

α -Chlorobutyric acid (α -クロ酪酸)

Chemical Name:	α -Chlorobutyric acid
Synonym	2-Chlorobutanoic acid
Molecular weight:	122.6
Melting point:	°C
Boiling point:	101 °C(15 mmHg)
Chemical Structure	$ \begin{array}{c} \text{Cl} \\ \\ \text{CH}_3\text{CH}_2\text{CHCOOH} \end{array} $
CAS No :	4170-24-5
Source of Substance:	Tokyo Kasei Kogyo Co., Ltd.
Lot. No. :	MAM01
Purity:	Extra pure reagent
Vehicle:	PBS

Experimental Data

	Treated Time (Hr)	Concentration (mg/ml)	No. of Meta-phase	Poly-ploid (%)	Judge	Cell with Structural Chromosome Aberration (%)							
						Gap	CTB	CTE	CSB	CSE	Total		Judge
											-G	+G	
PBS	24		200	0.5	—	0	0	0	0	0	0	0	—
	48		200	0	—	0	0	0	0	0	0	0	—
Test Chemical	24	0.4	200	0	—	0.5	0	0	0	0	0	0.5	—
		0.8	200	0	—	2.5	0.5	1.0	0	0	1.5	3.5	—
		1.2	200	0.5	—	7.0	4.5	7.0	0	0	11.5	18.0	+
		1.6	200	0	—	17.0	17.5	10.0	0	0	28.0	34.0	+
	48	0.4	200	0	—	0	0	0.5	0	0	0.5	0.5	—
		0.8	200	0	—	1.5	0.5	0.5	0	0	1.5	3.0	—
		1.2	200	0	—	4.0	3.0	2.0	0	0	5.5	9.0	±
		1.6	200	0	—	14.5	38.5	45.0	0	0	66.0	70.0	+
Positive Control (MMC)	24	0.0001	200	0	—	4.0	11.0	37.5	0	0	45.0	46.5	+
	48	0.0001	200	0	—	8.5	20.5	54.0	0	0	63.0	65.0	+

Judgement for Chromosomal Aberration in CHL: Positive

IARC Evaluation : not yet cited

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	CSB	CSE	Total		
										-G	+G	
PBS	-	200	0.5	-	1.5	0	0	0	0	0	1.5	-
	+	200	0	-	0.5	0	1.0	0	0	1.0	1.5	-
Test Chemical												
-	0.5	200	0	-	0.5	0	0.5	0	0	0.5	1.0	-
	1.0	200	0	-	0.5	0.5	0.5	0	0	1.0	1.5	-
	1.5	200	0	-	2.0	0	1.0	0	0	1.0	2.5	-
	2.0	200	1.0	-	3.0	1.0	1.5	0	0	2.5	5.0	-
+	0.5	200	0	-	1.5	0.5	0	0	0	0.5	2.0	-
	1.0	200	0	-	1.5	0	0.5	0	0	0.5	2.0	-
	1.5	200	2.0	-	0.5	0	1.0	0	0	1.0	1.5	-
	2.0				No observation for metaphase							
Positive Control												
(B(a)P)	-	0.016	200	0	-	1.0	0	0	0	0	1.0	-
	+	0.016	200	0	-	3.0	3.0	24.5	0	0	25.5	27.5