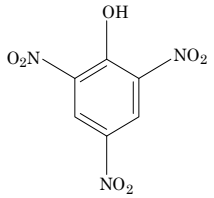
Chemical Name ; 2,4,6-Trinitrophenol

Synonym ; Picric acid
Phenol, 2,4,6-trinitro-
ピクリン酸

Molecular Weight ; 229.11
Melting Point ; 122.5℃[CHCD]
Boiling Point ; −
Flashing Point ; −
Molecular Formula ; $C_6H_3N_3O_7$

Chemical Structure



CAS No. ; 88-89-1
MITI No. ; (3)-823
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Wako Jyunyaku Kogyo Co., Ltd.

Lot No. ; PTQ3878
Purity ; 99.5%

Vehicle ; DMSO

Treatment			No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
Substance	Time (h)	Concentration (mg/ml)		(%)	Judgement	Gap	Chromatid		Chromosome		Others	Total		Judgement
						g	ctb	cte	csb	cse		−g	+g	
DMSO	24	1.0%	200	1	−	0	0	0	0	0	0	0	0	−
	48	1.0%	200	0.5	−	0	0	0	0	0	0	0	0	−
Test Chemical	24	0.0078	200	0	−	0	0.5	1	0	0	0	1.5	1.5	−
		0.031	200	1.5	−	0	1.5	1	0	0	0	1.5	1.5	−
		0.13	200	0.5	−	1.5	5.5	2	0	0	0	7.5	9	±
		0.5	200	0.5	−	1.5	18	6	0	0	0	22	23.5	+
		2.0	No obserbation for metaphase											
	48	0.13	200	0.5	−	0.5	2.5	1.5	0	0	0	3.5	4	−
		0.25	200	1.5	−	2	17	4	0	0	0	19.5	21	+
		0.5	200	0.5	−	3	48	25	0	0	0	61.5	62	+
		1.0	121	0	−	7.4	71.9	27.3	0	0	0	75.2	77.7	+
		2.0	No obserbation for metaphase											
Positive Control [MMC]	24	0.00004	200	1	−	0.5	11.5	11.5	0	0	0	21	21.5	+
	48	0.00004	200	2	−	0.5	14.5	27	0.5	0	0	35.5	35.5	+

Judgement for
Chromosomal Aberration in CHL ; Positive

IARC Evaluation ; not yet cited

Experimental Data with Metabolic Activation

Treatment			No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
Substance	S9 mix	Concent-ration (mg/ml)		(%)	Judge-ment	Gap	Chromatid		Chromosome		Others	Total		Judge-ment
						g	ctb	cte	csb	cse		−g	+g	
DMSO	−	1.0%	200	1	−	0	0.5	0.5	0	0	0	1	1	−
	+	1.0%	200	1	−	0	0	0	0	0	0	0	0	−
Test Chemical	−	0.5	200	2	−	0	0	0	0	0	0	0	0	−
		1.0	200	3	−	0	2.5	0	0	0	0	2.5	2.5	−
		1.5	200	1.5	−	0	2.5	1	0	0	0	3.5	3.5	−
		2.0	200	1.5	−	0.5	2.5	1.5	0	0	0	3.5	4	−
		2.5	200	0	−	2.5	7.5	4.5	0	0	0	10.5	12.5	+
	+	0.5	200	2	−	0	0	0	0	0	0	0	0	−
		1.0	200	1	−	0	0.5	0	0	0	0	0.5	0.5	−
		1.5	200	3.5	−	0	0.5	0.5	0	0	0	1	1	−
		2.0	200	1	−	0.5	0.5	3	0	0	0	3.5	4	−
		2.5	200	2.5	−	0	8	9.5	0	0	0	13	13	+
Positive Control [B[a]P]	−	0.01	200	1.5	−	0	0.5	0.5	0	0	0	1	1	−
	+	0.01	200	0.5	−	0	18	40.5	0	0	0	45	45	+

※ Test conditions: Treatment time ; 6h, Rcovery time ; 18h

※ There was no obserbation for methaphase with treatment of -S9 and +S9 at 3.0mg/ml.