Hydroquinone (ﾋﾄﾞﾛｷﾉﾝ)

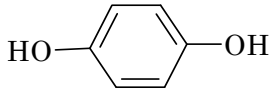
Experimental Data (Short treatments)

Chemical Name ; Hydroquinone

Synoym ; Benzene-1,4-diol
1,4-Benzenediol
1,4-Dihydroxybenzene
4-Hydroxyphenol

Molecular Weight ; 110.11
Melting Point ; 172℃ [CHCD]
Boiling Point ; 285℃(730mmHg)[CHCD]
Flashing Point ; 165℃ [CHCD]
Molecular Formula ; $C_6H_6O_2$

Chemical Structure ;



CAS No. ; 123-31-9
MITI No. ; (3)-543
ML No. ; －
Specified Chemical Substances ; －

Source of Substance ; Wako Pure Chemical Industries Ltd.
Lot No. ; CEP0552
Purity ; 99.8%

Vehicle ; Ultra pure H_2O

Judgement for
Chromosomal Aberration in CHL ; Positive

IARC Evaluation ; Group 3

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	1	0	0	0	1.5	0	100	201	0.5	0	0.5
		0.002	200	0.5	0.5	0	0	0	1	0	88	201	0.5	0	0.5
		0.004	200	3.5	7	0	0	0	7.5	0	96	209	4.3	0	4.3
		0.006	200	3.5	9.5	0	0	0	11	0.5	102	206	2.9	0	2.9
		0.008	78	2.6	9	0	0	0	9	0	86	80	2.5	0	2.5
		0.010	TOX								12	TOX			
		[MMC] (0.0001)	200	21	51	0	0	0	60.5	1	－	203	1.5	0	1.5
6-18	＋	[H_2O] (10%)	200	0	0	0	0	0	0	0	100	203	1.5	0	1.5
		0.02	200	2	8	0	0	0	8	0	74	203	1.5	0	1.5
		0.04	200	1.5	15	0	0	0	15	0	69	214	5.1	1.4	6.5
		0.06	200	1	10	0	0	0	10.5	0	64	208	2.9	1.0	3.8
		0.08	200	0.5	5.5	0	0	0	6	0	68	215	6.0	0.9	7.0
		0.10	200	3	5.5	0	0	0	7	0.5	60	205	2.0	0.5	2.4
		0.12	TOX								56	TOX			
		[B[a]P] (0.01)	200	5	40.5	0	0.5	0	42	0	－	203	1.0	0.5	1.5

※ 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	Polyploid	Others	Total
			ctb	cte	csb	cse								
24-0	[H_2O] (10%)	200	0.5	0	0	0	0	0.5	0.5	100	204	2.0	0	2.0
	0.0005	200	1.5	3	0	0	0	4.5	0	93	200	0	0	0
	0.001	200	1	6	0	0	0	7	0	86	201	0.5	0	0.5
	0.002	200	3.5	9	0	0	0	11.5	0.5	78	200	0	0	0
	0.003	200	8.5	10	0	0	0	17.5	2.5	76	200	0	0	0
	0.004	200	9	13.5	0	0	0	19.5	2	79	202	1.0	0	1.0
	[MMC] (0.00004)	200	10.5	41	0	0	0	48	0.5	—	206	2.9	0	2.9
48-0	[H_2O] (10%)	200	0	1	0	0	0	1	0	100	202	1.0	0	1.0
	0.0005	200	0.5	0	0	0	0	0.5	0	91	200	0	0	0
	0.001	200	0.5	1	0	0	0	1.5	0	83	202	1.0	0	1.0
	0.002	200	5	14.5	0	0	0	16	0.5	64	206	2.9	0	2.9
	0.003	200	16	41.5	0	0	0	46	1	56	205	2.4	0	2.4
	0.004	200	21	54.5	0	0	0	60	1	47	203	1.5	0	1.5
	[MMC] (0.00004)	200	13	51.5	0	0	0	57	0.5	—	203	1.5	0	1.5

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