

Chemical Name	: <u>Silane</u>
Synonym	: <u>Monosilane</u> <u>Silicon tetrahydride</u> <u>Silicane</u> <u>モノシレン</u>
Molecular Weight	: 32.12
Melting Point	: -185°C[Aldrich]
Boiling Point	: -112°C[Aldrich]
Flashing Point	: -
Molecular Formula	: H ₄ Si
Chemical Structure	SiH ₄
CAS No.	: 7803-62-5
MITI No.	: (1)-735
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Nippon Sanso Co., Ltd.
Lot No.	: 4K 49667
Purity	: 1.04%
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+
		(134)	(123)	(16)	(9)	(18)	(23)	(19)	(35)	(11)
0.05	132 (124)	123 (116)	13 (11)	9 (10)	30 (28)	35 (31)	23 (25)	35 (34)	14 (9)	15 (14)
0.1	97 (103)	128 (126)	15 (13)	8 (8)	29 (29)	36 (29)	26 (25)	26 (30)	9 (9)	20 (15)
0.2	104 (107)	135 (121)	5 (9)	13 (12)	21 (26)	26 (25)	27 (26)	33 (35)	9 (7)	12 (14)
0.5	119 (112)	137 (133)	15 (17)	15 (13)	29 (26)	18 (21)	28 (26)	23 (26)	11 (8)	21 (20)
1.0	105 (115)	181 (184)	14 (16)	7 (9)	22 (18)	26 (28)	27 (32)	64 (71)	13 (14)	106 (87)
Judgement	-	-	-	-	-	-	-	+	-	+
Specific Mutagenicity #								1.0%		1.0%
Positive Control	AF-2 (494)	2-AA (1926)	NaN ₃ (247)	2-AA (253)	AF-2 (103)	2-AA/20 (1167)	AF-2 (597)	2-AA (1070)	9-AA (340)	2-AA (1140)

The concentration which was two times of the negative control value was shown.

Mutagenicity in Bacterial Test ; Positive

IARC Evaluation ; not yet cited

Experimental Data-2

(B8614-2/2)

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+
	(122)	(163)	(10)	(9)	(23)	(20)	(16)	(33)	(15)	(21)
0 .05	121	141	15	19	30	20	17	29	16	11
	112	113	8	6	21	27	22	28	22	18
	(117)	(127)	(12)	(13)	(26)	(24)	(20)	(29)	(19)	(15)
0 .1	100	127	13	4	22	24	17	25	15	12
	114	117	3	6	22	22	14	34	13	12
	(107)	(122)	(8)	(5)	(22)	(23)	(16)	(30)	(14)	(12)
0 .2	112	119	20	20	17	18	13	31	17	16
	92	129	5	6	20	19	25	41	18	16
	(102)	(124)	(13)	(13)	(19)	(19)	(19)	(36)	(18)	(16)
0 .5	115	147	6	5	23	13	29	41	19	11
	107	153	12	12	27	24	21	36	14	13
	(111)	(150)	(9)	(9)	(25)	(19)	(25)	(39)	(17)	(12)
1 .0	137	202	12	14	25	17	41	152	62	36
	136	157	14	11	30	24	59	94	55	23
	(137)	(180)	(13)	(13)	(28)	(21)	(50)	(123)	(59)	(30)
Judgement	-	-	-	-	-	-	+	+	+	-
Specific Mutagenicity #							1.0%	1.0%	1.0%	
Positive Control	AF-2 (495)	2-AA (1497)	NaN ₃ (231)	2-AA (289)	AF-2 (105)	2-AA/20 (1302)	AF-2 (641)	2-AA (410)	9-AA (295)	2-AA (429)