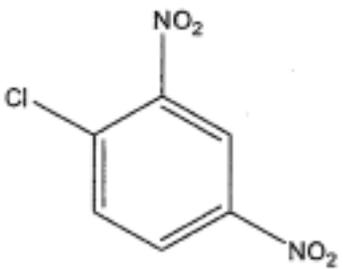


Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test(OECD TG422) -Data Sheet-

MITI No.	3-454	CAS No.	97-00-7
Test substance	Chemical name	: 1-Chloro-2,4-dinitrobenzene	
	Synonym	: 1,3-Dinitro-4-chlorobenzene, Dinitrochlorobenzene, DNCB	
	Molecular weight	: 202.55	
	Molecular formula	: C ₆ H ₃ ClN ₂ O ₄	
	Structural formula	:	
			
Appearance	Light yellow – light greenish yellow crystal		
Solubility	Insoluble in water (8 mg/L, 15 degC), Readily soluble in chloroform, Soluble in alcohol, ether, benzene, carbon tetrachloride and carbon disulfide		
Biodegradation	Non-biodegradable		
Bioconcentration	Low bioconcentration		
Purity	99.9%		
Range finding study	Dose level	0, 30, 100, 300, 600 mg/kg/day	
	Dosing period	14 days	
	Results	M 30: ALT ↑, AST ↑ M 30, 100, 300, 600: Body weight ↓, Food consumption ↓, Na ↑ M 100: MCH ↓, MCHC ↓, Eosinophil% ↓, ALP ↓, K ↑, Cl ↑, Spleen A ↑ M 300: Death (2/3) F 300: Body weight ↓, Food consumption ↓, MCV ↑, MCH ↓, MCHC ↓, Eosinophil% ↓, Lymphocyte ↓, Neutrophil ↑, TP ↓, Alb ↓, A/G ratio ↓, Thymus A ↓, Liver A ↑, Spleen A ↑, Adrenal gland A ↑ M, F 30, 100, 300, 600: Salivation, Chromaturia, Thickening in the forestomach wall M, F 100, 300: Decrease in locomotor activity, Anemic, Soiled perinasal or perineal region, Enlarged spleen, Erosion/ulcer in the glandular stomach M, F 100, 300, 600: RBC ↓, Hgb ↓, Hct ↓, Plt ↑, RET ↑ M, F 600: Death (M 1/3, F 2/3)	
Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test(OECD TG422)			
Experimental Method	Test animals	CrI:CD (SD) male and female rats, 9 weeks old (initiation of dosing)	
	Administration	Oral gavage Vehicle: 0.1w/v%Tween 80 + 0.5w/v% CMC-Na solution	
	Dose level	0, 1, 6, 30 mg/kg/day, Recovery 0, 30 mg/kg/day (R30)	
	Dosing period	M: 42days F: 42 - 54 days (from 14 days before mating to day 4 of lactation)	

Results of Repeated dose toxicity	Clinical signs	M, F: Chromaturia (30)
	FOB	NE
	Body weight	NE
	Food consumption	NE
	Urinalysis	NE
	Hematology	F: MCHC ↓ (30), WBC ↑ (30)
	Blood chemistry	NE
	Organ weight	M: Thymus A,R ↓(30) F: Spleen A,R ↑ (30)
	Histopathology	M: Enlargement of the spleen (30), Squamous hyperplasia in the forestomach (6, 30, R30), Thickening in the forestomach wall (30), Inflammatory cell infiltration and erosion in the forestomach (30) F: Erosion in the forestomach (6, 30), Squamous hyperplasia in the forestomach (6, 30, R30), Thickening in the forestomach wall (30), Inflammatory cell infiltration in the forestomach (30)
	Target organ	Stomach, Spleen, Erythropoietic system
Results of Reproduction and developmental toxicity	Parent	NE
	Offspring	NE
NOAEL		Repeated dose toxicity: M 1, F 1 Reproductive and developmental toxicity: 30
	Basis for NOAEL	Repeated dose toxicity: M, F 6: Squamous hyperplasia in the forestomach Reproductive and developmental toxicity: No adverse effect
NOEL		Repeated dose toxicity: M 1, F 1 Reproductive and developmental toxicity: 30
	Basis for NOEL	Repeated dose toxicity: M, F 6: Squamous hyperplasia in the forestomach Reproductive and developmental toxicity: No effect
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 2007.