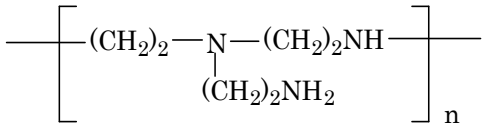
Chemical Name ; Polyethyleneimine

Synonym ; Aziridine, homopolymer

Molecular Weight ; Average Mw 600
Melting Point ; −
Boiling Point ; −
Flashing Point ; −
Molecular Formula ; −

Chemical Structure



CAS No. ; 9002-98-6
MITI No. ; (7)-5, (7)-30, (7)-741
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Wako Jyunyaku Kogyo Co., Ltd.
Lot No. ; ESG5003
Purity ; −

Vehicle ; Dehydrated DMSO

Mutagenicity in Bacterial Test ; Negative

IARC Evaluation ; not yet cited

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(119)	(116)	(9)	(9)	(68)	(93)	(19)	(22)	(5)	(11)
	130	133	7	11	75	96	25	25	3 *	10
	102	139	10	13	67	97	10	34	7 *	11
2.44	(116)	(136)	(9)	(12)	(71)	(97)	(18)	(30)	(5 *)	(11)
	143	124	8 *	10	67	97	21 *	37 *	8 *	3 *
	121	124	10 *	7	55	102	13 *	23 *	6 *	9 *
9.77	(132)	(124)	(9 *)	(9)	(61)	(100)	(17 *)	(30 *)	(7 *)	(6 *)
	106 *	119	10 *	7	76 *	112	20 *	23 *	2 *	7 *
	121 *	151	9 *	10	59 *	98	17 *	23 *	1 *	5 *
39.1	(114 *)	(135)	(10 *)	(9)	(68 *)	(105)	(19 *)	(23 *)	(2 *)	(6 *)
	133 *	116	7 *	9	0 *	89 *	14 *	15 *	5 *	9 *
	120 *	134	5 *	13	0 *	109 *	14 *	31 *	1 *	5 *
156	(127 *)	(125)	(6 *)	(11)	(0 *)	(99 *)	(14 *)	(23 *)	(3 *)	(7 *)
	135 *	143 *	6 *	9	0 *	0 *	17 *	16 *	3 *	7 *
	122 *	160 *	9 *	8	0 *	0 *	14 *	23 *	2 *	7 *
625	(129 *)	(152 *)	(8 *)	(9)	(0 *)	(0 *)	(16 *)	(20 *)	(3 *)	(7 *)
	134 *	129 *	11 *	15 *	0 *	0 *	20 *	29 *	6 *	6 *
	122 *	138 *	2 *	6 *	0 *	0 *	14 *	21 *	6 *	3 *
2500	(128 *)	(134 *)	(7 *)	(11 *)	(0 *)	(0 *)	(17 *)	(25 *)	(6 *)	(5 *)
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
10000	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (549)	2-AA (1132)	NaN_3 (405)	2-AA (322)	AF-2 (915)	2-AA (1127)	AF-2 (520)	2-AA (445)	9-AA (611)	2-AA (169)

* Growth inhibitation was observed.

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA100		TA1535		WP2*uvr*A/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(143)	(136)	(11)	(10)	(50)	(65)
0 .153			11 9 (10)			
0 .305			8 16 (12)			
0 .610	157 157 (157)		9 10 (10)		48 45 (47)	
1 .22	151 143 (147)		9 15 (12)		47 56 (52)	
2 .44	138 148 (143)		7 6 (7)		51 49 (50)	68 81 (75)
4 .88	167 135 (151)		14 8 (11)		71 66 (69)	66 81 (74)
9 .77	141 167 (154)	142 156 (149)	14 * 11 * (13 *)		57 52 (55)	70 71 (71)
19 .5	139 135 (137)	156 119 (138)	8 * 9 * (9 *)		63 69 (66)	68 57 (63)
39 .1	141 * 143 * (142 *)	149 152 (151)		7 10 (9)	62 * 51 * (57 *)	71 77 (74)
78 .1	133 * 158 * (146 *)	111 137 (124)		13 6 (10)	57 * 52 * (55 *)	84 94 (89)
156		158 129 (144)		9 10 (10)		74 * 46 * (60 *)
313		146 156 (151)		6 9 (8)		81 * 63 * (72 *)
625		167 * 167 * (167 *)		9 6 (8)		
1250		157 * 165 * (161 *)		15 * 10 * (13 *)		
2500				13 * 7 * (10 *)		
5000				8 * 10 * (9 *)		
Judgement	–	–	–	–	–	–
Specific Mutagenicity						
Positive Control	AF-2 (590)	2-AA (1366)	NaN_3 (394)	2-AA (336)	AF-2 (934)	2-AA (1058)

Conc. μg/plate	Number of Revertants/plate			
	Frame-shift			
	TA98		TA1537	
	S9−	S9+	S9−	S9+
DMSO	(23)	(27)	(7)	(6)
0 .0381			8 10 (9)	
0 .0763			9 9 (9)	
0 .153	23 15 (19)	25 25 (25)	8 13 (11)	10 10 (10)
0 .305	28 15 (22)	37 32 (35)	10 11 (11)	8 9 (9)
0 .610	14 22 (18)	23 17 (20)	10 10 (10)	6 7 (7)
1 .22	26 31 (29)	17 24 (21)	8 7 (8)	9 9 (9)
2 .44	22 18 (20)	32 23 (28)	10 * 8 * (9 *)	10 3 (7)
4 .88	17 17 (17)	25 37 (31)	0 * 0 * (0 *)	9 6 (8)
9 .77	21 * 18 * (20 *)	28 * 29 * (29 *)		9 * 9 * (9 *)
19 .5	23 * 23 * (23 *)	28 * 30 * (29 *)		7 * 7 * (7 *)
Judgement	–	–	–	–
Specific Mutagenicity				
Positive Control	AF-2 (511)	2-AA (466)	9-AA (534)	2-AA (192)

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA100		TA1535		WP2*uvrA*/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(143)	(151)	(11)	(15)	(50)	(71)
0 .305			11 9 (10)			
0 .610			8 16 (12)			
1 .22	157 157 (157)		9 10 (10)		48 45 (47)	
2 .44	151 143 (147)		9 15 (12)		47 56 (52)	
4 .88	138 148 (143)		7 6 (7)		51 49 (50)	89 93 (91)
9 .77	167 135 (151)		14 * 8 * (11 *)		71 66 (69)	89 87 (88)
19 .5	141 167 (154)	194 169 (182)	14 * 11 * (13 *)		57 52 (55)	92 94 (93)
39 .1	139 * 135 * (137 *)	177 164 (171)		7 15 (11)	63 * 69 * (66 *)	76 89 (83)
78 .1	141 * 143 * (142 *)	174 152 (163)		18 8 (13)	62 * 51 * (57 *)	75 79 (77)
156		149 144 (147)		11 18 (15)		74 * 72 * (73 *)
313		158 162 (160)		17 9 (13)		87 * 98 * (93 *)
625		199 * 160 * (180 *)		14 14 (14)		
1250		190 * 184 * (187 *)		10 * 11 * (11 *)		
2500				9 * 10 * (10 *)		
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	AF-2 (590)	2-AA (1183)	NaN_3 (394)	2-AA (330)	AF-2 (934)	2-AA (863)

Conc. μg/plate	Number of Revertants/plate			
	Frame-shift			
	TA98		TA1537	
	S9−	S9+	S9−	S9+
DMSO	(23)	(25)	(7)	(11)
0 .0763			8 10 (9)	
0 .153			9 9 (9)	
0 .305	23 15 (19)	22 29 (26)	8 13 (11)	6 15 (11)
0 .610	28 15 (22)	24 20 (22)	10 11 (11)	8 16 (12)
1 .22	14 22 (18)	26 25 (26)	10 10 (10)	17 13 (15)
2 .44	26 31 (29)	30 29 (30)	8 * 7 * (8 *)	11 15 (13)
4 .88	22 18 (20)	34 22 (28)	10 * 8 * (9 *)	14 21 (18)
9 .77	17 * 17 * (17 *)	25 * 24 * (25 *)		7 * 14 * (11 *)
19 .5	21 * 18 * (20 *)	32 * 20 * (26 *)		15 * 10 * (13 *)
Judgement	−	−	−	−
Specific Mutagenicity				
Positive Control	AF-2 (511)	2-AA (421)	9-AA (534)	2-AA (214)