

Summary of results (Diethyl phthalate)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}$)			0	0.4	2	10	50	2,000,000	
Number of pregnant females			15	15	15	14	14	15	
Found dead			0	0	0	0	0	0	
F0	Gestation Period	Clinical findings	-	-	-	-	-	-	
		Dead	0/15	0/15	0/15	0/14	0/14	0/15	
		Body weights (g)	Day 0	241.4 ± 6.8	242.0 ± 7.5	241.0 ± 11.4	241.8 ± 7.1	241.9 ± 7.8	239.3 ± 5.7
			Day 7	277.1 ± 7.7	279.2 ± 9.1	280.6 ± 11.2	276.1 ± 9.4	279.5 ± 9.2	271.7 ± 7.2
			Day 14	317.3 ± 10.6	320.6 ± 11.8	321.0 ± 12.6	317.5 ± 13.1	322.7 ± 11.0	313.0 ± 8.9
			Day 18	365.0 ± 13.0	371.5 ± 13.2	370.2 ± 12.6	368.3 ± 18.0	371.7 ± 13.2	351.9 L ± 11.5
			Day 21	399.2 ± 15.1	409.3 ± 16.2	408.4 ± 15.5	403.9 ± 19.9	406.2 ± 18.3	383.6 L ± 13.4
		Body weight gains(g)	Day 0-21	157.8 ± 15.7	167.3 ± 13.8	167.4 ± 9.9	162.1 ± 14.1	164.3 ± 14.7	144.2 L ± 10.4
		Food Consumption (g)	Day 0-7	22.8 ± 1.2	23.4 ± 1.6	23.4 ± 1.5	23.0 ± 1.6	23.4 ± 1.3	20.1 L ± 1.3
			Day 7-14	26.0 ± 1.5	26.1 ± 2.1	26.7 ± 1.9	26.5 ± 1.5	26.6 ± 1.5	23.6 L ± 1.5
	Day 14-21		24.6 ± 1.9	25.5 ± 2.6	25.6 ± 2.9	26.2 ± 2.3	26.5 ± 2.3	21.3 L ± 1.2	
	Lactation Period	Body weights (g)	Day 0	273.9 ± 15.7	276.6 ± 13.0	276.3 ± 17.1	274.6 ± 13.1	281.4 ± 20.4	278.6 ± 7.9
			Day 21	323.2 ± 12.2	320.9 ± 12.8	324.3 ± 12.3	320.2 ± 14.4	327.1 ± 11.3	321.0 ± 14.0
		Body weight gains(g)	Day 0-21	49.3 ± 14.2	44.4 ± 14.1	48.1 ± 12.3	45.6 ± 14.8	45.7 ± 15.9	40.8 ± 11.7
		Food consumption (g)	Day 0-4	25.5 ± 5.7	29.8 ± 2.5	27.6 ± 4.6	26.6 ± 5.6	25.5 ± 6.3	23.1 ± 4.4
			Day 4-7	28.2 ± 2.8	28.5 ± 2.3	29.1 ± 2.5	28.6 ± 2.1	27.1 ± 3.1	24.3 L ± 2.1
			Day 7-14	51.2 ± 4.0	51.5 ± 2.8	51.9 ± 2.9	52.4 ± 2.8	52.2 ± 3.5	42.6 L ± 5.2
Days 14-21			62.5 ± 4.7	61.5 ± 3.5	62.5 ± 3.2	64.1 ± 4.2	63.6 ± 3.7	50.4 L ± 7.2	

H or **H** : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or **L** : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

-: No treatment-related alterations.

Summary of results (continued-1)

Generation			Dam: F0 Offspring: F1						
Dose (µg/kg/day)			0	0.4	2	10	50	2,000,000	
Number of pregnant females			15	15	15	14	14	15	
F0	Delivery and maternal behavior	Defective delivery	1/15 (delayed birth)	0/15	0/15	0/14	0/14	0/15	
		Abnormality of lactation	0/15	0/15	0/15	0/14	0/14	3/15 (annihilation of pups)	
		Gestation index (%)	100.0	100.0	100.0	100.0	100.0	100.0	
		Gestation length (day)	22.1 ±0.5	22.1 ±0.3	22.1 ±0.3	22.0 ±0.0	22.1 ±0.3	22.1 ±0.3	
		Number of implantation sites	16.6 ±2.3	16.9 ±1.6	16.9 ±2.0	17.1 ±2.6	17.4 ±2.4	16.5 ±2.2	
	Number of dams			15	15	15	14	14	12
	Gross findings			-	-	-	-	-	-
	Absolute organ weights	Adrenal (mg)	76.0 ±7.3	74.2 ±6.6	73.7 ±9.4	72.8 ±7.5	73.2 ±9.7	82.6 ±6.7	
		Pituitary (mg)	14.9 ±1.4	13.2 L ±1.9	12.8 L ±1.4	12.2 L ±1.7	13.2 L ±1.4	12.2 L ±1.8	
		Thyroid (mg)	24.4 ±4.8	21.4 ±4.7	21.7 ±3.0	19.5 L ±2.9	19.5 L ±2.6	18.6 L ±4.8	
		Liver (mg)	15495.1 ±2113.0	15202.8 ±1643.0	15302.2 ±1456.6	14630.5 ±1737.4	15375.1 ±1400.1	17042.8 ±2072.9	
		Kidney (mg)	2529.4 ±235.3	2482.0 ±133.0	2485.0 ±149.9	2419.0 ±146.3	2518.5 ±124.9	2533.2 ±189.2	
		Ovary (mg)	93.3 ±13.3	98.9 ±13.3	96.3 ±11.8	92.1 ±13.8	97.8 ±10.5	86.9 ±11.2	
		Uterus (mg)	408.9 ±93.3	444.5 ±146.6	403.7 ±103.9	411.3 ±117.5	445.7 ±106.9	342.7 ±116.4	
	Relative organ weight	Adrenal (%)	0.0235 ±0.0017	0.0232 ±0.0024	0.0228 ±0.0031	0.0227 ±0.0020	0.0224 ±0.0029	0.0258 ±0.0019	
		Pituitary (%)	0.0046 ±0.0005	0.0041 L ±0.0006	0.0039 L ±0.0004	0.0038 L ±0.0005	0.0040 L ±0.0004	0.0038 L ±0.0006	
		Thyroid (%)	0.0076 ±0.0015	0.0067 ±0.0015	0.0067 ±0.0010	0.0061 L ±0.0007	0.0060 L ±0.0008	0.0058 L ±0.0014	
		Liver (%)	4.7944 ±0.6546	4.7322 ±0.4339	4.7196 ±0.4241	4.5600 ±0.4043	4.6985 ±0.3744	5.3048 H ±0.5467	
		Kidney (%)	0.7829 ±0.0743	0.7745 ±0.0502	0.7669 ±0.0499	0.7558 ±0.0374	0.7709 ±0.0495	0.7898 ±0.0571	
		Ovary (%)	0.0146 ±0.0031	0.0154 ±0.0024	0.0152 ±0.0024	0.0143 ±0.0026	0.0144 ±0.0021	0.0134 ±0.0024	
		Uterus (%)	0.1267 ±0.0296	0.1387 ±0.0459	0.1247 ±0.0323	0.1280 ±0.0358	0.1364 ±0.0328	0.1068 ±0.0368	
	Histopathological findings	Liver: Eosinophilic, granular change(+)	0/15	0/15	0/15	0/14	0/14	12/15	

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L or L : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).

-: No treatment-related alterations.

Summary of results (continued-2)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
F 1	Number of pups delivered		15.4 ± 2.4	15.5 ± 1.2	15.8 ± 1.7	15.8 ± 2.7	15.5 ± 3.1	14.5 ± 3.0	
	Delivery index (%)		93.1 ± 8.0	91.7 ± 7.0	93.6 ± 4.8	92.2 ± 7.9	83.3 ± 8.4	87.6 ± 12.3	
	Birth index (%)		91.7 ± 12.3	91.7 ± 7.0	93.6 ± 4.8	92.2 ± 7.9	87.4 ± 8.3	80.3 ± 20.0	
	Sex ratio (Male/ female)		1.30 ± 0.53	0.95 ± 0.58	1.29 ± 0.68	0.90 ± 0.47	1.09 ± 0.48	1.26 ± 0.58	
	Number of live pups	LD 0	15.1 ± 2.6	15.5 ± 1.2	15.8 ± 1.7	15.8 ± 2.7	15.4 ± 3.1	13.3 ± 3.8	
		LD 4	14.0 ± 2.6	15.3 ± 1.2	15.2 ± 1.5	15.4 ± 2.3	14.8 ± 2.9	8.7 <u>L</u> ± 5.7	
	Viability (%)	LD 0	98.1 ± 7.4	100.0 ± 0.0	100.0 ± 0.0	100.0 ± 0.0	99.0 ± 2.4	90.8 L ± 16.2	
		LD 4	92.9 ± 1.2	98.7 ± 2.6	96.4 ± 5.3	98.1 ± 3.4	95.4 ± 6.3	68.1 <u>L</u> ± 36.9	
		LD 21	100.0 ± 0.0	99.2 ± 3.2	99.2 ± 3.2	100.0 ± 0.0	100.0 ± 0.0	99.0 ± 3.5	
	Number of malformations	Male	Hypo-spadias	0	0	0	0	0	1
		Female	Cleft palate	0	0	0	0	1	0
	Clinical findings	Male		-	-	-	-	-	-
		Female		-	-	-	-	-	-

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-: No treatment-related alterations.

Summary of results (continued-3)

Generation				Dam: F0 Offspring: F1					
Dose ($\mu\text{g}/\text{kg}/\text{day}$)				0	0.4	2	10	50	2,000,000
Number of litters				15	15	15	14	14	12
F1	Body weights (g)	Male	Day 0	5.8 ± 0.3	6.1 • c ± 0.3	5.9 ± 0.4	6.0 ± 0.3	6.0 ± 0.4	5.0 <u>L</u> ± 0.3
			Day 4	8.8 ± 1.3	9.3 ± 0.5	8.8 ± 1.3	9.0 ± 0.8	8.9 ± 1.1	7.6 <u>L</u> ± 1.0
			Day 7	14.2 ± 1.6	14.4 ± 1.0	14.3 ± 1.2	14.1 ± 1.2	13.9 ± 1.7	11.2 <u>L</u> ± 2.0
			Day 14	29.6 ± 3.5	29.8 ± 1.6	30.0 ± 2.1	30.1 ± 1.8	29.2 ± 2.5	23.2 <u>L</u> ± 3.4
			Day 21	48.1 ± 4.1	49.0 ± 2.7	48.7 ± 2.5	49.4 ± 3.3	48.1 ± 3.5	36.9 <u>L</u> ± 5.4
		Female	Day 0	5.4 ± 0.3	5.6 ± 0.3	5.5 ± 0.3	5.5 ± 0.3	5.6 ± 0.3	4.7 <u>L</u> ± 0.3
			Day 4	8.3 ± 1.3	8.5 ± 0.6	8.4 ± 0.7	8.3 ± 0.9	8.4 ± 1.1	7.1 <u>L</u> ± 0.7
			Day 7	13.1 ± 1.7	13.5 ± 1.0	13.3 ± 1.2	13.5 ± 1.4	13.3 ± 1.6	10.6 <u>L</u> ± 1.4
			Day 14	26.9 ± 2.5	28.1 ± 1.5	28.6 ± 1.9	28.8 ± 2.3	28.0 ± 2.5	22.5 <u>L</u> ± 2.4
			Day 21	44.7 ± 4.3	45.7 ± 2.5	46.0 ± 2.7	47.1 ± 3.7	45.4 ± 3.5	35.6 <u>L</u> ± 3.9
	Body weight gains (g)	Male	Day 0-4	3.0 ± 1.1	3.1 ± 0.4	2.9 ± 1.2	2.9 ± 0.7	2.9 ± 0.9	2.5 ± 0.8
			Day 0-7	8.4 ± 1.5	8.3 ± 0.9	8.4 ± 1.0	8.1 ± 1.1	7.9 ± 1.4	6.1 <u>L</u> ± 1.8
			Day 0-14	23.8 ± 3.4	23.7 ± 1.5	24.2 ± 2.0	24.1 ± 1.7	23.3 ± 2.2	18.1 <u>L</u> ± 3.4
			Day 0-21	42.3 ± 4.0	42.8 ± 2.6	42.8 ± 2.4	43.4 ± 3.2	42.1 ± 3.2	31.8 <u>L</u> ± 5.3
		Female	Day 0-4	2.9 ± 1.2	3.0 ± 0.4	2.9 ± 0.6	2.8 ± 0.8	2.9 ± 1.0	2.3 ± 0.7
			Day 0-7	7.7 ± 1.6	7.9 ± 0.9	7.8 ± 1.0	8.0 ± 1.2	7.7 ± 1.4	5.8 ± 1.4
			Day 0-14	21.5 ± 2.4	22.5 ± 1.4	23.1 ± 1.9	23.3 ± 2.1	22.5 ± 2.3	17.7 <u>L</u> ± 2.4
			Day 0-21	39.3 ± 4.3	40.1 ± 2.4	40.5 ± 2.6	41.6 ± 3.5	39.9 ± 3.4	30.8 <u>L</u> ± 3.9
	Anogenital distances (LD 0)	Male	AGD (mm)	2.64 ± 0.20	2.75 ± 0.14	2.78 ± 0.18	2.73 ± 0.25	2.75 ± 0.19	2.81 ± 0.25
			AGD/ 3 • \bar{a} BW	1.47 ± 0.11	1.50 ± 0.07	1.54 ± 0.09	1.50 ± 0.14	1.52 ± 0.12	1.64 <u>H</u> ± 0.16
		Female	AGD (mm)	1.21 ± 0.05	1.24 ± 0.06	1.26 ± 0.07	1.27 • c ± 0.08	1.25 ± 0.06	1.38 <u>H</u> ± 0.23
			AGD/ 3 • \bar{a} BW	0.69 ± 0.03	0.70 ± 0.04	0.71 ± 0.04	0.72 ± 0.04	0.71 ± 0.04	0.82 <u>H</u> ± 0.14
	Presence of nipple (LD 12)	Male		0/120	0/120	0/120	0/112	0/112	0/99
		Female		120/120	119/119	119/119	112/112	112/112	98/98

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L or L : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-4)

Generation				Dam: F0 Offspring: F1					
Dose ($\mu\text{g}/\text{kg}/\text{day}$)				0	0.4	2	10	50	2,000,000
Number of litters				15	15	15	14	14	12
F1	Reflex responses (day)	Male	Surface righting	1.2 ± 0.4	1.3 ± 0.6	1.3 ± 0.6	1.3 ± 0.5	1.2 ± 0.5	1.4 ± 0.7
			Cliff aversion	4.2 ± 0.7	4.3 ± 0.8	4.5 ± 0.9	3.9 ± 0.5	4.2 ± 0.6	4.6 ± 1.1
			Negative geotaxis	7.7 ± 1.1	7.5 ± 1.1	7.5 ± 1.2	8.3 ± 0.8	7.8 ± 1.2	8.9 H ± 1.0
		Female	Surface righting	1.4 ± 0.7	1.4 ± 0.6	1.4 ± 0.6	1.1 ± 0.4	1.3 ± 0.6	1.3 ± 0.5
			Cliff aversion	4.2 ± 0.9	4.5 ± 0.9	4.6 ± 1.0	4.0 ± 0.8	4.3 ± 0.7	5.3 H ± 1.2
			Negative geotaxis	7.8 ± 1.2	7.6 ± 1.1	7.9 ± 1.1	8.2 ± 1.1	8.2 ± 1.1	9.7 H ± 1.3
	Postnatal development (day)	Male	Incisor eruption	10.3 ± 0.7	10.1 ± 0.6	9.8 ± 1.8	10.5 ± 0.6	10.4 ± 0.8	10.7 ± 0.7
			Ear opening	13.0 ± 0.7	13.1 ± 0.3	13.1 ± 0.3	13.3 ± 0.5	13.0 ± 0.4	14.5 H ± 0.9
			Eye opening	17.7 ± 0.7	17.5 ± 0.6	17.7 ± 0.5	17.6 ± 0.5	17.6 ± 0.6	18.8 H ± 0.5
		Female	Incisor eruption	10.2 ± 0.7	10.2 ± 0.8	10.3 ± 0.5	10.4 ± 0.5	10.4 ± 0.8	10.7 ± 0.6
			Ear opening	13.0 ± 0.7	13.1 ± 0.4	13.1 ± 0.3	13.1 ± 0.4	13.1 ± 0.5	14.4 H ± 0.7
			Eye opening	17.8 ± 0.7	17.5 ± 0.5	17.7 ± 0.6	17.6 ± 0.5	17.7 ± 0.6	18.8 H ± 0.7

H or **H** : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or **L** : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-5)

Generation			Dam: F0 Offspring: F1						
Dose (µg/kg/day)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals	LD 21	Male	32	29	29	27	27	26	
F 1	Male	Gross findings	Hydro-nephrosis	0	0	1	0	0	0
		Absolute organ weights	Thymus (mg)	201.5 ±33.1	205.0 ±21.9	203.2 ±23.6	197.3 ±30.3	193.8 ±28.2	141.5 L ±26.3
			Adrenal (mg)	10.0 ±2.0	10.0 ±1.8	10.0 ±1.7	10.3 ±1.7	9.6 ±1.9	8.0 L ±2.0
			Pituitary (mg)	1.6 ±0.4	1.7 ±0.7	2.0 ±1.0	1.5 ±0.7	1.6 ±0.5	1.4 ±0.5
			Thyroid (mg)	6.4 ±1.9	5.9 ±2.1	6.8 ±1.9	6.4 ±2.2	5.7 ±1.9	6.0 ±3.2
			Liver (mg)	1760.4 ±268.2	1790.9 ±195.1	1781.6 ±163.8	1802.4 ±204.8	1751.7 ±200.3	1341.5 L ±262.3
			Kidney (mg)	526.7 ±55.7	538.1 ±51.5	543.4 ±98.3	534.5 ±54.7	527.1 ±53.2	407.5 L ±66.2
			Testis (mg)	183.1 ±24.0	190.4 ±19.3	186.2 ±18.0	183.2 ±24.9	178.0 ±21.7	122.7 L ±40.1
			Epididymis (mg)	35.5 ±4.3	35.4 ±5.0	36.0 ±5.2	35.0 ±2.9	34.3 ±4.4	31.6 L ±4.2
			Prostate (mg)	33.4 ±8.3	33.2 ±8.6	33.3 ±8.3	29.9 ±7.1	30.2 ±7.2	24.1 L ±7.2
			Seminal vesicle + Coagulation gland (mg)	14.5 ±3.2	14.9 ±3.6	15.4 ±4.0	15.6 ±4.2	14.1 ±3.9	12.6 ±3.1
			Levator ani + Bulbocavernosus muscles (mg)	33.9 ±6.2	32.9 ±4.1	34.1 ±3.5	33.1 ±7.0	32.9 ±6.7	30.2 ±6.0
			Relative organ weights	Thymus (%)	0.4288 ±0.0570	0.4161 ±0.0426	0.40165 ±0.0457	0.4035 ±0.0458	0.4094 ±0.0483
		Adrenal (%)		0.0214 ±0.0044	0.0203 ±0.0036	0.0207 ±0.0026	0.0211 ±0.0035	0.0202 ±0.0039	0.0215 ±0.0042
		Pituitary (%)		0.0034 ±0.0011	0.0035 ±0.0015	0.0039 ±0.0018	0.0031 ±0.0015	0.0035 ±0.0013	0.0038 ±0.0015
		Thyroid (%)		0.0139 ±0.0051	0.0121 ±0.0041	0.0140 ±0.0033	0.0132 ±0.0048	0.0122 ±0.0041	0.0165 ±0.0081
		Liver (%)		3.7266 ±0.2779	3.6504 ±0.1665	3.6522 ±0.2176	3.6878 ±0.2010	3.6962 ±0.2200	3.6190 ±0.2011
		Kidney (%)		1.1208 ±0.0661	1.0952 ±0.0456	1.1254 ±0.1632	1.0949 ±0.0571	1.1139 ±0.0648	1.1065 ±0.0591
		Testis (%)		0.3895 ±0.0392	0.3874 ±0.0241	0.3863 ±0.0285	0.3751 ±0.0383	0.3756 ±0.0283	0.3248 L ±0.0707
		Epididymis (%)		0.0758 ±0.0084	0.0728 ±0.0109	0.0756 ±0.0107	0.0720 ±0.0067	0.0726 ±0.0083	0.0867 H ±0.0115
		Prostate (%)		0.0723 ±0.0227	0.0671 ±0.0174	0.0691 ±0.0164	0.0612 ±0.0134	0.0635 ±0.0131	0.0660 ±0.0182
		Seminal vesicle + Coagulation gland (%)		0.0313 ±0.0085	0.0305 ±0.0069	0.0319 ±0.0081	0.0322 ±0.0094	0.0299 ±0.0083	0.0351 ±0.0098
Levator ani + Bulbocavernosus muscles (%)	0.0729 ±0.0168	0.0675 ±0.0080	0.0708 ±0.0062	0.0681 ±0.0146	0.0701 ±0.0160	0.0833 H ±0.0173			

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L or **L** : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).

Summary of results (continued-6)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals	LD 21	Female	28	30	30	29	29	17	
F1	Female	Gross findings	Hydro-nephrosis	0	0	1	0	1	0
		Absolute organ weights	Thymus (mg)	195.1 ± 32.0	195.3 ± 23.1	201.3 ± 28.5	203.9 ± 21.2	190.9 ± 26.6	142.6 <u>L</u> ± 29.7
			Adrenal (mg)	13.4 ± 3.2	13.8 ± 2.3	13.1 ± 2.0	13.5 ± 1.6	13.8 ± 2.3	10.7 <u>L</u> ± 2.1
			Pituitary (mg)	1.5 ± 0.6	1.8 ± 0.7	1.7 ± 0.7	1.6 ± 0.5	1.6 ± 0.6	1.6 ± 0.9
			Thyroid (mg)	6.4 ± 2.4	6.8 ± 2.7	5.9 ± 2.5	6.0 ± 1.6	6.4 ± 1.9	5.7 ± 1.6
			Liver (mg)	1643.9 ± 226.6	1669.3 ± 139.4	1648.9 ± 183.0	1770.3 H ± 174.4	1694.5 ± 171.7	1304.6 <u>L</u> ± 219.7
			Kidney (mg)	496.4 ± 60.2	501.2 ± 45.5	500.9 ± 65.1	522.9 ± 50.5	510.1 ± 57.5	394.8 <u>L</u> ± 50.5
			Ovary (mg)	5.6 ± 2.2	6.8 ± 2.8	6.5 ± 2.2	6.4 ± 1.7	5.9 ± 2.3	4.4 ± 1.4
			Uterus (mg)	29.0 ± 5.4	28.9 ± 4.9	28.5 ± 5.0	28.9 ± 4.9	28.5 ± 4.8	26.1 ± 3.8
		Relative organ weights	Thymus (%)	0.4418 ± 0.0498	0.4328 ± 0.0395	0.4443 ± 0.0554	0.4343 ± 0.0353	0.4205 ± 0.0447	0.3996 L ± 0.0527
			Adrenal (%)	0.0304 ± 0.0062	0.0304 ± 0.0047	0.0289 ± 0.0038	0.0288 ± 0.0034	0.0305 ± 0.0044	0.0306 ± 0.0048
			Pituitary (%)	0.0035 ± 0.0012	0.0041 ± 0.0015	0.0039 ± 0.0015	0.0035 ± 0.0011	0.0035 ± 0.0012	0.0046 ± 0.0024
			Thyroid (%)	0.0146 ± 0.0055	0.0152 ± 0.0059	0.0132 ± 0.0051	0.0127 ± 0.0036	0.0143 ± 0.0044	0.0157 ± 0.0044
			Liver (%)	3.7246 ± 0.1422	3.6966 ± 0.1783	3.6330 ± 0.2144	3.7658 ± 0.1753	3.7404 ± 0.2062	3.6349 ± 0.2274
			Kidney (%)	1.1273 ± 0.0440	1.1101 ± 0.0516	1.1075 ± 0.1345	1.1152 ± 0.0679	1.1236 ± 0.0716	1.1122 ± 0.0676
			Ovary (%)	0.0127 ± 0.0046	0.0148 ± 0.0060	0.0144 ± 0.0049	0.0137 ± 0.0033	0.0130 ± 0.0047	0.0123 ± 0.0035
			Uterus (%)	0.0664 ± 0.0130	0.0639 ± 0.0101	0.0627 ± 0.0104	0.0617 ± 0.0102	0.0624 ± 0.0085	0.0749 H ± 0.0098

H or H : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or L : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-7)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals	LD 21	Male	32	29	29	27	27	26	
		Female	28	30	30	29	29	17	
F1	Male	Histopathological findings	Testis : Decrease in number of germ cells with elongated nuclear cells						
			(2+)	0/32	0/29	0/29	0/27	0/27	4/26
			(3+)	0/32	0/29	0/29	0/27	0/27	4/26
		Significant difference						H	
		Normal organs: Thymus, Adrenal, Pituitary, Thyroid, Liver, Kidney, Epididymis, Prostate, Seminal vesicle, Coagulation gland, Levator ani muscle, Bulbocavernosus muscle							
	Hormone concentrations ¹⁾	Testosterone (ng/mL)	0.10 ± 0.05	0.09 ± 0.02	0.08 ± 0.02	0.09 ± 0.03	0.07 ± 0.02	0.07 ± 0.02	
		FSH (ng/mL)	7.40 ± 2.82	7.29 ± 2.59	8.21 ± 3.34	8.34 ± 3.48	6.78 ± 3.51	4.82 L ± 2.34	
		LH (ng/mL)	1.42 ± 0.84	1.13 ± 0.29	1.37 ± 0.46	1.52 ± 1.05	1.16 ± 0.34	1.05 ± 0.26	
	Female	Histopathological findings	Normal organs: Thymus, Adrenal, Pituitary, Thyroid, Liver, Kidney, Uterus, Ovary, Vagina						
Hormone concentrations		FSH (ng/mL)	26.27 ± 7.60	21.61 ± 6.66	22.61 ± 6.75	27.53 ± 7.80	29.81 ± 22.40	26.36 ± 9.58	
		LH (ng/mL)	1.48 ± 0.037	1.85 ± 1.54	1.44 ± 0.67	1.65 ± 0.74	1.47 ± 0.46	1.46 ± 0.31	
		Estradiol (pg/mL)	51.1 ± 17.6	43.7 ± 12.2	47.7 ± 23.6	47.2 ± 14.5	41.9 ± 17.9	55.8 ± 19.5	
Prolactin (ng/mL)	–	–	–	–	–	–			

1) : Data lower than detection limit (Testosterone : 0.05ng/mL, FSH : 1.6ng/mL, LH : 0.8ng/mL, Estradiol:2.5pg/mL, Prolactin:0.78ng/mL) were excluded.

H or **H** : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or **L** : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-8)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals		Male	30	30	30	28	28	24	
		Female	30	30	30	28	28	23	
F1	Body weights (g)	Male	Day 28	84.7 ± 8.9	83.9 ± 8.1	83.8 ± 5.8	85.5 ± 8.7	84.0 ± 6.3	67.6 <u>L</u> ± 10.3
			Day 35	141.1 ± 12.7	140.2 ± 10.8	140.4 ± 7.7	144.2 ± 12.3	141.0 ± 9.7	114.6 <u>L</u> ± 15.8
			Day 42	201.2 ± 16.6	201.3 ± 12.5	200.8 ± 8.7	206.1 ± 13.1	201.0 ± 12.5	166.1 <u>L</u> ± 20.2
			Day 49	260.8 ± 20.1	263.3 ± 15.0	263.5 ± 10.8	268.2 ± 17.5	262.4 ± 17.3	217.6 <u>L</u> ± 26.4
			Day 56	325.1 ± 25.4	326.4 ± 17.1	329.2 ± 13.1	331.9 ± 19.7	325.9 ± 20.6	274.0 <u>L</u> ± 31.4
			Day 63	373.6 ± 25.3	370.5 ± 21.5	376.7 ± 16.2	377.3 ± 21.7	374.8 ± 22.2	322.7 <u>L</u> ± 34.3
			Day 70	406.8 ± 24.7	404.5 ± 18.2	412.2 ± 20.2	408.3 ± 25.2	410.1 ± 24.2	357.4 <u>L</u> ± 34.2
		Female	Day 28	76.3 ± 8.5	77.2 ± 6.6	77.4 ± 3.8	79.1 ± 6.5	76.0 ± 8.3	63.1 <u>L</u> ± 8.9
			Day 35	122.2 ± 12.1	122.7 ± 7.6	123.4 ± 5.5	123.7 ± 10.2	121.4 ± 9.7	102.3 <u>L</u> ± 14.1
			Day 42	159.4 ± 14.0	161.3 ± 8.1	161.8 ± 7.1	162.5 ± 11.8	162.2 ± 10.1	138.5 <u>L</u> ± 16.3
			Day 49	189.3 ± 17.8	192.9 ± 9.1	192.8 ± 8.5	193.8 ± 14.3	192.8 ± 10.7	168.0 <u>L</u> ± 19.3
			Day 56	217.4 ± 20.8	220.0 ± 10.6	217.6 ± 12.7	217.9 ± 18.1	217.6 ± 12.5	194.5 <u>L</u> ± 21.6
			Day 63	237.3 ± 21.5	239.3 ± 11.2	240.5 ± 10.9	241.3 ± 19.8	241.9 ± 13.0	218.7 <u>L</u> ± 22.3
			Day 70	253.8 ± 21.6	255.7 ± 13.0	258.0 ± 13.5	257.6 ± 18.5	259.8 ± 14.1	237.2 <u>L</u> ± 22.7

H or H : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or L : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-9)

Generation			Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals		Male	30	30	30	28	28	24	
		Female	30	30	30	28	28	23	
F1	Body weight gains (g)	Male	Day 28-35	56.4 ± 4.8	56.3 ± 3.6	56.7 ± 3.1	58.6 ± 5.0	57.0 ± 4.4	47.1 <u>L</u> ± 6.0
			Day 28-42	116.4 ± 9.5	117.4 ± 5.9	117.1 ± 6.0	120.5 ± 6.9	117.0 ± 7.7	98.5 <u>L</u> ± 10.5
			Day 28-49	176.1 ± 13.4	179.4 ± 9.0	179.7 ± 8.5	182.7 ± 11.5	178.4 ± 13.0	150.1 <u>L</u> ± 17.0
			Day 28-56	240.3 ± 18.7	242.5 ± 11.7	245.5 ± 11.2	246.3 ± 13.7	241.9 ± 16.3	206.5 <u>L</u> ± 22.4
			Day 28-63	288.9 ± 19.6	286.7 ± 17.4	292.9 ± 15.7	291.7 ± 16.7	290.8 ± 18.8	255.2 <u>L</u> ± 25.7
			Day 28-70	322.1 ± 20.4	320.6 ± 15.1	328.4 ± 18.6	322.8 ± 21.2	326.1 ± 21.0	289.9 <u>L</u> ± 26.6
		Female	Day 28-35	45.8 ± 5.4	45.5 ± 3.4	46.0 ± 3.7	44.6 ± 5.1	45.5 ± 3.9	39.2 <u>L</u> ± 5.9
			Day 28-42	83.1 ± 8.4	84.1 ± 6.0	84.4 ± 6.8	83.4 ± 7.6	86.2 ± 6.5	75.5 <u>L</u> ± 9.2
			Day 28-49	113.0 ± 12.1	115.6 ± 7.8	115.4 ± 8.1	114.7 ± 10.7	116.8 ± 6.7	104.9 L ± 12.5
			Day 28-56	141.0 ± 15.8	142.8 ± 9.8	140.2 ± 13.1	138.8 ± 15.4	141.6 ± 9.1	131.4 L ± 14.3
			Day 28-63	161.0 ± 17.2	162.1 ± 10.9	163.1 ± 10.9	162.2 ± 16.6	165.9 ± 9.7	155.7 ± 15.8
			Day 28-70	177.5 ± 17.3	178.5 ± 12.5	180.6 ± 13.6	178.6 ± 15.5	183.9 ± 11.0	174.2 ± 16.6

H or H : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or L : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-10)

Generation				Dam: F0 Offspring: F1					
Dose (µg/kg/day)				0	0.4	2	10	50	2,000,000
Number of litters				15	15	15	14	14	12
F1	Clinical findings	Male	–	–	–	–	–	–	–
		Female	Hemophthalmia • @exophthalmos	0	0	1	0	0	0
	Sexual development (day)	Male	Preputial separation	45.2 ±1.8	46.0 ±1.6	46.0 ±1.5	45.6 ±2.1	46.2 H ±1.4	49.8 H ±2.8
		Female	Vaginal opening	29.6 ±1.3	30.5 ±1.4	29.9 ±1.2	30.5 ±1.6	30.1 ±1.4	30.5 ±1.5
	Motor activity (8-9 weeks old) (count)	Male	Horizontal movement (short)	8009 ±1823	7326 ±2109	8677 ±1961	7169 ±1197	8436 ±2190	7876 ±1787
			Horizontal movement (long)	4966 ±1250	4578 ±1607	5603 ±1532	4327 ±839	5363 ±1659	4831 ±1271
			Vertical movement	67 ±37	64 ±33	72 ±23	67 ±17	68 ±37	75 ±22
		Female	Horizontal movement (short)	11054 ±2587	11003 ±2724	10861 ±1762	10220 ±1802	9981 ±2363	8913 ±1283
			Horizontal movement (long)	7645 ±2016	7448 ±2074	7453 ±1323	6825 ±1378	6786 ±1861	5929 L ±924
			Vertical movement	113 ±45	108 ±32	103 ±32	92 ±22	92 ±38	74 L ±23

H or **H** : Significantly higher than the control (p < 0.05 and p < 0.01, respectively).

L or **L** : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).

–: No treatment-related alterations.

Summary of results (continued-11)

Generation		Dam: F0 Offspring: F1						
Dose ($\mu\text{g}/\text{kg}/\text{day}$)		0	0.4	2	10	50	2,000,000	
Number of litters		15	15	15	14	14	12	
Number of animals	Female	30	30	30	28	28	23	
F 1	Reproductive performance	Estrus cycle length (day)	4.13 ± 0.07	4.15 ± 0.12	4.15 ± 0.08	4.25 ± 0.45	4.15 ± 0.25	4.13 ± 0.15
		Pairing days until copulation	3.20 ± 2.58	2.97 ± 2.22	2.44 ± 1.42	2.89 ± 1.97	2.12 ± 1.53	3.00 ± 1.91
		Copulation index (%)	90.0	100.0	90.0	100.0	92.9	95.7
		Fertility index (%)	96.3	100.0	100.0	100.0	100.0	86.4
		Number of corpora lutea	16.9 ± 1.4	17.4 ± 1.5	17.6 ± 2.0	17.3 ± 1.3	17.6 ± 1.3	16.2 ± 1.8
		Number of implantation sites	14.4 ± 2.0	15.8 H ± 1.7	15.6 ± 1.8	14.8 ± 3.1	15.5 ± 2.7	13.7 ± 1.8
		Implantation loss (%)	5.4 ± 5.8	5.8 ± 5.7	5.5 ± 6.7	5.0 ± 4.9	10.3 ± 18.0	4.8 ± 4.0
	Body weight (g)	GD 0	256.8 ± 25.5	257.6 ± 14.2	258.4 ± 14.8	257.6 ± 19.9	258.8 ± 14.6	236.8 L ± 24.5
		GD 7	294.8 ± 28.5	297.1 ± 16.1	297.7 ± 16.3	297.4 ± 20.5	297.6 ± 17.1	273.8 L ± 25.0
		GD 13	326.6 ± 31.3	330.2 ± 23.9	332.9 ± 19.0	332.6 ± 21.6	334.2 ± 20.9	305.3 L ± 27.3
Body weight gains (g)	GD 0-7	38.0 ± 7.4	39.5 ± 7.2	39.3 ± 6.8	39.8 ± 7.5	38.9 ± 8.0	37.0 ± 5.7	
	GD 7-13	31.7 ± 8.2	33.1 ± 17.0	35.2 ± 6.8	35.1 ± 8.5	36.6 ± 7.1	31.5 ± 5.9	

H or **H** : Significantly higher than the control ($p < 0.05$ and $p < 0.01$, respectively).

L or **L** : Significantly lower than the control ($p < 0.05$ and $p < 0.01$, respectively).

Summary of results (continued-12)

Generation			Dam: F0 Offspring: F1						
Dose (µg/kg/day)			0	0.4	2	10	50	2,000,000	
Number of litters			15	15	15	14	14	12	
Number of animals		Female	30	30	30	28	28	23	
F 1	Female	Gross findings	Hydro-nephrosis	0	1	0	0	0	0
			Eye: red	0	0	1	0	0	0
		Absolute organ weights	Thymus (mg)	539.1 ±89.5	522.8 ±81.2	583.3 ±126.0	541.2 ±83.0	555.7 ±90.7	518.9 ±109.4
			Adrenal (mg)	68.7 ±9.9	73.4 ±12.9	72.2 ±8.7	73.8 ±7.3	73.6 ±10.6	62.8 ±10.1
			Pituitary (mg)	9.5 ±2.1	9.8 ±1.8	9.9 ±1.4	9.9 ±1.2	9.5 ±1.4	8.9 ±2.3
			Thyroid (mg)	19.1 ±4.9	18.2 ±3.6	19.5 ±3.7	18.5 ±3.4	18.9 ±5.1	17.6 ±3.8
			Liver (mg)	17954.9 ±2781.0	18592.2 ±1764.4	18084.4 ±2569.8	19495.6 ±1832.0	19141.7 ±2129.7	17435.3 ±2691.9
			Kidney (mg)	2275.8 ±271.9	2587.6 ±1680.2	2325.6 ±162.0	2279.2 ±165.4	2247.7 ±183.1	1998.1 L ±206.5
			Ovary (mg)	116.5 ±13.9	122.8 ±10.7	123.0 ±9.7	119.9 ±9.9	122.9 ±12.4	107.9 L ±15.6
			Uterus (mg)	2129.3 ±828.0	2501.7 H ±246.0	2325.6 ±732.6	2394.1 ±479.0	2260.4 ±662.7	1902.3 ±751.3
	Relative organ weights	Thymus (%)	0.1655 ±0.0264	0.1584 ±0.0215	0.1768 ±0.0383	0.1622 ±0.0244	0.1672 ±0.0284	0.1700 ±0.0317	
		Adrenal (%)	0.0210 ±0.0023	0.0223 ±0.0043	0.0219 ±0.0024	0.0221 ±0.0023	0.0221 ±0.0029	0.0205 ±0.0024	
		Pituitary (%)	0.0029 ±0.0006	0.0030 ±0.0007	0.0030 ±0.0004	0.0030 ±0.0003	0.0029 ±0.0004	0.0029 ±0.0007	
		Thyroid (%)	0.0059 ±0.0014	0.0055 ±0.0011	0.0059 ±0.0011	0.0055 ±0.0011	0.0057 ±0.0016	0.0058 ±0.0012	
		Liver (%)	5.4801 ±0.6130	5.6398 ±0.4843	5.4569 ±0.5519	5.8351 H ±0.4097	5.7384 ±0.5015	5.6978 ±0.5727	
		Kidney (%)	0.6976 ±0.0683	0.7927 ±0.5554	0.6727 ±0.0383	0.6825 ±0.0324	0.6740 ±0.0313	0.6562 L ±0.0390	
		Ovary (%)	0.0359 ±0.0044	0.0373 ±0.0035	0.0373 ±0.0030	0.0359 ±0.0028	0.0369 ±0.0032	0.0354 ±0.0040	
		Uterus (%)	0.6489 ±0.2349	0.7613 ±0.0956	0.6998 ±0.2145	0.7168 ±0.1348	0.6786 ±0.2000	0.6193 ±0.2403	
	Histopathological findings		Normal organs: Thymus, Adrenal, Pituitary, Thyroid, Liver, Kidney, Uterus, Ovary, Vagina						

H or **H** : Significantly higher than the control (p < 0.05 and p < 0.01, respectively).

L or **L** : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).

Summary of results (continued-13)

Generation		Dam: F0 Offspring: F1							
Dose (µg/kg/day)		0	0.4	2	10	50	2,000,000		
Number of litters		15	15	15	14	14	12		
Number of animals		Male	30	30	30	28	28	24	
F 1	Male	Gross findings	Hydro-nephrosis	0	0	2	1	1	1
		Absolute organ weights	Thymus (mg)	597.9 ±120.3	605.0 ±119.4	651.6 ±150.1	556.3 ±83.9	594.0 ±91.8	579.4 ±108.8
			Adrenal (mg)	57.7 ±4.9	55.5 ±6.0	56.0 ±6.6	55.6 ±6.2	56.3 ±7.7	51.7 <u>L</u> ±7.0
			Pituitary (mg)	10.5 ±1.6	10.6 ±1.4	10.1 ±1.3	10.3 ±1.1	10.2 ±1.2	9.2 <u>L</u> ±1.4
			Thyroid (mg)	21.0 ±2.9	19.9 ±3.0	20.4 ±2.9	20.4 ±3.4	19.3 ±3.2	20.0 ±3.3
			Liver (mg)	21060.4 ±2088.7	20625.1 ±1830.8	20757.5 ±2892.5	20185.9 ±2066.5	20994.4 ±2142.9	17809.4 <u>L</u> ±2390.2
			Kidney (mg)	3669.5 ±256.3	3637.9 ±300.4	3624.1 ±231.4	3666.2 ±290.0	3705.0 ±328.8	3902.1 <u>H</u> ±3831.5
			Testis (mg)	2886.3 ±144.8	2958.7 <u>H</u> ±190.3	2974.2 <u>H</u> ±162.4	2916.8 ±158.8	2963.9 <u>H</u> ±158.7	2753.4 ±471.2
			Epididymis (mg)	1120.7 ±56.8	1131.0 ±63.1	1125.6 ±43.9	1139.2 ±65.6	1135.8 ±64.7	1040.6 ±154.3
			Prostate (mg)	1302.2 ±155.2	1276.9 ±177.4	1315.6 ±161.4	1307.9 ±154.0	1303.9 ±133.9	1192.5 ±182.4
			Seminal vesicle + Coagulation gland (mg)	1703.6 ±183.0	1721.2 ±203.4	1767.8 ±248.9	1831.7 ±185.9	1782.0 ±148.7	1564.7 <u>L</u> ±199.3
			Levator ani + Bulbocavernosus muscles (mg)	1040.8 ±82.4	1045.2 ±79.0	1040.2 ±84.8	1066.7 ±87.6	1049.7 ±97.2	945.0 <u>L</u> ±92.0
			Relative organ weights	Thymus (%)	0.1275 ±0.0260	0.1285 ±0.0247	0.1372 ±0.0298	0.1183 ±0.0148	0.1253 ±0.0147
		Adrenal (%)		0.0123 ±0.0012	0.0118 ±0.0011	0.0118 ±0.0014	0.0119 ±0.0013	0.0119 ±0.0014	0.0125 ±0.0013
	Pituitary (%)	0.0022 ±0.0003		0.0022 ±0.0003	0.0021 ±0.0003	0.0022 ±0.0002	0.0022 ±0.0003	0.0022 ±0.0003	
	Thyroid (%)	0.0045 ±0.0006		0.0042 ±0.0006	0.0043 ±0.0006	0.0043 ±0.0007	0.0041 ±0.0007	0.0048 ±0.0007	
	Liver (%)	4.4744 ±0.3195		4.3740 ±0.2777	4.3567 ±0.4269	4.2910 ±0.2565	4.4389 ±0.2920	4.2855 ±0.2746	
	Kidney (%)	0.7800 ±0.0284		0.7720 ±0.0516	0.7639 ±0.0427	0.7805 ±0.0353	0.7836 ±0.0391	0.9391 ±0.9125	
	Testis (%)	0.6151 ±0.0399		0.6287 ±0.0424	0.6275 ±0.0398	0.6266 ±0.0405	0.6261 ±0.0432	0.6613 <u>H</u> ±0.0846	
	Epididymis (%)	0.2387 ±0.0126		0.2403 ±0.0133	0.2376 ±0.0150	0.2431 ±0.0163	0.2409 ±0.0139	0.2504 <u>H</u> ±0.0254	
	Prostate (%)	0.2773 ±0.0324		0.2710 ±0.0367	0.2778 ±0.0365	0.2794 ±0.0353	0.2772 ±0.0342	0.2887 ±0.0407	
	Seminal vesicle + Coagulation gland (%)	0.3626 ±0.0359		0.3655 ±0.0420	0.3725 ±0.0499	0.3908 ±0.0394	0.3786 ±0.0387	0.3790 ±0.0442	
	Levator ani + Bulbocavernosus muscles (%)	0.2215 ±0.0150		0.2219 ±0.0140	0.2195 ±0.0198	0.2274 ±0.0162	0.2225 ±0.0198	0.2297 ±0.0283	

H or H : Significantly higher than the control (p < 0.05 and p < 0.01, respectively).

L or L : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).

Summary of results (continued-14)

Generation		Dam: F0 Offspring: F1						
Dose (µg/kg/day)		0	0.4	2	10	50	2,000,000	
Number of litters		15	15	15	14	14	12	
Number of animals		Male	30	30	30	28	28	24
F1	Hormone concentrations	Testosterone (ng/mL)	1.90 ±0.50	2.18 ±0.86	2.16 ±0.71	2.54 ±0.92	2.37 ±0.91	2.32 ±0.89
		FSH (ng/mL)	10.69 ±1.46	10.50 ±1.81	11.28 ±1.86	11.72 ±1.06	11.90 ±2.31	14.97 ^H ±11.96
		LH (ng/mL)	2.17 ±0.52	2.01 ±0.42	2.00 ±0.45	2.03 ±0.43	2.18 ±0.52	2.28 ±0.51
	Histopathological findings	Testis : Tubular atrophy: focal						
		(+)	0/30	0/30	0/30	0/28	0/28	2/24
		(2+)	0/30	0/30	0/30	0/28	0/28	4/24
		(3+)	0/30	0/30	0/30	0/28	0/28	2/24
		Significant difference						^H
		Testis : Interstitial cell hyperplasia						
		(+)	0/30	0/30	0/30	0/28	0/28	2/24
	Epididymis Debris of spermatic elements							
	(+)	0/30	0/30	0/30	0/28	0/28	6/24 ^H	
	Normal organs: Thymus, Adrenal, Pituitary, Thyroid, Liver, Kidney, Prostate, Seminal vesicle, Coagulation gland, Levator ani muscle, Bulbocavernosus muscle							
	Sperm examination	Motility (%)	88 ±5	90 ±4	89 ±5	91 ±3	90 ±4	84 ±12
		Progressive (%)	71 ±6	73 ±6	71 ±7	71 ±9	71 ±9	64 ±13
		Path velocity (µm/sec)	135.4 ±11.5	134.1 ±10.6	131.3 ±12.1	138.4 ±12.4	133.5 ±11.9	130.6 ±11.9
		Straight line velocity (µm/sec)	87.9 ±8.7	86.9 ±6.4	85.0 ±7.2	87.4 ±6.0	85.2 ±6.4	81.9 ^L ±7.3
		Curvilinear velocity (µm/sec)	282.0 ±27.9	276.8 ±27.0	270.4 ±25.1	284.8 ±25.2	271.5 ±26.7	268.5 ±25.0
		Amplitude of lateral head displacement (µm)	19.1 ±1.4	19.0 ±1.5	18.6 ±1.6	19.5 ±1.8	18.7 ±1.6	18.9 ±1.9
		Beat cross frequency (Hz)	23.7 ±2.7	23.3 ±2.2	23.4 ±2.4	23.0 ±1.9	23.6 ±1.8	23.5 ±2.4
Straightness (%)		67 ±4	66 ±3	66 ±4	65 ±5	66 ±4	65 ±6	
Linearity (%)		33 ±2	33 ±2	33 ±2	32 ±3	33 ±2	32 ±3	
Elongation (%)		20 ±2	21 ±2	21 ±3	21 ±2	21 ±2	20 ±3	
Area (µm ²)		358.2 ±34.5	358.4 ±47.5	353.1 ±61.2	357.7 ±49.9	356.1 ±60.5	346.2 ±48.9	
Number of epidermal sperm (x 10 ⁶ /g cauda)		597.3 ±102.3	628.2 ±103.3	586.6 ±97.7	601.6 ±74.8	590.4 ±80.6	496.8 ±169	
Daily sperm production (x 10 ⁶ /g testis)		22.9 ±2.3	22.1 ±1.9	22.1 ±1.6	21.5 ±2.4	22.1 ±1.9	21.9 ±3.0	

H or ^H : Significantly higher than the control (p < 0.05 and p < 0.01, respectively).

L or ^L : Significantly lower than the control (p < 0.05 and p < 0.01, respectively).