

Chemical Name	: <i>n</i> -Butyl methacrylate
Synonym	: Butyl methacrylate 2-Methyl-2-propanoic acid butyl ester メタクリル酸 <i>n</i> -ブチル
Molecular Weight	: 142.20
Melting Point	: -
Boiling Point	: 160-163°C[Aldrich]
Flashing Point	: 56°C[Aldrich]
Molecular Formula	: C <sub>8</sub> H <sub>14</sub> O <sub>2</sub>
Chemical Structure	$  \begin{array}{c}  \text{CH}_3 \\    \\  \text{CH}_2 = \text{C} - \text{C} = \text{O} \\  \quad \quad \quad   \\  \quad \quad \quad \text{O} - \text{CH}_2(\text{CH}_2)_2\text{CH}_3  \end{array}  $
CAS No.	: 97-88-1
MITI No.	: (2)-1039, (6)-2010
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.
Lot No.	: GE01
Purity	: >99%
Vehicle	: DMSO

Mutagenicity in Bacterial Test ; Negative

IARC Evaluation ; not yet cited

Conc. μg/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+
		( 134 )	( 145 )	( 11 )	( 10 )	( 60 )	( 91 )	( 19 )	( 31 )	( 5 )
	119	141	6	10	56	114	28	34	6	3
	116	157	6	13	77	91	14	34	6	11
1 .22	( 118 )	( 149 )	( 6 )	( 12 )	( 67 )	( 103 )	( 21 )	( 34 )	( 6 )	( 7 )
	134	138	8	7	56	85	25	37	2	9
	135	155	8	13	56	101	22	33	6	6
4 .88	( 135 )	( 147 )	( 8 )	( 10 )	( 56 )	( 93 )	( 24 )	( 35 )	( 4 )	( 8 )
	136	114	3	5	79	94	21	28	6	13
	141	153	5	10	47	100	24	26	2	10
19 .5	( 139 )	( 134 )	( 4 )	( 8 )	( 63 )	( 97 )	( 23 )	( 27 )	( 4 )	( 12 )
	145	143	5	15	55	97	18	41	5	10
	131	148	5	14	76	108	16	29	2	3
78 .1	( 138 )	( 146 )	( 5 )	( 15 )	( 66 )	( 103 )	( 17 )	( 35 )	( 4 )	( 7 )
	78 *	136	5 *	10 *	28 *	66	9 *	29	3 *	13 *
	96 *	135	7 *	9 *	26 *	62	7 *	25	1 *	3 *
313	( 87 *)	( 136 )	( 6 *)	( 10 *)	( 27 *)	( 64 )	( 8 *)	( 27 )	( 2 *)	( 8 *)
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
1250	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)	( 0 *)
	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 ( 741 )	2-AA ( 1361 )	NaN <sub>3</sub> ( 497 )	2-AA ( 333 )	AF-2 ( 1518 )	2-AA ( 1048 )	AF-2 ( 563 )	2-AA ( 462 )	9-AA ( 545 )	2-AA ( 230 )

\* Growth inhibition was observed.

Experimental Data-2

(B9723-2/2)

Conc. $\mu$ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA/pKM101		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	( 130 )	( 136 )	( 8 )	( 10 )	( 51 )	( 90 )	( 16 )	( 25 )	( 9 )	( 9 )
4 .88	148 167 ( 158 )		10 7 ( 9 )	13 8 ( 11 )	32 49 ( 41 )		11 18 ( 15 )		8 6 ( 7 )	14 9 ( 12 )
9 .77	127 142 ( 135 )		6 6 ( 6 )	10 10 ( 10 )	47 48 ( 48 )		23 17 ( 20 )		6 6 ( 6 )	14 10 ( 12 )
19 .5	135 113 ( 124 )	157 134 ( 146 )	7 10 ( 9 )	9 11 ( 10 )	52 52 ( 52 )	51 63 ( 57 )	22 14 ( 18 )	30 28 ( 29 )	8 3 ( 6 )	8 5 ( 7 )
39 .1	144 128 ( 136 )	144 144 ( 144 )	9 3 ( 6 )	9 8 ( 9 )	54 52 ( 53 )	94 78 ( 86 )	20 14 ( 17 )	20 22 ( 21 )	10 7 ( 9 )	14 9 ( 12 )
78 .1	139 162 ( 151 )	142 141 ( 142 )	10 6 ( 8 )	11 6 ( 9 )	45 70 ( 58 )	77 81 ( 79 )	8 15 ( 12 )	23 25 ( 24 )	7 8 ( 8 )	11 7 ( 9 )
156	119 143 ( 131 )	131 131 ( 131 )	10 8 ( 9 )	13 3 ( 8 )	49 55 ( 52 )	105 85 ( 95 )	25 13 ( 19 )	31 28 ( 30 )	5 8 ( 7 )	9 9 ( 9 )
313	101 * 93 * ( 97 * )	128 139 ( 134 )	0 * 0 * ( 0 * )	10 * 9 * ( 10 * )	33 * 26 * ( 30 * )	86 66 ( 76 )	16 * 17 * ( 17 * )	32 26 ( 29 )	0 * 0 * ( 0 * )	8 * 7 * ( 8 * )
625		94 * 114 * ( 104 * )		10 * 3 * ( 7 * )		63 * 56 * ( 60 * )		17 * 25 * ( 21 * )		13 * 6 * ( 10 * )
1250		0 * 0 * ( 0 * )				0 * 0 * ( 0 * )		0 * 0 * ( 0 * )		
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 ( 738 )	2-AA ( 1424 )	NaN <sub>3</sub> ( 472 )	2-AA ( 339 )	AF-2 ( 1587 )	2-AA ( 1195 )	AF-2 ( 503 )	2-AA ( 468 )	9-AA ( 648 )	2-AA ( 241 )