Chemical Name;Acetic anhydride
Synonym ;－

Molecular Weight ; 102.09
Melting Point ; -73 ℃ [CHCD,Aldrich,Merck]
Boiling Point ; 139.55 ℃, 44 ℃(15mmHg) [CHCD]
138 - 140 ℃ [Aldrich]
139 ℃ [Merck]
Flashing Point ; 49 ℃ [CHCD]
54 ℃ [Aldrich,Merck]
Molecular Formula; $C_4H_6O_3$

Chemical Structure

$(CH_3CO)_2O$

CAS No. ; 108-24-7
MITI No. ; (2)-690
ML No. ; －
Specified Chemical Substances; －

Source of Substance; Wako Junyaku Kogyo Co.,Ltd.
Lot No. ; KCL3214
Purity ; 97.0 %

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*uvrA*		TA98		TA1537	
	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋
DMSO	(130)	(138)	(20)	(22)	(30)	(32)	(17)	(23)	(11)	(13)
	127	123	13	22	22	29	13	25	10	23
	120	138	16	25	28	36	20	26	5	24
0.0763	(124)	(131)	(15)	(24)	(25)	(33)	(17)	(26)	(8)	(24)
	131	160	16	23	28	32	16	30	8	8
	89	133	10	24	24	33	16	29	10	13
0.305	(110)	(147)	(13)	(24)	(26)	(33)	(16)	(30)	(9)	(11)
	100	115	14	18	23	43	17	23	8	11
	113	136	18	23	32	33	14	24	11	13
1.22	(107)	(126)	(16)	(21)	(28)	(38)	(16)	(24)	(10)	(12)
	115	139	21	15	29	23	18	14	11	8
	115	119	15	17	29	34	23	23	11	9
4.88	(115)	(129)	(18)	(16)	(29)	(29)	(21)	(19)	(11)	(9)
	102	127	16	20	37	34	13	21	6	10
	112	120	20	28	28	31	14	29	14	9
19.5	(107)	(124)	(18)	(24)	(33)	(33)	(14)	(25)	(10)	(10)
	114	128	15	31	41	37	22	21	10	15
	102	135	14	16	26	31	11	24	7	14
78.1	(108)	(132)	(15)	(24)	(34)	(34)	(17)	(23)	(9)	(15)
	96	115	13	15	20	31	11	22	7	16
	115	107	16	15	33	30	16	21	6	17
313	(106)	(111)	(15)	(15)	(27)	(31)	(14)	(22)	(7)	(17)
	72*	105*	0*	10*	23*	34*	0*	20*	0*	10*
	83*	81*	10*	15*	22*	31*	0*	18*	0*	10*
1250	(78*)	(93*)	(5*)	(13*)	(23*)	(33*)	(0*)	(19*)	(0*)	(10*)
	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										
Positive Control	AF-2 (938)	2-AA (1248)	NaN_3 (414)	2-AA (354)	AF-2 (322)	2-AA (1124)	AF-2 (396)	2-AA (255)	9-AA (840)	2-AA (254)

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(109)	(126)	(14)	(23)	(30)	(34)	(17)	(18)	(8)	(12)
			20				20		9	
			20				13		7	
19.5			(20)				(17)		(8)	
	127	129	16	15	18	36	11	29	5	6
	113	136	13	21	25	25	16	21	6	6
39.1	(120)	(133)	(15)	(18)	(22)	(31)	(14)	(25)	(6)	(6)
	130	133	11	28	37	29	17	23	6	8
	105	121	14	20	34	32	10	21	5	6
78.1	(118)	(127)	(13)	(24)	(36)	(31)	(14)	(22)	(6)	(7)
	83	133	15	22	23	33	14	26	2	15
	97	117	17	18	25	28	20	28	2	9
156	(90)	(125)	(16)	(20)	(24)	(31)	(17)	(27)	(2)	(12)
	115	137	11	29	25	43	15	15	11	7
	102	124	18	17	34	25	16	24	6	8
313	(109)	(131)	(15)	(23)	(30)	(34)	(16)	(20)	(9)	(8)
	109	127	14	15	30	31	9	25	5	7
	121	109	14	20	24	30	17	21	6	9
625	(115)	(118)	(14)	(18)	(27)	(31)	(13)	(23)	(6)	(8)
	96*	90*	17*	17*	24*	37*	0*	26*	0*	5*
	99*	117*	13*	13*	22*	33*	0*	24*	0*	3*
1250	(98*)	(104*)	(15*)	(15*)	(23*)	(35*)	(0*)	(25*)	(0*)	(4*)
	0*	0*	17*	14*	10*	23*		0*		0*
	0*	0*	13*	11*	13*	28*		0*		0*
2500	(0*)	(0*)	(15*)	(13*)	(12*)	(26*)		(0*)		(0*)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (823)	2-AA (1499)	NaN_3 (385)	2-AA (318)	AF-2 (310)	2-AA (1086)	AF-2 (328)	2-AA (284)	9-AA (616)	2-AA (236)

Experimental Data - 3

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(205)	(285)	(256)	(326)	(61)	(95)
	198	261	239	310	52	98
	215	281	259	298	57	85
0.0763	(207)	(271)	(249)	(304)	(55)	(92)
	180	285	263	305	66	99
	192	263	228	328	61	106
0.305	(186)	(274)	(246)	(317)	(64)	(103)
	228	273	238	306	74	96
	214	298	247	293	66	105
1.22	(221)	(286)	(243)	(300)	(70)	(101)
	199	316	242	280	60	109
	214	286	223	263	67	105
4.88	(207)	(301)	(233)	(272)	(64)	(107)
	211	288	268	336	62	92
	181	269	263	320	56	112
19.5	(196)	(279)	(266)	(328)	(59)	(102)
	192	276	269	329	75	101
	208	280	253	309	69	94
78.1	(200)	(278)	(261)	(319)	(72)	(98)
	205	301	225	284	66	101
	202	273	230	323	74	72
313	(204)	(287)	(228)	(304)	(70)	(87)
	184	242	328*	242*	34*	81*
	192	240	418*	253*	53*	92*
1250	(188)	(241)	(373*)	(248*)	(44*)	(87*)
	0*	0*	0*	0*	0*	0*
	0*	0*	0*	0*	0*	0*
5000	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (685)	2-AA (1492)	PA (1590)	2-AA (1188)	AF-2 (1180)	2-AA (892)

Experimental Data - 4

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(200)	(297)	(258)	(345)	(48)	(71)
			249	281	31	72
			248	366	37	75
19.5			(249)	(324)	(34)	(74)
	207	247	218	320	32	76
	202	276	267	349	40	92
39.1	(205)	(262)	(243)	(335)	(36)	(84)
	214	290	286	330	41	85
	205	311	265	338	51	39
78.1	(210)	(301)	(276)	(334)	(46)	(62)
	228	319	243	300	38	74
	193	288	258	340	43	68
156	(211)	(304)	(251)	(320)	(41)	(71)
	216	304	259	305	54	74
	193	274	262	311	44	87
313	(205)	(289)	(261)	(308)	(49)	(81)
	213	284	268	301	41	61
	206	329	232	271	62	76
625	(210)	(307)	(250)	(286)	(52)	(69)
	82*	261	348*	266*	22*	69*
	126*	240	352*	285*	29*	71*
1250	(104*)	(251)	(350*)	(276*)	(26*)	(70*)
	0*	114*	0*	193*	0*	33*
	0*	199*	0*	164*	0*	22*
2500	(0*)	(157*)	(0*)	(179*)	(0*)	(28*)
	0*	0*				
	0*	0*				
5000	(0*)	(0*)				
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (714)	2-AA (1779)	PA (1663)	2-AA (1382)	AF-2 (1454)	2-AA (1088)