

Crotonaldehyde (クロトンアルデヒド)

Experimental Data

Chemical Name:	Crotonaldehyde
Synonym	2-Butenal
Molecular weight:	70.09
Melting point:	-76.5°C
Boiling point:	104°C
Flashing point:	80°C
Chemical Structure	
	$\text{CH}_3\text{CH}=\text{CHCHO}$
CAS No :	4170-30-3
MITI No :	(2)-524
Source of Substance:	Tokyo Kasei Kogyo Co., Ltd.
Lot.No. :	AV01
Purity:	%
Vehicle:	Saline

Judgement for
Chromosomal Aberration in CHL: Positive

IARC Evaluation : not yet cited

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		
Saline		200	1.0	—	0	0	0.5	0	0	0.5	0.5	—	
48		200	0	—	0.5	0.5	0	0	0	0.5	1.0	—	
Test Chemical													
24	0.001	200	1.0	—	0	0	0.5	0	0	0.5	0.5	—	
	0.002	200	4.0	—	0	1.0	1.0	0	0	2.0	2.0	—	
	0.003	200	16.0	+	1.0	3.0	10.5	0	0	13.0	13.5	+	
	0.004	200	2.0	—	5.0	27.0	51.0	0	0	59.5	59.5	+	
	0.005	200	0	—	8.0	48.5	74.5	0	0	81.0	81.0	+	
48	0.001	200	0.5	—	0.5	0	0	0	0	0	0.5	—	
	0.002	200	0	—	0	0.5	0	0	0	0.5	0.5	—	
	0.003	200	2.0	—	0.5	0	0.5	0	0.5	1.0	1.5	—	
	0.004	200	3.5	—	0	1.0	2.5	0	0	4.0	4.0	—	
	0.005	200	11.5	+	0.5	2.5	8.0	0	0.5	10.5	10.5	+	
Positive Control													
(MMC)	24	0.00005	200	0.5	—	0.5	9.0	45.0	0	0	48.5	48.5	+
	48	0.00005	200	0.5	—	0.5	7.0	57.5	0	1.0	60.0	60.5	+

Experimental Data

S 9 with or without	Concentration (mg/ml)	No. of Meta- phase	Poly- ploid (%)	Judge	Cell with Structural Chromosome Aberration (%)							
										Total		Judge
					Gap	CTB	CTE	CSB	CSE	-G	+G	
Saline -		200	0.5	-	0	0	0	0	0	0	0	-
+		200	0.5	-	0	0	1.0	0	0	1.0	1.0	-
Test Chemical												
-	0.005	185	4.3	-	4.3	15.7	31.4	0	0	39.5	40.0	+
	0.01				No observation for metaphase							
	0.02				No observation for metaphase							
	0.03				No observation for metaphase							
	0.04				No observation for metaphase							
+	0.005	200	0.5	-	0.5	0	0.5	0	0	0.5	1.0	-
	0.01	200	1.5	-	0	0	0.5	0	0.5	1.0	1.0	-
	0.02	200	3.0	-	3.0	8.0	40.0	0	0	43.5	43.5	+
	0.03	110	0.9	-	7.3	37.3	80.9	0	0	82.7	82.7	+
	0.04				No observation for metaphase							
Positive Control												
(B(a)P) -		200	0.5	-	0	0.5	1.0	0	0	1.5	1.5	-
+		200	0.5	-	1.5	3.0	37.0	0	0	39.0	40.0	+