

Diethyl sulfate (硫酸ジエチル)

Chemical Name:	Diethyl sulfate
Synonym	Sulfuric acid, diethyl ester
Molecular weight:	154.2
Melting point:	-24.5°C
Boiling point:	208°C
Chemical Structure	
	(C ₂ H ₅ O) ₂ SO ₂
CAS No :	64-67-5
MITI No :	(2)-1673
Source of Substance:	Tokyo Kasei Kogyo Co., Ltd.
Lot.No. :	FAZ01
Purity:	99.9%
Vehicle:	DMSO

Judgement for Chromosomal Aberration in CHL: Positive

IARC Evaluation : G2A

Experimental Data

Treated Time (Hr)	Concentration (mg/ml)	No. of Meta-phase	Poly-ploid (%)	Judge	Cell with Structural Chromosome Aberration (%)								
										Total		Judge	
					Gap	CTB	CTE	CSB	CSE	-G	+G		
DMSO	24	200	0.5	-	0.5	0	1.5	0	0	1.5	1.5	-	
	48	200	0	-	0	0.5	0	0	0	0.5	0.5	-	
Test Chemical	24	0.16	200	0	-	1.0	0	2.0	0	0	2.0	3.0	-
		0.31	200	0	-	2.0	2.5	3.5	0	0	6.0	7.5	±
		0.63	200	0.5	-	3.5	4.5	31.5	0	0	34.5	36.0	+
		1.3	200	0	-	24.0	48.5	90.0	0	0	98.5	98.5	+
		2.5				No observation for metaphase							
	48	0.16	200	0	-	0	0	0.5	0	0	0.5	0.5	-
		0.31	200	0	-	0.5	0.5	0.5	0	0	1.0	1.5	-
		0.63	200	0	-	0.5	1.5	3.5	0	0.5	5.0	5.5	±
		1.3	200	13.0	+	4.5	19.5	83.5	0	1.5	88.5	88.5	+
		2.5				No observation for metaphase							
Positive Control (MMC)	24	200	0	-	2.5	3.0	29.0	0	0	30.5	31.0	+	
	48	200	0	-	1.5	3.0	23.0	1.0	0	28.0	29.0	+	

Experimental Data

S 9 with or without	Concent- ration (mg/ml)	No. of Meta- phase	Poly- ploid (%)	Judge	Cell with Structural Chromosome Aberration (%)							Judge
					Gap	CTB	CTE	Total		-G	+G	
								CSB	CSE			
DMSO	-	200	0.5	-	0.5	0	0.5	0	0	0.5	1.0	-
	+	200	0.5	-	0	0	0	0	0	0	0	-
Test Chemical												
-	0.2	200	1.0	-	0	2.0	1.0	0	0	3.0	3.0	-
	0.6	200	0.5	-	3.0	8.0	42.5	0	0	46.5	47.5	+
	1.0	200	0	-	17.0	30.5	95.5	0	0	97.5	97.5	+
	1.4				No observation for metaphase							
+	0.2	200	1.0	-	0.5	0.5	0.5	0	0	1.0	1.5	-
	0.6	200	0.5	-	2.5	6.0	37.5	0	0	41.0	42.0	+
	1.0	200	1.0	-	15.0	41.0	92.0	0.5	1.0	98.5	99.0	+
	1.4				No observation for metaphase							
Positive Control (CP)												
-		200	0.5	-	0	0.5	0	0	0	0.5	0.5	-
+		200	0	-	2.5	6.0	39.0	0.5	0	40.5	41.0	+