2-アミノエタノールのマウスを用いた
経口投与による13週間毒性試験（混水試験）報告書

試験番号：0603

TABLES

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TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 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.
	<10>		<10>			<10>			<10>			<10>			<10>		
0	23.0 (10)	10 / 10	23.0 (10)	100	10 / 10	23.0 (10)	100	10 / 10	23.0 (10)	100	10 / 10	23.0 (10)	100	10 / 10	23.1 (10)	100	10 / 10
1	24.3 (10)	10 / 10	24.2 (10)	100	10 / 10	24.4 (10)	100	10 / 10	24.0 (9)	99	9 / 10	23.6 (10)	97	10 / 10	22.1 (10)	91	10 / 10
2	25.4 (10)	10 / 10	25.2 (10)	99	10 / 10	25.3 (10)	100	10 / 10	24.9 (9)	98	9 / 10	24.1 (10)	95	10 / 10	22.7 (10)	89	10 / 10
3	26.1 (10)	10 / 10	25.9 (10)	99	10 / 10	26.0 (10)	100	10 / 10	25.9 (9)	99	9 / 10	25.2 (10)	97	10 / 10	22.6 (10)	87	10 / 10
4	26.8 (10)	10 / 10	26.5 (10)	99	10 / 10	27.1 (10)	101	10 / 10	26.8 (9)	100	9 / 10	24.8 (10)	93	10 / 10	19.8 (9)	74	9 / 10
5	27.4 (10)	10 / 10	27.1 (10)	99	10 / 10	27.7 (10)	101	10 / 10	27.0 (9)	99	9 / 10	24.5 (10)	89	10 / 10	17.0 (5)	62	5 / 10
6	27.9 (10)	10 / 10	27.7 (10)	99	10 / 10	28.7 (10)	103	10 / 10	28.0 (9)	100	9 / 10	23.6 (10)	85	10 / 10	15.5 (2)	56	2 / 10
7	28.4 (10)	10 / 10	28.1 (10)	99	10 / 10	29.4 (10)	104	10 / 10	28.4 (9)	100	9 / 10	23.8 (9)	84	9 / 10	16.3 (1)	57	1 / 10
8	29.2 (10)	10 / 10	29.2 (10)	100	10 / 10	30.6 (10)	105	10 / 10	29.3 (9)	100	9 / 10	24.4 (8)	84	8 / 10	20.9 (1)	72	1 / 10
9	29.8 (10)	10 / 10	29.8 (10)	100	10 / 10	31.0 (10)	104	10 / 10	29.9 (9)	100	9 / 10	24.1 (8)	81	8 / 10	22.1 (1)	74	1 / 10
10	30.5 (10)	10 / 10	30.6 (10)	100	10 / 10	31.9 (10)	105	10 / 10	30.4 (9)	100	9 / 10	25.3 (7)	83	7 / 10	24.2 (1)	79	1 / 10
11	31.1 (10)	10 / 10	31.1 (10)	100	10 / 10	32.5 (10)	105	10 / 10	31.1 (9)	100	9 / 10	26.9 (6)	86	6 / 10	24.3 (1)	78	1 / 10
12	31.5 (10)	10 / 10	31.4 (10)	100	10 / 10	32.7 (10)	104	10 / 10	31.4 (9)	100	9 / 10	28.9 (5)	92	5 / 10	24.9 (1)	79	1 / 10
13	31.8 (10)	10 / 10	31.9 (10)	100	10 / 10	33.4 (10)	105	10 / 10	32.0 (9)	101	9 / 10	28.1 (5)	88	5 / 10	21.7 (1)	68	1 / 10

< > : 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 MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 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.
	<10>		<10>			<10>			<10>			<10>			<10>		
0	18.7 (10)	10 / 10	18.6 (10)	99	10 / 10	18.6 (10)	99	10 / 10	18.6 (10)	99	10 / 10	18.6 (10)	99	10 / 10	18.7 (10)	100	10 / 10
1	19.2 (10)	10 / 10	19.5 (10)	102	10 / 10	19.4 (10)	101	10 / 10	19.3 (10)	101	10 / 10	18.7 (10)	97	10 / 10	18.0 (10)	94	10 / 10
2	20.1 (10)	10 / 10	19.8 (10)	99	10 / 10	20.2 (10)	100	10 / 10	20.1 (10)	100	10 / 10	19.8 (10)	99	10 / 10	18.9 (10)	94	10 / 10
3	20.5 (10)	10 / 10	20.6 (10)	100	10 / 10	20.6 (10)	100	10 / 10	20.2 (10)	99	10 / 10	20.1 (10)	98	10 / 10	18.8 (10)	92	10 / 10
4	21.1 (10)	10 / 10	21.0 (10)	100	10 / 10	21.0 (10)	100	10 / 10	20.9 (10)	99	10 / 10	19.7 (10)	93	10 / 10	16.5 (10)	78	10 / 10
5	21.4 (10)	10 / 10	21.3 (10)	100	10 / 10	21.5 (10)	100	10 / 10	21.1 (10)	99	10 / 10	20.1 (10)	94	10 / 10	14.5 (10)	68	10 / 10
6	21.9 (10)	10 / 10	21.6 (10)	99	10 / 10	21.7 (10)	99	10 / 10	21.2 (10)	97	10 / 10	18.8 (10)	86	10 / 10	12.6 (9)	58	9 / 10
7	22.2 (10)	10 / 10	22.5 (10)	101	10 / 10	22.8 (10)	103	10 / 10	21.9 (10)	99	10 / 10	18.3 (10)	82	10 / 10	12.5 (2)	56	2 / 10
8	22.6 (10)	10 / 10	22.8 (10)	101	10 / 10	22.3 (10)	99	10 / 10	22.4 (10)	99	10 / 10	18.8 (10)	83	10 / 10	13.5 (1)	60	1 / 10
9	22.7 (10)	10 / 10	22.8 (10)	100	10 / 10	22.7 (10)	100	10 / 10	22.8 (10)	100	10 / 10	18.9 (10)	83	10 / 10	14.8 (1)	65	1 / 10
10	22.8 (10)	10 / 10	23.3 (10)	102	10 / 10	23.4 (10)	103	10 / 10	22.7 (10)	100	10 / 10	19.1 (10)	84	10 / 10	16.4 (1)	72	1 / 10
11	22.9 (10)	10 / 10	23.3 (10)	102	10 / 10	23.3 (10)	102	10 / 10	23.3 (10)	102	10 / 10	20.4 (9)	89	9 / 10	18.9 (1)	83	1 / 10
12	23.1 (10)	10 / 10	23.7 (10)	103	10 / 10	23.9 (10)	103	10 / 10	23.1 (10)	100	10 / 10	20.5 (9)	89	9 / 10	18.8 (1)	81	1 / 10
13	23.4 (10)	10 / 10	23.7 (10)	101	10 / 10	23.5 (10)	100	10 / 10	23.2 (10)	99	10 / 10	20.1 (8)	86	8 / 10	20.1 (1)	86	1 / 10

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

TABLE 3 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 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.
	<10>		<10>			<10>			<10>			<10>			<10>		
1	4.2 (10)	10 / 10	3.9 (10)	93	10 / 10	4.0 (10)	95	10 / 10	4.0 (9)	95	9 / 10	3.8 (10)	90	10 / 10	3.4 (10)	81	10 / 10
2	4.0 (10)	10 / 10	3.9 (10)	98	10 / 10	4.0 (10)	100	10 / 10	3.9 (9)	98	9 / 10	3.7 (10)	93	10 / 10	3.5 (10)	88	10 / 10
3	4.0 (10)	10 / 10	3.9 (10)	98	10 / 10	4.0 (10)	100	10 / 10	3.9 (9)	98	9 / 10	3.8 (10)	95	10 / 10	3.4 (10)	85	10 / 10
4	4.0 (10)	10 / 10	3.9 (10)	98	10 / 10	4.1 (10)	103	10 / 10	3.9 (9)	98	9 / 10	3.6 (10)	90	10 / 10	2.7 (9)	68	9 / 10
5	4.1 (10)	10 / 10	4.0 (10)	98	10 / 10	4.1 (10)	100	10 / 10	3.9 (9)	95	9 / 10	3.4 (10)	83	10 / 10	2.7 (5)	66	5 / 10
6	4.2 (10)	10 / 10	4.0 (10)	95	10 / 10	4.3 (10)	102	10 / 10	4.1 (9)	98	9 / 10	3.6 (10)	86	10 / 10	3.4 (2)	81	2 / 10
7	4.2 (10)	10 / 10	4.1 (10)	98	10 / 10	4.3 (10)	102	10 / 10	4.1 (9)	98	9 / 10	3.7 (9)	88	9 / 10	3.3 (1)	79	1 / 10
8	4.2 (10)	10 / 10	4.1 (10)	98	10 / 10	4.4 (10)	105	10 / 10	4.1 (9)	98	9 / 10	3.7 (8)	88	8 / 10	4.3 (1)	102	1 / 10
9	4.3 (10)	10 / 10	4.2 (10)	98	10 / 10	4.5 (10)	105	10 / 10	4.2 (9)	98	9 / 10	4.0 (5)	93	8 / 10	3.9 (1)	91	1 / 10
10	4.2 (10)	10 / 10	4.1 (10)	98	10 / 10	4.3 (10)	102	10 / 10	4.0 (9)	95	9 / 10	3.5 (7)	83	7 / 10	3.9 (1)	93	1 / 10
11	4.2 (10)	10 / 10	4.1 (10)	98	10 / 10	4.4 (10)	105	10 / 10	4.1 (9)	98	9 / 10	3.8 (6)	90	6 / 10	4.0 (1)	95	1 / 10
12	4.3 (10)	10 / 10	4.1 (10)	95	10 / 10	4.3 (10)	100	10 / 10	4.1 (9)	95	9 / 10	3.9 (5)	91	5 / 10	3.8 (1)	88	1 / 10
13	4.2 (10)	10 / 10	4.2 (10)	100	10 / 10	4.3 (10)	102	10 / 10	4.2 (9)	100	9 / 10	3.5 (5)	83	5 / 10	3.4 (1)	81	1 / 10

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

(Study No. 0603)

TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 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.
	<10>		<10>			<10>			<10>			<10>			<10>		
1	3.4 (10)	10 / 10	3.5 (10)	103	10 / 10	3.4 (10)	100	10 / 10	3.4 (10)	100	10 / 10	3.2 (10)	94	10 / 10	2.8 (10)	82	10 / 10
2	3.6 (10)	10 / 10	3.5 (10)	97	10 / 10	3.5 (10)	97	10 / 10	3.4 (10)	94	10 / 10	3.4 (10)	94	10 / 10	3.0 (10)	83	10 / 10
3	3.6 (10)	10 / 10	3.6 (10)	100	10 / 10	3.5 (9)	97	10 / 10	3.5 (10)	97	10 / 10	3.4 (10)	94	10 / 10	3.0 (10)	83	10 / 10
4	3.7 (10)	10 / 10	3.7 (10)	100	10 / 10	3.6 (10)	97	10 / 10	3.6 (10)	97	10 / 10	3.3 (10)	89	10 / 10	2.4 (10)	65	10 / 10
5	3.8 (10)	10 / 10	3.7 (10)	97	10 / 10	3.7 (10)	97	10 / 10	3.6 (10)	95	10 / 10	3.4 (10)	89	10 / 10	2.2 (10)	58	10 / 10
6	4.0 (10)	10 / 10	3.9 (10)	98	10 / 10	3.8 (10)	95	10 / 10	3.8 (10)	95	10 / 10	3.2 (10)	80	10 / 10	2.4 (9)	60	9 / 10
7	4.0 (10)	10 / 10	4.0 (10)	100	10 / 10	4.0 (10)	100	10 / 10	3.9 (10)	98	10 / 10	3.1 (10)	78	10 / 10	2.3 (2)	58	2 / 10
8	4.1 (10)	10 / 10	4.1 (10)	100	10 / 10	3.8 (10)	93	10 / 10	3.9 (10)	95	10 / 10	3.2 (10)	78	10 / 10	2.2 (1)	54	1 / 10
9	4.1 (10)	10 / 10	4.0 (10)	98	10 / 10	4.0 (10)	98	10 / 10	4.0 (10)	98	10 / 10	3.4 (6)	83	10 / 10	2.5 (1)	61	1 / 10
10	3.9 (10)	10 / 10	3.9 (10)	100	10 / 10	4.0 (10)	103	10 / 10	3.7 (10)	95	10 / 10	3.0 (10)	77	10 / 10	2.8 (1)	72	1 / 10
11	3.8 (10)	10 / 10	3.9 (10)	103	10 / 10	3.9 (10)	103	10 / 10	3.8 (10)	100	10 / 10	3.2 (9)	84	9 / 10	3.1 (1)	82	1 / 10
12	3.9 (10)	10 / 10	3.9 (10)	100	10 / 10	4.0 (10)	103	10 / 10	3.8 (10)	97	10 / 10	3.2 (9)	82	9 / 10	2.8 (1)	72	1 / 10
13	3.9 (10)	10 / 10	3.8 (10)	97	10 / 10	3.8 (10)	97	10 / 10	3.7 (10)	95	10 / 10	3.2 (8)	82	8 / 10	3.1 (1)	79	1 / 10

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

TABLE 5 WATER CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 ppm		
	Av. WC. <10>	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.
1	4.3 (10)	10 / 10	4.6 (10)	107	10 / 10	4.6 (10)	107	10 / 10	4.2 (9)	98	9 / 10	3.3 (10)	77	10 / 10	2.5 (10)	58	10 / 10
2	4.4 (10)	10 / 10	4.4 (10)	100	10 / 10	4.4 (10)	100	10 / 10	4.1 (9)	93	9 / 10	3.5 (10)	80	10 / 10	2.6 (10)	59	10 / 10
3	4.5 (10)	10 / 10	4.1 (10)	91	10 / 10	4.4 (10)	98	10 / 10	3.9 (9)	87	9 / 10	3.6 (10)	80	10 / 10	2.4 (10)	53	10 / 10
4	4.3 (10)	10 / 10	3.9 (10)	91	10 / 10	4.2 (10)	98	10 / 10	4.1 (9)	95	9 / 10	3.4 (10)	79	10 / 10	1.5 (9)	35	9 / 10
5	4.4 (10)	10 / 10	3.8 (10)	86	10 / 10	4.1 (10)	93	10 / 10	3.7 (9)	84	9 / 10	2.8 (10)	64	10 / 10	1.0 (5)	23	5 / 10
6	4.6 (10)	10 / 10	3.9 (10)	85	10 / 10	4.3 (10)	93	10 / 10	4.2 (9)	91	9 / 10	2.8 (10)	61	10 / 10	1.2 (2)	26	2 / 10
7	4.5 (10)	10 / 10	4.0 (10)	89	10 / 10	4.4 (10)	98	10 / 10	3.8 (9)	84	9 / 10	2.9 (9)	64	9 / 10	1.5 (1)	33	1 / 10
8	4.3 (10)	10 / 10	3.8 (10)	88	10 / 10	4.2 (10)	98	10 / 10	3.7 (9)	86	9 / 10	2.8 (8)	65	8 / 10	2.1 (1)	49	1 / 10
9	4.3 (10)	10 / 10	3.8 (10)	88	10 / 10	4.3 (10)	100	10 / 10	3.7 (9)	86	9 / 10	3.0 (8)	70	8 / 10	2.0 (1)	47	1 / 10
10	4.1 (10)	10 / 10	3.7 (10)	90	10 / 10	4.3 (10)	105	10 / 10	3.7 (9)	90	9 / 10	3.0 (7)	73	7 / 10	2.3 (1)	56	1 / 10
11	4.1 (10)	10 / 10	3.6 (10)	88	10 / 10	4.1 (10)	100	10 / 10	3.5 (9)	85	9 / 10	3.3 (6)	80	6 / 10	1.4 (1)	34	1 / 10
12	4.1 (10)	10 / 10	3.7 (10)	90	10 / 10	4.0 (10)	98	10 / 10	3.6 (9)	88	9 / 10	3.3 (5)	80	5 / 10	2.2 (1)	54	1 / 10
13	4.1 (10)	10 / 10	3.6 (10)	88	10 / 10	4.0 (10)	98	10 / 10	3.7 (9)	90	9 / 10	2.7 (5)	66	5 / 10	1.5 (1)	37	1 / 10

< > : No. of effective animals, ( ) : No. of measured animals, Av. WC. : Averaged water consumption (Unit : g).

TABLE 6 WATER CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Week on Study	Control		1250 ppm			2500 ppm			5000 ppm			10000 ppm			20000 ppm		
	Av. WC. <10>	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.	Av. WC. <10>	% of cont.	No. of Surviv.
1	4.4 (10)	10 / 10	4.3 (10)	98	10 / 10	4.1 (10)	93	10 / 10	3.9 (10)	89	10 / 10	3.6 (10)	82	10 / 10	2.6 (10)	59	10 / 10
2	4.6 (10)	10 / 10	4.4 (10)	96	10 / 10	4.2 (10)	91	10 / 10	4.0 (10)	87	10 / 10	3.9 (10)	85	10 / 10	2.8 (10)	61	10 / 10
3	4.4 (10)	10 / 10	4.1 (10)	93	10 / 10	4.0 (10)	91	10 / 10	3.8 (10)	86	10 / 10	3.7 (10)	84	10 / 10	2.5 (10)	57	10 / 10
4	4.8 (10)	10 / 10	4.1 (10)	85	10 / 10	4.0 (10)	83	10 / 10	3.8 (10)	79	10 / 10	3.1 (10)	65	10 / 10	1.6 (10)	33	10 / 10
5	4.4 (10)	10 / 10	4.1 (10)	93	10 / 10	3.9 (10)	89	10 / 10	3.7 (10)	84	10 / 10	3.2 (10)	73	10 / 10	1.3 (10)	30	10 / 10
6	4.7 (10)	10 / 10	4.3 (10)	91	10 / 10	4.2 (10)	89	10 / 10	3.9 (10)	83	10 / 10	2.6 (10)	55	10 / 10	1.2 (9)	26	9 / 10
7	4.5 (10)	10 / 10	4.3 (10)	96	10 / 10	4.1 (10)	91	10 / 10	4.2 (10)	93	10 / 10	2.3 (10)	51	10 / 10	1.3 (2)	29	2 / 10
8	4.6 (10)	10 / 10	4.2 (10)	91	10 / 10	4.1 (10)	89	10 / 10	4.5 (10)	98	10 / 10	2.4 (10)	52	10 / 10	1.4 (1)	30	1 / 10
9	4.5 (10)	10 / 10	4.3 (10)	96	10 / 10	4.1 (10)	91	10 / 10	4.0 (10)	89	10 / 10	2.5 (10)	56	10 / 10	1.5 (1)	33	1 / 10
10	4.5 (10)	10 / 10	4.3 (10)	96	10 / 10	4.3 (10)	96	10 / 10	3.8 (10)	84	10 / 10	2.7 (10)	60	10 / 10	1.5 (1)	33	1 / 10
11	4.5 (10)	10 / 10	4.2 (10)	93	10 / 10	4.0 (10)	89	10 / 10	4.0 (10)	89	10 / 10	2.9 (9)	64	9 / 10	2.0 (1)	44	1 / 10
12	4.5 (10)	10 / 10	4.3 (10)	96	10 / 10	4.2 (10)	93	10 / 10	4.3 (10)	96	10 / 10	3.3 (9)	73	9 / 10	1.6 (1)	36	1 / 10
13	4.4 (10)	10 / 10	4.3 (10)	98	10 / 10	4.0 (10)	91	10 / 10	4.0 (10)	91	10 / 10	3.0 (8)	68	8 / 10	2.3 (1)	52	1 / 10

< > : No. of effective animals, ( ) : No. of measured animals, Av. WC. : Averaged water consumption (Unit : g).

(Study No. 0603)

TABLE 7　HEMATOLOGY OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name	Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animals	10	10	10	9	8	1
RED BLOOD CELL ($10^6/\mu$ L)	10.70 ± 0.37	10.64 ± 0.31	10.60 ± 0.28	10.56 ± 0.24	9.88 ± 0.84 **	9.84
HEMOGLOBIN (g/dL)	16.2 ± 0.4	16.1 ± 0.4	16.1 ± 0.5	15.9 ± 0.3	14.4 ± 1.6 **	14.0
HEMATOCRIT (%)	48.2 ± 1.5	47.9 ± 1.5	47.8 ± 1.2	47.4 ± 1.1	43.7 ± 4.1 **	45.0
MCH (pg)	15.1 ± 0.2	15.1 ± 0.2	15.2 ± 0.2	15.1 ± 0.2	14.6 ± 0.7 *	14.3

Mean ± S.D.

Significant difference: * : $p \leqq 0.05$ ** : $p \leqq 0.01$ Test of Dunnett

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 8　BIOCHEMISTRY OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name	Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animals	10	10	10	9	5	1
GLUCOSE (mg/dL)	207 ± 31	211 ± 28	189 ± 30	205 ± 17	220 ± 36	171
TRIGLYCERIDE (mg/dL)	27 ± 7	32 ± 13	31 ± 10	32 ± 12	19 ± 4	5
AST (IU/L)	44 ± 11	45 ± 7	45 ± 6	44 ± 6	52 ± 17	171
ALT (IU/L)	15 ± 2	16 ± 1	18 ± 4	17 ± 2	17 ± 4	78
LDH (IU/L)	178 ± 68	165 ± 9	175 ± 23	167 ± 14	198 ± 85	392
CK (IU/L)	45 ± 14	49 ± 15	50 ± 12	50 ± 13	72 ± 53	241
UREA NITOROGEN (mg/dL)	23.5 ± 3.8	24.9 ± 3.4	23.3 ± 3.2	25.6 ± 4.2	41.4 ± 25.6	50.3

Mean ± S.D.

Significant difference:　* : p≦0.05　** : p≦0.01　Test of Dunnett

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 9　BIOCHEMISTRY OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name	Control	1250 ppm	2500 ppm		5000 ppm		10000 ppm		20000 ppm a)
No. of examined animals	10	10	10		10		8		1
GLUCOSE (mg/dL)	187 ± 25	168 ± 23	148 ± 20	*	144 ± 36	**	150 ± 37	*	150
T-CHOLESTEROL (mg/dL)	75 ± 10	67 ± 11	60 ± 8	*	58 ± 11	**	81 ± 16		78
PHOSPHOLIPID (mg/dL)	144 ± 18	130 ± 21	121 ± 21		115 ± 23	*	143 ± 29		169
AST (IU/L)	54 ± 8	55 ± 11	75 ± 33		70 ± 29		79 ± 21	*	49
LDH (IU/L)	208 ± 37	203 ± 39	266 ± 108		248 ± 110		432 ± 317	*	367
CK (IU/L)	62 ± 28	62 ± 22	98 ± 55		83 ± 42		189 ± 183	*	65
UREA NITOROGEN (mg/dL)	22.1 ± 2.4	21.5 ± 1.9	22.8 ± 4.2		22.9 ± 5.7		51.1 ± 31.2	**	34.2
SODIUM (mEq/L)	151 ± 2	151 ± 1	152 ± 1		152 ± 1		154 ± 2	**	151
INORGANIC PHOSPHORUS (mg/dL)	5.7 ± 0.7	5.7 ± 1.2	6.0 ± 1.0		6.7 ± 1.0		7.4 ± 1.3	**	9.5

Mean ± S.D.

Significant difference:　* : p≦0.05　** : p≦0.01　Test of Dunnett

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 10 URINALYSIS OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name		Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animals		10	10	10	9	5	1
	Grade						
pH	5.0	0	0	0	0	0	0
	6.0	0	0	0	0	1	0
	6.5	0	0	0	0	0	0
	7.0	0	0	0	0	0	0
	7.5	0	0	1	0	2	0
	8.0	7	2	2	5	1	1
	8.5	3	8	7	4	1	0
	Chi square test		*				
Protein	−	0	0	0	0	0	0
	±	0	0	1	1	0	0
	+	9	9	8	7	1	0
	2+	1	1	1	1	4	1
	3+	0	0	0	0	0	0
	4+	0	0	0	0	0	0
	Chi square test					**	
Occult blood	−	10	10	10	9	5	0
	±	0	0	0	0	0	1
	+	0	0	0	0	0	0
	2+	0	0	0	0	0	0
	3+	0	0	0	0	0	0
	Chi square test						

Significant difference: * : p≦0.05 ** : p≦0.01

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 11 URINALYSIS OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name		Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animals		10	10	10	10	8	1
	Grade						
Occult blood	−	10	10	10	10	5	1
	±	0	0	0	0	3	0
	+	0	0	0	0	0	0
	2+	0	0	0	0	0	0
	3+	0	0	0	0	0	0
	Chi square test					*	

Significant difference: * : p≦0.05 ** : p≦0.01

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 12 ORGAN WEIGHTS OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name	Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animal	10	10	10	9	5	1
Body weight (g)	29.3 ± 2.6	29.3 ± 1.6	30.7 ± 2.1	29.0 ± 2.5	26.0 ± 2.8 *	19.1
Thymus (g)	0.032 ± 0.007	0.035 ± 0.004	0.037 ± 0.006	0.033 ± 0.006	0.027 ± 0.010	0.010
Thymus (%)	0.110 ± 0.029	0.117 ± 0.011	0.121 ± 0.016	0.114 ± 0.013	0.101 ± 0.031	0.052
Adrenals (g)	0.012 ± 0.002	0.011 ± 0.002	0.013 ± 0.002	0.012 ± 0.001	0.012 ± 0.001	0.011
Adrenals (%)	0.041 ± 0.006	0.038 ± 0.007	0.043 ± 0.009	0.042 ± 0.005	0.047 ± 0.008	0.058
Testes (g)	0.224 ± 0.028	0.214 ± 0.029	0.228 ± 0.021	0.227 ± 0.035	0.213 ± 0.027	0.163
Testes (%)	0.770 ± 0.138	0.729 ± 0.095	0.745 ± 0.089	0.785 ± 0.106	0.827 ± 0.120	0.853
Heart (g)	0.150 ± 0.010	0.150 ± 0.011	0.155 ± 0.012	0.151 ± 0.010	0.141 ± 0.014	0.125
Heart (%)	0.513 ± 0.040	0.512 ± 0.029	0.507 ± 0.037	0.523 ± 0.047	0.545 ± 0.034	0.654
Lungs (g)	0.154 ± 0.008	0.145 ± 0.008	0.148 ± 0.009	0.143 ± 0.007	0.144 ± 0.011	0.127
Lungs (%)	0.527 ± 0.040	0.494 ± 0.034	0.483 ± 0.050	0.496 ± 0.041	0.556 ± 0.046	0.665
Kidneys (g)	0.432 ± 0.030	0.425 ± 0.016	0.439 ± 0.025	0.438 ± 0.029	0.719 ± 0.406 *	1.270
Kidneys (%)	1.478 ± 0.078	1.453 ± 0.065	1.432 ± 0.111	1.514 ± 0.097	2.793 ± 1.575 *	6.649
Spleen (g)	0.051 ± 0.005	0.053 ± 0.007	0.055 ± 0.006	0.050 ± 0.005	0.054 ± 0.014	0.038
Spleen (%)	0.173 ± 0.013	0.181 ± 0.024	0.179 ± 0.020	0.173 ± 0.010	0.208 ± 0.054	0.199
Liver (g)	1.120 ± 0.064	1.111 ± 0.043	1.154 ± 0.076	1.129 ± 0.067	0.992 ± 0.157	0.663
Liver (%)	3.828 ± 0.162	3.792 ± 0.126	3.766 ± 0.284	3.907 ± 0.241	3.801 ± 0.268	3.471
Brain (g)	0.445 ± 0.019	0.450 ± 0.015	0.450 ± 0.015	0.447 ± 0.012	0.443 ± 0.009	0.401
Brain (%)	1.529 ± 0.150	1.539 ± 0.099	1.471 ± 0.101	1.551 ± 0.138	1.719 ± 0.178 *	2.099

Mean ± S.D.

Significant difference: * : $p \leqq 0.05$ ** : $p \leqq 0.01$ Test of Dunnett

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 13 ORGAN WEIGHTS OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL

Group Name	Control	1250 ppm	2500 ppm	5000 ppm	10000 ppm	20000 ppm a)
No. of examined animal	10	10	10	10	8	1
Body weight (g)	20.6 ± 0.9	21.0 ± 0.6	20.6 ± 1.1	20.4 ± 0.9	18.5 ± 2.2	19.4
Thymus (g)	0.041 ± 0.006	0.039 ± 0.003	0.037 ± 0.003	0.038 ± 0.005	0.030 ± 0.017	0.050
Thymus (%)	0.197 ± 0.024	0.186 ± 0.016	0.179 ± 0.015	0.188 ± 0.022	0.155 ± 0.078	0.258
Adrenals (g)	0.015 ± 0.001	0.015 ± 0.002	0.015 ± 0.001	0.015 ± 0.002	0.014 ± 0.001	0.012
Adrenals (%)	0.073 ± 0.008	0.070 ± 0.008	0.070 ± 0.004	0.073 ± 0.008	0.076 ± 0.010	0.062
Ovaries (g)	0.027 ± 0.002	0.027 ± 0.003	0.026 ± 0.003	0.025 ± 0.002	0.024 ± 0.007	0.017
Ovaries (%)	0.129 ± 0.009	0.128 ± 0.012	0.124 ± 0.015	0.122 ± 0.008	0.127 ± 0.025	0.088
Heart (g)	0.117 ± 0.006	0.121 ± 0.005	0.117 ± 0.006	0.119 ± 0.010	0.108 ± 0.013	0.100
Heart (%)	0.570 ± 0.036	0.578 ± 0.019	0.571 ± 0.047	0.587 ± 0.060	0.582 ± 0.021	0.515
Lungs (g)	0.141 ± 0.009	0.136 ± 0.008	0.139 ± 0.005	0.132 ± 0.008	0.129 ± 0.013 *	0.115
Lungs (%)	0.686 ± 0.035	0.651 ± 0.040	0.677 ± 0.027	0.650 ± 0.051	0.698 ± 0.056	0.593
Kidneys (g)	0.289 ± 0.015	0.297 ± 0.014	0.295 ± 0.010	0.293 ± 0.013	0.561 ± 0.153 **	0.918
Kidneys (%)	1.408 ± 0.063	1.419 ± 0.075	1.432 ± 0.083	1.436 ± 0.058	3.079 ± 0.983 **	4.732
Spleen (g)	0.055 ± 0.005	0.053 ± 0.005	0.052 ± 0.005	0.052 ± 0.007	0.051 ± 0.014	0.059
Spleen (%)	0.265 ± 0.021	0.250 ± 0.021	0.252 ± 0.021	0.256 ± 0.030	0.274 ± 0.050	0.304
Liver (g)	0.852 ± 0.053	0.847 ± 0.040	0.859 ± 0.043	0.827 ± 0.045	0.753 ± 0.126	0.773
Liver (%)	4.143 ± 0.169	4.041 ± 0.172	4.169 ± 0.172	4.057 ± 0.109	4.058 ± 0.398	3.985
Brain (g)	0.456 ± 0.013	0.458 ± 0.018	0.459 ± 0.009	0.450 ± 0.013	0.434 ± 0.021 *	0.413
Brain (%)	2.220 ± 0.101	2.184 ± 0.097	2.231 ± 0.107	2.208 ± 0.098	2.362 ± 0.184	2.129

Mean ± S.D.

Significant difference: * : $p \leqq 0.05$ ** : $p \leqq 0.01$ Test of Dunnett

a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 14 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL (DEAD AND MORIBUND ANIMALS)

Group Name	Control				1250 ppm				2500 ppm				5000 ppm				10000 ppm				20000 ppm			
Number of examined animals	0				0				0				1				5				9			
Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
bone marrow													<1>				<5>				<9>			
congestion			–				–				–		1	0	0	0	2	0	0	0	9	0	0	0
lymph node													<1>				<5>				<9>			
atrophy			–				–				–		0	1	0	0	0	4	1	0	3	6	0	0
thymus													<1>				<5>				<9>			
atrophy			–				–				–		0	0	1	0	0	0	5	0	0	0	9	0
spleen													<1>				<5>				<9>			
atrophy			–				–				–		0	1	0	0	0	5	0	0	0	9	0	0
kidney													<1>				<5>				<9>			
inflammatory polyp			–				–				–		0	0	0	0	3	2	0	0	1	1	0	0
hydronephrosis			–				–				–		1	0	0	0	0	5	0	0	7	2	0	0

Grade 1: Slight 2 : Moderate 3 : Marked 4 :Severe
< > : Number of animals examined at the site
— : All animals survived at the terminal necropsy

TABLE 15 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL (SACRIFICED ANIMALS)

Group Name	Control				1250 ppm				2500 ppm				5000 ppm				10000 ppm				20000 ppm a)			
Number of examined animals	10				10				10				9				5				1			
Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
thymus	<10>				<10>				<10>				<9>				<5>				<1>			
atrophy	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
kidney	<10>				<10>				<10>				<9>				<5>				<1>			
inflammatory polyp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0 *	1	0	0	0
vacuolization of proximal tubule	4	4	0	0	9	1	0	0	7	0	0	0	5	1	0	0	0	0	0	0 *	0	0	0	0
hydronephrosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0 *	0	0	1	0

Grade 1: Slight 2 : Moderate 3 : Marked 4 :Severe
< > : Number of animals examined at the site
Significant difference: * : p≦ 0.05 ** : p≦ 0.01 Test of Chi Square
a): The statistical analysis was not applied, because number of data was less than 3.

TABLE 16 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL (DEAD AND MORIBUND ANIMALS)

Group Name	Control				1250 ppm				2500 ppm				5000 ppm				10000 ppm				20000 ppm			
Number of examined animals	0				0				0				0				2				9			
Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
bone marrow																	<2>				<9>			
congestion			−				−				−				−		0	0	0	0	8	0	0	0
lymph node																	<2>				<9>			
atrophy			−				−				−				−		1	1	0	0	0	8	1	0
thymus																	<2>				<9>			
atrophy			−				−				−				−		0	0	2	0	0	0	9	0
spleen																	<2>				<8>			
atrophy			−				−				−				−		1	1	0	0	0	7	1	0
kidney																	<2>				<9>			
inflammatory polyp			−				−				−				−		0	1	0	0	1	1	0	0
hydronephrosis			−				−				−				−		0	1	1	0	4	3	0	0

Grade 1: Slight 2 : Moderate 3 : Marked 4 :Severe
< > : Number of animals examined at the site
— : All animals survived at the terminal necropsy

TABLE 17 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE 13-WEEK DRINKING WATER STUDY OF 2-AMINOETHANOL (SACRIFICED ANIMALS)

Group Name	Control				1250 ppm				2500 ppm				5000 ppm				10000 ppm				20000 ppm a)			
Number of examined animals	10				10				10				10				8				1			
Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
thymus	<10>				<10>				<10>				<10>				<8>				<1>			
atrophy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
spleen	<10>				<10>				<10>				<10>				<8>				<1>			
atrophy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
kidney	<10>				<10>				<10>				<10>				<8>				<1>			
inflammatory polyp	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0 *	0	0	0	0
hydronephrosis	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0 **	0	0	1	0

Grade 1: Slight 2 : Moderate 3 : Marked 4 :Severe
< > : Number of animals examined at the site
Significant difference: * : p≦ 0.05 ** : p≦ 0.01 Test of Chi Square
a): The statistical analysis was not applied, because number of data was less than 3.