

Oxalic acid

[シュウ酸]

Experimental Data - 1

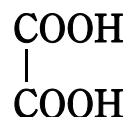
(B9511-1/3)

Chemical Name; Oxalic acid
 Synonym ; Ethanedioic acid
 ; Clover acid

Molecular Weight ; 90.04
 Melting Point ; 189.5 ℃ [CHCD; Merck(dec.)]
 190 ℃ (dec.) [Aldrich]

Boiling Point ; - ℃
 Flashing Point ; - ℃
 Molecular Formula; C₂H₂O₄

Chemical Structure



CAS No. ; 144-62-7
 MITI No. ; (2)-844
 ML No. ; -

Specified Chemical Substances; -

Source of Substance; Wako Junyaku Kogyo Co., Ltd.
 Lot No. ; ESR7199
 Purity ; 99.7 %

Vehicle ; Distilled H₂OMutagenicity in Bacterial Test ; **Negative**

IARC Evaluation ; not yet cited

Conc. 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	(132)	(135)	(9)	(9)	(26)	(28)	(14)	(24)	(6)	(11)
	159	158	8	9	23	18	16	22	5	6
	138	146	13	9	31	17	20	26	7	9
0.0763	(149)	(152)	(11)	(9)	(27)	(18)	(18)	(24)	(6)	(8)
	164	153	5	7	16	31	21	21	2	7
	165	151	9	6	29	38	22	18	5	7
0.305	(165)	(152)	(7)	(7)	(23)	(35)	(22)	(20)	(4)	(7)
	156	164	2	15	29	26	14	26	6	7
	122	130	8	13	26	24	11	24	3	7
1.22	(139)	(147)	(5)	(14)	(28)	(25)	(13)	(25)	(5)	(7)
	174	164	6	6	26	17	16	25	9	7
	165	155	13	10	20	22	18	30	3	8
4.88	(170)	(160)	(10)	(8)	(23)	(20)	(17)	(28)	(6)	(8)
	141	166	13	9	29	24	16	24	10	9
	138	146	2	5	24	23	11	31	5	13
19.5	(140)	(156)	(8)	(7)	(27)	(24)	(14)	(28)	(8)	(11)
	143	152	17	11	30	31	11	18	11	3
	162	150	8	14	25	37	18	28	3	3
78.1	(153)	(151)	(13)	(13)	(28)	(34)	(15)	(23)	(7)	(3)
	149	137	6	11	25	24	25	20	8	6
	159	156	6	16	28	29	20	28	8	9
313	(154)	(147)	(6)	(14)	(27)	(27)	(23)	(24)	(8)	(8)
	143	146	7	10	28	30	22	20	2	13
	137	162	6	8	28	26	17	23	8	9
1250	(140)	(154)	(7)	(9)	(28)	(28)	(20)	(22)	(5)	(11)
	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*)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive Control	AF-2 (926)	2-AA (1458)	NaN ₃ (372)	2-AA (251)	AF-2 (409)	2-AA (1055)	AF-2 (434)	2-AA (440)	9-AA (389)	2-AA (201)

Conc. 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+
	(137)	(134)	(8)	(10)	(30)	(26)	(18)	(27)	(5)	(17)
H ₂ O	122	150	9	16	32	32	24	30	3	11
	143	142	8	16	37	33	13	22	3	9
78.1	(133)	(146)	(9)	(16)	(35)	(33)	(19)	(26)	(3)	(10)
	141	122	13	3	31	30	23	17	8	9
	129	113	11	13	17	31	17	24	5	13
156	(135)	(118)	(12)	(8)	(24)	(31)	(20)	(21)	(7)	(11)
	152	142	10	9	25	23	21	32	7	11
	116	144	8	14	29	36	22	38	7	7
313	(134)	(143)	(9)	(12)	(27)	(30)	(22)	(35)	(7)	(9)
	115	116	9	15	25	28	18	22	6	13
	151	145	5	15	29	32	16	23	9	7
625	(133)	(131)	(7)	(15)	(27)	(30)	(17)	(23)	(8)	(10)
	148	127	11	13	28	39	28	24	7	8
	142	119	8	16	22	39	21	15	6	14
1250	(145)	(123)	(10)	(15)	(25)	(39)	(25)	(20)	(7)	(11)
	104*	0*	9*	0*	22*	0*	17*	0*	7*	0*
	107*	0*	9*	0*	24*	0*	14*	0*	5*	0*
2500	(106*)	(0*)	(9*)	(0*)	(23*)	(0*)	(16*)	(0*)	(6*)	(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*)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive	AF-2	2-AA	NaN ₃	2-AA	AF-2	2-AA	AF-2	2-AA	9-AA	2-AA
Control	(939)	(1410)	(329)	(275)	(334)	(1101)	(354)	(389)	(399)	(181)

Experimental Data - 3

Conc. µg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(242)	(354)	(309)	(333)	(43)	(65)
	219	344	316	350	59	61
	258	362	329	343	47	71
1.22	(239)	(353)	(323)	(347)	(53)	(66)
	253	330	377	334	44	89
	272	353	299	360	47	77
4.88	(263)	(342)	(338)	(347)	(46)	(83)
	266	360	245	350	61	76
	261	316	320	300	49	87
19.5	(264)	(338)	(283)	(325)	(55)	(82)
	222	362	292	322	44	87
	262	324	290	348	52	83
78.1	(242)	(343)	(291)	(335)	(48)	(85)
	248	377	317	356	51	90
	243	338	279	347	60	79
313	(246)	(358)	(298)	(352)	(56)	(85)
	253	372	323*	338	43*	77
	255	343	282*	299	47*	72
1250	(254)	(358)	(303*)	(319)	(45*)	(75)
	0*	0*	0*	0*	0*	0*
	0*	0*	0*	0*	0*	0*
5000	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive Control	BLM (915)	2-AA (2621)	PA (2384)	2-AA (1192)	AF-2 (1288)	2-AA (1088)

Experimental Data - 4

(B9511-3/3)

Conc. µg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(223)	(313)	(312)	(337)	(44)	(56)
			310		53	
			274		34	
19.5			(292)		(44)	
			319		37	
			335		37	
39.1			(327)		(37)	
	227	312	342	338	52	61
	212	278	311	325	34	55
78.1	(220)	(295)	(327)	(332)	(43)	(58)
	223	325	319	352	33	52
	233	332	337	362	36	55
156	(228)	(329)	(328)	(357)	(35)	(54)
	246	304	332	346	39	57
	239	292	314	354	41	53
313	(243)	(298)	(323)	(350)	(40)	(55)
	241	337	313	352	38	64
	201	338	341	343	37	54
625	(221)	(338)	(327)	(348)	(38)	(59)
	227	336	336*	343	39*	55
	240	303	337*	379	39*	59
1250	(234)	(320)	(337*)	(361)	(39*)	(57)
	223*	0*		365		55
	225*	0*		365		53
2500	(224*)	(0*)		(365)		(54)
	0*	0*		0*		0*
	0*	0*		0*		0*
5000	(0*)	(0*)		(0*)		(0*)

Judgement

Specific Mutagenicity

Positive Control	BLM (942)	2-AA (1218)	PA (1322)	2-AA (1128)	AF-2 (1097)	2-AA (934)
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