

Phosphine (ホスフィン)

Experimental Data-1

(B8615-1/2)

Chemical Name	: Phosphine
Synonym	: Hydrogen phosphide Phosphorus trihydride リン化水素
Molecular Weight	: 34.00
Melting Point	: -133 °C[Merck]
Boiling Point	: -87.7°C[Merck]
Flashing Point	: -
Molecular Formula	: H ₃ P
Chemical Structure	PH ₃
CAS No.	: 7803-51-2
MITI No.	: (1)-1204
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Nippon Sanso Co., Ltd.
Lot No.	: K 69877
Purity	: 0.522%
Vehicle	: He
Exposure Condition	: 25°C, 2hr
Culture Condition	: 37°C, 48hr

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
He	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(125)	(157)	(15)	(10)	(21)	(23)	(19)	(33)	(13)	(13)
0.02	77 142 (110)	119 135 (127)	13 12 (13)	14 14 (14)	25 15 (20)	17 30 (24)	19 21 (20)	27 33 (30)	13 12 (13)	14 13 (14)
0.05	152 149 (151)	130 151 (141)	14 13 (14)	11 18 (15)	27 23 (25)	13 34 (24)	18 20 (19)	34 30 (32)	14 10 (12)	15 13 (14)
0.1	146 132 (139)	154 142 (148)	15 17 (16)	10 6 (8)	30 24 (27)	26 24 (25)	28 26 (27)	28 31 (30)	16 12 (14)	12 20 (16)
0.2	116 156 (136)	152 162 (157)	11 13 (12)	13 14 (14)	22 21 (22)	22 17 (20)	19 13 (16)	29 31 (30)	16 9 (13)	11 13 (12)
0.5	143 137 (140)	136 129 (133)	19 17 (18)	24 6 (15)	16 25 (21)	21 16 (19)	14 27 (21)	25 32 (29)	11 12 (12)	13 10 (12)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive Control	AF-2 (643)	2-AA (3681)	NaN ₃ (234)	2-AA (283)	AF-2 (114)	2-AA/20 (1230)	AF-2 (647)	2-AA (922)	9-AA (320)	2-AA (1052)

Mutagenicity in Bacterial Test ; Negative

IARC Evaluation ; not yet cited

Experimental Data-2

(B8615-2/2)

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
He	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(168)	(155)	(20)	(13)	(35)	(31)	(18)	(40)	(13)	(27)
0 .02	172	172	23	16	30	35	16	41	13	12
	173	139	16	10	25	34	26	37	10	8
	(173)	(156)	(20)	(13)	(28)	(35)	(21)	(39)	(12)	(10)
0 .05	147	153	12	9	35	35	17	35	7	20
	167	171	20	13	27	27	16	34	7	12
	(157)	(162)	(16)	(11)	(31)	(31)	(17)	(35)	(7)	(16)
0 .1	171	162	21	10	32	31	16	37	10	21
	166	153	18	9	37	24	16	36	6	18
	(169)	(158)	(20)	(10)	(35)	(28)	(16)	(37)	(8)	(20)
0 .2	149	149	19	16	35	33	20	31	7	15
	142	136	23	16	28	21	19	39	7	9
	(146)	(143)	(21)	(16)	(32)	(27)	(20)	(35)	(7)	(12)
0 .5	165	126	24	16	27	35	26	38	7	15
	139	148	27	13	34	28	19	38	19	13
	(152)	(137)	(26)	(15)	(31)	(32)	(23)	(38)	(13)	(14)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive Control	AF-2 (635)	2-AA (3875)	NaN ₃ (387)	2-AA (237)	AF-2 (147)	2-AA/20 (1150)	AF-2 (697)	2-AA (888)	9-AA (209)	2-AA (710)