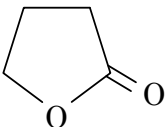


Chemical Name	: <u>Tetrahydro-2-furanone</u>
	; <u><math>\gamma</math>-Butyrolactone</u>
	<u>4-Hydroxybutyric acid lactone</u>
	<u>1,4-Butanolide</u>
	<u><math>\gamma</math>-ブチロラクトン</u>
Molecular Weight	: 86.09
Melting Point	: -45 °C[Aldrich]
Boiling Point	: 204-205°C[Aldrich]
Flashing Point	: 98 °C[Aldrich]
Molecular Formula	: C <sub>4</sub> H <sub>6</sub> O <sub>2</sub>
Chemical Structure	
CAS No.	: 96-48-0
MITI No.	: (5)-65, (5)-3337
ML No.	: -
Specified Chemical Substances	: -
Source of Substance	: Tokyo Kasei Kogyo Co., Ltd.
Lot No.	: FGD01
Purity	: 99.7%
Vehicle	: H <sub>2</sub> O

Mutagenicity in Bacterial Test ; Negative

IARC Evaluation ; Group 3

Conc. $\mu$ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2 <sub>uvrA</sub>		TA98		TA1537	
H <sub>2</sub> O	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	( 138 )	( 134 )	( 7 )	( 10 )	( 23 )	( 24 )	( 10 )	( 23 )	( 7 )	( 10 )
1 .22	143	164	8	7	13	31	14	28	7	7
	131	138	8	11	25	20	15	28	8	10
4 .88	( 137 )	( 151 )	( 8 )	( 9 )	( 19 )	( 26 )	( 15 )	( 28 )	( 8 )	( 9 )
	153	146	10	8	17	24	14	16	2	8
19 .5	133	131	7	9	15	22	7	23	5	7
	( 143 )	( 139 )	( 9 )	( 9 )	( 16 )	( 23 )	( 11 )	( 20 )	( 4 )	( 8 )
78 .1	142	164	3	5	11	16	16	26	7	11
	130	142	11	10	15	20	15	25	3	9
313	( 136 )	( 153 )	( 7 )	( 8 )	( 13 )	( 18 )	( 16 )	( 26 )	( 5 )	( 10 )
	145	148	3	8	20	11	16	26	6	13
1250	137	137	3	2	13	14	18	29	9	10
	( 141 )	( 143 )	( 3 )	( 5 )	( 17 )	( 13 )	( 17 )	( 28 )	( 8 )	( 12 )
5000	152	144	11	10	29	20	9	24	6	10
	142	134	8	9	26	18	20	21	3	8
Judgement	( 147 )	( 139 )	( 10 )	( 10 )	( 28 )	( 19 )	( 15 )	( 23 )	( 5 )	( 9 )
	148	144	3	9	23	21	11	17	10	13
Specific Mutagenicity	120	144	9	8	34	15	14	31	8	6
	( 134 )	( 144 )	( 6 )	( 9 )	( 29 )	( 18 )	( 13 )	( 24 )	( 9 )	( 10 )
Positive Control	157	163	10	7	20	17	13	22	8	11
	160	138	5	16	21	21	8	22	3	6
AF-2	( 159 )	( 151 )	( 8 )	( 12 )	( 21 )	( 19 )	( 11 )	( 22 )	( 6 )	( 9 )
	AF-2	2-AA	NaN <sub>3</sub>	2-AA	AF-2	2-AA	AF-2	2-AA	9-AA	2-AA
( 589 )	( 1226 )	( 295 )	( 255 )	( 312 )	( 1098 )	( 348 )	( 435 )	( 979 )	( 160 )	

Experimental Data-2

(B9623-2/3)

Conc. $\mu$ g/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
H <sub>2</sub> O	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
	( 158 )	( 164 )	( 8 )	( 9 )	( 27 )	( 28 )	( 15 )	( 26 )	( 5 )	( 6 )
	164	151	11	13	24	38	20	23	6	7
313	167	173	13	11	39	18	20	14	3	9
	( 166 )	( 162 )	( 12 )	( 12 )	( 32 )	( 28 )	( 20 )	( 19 )	( 5 )	( 8 )
	170	166	8	7	36	40	16	28	5	5
625	192	174	5	7	31	26	17	29	2	9
	( 181 )	( 170 )	( 7 )	( 7 )	( 34 )	( 33 )	( 17 )	( 29 )	( 4 )	( 7 )
	183	171	3	14	32	33	14	15	3	5
1250	169	157	5	7	29	29	17	17	7	7
	( 176 )	( 164 )	( 4 )	( 11 )	( 31 )	( 31 )	( 16 )	( 16 )	( 5 )	( 6 )
	155	181	7	15	31	25	20	31	5	8
2500	159	164	5	5	28	30	15	23	3	3
	( 157 )	( 173 )	( 6 )	( 10 )	( 30 )	( 28 )	( 18 )	( 27 )	( 4 )	( 6 )
	187	181	8	6	34	23	18	18	7	9
5000	155	171	13	7	16	34	21	25	3	7
	( 171 )	( 176 )	( 11 )	( 7 )	( 25 )	( 29 )	( 20 )	( 22 )	( 5 )	( 8 )
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 ( 721 )	2-AA ( 1161 )	NaN <sub>3</sub> ( 271 )	2-AA ( 236 )	AF-2 ( 234 )	2-AA ( 1075 )	AF-2 ( 529 )	2-AA ( 438 )	9-AA ( 588 )	2-AA ( 142 )

Experimental Data-3

Conc. μ g/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2 $uvrA/pKM101$	
H <sub>2</sub> O	S9-	S9+	S9-	S9+	S9-	S9+
		( 285 )	( 368 )	( 321 )	( 328 )	( 38 )
19 .5	252	326	340	332	59	71
	249	347	328	350	62	89
	( 251 )	( 337 )	( 334 )	( 341 )	( 61 )	( 80 )
78 .1	274	371	372	300	56	61
	303	322	352	378	34	85
	( 289 )	( 347 )	( 362 )	( 339 )	( 45 )	( 73 )
313	272	371	343	309	37	68
	278	330	372	324	46	81
	( 275 )	( 351 )	( 358 )	( 317 )	( 42 )	( 75 )
1250	261	355	368	306	64	68
	278	364	336	374	43	79
	( 270 )	( 360 )	( 352 )	( 340 )	( 54 )	( 74 )
5000	248	383	326	346	45	64
	248	361	352	297	55	68
	( 248 )	( 372 )	( 339 )	( 322 )	( 50 )	( 66 )
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive Control	BLM ( 688 )	2-AA ( 1259 )	PA ( 1540 )	2-AA ( 1439 )	AF-2 ( 974 )	2-AA ( 1046 )

Experimental Data-4

(B9623-3/3)

Conc. μ g/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2 $uvrA/pKM101$	
H <sub>2</sub> O	S9-	S9+	S9-	S9+	S9-	S9+
		( 213 )	( 266 )	( 291 )	( 270 )	( 45 )
313	178	238	292	268	46	62
	199	272	268	255	59	52
	( 189 )	( 255 )	( 280 )	( 262 )	( 53 )	( 57 )
625	192	252	303	280	43	29
	206	256	268	229	47	75
	( 199 )	( 254 )	( 286 )	( 255 )	( 45 )	( 52 )
1250	187	238	282	243	54	69
	216	262	298	267	41	79
	( 202 )	( 250 )	( 290 )	( 255 )	( 48 )	( 74 )
2500	170	263	282	242	49	71
	167	263	273	249	66	76
	( 169 )	( 263 )	( 278 )	( 246 )	( 58 )	( 74 )
5000	188	253	255	269	51	81
	206	235	274	241	71	64
	( 197 )	( 244 )	( 265 )	( 255 )	( 61 )	( 73 )
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive Control	BLM ( 611 )	2-AA ( 1296 )	PA ( 2189 )	2-AA ( 1412 )	AF-2 ( 1203 )	2-AA ( 870 )