atrophy	1+	0	0	0	0	0	5
Spleen							
Extramedullary hematopoiesis	1+	0	0	0	4	3	1
	2+	0	0	0	1	2	4
Engorgement of erythrocyte	1+	0	0	0	5	0	0
	2+	0	0	0	0	5	5
Esophagus							
Hyperplasia	1+	0	0	0	0	0	1
Stomach							
Ulcer: forestomach	1+	0	0	0	0	1	0
	2+	0	0	0	0	0	3
	3+	0	0	0	0	0	2
Hyperplasia: forestomach	1+	0	0	1	2	0	0
	2+	0	0	0	3	0	0
	3+	0	0	0	0	5	5
Urinary bladder							
Degeneration	1+	0	0	0	0	0	4
Grade : 1+ Slight 2+ Moderate 3+ Marked 4+ Severe							