Acetaldehyde (アセトアルデヒド)

Experimental Data (Short treatments)

Chemical Name ; Acetaldehyde

Synoym ; Ethanal
Acetic aldehyde
Ethylaldehyde

Molecular Weight ; 44.05
Melting Point ; -121℃ [CHCD]
Boiling Point ; 21℃ [CHCD]
Flashing Point ; -38℃(c.c)[CHCD]
Molecular Formula ; C_2H_4O
Chemical Structure ;

CH_3CHO

CAS No. ; 75-07-0
MITI No. ; (2)-485
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Wako Pure Chemical Industries, Ltd.
Lot No. ; PAP4825
Purity ; 89.8%

Vehicle ; Distilled H_2O

Treatment Time (h)	S9 mix	Concentration (mg/ml)	Cell with Structural Chromosome Aberration (%)							Gap (%)	Cell Growth Rate (%)	Cell with Numerical Chromosome Aberration(%)			
			No. of Metaphase	Chromatid		Chromosome		Others	Total			No. of Metaphase	Poly-ploid	Others	Total
				ctb	cte	csb	cse								
6-18	−	[H_2O] (10%)	200	0.5	0	0	0	0	0.5	0	100	200	0	0	0
		0.025	200	0.5	0.5	0	0	0	1	0	81	200	0.5	0	0.5
		0.050	200	1	2.5	0	0	0	3	0.5	61	200	0	0	0
		0.10	200	6.5	50.5	0	0	0	53.5	1	50	200	0.5	0	0.5
		0.20	200	24	93.5	0	0	0	94.5	0	31	200	0.5	0	0.5
		[MMC] (0.00012)	200	11	32.5	0.5	0	0	39	1.5	−	200	0	0	0
6-18	+	[H_2O] (10%)	200	0	0	0	0	0	0	0	100	200	0	0	0
		0.10	200	0	0.5	0	0	0	0.5	0	84	200	0	0	0
		0.20	200	1.5	8.5	0	0	0	9.5	1	60	200	2.5	0	2.5
		0.30	200	8.5	53	0	0.5	0	56.5	0.5	48	200	0.5	0	0.5
		0.40	200	1.5	88	0	0	0	90.5	1.5	38	200	0	0	0
		[B[a]P] (0.015)	200	8.5	45	0	0	0	49	1	−	200	0.5	0	0.5

※ Test conditions: S9mix ; 5%, Treatment time ; 6h, Recovery time ; 18h
The culture vessel was sealed and cultured rotating after adding the test chemical.

Judgement for
Chromosomal Aberration in CHL/IU ; Positive

IARC Evaluation ; Group 2B

Experimental Data without Metabolic Activation (Continuous treatments)

Treatment Time (h)	Concentration (mg/ml)	Cell with Structural Chromosome Aberration (%)							Gap (%)	Cell Growth Rate (%)	Cell with Numerical Chromosome Aberration(%)			
		No. of Metaphase	Chromatid		Chromosome		Others	Total			No. of Metaphase	Poly-ploid	Others	Total
			ctb	cte	csb	cse								
24-0	[H_2O] (10%)	200	0	0	0	0	0	0	0.5	100	200	1.5	0	1.5
	0.020	200	4.5	6.5	0	0	0	10.5	1.5	73	200	2	0	2
	0.030	200	3	12.5	0	0	0	15.5	1.5	76	200	0	0	0
	0.040	200	3.5	14.5	0	0	0	18	1.5	70	200	0	0	0
	0.050	200	6.5	20	0	0	0	24.5	2	63	200	0	0	0
	0.060	200	10.5	24	0	0	0	32.5	4.5	54	200	0.5	0	0.5
	[MMC] (0.00004)	200	2.5	23	0	0	0	24	1	—	200	0	0	0
48-0	[H_2O] (10%)	200	0	0	0	0	0	0	0.5	100	200	0.5	0	0.5
	0.0060	200	1.5	0	0	0	0	1.5	2.5	81	200	0.5	0	0.5
	0.012	200	0.5	0.5	0	0	0	1	0	62	200	1	0	1
	0.018	200	1.5	3	0	0	0	3.5	0.5	43	200	0.5	0	0.5
	0.024	200	3.5	14.5	0	0	0	16.5	0.5	37	200	0.5	0	0.5
	0.030	200	8	38	0	0	0	40.5	1.5	29	200	0.5	0	0.5
	[MMC] (0.00004)	200	1	28.5	0	0	0	29	1	—	200	1.5	0	1.5

※ Test conditions: Treatment time ; 24h or 48h, Recovery time ; 0h
The culture vessel was sealed and cultured rotating after adding the test chemical.