Crotonaldehyde(trans-form) (クロトンアルデヒド(トランス体))

Chemical Name: Crotonaldehyde(trans-form)
Synonym: trans-2-Butenal
2-Butenal, (E)-
Molecular weight: 70.09
Melting point: -76.5~-69℃
Boiling point: 102.2~104℃
Flashing point: 8℃

Chemical Structure

$CH_3CH=CHCHO$

CAS No : 123-73-9
MITI No : (2)-524
Source of Substance: Wako Pure Chem. Ind., Ltd.
Lot.No.: CTH5665
Purity: 99 %
Vehicle: H_2O

Mutagenicity
in Bacterial Test: Positive

IARC Evaluation: not yet cited

Experimental Data

Con. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
H_2O	(179)	(185)	(10)	(8)	(30)	(38)	(22)	(24)	(8)	(13)
	165	188	9	8	28	37	22	20	3	18
	132	206	5	9	27	32	15	15	7	18
9.77	(149)	(197)	(7)	(9)	(28)	(35)	(19)	(18)	(5)	(18)
	185	195	8	10	29	39	21	21	9	10
	198	192	12	12	27	32	27	28	9	14
19.5	(192)	(194)	(10)	(11)	(28)	(36)	(24)	(25)	(9)	(12)
	242	187	12	8	30	29	44	23	18	10
	247	194	9	10	24	38	50	24	10	14
39.1	(245)	(191)	(11)	(9)	(27)	(34)	(47)	(24)	(14)	(12)
	378	214	7	7	23	40	37*	21	10	18
	347	184	6	17	35	30	28*	14	18	9
78.1	(363)	(199)	(7)	(12)	(29)	(35)	(33*)	(18)	(14)	(14)
	526	347	12	12	38	38	0*	25	0*	10
	572	310	8	9	42	34	0*	20	0*	14
156	(549)	(329)	(10)	(11)	(40)	(36)	(0*)	(23)	(0*)	(12)
	926	809	6	5	43	36	0*	23	0*	9
	962	943	9	8	40	40	0*	32	0*	8
313	(944)	(876)	(8)	(7)	(42)	(38)	(0*)	(28)	(0*)	(9)
	0*	1013	0*	8	32*	66	0*	66	0*	18
	0*	1048	0*	9	30*	50	0*	58	0*	9
625	(0*)	(1031)	(0*)	(9)	(31*)	(58)	(0*)	(62)	(0*)	(14)
1250	(0*)	(0*)	(0*)	(0*)	(0*)	(33*)	(0*)	(0*)	(0*)	(0*)
2500	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	+	+	−	−	−	−	+	+	−	−
Specific Mutagenicity	2440	2210					639	60.8		
Positive Control	AF2 (701)	2AA (799)	NaN_3 (409)	2AA (224)	AF2 (176)	2AA 20 (1511)	AF2 (403)	2AA (409)	9AA (442)	2AA (146)

Con. μg/plate	Experimental Data: Number of Revertants/plate				
	Base-substitution			Frame-shift	
	TA100	TA1535	WP2uvrA	TA98	TA1537
	S9-	S9-	S9-	S9-	S9-
H_2O	(135)	(10)	(21)	(19)	(6)
1.25				(26)	
2.5				(28)	
5				(25)	(7)
	154			32	8
	146			27	9
10	(150)			(30)	(9)
	158		23	24	5
	161		22	27	7
20	(160)		(23)	(26)	(6)
	183	7	21	45	18
	176	7	31	32	15
40	(180)	(7)	(26)	(42)	(17)
	280	13	29	24*	17*
	247	7	20	14*	13*
60	(264)	(10)	(25)	(19*)	(15*)
	334	9	16	0*	0*
	326	9	20	0*	0*
80	(330)	(9)	(18)	(0*)	(0*)
	333	5	28		0*
	245	9	21		0*
100	(289)	(7)	(25)		(0*)
	498	8	31		
	392	8	23		
200	(445)	(8)	(27)		
	472	3*	22*		
	397	5*	25*		
400	(435)	(4*)	(24*)		
600	(0*)	(0*)	(12*)		
800		(0*)			
Judgement	+	−	−	+	+
Specific Mutagenicity	2440			575	275
Positive Control	AF2 (668)	NaN_3 (320)	AF2 (195)	AF2 (440)	9AA (355)

Con. μg/plate	Experimental Data: Number of Revertants/plate				
	Base-substitution			Frame-shift	
	TA100	TA1535	WP2uvrA	TA98	TA1537
	S9+	S9+	S9+	S9+	S9+3
H_2O	(180)	(9)	(24)	(23)	(9)
	176				
	184				
40	(180)				
	181			23	
	207			17	
60	(194)			(20)	
	198	10	24	17	13
	232	12	25	22	8
80	(215)	(11)	(25)	(20)	(11)
	236	9	28	24	8
	242	13	29	32	8
100	(239)	(11)	(29)	(28)	(8)
	417	15	27	28	7
	435	7	25	27	6
200	(426)	(11)	(26)	(28)	(7)
	586	10	23	37	7
	538	8	28	45	10
400	(562)	(9)	(26)	(41)	(9)
	592	6*	22	46	9
	579	5*	30	47	5
600	(586)	(6*)	(26)	(47)	(7)
	180*	0*	38	0*	7*
	188*	0*	32	0*	5*
800	(184*)	(0*)	(35)	(0*)	(6*)
1000	(0*)	(0*)	(43)	(0*)	(0*)
1200					(0*)
2000			(38*)		
Judgement	+	−	−	+	−
Specific Mutagenicity	1230			40.0	
Positive Control	2AA (1006)	2AA (288)	2AA 20 (1129)	2AA (485)	2AA (174)