

表5 血液学的検査(雄 続き)

Items of Examination		Male				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples	2d	5	5	5	5	5
No.of samples	7d	5	5	5	5	5
No.of samples	36d	5	5	5	5	5
WBC ( $10^3/\mu$ L)	2d	6.62 $\pm$ 0.98	7.36 $\pm$ 2.51	7.12 $\pm$ 1.49	6.65 $\pm$ 2.46	7.06 $\pm$ 2.39
	7d	8.06 $\pm$ 2.59	6.94 $\pm$ 0.96	5.98 $\pm$ 1.90	7.98 $\pm$ 2.41	9.60 $\pm$ 3.21
	36d	11.7 $\pm$ 3.5	8.62 $\pm$ 1.26	7.27 $\pm$ 3.33	8.27 $\pm$ 3.66	3.96 $\pm$ 1.60 **
Differential	NEUTRO	16.6 $\pm$ 3.4	15.6 $\pm$ 4.2	19.8 $\pm$ 7.4	15.2 $\pm$ 4.7	15.0 $\pm$ 2.1
WBC (%)2d	LYMPHO	78.5 $\pm$ 3.8	77.8 $\pm$ 6.0	74.4 $\pm$ 7.4	79.1 $\pm$ 6.5	79.7 $\pm$ 4.2
	MONO	2.6 $\pm$ 0.8	3.8 $\pm$ 1.5	3.7 $\pm$ 0.8	3.3 $\pm$ 1.5	3.6 $\pm$ 1.6
	EOSINO	1.2 $\pm$ 0.3	1.2 $\pm$ 0.4	1.0 $\pm$ 0.4	0.8 $\pm$ 0.2	0.5 $\pm$ 0.3 *
	BASO	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.1 $\pm$ 0.1	0.2 $\pm$ 0.1
	LUC	0.9 $\pm$ 0.5	1.5 $\pm$ 0.7	1.0 $\pm$ 0.8	1.4 $\pm$ 0.7	1.0 $\pm$ 0.4
Differential	NEUTRO	13.3 $\pm$ 4.4	16.7 $\pm$ 3.4	15.5 $\pm$ 2.5	15.6 $\pm$ 2.1	17.4 $\pm$ 8.8
WBC (%)7d	LYMPHO	81.3 $\pm$ 4.2	78.4 $\pm$ 4.4	81.0 $\pm$ 2.7	80.6 $\pm$ 2.5	79.0 $\pm$ 8.8
	MONO	3.3 $\pm$ 0.8	3.0 $\pm$ 0.7	2.4 $\pm$ 0.4	2.5 $\pm$ 0.5	2.3 $\pm$ 0.6
	EOSINO	1.0 $\pm$ 0.3	0.9 $\pm$ 0.3	0.4 $\pm$ 0.2 **	0.2 $\pm$ 0.1 **	0.3 $\pm$ 0.1
	BASO	0.1 $\pm$ 0.1	0.1 $\pm$ 0.0	0.2 $\pm$ 0.1	0.1 $\pm$ 0.1	0.2 $\pm$ 0.1
	LUC	1.0 $\pm$ 0.7	0.9 $\pm$ 0.5	0.6 $\pm$ 0.1	1.0 $\pm$ 0.4	0.9 $\pm$ 0.1
Differential	NEUTRO	14.1 $\pm$ 2.8	21.0 $\pm$ 4.5	14.8 $\pm$ 4.5	14.5 $\pm$ 4.2	18.3 $\pm$ 8.7
WBC (%)36d	LYMPHO	81.5 $\pm$ 2.7	73.8 $\pm$ 4.0	81.5 $\pm$ 5.1	81.5 $\pm$ 4.6	78.6 $\pm$ 8.9
	MONO	2.0 $\pm$ 0.7	2.8 $\pm$ 1.2	1.9 $\pm$ 0.7	2.3 $\pm$ 0.8	1.8 $\pm$ 0.7
	EOSINO	1.3 $\pm$ 0.2	1.4 $\pm$ 0.5	0.6 $\pm$ 0.3 *	0.6 $\pm$ 0.6 *	0.5 $\pm$ 0.2 *
	BASO	0.3 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.1 $\pm$ 0.1
	LUC	0.9 $\pm$ 0.2	0.8 $\pm$ 0.3	1.0 $\pm$ 0.5	0.8 $\pm$ 0.4	0.7 $\pm$ 0.4
Prothrombin Time(sec)	36d	15.7 $\pm$ 0.67	15.4 $\pm$ 0.33	15.4 $\pm$ 0.5	15.5 $\pm$ 0.4	16.3 $\pm$ 1.0 a)
APTT (sec)	36d	27.3 $\pm$ 16.2	21.3 $\pm$ 0.8	21.5 $\pm$ 4.8	21.2 $\pm$ 1.2	19.0 $\pm$ 3.1 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of summerized animals is 4. Clotting time of one animal is scale-out of the equipment range.

表6 血液学的検査(雌)

Items of Examination	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	2
Red blood cell( $10^6/\mu$ L) 2d	6.45 $\pm$ 0.38	6.42 $\pm$ 0.35	6.54 $\pm$ 0.49	6.59 $\pm$ 0.41	6.70 $\pm$ 0.30
7d	6.74 $\pm$ 0.36	6.95 $\pm$ 0.26	6.82 $\pm$ 0.42	7.06 $\pm$ 0.49	7.72 $\pm$ 0.57 **
36d	8.00 $\pm$ 0.51	7.66 $\pm$ 0.30	7.46 $\pm$ 0.29	6.95 $\pm$ 0.67 **	5.97 $\pm$ 0.31 a)
Hemoglobin (g/dL)2d	12.9 $\pm$ 0.8	13.4 $\pm$ 0.4	13.4 $\pm$ 0.4	13.5 $\pm$ 0.3	13.2 $\pm$ 0.6
7d	13.6 $\pm$ 0.5	13.9 $\pm$ 0.5	13.5 $\pm$ 0.9	13.7 $\pm$ 1.0	15.2 $\pm$ 1.2
36d	14.6 $\pm$ 0.7	14.0 $\pm$ 0.5	13.3 $\pm$ 0.3 *	12.3 $\pm$ 1.3 **	10.5 $\pm$ 0.8 a)
Hematocrit (%)2d	37.0 $\pm$ 1.7	38.4 $\pm$ 1.1	38.3 $\pm$ 3.2	38.6 $\pm$ 2.1	38.5 $\pm$ 1.3
7d	39.0 $\pm$ 2.1	40.3 $\pm$ 1.3	39.2 $\pm$ 2.2	39.7 $\pm$ 2.4	43.8 $\pm$ 3.7
36d	41.2 $\pm$ 1.9	39.9 $\pm$ 1.5	37.5 $\pm$ 0.6 **	35.3 $\pm$ 3.8 **	30.9 $\pm$ 1.8 a)
MCV (fL)2d	57.4 $\pm$ 0.9	59.8 $\pm$ 1.8	58.5 $\pm$ 1.1	58.6 $\pm$ 1.5	57.4 $\pm$ 1.1
7d	57.9 $\pm$ 1.6	58.0 $\pm$ 0.6	57.5 $\pm$ 1.3	56.3 $\pm$ 2.2	56.6 $\pm$ 1.4
36d	51.6 $\pm$ 1.4	52.2 $\pm$ 1.6	50.3 $\pm$ 1.5	50.7 $\pm$ 0.8	51.8 $\pm$ 0.2 a)
MCH (pg)2d	20.0 $\pm$ 0.5	20.8 $\pm$ 0.8	20.5 $\pm$ 1.1	20.5 $\pm$ 0.8	19.8 $\pm$ 0.4
7d	20.2 $\pm$ 0.4	19.9 $\pm$ 0.2	19.8 $\pm$ 0.5	19.5 $\pm$ 0.8	19.7 $\pm$ 0.7
36d	18.3 $\pm$ 0.5	18.4 $\pm$ 0.6	17.8 $\pm$ 0.5	17.7 $\pm$ 0.4	17.6 $\pm$ 0.4 a)
MCHC (g/dL)2d	34.8 $\pm$ 0.7	34.9 $\pm$ 0.7	35.1 $\pm$ 2.2	35.1 $\pm$ 1.3	34.4 $\pm$ 0.7
7d	34.8 $\pm$ 0.7	34.4 $\pm$ 0.5	34.5 $\pm$ 0.7	34.6 $\pm$ 0.4	34.8 $\pm$ 0.6
36d	35.4 $\pm$ 0.2	35.3 $\pm$ 1.3	35.5 $\pm$ 0.3	34.8 $\pm$ 0.4	34.0 $\pm$ 0.6 a)
Platlet ( $10^3/\mu$ L)2d	1440 $\pm$ 114	1349 $\pm$ 146	1324 $\pm$ 210	1182 $\pm$ 169	1262 $\pm$ 154
7d	1357 $\pm$ 85	1311 $\pm$ 86	1144 $\pm$ 131 *	749 $\pm$ 156 **	762 $\pm$ 149 **
36d	1148 $\pm$ 102	1112 $\pm$ 158	998 $\pm$ 149	821 $\pm$ 152 **	354 $\pm$ 192 a)
Reticulocyte(%)2d	2.44 $\pm$ 0.43	2.44 $\pm$ 0.27	2.56 $\pm$ 0.15	2.70 $\pm$ 0.55	3.78 $\pm$ 0.55 **
7d	4.16 $\pm$ 1.11	3.92 $\pm$ 1.15	2.94 $\pm$ 0.55	2.38 $\pm$ 0.19 *	2.76 $\pm$ 1.07
36d	2.52 $\pm$ 0.58	2.76 $\pm$ 0.51	2.80 $\pm$ 0.29	4.54 $\pm$ 1.61	5.30 $\pm$ 0.71 a)

( Significant difference on the test of Dunnett, \*:  $p < 0.05$ , \*\*:  $p < 0.01$  )

a) : Number of animals is 2. Statistical analysis was not applied.

表6 血液学的検査(雌 続き)

Items of Examination		Female				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples	2d	5	5	5	5	5
No.of samples	7d	5	5	5	5	5
No.of samples	36d	5	5	5	5	2
WBC ( $10^3/\mu$ L)2d		3.83 $\pm$ 0.92	5.00 $\pm$ 1.17	6.10 $\pm$ 1.93	6.25 $\pm$ 1.11	4.99 $\pm$ 0.99
	7d	4.52 $\pm$ 1.03	6.57 $\pm$ 1.36	5.82 $\pm$ 1.34	9.52 $\pm$ 3.38 *	9.63 $\pm$ 4.38 *
	36d	7.87 $\pm$ 0.65	5.65 $\pm$ 1.78	4.64 $\pm$ 1.82 *	5.18 $\pm$ 1.53 *	4.14 $\pm$ 0.10 a)
Differential	NEUTRO	20.3 $\pm$ 5.0	15.1 $\pm$ 4.0	16.9 $\pm$ 2.2	18.1 $\pm$ 7.1	17.1 $\pm$ 1.7
WBC (%)2d	LYMPHO	72.9 $\pm$ 4.4	80.0 $\pm$ 6.1	74.8 $\pm$ 3.5	75.9 $\pm$ 7.1	76.2 $\pm$ 2.7
	MONO	3.2 $\pm$ 0.8	2.8 $\pm$ 1.3	4.4 $\pm$ 0.7	3.4 $\pm$ 0.3	4.2 $\pm$ 1.0
	EOSINO	2.5 $\pm$ 1.0	1.2 $\pm$ 0.5 *	1.8 $\pm$ 0.4	1.2 $\pm$ 0.5 **	1.2 $\pm$ 0.2 **
	BASO	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.2 $\pm$ 0.1	0.2 $\pm$ 0.0	0.2 $\pm$ 0.2
	LUC	1.0 $\pm$ 0.5	0.9 $\pm$ 0.6	2.0 $\pm$ 1.5	1.2 $\pm$ 1.0	1.1 $\pm$ 0.6
Differential	NEUTRO	14.0 $\pm$ 3.7	14.9 $\pm$ 1.9	13.5 $\pm$ 2.7	12.2 $\pm$ 1.9	14.7 $\pm$ 4.5
WBC (%)7d	LYMPHO	81.7 $\pm$ 4.5	80.1 $\pm$ 2.9	82.2 $\pm$ 2.8	83.6 $\pm$ 2.4	81.6 $\pm$ 4.4
	MONO	1.9 $\pm$ 0.7	2.7 $\pm$ 0.9	2.3 $\pm$ 0.6	2.6 $\pm$ 0.5	2.4 $\pm$ 0.5
	EOSINO	1.5 $\pm$ 0.4	1.2 $\pm$ 0.5	0.9 $\pm$ 0.4	0.5 $\pm$ 0.3 **	0.3 $\pm$ 0.1 **
	BASO	0.2 $\pm$ 0.2	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1
	LUC	0.6 $\pm$ 0.1	0.9 $\pm$ 0.3	1.0 $\pm$ 0.4	1.0 $\pm$ 0.2	0.8 $\pm$ 0.1
Differential	NEUTRO	19.9 $\pm$ 3.5	18.4 $\pm$ 5.1	19.0 $\pm$ 4.0	16.1 $\pm$ 4.1	19.1 $\pm$ 0.6 a)
WBC (%)36d	LYMPHO	74.8 $\pm$ 4.4	76.7 $\pm$ 6.2	76.2 $\pm$ 4.2	80.3 $\pm$ 4.7	78.3 $\pm$ 1.3 a)
	MONO	2.3 $\pm$ 0.2	2.6 $\pm$ 0.9	2.6 $\pm$ 0.4	2.4 $\pm$ 0.7	1.6 $\pm$ 0.5 a)
	EOSINO	2.3 $\pm$ 1.0	1.6 $\pm$ 0.7	1.4 $\pm$ 0.2	0.6 $\pm$ 0.1 **	0.4 $\pm$ 0.0 a)
	BASO	0.2 $\pm$ 0.0	0.2 $\pm$ 0.1	0.1 $\pm$ 0.1	0.1 $\pm$ 0.1	0.2 $\pm$ 0.1 a)
	LUC	0.5 $\pm$ 0.1	0.6 $\pm$ 0.2	0.6 $\pm$ 0.3	0.7 $\pm$ 0.2	0.6 $\pm$ 0.4 a)
Prothrombin Time(sec)36d		18.1 $\pm$ 2.7	16.7 $\pm$ 0.3	16.4 $\pm$ 0.6	15.7 $\pm$ 0.4 **	15.6 $\pm$ 1.2 a)
APIT (sec)36d		20.4 $\pm$ 2.1	19.3 $\pm$ 1.4	20.3 $\pm$ 1.8	19.6 $\pm$ 2.1	18.8 $\pm$ 0.4 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical analysis was not applied.

表7 血液生化学的检查(雄)

Items of Examination		Male				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples	2d	5	5	5	5	5
No.of samples	7d	5	5	5	5	5
No.of samples	36d	5	5	5	5	5
Total protein (g/dL)	2d	5.38 $\pm$ 0.15	5.4 $\pm$ 0.1	5.5 $\pm$ 0.1	5.7 $\pm$ 0.2 **	5.5 $\pm$ 0.1
	7d	5.48 $\pm$ 0.23	5.7 $\pm$ 0.2	5.9 $\pm$ 0.3	6.1 $\pm$ 0.2 *	6.4 $\pm$ 0.4 **
	36d	5.76 $\pm$ 0.21	6.2 $\pm$ 0.3	6.0 $\pm$ 0.2	6.4 $\pm$ 0.3	6.2 $\pm$ 0.5
Albumin (g/dL)	2d	3.34 $\pm$ 0.11	3.32 $\pm$ 0.13	3.28 $\pm$ 0.08	3.44 $\pm$ 0.21	3.34 $\pm$ 0.23
	7d	3.32 $\pm$ 0.13	3.34 $\pm$ 0.19	3.46 $\pm$ 0.21	3.66 $\pm$ 0.05 *	3.80 $\pm$ 0.24 **
	36d	3.46 $\pm$ 0.18	3.60 $\pm$ 0.19	3.54 $\pm$ 0.17	3.94 $\pm$ 0.23 **	3.82 $\pm$ 0.29
Serum protein electrophoresis	Albumin	51.9 $\pm$ 1.8	51.9 $\pm$ 1.4	52.0 $\pm$ 1.8	52.6 $\pm$ 1.8	51.8 $\pm$ 2.2
	$\alpha$ 1 globlin	20.6 $\pm$ 1.2	20.1 $\pm$ 0.7	19.1 $\pm$ 0.7	18.6 $\pm$ 1.6 *	18.7 $\pm$ 0.6 *
	2d(%) $\alpha$ 2 globlin	9.0 $\pm$ 1.3	9.0 $\pm$ 2.1	9.2 $\pm$ 1.7	9.1 $\pm$ 1.1	9.3 $\pm$ 1.8
	$\beta$ globlin	16.6 $\pm$ 1.0	17.2 $\pm$ 1.0	18.0 $\pm$ 1.1	17.9 $\pm$ 1.2	18.7 $\pm$ 1.0
	$\gamma$ globlin	1.9 $\pm$ 0.1	1.8 $\pm$ 0.2	1.7 $\pm$ 0.2	1.7 $\pm$ 0.2	1.6 $\pm$ 0.2
Serum protein electrophoresis	Albumin	50.4 $\pm$ 1.1	49.2 $\pm$ 1.7	48.6 $\pm$ 1.3	48.5 $\pm$ 1.3	47.7 $\pm$ 1.2
	$\alpha$ 1 globlin	22.1 $\pm$ 2.1	22.8 $\pm$ 2.0	19.8 $\pm$ 1.2	19.1 $\pm$ 1.6	18.4 $\pm$ 2.5 *
	7d(%) $\alpha$ 2 globlin	9.0 $\pm$ 1.0	8.9 $\pm$ 1.3	10.8 $\pm$ 0.6	11.5 $\pm$ 1.5 *	12.3 $\pm$ 1.4 **
	$\beta$ globlin	16.9 $\pm$ 1.0	17.5 $\pm$ 1.2	19.3 $\pm$ 0.9 *	19.5 $\pm$ 1.2 *	20.0 $\pm$ 1.7 **
	$\gamma$ globlin	1.6 $\pm$ 0.3	1.6 $\pm$ 0.5	1.6 $\pm$ 0.5	1.4 $\pm$ 0.4	1.5 $\pm$ 0.3
Serum protein electrophoresis	Albumin	49.1 $\pm$ 1.8	47.1 $\pm$ 1.2	47.0 $\pm$ 2.0	49.1 $\pm$ 1.3	48.9 $\pm$ 2.0
	$\alpha$ 1 globlin	23.1 $\pm$ 2.3	24.1 $\pm$ 1.4	23.7 $\pm$ 1.6	20.8 $\pm$ 0.6	17.3 $\pm$ 2.1 **
	36d(%) $\alpha$ 2 globlin	9.0 $\pm$ 0.5	8.9 $\pm$ 1.2	8.9 $\pm$ 0.7	9.5 $\pm$ 1.3	10.6 $\pm$ 0.9
	$\beta$ globlin	16.9 $\pm$ 0.9	18.0 $\pm$ 0.8	18.5 $\pm$ 1.1	18.9 $\pm$ 0.9 *	21.6 $\pm$ 3.3 **
	$\gamma$ globlin	1.9 $\pm$ 0.3	2.0 $\pm$ 0.5	1.8 $\pm$ 0.2	1.7 $\pm$ 0.5	1.6 $\pm$ 0.6
A/G ratio	2d	1.66 $\pm$ 0.09	1.60 $\pm$ 0.10	1.52 $\pm$ 0.13	1.48 $\pm$ 0.11	1.50 $\pm$ 0.21
	7d	1.54 $\pm$ 0.15	1.42 $\pm$ 0.16	1.44 $\pm$ 0.11	1.52 $\pm$ 0.13	1.48 $\pm$ 0.08
	36d	1.50 $\pm$ 0.14	1.38 $\pm$ 0.11	1.42 $\pm$ 0.11	1.62 $\pm$ 0.04	1.62 $\pm$ 0.22
T-Bilirubin (mg/dL)	2d	0.12 $\pm$ 0.02	0.13 $\pm$ 0.03	0.12 $\pm$ 0.02	0.12 $\pm$ 0.02	0.14 $\pm$ 0.03
	7d	0.13 $\pm$ 0.02	0.11 $\pm$ 0.01	0.10 $\pm$ 0.01	0.11 $\pm$ 0.01	0.14 $\pm$ 0.05
	36d	0.13 $\pm$ 0.02	0.16 $\pm$ 0.04	0.12 $\pm$ 0.02	0.15 $\pm$ 0.03	0.46 $\pm$ 0.57
Glucose (mg/dL)	2d	186 $\pm$ 11	180 $\pm$ 4	166 $\pm$ 8	171 $\pm$ 13	169 $\pm$ 17
	7d	199 $\pm$ 11	191 $\pm$ 19	177 $\pm$ 6 *	163 $\pm$ 13 **	147 $\pm$ 12 **
	36d	207 $\pm$ 31	184 $\pm$ 10	186 $\pm$ 21	197 $\pm$ 6	149 $\pm$ 35
T-Cholesterol (mg/dL)	2d	78 $\pm$ 10	87 $\pm$ 6	98 $\pm$ 9 *	107 $\pm$ 14 **	96 $\pm$ 12
	7d	82 $\pm$ 5	109 $\pm$ 26	127 $\pm$ 16 **	126 $\pm$ 5 **	118 $\pm$ 21 *
	36d	62 $\pm$ 9	96 $\pm$ 12	117 $\pm$ 15 **	139 $\pm$ 38 **	131 $\pm$ 26 **
Triglyceride (mg/dL)	2d	67 $\pm$ 28	89 $\pm$ 48	78 $\pm$ 24	70 $\pm$ 34	115 $\pm$ 54
	7d	80 $\pm$ 45	57 $\pm$ 25	26 $\pm$ 7 **	30 $\pm$ 13 *	43 $\pm$ 24
	36d	83 $\pm$ 28	116 $\pm$ 69	86 $\pm$ 39	64 $\pm$ 30	88 $\pm$ 54
Phospholipid (mg/dL)	2d	171 $\pm$ 19	184 $\pm$ 24	200 $\pm$ 17	206 $\pm$ 11	201 $\pm$ 26
	7d	175 $\pm$ 7	199 $\pm$ 36	207 $\pm$ 22	212 $\pm$ 13	217 $\pm$ 35
	36d	135 $\pm$ 15	186 $\pm$ 8	213 $\pm$ 23 **	231 $\pm$ 53 **	235 $\pm$ 47 **

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

表7 血液生化学の検査(雄 続き)

Items of Examination	Male				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	5
GOT (IU/L) 2d	56.4 $\pm$ 2.4	58 $\pm$ 5	58 $\pm$ 8	63 $\pm$ 4	62 $\pm$ 4
7d	63.0 $\pm$ 4.4	59 $\pm$ 5	57 $\pm$ 5	76 $\pm$ 26	81 $\pm$ 33
36d	60.4 $\pm$ 7.3	62 $\pm$ 7	73 $\pm$ 17	81 $\pm$ 21	181 $\pm$ 195
GPT (IU/L) 2d	35.0 $\pm$ 5.7	34 $\pm$ 6	35 $\pm$ 4	40 $\pm$ 4	38 $\pm$ 8
7d	32.6 $\pm$ 1.8	29 $\pm$ 4	24 $\pm$ 3 **	21 $\pm$ 4 **	19 $\pm$ 3 **
36d	30.4 $\pm$ 4.2	29 $\pm$ 4	30 $\pm$ 10	28 $\pm$ 3	43 $\pm$ 32
LDH (IU/L) 2d	240 $\pm$ 76	245 $\pm$ 74	367 $\pm$ 237	279 $\pm$ 112	278 $\pm$ 134
7d	313 $\pm$ 49	286 $\pm$ 86	303 $\pm$ 71	324 $\pm$ 38	438 $\pm$ 91 *
36d	197 $\pm$ 46	249 $\pm$ 121	224 $\pm$ 56	326 $\pm$ 194	374 $\pm$ 221
ALP (IU/L) 2d	704 $\pm$ 66	777 $\pm$ 125	698 $\pm$ 149	825 $\pm$ 136	743 $\pm$ 151
7d	711 $\pm$ 64	541 $\pm$ 85	560 $\pm$ 92	460 $\pm$ 139	560 $\pm$ 139
36d	360 $\pm$ 82	325 $\pm$ 65	357 $\pm$ 83	339 $\pm$ 73	550 $\pm$ 181 *
$\gamma$ -GTP(IU/L) 2d	1.2 $\pm$ 0.8	1.0 $\pm$ 0.0	1.0 $\pm$ 0.7	1.2 $\pm$ 0.8	1.4 $\pm$ 0.5
7d	1.2 $\pm$ 0.4	1.2 $\pm$ 0.4	1.2 $\pm$ 0.4	0.8 $\pm$ 0.4	1.2 $\pm$ 0.8
36d	1.8 $\pm$ 0.4	1.8 $\pm$ 0.4	1.6 $\pm$ 0.9	2.0 $\pm$ 0.7	5.8 $\pm$ 8.5
CPK (IU/L) 2d	201 $\pm$ 26	213 $\pm$ 52	264 $\pm$ 90	245 $\pm$ 81	214 $\pm$ 56
7d	260 $\pm$ 70	232 $\pm$ 37	180 $\pm$ 10	192 $\pm$ 21	191 $\pm$ 41
36d	143 $\pm$ 20	138 $\pm$ 46	128 $\pm$ 24	129 $\pm$ 41	103 $\pm$ 15
Urea Nitrogen(mg/L) 2d	18.1 $\pm$ 2.3	17.9 $\pm$ 2.7	15.2 $\pm$ 3.5	15.1 $\pm$ 7.0	13.1 $\pm$ 3.3
7d	15.2 $\pm$ 2.7	14.4 $\pm$ 1.9	14.3 $\pm$ 2.4	16.2 $\pm$ 4.3	18.8 $\pm$ 4.3
36d	21.3 $\pm$ 3.6	20.8 $\pm$ 2.6	17.5 $\pm$ 1.7	20.1 $\pm$ 4.5	32.0 $\pm$ 15.0
Creatinine(mg/dL) 2d	0.4 $\pm$ 0.0	0.4 $\pm$ 0.0	0.4 $\pm$ 0.0	0.4 $\pm$ 0.0	0.4 $\pm$ 0.1
7d	0.4 $\pm$ 0.1	0.4 $\pm$ 0.1	0.5 $\pm$ 0.1	0.5 $\pm$ 0.1	0.5 $\pm$ 0.0
36d	0.5 $\pm$ 0.1	0.5 $\pm$ 0.1	0.5 $\pm$ 0.0	0.5 $\pm$ 0.1	0.5 $\pm$ 0.1
Sodium (mEq/L) 2d	139 $\pm$ 1	139 $\pm$ 1	139 $\pm$ 1	140 $\pm$ 3	139 $\pm$ 3
7d	141 $\pm$ 2	141 $\pm$ 1	141 $\pm$ 1	141 $\pm$ 2	141 $\pm$ 2
36d	138 $\pm$ 2	139 $\pm$ 1	138 $\pm$ 1	138 $\pm$ 1	139 $\pm$ 1
Potassium (mEq/L) 2d	4.94 $\pm$ 0.48	5.02 $\pm$ 0.78	4.86 $\pm$ 0.63	4.76 $\pm$ 0.17	4.80 $\pm$ 0.38
7d	4.22 $\pm$ 0.48	4.16 $\pm$ 0.40	4.68 $\pm$ 0.40	4.72 $\pm$ 0.40	4.68 $\pm$ 0.33
36d	3.86 $\pm$ 0.31	4.02 $\pm$ 0.75	4.18 $\pm$ 0.31	4.26 $\pm$ 0.30	4.80 $\pm$ 0.52
Chloride (mEq/L) 2d	103 $\pm$ 1	103 $\pm$ 1	104 $\pm$ 1	104 $\pm$ 1	104 $\pm$ 2
7d	104 $\pm$ 2	105 $\pm$ 2	105 $\pm$ 2	105 $\pm$ 2	106 $\pm$ 2
36d	103 $\pm$ 3	103 $\pm$ 3	103 $\pm$ 1	104 $\pm$ 3	104 $\pm$ 3
Calcium(mg/dL) 2d	11.0 $\pm$ 0.2	11.0 $\pm$ 0.2	10.8 $\pm$ 0.3	10.9 $\pm$ 0.6	10.9 $\pm$ 0.3
7d	10.8 $\pm$ 0.3	10.7 $\pm$ 0.2	10.6 $\pm$ 0.3	10.8 $\pm$ 0.3	11.1 $\pm$ 0.4
36d	10.6 $\pm$ 0.2	11.1 $\pm$ 0.3	10.8 $\pm$ 0.1	10.8 $\pm$ 0.3	11.1 $\pm$ 0.4
Inorganic phosphorus 2d	9.06 $\pm$ 0.62	9.12 $\pm$ 0.40	9.18 $\pm$ 0.50	8.44 $\pm$ 0.57	7.36 $\pm$ 0.55 **
(mg/dL) 7d	8.94 $\pm$ 0.61	9.32 $\pm$ 0.61	9.44 $\pm$ 0.52	8.52 $\pm$ 0.66	8.48 $\pm$ 0.43
36d	7.28 $\pm$ 1.05	7.20 $\pm$ 0.45	7.24 $\pm$ 0.61	8.02 $\pm$ 0.49	7.46 $\pm$ 0.50

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

表8 血液生化学的検査(雌)

Items of Examination	Female					
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg	
No.of samples 2d	5	5	5	5	5	
No.of samples 7d	5	5	5	5	5	
No.of samples 36d	5	5	5	5	2	
Total protein (g/dL)	2d	5.6 $\pm$ 0.2	5.6 $\pm$ 0.2	5.7 $\pm$ 0.2	5.9 $\pm$ 0.2	5.7 $\pm$ 0.1
	7d	5.6 $\pm$ 0.3	5.9 $\pm$ 0.2	6.0 $\pm$ 0.3	6.2 $\pm$ 0.3 *	6.4 $\pm$ 0.4 **
	36d	6.0 $\pm$ 0.3	6.2 $\pm$ 0.3	6.4 $\pm$ 0.1	6.2 $\pm$ 0.6	5.9 $\pm$ 0.2 a)
Albumin (g/dL)	2d	3.58 $\pm$ 0.19	3.48 $\pm$ 0.23	3.56 $\pm$ 0.21	3.58 $\pm$ 0.15	3.68 $\pm$ 0.04
	7d	3.58 $\pm$ 0.27	3.72 $\pm$ 0.15	3.76 $\pm$ 0.21	3.94 $\pm$ 0.09	3.80 $\pm$ 0.16
	36d	3.86 $\pm$ 0.27	4.06 $\pm$ 0.26	4.12 $\pm$ 0.22	3.80 $\pm$ 0.54	3.50 $\pm$ 0.28 a)
Serum protein electrophoresis 2d(%)	Albumin	57.1 $\pm$ 1.2	55.2 $\pm$ 2.3	54.1 $\pm$ 2.2	55.2 $\pm$ 1.8	54.3 $\pm$ 1.7
	$\alpha$ 1 globlin	17.8 $\pm$ 0.7	18.0 $\pm$ 1.1	17.0 $\pm$ 0.8	17.3 $\pm$ 1.2	16.0 $\pm$ 1.6
	$\alpha$ 2 globlin	7.7 $\pm$ 1.2	8.3 $\pm$ 2.3	8.6 $\pm$ 1.4	8.4 $\pm$ 1.4	9.6 $\pm$ 1.9
	$\beta$ globlin	15.6 $\pm$ 1.5	16.5 $\pm$ 1.5	18.7 $\pm$ 1.3 **	17.5 $\pm$ 1.1	18.2 $\pm$ 1.5 *
	$\gamma$ globlin	1.8 $\pm$ 0.2	2.0 $\pm$ 0.3	1.6 $\pm$ 0.3	1.7 $\pm$ 0.3	1.8 $\pm$ 0.5
Serum protein electrophoresis 7d(%)	Albumin	54.4 $\pm$ 0.9	52.7 $\pm$ 1.4	52.6 $\pm$ 1.8	51.3 $\pm$ 1.7 *	48.4 $\pm$ 1.5 **
	$\alpha$ 1 globlin	18.9 $\pm$ 1.6	17.5 $\pm$ 1.2	16.6 $\pm$ 1.7	17.5 $\pm$ 1.1	20.3 $\pm$ 1.5
	$\alpha$ 2 globlin	8.6 $\pm$ 1.3	10.3 $\pm$ 1.9	11.0 $\pm$ 1.6	11.5 $\pm$ 1.4	11.4 $\pm$ 2.1
	$\beta$ globlin	16.0 $\pm$ 0.8	17.6 $\pm$ 0.4	18.3 $\pm$ 0.5 **	18.2 $\pm$ 2.3 *	18.5 $\pm$ 1.1 **
	$\gamma$ globlin	2.0 $\pm$ 0.3	1.9 $\pm$ 0.3	1.5 $\pm$ 0.2 **	1.5 $\pm$ 0.2 **	1.5 $\pm$ 0.1 **
Serum protein electrophoresis 36d(%)	Albumin	52.7 $\pm$ 0.8	52.7 $\pm$ 2.9	54.7 $\pm$ 3.1	50.0 $\pm$ 2.4	46.8 $\pm$ 4.0 a)
	$\alpha$ 1 globlin	19.3 $\pm$ 1.5	19.2 $\pm$ 0.7	17.7 $\pm$ 1.5	17.6 $\pm$ 1.6	20.3 $\pm$ 2.1 a)
	$\alpha$ 2 globlin	8.3 $\pm$ 1.4	8.7 $\pm$ 1.3	9.1 $\pm$ 1.2	10.7 $\pm$ 0.6 *	10.4 $\pm$ 3.4 a)
	$\beta$ globlin	16.9 $\pm$ 1.3	17.5 $\pm$ 2.1	16.5 $\pm$ 2.0	20.1 $\pm$ 2.5	20.8 $\pm$ 1.1 a)
	$\gamma$ globlin	2.7 $\pm$ 0.2	2.0 $\pm$ 0.3 **	2.1 $\pm$ 0.3 **	1.6 $\pm$ 0.3 **	1.8 $\pm$ 0.4 a)
A/G ratio	2d	1.78 $\pm$ 0.22	1.66 $\pm$ 0.21	1.66 $\pm$ 0.15	1.58 $\pm$ 0.16	1.84 $\pm$ 0.09
	7d	1.78 $\pm$ 0.16	1.68 $\pm$ 0.13	1.68 $\pm$ 0.15	1.74 $\pm$ 0.15	1.46 $\pm$ 0.11 **
	36d	1.82 $\pm$ 0.13	1.86 $\pm$ 0.15	1.80 $\pm$ 0.25	1.62 $\pm$ 0.22	1.50 $\pm$ 0.14 a)
T-Bilirubin(mg/dL)	2d	0.10 $\pm$ 0.01	0.11 $\pm$ 0.01	0.12 $\pm$ 0.01	0.11 $\pm$ 0.01	0.11 $\pm$ 0.01
	7d	0.11 $\pm$ 0.01	0.11 $\pm$ 0.02	0.12 $\pm$ 0.01	0.13 $\pm$ 0.01	0.18 $\pm$ 0.06
	36d	0.16 $\pm$ 0.01	0.15 $\pm$ 0.02	0.16 $\pm$ 0.03	0.18 $\pm$ 0.02	0.21 $\pm$ 0.02 a)
Glucose (mg/dL)	2d	168 $\pm$ 10	159 $\pm$ 11	158 $\pm$ 11	148 $\pm$ 11 *	141 $\pm$ 8 **
	7d	189 $\pm$ 7	183 $\pm$ 7	169 $\pm$ 5 *	152 $\pm$ 12 **	129 $\pm$ 13 **
	36d	172 $\pm$ 7	173 $\pm$ 13	167 $\pm$ 19	156 $\pm$ 26	149 $\pm$ 7 a)
T-Cholesterol (mg/dL)	2d	68 $\pm$ 6	82 $\pm$ 3	81 $\pm$ 12	79 $\pm$ 8	82 $\pm$ 9
	7d	77 $\pm$ 5	129 $\pm$ 20 **	115 $\pm$ 7 **	128 $\pm$ 18 **	163 $\pm$ 18 **
	36d	69 $\pm$ 11	93 $\pm$ 7 *	110 $\pm$ 14 **	117 $\pm$ 21 **	120 $\pm$ 70 a)
Triglyceride (mg/dL)	2d	34 $\pm$ 15	41 $\pm$ 21	49 $\pm$ 16	48 $\pm$ 4	25 $\pm$ 12
	7d	52 $\pm$ 12	28 $\pm$ 12	38 $\pm$ 30	20 $\pm$ 5 *	16 $\pm$ 7 **
	36d	99 $\pm$ 56	91 $\pm$ 49	43 $\pm$ 14	18 $\pm$ 3 **	35 $\pm$ 26 a)
Phospholipid (mg/dL)	2d	143 $\pm$ 11	170 $\pm$ 10	169 $\pm$ 23	164 $\pm$ 15	160 $\pm$ 10
	7d	157 $\pm$ 10	231 $\pm$ 30 **	211 $\pm$ 17 *	224 $\pm$ 30 **	292 $\pm$ 36 **
	36d	163 $\pm$ 25	201 $\pm$ 14 *	218 $\pm$ 7 **	212 $\pm$ 29 **	226 $\pm$ 110 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical anlysis was not applied.

表8 血液生化学的検査(雌 続き)

Items of Examination	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	2
GOT (IU/L) 2d	54 $\pm$ 5	62 $\pm$ 7	62 $\pm$ 6	64 $\pm$ 5	61 $\pm$ 4
7d	53 $\pm$ 5	57 $\pm$ 5	61 $\pm$ 8 *	78 $\pm$ 15 **	311 $\pm$ 281 **
36d	48 $\pm$ 8	60 $\pm$ 18	62 $\pm$ 10	97 $\pm$ 16 **	186 $\pm$ 81 a)
GPT (IU/L) 2d	27 $\pm$ 3	32 $\pm$ 4	38 $\pm$ 5 **	36 $\pm$ 4 *	31 $\pm$ 5
7d	24 $\pm$ 4	25 $\pm$ 3	26 $\pm$ 3	23 $\pm$ 6	24 $\pm$ 9
36d	26 $\pm$ 3	27 $\pm$ 5	25 $\pm$ 4	33 $\pm$ 6	49 $\pm$ 19 a)
LDH (IU/L) 2d	296 $\pm$ 124	405 $\pm$ 217	293 $\pm$ 98	317 $\pm$ 133	310 $\pm$ 68
7d	383 $\pm$ 90	296 $\pm$ 97	328 $\pm$ 68	313 $\pm$ 123	505 $\pm$ 345
36d	235 $\pm$ 105	262 $\pm$ 73	339 $\pm$ 92	388 $\pm$ 82	462 $\pm$ 15 a)
ALP (IU/L) 2d	590 $\pm$ 155	543 $\pm$ 70	682 $\pm$ 132	706 $\pm$ 70	689 $\pm$ 171
7d	439 $\pm$ 49	412 $\pm$ 79	429 $\pm$ 115	454 $\pm$ 98	436 $\pm$ 68
36d	308 $\pm$ 47	296 $\pm$ 67	236 $\pm$ 25	386 $\pm$ 178	502 $\pm$ 23 a)
$\gamma$ -GTP(IU/L) 2d	1.4 $\pm$ 0.5	1.2 $\pm$ 0.4	1.2 $\pm$ 0.4	1.6 $\pm$ 0.5	1.2 $\pm$ 0.4
7d	1.0 $\pm$ 0.7	1.0 $\pm$ 0.0	1.0 $\pm$ 0.7	0.6 $\pm$ 0.5	1.0 $\pm$ 1.0
36d	1.2 $\pm$ 0.4	1.4 $\pm$ 0.5	1.6 $\pm$ 0.5	2.2 $\pm$ 0.4	3.5 $\pm$ 0.7 a)
CPK (IU/L) 2d	210 $\pm$ 67	235 $\pm$ 61	213 $\pm$ 31	268 $\pm$ 106	212 $\pm$ 39
7d	238 $\pm$ 22	194 $\pm$ 62	163 $\pm$ 43	146 $\pm$ 34	169 $\pm$ 48
36d	115 $\pm$ 27	122 $\pm$ 34	132 $\pm$ 38	144 $\pm$ 25	127 $\pm$ 17 a)
Urea Nitrogen(mg/L) 2d	18.1 $\pm$ 2.9	17.5 $\pm$ 1.5	18.3 $\pm$ 3.1	18.9 $\pm$ 2.3	16.4 $\pm$ 6.0
7d	19.2 $\pm$ 3.7	21.5 $\pm$ 3.1	14.6 $\pm$ 5.2	18.7 $\pm$ 2.4	28.1 $\pm$ 12.4
36d	22.6 $\pm$ 2.2	22.3 $\pm$ 2.5	20.4 $\pm$ 2.2	30.9 $\pm$ 10.7	22.6 $\pm$ 2.1 a)
Creatinine(mg/dL) 2d	0.4 $\pm$ 0.0	0.4 $\pm$ 0.0	0.4 $\pm$ 0.0	0.4 $\pm$ 0.1	0.4 $\pm$ 0.0
7d	0.5 $\pm$ 0.1	0.5 $\pm$ 0.0	0.4 $\pm$ 0.1	0.5 $\pm$ 0.0	0.6 $\pm$ 0.1 *
36d	0.5 $\pm$ 0.1	0.5 $\pm$ 0.0	0.5 $\pm$ 0.1	0.6 $\pm$ 0.1	0.4 $\pm$ 0.0 a)
Sodium (mEq/L) 2d	140 $\pm$ 2	139 $\pm$ 1	139 $\pm$ 1	139 $\pm$ 1	139 $\pm$ 2
7d	140 $\pm$ 1	140 $\pm$ 2	139 $\pm$ 2	138 $\pm$ 2	139 $\pm$ 2
36d	138 $\pm$ 2	138 $\pm$ 1	138 $\pm$ 1	137 $\pm$ 1	138 $\pm$ 1 a)
Potassium (mEq/L) 2d	4.22 $\pm$ 0.59	4.70 $\pm$ 0.39	4.52 $\pm$ 0.36	4.72 $\pm$ 0.25	4.66 $\pm$ 0.27
7d	3.70 $\pm$ 0.46	3.76 $\pm$ 0.19	4.46 $\pm$ 0.52 *	4.32 $\pm$ 0.27	4.34 $\pm$ 0.54
36d	3.66 $\pm$ 0.42	3.68 $\pm$ 0.22	4.16 $\pm$ 0.56	4.46 $\pm$ 0.72	4.85 $\pm$ 0.21 a)
Chloride (mEq/L) 2d	104 $\pm$ 2	104 $\pm$ 2	103 $\pm$ 1	104 $\pm$ 2	104 $\pm$ 2
7d	107 $\pm$ 2	106 $\pm$ 2	106 $\pm$ 1	104 $\pm$ 2	104 $\pm$ 3
36d	105 $\pm$ 2	104 $\pm$ 1	105 $\pm$ 2	107 $\pm$ 2	108 $\pm$ 0 a)
Calcium(mg/dL) 2d	10.9 $\pm$ 0.3	11.0 $\pm$ 0.3	11.1 $\pm$ 0.3	11.1 $\pm$ 0.2	10.8 $\pm$ 0.2
7d	10.7 $\pm$ 0.2	10.7 $\pm$ 0.3	10.8 $\pm$ 0.5	11.1 $\pm$ 0.4	11.2 $\pm$ 0.3
36d	10.7 $\pm$ 0.3	11.1 $\pm$ 0.4	11.1 $\pm$ 0.1	11.1 $\pm$ 0.4	10.5 $\pm$ 0.4 a)
Inorganic phosphorus 2d	8.24 $\pm$ 0.15	8.54 $\pm$ 0.66	8.84 $\pm$ 0.89	7.86 $\pm$ 0.40	8.88 $\pm$ 0.47
(mg/dL) 7d	7.52 $\pm$ 1.24	8.12 $\pm$ 1.16	8.58 $\pm$ 0.65	7.74 $\pm$ 0.32	8.28 $\pm$ 0.55
36d	5.06 $\pm$ 1.47	6.06 $\pm$ 0.73	6.38 $\pm$ 0.32	6.88 $\pm$ 0.80	6.30 $\pm$ 0.00 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical analysis was not applied.

表9 血清中のホルモン濃度(雄)

Items of Examination	Male				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	3	3	3	3	3
No.of samples 7d	3	3	3	3	3
No.of samples 36d	3	3	3	3	3
Thyroid stimulating hormone (ng/mL) 2d	25.5 $\pm$ 2.7	21.7 $\pm$ 9.7	24.2 $\pm$ 8.3	23.4 $\pm$ 3.5	21.3 $\pm$ 5.5
7d	21.7 $\pm$ 4.9	21.8 $\pm$ 2.3	16.5 $\pm$ 2.9	19.9 $\pm$ 1.4	18.7 $\pm$ 0.9
36d	26.7 $\pm$ 3.7	21.9 $\pm$ 2.5	18.3 $\pm$ 1.4	20.4 $\pm$ 4.9	17.7 $\pm$ 9.1
Triiodothyronine(T3) (ng/mL) 2d	2.1 $\pm$ 0.3	2.3 $\pm$ 0.4	2.0 $\pm$ 0.1	2.0 $\pm$ 0.1	2.0 $\pm$ 0.3
7d	2.7 $\pm$ 0.2	2.5 $\pm$ 0.3	2.8 $\pm$ 0.4	2.6 $\pm$ 0.3	3.1 $\pm$ 0.3
36d	2.4 $\pm$ 0.4	2.5 $\pm$ 0.4	2.6 $\pm$ 0.4	2.7 $\pm$ 0.3	2.5 $\pm$ 0.1
Thyroxin(T4) (ng/mL) 2d	144.7 $\pm$ 21.9	117.3 $\pm$ 0.4	96.7 $\pm$ 3.1 **	87.9 $\pm$ 5.8 **	81.9 $\pm$ 6.7 **
7d	178.6 $\pm$ 16.5	176.8 $\pm$ 16.2	131.2 $\pm$ 24.5 *	110.0 $\pm$ 5.2 **	108.8 $\pm$ 19.0 **
36d	143.5 $\pm$ 31.9	165.2 $\pm$ 44.9	153.3 $\pm$ 18.0	119.8 $\pm$ 27.0	81.9 $\pm$ 10.0

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

表10 血清中のホルモン濃度(雌)

Items of Examination	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	3	3	3	3	3
No.of samples 7d	3	3	3	3	3
No.of samples 36d	3	3	3	3	2
Thyroid stimulating hormone (ng/mL) 2d	29.2 $\pm$ 5.9	42.5 $\pm$ 16.5	26.9 $\pm$ 2.9	27.8 $\pm$ 5.7	29.2 $\pm$ 4.0
7d	22.0 $\pm$ 5.4	65.3 $\pm$ 75.9	44.3 $\pm$ 50.5	22.5 $\pm$ 4.5	15.2 $\pm$ 4.8
36d	18.2 $\pm$ 3.0	29.0 $\pm$ 4.1 **	22.8 $\pm$ 2.3	19.4 $\pm$ 3.3	21.1 $\pm$ 3.3 a)
Triiodothyronine(T3) (ng/mL) 2d	2.2 $\pm$ 0.3	2.5 $\pm$ 0.5	2.4 $\pm$ 0.2	2.3 $\pm$ 0.4	2.4 $\pm$ 0.4
7d	2.9 $\pm$ 0.6	2.9 $\pm$ 0.7	3.0 $\pm$ 0.4	3.5 $\pm$ 0.5	3.7 $\pm$ 0.6
36d	2.6 $\pm$ 0.2	2.8 $\pm$ 0.2	3.0 $\pm$ 0.4	2.5 $\pm$ 0.3	2.6 $\pm$ 0.2 a)
Thyroxin(T4) (ng/mL) 2d	122.2 $\pm$ 15.8	110.9 $\pm$ 27.2	101.6 $\pm$ 17.6	85.9 $\pm$ 17.9	88.4 $\pm$ 23.7
7d	137.2 $\pm$ 37.4	153.9 $\pm$ 63.1	115.6 $\pm$ 22.0	139.7 $\pm$ 33.5	118.6 $\pm$ 5.1
36d	101.4 $\pm$ 12.6	137.8 $\pm$ 22.9	116.9 $\pm$ 16.4	88.0 $\pm$ 15.5	87.7 $\pm$ 2.9 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical analysis was not applied.



表11 肝臓中の誘導酵素量(雄)

Items of Examination		Male				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No. of samples	2d	2	2	2	2	2
No. of samples	7d	2	2	2	2	2
No. of samples	36d	2	2	2	2	2
AHH	2d	14.9,13.6(14.3)	28.1,26.0(27.1)	26.4,19.3(22.9)	25.5,14.4(20.0)	16.1,22.4(19.3)
(nmol/g liver/min)	7d	6.4,9.3(7.9)	12.0,26.3(19.2)	21.8,12.5(17.2)	17.0,27.1(22.1)	14.1,9.1(11.6)
	36d	15.4,14.1(14.8)	22.5,25.2(23.9)	32.6,20.4(26.5)	21.7,26.5(24.1)	21.7,16.9(19.3)
AHH	2d	0.56,0.58(0.57)	1.19,1.08(1.14)	1.22,1.10(1.16)	1.16,1.17(1.17)	0.96,1.31(1.14)
(nmol/mg protein/min)	7d	0.36,0.51(0.44)	0.63,1.01(0.82)	1.25,0.69(0.97)	1.09,1.19(1.14)	1.06,1.05(1.06)
	36d	0.76,0.76(0.76)	1.06,1.10(1.08)	1.18,0.93(1.06)	1.27,1.08(1.18)	1.27,1.08(1.12)
ECOD	2d	29.8,38.8(34.3)	234,246(240)	232,210(221)	221,138(179)	160,198(179)
(nmol/g liver/min)	7d	23.3,21.8(22.6)	94.6,215(155)	208,204(206)	182,282(232)	145,86.2(116)
	36d	20.3,24.6(22.5)	76.1,94.6(85.4)	231,124(178)	206,293(250)	194,167(181)
ECOD	2d	1.12,1.66(1.39)	9.92,10.2(10.1)	10.7,12.0(11.4)	10.1,11.2(10.6)	9.55,11.6(10.6)
(nmol/mg protein/min)	7d	1.30,1.19(1.25)	4.98,8.26(6.62)	11.9,11.3(11.6)	11.6,12.4(12.0)	10.9,9.91(10.4)
	36d	1.00,1.32(1.16)	3.59,4.13(3.86)	8.41,5.65(7.03)	12.1,12.0(12.1)	11.3,9.62(10.5)
EROD	2d	4.3,4.9(4.6)	97.9,108(103)	103,103(103)	95.5,80.0(87.8)	81.8,104(92.8)
(nmol/g liver/min)	7d	2.9,3.1(3.0)	48.1,92.0(70.1)	83.3,94.1(88.7)	78.3,93.7(86.0)	45.0,39.4(42.2)
	36d	2.2,2.8(2.5)	29.5,41.0(35.3)	101,51.9(76.5)	67.7,105(86.6)	56.8,42.5(49.7)
EROD	2d	0.16,0.21(0.19)	4.15,4.49(4.32)	4.78,5.89(5.34)	4.34,6.50(5.42)	4.87,6.07(5.47)
(nmol/mg protein/min)	7d	0.16,0.17(0.17)	2.53,3.54(3.04)	4.79,5.20(5.00)	5.02,4.11(4.57)	3.38,4.53(3.96)
	36d	0.11,0.15(0.13)	1.39,1.79(1.59)	3.66,2.37(3.02)	3.96,4.30(4.13)	3.32,2.44(2.88)

表12 肝臓中の誘導酵素量(雌)

Items of Examination		Female				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No. of samples	2d	2	2	2	2	2
No. of samples	7d	2	2	2	2	2
No. of samples	36d	2	2	2	2	2
AHH	2d	2.5,1.6(2.1)	14.3,17.5(15.9)	13.1,19.4(16.3)	7.3,10.8(9.1)	18.1,12.2(15.2)
(nmol/g liver/min)	7d	2.1,2.1(2.1)	25.9,25.9(25.9)	18.1,17.1(17.6)	20.6,23.4(22.0)	19.7,14.4(17.1)
	36d	1.8,2.4(2.1)	14.6,10.1(12.4)	18.4,22.4(20.4)	11.1,24.8(18.0)	14.3,11.6(13.0)
AHH	2d	0.12,0.10(0.11)	0.93,0.80(0.87)	1.01,1.09(1.05)	0.53,0.68(0.61)	1.04,0.95(1.00)
(nmol/mg protein/min)	7d	0.12,0.12(0.12)	1.16,1.10(1.13)	1.12,1.18(1.15)	1.16,1.17(1.17)	1.01,1.24(1.13)
	36d	0.11,0.13(0.12)	0.73,0.54(0.64)	0.89,0.95(0.92)	0.94,1.04(0.99)	1.06,1.01(1.04)
ECOD	2d	11.9,8.4(10.2)	133,208(171)	127,171(149)	146,168(157)	186,149(168)
(nmol/g liver/min)	7d	11.5,10.8(11.2)	231,259(245)	196,165(181)	249,280(265)	221,152(187)
	36d	10.4,10.0(10.2)	127,78.0(103)	175,218(196)	99.6,246(173)	146,131(138)
ECOD	2d	0.57,0.54(0.56)	8.65,9.51(9.08)	9.78,9.60(9.69)	10.6,10.6(10.6)	10.7,11.7(11.2)
(nmol/mg protein/min)	7d	0.64,0.62(0.63)	10.4,11.0(10.7)	12.1,11.4(11.8)	14.0,14.0(14.0)	11.4,13.1(12.2)
	36d	0.64,0.55(0.60)	6.35,4.17(5.26)	8.43,9.22(8.83)	8.44,10.3(9.38)	10.8,11.4(11.1)
EROD	2d	4.8,3.0(3.9)	77.5,103(90.3)	58.6,88.8(73.7)	59.2,71.4(65.3)	78.5,64.4(71.5)
(nmol/g liver/min)	7d	3.4,3.3(3.4)	67.6,79.0(73.3)	56.4,53.4(54.9)	65.0,66.0(65.5)	46.0,44.2(45.1)
	36d	2.4,2.9(2.7)	47.6,30.9(39.3)	61.3,81.9(71.6)	28.8,60.7(44.8)	46.8,51.1(49.0)
EROD	2d	0.23,0.19(0.21)	5.03,4.71(4.87)	4.51,4.99(4.75)	4.29,4.49(4.39)	4.51,5.03(4.77)
(nmol/mg protein/min)	7d	0.19,0.19(0.19)	3.03,3.36(3.20)	3.48,3.68(3.58)	3.65,3.30(3.48)	2.36,3.81(3.09)
	36d	0.15,0.16(0.16)	2.38,1.65(2.02)	2.96,3.47(3.22)	2.44,2.55(2.50)	3.47,4.44(3.96)

表13 体内負荷量(雄)

Items of Examination		Male				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No. of samples	2d	2	0	2	2	2
No. of samples	7d	0	0	0	2	2
No. of samples	36d	0	0	0	2	2
Liver TBDD	2d	0.0095,0.012(0.0108)	-	61,74(68)	250,250(250)	540,630(585)
(ng/g liver)	7d	-	-	-	230,200(215)	650,280(465)
	36d	-	-	-	27,56(42)	110,130(120)
Fat TBDD	2d	0.0045,0.025(0.0148)	-	41,52(47)	130,120(125)	470,410(440)
(ng/g Fat)	7d	-	-	-	210,190(200)	730,270(500)
	36d	-	-	-	27,51(39)	110,130(120)

表14 体内負荷量(雌)

Items of Examination		Female				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No. of samples	2d	2	0	2	2	2
No. of samples	7d	0	0	0	2	2
No. of samples	36d	0	0	0	2	2
Liver TBDD	2d	0.024,0.0077(0.0159)	-	44,48(46)	160,240(200)	720,700(710)
(ng/g liver)	7d	-	-	-	110,210(160)	430,470(450)
	36d	-	-	-	42,47(45)	110,63(87)
Fat TBDD	2d	0.011,0.0086(0.0098)	-	34,33(34)	110,170(140)	530,500(515)
(ng/g Fat)	7d	-	-	-	140,280(210)	500,590(545)
	36d	-	-	-	55,68(62)	130,110(120)

表15 病理学的検査(剖検)

途中死亡動物/動物番号(死亡日)

- 雌 2413(21d) 肺:赤色斑, 胸腺:萎縮, 頭蓋腔と脊椎腔:出血(胃;内容物なし)  
 2415(23d) 胸腺:萎縮, 皮下(頸部):出血, 頭蓋腔と脊椎腔:出血, 脳:貧血様, 鼻腔:出血  
 2412(27d) 肺:赤色斑, 胸腺:萎縮

定期解剖動物/動物番号(剖検日)

- 雄 1109(7d) 肺:赤色斑  
 1412(36d) 皮下~筋肉(右上肢):出血, 肝:黒色斑  
 1414(36d) 胸水(中等度,透明), 心:肥大(右心室壁、心室中隔及び右心房壁の肥厚)  
 雌 2311(36d) 肺:赤色斑

表16 臟器重量(雄)

Organs	Male				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	5
Body weight (g) 2d	220 $\pm$ 9	219 $\pm$ 13	220 $\pm$ 7	212 $\pm$ 9	209 $\pm$ 11
7d	259 $\pm$ 9	264 $\pm$ 9	242 $\pm$ 13	242 $\pm$ 12	224 $\pm$ 16
36d	387 $\pm$ 20	401 $\pm$ 18	414 $\pm$ 26	364 $\pm$ 42	306 $\pm$ 54 **
Thymus (mg) 2d	615 $\pm$ 78	591 $\pm$ 151	428 $\pm$ 47 *	577 $\pm$ 86	423 $\pm$ 111 *
7d	652 $\pm$ 130	599 $\pm$ 71	441 $\pm$ 87 **	290 $\pm$ 83 **	263 $\pm$ 65 **
36d	666 $\pm$ 128	639 $\pm$ 139	602 $\pm$ 60	360 $\pm$ 136 **	187 $\pm$ 79 **
Thymus (%) 2d	0.279 $\pm$ 0.024	0.268 $\pm$ 0.052	0.195 $\pm$ 0.022 *	0.273 $\pm$ 0.043	0.201 $\pm$ 0.047 *
7d	0.252 $\pm$ 0.047	0.227 $\pm$ 0.026	0.181 $\pm$ 0.031 *	0.120 $\pm$ 0.033 **	0.116 $\pm$ 0.024 **
36d	0.172 $\pm$ 0.028	0.159 $\pm$ 0.033	0.146 $\pm$ 0.019	0.098 $\pm$ 0.037 **	0.060 $\pm$ 0.020 **
Adrenals (mg) 2d	57.2 $\pm$ 4.76	62.2 $\pm$ 8.64	63.4 $\pm$ 5.46	61.2 $\pm$ 6.53	55.2 $\pm$ 5.67
7d	66.6 $\pm$ 9.32	70 $\pm$ 3.54	66.6 $\pm$ 6.54	62.8 $\pm$ 8.53	62.4 $\pm$ 7.92
36d	73.4 $\pm$ 4.04	84.6 $\pm$ 7.37	80.4 $\pm$ 9.84	69.8 $\pm$ 11.6	61.2 $\pm$ 7.26
Adrenals (%) 2d	0.026 $\pm$ 0.002	0.028 $\pm$ 0.003	0.029 $\pm$ 0.002	0.029 $\pm$ 0.004	0.026 $\pm$ 0.003
7d	0.026 $\pm$ 0.003	0.027 $\pm$ 0.002	0.027 $\pm$ 0.002	0.026 $\pm$ 0.003	0.028 $\pm$ 0.003
36d	0.019 $\pm$ 0.002	0.021 $\pm$ 0.002	0.019 $\pm$ 0.002	0.019 $\pm$ 0.003	0.020 $\pm$ 0.002
Testes (mg) 2d	2239 $\pm$ 166	2098 $\pm$ 99	2190 $\pm$ 110	2104 $\pm$ 203	2205 $\pm$ 122
7d	2464 $\pm$ 97	2586 $\pm$ 81	2562 $\pm$ 94	2764 $\pm$ 188 **	2584 $\pm$ 169
36d	3562 $\pm$ 150	3566 $\pm$ 313	3665 $\pm$ 325	3452 $\pm$ 236	3458 $\pm$ 252
Testes (%) 2d	1.022 $\pm$ 0.104	0.963 $\pm$ 0.075	0.999 $\pm$ 0.067	0.993 $\pm$ 0.072	1.054 $\pm$ 0.052
7d	0.952 $\pm$ 0.053	0.978 $\pm$ 0.018	1.062 $\pm$ 0.095 *	1.146 $\pm$ 0.091 **	1.157 $\pm$ 0.118 **
36d	0.922 $\pm$ 0.035	0.891 $\pm$ 0.100	0.885 $\pm$ 0.063	0.956 $\pm$ 0.096	1.157 $\pm$ 0.215
Heart (mg) 2d	831 $\pm$ 66	855 $\pm$ 74	780 $\pm$ 168	815 $\pm$ 45	772 $\pm$ 44
7d	939 $\pm$ 50	1055 $\pm$ 159	877 $\pm$ 66	897 $\pm$ 98	806 $\pm$ 73 *
36d	1179 $\pm$ 96	1197 $\pm$ 112	1276 $\pm$ 65	1315 $\pm$ 251	1203 $\pm$ 401
Heart (%) 2d	0.378 $\pm$ 0.017	0.391 $\pm$ 0.017	0.354 $\pm$ 0.069	0.386 $\pm$ 0.022	0.369 $\pm$ 0.008
7d	0.363 $\pm$ 0.018	0.398 $\pm$ 0.051	0.362 $\pm$ 0.013	0.371 $\pm$ 0.027	0.359 $\pm$ 0.016
36d	0.305 $\pm$ 0.026	0.298 $\pm$ 0.022	0.309 $\pm$ 0.031	0.362 $\pm$ 0.063	0.392 $\pm$ 0.118
Lungs (mg) 2d	1129 $\pm$ 115	1124 $\pm$ 112	1089 $\pm$ 41	1038 $\pm$ 61	1030 $\pm$ 52
7d	1203 $\pm$ 29	1463 $\pm$ 263 *	1227 $\pm$ 143	1272 $\pm$ 85	1208 $\pm$ 74
36d	1396 $\pm$ 76	1229 $\pm$ 388	1473 $\pm$ 108	1505 $\pm$ 212	1468 $\pm$ 272
Lungs (%) 2d	0.513 $\pm$ 0.031	0.514 $\pm$ 0.041	0.496 $\pm$ 0.020	0.491 $\pm$ 0.041	0.493 $\pm$ 0.024
7d	0.465 $\pm$ 0.005	0.552 $\pm$ 0.088 *	0.506 $\pm$ 0.050	0.527 $\pm$ 0.027 *	0.539 $\pm$ 0.023 *
36d	0.362 $\pm$ 0.023	0.307 $\pm$ 0.096	0.356 $\pm$ 0.023	0.415 $\pm$ 0.049	0.485 $\pm$ 0.084 **

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

表16 臓器重量(雄 続き)

Organs	Male				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	5
<b>Kidneys (mg) 2d</b>	2039 $\pm$ 160	2063 $\pm$ 160	1944 $\pm$ 142	1906 $\pm$ 105	1888 $\pm$ 70
7d	2308 $\pm$ 174	2344 $\pm$ 154	2213 $\pm$ 147	2244 $\pm$ 229	2040 $\pm$ 248
36d	2641 $\pm$ 239	2820 $\pm$ 371	2989 $\pm$ 129	2716 $\pm$ 146	2453 $\pm$ 370
<b>Kidneys (%) 2d</b>	0.927 $\pm$ 0.043	0.944 $\pm$ 0.059	0.885 $\pm$ 0.043	0.901 $\pm$ 0.046	0.903 $\pm$ 0.037
7d	0.891 $\pm$ 0.065	0.887 $\pm$ 0.058	0.914 $\pm$ 0.058	0.928 $\pm$ 0.067	0.906 $\pm$ 0.052
36d	0.683 $\pm$ 0.051	0.701 $\pm$ 0.075	0.722 $\pm$ 0.023	0.752 $\pm$ 0.061	0.809 $\pm$ 0.093
<b>Spleen (mg) 2d</b>	677 $\pm$ 70	758 $\pm$ 62	770 $\pm$ 103	671 $\pm$ 61	583 $\pm$ 198
7d	950 $\pm$ 165	948 $\pm$ 105	818 $\pm$ 102	827 $\pm$ 200	825 $\pm$ 181
36d	856 $\pm$ 115	900 $\pm$ 118	1043 $\pm$ 179	1039 $\pm$ 128	1198 $\pm$ 513
<b>Spleen (%) 2d</b>	0.308 $\pm$ 0.020	0.346 $\pm$ 0.011 *	0.351 $\pm$ 0.044	0.317 $\pm$ 0.021	0.277 $\pm$ 0.091
7d	0.366 $\pm$ 0.057	0.360 $\pm$ 0.051	0.337 $\pm$ 0.030	0.345 $\pm$ 0.092	0.367 $\pm$ 0.072
36d	0.222 $\pm$ 0.031	0.224 $\pm$ 0.024	0.251 $\pm$ 0.038	0.286 $\pm$ 0.027 *	0.401 $\pm$ 0.181 **
<b>Liver (mg) 2d</b>	11090 $\pm$ 437	13496 $\pm$ 1601	14366 $\pm$ 1265 *	14405 $\pm$ 1201 **	15678 $\pm$ 2422 **
7d	12024 $\pm$ 1567	14939 $\pm$ 534 **	15543 $\pm$ 890 **	17411 $\pm$ 1773 **	15853 $\pm$ 1290 **
36d	14819 $\pm$ 1571	17371 $\pm$ 1806	19353 $\pm$ 1607	21171 $\pm$ 4295 **	18731 $\pm$ 3276
<b>Liver (%) 2d</b>	5.050 $\pm$ 0.176	6.164 $\pm$ 0.479	6.541 $\pm$ 0.501 **	6.814 $\pm$ 0.616 **	7.494 $\pm$ 1.155 **
7d	4.634 $\pm$ 0.513	5.656 $\pm$ 0.287 **	6.432 $\pm$ 0.513 **	7.201 $\pm$ 0.518 **	7.062 $\pm$ 0.192 **
36d	3.828 $\pm$ 0.269	4.322 $\pm$ 0.311	4.671 $\pm$ 0.282 *	5.792 $\pm$ 0.694 **	6.120 $\pm$ 0.258 **
<b>Brain (mg) 2d</b>	1724 $\pm$ 96	1781 $\pm$ 43	1808 $\pm$ 125	1774 $\pm$ 62	1853 $\pm$ 300
7d	1844 $\pm$ 37	1681 $\pm$ 281	1733 $\pm$ 365	1795 $\pm$ 51	1756 $\pm$ 46
36d	1889 $\pm$ 48	1956 $\pm$ 47	1970 $\pm$ 77	1843 $\pm$ 73	1798 $\pm$ 55
<b>Brain (%) 2d</b>	0.784 $\pm$ 0.026	0.817 $\pm$ 0.039	0.825 $\pm$ 0.067	0.839 $\pm$ 0.028	0.887 $\pm$ 0.154
7d	0.712 $\pm$ 0.020	0.638 $\pm$ 0.119	0.717 $\pm$ 0.153	0.744 $\pm$ 0.037	0.785 $\pm$ 0.055
36d	0.489 $\pm$ 0.022	0.488 $\pm$ 0.032	0.476 $\pm$ 0.019	0.512 $\pm$ 0.059	0.601 $\pm$ 0.102
<b>Thyroids (mg) 2d</b>	26 $\pm$ 5	33 $\pm$ 4	29 $\pm$ 7	28 $\pm$ 8	31 $\pm$ 6
7d	27 $\pm$ 4	38 $\pm$ 4 **	34 $\pm$ 3 **	37 $\pm$ 4 **	32 $\pm$ 3
36d	28 $\pm$ 1	28 $\pm$ 5	29 $\pm$ 5	34 $\pm$ 8	24 $\pm$ 7
<b>Thyroids (%) 2d</b>	0.012 $\pm$ 0.002	0.015 $\pm$ 0.002	0.013 $\pm$ 0.003	0.013 $\pm$ 0.004	0.015 $\pm$ 0.003
7d	0.011 $\pm$ 0.001	0.014 $\pm$ 0.002 **	0.014 $\pm$ 0.002 **	0.015 $\pm$ 0.002 **	0.014 $\pm$ 0.001 **
36d	0.007 $\pm$ 0.000	0.007 $\pm$ 0.001	0.007 $\pm$ 0.001	0.009 $\pm$ 0.002	0.008 $\pm$ 0.003
<b>Pituitary (mg) 2d</b>	11.2 $\pm$ 1.8	12.6 $\pm$ 1.5	14.6 $\pm$ 2.6 *	14.0 $\pm$ 1.2	12.8 $\pm$ 1.5
7d	12.8 $\pm$ 2.4	15.2 $\pm$ 1.3	12.2 $\pm$ 0.4	13.0 $\pm$ 1.2	12.8 $\pm$ 1.5
36d	10.0 $\pm$ 2.4	11.2 $\pm$ 2.3	11.6 $\pm$ 2.1	11.0 $\pm$ 1.2	10.4 $\pm$ 2.1
<b>Pituitary (%) 2d</b>	0.005 $\pm$ 0.001	0.006 $\pm$ 0.001	0.007 $\pm$ 0.001 *	0.007 $\pm$ 0.001 *	0.006 $\pm$ 0.001
7d	0.005 $\pm$ 0.001	0.006 $\pm$ 0.001	0.005 $\pm$ 0.000	0.005 $\pm$ 0.000	0.006 $\pm$ 0.000
36d	0.003 $\pm$ 0.001	0.003 $\pm$ 0.001	0.003 $\pm$ 0.000	0.003 $\pm$ 0.000	0.004 $\pm$ 0.001

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

表17 臟器重量(雌)

Organs	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d	5	5	5	5	5
No.of samples 7d	5	5	5	5	5
No.of samples 36d	5	5	5	5	2
Body weight (g) 2d	167 $\pm$ 11	166 $\pm$ 7	171 $\pm$ 8	166 $\pm$ 7	164 $\pm$ 7
7d	189 $\pm$ 17	190 $\pm$ 11	189 $\pm$ 9	175 $\pm$ 16	163 $\pm$ 9 *
36d	262 $\pm$ 9	279 $\pm$ 16	231 $\pm$ 11	230 $\pm$ 21	226 $\pm$ 25 a)
Thymus (mg) 2d	431 $\pm$ 100	459 $\pm$ 118	388 $\pm$ 75	425 $\pm$ 53	446 $\pm$ 107
7d	501 $\pm$ 57	485 $\pm$ 98	355 $\pm$ 98 *	240 $\pm$ 48 **	207 $\pm$ 59 **
36d	526 $\pm$ 86	504 $\pm$ 152	341 $\pm$ 37 *	177 $\pm$ 94 **	138 $\pm$ 42 a)
Thymus (%) 2d	0.256 $\pm$ 0.049	0.275 $\pm$ 0.062	0.226 $\pm$ 0.035	0.256 $\pm$ 0.029	0.271 $\pm$ 0.063
7d	0.266 $\pm$ 0.020	0.254 $\pm$ 0.038	0.187 $\pm$ 0.050 **	0.136 $\pm$ 0.018 **	0.126 $\pm$ 0.031 **
36d	0.201 $\pm$ 0.037	0.180 $\pm$ 0.051	0.148 $\pm$ 0.024	0.078 $\pm$ 0.041 **	0.061 $\pm$ 0.012 a)
Adrenals (mg) 2d	64.8 $\pm$ 4.92	66.8 $\pm$ 7.53	66.4 $\pm$ 6.07	62.6 $\pm$ 7.4	67.6 $\pm$ 10.9
7d	78.4 $\pm$ 7.77	75 $\pm$ 10.3	74.2 $\pm$ 6.83	66.6 $\pm$ 5.27	71.4 $\pm$ 11.5
36d	91 $\pm$ 13.8	99 $\pm$ 9.25	97.2 $\pm$ 19	80.8 $\pm$ 16	81.5 $\pm$ 7.78 a)
Adrenals (%) 2d	0.039 $\pm$ 0.001	0.040 $\pm$ 0.006	0.039 $\pm$ 0.004	0.038 $\pm$ 0.006	0.041 $\pm$ 0.007
7d	0.042 $\pm$ 0.004	0.040 $\pm$ 0.005	0.039 $\pm$ 0.003	0.038 $\pm$ 0.003	0.044 $\pm$ 0.007
36d	0.035 $\pm$ 0.006	0.036 $\pm$ 0.002	0.042 $\pm$ 0.008	0.035 $\pm$ 0.005	0.037 $\pm$ 0.007 a)
Ovaries (mg) 2d	127 $\pm$ 19	128 $\pm$ 11	120 $\pm$ 20	118 $\pm$ 19	108 $\pm$ 10
7d	150 $\pm$ 20	132 $\pm$ 22	126 $\pm$ 21	135 $\pm$ 23	123 $\pm$ 13
36d	181 $\pm$ 22	196 $\pm$ 12	170 $\pm$ 23	146 $\pm$ 37	161 $\pm$ 25 a)
Ovaries (%) 2d	0.076 $\pm$ 0.010	0.077 $\pm$ 0.007	0.070 $\pm$ 0.012	0.071 $\pm$ 0.010	0.066 $\pm$ 0.006
7d	0.080 $\pm$ 0.014	0.070 $\pm$ 0.010	0.067 $\pm$ 0.012	0.077 $\pm$ 0.009	0.076 $\pm$ 0.008
36d	0.069 $\pm$ 0.008	0.070 $\pm$ 0.004	0.073 $\pm$ 0.007	0.063 $\pm$ 0.015	0.071 $\pm$ 0.003 a)
Heart (mg) 2d	710 $\pm$ 65	682 $\pm$ 65	716 $\pm$ 53	693 $\pm$ 33	697 $\pm$ 53
7d	765 $\pm$ 107	738 $\pm$ 67	760 $\pm$ 82	679 $\pm$ 63	628 $\pm$ 57
36d	958 $\pm$ 82	989 $\pm$ 119	853 $\pm$ 71	856 $\pm$ 88	950 $\pm$ 100 a)
Heart (%) 2d	0.424 $\pm$ 0.017	0.410 $\pm$ 0.032	0.418 $\pm$ 0.016	0.418 $\pm$ 0.029	0.424 $\pm$ 0.024
7d	0.404 $\pm$ 0.026	0.388 $\pm$ 0.014	0.401 $\pm$ 0.027	0.389 $\pm$ 0.032	0.386 $\pm$ 0.019
36d	0.366 $\pm$ 0.030	0.354 $\pm$ 0.030	0.369 $\pm$ 0.023	0.372 $\pm$ 0.025	0.421 $\pm$ 0.002 a)
Lungs (mg) 2d	952 $\pm$ 94	931 $\pm$ 26	1007 $\pm$ 61	953 $\pm$ 59	909 $\pm$ 118
7d	1049 $\pm$ 98	1085 $\pm$ 67	1062 $\pm$ 86	1034 $\pm$ 110	990 $\pm$ 82
36d	1198 $\pm$ 31	1212 $\pm$ 89	1109 $\pm$ 29	1274 $\pm$ 113	1312 $\pm$ 74 a)
Lungs (%) 2d	0.568 $\pm$ 0.029	0.560 $\pm$ 0.019	0.588 $\pm$ 0.028	0.574 $\pm$ 0.028	0.554 $\pm$ 0.069
7d	0.556 $\pm$ 0.022	0.573 $\pm$ 0.036	0.561 $\pm$ 0.025	0.592 $\pm$ 0.036	0.609 $\pm$ 0.033
36d	0.458 $\pm$ 0.009	0.436 $\pm$ 0.035	0.481 $\pm$ 0.036	0.555 $\pm$ 0.051 **	0.587 $\pm$ 0.097 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical analysis was not applied.

表17 臓器重量(雌 続き)

Organs	Female					
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg	
No.of samples 2d	5	5	5	5	5	
No.of samples 7d	5	5	5	5	5	
No.of samples 36d	5	5	5	5	2	
Kidneys (mg) 2d	1609 $\pm$ 142	1524 $\pm$ 96	1668 $\pm$ 112	1624 $\pm$ 124	1636 $\pm$ 197	
	7d	1698 $\pm$ 144	1694 $\pm$ 173	1827 $\pm$ 164	1636 $\pm$ 207	
	36d	2076 $\pm$ 115	2077 $\pm$ 88	1867 $\pm$ 138 *	1815 $\pm$ 144 *	2213 $\pm$ 264 a)
Kidneys (%) 2d	0.961 $\pm$ 0.057	0.916 $\pm$ 0.025	0.974 $\pm$ 0.033	0.978 $\pm$ 0.050	0.994 $\pm$ 0.095	
	7d	0.900 $\pm$ 0.028	0.891 $\pm$ 0.045	0.964 $\pm$ 0.057	0.936 $\pm$ 0.076	0.944 $\pm$ 0.057
	36d	0.794 $\pm$ 0.052	0.746 $\pm$ 0.027	0.807 $\pm$ 0.035	0.790 $\pm$ 0.055	0.981 $\pm$ 0.010 a)
Spleen (mg) 2d	562 $\pm$ 76	487 $\pm$ 59	593 $\pm$ 49	502 $\pm$ 90	546 $\pm$ 92	
	7d	638 $\pm$ 140	609 $\pm$ 43	601 $\pm$ 49	587 $\pm$ 114	551 $\pm$ 51
	36d	700 $\pm$ 85	729 $\pm$ 115	565 $\pm$ 43	685 $\pm$ 78	688 $\pm$ 33 a)
Spleen (%) 2d	0.335 $\pm$ 0.034	0.292 $\pm$ 0.029	0.347 $\pm$ 0.043	0.302 $\pm$ 0.049	0.332 $\pm$ 0.055	
	7d	0.336 $\pm$ 0.049	0.321 $\pm$ 0.005	0.317 $\pm$ 0.020	0.334 $\pm$ 0.044	0.339 $\pm$ 0.028
	36d	0.268 $\pm$ 0.037	0.262 $\pm$ 0.036	0.245 $\pm$ 0.017	0.298 $\pm$ 0.025	0.306 $\pm$ 0.019 a)
Liver (mg) 2d	8474 $\pm$ 984	9558 $\pm$ 1298	11208 $\pm$ 713 **	11545 $\pm$ 1074 **	10680 $\pm$ 1607 **	
	7d	8658 $\pm$ 820	10754 $\pm$ 1146	12560 $\pm$ 1274 **	12427 $\pm$ 2370 **	11342 $\pm$ 1189 **
	36d	10663 $\pm$ 723	12417 $\pm$ 1651	10463 $\pm$ 928	11991 $\pm$ 1214	14396 $\pm$ 1366 a)
Liver (%) 2d	5.051 $\pm$ 0.274	5.730 $\pm$ 0.564	6.552 $\pm$ 0.462 **	6.957 $\pm$ 0.546 **	6.482 $\pm$ 0.739 **	
	7d	4.589 $\pm$ 0.225	5.656 $\pm$ 0.349 **	6.629 $\pm$ 0.480 **	7.067 $\pm$ 0.799 **	6.966 $\pm$ 0.412 **
	36d	4.072 $\pm$ 0.215	4.451 $\pm$ 0.453	4.521 $\pm$ 0.239	5.203 $\pm$ 0.240 **	6.389 $\pm$ 0.095 a)
Brain (mg) 2d	1707 $\pm$ 103	1801 $\pm$ 290	1690 $\pm$ 54	1746 $\pm$ 55	1653 $\pm$ 42	
	7d	1732 $\pm$ 54	1758 $\pm$ 29	1720 $\pm$ 89	1699 $\pm$ 48	1662 $\pm$ 30
	36d	1823 $\pm$ 26	1871 $\pm$ 111	1785 $\pm$ 45	1780 $\pm$ 73	1787 $\pm$ 93 a)
Brain (%) 2d	1.021 $\pm$ 0.043	1.081 $\pm$ 0.145	0.989 $\pm$ 0.058	1.054 $\pm$ 0.056	1.008 $\pm$ 0.038	
	7d	0.922 $\pm$ 0.060	0.929 $\pm$ 0.068	0.910 $\pm$ 0.055	0.977 $\pm$ 0.065	1.025 $\pm$ 0.057
	36d	0.697 $\pm$ 0.019	0.673 $\pm$ 0.046	0.774 $\pm$ 0.048	0.777 $\pm$ 0.065 *	0.795 $\pm$ 0.046 a)
Thyroids (mg) 2d	28 $\pm$ 6	25 $\pm$ 8	26 $\pm$ 8	23 $\pm$ 6	30 $\pm$ 7	
	7d	27 $\pm$ 3	29 $\pm$ 4	29 $\pm$ 4	29 $\pm$ 4	25 $\pm$ 6
	36d	24 $\pm$ 5	27 $\pm$ 6	26 $\pm$ 6	25 $\pm$ 8	23 $\pm$ 6 a)
Thyroids (%) 2d	0.017 $\pm$ 0.004	0.015 $\pm$ 0.005	0.015 $\pm$ 0.004	0.014 $\pm$ 0.003	0.018 $\pm$ 0.004	
	7d	0.014 $\pm$ 0.002	0.015 $\pm$ 0.001	0.015 $\pm$ 0.001	0.016 $\pm$ 0.002	0.016 $\pm$ 0.003
	36d	0.009 $\pm$ 0.002	0.010 $\pm$ 0.002	0.011 $\pm$ 0.003	0.011 $\pm$ 0.004	0.010 $\pm$ 0.002 a)
Pituitary (mg) 2d	15.6 $\pm$ 2.6	13.4 $\pm$ 1.7	14.4 $\pm$ 1.8	12.6 $\pm$ 2.5	12.6 $\pm$ 1.8	
	7d	16.6 $\pm$ 2.1	15.8 $\pm$ 1.3	14.2 $\pm$ 3.1	14.2 $\pm$ 3.1	12.8 $\pm$ 0.8
	36d	13.8 $\pm$ 1.3	15.0 $\pm$ 2.3	14.0 $\pm$ 3.8	12.4 $\pm$ 1.8	10.5 $\pm$ 0.7 a)
Pituitary (%) 2d	0.009 $\pm$ 0.002	0.008 $\pm$ 0.001	0.008 $\pm$ 0.001	0.008 $\pm$ 0.001	0.008 $\pm$ 0.001	
	7d	0.009 $\pm$ 0.002	0.008 $\pm$ 0.000	0.008 $\pm$ 0.002	0.008 $\pm$ 0.002	0.008 $\pm$ 0.001
	36d	0.005 $\pm$ 0.000	0.005 $\pm$ 0.001	0.006 $\pm$ 0.002	0.005 $\pm$ 0.001	0.005 $\pm$ 0.000 a)

( Significant difference on the test of Dunnett, \*: p<0.05, \*\*: p<0.01 )

a) : Number of animals is 2. Statistical analysis was not applied.

表18 病理組織学的検査 (途中死亡動物: 雌)

Dead animals		Female				
		0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples	2d	0	0	0	0	0
No.of samples	7d	0	0	0	0	0
No.of samples	36d	0	0	0	0	3

  

organ	Pathological findings	
liver	irregular shape: liver cell(+)	2
	irregular shape: liver cell(2+)	1
	disarrangement: liver cell(2+)	2
	disarrangement: liver cell(3+)	1
	duct-like arrangement: liver cell(+)	1
	duct-like arrangement: liver cell(2+)	2
	peliosis(+)	1
	peliosis(2+)	1
	fibrosis:central(+)	3
	inflammatory infiltration(+)	2
bone marrow	inflammatory infiltration(2+)	1
	decreased hematopoiesis(+)	2
	decreased hematopoiesis(2+)	1
	fibrosis(+)	2
thymus	fibrosis(2+)	1
	atrophy(4+)	3
spleen	atrophy: white pulp(+)	2
bone	thickening of bone(+)	2
brain	hemorrhage(2+)	2
	hemorrhage(+)	1
spinal cord	hemorrhage(2+)	1
	hemorrhage(+)	(1) 1
subcutis	hemorrhage(+)	(2) 2
nasal cavity	hemorrhage(2+)	
	congestion(2+)	1
	congestion(3+)	1
lung	edema(+)	2

(註)+:軽度、2+:中等度、3+:重度、4+:極重度



表19 病理組織学的検査 (定期解剖動物:雄 投与後2日)

Survival animals	Male					
	Findings	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 2d		5	5	5	5	5
<b>liver</b>						
cytoplasmic basophilia: tigroid(+)		0	5	5	5	5

(註) + : 軽度、2+ : 中等度、3+ : 重度

表20 病理組織学的検査 (定期解剖動物:雄 投与後7日)

Survival animals	Male					
	Findings	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 7d		5	5	5	5	5
<b>liver</b>						
cytoplasmic basophilia:tigroid(+)		0	5	5	5	5
hepatocellular hypertrophy(+)		0	0	5	5	5
cytoplasmic inclusion:liver cell(+)		0	0	0	0	3
<b>bone marrow</b>						
decreased hematopoiesis(+)		0	0	0	0	2
<b>thymus</b>						
atrophy(+)		0	0	0	2	3
atrophy(2+)		0	0	0	1	2

(註) + : 軽度、2+ : 中等度、3+ : 重度

表21 病理組織学的検査 (定期解剖動物:雄 投与後36日)

Survival animals	Male				
	Findings	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg
No.of samples 36d	5	5	5	5	5
<b>liver</b>					
cytoplasmic basophilia:tigroid(+)	0	5	5	5	5
hepatocellular hypertrophy(+)	0	5	5	5	4
cytoplasmic inclusion:liver cell(+)	0	0	0	1	0
disarrangement:liver cell(2+)	0	0	0	0	1
duct-like arrangement:liver cell(2+)	0	0	0	0	1
cyst-like arrangement:liver cell(2+)	0	0	0	0	1
fibrosis: central(+)	0	0	0	0	1
<b>bone marrow</b>					
decreased hematopoiesis(+)	0	0	0	2	1
decreased hematopoiesis(2+)	0	0	0	1	2
decreased hematopoiesis(3+)	0	0	0	0	2
fibrosis(+)	0	0	0	1	1
fibrosis(2+)	0	0	0	0	2
<b>thymus</b>					
atrophy(+)	0	0	0	3	0
atrophy(2+)	0	0	0	0	2
atrophy(3+)	0	0	0	0	3
<b>spleen</b>					
extramedullary hematopoiesis(+)	0	0	0	1	4
<b>bone</b>					
thickening of bone(+)	0	0	0	0	1
thickening of bone(2+)	0	0	0	2	3
<b>thyroid</b>					
vacuolar change(2+)	0	0	0	1	0
<b>subcutis</b>					
hemorrhage(2+)	0	0	0	0	(1)1
<b>muscle</b>					
hemorrhage(+)	0	0	0	0	(1)1

(註) + : 軽度、2+ : 中等度、3+ : 重度

表22 病理組織学的検査 (定期解剖動物:雌 投与後2日)

Survival animals	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
Findings					
No.of samples 2d	5	5	5	5	5
<b>liver</b>					
cytoplasmic basophilia: tigroid(+)	0	5	5	5	2

(註) + : 軽度、2+ : 中等度、3+ : 重度

表23 病理組織学的検査 (定期解剖動物:雌 投与後7日)

Survival animals	Female				
	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
Findings					
No.of samples 7d	5	5	5	5	5
<b>liver</b>					
cytoplasmic basophilia:tigroid(+)	0	5	5	5	5
hepatocellular hypertrophy(+)	0	5	5	5	5
cytoplasmic inclusion:liver cell(+)	0	0	0	0	2
necrosis:single cell(+)	0	0	0	4	4
fibrosis: central(+)	0	0	0	4	4
<b>bone marrow</b>					
decreased hematopoiesis(+)	0	0	0	0	2
<b>thymus</b>					
atrophy(+)	0	0	1	4	1
atrophy(2+)	0	0	0	1	4
karyorrhexis(+)	0	0	0	2	0

(註) + : 軽度、2+ : 中等度、3+ : 重度

表24 病理組織学的検査 (定期解剖動物:雌 投与後36日)

Survival animals	Female					
	Findings	0(control)	10 $\mu$ g/kg	30 $\mu$ g/kg	100 $\mu$ g/kg	300 $\mu$ g/kg
No.of samples 36d	5	5	5	5	5	2
<b>liver</b>						
cytoplasmic basophilia:tigroid(+)	0	5	5	5	5	2
hepatocellular hypertrophy(+)	0	5	5	5	5	2
vacuolic change:liver cell(+)	0	0	0	0	0	1
multinuclear:liver cell(+)	0	0	0	0	4	2
disarrangement:liver cell(+)	0	0	0	0	0	1
disarrangement:liver cell(2+)	0	0	0	1	1	1
duct-like arrangement:liver cell(+)	0	0	0	0	0	1
duct-like arrangement:liver cell(2+)	0	0	0	1	0	0
cyst-like arrangement:liver cell(2+)	0	0	0	0	0	0
fibrosis: central(+)	0	1	4	5	5	2
<b>bone marrow</b>						
decreased hematopoiesis(+)	0	0	0	2	2	0
decreased hematopoiesis(2+)	0	0	0	3	3	0
decreased hematopoiesis(3+)	0	0	0	0	0	2
fibrosis(+)	0	0	0	1	1	0
fibrosis(2+)	0	0	0	2	2	2
<b>thymus</b>						
atrophy(+)	0	0	0	3	3	0
atrophy(2+)	0	0	0	0	0	0
atrophy(3+)	0	0	0	2	2	2
<b>spleen</b>						
atrophy: white pulp(+)	0	0	0	0	0	1
atrophy: white pulp(2+)	0	0	0	0	0	1
extramedullary hematopoiesis(+)	0	0	0	0	0	1
<b>bone</b>						
thickening of bone(+)	0	0	0	2	2	0
thickening of bone(2+)	0	0	0	3	3	2
<b>thyroid</b>						
vacuolar change(3+)	0	0	1	0	0	0

(註) + : 軽度、2+ : 中等度、3+ : 重度