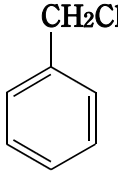
Benzyl chloride
【ﾍﾞﾝｼﾞﾙｸﾛﾘﾄﾞ】

Chemical Name;Benzyl chloride
Synonym ;α-Chlorotoluene
(Chloromethyl)benzene
α-ｸﾛﾛﾄﾙｴﾝ
(ｸﾛﾛﾒﾁﾙ)ﾍﾞﾝｾﾞﾝ
塩化ﾍﾞﾝｼﾞﾙ

Molecular Weight ; 126.59
Melting Point ; - 43 ℃ [CHCD,Aldrich]
- 48 ℃ [CHCD]
- 48 ～ -43 ℃ [Merck]
Boiling Point ; 179 ℃ [CHCD,Merck]
177 - 181 ℃ [Aldrich]
Flashing Point ; 73 ℃ [Aldrich]
Molecular Formula; C_7H_7Cl

Chemical Structure



CAS No. ; 100-44-7
MITI No. ; (3)-39 , (3)-102
ML No. ; －
Specified Chemical Substances; －

Source of Substance; Wako Junyaku Kogyo Co.,Ltd.
Lot No. ; APQ5976
Purity ; 100.0 %

Vehicle ; DMSO

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

IARC Evaluation ; not yet cited

Exprimental Data without Metabolic Activation

Treatment Substance	Time (h)	Concent-ration (mg/ml)	No. of Metaphase	Polyploid (%)	Judge-ment	Cell with Structural Chromosome Aberration (%) Gap	Chromatid CTB	Chromatid CTE	Chromosome CSB	Chromosome CSE	Total −G	Total +G	Judge-ment
DMSO	24		200	0.5	－	0.0	0.0	1.0	0.0	0.0	1.0	1.0	－
	48		200	1.0	－	0.0	0.0	0.0	0.0	0.0	0.0	0.0	－
Test Chemical	24	0.01	200	0.5	－	0.0	0.0	1.0	0.0	0.5	1.5	1.5	－
		0.02	200	0.5	－	0.0	2.0	2.0	0.0	0.0	3.5	3.5	－
		0.03	200	0.5	－	0.0	2.5	5.5	0.0	0.0	7.0	7.0	±
		0.04	200	4.0	－	1.5	7.0	17.5	0.0	0.0	19.5	19.5	＋
		0.05	200	4.0	－	2.5	12.0	42.0	0.0	0.0	46.0	46.5	＋
	48	0.01	200	0.5	－	0.0	0.0	0.0	0.0	0.0	0.0	0.0	－
		0.02	200	0.0	－	0.0	0.0	0.0	0.0	0.0	0.0	0.0	－
		0.03	200	0.0	－	0.0	0.0	0.0	0.0	0.5	0.5	0.5	－
		0.04	200	0.0	－	0.0	0.5	2.5	0.0	0.0	3.0	3.0	－
		0.05	200	5.5	±	0.5	0.5	3.0	0.0	0.0	3.0	3.5	－
Positive Control [MMC]	24	0.00004	200	0.5	－	0.5	11.0	55.5	0.0	0.0	59.5	59.5	＋
	48	0.00004	200	0.0	－	1.0	9.0	69.5	0.0	0.0	70.5	70.5	＋

※ There was no observation for metaphase with both treatment of 24Hr and 48Hr at 0.06mg/ml.

Exprimental Data with Metabolic Activation

Treatment			No. of Metaphase	Polyploid (%)	Judge-ment	Cell with Structural Chromosome Aberration (%)							
							Chromatid		Chromosome		Total		
Substance	S9 mix	Concent-ration (mg/ml)				Gap	CTB	CTE	CSB	CSE	−G	+G	Judge-ment
DMSO	−		200	0.5	−	0.0	0.5	0.5	0.0	0.0	1.0	1.0	−
	+		200	0.0	−	0.0	0.0	0.5	0.0	0.0	0.5	0.5	−
Test	−	0.025	200	0.0	−	0.0	0.0	0.0	0.0	0.0	0.0	0.0	−
Chemical		0.05	200	1.0	−	0.5	1.5	4.5	0.0	0.0	5.5	6.0	±
		0.1				No observation for metaphase							
		0.2				No observation for metaphase							
		0.3				No observation for metaphase							
	+	0.025	200	0.5	−	0.0	0.0	0.0	0.0	0.0	0.0	0.0	−
		0.05	200	0.5	−	0.0	0.0	1.0	0.0	0.0	1.0	1.0	−
		0.1	200	1.0	−	0.0	2.0	1.5	0.0	0.0	3.5	3.5	−
		0.2	200	1.0	−	0.0	0.5	12.5	0.0	0.0	12.5	12.5	+
		0.3				No observation for metaphase							
Positive Control [B(a)P]	−	0.01	200	2.5	−	0.0	0.5	0.0	0.0	0.0	0.5	0.5	−
	+	0.01	200	0.5	−	0.5	6.0	28.0	0.0	0.0	31.0	31.0	+