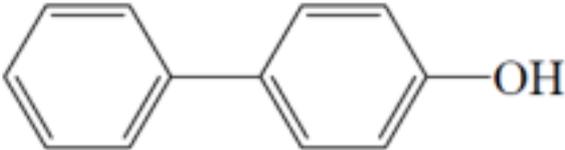


## Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test(OECD TG422) -Data Sheet-

MITI No.	4-19	CAS No.	92-69-3
Test substance	Chemical name	: <i>p</i> -Phenylphenol	
	Synonym	: 4-Hydroxybiphenyl	
	Molecular weight	: 170.21	
	Molecular formula	: C <sub>12</sub> H <sub>10</sub> O	
	Structural formula	:	
			
Appearance	White crystal – crystalline powder		
Solubility	0.0562 g/L in water, Soluble in the organic solvent such as chloroform and ethanol		
Biodegradation	Non-biodegradable (Official Bulletin of the Ministry of International Trade and Industry dated December 27, 1986)		
Bioconcentration	Low bioconcentration (Official Bulletin of the Ministry of International Trade and Industry dated December 27, 1986)		
Purity	99.9%		
Range finding study	Dose level	0, 30, 100, 300, 1,000 mg/kg/day	
	Dosing period	14 days	
	Results	1,000: Death (M 5/5, F 3/5), Body weight gain ↓ (M, F) 300: Food consumption ↓ (M, F), Body weight gain ↓ (tendency) (M) 100: NE 30: NE	
<b>Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test(OECD TG422)</b>			
Experimental Method	Test animals	CrI:CD (SD) male and female rats, 10 weeks old (initiation of dosing)	
	Administration	Oral gavage    Vehicle: Olive oil	
	Dose level	0, 30, 100, 300 mg/kg/day,    Recovery 0, 300 mg/kg/day (R300)	
	Dosing period	M: 42days F: 42 - 49 days (from 14 days before mating to day 4 of lactation)	
Results of Repeated dose toxicity	Clinical signs	M: NE F: Death (300, 1/12), Soiled perigenitalia (300), Loss of fur (300)	
	FOB	NE	
	Body weight	M: Body weight gain ↓ (300, R300) F: Body weight gain ↓ (300)	
	Food consumption	M: Food consumption ↓ (300) F: NE	
	Urinalysis	NE	

	Hematology	M: WBC ↑ (100, 300), Segmented neutrophil % ↓ (100, 300), Lymphocyte % ↑ (100, 300) F: NE
	Blood chemistry	M: IP ↑ (300, R300) F: TG ↑ (300), PL ↑ (300), ALT ↑ (300), ALP ↑ (300), BUN ↑ (tendency) (300), IP ↑ (tendency) (300), Na ↓ (300), Cl ↓ (300)
	Organ weight	M: Kidney A, R ↑ (300), Brain R ↑ (300), Testis R ↑ (300), Epididymis R ↑ (300) F: Kidney A, R ↑ (300), Liver R ↑ (300), Brain R ↑ (300), Thymus A ↓ (300), Adrenal A ↓ (300), Heart A ↓ (300)
	Histopathology	M: NE F: Dilatation of tubular lumen in the kidney (300), Papillary necrosis in the kidney (300), Regeneration of renal tubule (300), Hyperplasia in the forestomach (300), Ulcer in the forestomach (300) F (dead animal): Papillary necrosis in the kidney, Necrosis of proximal tubule in the kidney, Perivascular calcification in the heart
	Target organ	Kidney, Stomach
Results of Reproduction and developmental toxicity	Parent	Nursing failure(300)
	Offspring	Number of live pups on day 0 ↓ (tendency) (300), Cyanosis (300, 6/120 pups), Number of live pups and viability index on day 4 ↓ (tendency) (300), Total litter loss (300, 2/11 dams) (No statistically significant difference was found in either parameter.)
NOAEL		Repeated dose toxicity: M 100, F 100 Reproductive and developmental toxicity: 100
	Basis for NOAEL	Repeated dose toxicity: M 300: Kidney A, R ↑ F 300: Histopathological changes in the kidney and stomach  Reproductive and developmental toxicity: Parent 300: Nursing failure Offspring 300: Number of live pups on day 0, Number of live pups and viability index on day 4 ↓ (tendency)
NOEL		Repeated dose toxicity: M 30, F 100 Reproductive and developmental toxicity: 100
	Basis for NOEL	Repeated dose toxicity: M 100: WBC ↑, Segmented neutrophil % ↓, Lymphocyte % ↑ F 300: Histopathological changes in the kidney and stomach  Reproductive and developmental toxicity: Parent 300: Nursing failure Offspring 300: Number of live pups on day 0, Number of live pups and viability index on day 4 ↓ (tendency)
Note		

↑; increase, ↓; decrease

M; male, F; female

A; absolute organ weight, R; relative organ weight

**The data was reviewed by Hazard-Data Evaluation Committee of National Institute of Technology and Evaluation in fiscal 2008.**