

Chemical Name	: <u>Glutaraldehyde</u>	
Synonym	: <u>Pentanedial</u> <u>Glutaral</u> ペンタンジアル	
Molecular Weight	: 100.12	
Melting Point	: -14°C	[CHCD]
Boiling Point	: 188°C(decomposition)	[CHCD]
Flashing Point	: -	
Molecular Formula	: C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	
Chemical Structure	OHC(CH <sub>2</sub> ) <sub>3</sub> CHO	
CAS No.	: 111-30-8	
MITI No.	: (2)-509	
ML No.	: -	
Specified Chemical Substances	: -	
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.	
Lot No.	: FGD04	
Purity	: 50.2%	
Vehicle	: Saline	

Substance	Treatment		No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
	Time (h)	Concentration (mg/ml)		%	Judgement	Gap g	Chromatid		Chromosome		Others	Total		Judgement
							ctb	cte	csb	cse		-g	+g	
Saline	24	10%	200	0.5	-	0	0.5	0.5	0	0	0	1	1	-
	48	10%	200	0	-	0	0	0	0	0	0	0	0	-
Test Chemical	24	0.00040	200	2.5	-	0	1.5	2.5	0	0	0	3	3	-
		0.00080	200	0.5	-	2	15.5	28.5	0	0	0	39.5	40	+
		0.0012	200	0	-	1.5	50.5	76	0	1	0	89.5	89.5	+
		0.0016	No obserbation for metaphase											
	48	0.00040	200	0.5	-	0	1	1	0	0	0	2	2	-
		0.00080	200	6	±	0.5	3.5	6.5	0	0	0	8.5	9	±
0.0012		200	6	±	1	33.5	39	0.5	0	0	41.5	42	+	
0.0016		155	3.9	-	2.6	46.5	54.8	1.3	0	0	61.9	62.6	+	
	0.0020	No obserbation for metaphase												
Positive Control [MMC]	24	0.00004	200	1	-	2	12.5	54.5	0	0	0	61	61.5	+
	48	0.00004	200	0	-	2	12	59	0	0	0	61	63	+

Judgement for Chromosomal Aberration in CHL ; Positive

IARC Evaluation ; not yet cited

Experimental Data with Metabolic Activation

Treatment			No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
Substance	S9 mix	Concent- ration (mg/ml)		(%)	Judge- ment	Gap g	Chromatid		Chromosome		Others	Total		Judge- ment
							ctb	cte	csb	cse		-g	+g	
Saline	-	10%	200	0.5	-	0.5	0.5	0	0	0	0	0.5	1	-
	+	10%	200	2	-	0.5	0	0.5	0	0	0	0.5	1	-
Test Chemical	-	0.0008	200	1.5	-	1	8	17	0	0	0	22	22.5	+
		0.0012	200	0.5	-	2	11.5	17.5	0	0	0	25	26	+
		0.0016	200	0	-	1	59	80.5	0.5	0	0	90	90.5	+
		0.0020	200	1.5	-	2.5	28.5	61	1	0	0	68.5	69	+
		0.0024	200	0.5	-	2	62	79	0.5	1	0	89	89	+
	+	0.0040	200	0.5	-	0.5	1	2	0.5	0	0	3	3	-
		0.0080	200	2.5	-	1	1.5	2	0	0	0	3	3.5	-
		0.012	200	11	+	1	13	29.5	0	0	0	33.5	34.5	+
		0.016	200	1	-	1	60.5	80.5	0	0	0	89	89	+
		0.020	71	0	-	1.4	46.5	59.2	0	1.4	0	77.5	77.5	+
Positive Control [B[a]P]	-	0.01	200	1	-	0.5	0	0	0	0	0	0.5	-	
	+	0.01	200	0.5	-	1	12.5	66	0	0.5	0	67.5	67.5	+

※ Test conditions: Treatment time ; 6h, Recovery time ; 18h