Table 1-1 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Clinical signs (Administration period)

Sex	Dose mg/kg	Findings	Day of administration													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
Male	0	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	15	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Female	0	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	15	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12

Table 1-2 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Clinical signs (Administration period)

Sex	Dose mg/kg	Findings	Day of administration													
			15	16	17	18	19	20	21	22	23	24	25	26	27	28
Male	0	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	15	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Female	0	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	15	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		No abnormality	12	12	12	12	12	12	12	12	12	12	12	12	12	12

Table 1-3 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Clinical signs (Recovery period)

Sex	Dose mg/kg	Findings	Day of recovery													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
Male	0	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Female	0	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250	No. of animals	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		No abnormality	6	6	6	6	6	6	6	6	6	6	6	6	6	6

Table 2-1 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 1)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-2 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 2)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-3 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 3)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-4 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 4)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-5 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 1 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Posture					
Normal		6	6	6	6
Convulsion					
None		6	6	6	6
Abnormal behavior					
None		6	6	6	6

No significant difference between treated group and control group.

Table 2-6 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : home cage observations (Week 2 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Posture					
Normal		6	6	6	6
Convulsion					
None		6	6	6	6
Abnormal behavior					
None		6	6	6	6

No significant difference between treated group and control group.

Table 2-7 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 1)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Ease of removal from cage Easy		12	6	6	12	12	6	6	12
Fur condition Normal		12	6	6	12	12	6	6	12
Skin Normal		12	6	6	12	12	6	6	12
Secretions-Eye, Nose Absent		12	6	6	12	12	6	6	12
Exophthalmos Absent		12	6	6	12	12	6	6	12
Palpebral closure Normal		12	6	6	12	12	6	6	12
Mucosal membranes Normal		12	6	6	12	12	6	6	12
Lacrimation Normal		12	6	6	12	12	6	6	12
Piloerection Absent		12	6	6	12	12	6	6	12
Pupil size Normal		12	6	6	12	12	6	6	12
Salivation None		12	6	6	12	12	6	6	12
Abnormal respiration Absent		12	6	6	12	12	6	6	12
Reactivity to handling Easy		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-8 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 2)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Ease of removal from cage									
Easy		12	6	6	12	11	6	6	12
Some resistance/avoidance		0	0	0	0	1	0	0	0
Fur condition									
Normal		12	6	6	12	12	6	6	12
Skin									
Normal		12	6	6	12	12	6	6	12
Secretions-Eye, Nose									
Absent		12	6	6	12	12	6	6	12
Exophthalmos									
Absent		12	6	6	12	12	6	6	12
Palpebral closure									
Normal		12	6	6	12	12	6	6	12
Mucosal membranes									
Normal		12	6	6	12	12	6	6	12
Lacrimation									
Normal		12	6	6	12	12	6	6	12
Piloerection									
Absent		12	6	6	12	12	6	6	12
Pupil size									
Normal		12	6	6	12	12	6	6	12
Salivation									
None		12	6	6	12	12	6	6	12
Abnormal respiration									
Absent		12	6	6	12	12	6	6	12
Reactivity to handling									
Easy		12	6	6	12	12	6	6	12

No significant difference in any treated groups from control group.

Table 2-9 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 3)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Ease of removal from cage									
Easy		12	6	6	12	11	6	5	12
Some resistance/avoidance		0	0	0	0	1	0	1	0
Fur condition									
Normal		12	6	6	12	12	6	6	12
Skin									
Normal		12	6	6	12	12	6	6	12
Secretions-Eye, Nose									
Absent		12	6	6	12	12	6	6	12
Exophthalmos									
Absent		12	6	6	12	12	6	6	12
Palpebral closure									
Normal		12	6	6	12	12	6	6	12
Mucosal membranes									
Normal		12	6	6	12	12	6	6	12
Lacrimation									
Normal		12	6	6	12	12	6	6	12
Piloerection									
Absent		12	6	6	12	12	6	6	12
Pupil size									
Normal		12	6	6	12	12	6	6	12
Salivation									
None		12	6	6	12	12	6	6	12
Abnormal respiration									
Absent		12	6	6	12	12	6	6	12
Reactivity to handling									
Easy		12	6	6	12	11	6	5	12
Slightly awkward		0	0	0	0	1	0	1	0

No significant difference in any treated groups from control group.

Table 2-10 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 4)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Ease of removal from cage									
Easy		11	6	6	12	12	5	6	12
Some resistance/avoidance		1	0	0	0	0	1	0	0
Fur condition									
Normal		12	6	6	12	12	6	6	12
Skin									
Normal		12	6	6	12	12	6	6	12
Secretions-Eye, Nose									
Absent		12	6	6	12	12	6	6	12
Exophthalmos									
Absent		12	6	6	12	12	6	6	12
Palpebral closure									
Normal		12	6	6	12	12	6	6	12
Mucosal membranes									
Normal		12	6	6	12	12	6	6	12
Lacrimation									
Normal		12	6	6	12	12	6	6	12
Piloerection									
Absent		12	6	6	12	12	6	6	12
Pupil size									
Normal		12	6	6	12	12	6	6	12
Salivation									
None		12	6	6	12	12	6	6	12
Abnormal respiration									
Absent		12	6	6	12	12	6	6	12
Reactivity to handling									
Easy		12	6	6	12	11	6	6	11
Slightly awkward		0	0	0	0	1	0	0	1

No significant difference in any treated groups from control group.

Table 2-11 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 1 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Ease of removal from cage					
Easy		5	6	6	6
Some resistance/avoidance		1	0	0	0
Fur condition					
Normal		6	6	6	6
Skin					
Normal		6	6	6	6
Secretions-Eye, Nose					
Absent		6	6	6	6
Exophthalmos					
Absent		6	6	6	6
Palpebral closure					
Normal		6	6	6	6
Mucosal membranes					
Normal		6	6	6	6
Lacrimation					
Normal		6	6	6	6
Piloerection					
Absent		6	6	6	6
Pupil size					
Normal		6	6	6	6
Salivation					
None		6	6	6	6
Abnormal respiration					
Absent		6	6	6	6
Reactivity to handling					
Easy		6	6	6	6

No significant difference between treated group and control group.

Table 2-12 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : in-the-hand observations (Week 2 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Ease of removal from cage					
Easy		5	4	6	6
Some resistance/avoidance		1	0	0	0
Difficult		0	2	0	0
Fur condition					
Normal		6	6	6	6
Skin					
Normal		6	6	6	6
Secretions-Eye, Nose					
Absent		6	6	6	6
Exophthalmos					
Absent		6	6	6	6
Palpebral closure					
Normal		6	6	6	6
Mucosal membranes					
Normal		6	6	6	6
Lacrimation					
Normal		6	6	6	6
Piloerection					
Absent		6	6	6	6
Pupil size					
Normal		6	6	6	6
Salivation					
None		6	6	6	6
Abnormal respiration					
Absent		6	6	6	6
Reactivity to handling					
Easy		5	3	6	6
Slightly awkward		0	3	0	0
Difficult		1	0	0	0

No significant difference between treated group and control group.

Table 2-13 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 1)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Arousal									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12
Stereotypy									
None		12	6	6	12	12	6	6	12
Gait									
No/minimal location		0	0	0	1	0	0	0	0
Normal		12	6	6	11	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Grooming									
None		12	6	6	12	12	6	6	12
Rearing count (Mean±S.D.)		5± 3	5± 2	4± 3	4± 3	7± 2	4± 2	7± 2	6± 3
Defecation count (Mean±S.D.)		0± 1	0± 1	0± 1	1± 1	0± 0	0± 0	0± 0	0± 1
Urination									
None		9	3	5	10	12	6	4	11
Small amount		3	3	1	2	0	0	2	1

No significant difference in any treated groups from control group.

Table 2-14 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 2)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Arousal									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior						a)			
None		12	6	6	12	11	6	6	12
Minor		0	0	0	0	1	0	0	0
Stereotypy									
None		12	6	6	12	12	6	6	12
Gait									
No/minimal location		0	0	1	2	0	0	0	0
Normal		12	6	5	10	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Grooming									
None		12	6	6	12	12	6	6	12
Rearing count (Mean±S.D.)		5± 3	4± 2	4± 3	2± 2*D	7± 4	6± 4	9± 4	6± 3
Defecation count (Mean±S.D.)		0± 0	0± 0	0± 0	1± 1**DT	0± 0	0± 0	1± 1	0± 1
Urination									
None		10	6	6	10	12	6	6	9
Small amount		2	0	0	1	0	0	0	3
Moderate amount		0	0	0	1	0	0	0	0

a) Career
* : p<0.05 ; ** : p<0.01 (Significant difference from control group)
D : Dunnett's test
DT : Dunnett-type rank test

Table 2-15 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 3)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Arousal									
Normal		12	6	6	12	12	5	6	12
Increased alertness		0	0	0	0	0	1	0	0
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	5	11
Minor		0	0	0	0	0	0	1	1
Stereotypy									
None		12	6	6	12	12	6	6	12
Gait									
No/minimal location		1	1	0	1	0	0	0	0
Normal		11	5	6	11	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Grooming									
None		12	6	6	12	12	6	6	12
Rearing count (Mean±S.D.)		4± 3	2± 2	3± 3	3± 4	7± 3	5± 3	10± 5	6± 4
Defecation count (Mean±S.D.)		1± 2	1± 1	0± 0	2± 2	0± 1	0± 0	0± 0	0± 0
Urination									
None		10	4	5	8	12	6	6	10
Small amount		2	2	1	4	0	0	0	2

No significant difference in any treated groups from control group.

Table 2-16 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 4)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Arousal									
Normal		12	6	6	12	12	6	6	12
Convulsion									
None		12	6	6	12	12	6	6	12
Abnormal behavior									
None		12	6	6	12	12	6	6	12
Stereotypy									
None		12	6	6	12	12	6	6	12
Gait									
No/minimal location		2	1	1	0	0	0	0	0
Normal		10	5	5	12	12	6	6	12
Posture									
Normal		12	6	6	12	12	6	6	12
Grooming									
None		12	6	6	12	12	6	6	12
Rearing count (Mean±S.D.)		5± 3	4± 2	4± 3	5± 2	10± 3	8± 3	10± 4	7± 3*D
Defecation count (Mean±S.D.)		0± 0	0± 0	0± 0	1± 1**DT	0± 0	0± 0	0± 0	0± 0
Urination									
None		11	6	6	9	12	6	6	12
Small amount		1	0	0	3	0	0	0	0

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
D : Dunnett's test
DT : Dunnett-type rank test

Table 2-17 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 1 of recovery)

Parameter	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
	No. of animals	6	6	6	6
Arousal					
Normal		6	6	6	6
Convulsion					
None		6	6	6	6
Abnormal behavior					
None		6	6	6	6
Stereotypy					
None		6	6	6	6
Gait					
Normal		6	6	6	6
Posture					
Normal		6	6	6	6
Grooming					
None		6	6	6	6
Rearing count (Mean±S.D.)		6± 2	4± 2	8± 2	7± 3
Defecation count (Mean±S.D.)		0± 0	0± 0	0± 0	0± 0
Urination					
None		5	5	6	6
Small amount		0	1	0	0
Moderate amount		1	0	0	0

No significant difference between treated group and control group.

Table 2-18 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Detailed clinical signs : open field observation (Week 2 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Arousal					
Normal		6	6	6	6
Convulsion					
None		6	6	6	6
Abnormal behavior					
None		6	6	6	6
Stereotypy					
None		6	6	6	6
Gait					
Normal		6	6	6	6
Posture					
Normal		6	6	6	6
Grooming					
None		6	6	6	6
Rearing count (Mean±S.D.)		5± 2	5± 2	8± 3	7± 2
Defecation count (Mean±S.D.)		0± 0	0± 0	0± 0	0± 0
Urination					
None		4	6	6	6
Small amount		1	0	0	0
Moderate amount		1	0	0	0

No significant difference between treated group and control group.

Table 2-19 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Manipulative test (Week 4)

	Sex	Male				Female			
	Dose (mg/kg)	0	15	60	250	0	15	60	250
Parameter	No. of animals	12	6	6	12	12	6	6	12
Auditory response Normal		12	6	6	12	12	6	6	12
Approach response Normal		12	6	6	12	12	6	6	12
Touch response Normal		12	6	6	12	12	6	6	12
Tail pinch response Normal		12	6	6	12	12	6	6	12
Pupillary reflex Pass, both		12	6	6	12	12	6	6	12
Aerial righting reflex (Total score: Mean±S.D.)		0± 0	0± 0	0± 0	0± 0	0± 0	0± 0	0± 0	0± 0
Landing foot splay (mm: Mean±S.D.)		78±16	89±15	91±16	89±17	62±13	61±19	64±28	68±14

No significant difference in any treated groups from control group.

Table 2-20 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Manipulative test (Week 2 of recovery)

	Sex	Male		Female	
	Dose (mg/kg)	0	250	0	250
Parameter	No. of animals	6	6	6	6
Auditory response					
Weak		0	1	0	1
Normal		6	5	6	5
Approach response					
Normal		6	6	6	6
Touch response					
Normal		6	6	6	6
Tail pinch response					
Normal		6	6	6	6
Pupillary reflex					
Pass, both		6	6	6	6
Aerial righting reflex (Total score: Mean±S.D.)		0± 0	0± 0	0± 0	0± 0
Landing foot splay (mm: Mean±S.D.)		72±14	91±13*T	52± 9	65±18

* : $p<0.05$ (Significant difference from control group)
T : Student's t-test

Table 2-21 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Grip strength (Week 4)

Sex	Dose mg/kg		Fore limb g	Hind limb g
Male	0	No.	12	12
		Mean	906	534
		S.D.	95	71
	15	No.	6	6
		Mean	965	620
		S.D.	199	98
	60	No.	6	6
		Mean	912	583
		S.D.	164	89
	250	No.	12	12
		Mean	1021	533
		S.D.	252	139
Female	0	No.	12	12
		Mean	902	426
		S.D.	114	72
	15	No.	6	6
		Mean	808	472
		S.D.	138	94
	60	No.	6	6
		Mean	857	390
		S.D.	190	57
	250	No.	12	12
		Mean	925	455
		S.D.	189	89

No significant difference in any treated groups from control group.

Table 2-22 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Grip strength (Week 2 of recovery)

Sex	Dose mg/kg		Fore limb g	Hind limb g
Male	0	No.	6	6
		Mean	1398	653
		S.D.	204	135
	250	No.	6	6
		Mean	1362	665
		S.D.	95	108
Female	0	No.	6	6
		Mean	1032	540
		S.D.	79	99
	250	No.	6	6
		Mean	1134	571
		S.D.	94	75

No significant difference between treated group and control group.

Table 2-23 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Motor activity (Week 4)

Sex	Dose mg/kg		Interval (minutes) 0-10	10-20	20-30	30-40	40-50	50-60	Total(0-60)
Male	0	No.	12	12	12	12	12	12	12
		Mean	415	361	335	355	308	317	2090
		S.D.	46	44	70	67	101	148	339
	15	No.	6	6	6	6	6	6	6
		Mean	421	373	318	232*	237	252	1832
		S.D.	35	79	80	131D	171	193	622
	60	No.	6	6	6	6	6	6	6
		Mean	438	396	372	348	314	261	2128
		S.D.	26	47	37	54	100	147	201
	250	No.	12	12	12	12	12	12	12
		Mean	422	366	371	335	266	260	2019
		S.D.	27	30	60	91	134	153	384
Female	0	No.	12	12	12	12	12	12	12
		Mean	398	324	262	282	231	199	1695
		S.D.	48	84	73	100	121	124	337
	15	No.	6	6	6	6	6	6	6
		Mean	409	328	282	277	253	199	1748
		S.D.	34	50	84	126	121	99	367
	60	No.	6	6	6	6	6	6	6
		Mean	427	341	281	270	227	207	1753
		S.D.	48	30	49	51	129	105	283
	250	No.	12	12	12	12	12	12	12
		Mean	396	332	274	275	208	152	1637
		S.D.	47	42	83	127	129	129	442

* : $p<0.05$ (Significant difference from control group)
D : Dunnett's test

Table 2-24 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Motor activity (Week 2 of recovery)

Sex	Dose mg/kg		Interval (minutes) 0-10	10-20	20-30	30-40	40-50	50-60	Total(0-60)
Male	0	No.	6	6	6	6	6	6	6
		Mean	381	276	272	307	287	226	1747
		S.D.	62	82	76	61	106	136	394
	250	No.	6	6	6	6	6	6	6
		Mean	364	304	311	264	262	229	1732
		S.D.	56	62	39	57	100	108	276
Female	0	No.	6	6	6	6	6	6	6
		Mean	359	321	252	236	206	118	1492
		S.D.	64	20	79	50	149	106	330
	250	No.	6	6	6	6	6	6	6
		Mean	398	299	270	239	194	161	1561
		S.D.	50	127	69	127	127	129	418

No significant difference between treated group and control group.

Table 3-1 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Body weight (Administration period)

Sex	Dose mg/kg		Day of administration 1	4	7	10	14	17	21	24	28	Gain 1-28
Male	0	No.	12	12	12	12	12	12	12	12	12	12
		Mean	212	240	260	283	316	337	358	371	391	179
		S.D.	7	7	10	12	13	15	18	21	20	19
	15	No.	6	6	6	6	6	6	6	6	6	6
		Mean	212	240	265	286	322	346	369	384	398	187
		S.D.	5	7	10	13	17	21	25	25	28	24
	60	No.	6	6	6	6	6	6	6	6	6	6
		Mean	213	242	265	284	316	338	357	373	391	179
		S.D.	7	11	16	21	30	36	41	46	53	47
	250	No.	12	12	12	12	12	12	12	12	12	12
		Mean	213	240	264	285	317	339	357	370	386	174
		S.D.	8	9	12	16	20	23	25	27	30	25
Female	0	No.	12	12	12	12	12	12	12	12	12	12
		Mean	151	162	167	178	192	202	212	220	229	78
		S.D.	5	8	8	12	13	15	17	19	21	18
	15	No.	6	6	6	6	6	6	6	6	6	6
		Mean	150	162	167	177	190	198	207	216	224	74
		S.D.	8	7	6	7	9	12	13	13	14	10
	60	No.	6	6	6	6	6	6	6	6	6	6
		Mean	152	163	166	179	191	202	212	218	227	75
		S.D.	7	6	4	9	11	12	12	13	14	10
	250	No.	12	12	12	12	12	12	12	12	12	12
		Mean	152	163	168	179	193	205	214	221	227	76
		S.D.	3	3	4	7	10	11	11	11	12	11

Unit : g
No significant difference in any treated groups from control group.

Table 3-2 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Body weight (Recovery period)

Sex	Dose mg/kg		Day of recovery 1	3	7	10	14	Gain 1-14
Male	0	No.	6	6	6	6	6	6
		Mean	406	415	434	449	457	51
		S.D.	10	11	13	13	14	8
	250	No.	6	6	6	6	6	6
		Mean	380	388	408	422	430	50
		S.D.	33	31	37	40	40	11
Female	0	No.	6	6	6	6	6	6
		Mean	228	235	241	247	249	21
		S.D.	27	29	29	32	33	9
	250	No.	6	6	6	6	6	6
		Mean	230	233	235	241	243	13
		S.D.	11	9	11	14	11	3

Unit : g
No significant difference between treated group and control group.

Table 4-1 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Food consumption (Administration period)

Sex	Dose mg/kg		Day of administration 1	4	7	10	14	17	21	24	28
Male	0	No.	12	12	12	12	12	12	12	12	12
		Mean	23	24	25	27	27	26	27	25	28
		S.D.	2	2	2	2	2	2	2	2	2
	15	No.	6	6	6	6	6	6	6	6	6
		Mean	24	24	26	28	28	29	28	27	28
		S.D.	1	1	1	1	1	2	2	1	2
	60	No.	6	6	6	6	6	6	6	6	6
		Mean	24	25	26	28	27	27	27	26	28
		S.D.	2	2	3	3	4	4	4	4	5
	250	No.	12	12	12	12	12	12	12	12	12
		Mean	24	24	26	28	27	28	27	28*	28
		S.D.	2	1	2	2	2	2	2	3D	2
Female	0	No.	12	12	12	12	12	12	12	12	12
		Mean	17	17	17	18	18	18	19	19	20
		S.D.	2	2	1	2	2	2	2	3	2
	15	No.	6	6	6	6	6	6	6	6	6
		Mean	16	17	16	18	17	17	18	18	19
		S.D.	2	1	1	1	1	1	1	1	1
	60	No.	6	6	6	6	6	6	6	6	6
		Mean	17	17	16	18	18	18	18	17	19
		S.D.	2	1	2	2	2	2	1	1	1
	250	No.	12	12	12	12	12	12	12	12	12
		Mean	17	16	16	18	18	19	19	18	20
		S.D.	1	1	1	2	1	1	1	2	2

Unit : g/rat/day
* : $p<0.05$ (Significant difference from control group)
D : Dunnett's test

Table 4-2 A 28-day oral toxicity study of 2,6-di-tert-butyl-4-ethylphenol in rats with a recovery period of 2 weeks

Food consumption (Recovery period)

Sex	Dose mg/kg		Day of recovery 3	7	10	14
Male	0	No.	6	6	6	6
		Mean	29	28	28	27
		S.D.	1	2	2	2
	250	No.	6	6	6	6
		Mean	30	29	29	27
		S.D.	2	3	3	3
Female	0	No.	6	6	6	6
		Mean	21	19	19	18
		S.D.	3	3	3	3
	250	No.	6	6	6	6
		Mean	21	19	20	19
		S.D.	2	2	2	1

Unit : g/rat/day
No significant difference between treated group and control group.