

Thiourea dioxide (二酸化チオ尿素)

Experimental Data-1

(B9713-1/2)

Chemical Name	: Thiourea dioxide
Synonym	: Thiourea S,S-dioxide Thiourea 2,2-dioxide チオウレアジオキソト
Molecular Weight	: 108.12
Melting Point	: 144°C(decomposition)[CHCD]
Boiling Point	: -
Flashing Point	: -
Molecular Formula	: CH ₄ N ₂ O ₂ S
Chemical Structure	(NH ₂) ₂ CSO ₂
CAS No.	: 4189-44-0
MITI No.	: (2)-2873
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Wako Jyunyaku Kogyo Co., Ltd.
Lot No.	: LEE1728
Purity	: 97%
Vehicle	: DMSO

Conc. μ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
DMSO	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(128)	(121)	(10)	(10)	(50)	(86)	(22)	(28)	(6)	(11)
1 .22	134 138 (136)	135 163 (149)	7 5 (6)	9 10 (10)	52 66 (59)	77 85 (81)	23 24 (24)	24 26 (25)	3 6 (5)	13 8 (11)
4 .88	124 123 (124)	142 134 (138)	3 9 (6)	10 13 (12)	68 49 (59)	76 90 (83)	25 17 (21)	32 28 (30)	3 6 (5)	8 8 (8)
19 .5	123 136 (130)	139 163 (154)	5 7 (6)	17 7 (12)	55 46 (51)	85 101 (93)	23 22 (23)	23 24 (24)	7 6 (7)	5 13 (9)
78 .1	115 131 (123)	134 148 (141)	10 5 (8)	9 20 (15)	55 51 (53)	83 90 (87)	20 17 (19)	29 26 (28)	6 6 (6)	6 10 (8)
313	148 114 (131)	135 142 (139)	8 10 (9)	18 22 (20)	56 56 (56)	68 84 (76)	28 14 (21)	30 22 (26)	3 6 (5)	3 6 (5)
1250	157 120 (139)	165 156 (161)	36 44 (40)	48 64 (56)	49 63 (56)	85 78 (82)	20 26 (23)	29 18 (24)	2 5 (4)	8 8 (8)
5000	134 116 (125)	166 176 (171)	101 84 (93)	120 108 (114)	56 74 (65)	107 81 (94)	13 * 14 * (14 *)	11 * 11 * (11 *)	2 7 (5)	10 10 (10)
Judgement	-	-	+	+	-	-	-	-	-	-
Specific Mutagenicity			24.0	36.8						
Positive Control	AF-2 (749)	2-AA (1367)	NaN ₃ (447)	2-AA (333)	AF-2 (1453)	2-AA (1035)	AF-2 (551)	2-AA (466)	9-AA (724)	2-AA (219)

* Growth inhibition was observed.

Experimental Data-2

(B9713-2/2)

Conc. μ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
DMSO	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	(114)	(108)	(8)	(9)	(47)	(65)	(18)	(24)	(5)	(10)
78 .1	111	111	10	16	34	67	22	14	3	9
	99	107	6	17	40	64	16	36	7	15
	(105)	(109)	(8)	(17)	(37)	(66)	(19)	(25)	(5)	(12)
156	101	131	8	18	49	63	10	29	8	13
	100	107	9	13	54	69	17	25	2	5
	(101)	(119)	(9)	(16)	(52)	(66)	(14)	(27)	(5)	(9)
313	114	115	6	21	48	53	18	32	5	14
	96	105	10	21	41	66	9	32	5	15
	(105)	(110)	(8)	(21)	(45)	(60)	(14)	(32)	(5)	(15)
625	115	102	28	29	45	62	17	20	5	7
	115	124	14	24	49	79	24	25	1	11
	(115)	(113)	(21)	(27)	(47)	(71)	(21)	(23)	(3)	(9)
1250	148	138	31	39	55	70	23	33	2	9
	127	152	25	51	51	67	22	30	9	6
	(138)	(145)	(28)	(45)	(53)	(69)	(23)	(32)	(6)	(8)
2500	142	155	77	75	56	87	23	15	3	6
	146	136	52	99	49	72	22	18	5	5
	(144)	(146)	(65)	(87)	(53)	(80)	(23)	(17)	(4)	(6)
5000	160	197	92	142	69	97	17 *	23 *	9	7
	143	164	90	170	64	93	8 *	22 *	3	6
	(152)	(181)	(91)	(156)	(67)	(95)	(13 *)	(23 *)	(6)	(7)
Judgement	-	-	+	+	-	-	-	-	-	-
Specific Mutagenicity			22.8	38.3						
Positive Control	AF-2 (679)	2-AA (1302)	NaN ₃ (432)	2-AA (283)	AF-2 (1090)	2-AA (901)	AF-2 (456)	2-AA (431)	9-AA (678)	2-AA (160)