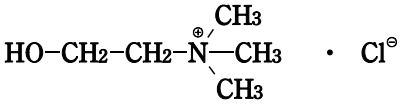
Chemical Name; (2-Hydroxyethyl)trimethylammonium chloride
Synonym ; Choline chloride
2-Hydroxy-*N,N,N*-trimethylethanaminium chloride
コリンクロリド
2-ヒドロキシ-*N,N,N*-トリメチルエタナミニウムクロリド

Molecular Weight ; 139.63
Melting Point ; 302 - 305 ℃ (dec.) [Aldrich]
Boiling Point ; — ℃
Flashing Point ; — ℃
Molecular Formula; $C_5H_{14}ClNO$

Chemical Structure



CAS No. ; 67-48-1
MITI No. ; (2)-341
ML No. ; 2-(2)-114
Specified Chemical Substances; —

Source of Substance; Tokyo Kasei Kogyo Co.,Ltd.
Lot No. ; FHC01
Purity ; ≧ 99 %

Vehicle ; Distilled H_2O

Mutagenicity in Bacterial Test ; **Negative**

IARC Evaluation ; not yet cited

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*		TA98		TA1537	
	S9−	S9＋	S9−	S9＋	S9−	S9＋	S9−	S9＋	S9−	S9＋
H_2O	(111)	(133)	(9)	(9)	(44)	(44)	(13)	(18)	(7)	(8)
	105	137	5	15	31	41	16	30	6	9
	142	116	8	5	53	52	17	17	10	11
0.0763	(124)	(127)	(7)	(10)	(42)	(47)	(17)	(24)	(8)	(10)
	107	144	5	8	41	49	17	22	5	6
	126	129	8	8	33	39	15	26	5	6
0.305	(117)	(137)	(7)	(8)	(37)	(44)	(16)	(24)	(5)	(6)
	144	113	2	13	54	49	13	23	7	9
	135	135	9	10	23	49	20	23	3	10
1.22	(140)	(124)	(6)	(12)	(39)	(49)	(17)	(23)	(5)	(10)
	101	130	15	6	41	55	11	15	6	10
	104	120	9	3	48	36	17	16	3	3
4.88	(103)	(125)	(12)	(5)	(45)	(46)	(14)	(16)	(5)	(7)
	144	143	11	11	46	39	17	13	5	6
	112	149	6	9	40	32	7	16	3	11
19.5	(128)	(146)	(9)	(10)	(43)	(36)	(12)	(15)	(4)	(9)
	142	146	6	10	39	56	17	20	6	14
	144	139	8	13	40	47	10	26	10	10
78.1	(143)	(143)	(7)	(12)	(40)	(52)	(14)	(23)	(8)	(12)
	122	127	13	14	31	55	11	24	3	6
	120	153	10	10	38	49	11	21	8	14
313	(121)	(140)	(12)	(12)	(35)	(52)	(11)	(23)	(6)	(10)
	138	124	15	7	37	51	15	21	9	14
	129	122	6	10	55	51	13	21	6	8
1250	(134)	(123)	(11)	(9)	(46)	(51)	(14)	(21)	(8)	(11)
	112*	113*	8*	14*	48	43	7*	17*	6*	8*
	127*	141*	8*	9*	40	52	7*	33*	3*	11*
5000	(120*)	(127*)	(8*)	(12*)	(44)	(48)	(7*)	(25*)	(5*)	(10*)
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 (676)	2-AA (1257)	NaN_3 (363)	2-AA (261)	AF-2 (282)	2-AA (999)	AF-2 (396)	2-AA (323)	9-AA (527)	2-AA (132)

Experimental Data - 2

Conc. μg/plate	Number of Revertants/plate Base-substitution WP2*uvrA* S9−	S9+
H_2O	(24)	(25)
	18	29
	17	39
313	(18)	(34)
	28	23
	17	21
625	(23)	(22)
	22	29
	34	26
1250	(28)	(28)
	25	34
	31	31
2500	(28)	(33)
	34	28
	24	31
5000	(29)	(30)
Judgement	−	−
Specific Mutagenicity		
Positive Control	AF-2 (294)	2-AA (1270)

Experimental Data - 3

(B9507-2/3)

Conc. μg/plate	Number of Revertants/plate Base-substitution TA100 S9−	TA100 S9+	TA1535 S9−	TA1535 S9+	WP2*uvrA* S9−	WP2*uvrA* S9+	Frame-shift TA98 S9−	TA98 S9+	TA1537 S9−	TA1537 S9+
H_2O	(143)	(166)	(11)	(11)	(26)	(26)	(14)	(23)	(6)	(8)
	145	178	3	14			16	28	5	11
	136	176	6	10			9	24	6	8
78.1	141)	(177)	(5)	(12)			(13)	(26)	(6)	(10)
	135	172	10	13			11	17	3	5
	150	136	7	10			11	17	8	5
156	(143)	(154)	(9)	(12)			(11)	(17)	(6)	(5)
	144	176	10	10	26	21	9	14	3	8
	126	155	3	15	13	26	10	22	6	11
313	(135)	(166)	(7)	(13)	(20)	(24)	(10)	(18)	(5)	(10)
	138	152	10	14	24	36	14	24	6	6
	142	159	8	13	23	23	15	24	3	10
625	(140)	(156)	(9)	(14)	(24)	(30)	(15)	(24)	(5)	(8)
	143	148	10	10	22	28	10	20	8	6
	146	162	10	11	22	34	17	18	2	13
1250	(145)	(155)	(10)	(11)	(22)	(31)	(14)	(19)	(5)	(10)
	139	173	5	3	14	29	15	22	5	2
	160	170	8	15	17	15	11	24	6	10
2500	(150)	(172)	(7)	(9)	(16)	(22)	(13)	(23)	(6)	(6)
	144*	176*	3*	16*	21	18	24*	23*	7*	10*
	135*	157*	10*	6*	28	25	9*	21*	3*	8*
5000	(140*)	(167*)	(7*)	(11*)	(25)	(22)	(17*)	(22*)	(5*)	(9*)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (869)	2-AA (1420)	NaN_3 (339)	2-AA (296)	AF-2 (310)	2-AA (1230)	AF-2 (427)	2-AA (410)	9-AA (444)	2-AA (211)

Experimental Data - 4

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9＋	S9−	S9＋	S9−	S9＋
H_2O	(224)	(322)	(297)	(359)	(49)	(81)
	213	305	253	267	34	78
	171	266	317	295	37	79
1.22	(192)	(286)	(285)	(281)	(36)	(79)
	198	304	275	312	54	77
	213	329	348	337	52	100
4.88	(206)	(317)	(312)	(325)	(53)	(89)
	190	292	305	359	45	105
	198	268	312	323	47	86
19.5	(194)	(280)	(309)	(341)	(46)	(96)
	221	303	297	364	54	84
	205	317	326	377	54	86
78.1	(213)	(310)	(312)	(371)	(54)	(85)
	214	332	311	362	55	89
	225	311	311	352	47	91
313	(220)	(322)	(311)	(357)	(51)	(90)
	204	311	309	362	63	97
	181	324	254	382	46	76
1250	(193)	(318)	(282)	(372)	(55)	(87)
	204	300	340	377	61	76
	232	300	316	394	52	84
5000	(218)	(300)	(328)	(386)	(57)	(80)
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (744)	2-AA (2340)	PA (1535)	2-AA (1262)	AF-2 (1791)	2-AA (1043)

Experimental Data - 5

(B9507-3/3)

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9＋	S9−	S9＋	S9−	S9＋
H_2O	(228)	(318)	(288)	(336)	(42)	(69)
	243	311	269	324	47	70
	262	322	329	384	39	72
313	(253)	(317)	(299)	(354)	(43)	(71)
	263	300	279	355	36	66
	239	324	324	324	44	76
625	(251)	(312)	(302)	(340)	(40)	(71)
	233	323	282	324	41	81
	238	311	335	342	33	87
1250	(236)	(317)	(309)	(333)	(37)	(84)
	250	303	305	340	39	56
	252	299	304	349	45	90
2500	(251)	(301)	(305)	(345)	(42)	(73)
	204	312	316	348	55	67
	219	316	326	301	56	91
5000	(212)	(314)	(321)	(325)	(56)	(79)
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (538)	2-AA (2641)	PA (1216)	2-AA (1081)	AF-2 (1235)	2-AA (983)