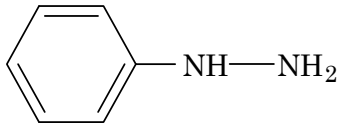
Chemical Name ; Phenylhydrazine

Synonym ; Hydrazinobenzene

Molecular Weight ; 108.14
Melting Point ; 19.6℃ [CHCD]
Boiling Point ; 243.5℃(decomposition)[CHCD]
Flashing Point ; 88 ℃ [CHCD]
Molecular Formula ; $C_6H_8N_2$

Chemical Structure



CAS No. ; 100-63-0
MITI No. ; (3)-470
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; FHE01
Purity ; 99.0%

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+
	(163)	(181)	(8)	(10)	(23)	(24)	(14)	(25)	(7)	(12)
	206	200	6	8	26	32	16	18	10	9
	195	208	5	10	22	31	23	29	11	17
1 .22	(201)	(204)	(6)	(9)	(24)	(32)	(20)	(24)	(11)	(13)
	170	226	10	7	28	26	29	23	13	13
	180	218	3	6	20	41	20	37	16	13
4 .88	(175)	(222)	(7)	(7)	(24)	(34)	(25)	(30)	(15)	(13)
	195	225	3	6	26	41	15	43	20	26
	187	225	9	14	37	47	16	38	40	28
19 .5	(191)	(225)	(6)	(10)	(32)	(44)	(16)	(41)	(30)	(27)
	240	272	10	8	55	56	31	41	66	70
	219	263	13	14	43	71	21	44	75	77
78 .1	(230)	(268)	(12)	(11)	(49)	(64)	(26)	(43)	(71)	(74)
	273	324	9	13	130	104	46	62	160	233
	275	370	10	9	128	130	61	63	174	200
313	(274)	(347)	(10)	(11)	(129)	(117)	(54)	(63)	(167)	(217)
	0 *	279	0 *	13	198	192	0 *	109	0 *	385
	0 *	303	0 *	11	222	199	0 *	129	0 *	367
1250	(0 *)	(291)	(0 *)	(12)	(210)	(196)	(0 *)	(119)	(0 *)	(376)
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
5000	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)
Judgement	−	−	−	−	+	+	+	+	+	+
Specific Mutagenicity					339	512	128	121	1640	794
Positive Control	AF-2 (635)	2-AA (1323)	NaN_3 (303)	2-AA (263)	AF-2 (207)	2-AA (1323)	AF-2 (479)	2-AA (417)	9-AA (793)	2-AA (145)

* Growth inhibitation was observed.

Experimental Data-2

Conc. μg/plate	Base-substitution					
	TA100		TA1535		WP2*uvr*A	
H_2O	S9−	S9+	S9−	S9+	S9−	S9+
	(170)	(162)	(9)	(8)	(22)	(28)
						29
						26
4 .88						(28)
					26	51
					18	45
9 .77					(22)	(48)
					38	51
					32	47
19 .5					(35)	(49)
	201		13		41	55
	205		10		43	51
39 .1	(203)		(12)		(42)	(53)
	221		8		51	66
	226		6		60	71
78 .1	(224)		(7)		(56)	(69)
	247	279	10	10	70	112
	260	275	6	11	67	109
156	(254)	(277)	(8)	(11)	(69)	(111)
	295	301	10	13	109	158
	291	336	15	8	126	174
313	(293)	(319)	(13)	(11)	(118)	(166)
	269	353	9	18	166	
	301	323	11	8	171	
625	(285)	(338)	(10)	(13)	(169)	
	0 *	269	0 *	9		
	0 *	239	0 *	8		
1250	(0 *)	(254)	(0 *)	(9)		
		0 *		6		
		0 *		6		
2500		(0 *)		(6)		
		0 *		0 *		
		0 *		0 *		
5000		(0 *)		(0 *)		
Judgement	−	−	−	−	+	+
Specific Mutagenicity					435	532
Positive Control	AF-2 (603)	2-AA (1296)	NaN_3 (280)	2-AA (258)	AF-2 (208)	2-AA (1357)

Experimental Data-2

Conc. μg/plate	Number of Revertants/plate			
	Frame-shift			
	TA98		TA1537	
H_2O	S9−	S9+	S9−	S9+
	(16)	(23)	(6)	(10)
			9	
			7	
0 .610			(8)	
			8	
			7	
1 .22			(8)	
			10	17
			16	11
2 .44			(13)	(14)
			18	9
			14	16
4 .88			(16)	(13)
			28	20
			28	21
9 .77			(28)	(21)
	21	29	43	34
	16	26	20	38
19 .5	(19)	(28)	(32)	(36)
	25	38	59	48
	24	34	55	69
39 .1	(25)	(36)	(57)	(59)
	31	31		89
	23	31		82
78 .1	(27)	(31)		(86)
	34	52		109
	41	40		141
156	(38)	(46)		(125)
	69	36		
	66	48		
313	(68)	(42)		
	66 *	72		
	48 *	67		
625	(57 *)	(70)		
	0 *	91		
	0 *	93		
1250	(0 *)	(92)		
Judgement	+	+	+	+
Specific Mutagenicity	166	147	2870	1330
Positive Control	AF-2 (535)	2-AA (486)	9-AA (828)	2-AA (181)