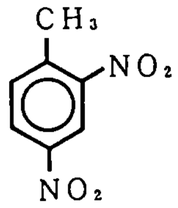
2,4-Dinitrotoluene (2,4-ジニトロトルエン)

Chemical Name: 2,4-Dinitrotoluene
Synonym: Benzene, 1-methyl-2,4-dinitro-
Molecular weight: 182.1
Melting point: 70～71℃
Boiling point: ℃

Chemical Structure



CAS No : 121-14-2
MITI No : (3)-446
Source of Substance: Tokyo Kasei Kogyo Co., Ltd.
Lot.No.: FBR02
Purity: %
Vehicle: DMSO

Judgement for
Chromosomal Aberration in CHL: Positive

IARC Evaluation : not yet cited

Experimental Data

	Treated Time (Hr)	Concentration (mg/ml)	No. of Metaphase	Polyploid (%)	Judge	Cell with Structural Chromosome Aberration (%) Gap	CTB	CTE	CSB	CSE	Total -G	Total +G	Judge
DMSO	24		200	0	−	0.5	0.5	0.5	0	0	1.0	1.5	−
	48		200	0	−	0	0	0	0	0	0	0	−
Test Chemical													
	24	0.05	200	0.5	−	0.5	0	0	0	0	0	0.5	−
		0.1	200	0	−	0	0	0	0	0	0	0	−
		0.2	200	0	−	1.0	2.0	0.5	0	0	2.5	3.5	−
		0.3	158	1.9	−	1.3	0	0	0	0.5	0.6	1.9	−
		0.4				No observation for metaphase							
	48	0.05	200	1.0	−	0	0.5	0	0	0	0.5	0.5	−
		0.1	200	0	−	0.5	0.5	0	0	0	0.5	1.0	−
		0.2	92	1.1	−	2.2	0	0	0	0	0	2.2	−
		0.3				No observation for metaphase							
		0.4				No observation for metaphase							
Positive Control (MMC)	24	0.00008	200	0.5	−	2.5	6.0	12.0	0	0	18.0	20.0	+
	48	0.00008	200	0	−	3.0	5.5	17.0	0	0	20.5	22.0	+

Experimental Data

	S 9 with or without	Concentration (mg/ml)	No. of Metaphase	Polyploid (%)	Judge	Cell with Structural Chromosome Aberration (%) Gap	CTB	CTE	CSB	CSE	Total -G	Total +G	Judge
DMSO	−		200	0	−	0.5	0.5	1.0	0	0	1.5	2.0	−
	+		200	0	−	0.5	0	0.5	0	0	0.5	1.0	−
Test Chemical													
	−	0.5	200	1.0	−	1.0	0.5	0.5	0	0	1.0	2.0	−
		1.0	200	0.5	−	2.0	0.5	2.0	0	0	2.5	4.5	−
		2.0	200	0	−	2.5	4.0	4.5	0	0	8.0	10.5	+
		3.0	200	0	−	2.5	3.5	6.5	0	0	10.0	12.0	+
		4.0				No observation for metaphase							
	+	0.5	200	1.0	−	0	0.5	2.0	0	0	2.5	2.5	−
		1.0	200	1.0	−	1.5	0.5	3.0	0	0	3.5	5.0	±
		2.0	163	0	−	3.7	4.3	16.0	0	0	17.8	18.4	+
		3.0	88	1.1	−	5.7	3.4	13.6	0	0	14.8	19.3	+
		4.0				No observation for metaphase							
Positive Control													
(B(a)P)−		0.008	200	0	−	0	0	0	0	0.5	0.5	0.5	−
	+	0.008	200	0	−	2.0	2.5	14.5	0	0.5	16.5	18.5	+

Test chemical was precipitated on the plate at the concentration of 0.1, 0.2, 0.3 and 0.4mg/ml.