

Methyl acetoacetate (アセト酢酸メチル)Experimental Data (Short treatments)

Chemical Name	: <u>Methyl acetoacetate</u>
Synonym	: <u>Methyl 3-oxobutanoate</u> <u>3-Oxobutanoic acid methyl ester</u> <u>3-オキソブタン酸メチル</u> <u>Methyl 3-oxobutyrate</u>
Molecular Weight	: 116.12
Melting Point	: -80°C [Merck]
Boiling Point	: 169-170°C [CHCD]
Flashing Point	: 67°C [CHCD]
Molecular Formula	: C ₅ H ₈ O ₃
Chemical Structure	: $\text{CH}_3\text{COCH}_2\text{COOCH}_3$
CAS No.	: 105-45-3
METI No.	: (2)-1474, (2)-1475
MHLW No.	: -
Specified Chemical Substances	: -
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.
Lot No.	: GE01
Purity	: 99.8%
Vehicle	: Ultrapure H ₂ O

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 ₂ O] (10%)	200	0	0	0	0	0	0	0	100	200	0	0	0	
		0.30	200	0	0	0	0	0	0	0	97	200	1	0	1	
		0.60	200	0	0.5	0	0	0	0	0.5	0	92	200	0	0	0
		0.90	200	0.5	0	0	0	0	0	0.5	0	90	200	0	0	0
		1.2	200	0	0	0	0	0	0	0	0	89	200	1.5	0	1.5
		[MMC] (0.00012)	200	14	37.5	0	0	0	0	46.5	0	-	200	0	0	0
6-18	+	[H ₂ O] (10%)	200	0.5	0.5	0	0	0	0.5	0	100	200	0.5	0	0.5	
		0.30	200	0	0	0	0	0	0	0	101	200	0.5	0	0.5	
		0.60	200	0.5	1	0	0	0	1.5	0	96	200	0.5	0	0.5	
		0.90	200	0	0.5	0	0.5	0	1	0	90	200	4.5	0	4.5	
		1.2	200	0	2	0	0	0	2	0	87	200	13	0	13	
		[B[a]P] (0.01)	200	5.5	39	0.5	0	0	41.5	0	-	200	0.5	0	0.5	

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

Judgement for
Chromosomal Aberration in CHL/IU ; Positive

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	0.5	0	0	0	0	0	0.5	0	100	200	1	0	1
	0.40	200	0	0	0	0	0	0	0	0	95	200	0.5	0	0.5
	0.60	200	0	0.5	0	0	0	0	0.5	0	96	200	1.5	0	1.5
	0.80	200	1	0.5	0	0	0	0	1.5	0.5	99	200	0.5	0	0.5
	1.0	200	0.5	0	0	0	0	0	0.5	0.5	88	200	1	0	1
	1.2	200	1	0	0	0	0	0	1	0	84	200	3	0	3
	[MMC] (0.00004)	200	12.5	30	0	0	0	0	37	0	—	200	0	0	0
48-0	[H ₂ O] (10%)	200	0	0	0	0	0	0	0	0	100	200	0.5	0	0.5
	0.40	200	0	0	0	0	0	0	0	0	88	200	0	0	0
	0.60	200	0.5	0	0	0	0	0	0.5	0	82	200	0.5	0	0.5
	0.80	200	0	0.5	0	0	0	0	0.5	0	78	200	0	0	0
	1.0	200	1	0	0	0	0	0	1	0	71	200	2.5	0	2.5
	1.2	200	0	0.5	0	0	0	0	0.5	0	71	200	1	0	1
	[MMC] (0.00004)	200	19	40	0	0	0	0	47.5	1	—	200	0.5	0	0.5

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