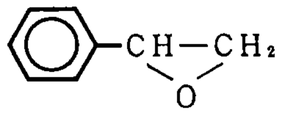
Styrene oxide (スチレン オキシド)

Chemical Name: Styrene oxide
Synonym: Epoxyethyl benzene
Phenyloxirane
Oxirane, phenyl-
Molecular weight: 120.1
Melting point: -35.6℃ (±)
Boiling point: 191~192℃, 57.5~58.5℃(4mmHg)

Chemical Structure



CAS No : 96-09-3
MITI No : (3)-1033
Source of Substance: Tokyo Kasei Kogyo Co., Ltd.
Lot.No.: AX01
Purity: 99.4%
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	−	0.5	0	0.5	0	0	0.5	1.0	−
	48		200	0.5	−	0.5	0	0	0	0	0	0.5	−
Test Chemical													
	24	0.0026	200	0.5	−	0	0	0.5	0	0	0.5	0.5	−
		0.0064	200	0	−	1.5	0	2.0	0	0	2.0	3.5	−
		0.016	200	0.5	−	1.0	4.5	10.5	0	0	13.5	14.5	+
		0.04	200	0	−	8.0	46.5	93.5	0	0	95.5	95.5	+
		0.1	200			No observation for metaphase							
	48	0.0026	200	0.5	−	0	0	0	0	0	0	0	−
		0.0064	200	0	−	0.5	1.0	0.5	0	0	1.5	2.0	−
		0.016	200	1.0	−	0	0	1.0	0	0	1.0	1.0	−
		0.04	200	7.5	±	3.5	7.5	19.5	2.5	3.5	24.5	25.5	+
		0.1	200			No observation for metaphase							
Positive Control (MMC)	24		200	0	−	2.5	10.0	45.5	0	0	50.0	50.0	+
	48		200	0	−	7.0	36.0	88.0	0	0	89.5	89.5	+

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	0.5	−	0.5	0.5	1.5	0	0	2.0	2.5	−
	+		200	1.5	−	0	0	0.5	0	0	0.5	0.5	−
Test Chemical													
	−	0.05	200	1.0	−	7.0	21.0	49.5	0	0	54.0	55.0	+
		0.1				No observation for metaphase							
		0.15				No observation for metaphase							
		0.2				No observation for metaphase							
		0.25				No observation for metaphase							
	+	0.05	200	0	−	0.5	0.5	0	0	0	0.5	1.0	−
		0.1	200	1.5	−	0.5	2.0	0.5	0	0	2.5	2.5	−
		0.15	200	1.0	−	2.0	4.0	15.5	0	0	17.5	19.0	+
		0.2	200	1.0	−	7.5	25.5	74.0	0	0.5	75.5	76.0	+
		0.25				No observation for metaphase							
Positive Control (CP)	−		200	0	−	1.0	0.5	0.5	0	0	1.0	2.0	−
	+		200	0	−	4.0	14.5	61.0	0	0	64.5	65.0	+