

Experimental Data-1

(B0002-1/2)

Carbon tetrachloride(四塩化炭素)

Chemical Name	: <u>Carbon tetrachloride</u>
Synonym	: <u>Tetrachloromethane</u> <u>Perchloromethane</u>
Molecular Weight	: 153.82
Melting Point	: -23 °C [Merck]
Boiling Point	: 76.74°C [CHCD]
Flashing Point	: -
Molecular Formular	: CCl ₄
Chemical Structure:	$\begin{array}{c} \text{Cl} \\ \\ \text{Cl}-\text{C}-\text{Cl} \\ \\ \text{Cl} \end{array}$
CAS No.	: 56-23-5
METI No.	: (2)-38
MHLW No.	: 2-(13)-47
Specified Chemical Substances	: -
Source of Substance	: Wako Pure Chemical Industries, Ltd.
Lot No.	: KSG7670
Purity	: 99.90%
Vehicle	: Air
Exposure Condition	: 37°C, 24hr
Culture Condition	: 37°C, 24hr

Mutagenicity in Bacterial Test: Positive

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2 <i>uvrA</i> /pKM101		TA98		TA1537	
Air	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
		(113)	(120)	(14)	(13)	(67)	(95)	(15)	(33)	(11)
0 .005	119	117	24	15	77	83	13	37	16	17
	124	120	21	17	69	91	23	29	16	14
	(122)	(119)	(23)	(16)	(73)	(87)	(18)	(33)	(16)	(16)
0 .01	119	115	18	16	54	87	16	32	11	10
	120	129	14	9	72	77	20	26	11	10
	(120)	(122)	(16)	(13)	(63)	(82)	(18)	(29)	(11)	(10)
0 .05	112	150	21	20	87	94	28	22	15	10
	133	129	24	20	77	96	16	32	6	9
	(123)	(140)	(23)	(20)	(82)	(95)	(22)	(27)	(11)	(10)
0 .1	121	123	26	18	90	108	22	37	6	13
	141	142	13	14	79	116	23	22	10	3
	(131)	(133)	(20)	(16)	(85)	(112)	(23)	(30)	(8)	(8)
0 .5	134	122	21	17	104	160	28	25	8	11
	131	156	15	23	122	167	31	25	13	9
	(133)	(139)	(18)	(20)	(113)	(164)	(30)	(25)	(11)	(10)
1	119	121	10	17	84	113	21	31	7	11
	114	131	28	10	100	122	21	38	16	8
	(117)	(126)	(19)	(14)	(92)	(118)	(21)	(35)	(12)	(10)
5	96 *	76 *	15 *	10 *	0 *	59 *	34 *	30 *	9 *	5 *
	97 *	68 *	24 *	7 *	81 *	46 *	30 *	36 *	3 *	1 *
	(97 *)	(72 *)	(20 *)	(9 *)	(41 *)	(53 *)	(32 *)	(33 *)	(6 *)	(3 *)
Judgement	-	-	-	-	-	-	+	-	-	-
Specific Mutagenicity #							0.5%			
Positive Control	AF-2 (499)	2-AA (1370)	NaN ₃ (473)	2-AA (271)	AF-2 (562)	2-AA (1162)	AF-2 (621)	2-AA (397)	9-AA (350)	2-AA (229)

IARC Evaluation : Group 2B

* Growth inhibition was observed.

The concentration which was two times of the negative control value was shown.

Experimental Data-2

Conc. %	Number of Revertants/plate									
	Base-substitution					Frame-shift				
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
Air	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(105)	(100)	(10)	(9)	(65)	(77)	(11)	(22)	(10)	(9)
	90	94	6	11	69	76	11	11	3	16
0.05	87	101	8	9	74	100	16	23	3	8
	(89)	(98)	(7)	(10)	(72)	(88)	(14)	(17)	(3)	(12)
	102	89	7	10	71	84	11	29	8	9
0.1	79	87	9	10	77	78	13	23	10	6
	(91)	(88)	(8)	(10)	(74)	(81)	(12)	(26)	(9)	(8)
	90	121	13	16	76	114	15	21	5	7
0.2	109	94	6	8	68	120	17	26	5	11
	(100)	(108)	(10)	(12)	(72)	(117)	(16)	(24)	(5)	(9)
	109	101	21	14	107	135	10	28	9	13
0.5	128	119	14	16	105	130	22	28	8	14
	(119)	(110)	(18)	(15)	(106)	(133)	(16)	(28)	(9)	(14)
	113	136	17	16	137	184	26	31	10	8
1	136	119	15	10	131	176	21	24	10	15
	(125)	(128)	(16)	(13)	(134)	(180)	(24)	(28)	(10)	(12)
	136	113	15	9	139	205	32	36	7	11
2	122	119	14	15	156	229	36	32	3	11
	(129)	(116)	(15)	(12)	(148)	(217)	(34)	(34)	(5)	(11)
	68 *	69 *	18 *	3 *	91 *	111 *	31 *	24 *	3 *	2 *
5	67 *	57 *	8 *	10 *	112 *	100 *	17 *	28 *	13 *	2 *
	(68 *)	(63 *)	(13 *)	(7 *)	(102 *)	(106 *)	(24 *)	(26 *)	(8 *)	(2 *)
Judgement	-	-	-	-	+	+	+	-	-	-
Specific Mutagenicity #					1%	1%	1%			
Positive Control	AF-2 (464)	2-AA (1286)	NaN ₃ (397)	2-AA (302)	AF-2 (496)	2-AA (1297)	AF-2 (590)	2-AA (440)	9-AA (442)	2-AA (233)

* Growth inhibition was observed.

The concentration which was two times of the negative control value was shown

Experimental Data-3

(B0002-2/2)

Conc. %	Number of Revertants/plate	
	Base-substitution	
	WP2uvrA/pKM101	
Air	S9-	S9+
	(66)	(78)
	89	91
0.05	81	78
	(85)	(85)
	77	94
0.1	81	78
	(79)	(86)
	96	100
0.2	76	104
	(86)	(102)
	98	123
0.5	117	137
	(108)	(130)
	135	187
1	146	187
	(141)	(187)
	197	214
2	184	194
	(191)	(204)
	101 *	242 *
5	144 *	78 *
	(123 *)	(160 *)
Judgement	+	+
Specific Mutagenicity #	1%	1%
Positive Control	AF-2 (479)	2-AA (1139)