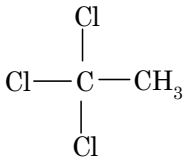
1,1,1-Trichloroethane (1,1,1-トリクロロエタン)

Chemical Name ; 1,1,1-Trichloroethane
Synoym ; Methyl chloroform

Molecular Weight ; 133.40
Melting Point ; -32.5℃[CHCD]
Boiling Point ; 74.1℃[CHCD]
Flashing Point ; −
Molecular Formular; $C_2H_3Cl_3$

Chemical Structure;



CAS No. ; 71-55-6
METI No. ; (2)-55
MHLW No. ; −
Specified Chemical Substances;−

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; FGB01
Purity ; 99.00%

Vehicle ; Air
ExposureCondition ; 37℃, 24hr
Culture Condition ; 37℃, 24hr

Mutagenicity in Bacterial Test; Positive

IARC Evaluation ; Group 3

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
Air	(108)	(106)	(15)	(13)	(68)	(85)	(18)	(25)	(8)	(9)
	126	97	25	20	63	105	15	26	8	9
	105	117	14	18	67	100	13	32	5	9
0 .05	(116)	(107)	(20)	(19)	(65)	(103)	(14)	(29)	(7)	(9)
	116	111	31	20	68	102	14	21	2	8
	127	119	29	17	66	101	17	31	10	3
0 .1	(122)	(115)	(30)	(19)	(67)	(102)	(16)	(26)	(6)	(6)
	128	138	56	28	85	92	21	25	5	10
	133	136	49	24	85	108	9	18	7	7
0 .5	(131)	(137)	(53)	(26)	(85)	(100)	(15)	(22)	(6)	(9)
	156	160	115	63	121	131	20	20	6	10
	156	159	116	63	93	112	16	25	3	15
1	(156)	(160)	(116)	(63)	(107)	(122)	(18)	(23)	(5)	(13)
	239	263	227	247	62	66	14	17	3	2
	213	268	249	235	48	93	10	18	3	5
5	(226)	(266)	(238)	(241)	(55)	(80)	(12)	(18)	(3)	(4)
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
10	(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 *
20	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)
Judgement	+	+	+	+	−	−	−	−	−	−
Specific Mutagenicity #	5%	5%	0.1%	0.5%						
Positive Control	AF-2 (509)	2-AA (1105)	NaN_3 (367)	2-AA (259)	AF-2 (837)	2-AA (1104)	AF-2 (615)	2-AA (332)	9-AA (550)	2-AA (266)

* Growth inhibition was observed.
# The concentration which was two times of the negative control value was shown.

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
Air	(96)	(101)	(9)	(10)	(81)	(98)	(20)	(26)	(4)	(7)
	123	101	13	9	78	116	9	16	3	9
	86	102	9	15	84	131	16	32	3	8
0 .01	(105)	(102)	(11)	(12)	(81)	(124)	(13)	(24)	(3)	(9)
	105	119	14	9	79	102	21	24	3	7
	104	111	11	6	72	116	17	25	8	11
0 .05	(105)	(115)	(13)	(8)	(76)	(109)	(19)	(25)	(6)	(9)
	117	112	13	15	87	105	18	25	5	9
	89	119	20	10	84	93	15	28	1	9
0 .1	(103)	(116)	(17)	(13)	(86)	(99)	(17)	(27)	(3)	(9)
	108	135	53	24	100	106	13	22	5	9
	120	87	47	30	100	116	9	24	3	8
0 .5	(114)	(111)	(50)	(27)	(100)	(111)	(11)	(23)	(4)	(9)
	138	131	51	28	84	129	21	25	3	9
	144	124	49	32	107	115	17	32	8	14
1	(141)	(128)	(50)	(30)	(96)	(122)	(19)	(29)	(6)	(12)
	222	273	245	222	94	94	11	23	5	8
	248	256	233	225	89	101	13	29	3	9
5	(235)	(265)	(239)	(224)	(92)	(98)	(12)	(26)	(4)	(9)
	0 *	0 *	0 *	0 *	1 *	0 *	1 *	0 *	1 *	1 *
	1 *	0 *	0 *	0 *	0 *	0 *	1 *	0 *	1 *	0 *
10	(1 *)	(0 *)	(0 *)	(0 *)	(1 *)	(0 *)	(1 *)	(0 *)	(1 *)	(1 *)
Judgement	+	+	+	+	−	−	−	−	−	−
Specific Mutagenicity #	5%	5%	0.5%	0.5%						
Positive Control	AF-2 (504)	2-AA (1086)	NaN_3 (374)	2-AA (291)	AF-2 (754)	2-AA (1088)	AF-2 (659)	2-AA (361)	9-AA (401)	2-AA (231)

* Growth inhibition was observed.

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