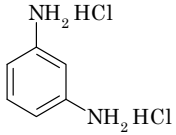
1,3-Phenylenediamine dihydrochloride
(1,3-ﾌｪﾆﾚﾝｼﾞｱﾐﾝ=二塩酸塩)

Chemical Name ; 1,3-Phenylenediamine dihydrochloride
Synoym ; 1,3-Benzenediamine dihydrochloride

Molecular Weight ; 181.06
Melting Point ; −
Boiling Point ; −
Flashing Point ; −
Molecular Formular; $C_6H_{10}Cl_2N_2$

Chemical Structure;



CAS No. ; 541-69-5
METI No. ; −
MHLW No. ; −
Specified Chemical Substances; −

Source of Substance; Tokyo Kasei Kogyo Co., Ltd
Lot No. ; FIC01
Purity ; 99.00%

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*uvrA*/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
H_2O	(111)	(130)	(13)	(13)	(85)	(107)	(21)	(26)	(9)	(14)
	127	149	15	21	91	137	29	25	10	20
	122	153	11	25	83	151	26	33	6	15
1 22	(125)	(151)	(13)	(23)	(87)	(144)	(28)	(29)	(8)	(18)
	137	107	10	21	114	137	24	41	9	9
	136	137	10	22	91	104	31	38	10	10
4 .88	(137)	(122)	(10)	(22)	(103)	(121)	(28)	(40)	(10)	(10)
	122	152	20	11	101	142	11	70	14	17
	114	171	24	18	101	126	23	56	7	9
19 .5	(118)	(162)	(22)	(15)	(101)	(134)	(17)	(63)	(11)	(13)
	114	180	25	16	101	142	20	177	10	16
	139	190	13	23	113	138	30	162	15	16
78 .1	(127)	(185)	(19)	(20)	(107)	(140)	(25)	(170)	(13)	(16)
	112	248	20	18	100	153	30	765	17	17
	112	236	22	13	109	142	17	792	11	29
313	(112)	(242)	(21)	(16)	(105)	(148)	(24)	(779)	(14)	(23)
	117	245	13	22	100	153	15	1517	14	36
	109	225	11	16	79	123	21	1377	20	29
1250	(113)	(235)	(12)	(19)	(90)	(138)	(18)	(1447)	(17)	(33)
	122	255	11	15	102	102	22 *	6249 *	9 *	116 *
	126	239	10	18	104	96	43 *	6465 *	10 *	119 *
5000	(124)	(247)	(11)	(17)	(103)	(99)	(33 *)	(6357 *)	(10 *)	(118 *)
Judgement	−	−	−	−	−	−	−	+	−	+
Specific Mutagenicity								2410		20.8
Positive Control	AF-2 (672)	2-AA (1382)	NaN_3 (379)	2-AA (259)	AF-2 (1225)	2-AA (969)	AF-2 (497)	2-AA (487)	9-AA (225)	2-AA (180)

* Growth inhibition was observed.

Experimental Data-2

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	(120)	(124)	(25)	(24)	(75)	(106)	(21)	(23)	(9)	(13)
4 .88	( )	( )	( )	( )	( )	( )	( )	40 44 (42)	( )	( )
9 .77	( )	( )	( )	( )	( )	( )	( )	55 51 (53)	( )	( )
19 .5	( )	( )	( )	( )	( )	( )	( )	77 61 (69)	( )	( )
39 .1	( )	( )	( )	( )	( )	( )	( )	134 112 (123)	( )	( )
78 .1	( )	( )	( )	( )	( )	( )	( )	187 202 (195)	( )	17 23 (20)
156	( )	( )	( )	( )	( )	( )	20 32 (26)	391 427 (409)	15 10 (13)	16 16 (16)
313	136 157 (147)	261 279 (270)	26 22 (24)	25 30 (28)	97 102 (100)	162 149 (156)	30 26 (28)	699 717 (708)	13 11 (12)	24 24 (24)
625	144 117 (131)	276 245 (261)	30 18 (24)	17 16 (17)	108 116 (112)	165 176 (171)	18 21 (20)	914 938 (926)	6 10 (8)	21 33 (27)
1250	131 150 (141)	248 252 (250)	24 23 (24)	26 23 (25)	100 75 (88)	179 172 (176)	24 23 (24)	1407 1550 (1479)	8 14 (11)	38 43 (41)
2500	153 120 (137)	226 225 (226)	18 24 (21)	34 29 (32)	94 94 (94)	162 153 (158)	34 25 (30)	( )	9 10 (10)	54 63 (59)
5000	119 * 109 * (114 *)	242 239 (241)	33 10 (22)	20 26 (23)	93 93 (93)	136 135 (136)	34 * 16 * (25 *)	( )	10 * 6 * (8 *)	107 * 104 * (106 *)
Judgement	−	+	−	−	−	−	−	+	−	+
Specific Mutagenicity		466						3070		22.4
Positive Control	AF-2 (655)	2-AA (1486)	NaN_3 (406)	2-AA (299)	AF-2 (872)	2-AA (878)	AF-2 (483)	2-AA (467)	9-AA (213)	2-AA (222)

* Growth inhibition was observed.

Experimental Data-3 (B0103-2/2)

Conc. μg/plate	Number of Revertants/plate			
	Base-substitution			
	TA100	TA1535		
	S9+	S9−	S9+	
H_2O	(126)	(13)	(14)	
4 .88	126 126 (126)	( )	( )	
9 .77	126 123 (125)	( )	( )	
19 .5	117 127 (122)	( )	( )	
39 .1	135 124 (130)	( )	( )	
78 .1	164 153 (159)	( )	( )	
156	177 146 (162)	( )	( )	
313	236 167 (202)	15 22 (19)	14 15 (15)	
625	200 205 (203)	13 15 (14)	21 18 (20)	
1250	216 214 (215)	24 8 (16)	17 17 (17)	
2500	178 184 (181)	20 9 (15)	20 18 (19)	
5000	253 227 (240)	16 17 (17)	8 18 (13)	
Judgement	−	−	−	
Specific Mutagenicity				
Positive Control	2-AA (1371)	NaN_3 (363)	2-AA (310)	