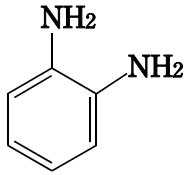
o-Phenylenediamine
【o-ﾌｪﾆﾚﾝｼﾞｱﾐﾝ】

Chemical Name; o-Phenylenediamine
Synonym ; o-Diaminobenzene
1,2-Diaminobenzene
1,2-Benzenediamine
o-ｼﾞｱﾐﾉﾍﾞﾝｾﾞﾝ
1,2-ｼﾞｱﾐﾉﾍﾞﾝｾﾞﾝ
1,2-ﾍﾞﾝｾﾞﾝｼﾞｱﾐﾝ

Molecular Weight ; 108.14
Melting Point ; 104 ℃ [CHCD]
103 - 105 ℃ [Aldrich]
103 - 104 ℃ [Merck]
Boiling Point ; 256 -258 ℃
[CHCD,Aldrich,Merck]
Flashing Point ; — ℃
Molecular Formula; $C_6H_8N_2$

Chemical Structure



CAS No. ; 95-54-5
MITI No. ; (3)-185
ML No. ; —
Specified Chemical Substances; —

Source of Substance; Tokyo Kasei Kogyo Co.,Ltd.
Lot No. ; FHA01
Purity ; 98 %

Vehicle ; DMSO

Judgement for
Chromosomal Aberration in CHL ; **Positive**

IARC Evaluation ; not yet cited

Exprimental Data without Metabolic Activation

Treatment						Cell with Structural Chromosome Aberration (%)							
Substance	Time (h)	Concent-ration (mg/ml)	No. of Metaphase	Polyploid (%)	**Judge-ment**		Chromatid		Chromosome		Total		**Judge-ment**
						Gap	CTB	CTE	CSB	CSE	−G	+G	
DMSO	24		200	1.5	−	0.5	1.0	1.5	0.0	0.0	2.5	3.0	−
	48		200	2.0	−	0.0	0.0	0.5	0.0	0.0	0.5	0.5	−
Test	24	0.000099	200	2.0	−	1.0	0.5	1.0	0.0	0.0	1.5	2.5	−
Chemical		0.00030	200	1.5	−	0.0	2.0	3.0	0.0	0.0	5.0	5.0	±
		0.00089	200	1.0	−	1.0	5.0	6.5	0.0	0.0	11.5	12.5	+
		0.0027	200	0.0	−	1.5	10.5	13.5	0.0	0.0	20.5	21.0	+
		0.0080	200	0.0	−	6.5	17.5	30.5	0.0	0.0	38.5	39.5	+
	48	0.000099	200	1.0	−	0.5	0.0	0.0	0.0	0.0	0.0	0.5	−
		0.00030	200	1.5	−	0.5	0.0	0.0	0.0	0.0	0.0	0.5	−
		0.00089	200	0.0	−	1.0	0.5	4.0	0.0	0.0	4.5	5.0	±
		0.0027	200	1.0	−	3.5	8.5	36.0	0.0	0.0	40.0	41.0	+
		0.0080	200	0.0	−	8.0	19.0	66.0	0.0	0.0	70.0	70.0	+
Positive Control [MMC]	24	0.00004	200	2.0	−	4.5	9.0	29.0	0.0	0.0	35.5	37.0	+
	48	0.00004	200	1.0	−	3.0	12.0	39.5	0.0	0.0	46.5	47.0	+

※ There was no observation for metaphase with both treatment of 24Hr and 48Hr at 0.024mg/ml.

Exprimental Data with Metabolic Activation

Treatment						Cell with Structural Chromosome Aberration (%)							
Substance	S9 mix	Concent-ration (mg/ml)	No. of Metaphase	Polyploid (%)	Judge-ment		Chromatid		Chromosome		Total		Judge-ment
						Gap	CTB	CTE	CSB	CSE	−G	+G	
DMSO	−		200	0.5	−	0.5	0.5	0.5	0.0	0.5	1.5	2.0	−
	+		200	2.5	−	0.0	0.5	1.0	0.0	0.0	1.5	1.5	−
Test Chemical	−	0.019	200	0.5	−	0.0	4.0	8.0	0.0	0.0	10.0	10.5	+
		0.038	200	0.5	−	2.5	5.0	15.0	0.0	0.0	19.5	19.5	+
		0.075	200	2.0	−	1.5	3.5	14.5	0.0	1.0	19.0	19.0	+
		0.15	200	1.0	−	2.5	8.0	25.0	0.0	0.0	28.0	28.5	+
		0.30				No observation for metaphase							
	+	0.019	200	0.5	−	0.0	0.0	2.5	0.0	0.0	2.5	2.5	−
		0.038	200	0.5	−	0.0	1.5	9.5	0.0	0.0	9.5	9.5	±
		0.075	200	1.0	−	1.5	2.0	9.5	0.0	0.0	10.5	10.5	+
		0.15	200	0.5	−	2.0	3.5	12.5	0.0	0.0	14.5	14.5	+
		0.30				No observation for metaphase							
Positive Control [CYP]	−	0.01	200	2.0	−	0.0	1.5	0.5	0.0	0.5	2.5	2.5	−
	+	0.01	200	0.0	−	2.0	8.5	74.0	0.0	0.0	75.0	75.0	+