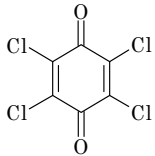


Experimental Data-1

(B9909-1/3)

2,3,5,6-Tetrachloro-1,4-benzoquinone

(2,3,5,6-テトラクロロ-1,4-ベンゾキノン)

Chemical Name	: 2,3,5,6-Tetrachloro-1,4-benzoquinone
Synonym	: Chloranil
Molecular Weight	: 245.88
Melting Point	: 290°C [Merck]
Boiling Point	: -
Flashing Point	: -
Molecular Formula	: C ₆ Cl ₄ O ₂
Chemical Structure:	
CAS No.	: 118-75-2
METI No.	: (3)-1007
MHLW No.	: -
Specified Chemical Substances	: -
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.
Lot No.	: GF01
Purity	: >95.0%
Vehicle	: DMSO

Mutagenicity in Bacterial Test: Positive

IARC Evaluation : not yet cited

Conc. μ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
DMSO	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(104)	(108)	(7)	(8)	(72)	(98)	(17)	(26)	(6)	(8)
1 .22	111 104 (108)	127 113 (120)	5 9 (7)	10 10 (10)	78 82 (80)	93 90 (92)	22 22 (22)	37 31 (34)	7 6 (7)	15 17 (16)
4 .88	101 123 (112)	123 123 (123)	8 10 (9)	8 7 (8)	70 83 (77)	89 93 (91)	20 21 (21)	20 17 (19)	5 6 (6)	11 9 (10)
19 .5	87 * 94 * (91 *)	141 134 (138)	7 * 9 * (8 *)	8 5 (7)	61 53 (57)	87 90 (89)	11 16 (14)	24 32 (28)	6 3 (5)	0 10 (5)
78 .1	0 * 0 * (0 *)	138 126 (132)	0 * 0 * (0 *)	9 5 (7)	0 * 0 * (0 *)	114 83 (99)	0 * 0 * (0 *)	26 23 (25)	0 * 0 * (0 *)	3 8 (6)
313	0 * 0 * (0 *)	419 354 (387)	0 * 0 * (0 *)	8 11 (10)	0 * 0 * (0 *)	128 101 (115)	0 * 0 * (0 *)	34 33 (34)	0 * 0 * (0 *)	8 9 (9)
1250	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)
5000 †	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)	0 * 0 * (0 *)
Judgement	-	+	-	-	-	-	-	-	-	-
Specific Mutagenicity		891								
Positive Control	AF-2 (747)	2-AA (1408)	NaN ₃ (426)	2-AA (258)	AF-2 (1417)	2-AA (776)	AF-2 (511)	2-AA (512)	9-AA (348)	2-AA (228)

* Growth inhibition was observed.

† Test chemical was precipitated with and without S9mix.

Experimental Data-2

(B9909-2/3)

Conc. μ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
DMSO	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(108)	(108)	(12)	(8)	(74)	(98)	(15)	(23)	(8)	(12)
0 .305	115 104 (110)	()	10 17 (14)	()	91 81 (86)	()	16 13 (15)	()	8 9 (9)	()
0 .61	119 105 (112)	()	8 3 (6)	()	101 86 (94)	()	15 13 (14)	()	11 8 (10)	()
1 .22	116 116 (116)	()	5 13 (9)	()	89 75 (82)	()	13 20 (17)	()	5 7 (6)	()
2 .44	112 90 (101)	()	7 15 (11)	()	86 83 (85)	()	16 21 (19)	()	11 6 (9)	()
2 .88	116 115 (116)	()	6 14 (10)	()	92 81 (87)	()	11 15 (13)	()	3 7 (5)	()
9 .77	98 * 104 * (101 *)	()	3 * 2 * (3 *)	()	62 59 (61)	()	9 * 17 * (13 *)	()	6 * 6 * (6 *)	()
19 .5	94 * 105 * (100 *)	150 152 (151)	7 * 9 * (8 *)	13 8 (11)	44 * 52 * (48 *)	111 130 (121)	11 * 9 * (10 *)	29 37 (33)	6 * 2 * (4 *)	15 14 (15)
39 .1	()	126 113 (120)	()	11 7 (9)	()	108 126 (117)	()	31 36 (34)	()	7 13 (10)
78 .1	()	123 145 (134)	()	10 6 (8)	()	121 121 (121)	()	22 21 (22)	()	9 7 (8)
156	()	268 297 (283)	()	8 7 (8)	()	117 120 (119)	()	31 25 (28)	()	9 8 (9)
313	()	329 352 (341)	()	9 14 (12)	()	149 121 (135)	()	33 34 (34)	()	11 9 (10)
625	()	173 * 113 * (143 *)	()	0 * 0 * (0 *)	()	180 * 77 * (129 *)	()	32 * 24 * (28 *)	()	0 * 0 * (0 *)
1250	()	0 * 0 * (0 *)	()	0 * 0 * (0 *)	()	0 * 0 * (0 *)	()	0 * 0 * (0 *)	()	0 * 0 * (0 *)
Judgement	-	+	-	-	-	-	-	-	-	-
Specific Mutagenicity		1120								
Positive Control	AF-2 (782)	2-AA (1419)	NaN ₃ (488)	2-AA (329)	AF-2 (1506)	2-AA (1023)	AF-2 (538)	2-AA (455)	9-AA (398)	2-AA (247)

* Growth inhibition was observed.

Experimental Data-3

(B9909-3/3)

Conc. μ g/plate	Number of Revertants/plate				
	Base-substitution			Frame-shift	
	TA100	TA1535	WP2 _{uvrA} /pKM101	TA98	TA1537
DMSO	S9-	S9-	S9-	S9-	S9-
	(121)	(9)	(63)	(21)	(9)
0 .305	111	6		13	8
	(126)	(8)	()	(13)	(7)
0 .61	123	7	24	15	3
	(122)	(9)	(50)	(12)	(6)
1 .22	128	3	72	11	7
	(130)	(3)	(64)	(15)	(7)
2 .44	126	6	67	10	7
	(125)	(7)	(64)	(14)	(8)
4 .88	139	6	81	24	9
	(131)	(6)	(76)	(23)	(9)
9 .77	104 *	7 *	44	16 *	5 *
	(105 *)	(8 *)	(53)	(17 *)	(6 *)
19 .5			53 *		
	()	()	(41 *)	()	()
Judgement	—	—	—	—	—
Specific Mutagenicity					
Positive Control	AF-2 (783)	NaN ₃ (427)	AF-2 (749)	AF-2 (502)	9-AA (426)

* Growth inhibition was observed.