Chemical Name ; Diethylenetriamine

Synoym ; 2,2'-Iminodi(ethylamine)
N-(2-Aminoethyl)-1,2-ethanediamine
ﾋﾞｽ-(2-ｱﾐﾉｴﾁﾙ)-ｱﾐﾝ

Molecular Weight ; 103.17
Melting Point ; -39℃ [CHCD]
Boiling Point ; 208℃ [CHCD]
Flashing Point ; 98℃(o.c.)[CHCD]
Molecular Formula ; $C_4H_{13}N_3$
Chemical Structure $(NH_2CH_2CH_2)_2NH$

CAS No. ; 111-40-0
MITI No. ; (2)-159
ML No. ; －
Specified Chemical Substances ; －

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; FGA01
Purity ; >97%

Vehicle ; Distilled 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/pKM101		TA98		TA1537	
H_2O	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋
	(130)	(152)	(7)	(16)	(42)	(56)	(15)	(20)	(6)	(10)
	139	145	13	11	29	49	8	16	6	9
	145	207	3	11	38	63	21	20	5	10
1 .22	(142)	(176)	(8)	(11)	(34)	(56)	(15)	(18)	(6)	(10)
	136	156	7	6	40	61	8	25	6	5
	135	153	7	8	43	64	20	20	5	7
4 .88	(136)	(155)	(7)	(7)	(42)	(63)	(14)	(23)	(6)	(6)
	141	159	7	11	40	62	21	26	7	10
	128	170	7	10	45	64	15	26	5	11
19 .5	(135)	(165)	(7)	(11)	(43)	(63)	(18)	(26)	(6)	(11)
	159	126	6	13	48	70	14	23	3	11
	163	197	10	8	41	52	15	22	5	8
78 .1	(161)	(162)	(8)	(11)	(45)	(61)	(15)	(23)	(4)	(10)
	176	157	7	7	44	90	18	22	5	6
	151	169	11	7	45	59	22	18	7	9
313	(164)	(163)	(9)	(7)	(45)	(75)	(20)	(20)	(6)	(8)
	142 *	177 *	9 *	15 *	66 *	101 *	6 *	22 *	5 *	9 *
	102 *	193 *	6 *	10 *	74 *	98 *	8 *	26 *	3 *	7 *
1250	(122 *)	(185 *)	(8 *)	(13 *)	(70 *)	(100 *)	(7 *)	(24 *)	(4 *)	(8 *)
	111 *	138 *	11 *	13 *	32 *	54 *	13 *	7 *	7 *	3 *
	130 *	133 *	10 *	7 *	21 *	47 *	11 *	15 *	5 *	8 *
5000	(121 *)	(136 *)	(11 *)	(10 *)	(27 *)	(51 *)	(12 *)	(11 *)	(6 *)	(6 *)
Judgement	－	－	－	－	－	－	－	－	－	－
Specific Mutagenicity										
Positive Control	AF-2 (792)	2-AA (1254)	NaN_3 (454)	2-AA (324)	AF-2 (1668)	2-AA (872)	AF-2 (379)	2-AA (410)	9-AA (649)	2-AA (187)

* Growth inhibitation was observed.

Experimental Data-2

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A/pKM101		TA98		TA1537	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
	(113)	(144)	(8)	(11)	(36)	(67)	(14)	(28)	(8)	(10)
	107	145	6	13	30	55	13	24	6	11
	114	121	7	9	37	57	14	22	5	6
19 .5	(111)	(133)	(7)	(11)	(34)	(56)	(14)	(23)	(6)	(9)
	133	145	9	7	43	68	17	22	6	13
	133	160	9	7	51	57	17	33	5	9
39 .1	(133)	(153)	(9)	(7)	(47)	(63)	(17)	(28)	(6)	(11)
	121	130	5	11	59	81	9	20	6	3
	114	148	10	7	51	57	14	22	8	10
78 .1	(118)	(139)	(8)	(9)	(55)	(69)	(12)	(21)	(7)	(7)
	133	114	5	9	57	85	14	31	10	7
	149	146	6	13	55	79	16	33	6	9
156	(141)	(130)	(6)	(11)	(56)	(82)	(15)	(32)	(8)	(8)
	129	127	8	13	63	76	10	33	9	7
	131	153	10	14	46	81	18	26	7	8
313	(130)	(140)	(9)	(14)	(55)	(79)	(14)	(30)	(8)	(8)
	172	157	9	16	76	89	17	31	6	7
	165	130	6	8	77	81	17	25	9	10
625	(169)	(144)	(8)	(12)	(77)	(85)	(17)	(28)	(8)	(9)
	113 *	180 *	3 *	11 *	46 *	167 *	20 *	31 *	2 *	14 *
	107 *	150 *	10 *	8 *	36 *	171 *	7 *	33 *	6 *	9 *
1250	(110 *)	(165 *)	(7 *)	(10 *)	(41 *)	(169 *)	(14 *)	(32 *)	(4 *)	(12 *)
	119 *	98 *	8 *	11 *	23 *	38 *	8 *	24 *	5 *	9 *
	128 *	138 *	3 *	6 *	29 *	59 *	10 *	22 *	7 *	6 *
2500	(124 *)	(118 *)	(6 *)	(9 *)	(26 *)	(49 *)	(9 *)	(23 *)	(6 *)	(8 *)
Judgement	−	−	−	−	+	+	−	−	−	−
Specific Mutagenicity					65.6	81.6				
Positive Control	AF-2 (671)	2-AA (1348)	NaN_3 (489)	2-AA (356)	AF-2 (1534)	2-AA (1204)	AF-2 (512)	2-AA (471)	9-AA (715)	2-AA (209)

Experimental Data-3

Conc. μg/plate	Number of Revertants/plate	
	Base-substitution	
	WP2*uvr*A/pKM101	
H_2O	S9−	S9+
	(42)	(70)
	36	68
	53	81
39 .1	(45)	(75)
	36	68
	53	64
78 .1	(45)	(66)
	53	76
	64	81
156	(59)	(79)
	54	87
	53	84
313	(54)	(86)
	94	92
	92	99
625	(93)	(96)
	92 *	128 *
	79 *	115 *
1250	(86 *)	(122 *)
	18 *	74 *
	30 *	41 *
2500	(24 *)	(58 *)
Judgement	+	−
Specific Mutagenicity	81.6	
Positive Control	AF-2 (858)	2-AA (957)