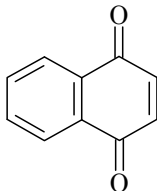


1,4-Naphthoquinone (1,4-ナフトキノン)

Experimental Data (Short treatments)

Chemical Name	: <u>1,4-Naphthoquinone</u>
Synonym	: <u>Naphthalene-1,4-dione</u> <u>α-Naphthoquinon</u> <u>1,4-Dihydronaphthalene-1,4-dione</u>
Molecular Weight	: 158.15
Melting Point	: 126°C[Merck]
Boiling Point	: -
Flashing Point	: -
Molecular Formula	: C ₁₀ H ₆ O ₂
Chemical Structure :	
CAS No.	: 130-15-4
MITI No.	: (4)-372
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.
Lot No.	: FHJ01
Purity	: 99.5%
Vehicle	: Dehydrated DMSO

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	-	[DMSO] (1%)	200	0.5	0	0	0	0	0	0.5	0	100	202	1.0	0.0	1.0	
		0.00006	200	0	1	0	0	0	0	1	1	106	207	3.4	0.0	3.4	
		0.00012	200	1	0.5	0	0	0	0	1.5	0	102	209	4.3	0.0	4.3	
		0.00015	200	0.5	1.5	0	0	0	0	2	1	53	211	5.2	0.0	5.2	
		0.00018	200	3.5	3	0	0	0	0	6	0	35	216	7.4	0.0	7.4	
		0.00021	200	4	4	0	0.5	0	0	7.5	1	30	219	8.7	0.0	8.7	
		0.00024	TOX									28	TOX				
		[MMC] (0.0001)	200	12	52	0	0	0	0	60	1	-	204	2.0	0.0	2.0	
6-18	+	[DMSO] (1%)	200	0	0.5	0	0	0	0	0.5	0	100	201	0.5	0.0	0.5	
		0.006	200	0	1	0	0	0	0	1	0	87	203	1.5	0.0	1.5	
		0.008	200	0.5	2	0	0	0	0	2	0	72	202	1.0	0.0	1.0	
		0.010	200	1.5	5	0	0	0	0	6	0.5	43	203	1.5	0.0	1.5	
		0.012	200	5	12	0	0	0	0	14	0.5	35	204	2.0	0.0	2.0	
		0.014	TOX									13	TOX				
		[B[a]P] (0.01)	200	5.5	44	0	0.5	0	0	46.5	0.5	-	204	2.0	0.0	2.0	

Judgement for
Chromosomal Aberration in CHL ; Positive

IARC Evaluation : Not yet cited

※ Test conditions: S9mix ; 5%, Treatment time ; 6h, Recovery time ; 18h
TOX: Metaphase cell division was not observed.

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	[DMSO] (1%)	200	2.5	0.5	0	0	0	3	0.5	100	201	0.5	0.0	0.5
	0.00004	200	1.5	0.5	0	0	0	2	0.5	113	200	0.0	0.0	0.0
	0.00008	200	2	1.5	0	0	0	3.5	0	107	201	0.5	0.0	0.5
	0.00012	200	2	2.5	0	0	0	4.5	0.5	84	202	1.0	0.0	1.0
	0.00016	200	1.5	4	0	0.5	0	5.5	3	62	204	2.0	0.0	2.0
	0.00020	200	1	3	0	0	0	3.5	1.5	66	202	1.0	0.0	1.0
	0.00024	200	1.5	2	0	0	0	3.5	0.5	45	205	2.4	0.0	2.4
	[MMC] (0.00004)	200	10.5	40.5	0	0	0	46.5	0	—	203	1.5	0.0	1.5
48-0	[DMSO] (1%)	200	0.5	0.5	0	0	0	1	0.5	100	201	0.5	0.0	0.5
	0.00008	200	0	0	0	0	0	0	0	94	203	1.5	0.0	1.5
	0.00012	200	0.5	1.5	0	0	0	2	0	71	204	2.0	0.0	2.0
	0.00016	200	0	1	0	0	0	1	0	65	202	1.0	0.0	1.0
	0.00020	200	0.5	1.5	0	0	0	2	0.5	58	202	1.0	0.0	1.0
	0.00024	200	2	1.5	0	0	0	3.5	1.5	33	200	0.0	0.0	0.0
	0.00028	200	1	1	0	0	0	2	0.5	15	202	1.0	0.0	1.0
	[MMC] (0.00004)	200	19.5	64	0	0	0	71.5	1	—	201	0.5	0.0	0.5

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