

Table 3.

## Food consumption

Exp. No. 9934 (115-213)

Sex: Male

Group No. Dose mg/kg		Day of experiment						Unit:g/animal/day
		=> 8	=> 15	=> 22	=> 28	=> 36	=> 42	
01 control 0	N	10	10	10	9	4	4	
	Mean	23	24	25	25	28	29	
	S.D.	2	3	3	2	1	2	
02 TCDAM 100	N	5	5	5	5			
	Mean	23	25	25	25			
	S.D.	2	3	4	5			
03 TCDAM 300	N	5	5	5	5			
	Mean	23	25	27	27			
	S.D.	1	2	2	2			
04 TCDAM 1000	N	10	10	10	10	5	5	
	Mean	22	24	24	24	26	26	
	S.D.	2	3	3	3	2	2	

TCDAM: 2,2',3,3'-Tetrachloro-4,4'-diamino diphenylmethane

Table 3.

## -continued Food consumption

Exp. No. 9934 (115-213)

Sex: Female

Group No. Dose mg/kg		Day of experiment						Unit:g/animal/day
		=> 8	=> 15	=> 22	=> 28	=> 36	=> 42	
01 control 0	N	10	10	10	10	5	5	
	Mean	17	18	18	18	20	19	
	S.D.	1	1	1	1	2	1	
02 TCDAM 100	N	5	5	5	5			
	Mean	18	18	18	17			
	S.D.	1	2	2	2			
03 TCDAM 300	N	5	5	5	5			
	Mean	17	18	18	18			
	S.D.	1	2	3	3			
04 TCDAM 1000	N	10	10	10	10	5	5	
	Mean	17	18	19	18	20	19	
	S.D.	2	2	2	2	2	2	

TCDAM: 2,2',3,3'-Tetrachloro-4,4'-diamino diphenylmethane

Table 4. Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)		
		B. G. 1	2	3	4	1	2	
No. of animals	0	10	10	10	10	5	4	
	100	5	5	5	5	-	-	
	300	5	5	5	5	-	-	
	1000	10	10	10	10	5	5	
REMOVAL FROM CAGE Ease of removal	Very easy	0	10	10	10	10	5	4
		100	5	4	5	5	2	-
		300	5	5	5	5	4	-
		1000	10	7	10	9	9	5
Easy	0	0	0	0	0	0	0	
	100	0	1	0	0	3	-	
	300	0	0	0	0	1	-	
	1000	0	3	0	1	1	0	
Vocalization	None	0	10	10	10	10	5	4
		100	5	5	5	5	-	-
		300	5	5	5	5	-	-
		1000	10	10	10	10	5	5

B. G.: Before grouping

Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)		
		B. G. 1	2	3	4	1	2	
HANDLING OBSERVATIONS Muscle tone	Normal	0	10	10	10	10	9	4
		100	5	5	5	5	5	-
		300	5	5	5	5	5	-
		1000	10	10	10	10	10	5
Decrease or limp	0	0	0	0	0	1	0	
	100	0	0	0	0	0	-	
	300	0	0	0	0	0	-	
	1000	0	0	0	0	0	0	
Subnormal temperature	Absent	0	10	10	10	10	5	4
		100	5	5	5	5	-	-
		300	5	5	5	5	-	-
		1000	10	10	10	10	10	5
Piloerection	Absent	0	10	10	10	10	5	4
		100	5	5	5	5	-	-
		300	5	5	5	5	-	-
		1000	10	10	10	10	10	5
Staining hair	Absent	0	10	10	10	10	5	4
		100	5	5	5	5	-	-
		300	5	5	5	5	-	-
		1000	10	10	10	10	10	5
Unkempt hair	Absent	0	10	10	10	10	4	4
		100	5	5	5	5	-	-
		300	5	5	5	5	-	-
		1000	10	10	10	10	5	5
Rough fur	Absent	0	0	0	0	0	1	0
		100	0	0	0	0	0	-
		300	0	0	0	0	0	-
		1000	0	0	0	0	0	0

B. G.: Before grouping

Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)			
		B. G.	1	2	3	4	1	2	
Skin color	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Lacrimation	Absent	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Exophthalmos	Absent	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Pupillary size	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Salivation	Absent	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5

B. G. : Before grouping

Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)			
		B. G.	1	2	3	4	1	2	
OBSERVATIONS IN ARENA Posture	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Motor activity	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Respiration	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Lid closure	Wide open	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Gait	Normal	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Tremor	None	0	10	10	10	10	10	5	4
		100	5	5	5	5	5	-	-
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5

B. G. : Before grouping

Table 4. --continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	B. G. Administration period (Week)				Recovery period (Week)	
		1	2	3	4	1	2
Twitch	0	10	10	10	10	5	4
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
Convulsion	1000	10	10	10	10	5	5
	0	10	10	10	10	5	4
	100	5	5	5	5	-	-
Stereotypic behavior	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
Abnormal behavior	100	10	10	10	10	5	4
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5

B. G.: Before grouping

Table 4. --continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	B. G. Administration period (Week)				Recovery period (Week)	
		1	2	3	4	1	2
SENSORIMOTOR FUNCTION Approach contact	0	9	5	5	4	4	-
	100	5	5	5	5	-	-
	300	10	10	10	10	5	5
Freezing	0	1	0	0	0	0	0
	100	0	0	0	0	-	-
	300	0	0	0	0	-	-
Touch response	1000	0	0	0	0	0	0
	0	9	4	4	4	4	-
	100	4	5	5	5	-	-
Moderate reaction	300	10	10	10	10	5	5
	1000	0	0	0	0	0	0
	0	1	0	0	0	0	0
Freezing	100	1	0	0	0	0	0
	300	1	0	0	0	-	-
	1000	0	0	0	0	0	0
Vocalization, energetically reaction	0	0	0	0	0	0	0
	100	1	0	0	0	-	-
	300	1	0	0	0	-	-
Freezing	1000	0	0	0	0	0	0
	0	1	0	0	0	0	0
	100	0	0	0	0	-	-
Prima response	300	0	0	0	0	0	0
	1000	0	0	0	0	0	0
	0	10	5	5	5	4	-
Normal	100	10	5	5	5	-	-
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5

B. G.: Before grouping

a) Rat slowly approaches and sniffs at object or turns away

Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Male

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)		
		B. G.	1	2	3	4	1	2
Pain response(Tail pinch)	Slowly turns	0				1	0	
		100				0	-	
		300				0	-	
		1000				0	0	
	Walk away from stimulus	0				2	0	
		100				0	-	
		300				1	-	
		1000				0	0	
	Freezing	0				0	0	
		100				0	-	
		300				0	-	
		1000				0	1	
Normal	0				7	4		
	100				5	-		
	300				4	-		
	1000				10	4		
Pupillary reflex	Normal	0				10	4	
		100				5	-	
		300				5	-	
		1000				10	5	
Air righting reflex	Normal	0				10	4	
		100				5	-	
		300				5	-	
		1000				10	5	

B.G.: Before grouping

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Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)				
		B. G.	1	2	3	4	1	2		
No. of animals	0	10	10	10	10	10	5	5		
	100	5	5	5	5	5	-	-		
	300	5	5	5	5	5	-	-		
	1000	10	10	10	10	10	5	5		
REMOVAL FROM CAGE Ease of removal	Very easy	0	6	7	9	9	7	5	5	
		100	3	5	5	5	3	-	-	
		300	3	5	5	5	5	-	-	
		1000	6	10	10	10	9	5	4	
	Easy	0	4	3	1	1	3	0	0	
		100	2	0	0	0	2	-	-	
		300	2	0	0	0	0	-	-	
		1000	4	0	0	0	1	0	1	
	Vocalization	None	0	10	10	10	10	10	5	5
			100	5	5	5	5	5	-	-
			300	5	5	5	5	5	-	-
			1000	10	10	10	10	10	5	5

B.G.: Before grouping

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Table 4. --continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

HANDLING OBSERVATIONS	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)	
		B. G. 1	2	3	4	1	2
Muscle tone	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
Subnormal temperature	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
Piloerection	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
Staining hair	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5
Unkempt hair	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
Skin color	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5

B. G.: Before grouping

Table 4. --continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)	
		B. G. 1	2	3	4	1	2
Lacrimation	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
Exophthalmos	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
Pupillary size	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
Salivation	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5
	0	10	10	10	10	5	5
	100	5	5	5	5	-	-
	300	5	5	5	5	-	-
	1000	10	10	10	10	5	5

B. G.: Before grouping

Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)			
		B. G.	1	2	3	4	1	2	
OBSERVATIONS IN ARENA									
Posture	Normal	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Motor activity	Normal	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Respiration	Normal	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Lid closure	Wide open	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Gait	Normal	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Tremor	None	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5

B. G. : Before grouping

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Table 4. -continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)			
		B. G.	1	2	3	4	1	2	
Twitch	None	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Convulsion	None	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Stereotypic behavior	None	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5
Abnormal behavior	None	0	10	10	10	10	5	5	
		100	5	5	5	5	-	-	
		300	5	5	5	5	5	-	-
		1000	10	10	10	10	10	5	5

B. G. : Before grouping

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Table 4. --continued Detailed clinical observation and sensory reactivity to stimuli of different types

Exp. No. 9934 (115-213)

Sex: Female

Signs	Dose level (mg/kg)	Administration period (Week)				Recovery period (Week)	
		1	2	3	4	1	2
<b>SENSORIMOTOR FUNCTION</b>							
Approach contact	Normal a)	0 100 300 1000				10 5 5 10	5 - 5 5
Touch response	Moderate reaction	0 100 300 1000				10 5 5 10	5 - - 5
Pinna response	Normal	0 100 300 1000				10 5 5 10	5 - - 5
Pain response (Tail pinch)	Normal	0 100 300 1000				10 5 5 10	5 - - 5
Pupillary reflex	Normal	0 100 300 1000				10 5 5 10	5 - - 5
Air righting reflex	Normal	0 100 300 1000				10 5 5 10	5 - - 5

B. G.: Before grouping

a) Rat slowly approaches and sniffs at object or turns away

Table 5. Summary of number of defecation

Exp. No. 9934(115-213)

Sex	Dose level (mg/kg)	No. of animals	B. G.	Administration period (week)				Recovery period (week)	
				1	2	3	4	1	2
Male	0	10	0.0±0.0 a)	0.3±0.9	0.0±0.0	0.2±0.6	0.3±1.0 (9)	0.0±0.0 (4)	0.0±0.0 (4)
	100	5	0.4±0.9	1.0±1.4	0.0±0.0	0.0±0.0	0.0±0.0		
	300	5	0.4±0.9	0.4±0.9	0.0±0.0	0.2±0.4	0.6±1.3		
	1,000	10	0.6±1.1	0.8±1.1	0.2±0.6	0.3±0.9	0.1±0.3	0.4±0.9 (5)	0.0±0.0 (5)
Female	0	10	0.2±0.6	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0 (5)	0.0±0.0 (5)
	100	5	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0		
	300	5	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0		
	1,000	10	0.1±0.3	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0 (5)	0.0±0.0 (5)

B. G.: Before Grouping

a) Mean ± S.D.

Values in parentheses are expressed no. of animals examined



Table 6. Summary of number of pools of urine

Exp. No. 9934(115-213)

Sex	Dose level (mg/kg)	No. of animals	B. G.	Administration period (week)				Recovery period (week)	
				1	2	3	4	1	2
Male	0	10	0.6 ± 0.8 a)	0.3 ± 0.5	0.2 ± 0.6	0.4 ± 0.8	0.2 ± 0.4 (9)	0.0 ± 0.0 (4)	0.5 ± 0.6 (4)
	100	5	0.6 ± 0.9	0.2 ± 0.4	0.0 ± 0.0	0.2 ± 0.4	0.0 ± 0.0		
	300	5	0.2 ± 0.4	0.8 ± 1.3	0.4 ± 0.5	0.2 ± 0.4	0.0 ± 0.0		
	1,000	10	1.0 ± 1.1	0.7 ± 0.8	0.2 ± 0.4	0.8 ± 0.9	0.3 ± 0.5	0.2 ± 0.4 (5)	0.2 ± 0.4 (5)
Female	0	10	0.3 ± 0.7	0.2 ± 0.4	0.1 ± 0.3	0.1 ± 0.3	0.2 ± 0.4	0.0 ± 0.0 (5)	0.0 ± 0.0 (5)
	100	5	0.2 ± 0.4	0.0 ± 0.0	0.2 ± 0.4	0.0 ± 0.0	0.4 ± 0.5		
	300	5	0.4 ± 0.9	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		
	1,000	10	0.2 ± 0.6	0.5 ± 1.0	0.1 ± 0.3	0.0 ± 0.0	0.2 ± 0.4	0.0 ± 0.0 (5)	0.0 ± 0.0 (5)

B. G. : Before grouping

a) Mean ± S.D.

Values in parentheses are expressed no. of animals examined

Table 7. Summary of grip strength

Exp. No. 9934(115-213)

4 week of administration					Unit : g
Sex	Dose level (mg/kg)	No. of animals	Forelimb	Hindlimb	
Male	0	9	1338 ± 147 a)	703 ± 139	
	100	5	1457 ± 206	822 ± 228	
	300	5	1370 ± 211	721 ± 129	
	1,000	10	1281 ± 170	739 ± 205	
Female	0	10	620 ± 171	321 ± 77	
	100	5	741 ± 99	289 ± 42	
	300	5	551 ± 99	307 ± 34	
	1,000	10	605 ± 126	301 ± 74	

a) Mean ± S.D.

Table 7. --continued Summary of grip strength

Exp. No. 9934(115-213)

2 week of recovery		Unit : g			
Sex	Dose level (mg/kg)	No. of animals	Forelimb	Hindlimb	
Male	0	4	1381 ± 408 a)	707 ± 284	
	1,000	5	1604 ± 241	1027 ± 155	
Female	0	5	1080 ± 291	574 ± 190	
	1,000	5	889 ± 249	510 ± 269	
a) Mean ± S.D.					

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Table 8. Summary of motor activity

Exp. No. 9934 (115-213)

4 week of administration		Motor activity (counts)						Total (0-60)	
Dose level (mg/kg)	No. of animals	0-10 a)	10-20	20-30	30-40	40-50	50-60		
Sex	0	9	194 ± 27 b)	169 ± 25	151 ± 40	129 ± 33	102 ± 40	102 ± 59	847 ± 139
	100	5	195 ± 35	178 ± 15	147 ± 30	127 ± 29	111 ± 57	132 ± 21	890 ± 132
	300	5	216 ± 22	159 ± 27	145 ± 25	111 ± 30	96 ± 58	102 ± 52	829 ± 153
Male	1,000	10	204 ± 17	169 ± 26	157 ± 25	130 ± 35	105 ± 64	74 ± 57	838 ± 146
	0	10	127 ± 28	68 ± 28	72 ± 20	77 ± 33	44 ± 25	58 ± 20	445 ± 114
	100	5	133 ± 22	113 ± 31**	91 ± 35	69 ± 37	87 ± 27*	62 ± 32	554 ± 117
Female	300	5	105 ± 23	102 ± 21*	69 ± 41	74 ± 25	51 ± 15	53 ± 30	455 ± 125
	1,000	10	126 ± 30	101 ± 17*	72 ± 23	74 ± 33	59 ± 32	46 ± 22	478 ± 103
	a) Interval time (minutes)								
b) Mean ± S.D.									
Significantly different from control group * p ≤ 0.05 ** p ≤ 0.01 (Dunnett)									

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Table 8. -continued Summary of motor activity

Exp. No. 9934 (115-213)

2 week of recovery			Motor activity (counts)						
Sex	Dose level (mg/kg)	No. of animals	0-10 a)	10-20	20-30	30-40	40-50	50-60	Total (0-60)
Male	0	4	181 ± 38 b)	150 ± 34	128 ± 7	52 ± 45	24 ± 29	11 ± 18	546 ± 89
	1,000	5	183 ± 32	132 ± 68	110 ± 57	115 ± 52	68 ± 49	46 ± 52	653 ± 262
Female	0	5	137 ± 11	126 ± 35	94 ± 27	105 ± 58	108 ± 113	65 ± 68	636 ± 247
	1,000	5	161 ± 58	128 ± 55	106 ± 65	99 ± 70	104 ± 72	55 ± 57	652 ± 355

a) interval time (minutes)

b) Mean ± S.D.

Table 9-1. Hematology  
---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	HCT (%)	HGB (g/dL)	RBC ( $\times 10^6/\text{mm}^3$ )	MCV ( $\mu\text{m}^3$ )	MCH (pg)	MCHC (%)
Male	0	5	41.8 ± 1.3	15.5 ± 0.4	7.72 ± 0.13	54.2 ± 1.0	20.1 ± 0.2	37.1 ± 0.6
	100	5	42.0 ± 1.5	15.5 ± 0.6	7.71 ± 0.27	54.5 ± 1.2	20.1 ± 0.5	36.9 ± 0.2
	300	5	40.5 ± 1.6	14.9 ± 0.5	7.31 ± 0.32	55.4 ± 2.4	20.4 ± 0.7	36.7 ± 0.4
	1,000	5	41.3 ± 2.0	15.2 ± 0.8	7.52 ± 0.29	54.9 ± 0.9	20.3 ± 0.4	36.9 ± 0.2
Female	0	5	39.5 ± 1.2	14.8 ± 0.4	7.22 ± 0.24	54.8 ± 0.4	20.5 ± 0.4	37.4 ± 0.5
	100	5	40.7 ± 1.8	15.3 ± 0.7	7.66 ± 0.38	53.2 ± 0.6#	20.0 ± 0.2	37.6 ± 0.4
	300	5	39.5 ± 1.4	14.9 ± 0.3	7.38 ± 0.38	53.6 ± 1.6	20.3 ± 0.8	37.7 ± 0.6
	1,000	5	39.4 ± 1.3	14.5 ± 0.5	7.24 ± 0.28	54.4 ± 1.9	20.0 ± 0.6	36.8 ± 0.3

Mean ± S.D.

Significantly different from control group; #:  $P \leq 0.05$  (Steel)

Table 9-1. -continued Hematology  
 ---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	WBC ( $\times 10^9/\text{mm}^3$ )	Differential leukocyte counts (%)					
				NEUT	LYMPH	MONO	EOSN	BASO	LUC
Male	0	5	9.26 ± 2.60	15.3 ± 1.8	81.5 ± 1.6	1.8 ± 0.5	0.7 ± 0.3	0.1 ± 0.1	0.6 ± 0.1
	100	5	8.46 ± 2.65	14.4 ± 3.4	82.4 ± 3.8	1.5 ± 0.4	0.8 ± 0.4	0.1 ± 0.0	0.7 ± 0.3
	300	5	8.11 ± 1.02	18.3 ± 2.5	79.0 ± 2.9	1.5 ± 0.3	0.7 ± 0.3	0.1 ± 0.0	0.6 ± 0.3
	1,000	5	9.62 ± 2.25	18.2 ± 3.5	78.5 ± 3.5	1.7 ± 0.2	0.7 ± 0.3	0.1 ± 0.0	0.8 ± 0.4
Female	0	5	5.21 ± 2.63	14.0 ± 4.2	83.1 ± 4.5	1.1 ± 0.3	0.9 ± 0.4	0.2 ± 0.2	0.7 ± 0.2
	100	5	5.12 ± 0.82	14.3 ± 2.9	82.6 ± 3.4	1.2 ± 0.3	1.2 ± 0.6	0.1 ± 0.0	0.6 ± 0.1
	300	5	4.94 ± 1.19	16.9 ± 8.1	80.3 ± 7.9	1.3 ± 0.4	0.8 ± 0.3	0.1 ± 0.0	0.6 ± 0.3
	1,000	5	8.71 ± 2.92*	14.4 ± 4.3	82.1 ± 4.9	1.3 ± 0.7	1.1 ± 0.4	0.1 ± 0.1	1.0 ± 0.4

NEUT: Neutrophil LYMPH: Lymphocyte MONO: Monocyte EOSN: Eosinophil BASO: Basophil LUC: Large unstained cells  
 Mean ± S.D.  
 Significantly different from control group; \*: P ≤ 0.05 (Dunnnett)

Table 9-1. -continued Hematology  
 ---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	NEUT ( $\times 10^9/\text{mm}^3$ )		LYMPH ( $\times 10^9/\text{mm}^3$ )		MONO ( $\times 10^9/\text{mm}^3$ )		EOSN ( $\times 10^9/\text{mm}^3$ )		BASO ( $\times 10^9/\text{mm}^3$ )		LUC ( $\times 10^9/\text{mm}^3$ )
			Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean
Male	0	5	1.41 ± 0.40	7.56 ± 2.14	0.17 ± 0.09	0.06 ± 0.03	0.01 ± 0.01	0.06 ± 0.02					
	100	5	1.21 ± 0.41	6.98 ± 2.25	0.13 ± 0.03	0.07 ± 0.05	0.01 ± 0.01	0.06 ± 0.03					
	300	5	1.48 ± 0.28	6.40 ± 0.82	0.12 ± 0.03	0.05 ± 0.03	0.01 ± 0.01	0.05 ± 0.02					
	1,000	5	1.75 ± 0.57	7.55 ± 1.79	0.16 ± 0.04	0.07 ± 0.04	0.01 ± 0.01	0.08 ± 0.05					
Female	0	5	0.68 ± 0.20	4.38 ± 2.41	0.06 ± 0.02	0.04 ± 0.01	0.01 ± 0.01	0.04 ± 0.03					
	100	5	0.72 ± 0.12	4.24 ± 0.80	0.06 ± 0.02	0.06 ± 0.03	0.00 ± 0.00	0.03 ± 0.00					
	300	5	0.82 ± 0.38	3.98 ± 1.18	0.06 ± 0.01	0.04 ± 0.01	0.00 ± 0.01	0.03 ± 0.01					
	1,000	5	1.29 ± 0.70	7.10 ± 2.11	0.13 ± 0.12	0.09 ± 0.04	0.01 ± 0.01	0.09 ± 0.07					

NEUT: Neutrophil LYMPH: Lymphocyte MONO: Monocyte EOSN: Eosinophil BASO: Basophil LUC: Large unstained cells  
 Mean ± S.D.

Table 9-1. -continued Hematology  
 ---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	PLT ( $\times 10^9/\text{mm}^3$ )	Reticulocyte (%)
Male	0	5	1153 $\pm$ 164	2.7 $\pm$ 0.5
	100	5	1135 $\pm$ 178	2.7 $\pm$ 0.5
	300	5	1218 $\pm$ 58	3.0 $\pm$ 0.1
	1,000	5	1169 $\pm$ 178	3.0 $\pm$ 0.4
Female	0	5	1382 $\pm$ 185	2.6 $\pm$ 0.8
	100	5	1284 $\pm$ 136	2.2 $\pm$ 0.3
	300	5	1226 $\pm$ 152	2.4 $\pm$ 0.3
	1,000	5	1264 $\pm$ 190	3.2 $\pm$ 0.7

Mean  $\pm$  S.D.

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Table 9-2. Hematology  
 ---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	HCT (%)	HGB (g/dL)	RBC ( $\times 10^6/\text{mm}^3$ )	MCV ( $\mu\text{m}^3$ )	MCH (pg)	MCHC (%)
Male	0	4	42.7 $\pm$ 2.0	15.6 $\pm$ 0.6	8.06 $\pm$ 0.19	52.9 $\pm$ 1.5	19.4 $\pm$ 0.4	36.5 $\pm$ 0.3
	1,000	5	42.2 $\pm$ 1.6	15.3 $\pm$ 0.7	8.03 $\pm$ 0.54	52.6 $\pm$ 2.2	19.1 $\pm$ 0.7	36.3 $\pm$ 0.5
Female	0	5	41.9 $\pm$ 2.6	15.7 $\pm$ 1.0	7.91 $\pm$ 0.42	53.0 $\pm$ 1.4	19.9 $\pm$ 0.3	37.5 $\pm$ 0.8
	1,000	5	40.3 $\pm$ 2.4	15.0 $\pm$ 0.8	7.62 $\pm$ 0.58	52.9 $\pm$ 1.7	19.7 $\pm$ 0.7	37.3 $\pm$ 0.4

Mean  $\pm$  S.D.

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Table 9-2. --continued Hematology  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	WBC ( $\times 10^9/\text{mm}^3$ )	Differential leukocyte counts (%)						
				NEUT	LYMPH	MONO	EOSN	BASO	LUC	
Male	0	4	10.00 $\pm$ 2.46	16.7 $\pm$ 3.6	79.8 $\pm$ 3.7	1.8 $\pm$ 0.2	1.0 $\pm$ 0.5	0.1 $\pm$ 0.0	0.6 $\pm$ 0.1	
	1,000	5	10.20 $\pm$ 2.74	11.9 $\pm$ 4.7	84.4 $\pm$ 5.2	1.9 $\pm$ 0.6	1.0 $\pm$ 0.4	0.2 $\pm$ 0.1	0.6 $\pm$ 0.1	
Female	0	5	6.69 $\pm$ 2.02	19.4 $\pm$ 7.4	77.4 $\pm$ 6.9	1.7 $\pm$ 0.4	1.0 $\pm$ 0.3	0.1 $\pm$ 0.0	0.6 $\pm$ 0.2	
	1,000	5	5.81 $\pm$ 2.87	16.3 $\pm$ 5.8	79.7 $\pm$ 6.2	1.8 $\pm$ 0.4	1.6 $\pm$ 0.7	0.0 $\pm$ 0.1	0.6 $\pm$ 0.2	

NEUT: Neutrophil LYMPH: Lymphocyte MONO: Monocyte EOSN: Eosinophil BASO: Basophil LUC: Large unstained cells  
Mean  $\pm$  S.D.

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Table 9-2. --continued Hematology  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	NEUT ( $\times 10^9/\text{mm}^3$ )		LYMPH ( $\times 10^9/\text{mm}^3$ )		MONO ( $\times 10^9/\text{mm}^3$ )		EOSN ( $\times 10^9/\text{mm}^3$ )		BASO ( $\times 10^9/\text{mm}^3$ )		LUC ( $\times 10^9/\text{mm}^3$ )	
			Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Male	0	4	1.62	0.28	8.03	2.17	0.18	0.06	0.10	0.06	0.01	0.00	0.06	0.02
	1,000	5	1.15	0.25*	8.69	2.66	0.18	0.03	0.10	0.06	0.02	0.01	0.06	0.02
Female	0	5	1.33	0.83	5.14	1.38	0.11	0.04	0.06	0.03	0.00	0.01	0.04	0.02
	1,000	5	0.92	0.45	4.66	2.53	0.10	0.03	0.08	0.03	0.00	0.00	0.04	0.04

NEUT: Neutrophil LYMPH: Lymphocyte MONO: Monocyte EOSN: Eosinophil BASO: Basophil LUC: Large unstained cells  
Mean  $\pm$  S.D.  
Significantly different from control group; \*:  $P \leq 0.05$  (Dunnett)

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Table 9-2. ---continued Hematology  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	PLT (x10 <sup>9</sup> /mm <sup>3</sup> )	Reticulocyte (%)
Male	0	4	1169 ± 192	2.4 ± 0.2
	1,000	5	1047 ± 74	2.6 ± 0.5
Female	0	5	1276 ± 142	2.0 ± 0.5
	1,000	5	1173 ± 112	2.9 ± 0.5*

Mean ± S.D.  
Significantly different from control group; \*; P ≤ 0.05 (Dunnnett)

Table 10-1. Coagulation  
---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	PT (sec.)	APTT (sec.)
Male	0	5	19.1 ± 0.6	23.9 ± 1.7
	100	5	20.7 ± 3.5	24.9 ± 2.0
	300	5	19.9 ± 1.5	24.0 ± 2.1
	1,000	5	20.4 ± 1.0	25.2 ± 3.7
Female	0	5	17.3 ± 0.9	17.8 ± 2.6
	100	5	17.3 ± 0.8	18.4 ± 0.6
	300	5	17.6 ± 0.9	19.1 ± 1.8
	1,000	5	16.6 ± 0.4	18.7 ± 1.3

Mean ± S.D.

Table 10-2. Coagulation  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	PT (sec.)	APTT (sec.)
Male	0	4	19.4 ± 1.5	24.1 ± 1.7
	1,000	5	21.5 ± 1.4	25.1 ± 2.4
Female	0	5	17.9 ± 0.5	17.9 ± 1.0
	1,000	5	16.9 ± 0.4**	18.6 ± 0.7

Mean ± S.D.  
Significantly different from control group; \*\*: P ≤ 0.01 (Dunnett)

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Table 11-1. Blood chemistry  
---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	T.protein (g/dL)	Glucose (mg/dL)	Triglyceride (mg/dL)	T.cholesterol (mg/dL)
Male	0	5	5.77 ± 0.16	145 ± 16	28.5 ± 16.7	61 ± 10
	100	5	5.62 ± 0.13	163 ± 19	51.0 ± 29.9	61 ± 12
	300	5	5.46 ± 0.15*	148 ± 24	43.5 ± 13.6	57 ± 6
	1,000	5	5.50 ± 0.21*	161 ± 26	51.4 ± 20.7	59 ± 8
Female	0	5	5.93 ± 0.31	115 ± 21	8.5 ± 5.1	63 ± 14
	100	5	5.84 ± 0.20	125 ± 19	17.2 ± 5.5	75 ± 7
	300	5	5.96 ± 0.13	118 ± 13	13.0 ± 6.5	66 ± 6
	1,000	5	5.89 ± 0.26	141 ± 25	20.1 ± 7.3*	71 ± 11

Mean ± S.D.  
Significantly different from control group; \*: P ≤ 0.05 (Dunnett)

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Table 11-1. -continued Blood chemistry  
 ---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	BUN (mg/dL)	Creatinine (mg/dL)	T.bilirubin (mg/dL)	Total bile acid (μmol/L)
Male	0	5	12.5 ± 0.7	0.21 ± 0.02	0.04 ± 0.01	42.3 ± 23.9
	100	5	12.1 ± 1.2	0.22 ± 0.03	0.03 ± 0.01	13.4 ± 5.0
	300	5	11.6 ± 1.2	0.22 ± 0.00	0.03 ± 0.01	10.8 ± 4.6
	1,000	5	13.2 ± 2.4	0.21 ± 0.02	0.03 ± 0.01	19.4 ± 15.8
Female	0	5	15.5 ± 1.7	0.27 ± 0.03	0.03 ± 0.01	16.8 ± 4.1
	100	5	13.3 ± 1.1	0.23 ± 0.03	0.03 ± 0.01	11.8 ± 7.8
	300	5	15.7 ± 2.0	0.25 ± 0.01	0.04 ± 0.01	13.2 ± 5.8
	1,000	5	14.5 ± 1.6	0.24 ± 0.02	0.04 ± 0.01	8.8 ± 1.6

Mean ± S.D.

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Table 11-1. -continued Blood chemistry  
 ---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	AST (U/L)	ALT (U/L)	AIP (U/L)	Gamma-GTP (U/L)
Male	0	5	82 ± 3	29 ± 6	860 ± 126	0.4 ± 0.1
	100	5	83 ± 7	31 ± 5	818 ± 84	0.3 ± 0.1
	300	5	78 ± 9	29 ± 3	762 ± 131	0.3 ± 0.1
	1,000	5	85 ± 10	31 ± 5	804 ± 172	0.4 ± 0.1
Female	0	5	84 ± 13	24 ± 7	409 ± 75	0.7 ± 0.1
	100	5	95 ± 15	22 ± 3	384 ± 40	0.8 ± 0.4
	300	5	88 ± 12	23 ± 6	397 ± 50	0.8 ± 0.1
	1,000	5	71 ± 10	21 ± 3	427 ± 108	0.8 ± 0.2

Mean ± S.D.

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Table 11-1. -continued Blood chemistry  
---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	Calcium (mg/dL)	I.phosphorus (mg/dL)	Sodium (mmol/L)	Potassium (mmol/L)	Chloride (mmol/L)
Male	0	5	9.84 ± 0.14	8.27 ± 0.60	143.4 ± 0.5	4.48 ± 0.17	106.6 ± 0.7
	100	5	9.92 ± 0.21	8.75 ± 0.38	144.2 ± 0.3#	4.89 ± 0.17*	108.5 ± 0.2#
	300	5	9.78 ± 0.40	8.69 ± 0.43	143.9 ± 1.5	4.46 ± 0.17	107.2 ± 1.3
	1,000	5	9.65 ± 0.33	9.03 ± 0.68	142.5 ± 0.8	5.04 ± 0.28**	107.2 ± 1.4
Female	0	5	9.78 ± 0.36	7.84 ± 0.64	144.0 ± 1.3	4.46 ± 0.12	109.3 ± 1.3
	100	5	9.66 ± 0.20	7.86 ± 0.48	142.7 ± 1.0	4.36 ± 0.27	108.4 ± 1.8
	300	5	9.75 ± 0.34	7.95 ± 0.61	143.6 ± 0.3	4.26 ± 0.22	108.9 ± 1.8
	1,000	5	9.95 ± 0.12	8.34 ± 0.87	143.7 ± 1.1	4.28 ± 0.29	107.9 ± 1.5

Mean ± S.D.  
Significantly different from control group; \*: P ≤ 0.05    \*\*: P ≤ 0.01 (Dunnett)  
Significantly different from control group; #: P ≤ 0.05 (Steel)

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Table 11-2. Blood chemistry  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	T.protein (g/dL)	Glucose (mg/dL)	Triglyceride (mg/dL)	T.cholesterol (mg/dL)
Male	0	4	5.55 ± 0.28	149 ± 19	39.3 ± 7.6	55 ± 16
	1,000	5	5.53 ± 0.11	156 ± 18	50.3 ± 21.8	58 ± 11
Female	0	5	5.85 ± 0.15	115 ± 10	11.4 ± 3.0	61 ± 14
	1,000	5	5.95 ± 0.26	129 ± 22	12.4 ± 4.7	65 ± 9

Mean ± S.D.

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Table 11-2. --continued Blood chemistry  
 ---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	BUN (mg/dL)	Creatinine (mg/dL)	T.bilirubin (mg/dL)	Total bile acid ( $\mu$ mol/L)
Male	0	4	11.5 $\pm$ 1.1	0.27 $\pm$ 0.02	0.04 $\pm$ 0.02	23.2 $\pm$ 21.4
	1,000	5	11.6 $\pm$ 1.4	0.26 $\pm$ 0.04	0.03 $\pm$ 0.01	20.9 $\pm$ 14.3
Female	0	5	15.6 $\pm$ 1.2	0.30 $\pm$ 0.03	0.05 $\pm$ 0.01	18.7 $\pm$ 20.2
	1,000	5	15.6 $\pm$ 2.6	0.27 $\pm$ 0.04	0.05 $\pm$ 0.01	16.4 $\pm$ 6.3

Mean  $\pm$  S.D.

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Table 11-2. --continued Blood chemistry  
 ---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	AST (U/L)	ALT (U/L)	ALP (U/L)	Gamma-GTP (U/L)
Male	0	4	96 $\pm$ 15	31 $\pm$ 3	486 $\pm$ 70	0.4 $\pm$ 0.1
	1,000	5	84 $\pm$ 6	30 $\pm$ 4	565 $\pm$ 76	0.4 $\pm$ 0.1
Female	0	5	86 $\pm$ 20	25 $\pm$ 3	358 $\pm$ 79	0.9 $\pm$ 0.4
	1,000	5	78 $\pm$ 10	25 $\pm$ 2	375 $\pm$ 31	0.9 $\pm$ 0.2

Mean  $\pm$  S.D.

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Table 11-2. -continued Blood chemistry  
---Recovery period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	Calcium (mg/dL)	I. phosphorus (mg/dL)	Sodium (mmol/L)	Potassium (mmol/L)	Chloride (mmol/L)
Male	0	4	9.67 ± 0.32	7.58 ± 0.26	142.6 ± 1.3	4.73 ± 0.22	106.2 ± 1.0
	1,000	5	9.86 ± 0.25	7.71 ± 0.45	143.3 ± 0.6	4.60 ± 0.52	106.1 ± 0.9
Female	0	5	9.74 ± 0.24	7.52 ± 1.02	142.1 ± 1.2	4.55 ± 0.30	107.4 ± 1.6
	1,000	5	9.80 ± 0.30	6.84 ± 0.78	142.8 ± 1.9	4.33 ± 0.25	107.8 ± 1.5

Mean ± S.D.

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Table 12-1. Electrophoresis  
---Administration period---

Exp. No. 9934 (115-213)

Sex	Dose level (mg/kg)	No. of animals	Albumin (%)	Alpha-1 (%)	Alpha-2 (%)	Beta (%)	Gamma (%)	A/G
Male	0	5	50.6 ± 1.7	22.7 ± 1.4	7.9 ± 0.6	14.8 ± 0.7	4.1 ± 0.5	1.02 ± 0.07
	100	5	51.4 ± 3.2	21.0 ± 0.8	8.4 ± 0.9	15.5 ± 1.4	3.7 ± 0.7	1.07 ± 0.15
	300	5	52.6 ± 2.3	19.4 ± 2.5*	7.9 ± 0.6	15.5 ± 0.5	4.6 ± 0.2	1.12 ± 0.10
	1,000	5	52.9 ± 1.4	18.4 ± 2.0**	8.4 ± 0.6	15.5 ± 1.6	4.8 ± 0.7	1.12 ± 0.07
Female	0	5	52.7 ± 1.6	19.6 ± 2.2	7.5 ± 0.7	15.1 ± 0.5	5.2 ± 1.0	1.12 ± 0.07
	100	5	54.7 ± 3.4	18.4 ± 1.5	7.9 ± 0.3	14.9 ± 1.3	4.0 ± 1.1	1.22 ± 0.18
	300	5	54.1 ± 0.8	17.0 ± 0.8	8.8 ± 0.7**	15.3 ± 1.1	4.8 ± 0.9	1.18 ± 0.04
	1,000	5	55.0 ± 2.3	17.3 ± 1.6	8.1 ± 0.6	15.1 ± 1.3	4.5 ± 1.4	1.23 ± 0.12

Mean ± S.D.  
Significantly different from control group; \*: P ≤ 0.05 \*\*: P ≤ 0.01 (Dunnett)

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