

Isobutyronitrile (イソブチロニトリル)

Experimental Data (Short treatments)

Chemical Name ; <u>Isobutyronitrile</u> Synonym ; <u>Isopropyl cyanide</u> <u>2-Cyanopropane</u> <u>2-Methylpropanenitrile</u> <u>シアニ化イソプロピル</u>	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								
Molecular Weight ; 69.11 Melting Point ; -72°C[Aldrich] Boiling Point ; 107-108°C[CHCD] Flashing Point ; 8°C[CHCD] Molecular Formula ; C ₄ H ₇ N Chemical Structure ; $\begin{array}{c} \text{CH}_3 \\ \diagdown \\ \text{CH} - \text{C} \equiv \text{N} \\ \diagup \\ \text{CH}_3 \end{array}$ CAS No. ; 78-82-0 METI No. ; (2)-1510 MHLW No. ; - Specified Chemical Substances ; - Source of Substance; Wako Pure Chemical Industries, Ltd. Lot No. ; ELN4515 Purity ; 99.8% Vehicle ; Ultrapure H ₂ O	6-18	-	[H ₂ O] (10%)	200	1.5	1.5	0	0	0	3.0	0.5	100	202	1.0	0	1.0
			0.18	200	1.5	0	0	0.5	0	2.0	0	94	201	0.5	0	0.5
			0.35	200	1.0	1.0	0	0.5	0	2.5	0.5	93	202	1.0	0	1.0
			0.53	200	2.0	1.5	0	0	0	3.5	0	95	202	1.0	0	1.0
			0.70	200	0.5	1.5	0	0	0	2.0	0.5	95	205	2.4	0	2.4
			[MMC] (0.00012)	200	16.5	57.5	0	0	0	61.0	1.0	-	202	1.0	0	1.0
	6-18	+	[H ₂ O] (10%)	200	1.5	1.0	0	0	0	2.0	0.5	100	203	1.5	0	1.5
			0.18	200	0	0	0	0.5	0	0.5	0	85	203	1.5	0	1.5
			0.35	200	0	0	0	0	0	0	0	72	203	1.5	0	1.5
			0.53	200	0	0	0	0	0	0	0	80	204	2.0	0	2.0
			0.70	200	0	1.5	0	0	0	1.5	0	87	202	1.0	0	1.0
			[B[a]P] (0.01)	200	5.5	35.5	0	0	0	37.5	1.0	-	202	1.0	0	1.0

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

Judgement for
Chromosomal Aberration in CHL/IU ; Negative

IARC Evaluation ; not yet cited

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 ₂ O] (10%)	200	0	0.5	0	0	0	0.5	0.5	100	200	0	0	0
	0.18	200	0	1.0	0	0	0	1.0	0	99	202	1.0	0	1.0
	0.35	200	0.5	0.5	0	0	0	1.0	0.5	96	201	0.5	0	0.5
	0.53	200	0.5	0.5	0	0	0	1.0	0.5	97	200	0	0	0
	0.70	200	1.0	0	0	0	0	1.0	0	102	200	0	0	0
	[MMC] (0.00004)	200	13.0	32.0	0	0	0	41.5	2.0	—	201	0.5	0	0.5
48-0	[H ₂ O] (10%)	200	0	0.5	0	0.5	0	1.0	0	100	201	0.5	0	0.5
	0.18	200	0	1.0	0	0	0	1.0	0	100	201	0.5	0	0.5
	0.35	200	0.5	0	0	0	0	0.5	0	97	201	0.5	0	0.5
	0.53	200	0	0	0	0	0	0	0	104	202	1.0	0	1.0
	0.70	200	0	0	0	0	0	0	0	98	201	0.5	0	0.5
	[MMC] (0.00004)	200	10.5	64.5	0	0	0	66.5	1.5	—	200	0	0	0

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