

Chloroacetic acid (クロロ酢酸)

Experimental Data

Chemical Name: Chloroacetic acid
 Synonym: Monochloroacetic acid
 Acetic acid, chloro-
 Molecular weight: 94.5
 Melting point: 62~64°C
 Boiling point: 185~189°C
 Chemical Structure

$$C\ell CH_2COOH$$

 CAS No : 79-11-8
 MITI No: (2)-1145
 Source of Substance: Wako Pure Chem. Ind., Ltd.
 Lot. No. : CTL0210
 Purity: 99 %
 Vehicle: H₂O

Con. μg/ plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(184)	(193)	(9)	(12)	(25)	(28)	(28)	(33)	(8)	(13)
	207	172	7	10	24	34	34	30	7	14
	206	171	13	12	22	21	34	31	8	14
9.77	(207)	(172)	(10)	(11)	(23)	(28)	(34)	(31)	(8)	(14)
	193	190	5	9	21	31	31	32	7	12
	227	200	8	10	34	35	35	31	12	15
19.5	(210)	(195)	(7)	(10)	(28)	(33)	(33)	(32)	(10)	(14)
	191	180	9	15	21	31	28	21	7	17
	199	178	6	10	21	25	28	31	8	16
39.1	(195)	(179)	(8)	(13)	(21)	(28)	(28)	(26)	(8)	(17)
	206	175	10	8	29	29	31	31	10	14
	194	194	10	8	22	35	30	21	7	15
78.1	(200)	(185)	(10)	(8)	(26)	(32)	(31)	(26)	(9)	(15)
	194	206	9	9	21	34	25	27	9	15
	207	173	6	10	20	23	32	28	7	14
156	(201)	(190)	(8)	(10)	(21)	(29)	(29)	(28)	(8)	(15)
	187	172	17	5	28	30	36	36	8	16
	216	188	10	9	27	38	31	37	10	20
313	(202)	(180)	(4)	(7)	(28)	(34)	(34)	(37)	(9)	(18)
	184	168	7	9	20	38	30	31	8	12
	200	186	10	10	28	36	37	30	6	22
625	(192)	(177)	(9)	(10)	(24)	(37)	(34)	(31)	(7)	(17)
	234	193	2*	2	23	34	10*	24	5*	6*
	239	190	1*	3	17	27	14*	28	3*	9*
1250	(237)	(192)	(2*)	(3)	(20)	(31)	(12*)	(26)	(4*)	(8*)

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Mutagenicity
 in Bacterial Test: Negative

IARC Evaluation: not yet cited

Experimental Data										
Con. μ g/ plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	243*	171	0*	2*	28	34	0*	3*	0*	2*
	222*	179	1*	1*	36	25	0*	1*	0*	1*
2500	(233*)	(175)	(1*)	(2*)	(32)	(30)	(0*)	(2*)	(0*)	(8*)
	0	0*	0*	0*	12*	30*	0*	0*	0*	0*
	0	0*	0*	0*	17*	29*	0*	0*	0*	0*
5000	(0)	(0*)	(0*)	(0*)	(15*)	(30*)	(0*)	(0*)	(0*)	(0*)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive	AF2	2AA	NaN ₃	2AA	AF2	2AA 20	AF2	2AA	9AA	2AA
Control	(794)	(804)	(504)	(307)	(178)	(1562)	(460)	(438)	(372)	(172)

Experimental Data

Con. μg/ plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(174)	(190)	(10)	(11)	(22)	(25)	(29)	(26)	(11)	(15)
	218	225	8	8	18	18	42	31	12	12
	209	200	15	10	28	30	31	29	14	17
39.1	(214)	(213)	(12)	(9)	(23)	(24)	(37)	(30)	(13)	(15)
	249	215	12	12	20	21	39	31	9	10
	238	202	8	8	17	24	32	27	12	16
78.1	(244)	(209)	(10)	(10)	(19)	(23)	(36)	(29)	(11)	(13)
	195	224	9	9	15	30	28	24	12	10
	229	190	6	13	16	17	51	31	12	12
156	(212)	(207)	(8)	(11)	(16)	(24)	(40)	(28)	(12)	(11)
	193	230	8	9	17	32	32	22	13	13
	216	195	10	6	20	28	42	27	14	10
313	(205)	(213)	(9)	(8)	(19)	(30)	(37)	(25)	(14)	(12)
	234	240	5	12	24	29	25	27	10	8
	203	230	6	9	21	28	34	29	12	8
625	(219)	(235)	(6)	(11)	(23)	(29)	(30)	(28)	(11)	(8)
	228	186	0*	5	23	30	6*	25	2*	9
	247	212	2*	3	25	24	6*	17	3*	6
1250	(238)	(199)	(1*)	(4)	(24)	(27)	(6*)	(21)	(3*)	(8)
	212*	140	0*	0*	27	23	0*	0*	0*	0*
	160*	132	0*	0*	16	27	0*	3*	0*	1*
2500	(186*)	(136)	(0*)	(0*)	(22)	(25)	(0*)	(2*)	(0*)	(1*)
	0	0*	0*	0*	10*	23*	0*	0*	0*	0*
	0	0*	0*	0*	9*	13*	0*	0*	0*	0*
5000	(0)	(0*)	(0*)	(0*)	(10*)	(18*)	(0*)	(0*)	(0*)	(0*)
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive	AF2	2AA	NaN ₃	2AA	AF2	2AA 20	AF2	2AA	9AA	2AA
Control	(806)	(811)	(400)	(233)	(151)	(1469)	(440)	(402)	(341)	(177)

Experimental Data						
Con. μ g/ plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
<u>H₂O</u>	(210)	(258)	(241)	(281)	(98)	(125)
	212	261	272	269	94	131
	206	229	261	249	108	139
<u>39.1</u>	(209)	(245)	(267)	(259)	(101)	(135)
	186	271	273	275	109	124
	225	269	253	283	99	121
<u>78.1</u>	(206)	(270)	(263)	(279)	(104)	(123)
	208	258	288	276	109	153
	208	268	290	275	114	127
<u>156</u>	(208)	(263)	(289)	(276)	(112)	(140)
	194	258	272	279	92	120
	224	253	257	280	91	142
<u>313</u>	(209)	(256)	(265)	(280)	(92)	(131)
	169	251	269	271	96	148
	146	288	249	267	103	125
<u>625</u>	(158)	(270)	(259)	(269)	(100)	(137)
	28*	176	45*	157	90	164
	30*	169	75*	114	109	164
<u>1250</u>	(29*)	(173)	(60*)	(136)	(100)	(164)
	0*	16*	5*	7*	125	169
	0*	16*	8*	7*	113	178
<u>2500</u>	(0*)	(16*)	(7*)	(7*)	(119)	(174)
	0*	0*	0*	0*	12*	69*
	0*	0*	0*	0*	9*	67*
<u>5000</u>	(0*)	(0*)	(0*)	(0*)	(11*)	(68*)
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive	BLM	2AA	PA	2AA	AF2	2AA
Control	(441)	(762)	(1492)	(1069)	(482)	(505)