Chemical Name ; 2-(Dimethylamino)ethyl methacrylate

Synonym ; Methacrylic acid, 2-(dimethylamino)ethyl ester
Propamoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester
メタクリル酸2-ジメチルアミノエチルエステル

Molecular Weight ; 157.21
Melting Point ; −
Boiling Point ; 182-192℃[Aldrich]
Flashing Point ; 71 ℃[Aldrich]
Molecular Formula ; $C_8H_{15}NO_2$

Chemical Structure

$$CH_2=(CH_3)COOCH_2CH_2N(CH_3)_2$$

CAS No. ; 2867-47-2
MITI No. ; (2)-1047
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; GE01
Purity ; 99.9%

Vehicle ; H_2O

Mutagenicity in Bacterial Test ; Positive

IARC Evaluation ; not yet cited

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
	(149)	(143)	(7)	(10)	(18)	(22)	(13)	(20)	(5)	(11)
	152	149	8	5	17	16	18	20	2	9
	142	183	14	5	23	21	14	25	3	8
1 .22	(147)	(166)	(11)	(5)	(20)	(19)	(16)	(23)	(3)	(9)
	135	156	5	7	17	28	7	22	7	10
	144	170	9	9	10	20	13	21	8	10
4 .88	(140)	(163)	(7)	(8)	(14)	(24)	(10)	(22)	(8)	(10)
	136	133	8	9	22	24	13	29	5	6
	160	180	8	8	13	24	9	23	3	5
19 .5	(148)	(157)	(8)	(9)	(18)	(24)	(11)	(26)	(4)	(6)
	153	158	10	5	15	22	16	23	3	6
	153	156	7	13	17	22	15	25	6	15
78 .1	(153)	(157)	(9)	(9)	(16)	(22)	(16)	(24)	(5)	(11)
	149	173	7	5	17	25	15	25	2	8
	166	155	5	8	22	28	16	23	7	7
313	(158)	(164)	(6)	(7)	(20)	(27)	(16)	(24)	(5)	(8)
	162	162	5	8	10	31	18	30	3	3
	160	167	9	6	11	22	14	21	6	9
1250	(161)	(165)	(7)	(7)	(11)	(27)	(16)	(26)	(5)	(6)
	174 *	174	8 *	6	18	24	0 *	31	2 *	9
	177 *	188	5 *	10	25	30	0 *	20	5 *	7
5000	(176 *)	(181)	(7 *)	(8)	(22)	(27)	(0 *)	(26)	(4 *)	(8)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (653)	2-AA (1285)	NaN_3 (266)	2-AA (216)	AF-2 (339)	2-AA (927)	AF-2 (319)	2-AA (409)	9-AA (831)	2-AA (134)

* Growth inhibitation was observed.

Conc. μ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
	(135)	(149)	(8)	(9)	(26)	(23)	(12)	(19)	(6)	(12)
	127		5				11		5	
	139		8				8		8	
156	(133)		(7)				(10)		(7)	
	142	146	3	14	23	25	11	17	3	10
	145	124	8	5	11	18	13	23	3	9
313	(144)	(135)	(6)	(10)	(17)	(22)	(12)	(20)	(3)	(10)
	150	159	10	11	29	16	8	21	5	7
	163	146	5	6	20	24	13	25	7	17
625	(157)	(153)	(8)	(9)	(25)	(20)	(11)	(23)	(6)	(12)
	170	180	6	11	25	22	16	22	8	8
	159	148	7	6	16	24	18	20	7	5
1250	(165)	(164)	(7)	(9)	(21)	(23)	(17)	(21)	(8)	(7)
	160	144	3	7	20	36	13	24	6	9
	173	152	8	6	26	25	21	22	9	7
2500	(167)	(148)	(6)	(7)	(23)	(31)	(17)	(23)	(8)	(8)
	155 *	207	6 *	7	18	30	0 *	23	8 *	13
	153 *	215	9 *	11	25	24	0 *	25	7 *	10
5000	(154 *)	(211)	(8 *)	(9)	(22)	(27)	(0 *)	(24)	(8 *)	(12)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (635)	2-AA (1169)	NaN_3 (253)	2-AA (225)	AF-2 (209)	2-AA (1062)	AF-2 (487)	2-AA (450)	9-AA (720)	2-AA (160)

Experimental Data-3

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvr*A/pKM101	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+
	(241)	(342)	(320)	(330)	(44)	(72)
	276	360	334	328	48	86
	293	344	322	305	48	84
1 .22	(285)	(352)	(328)	(317)	(48)	(85)
	269	354	362	360	49	82
	275	322	344	349	61	92
4 .88	(272)	(338)	(353)	(355)	(55)	(87)
	300	356	328	353	53	81
	238	322	317	362	66	85
19 .5	(269)	(339)	(323)	(358)	(60)	(83)
	252	378	340	390	56	98
	276	354	340	374	55	106
78 .1	(264)	(366)	(340)	(382)	(56)	(102)
	261	389	385	454	36	119
	252	394	377	376	48	87
313	(257)	(392)	(381)	(415)	(42)	(103)
	274 *	424	424	480	52	131
	253 *	412	440	529	45	109
1250	(264 *)	(418)	(432)	(505)	(49)	(120)
	0 *	454	271 *	695	57	141
	0 *	406	313 *	682	54	130
5000	(0 *)	(430)	(292 *)	(689)	(56)	(136)
Judgement	−	−	−	+	−	−
Specific Mutagenicity				71.8		
Positive Control	BLM (739)	2-AA (1329)	PA (1816)	2-AA (1409)	AF-2 (1428)	2-AA (1002)

Experimental Data-4 (B9608-3/3)

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvr*A/pKM101	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+
	(292)	(381)	(291)	(297)	(44)	(67)
	298					
	290					
39 .1	(294)					
	306					
	331					
78 .1	(319)					
	300		268			
	320		307			
156	(310)		(288)			
	297	389	341	366	47	86
	253	384	297	407	56	78
313	(275)	(387)	(319)	(387)	(52)	(82)
	292	414	356	372	48	82
	275	416	314	373	68	84
625	(284)	(415)	(335)	(373)	(58)	(83)
	273 *	430	346	408	46	122
	250 *	400	338	393	53	101
1250	(262 *)	(415)	(342)	(401)	(50)	(112)
		436	566	507	64	87
		441	613	521	54	127
2500		(439)	(590)	(514)	(59)	(107)
		423	638 *	657	64	129
		465	471 *	640	60	86
5000		(444)	(555 *)	(649)	(62)	(108)
		389 *		0 *	0 *	126 *
		371 *		0 *	0 *	176 *
10000		(380 *)		(0 *)	(0 *)	(151 *)
Judgement	−	−	−	+	−	−
Specific Mutagenicity				70.4		
Positive Control	BLM (723)	2-AA (1060)	PA (1794)	2-AA (1281)	AF-2 (773)	2-AA (876)