2,3-Epoxy-1-propanol (2,3-エポキシ-1-プロパノール)

Chemical Name ; 2,3-Epoxy-1-propanol
Synoym ; Glycidol
3-Hydroxypropylene oxide
Oxiranemethanol

Molecular Weight ; 74.08
Melting Point ; −
Boiling Point ; 167 ℃[Merck]
Flashing Point ; 81.1℃[Aldrich]
Molecular Formular; $C_3H_6O_2$

Chemical Structure;

CAS No. ; 556-52-5
METI No. ; (2)-2389
MHLW No. ; −
Specified Chemical Substances; −

Source of Substance; Wako Pure Chemical Industries, Ltd.
Lot No. ; SEL5762
Purity ; 85%

Vehicle ; H_2O

Mutagenicity in Bacterial Test; Positive

IARC Evaluation ; Group 2A

Conc. μg/plate	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+
H_2O	(116)	(128)	(11)	(13)	(73)	(102)	(19)	(26)	(7)	(15)
	112	139	32	41	90	109	13	29	7	10
	142	136	28	34	64	138	15	32	9	11
1 .22	(127)	(138)	(30)	(38)	(77)	(124)	(14)	(31)	(8)	(11)
	137	158	51	68	84	169	14	16	7	10
	126	150	39	52	104	139	14	26	6	11
4 .88	(132)	(154)	(45)	(60)	(94)	(154)	(14)	(21)	(7)	(11)
	247	229	105	156	122	197	16	25	3	8
	225	233	121	155	119	176	10	17	3	8
19 .5	(236)	(231)	(113)	(156)	(121)	(187)	(13)	(21)	(3)	(8)
	529	548	311	509	207	365	14	33	13	13
	488	529	359	447	179	361	14	22	6	13
78 .1	(509)	(539)	(335)	(478)	(193)	(363)	(14)	(28)	(10)	(13)
	1236	1336	787	1038	593	1134	21	24	2	9
	1359	1393	810	981	604	1108	24	37	9	13
313	(1298)	(1365)	(799)	(1010)	(599)	(1121)	(23)	(31)	(6)	(11)
	3293	3123	1156	1568	1564	1865	18	38	6	16
	3499	3185	1193	1632	1523	1895	22	30	8	11
1250	(3396)	(3154)	(1175)	(1600)	(1544)	(1880)	(20)	(34)	(7)	(14)
	9353	8147	1725	2700	2549	2484	54	67	20	20
	9121	7727	1659	2242	2821	2435	68	52	17	22
5000	(9237)	(7937)	(1692)	(2471)	(2685)	(2460)	(61)	(60)	(19)	(21)
Judgement	+	+	+	+	+	+	+	+	+	−
Specific Mutagenicity	6150	5260	15600	20500	1680	3340	8.40	6.80	2.40	
Positive Control	AF-2	2-AA	NaN_3	2-AA	AF-2	2-AA	AF-2	2-AA	9-AA	2-AA
	(743)	(1122)	(369)	(221)	(966)	(871)	(409)	(439)	(236)	(177)

Conc. μg/plate	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+
H_2O	(118)	(120)	(11)	(11)	(79)	(109)	(19)	(26)	(9)	(13)
0 .153	( )	( )	7 13 (10)	11 13 (12)	( )	( )	( )	( )	( )	( )
0 .305	( )	( )	9 14 (12)	3 9 (6)	( )	( )	( )	( )	( )	( )
0 .610	( )	( )	17 13 (15)	9 7 (8)	( )	( )	( )	( )	( )	( )
1 .22	( )	( )	22 17 (20)	16 18 (17)	( )	( )	( )	( )	( )	( )
2 .44	121 141 (131)	( )	24 23 (24)	26 29 (28)	( )	( )	( )	( )	( )	( )
4 .88	129 156 (143)	( )	39 25 (32)	68 53 (61)	( )	( )	( )	( )	( )	( )
9 .77	155 144 (150)	183 146 (165)	( )	( )	77 94 (86)	130 169 (150)	( )	( )	( )	( )
19 .5	220 247 (234)	239 205 (222)	( )	( )	136 98 (117)	171 190 (181)	( )	( )	( )	( )
39 .1	313 276 (295)	319 336 (328)	( )	( )	126 160 (143)	226 220 (223)	( )	( )	( )	( )
78 .1	481 452 (467)	467 527 (497)	( )	( )	195 205 (200)	329 312 (321)	( )	( )	( )	( )
156	( )	787 792 (790)	( )	( )	317 305 (311)	539 478 (509)	15 23 (19)	22 24 (23)	15 8 (12)	14 10 (12)
313	( )	1266 1216 (1241)	( )	( )	556 575 (566)	1005 1003 (1004)	9 17 (13)	31 39 (35)	13 8 (11)	3 15 (9)
625	( )	( )	( )	( )	( )	( )	28 18 (23)	28 32 (30)	11 8 (10)	15 15 (15)
1250	( )	( )	( )	( )	( )	( )	31 31 (31)	34 37 (36)	14 10 (12)	15 23 (19)
2500	( )	( )	( )	( )	( )	( )	44 40 (42)	44 36 (40)	10 15 (13)	16 25 (21)
5000	( )	( )	( )	( )	( )	( )	57 44 (51)	59 47 (53)	26 26 (26)	22 25 (24)
Judgement	+	+	+	+	+	+	+	+	+	−
Specific Mutagenicity	4530	5320	5330	10200	1560	2920	9.20	5.40	3.40	
Positive Control	AF-2 (640)	2-AA (1117)	NaN_3 (376)	2-AA (219)	AF-2 (993)	2-AA (785)	AF-2 (418)	2-AA (442)	9-AA (278)	2-AA (194)