Acrylamide (ｱｸﾘﾙｱﾐﾄﾞ)

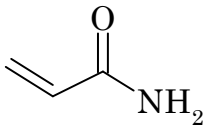
Experimental Data (Short treatments)

Chemical Name ; Acrylamide

Synoym ; 2-Propenamide
Acrylic acid amide

Molecular Weight ; 71.08
Melting Point ; 84.5℃ [Merck]
Boiling Point ; 125 ℃(25mmHg)[Merck]
Flashing Point ; －
Molecular Formula ; C_3H_5NO

Chemical Structure ;



CAS No. ; 79-06-1
MITI No. ; (2)-1014
ML No. ; －
Specified Chemical Substances ; Group 2

Source of Substance ; Wako Pure Chemical Industries Ltd.
Lot No. ; TCP2691
Purity ; 98.7%

Vehicle ; Ultrapure H_2O

Judgement for
Chromosomal Aberration in CHL ; Positive

IARC Evaluation ; Group 2A

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	1	1	0	0	0	2	0	100	200	0.0	0.0	0.0
		0.12	200	2	0	0	0	0	2	0	81	202	1.0	0.0	1.0
		0.24	200	1	1.5	0	0	0	2.5	0	72	207	3.4	0.0	3.4
		0.36	200	6.5	3.5	0	0	0	9.5	0.5	81	218	8.3	0.0	8.3
		0.48	200	14	8	0	0	0	20	1	65	251	20.3	0.0	20.3
		0.60	200	22	17	0	0	0	32.5	0.5	65	233	14.2	0.0	14.2
		0.72	200	26	25	0	0	0	43	1.5	54	212	5.7	0.0	5.7
		[MMC] (0.0001)	200	15.5	54	0	0	0	59	0	－	201	0.5	0.0	0.5
6-18	＋	[H_2O] (10%)	200	0.5	0.5	0	0	0	1	0	100	202	1.0	0.0	1.0
		0.24	200	0.5	2.5	0	0	0	3	0.5	77	200	0.0	0.0	0.0
		0.36	200	0.5	1	0	0	0	1	0.5	77	207	3.4	0.0	3.4
		0.48	200	3	8.5	0	0	0	10	0.5	73	232	13.8	0.0	13.8
		0.60	200	6	8.5	0	0	0	12.5	1	52	228	12.3	0.0	12.3
		0.72	200	6.5	11.5	0	0	0	16.5	0	54	203	1.5	0.0	1.5
		[B[a]P] (0.01)	200	7.5	39	0	0	0	42	0	－	201	0.5	0.0	0.5

※ Test conditions: S9mix ; 5%, Treatment time ; 6h, Recovery time ; 18h

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	Polyploid	Others	Total
			ctb	cte	csb	cse								
24-0	[H_2O] (10%)	200	1	0.5	0	0	0	1.5	0	100	200	0.0	0.0	0.0
	0.025	200	1	1	0	0	0	2	0	103	200	0.0	0.0	0.0
	0.05	200	0.5	1.5	0	0	0	2	0.5	96	204	2.0	0.0	2.0
	0.1	200	14	4.5	0	0	0	16.5	0	68	208	3.8	0.0	3.8
	0.2	200	54	42	0	0	0	72.5	0	52	208	3.8	0.0	3.8
	0.4	200	74	44.5	0	0	0	90	0	45	206	2.9	0.0	2.9
	[MMC] (0.00004)	200	21	42	0	0	0	53.5	1	—	200	0.0	0.0	0.0
48-0	[H_2O] (10%)	200	1	0.5	0	0	0	1.5	0	100	203	1.5	0.0	1.5
	0.025	200	0	0	0	0	0	0	0	89	203	1.5	0.0	1.5
	0.05	200	1.5	0	0	0	0	1.5	0	67	200	0.0	0.0	0.0
	0.1	200	18.5	6.5	0	0	0	23	1.5	35	212	5.7	0.0	5.7
	0.15	200	60	37.5	0	0	0	72	0.5	24	242	17.4	0.0	17.4
	0.2	200	87	78.5	0	0	2	97.5	1	16	215	7.0	0.0	7.0
	[MMC] (0.00004)	200	22.5	72	0	0.5	0	76	0	—	205	2.4	0.0	2.4

※ Test conditions: Treatment time ; 24h or 48h, Recovery time ; 0h