Dimethyl sulfate (硫酸ジメチル)

Chemical Name: Dimethyl sulfate
Synonym Sulfuric acid dimethylester
Molecular weight: 126.1
Melting point: -27℃
Boiling point: 188℃

Chemical Structure

$(CH_3O)_2SO_2$

CAS No : 77-78-1
MITI No : (2)-1673
Specified chemical substances : G2
Source of Substance: Tokyo Kasei Kogyo Co., Ltd.
Lot.No.: FAZ01
Purity:
Vehicle: DMSO

Judgement for
Chromosomal Aberration in CHL: Positive

IARC Evaluation : G 2A

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	0.5	−	1.0	0.5	0	0	0	0.5	1.5	−
	48		200	0	−	0	0.5	0.5	0	0	1.0	1.0	−
Test Chemical													
	24	0.005	200	0.5	−	1.0	0.5	1.0	0	0	1.5	2.5	−
		0.01	200	0	−	2.5	1.5	1.0	0	0	2.5	5.0	±
		0.02	200	1.0	−	2.5	2.0	4.0	0	0	5.5	7.5	±
		0.04	200	0.5	−	5.5	8.0	18.5	0	0	24.0	27.0	+
		0.08	200	1.0	−	12.0	25.0	69.0	0	0	77.0	78.5	+
	48	0.005	200	0.5	−	1.0	0.5	0	0	0	0.5	1.0	−
		0.01	200	0	−	0.5	0	0.5	0	0	0.5	1.0	−
		0.02	200	0.5	−	2.0	1.0	0	0	0	1.0	2.0	−
		0.04	200	0	−	1.5	2.5	3.5	0	0	5.0	6.0	±
		0.08	200	2.5	−	4.5	11.0	24.0	0	0.5	30.0	30.5	+
Positive Control													
(MMC)	24	0.00008	200	0	−	6.0	9.5	20.0	0	0	27.0	30.0	+
	48	0.00008	200	1.0	−	6.0	14.0	32.5	0	0.5	37.5	38.5	+

Metaphase was not observed at the concentration of 0.12mg/ml.

Experimental Data

	S 9 with or without	Concentration (mg/ml)	No. of Meta-Phase	Poly-ploid (%)	Judge	Cell with Structural Chromosome Aberration (%) Gap	CTB	CTE	CSB	CSE	Total -G	Total +G	Judge
DMSO	−		200	0.5	−	1.0	0	0	0	0	0	1.0	−
	+		200	0	−	0	0.5	0	0	0	0.5	0.5	−
Test Chemical													
	−	0.01	200	0.5	−	2.5	2.0	1.0	0	0	3.0	5.5	±
		0.02	200	1.0	−	2.5	4.0	4.5	0	0	8.0	10.0	+
		0.04	200	0.5	−	7.0	9.0	10.5	0	0.5	19.0	22.5	+
		0.08	200	0	−	6.0	29.0	56.0	0	0	65.0	65.5	+
		0.12	200	0.5	−	12.5	38.0	77.0	0	0	86.0	87.0	+
	+	0.01	200	0	−	0.5	0	0.5	0	0	0.5	1.0	−
		0.02	200	0	−	1.0	1.5	0.5	0	0.5	2.0	3.0	−
		0.04	200	0	−	1.0	1.5	3.5	0	0	4.5	5.0	±
		0.08	200	0	−	4.0	12.5	26.5	0	0	34.0	34.5	+
		0.12	200	0.5	−	4.5	14.0	45.5	0	0.5	48.5	48.5	+
Positive Control													
(B(a)P)−		0.008	200	1.0	−	1.5	1.0	0.5	0	0	1.0	2.5	−
	+	0.008	200	0.5	−	2.0	10.5	37.5	0	0.5	42.0	43.0	+

Metaphase was not observed at the concentration of 0.16mg/ml.