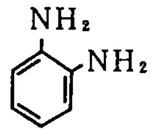
o-Phenylenediamine (o-フェニレンジアミン)

Chemical Name: o-Phenylenediamine
Synonym: o-Diaminobenzene
Molecular weight: 108.14
Melting point: 103-105℃
Boiling point: 256-258℃

Chemical Structure



CAS No : 95-54-5
MITI No : (3)-185
Source of Substance:Tokyo Kasei Kogyo Co.Ltd
Lot.No. : FHA01
Purity : 98 %
Vehicle : DMSO

Mutagenicity
in Bacterial Test : Positive

IARC Evaluation : not yet cited

Experimental Data

Number of Revertants/plate

Con. μg/plate	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(125)	(118)	(9)	(12)	(27)	(25)	(17)	(21)	(7)	(10)
	158	106	17	10	25	26	16	32	11	14
	127	112	7	9	28	33	23	33	8	7
0.0763	(143)	(109)	(12)	(10)	(27)	(30)	(20)	(33)	(10)	(11)
	187	121	14	10	24	31	21	18	8	7
	190	116	16	9	24	37	15	28	10	9
0.305	(189)	(119)	(15)	(10)	(24)	(34)	(18)	(23)	(9)	(8)
	126	129	16	23	38	32	13	26	7	17
	143	112	13	13	32	25	24	24	3	10
1.22	(135)	(121)	(15)	(18)	(35)	(29)	(19)	(25)	(5)	(14)
	122	124	8	20	26	21	18	31	8	8
	144	111	15	16	23	31	20	29	9	14
4.88	(133)	(118)	(12)	(18)	(25)	(26)	(19)	(30)	(9)	(11)
	117	152	14	14	34	28	20	36	9	14
	145	139	17	11	33	28	21	44	8	13
19.5	(131)	(146)	(16)	(13)	(34)	(28)	(21)	(40)	(9)	(14)
	162	177	7	25	20	31	23	158	13	17
	158	151	11	13	24	32	14	153	7	23
78.1	(160)	(164)	(9)	(19)	(22)	(32)	(19)	(156)	(10)	(20)
	171	248	11	16	22	31	24	1157	9	31
	185	263	16	18	24	36	15	1089	9	52
313	(178)	(256)	(14)	(17)	(23)	(34)	(20)	(1123)	(9)	(42)
	144	292	17	13	20	38	23	1838	5	67
	128	340	6	11	26	34	23	2622	9	45
1250	(136)	(316)	(12)	(12)	(23)	(36)	(23)	(2230)	(7)	(56)
	96	149	7	8	32	30	16	1162	7	24
	87	162	8	8	24	30	15	1450	9	30
5000	(92)	(156)	(8)	(8)	(28)	(30)	(16)	(1306)	(8)	(27)
Judgement	−	+	−	−	−	−	−	+	−	+
Specific Mutagenicity		441						3520		128
Positive Control	AF2	2AA	NaN_3	2AA	AF2	2AA	AF2	2AA	9AA	2AA
	(849)	(1209)	(315)	(302)	(229)	(976)	(562)	(310)	(406)	(203)

Con. μg/plate	Experimental Data: Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(145)	(131)	(20)	(20)	(18)	(25)	(16)	(22)	(6)	(7)
								23		
								31		
9.77								(27)		
								15		
								21		
19.5								(23)		
		153						44		17
		173						34		16
39.1		(163)						(39)		(17)
	142	180	25	28	17	24	10	91	3	9
	153	180	8	19	17	14	18	94	9	11
78.1	(148)	(180)	(17)	(24)	(17)	(19)	(14)	(93)	(6)	(10)
	134	180	12	7	17	25	16	247	6	26
	144	229	19	25	14	20	14	186	9	14
156	(139)	(205)	(16)	(16)	(16)	(23)	(15)	(217)	(8)	(20)
	116	197	23	22	24	29	6	580	8	24
	148	256	16	28	18	31	24	623	6	22
313	(132)	(227)	(20)	(25)	(21)	(30)	(15)	(602)	(7)	(23)
	124	230	20	25	21	36	6	1052	9	30
	139	305	19	24	15	37	22	971	2	33
625	(132)	(268)	(20)	(25)	(18)	(37)	(14)	(1012)	(6)	(32)

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Experimental Data

Con. 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+
	149	295	16	24	14	51	13		5	37
	134	281	13	17	22	52	10		3	48
1250	(142)	(288)	(15)	(21)	(18)	(52)	(12)		(4)	(43)
	107	295	11	20	26	41	13		3	38
	135	268	20	22	29	24	16		2	33
2500	(121)	(282)	(16)	(21)	(28)	(33)	(15)		(3)	(36)
	100		12	17	18	28	10		3	
	93		10	10	20	18	13		5	
5000	(97)		(11)	(14)	(19)	(23)	(12)		(4)	
Judgement	−	+	−	−	−	+	−	+	−	+
Specific Mutagenicity		219				21.6		1850		83.3
Positive Control	AF2	2AA	NaN_3	2AA	AF2	2AA	AF2	2AA	9AA	2AA
	(846)	(1026)	(316)	(271)	(227)	(858)	(533)	(382)	(316)	(229)

Experimental Data		
Con. μg/plate	Number of Revertants/plate Frame-shift TA1537	
	S9-	S9+
DMSO	(10)	(13)
		15
		13
19.5		(14)
		15
		16
39.1		(16)
	7	20
	14	30
78.1	(11)	(25)
	7	26
	17	28
156	(12)	(27)
	21	31
	9	44
313	(15)	(38)
	14	45
	8	56
625	(11)	(51)
	5	59
	8	79
1250	(7)	(69)
	5	
	7	
2500	(6)	
	11	
	10	
5000	(11)	
Judgement	−	+
Specific Mutagenicity		89.7
Positive Control	9AA (347)	2AA (221)