

1,2-Diethylhydrazine·dihydrochloride (1,2-ジエチルヒドラジン・2塩酸)

Experimental Data

Chemical Name: <u>1,2-Diethylhydrazine</u> <u>·dihydrochloride</u>	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+
Molecular weight: 161.08	H <sub>2</sub> O	(140)	(131)	(14)	(20)	(17)	(18)	(21)	(23)	(8)	(13)
Melting point: 169°C		120	158	16	26	16	15	16	18	8	9
Boiling point:		155	126	18	15	6	22	18	18	11	7
Chemical Structure	0.153	(138)	(142)	(17)	(21)	(11)	(19)	(17)	(18)	(10)	(8)
C <sub>2</sub> H <sub>5</sub> NHNHC <sub>2</sub> H <sub>5</sub> · 2 HCl		142	129	17	11	17	17	16	17	14	8
		133	116	8	22	16	24	16	21	14	11
CAS No : 7699-31-2	0.610	(138)	(123)	(13)	(17)	(17)	(21)	(16)	(19)	(14)	(10)
Source of Substance : Aldrich		134	129	11	17	20	24	16	14	7	7
Lot. No. : BW02907KT		130	122	8	16	14	13	20	22	8	13
Purity :	2.44	(132)	(126)	(10)	(17)	(17)	(19)	(18)	(18)	(8)	(10)
Vehicle : H <sub>2</sub> O		136	131	16	18	9	18	9	21	5	10
Mutagenicity	9.77	(140)	(143)	(14)	(17)	(12)	(14)	(15)	(21)	(8)	(9)
in Bacterial Test : Negative		133	139	20	18	21	9	11	25	20	9
IARC Evaluation : not yet cited		136	139	14	24	20	14	10	18	8	18
	39.1	(135)	(139)	(17)	(21)	(21)	(12)	(11)	(22)	(14)	(14)
		144	142	18	15	16	11	23	20	8	14
		167	142	22	22	22	14	16	20	10	13
	156	(156)	(142)	(20)	(19)	(19)	(13)	(20)	(20)	(9)	(14)
		166	137	7	11	13	22	14	17	8	15
		144	128	14	17	10	22	16	30	11	10
	625	(155)	(133)	(11)	(14)	(12)	(22)	(15)	(24)	(10)	(13)
		129	112	21	13	17	23	16	17	13	7
		143	158	16	9	18	21	23	45	14	7
	2500	(136)	(135)	(19)	(11)	(18)	(22)	(20)	(31)	(14)	(7)
		134	135*	18	15*	14	24*	0*	0*	2*	7*
		165	119*	13	11*	29	29*	0*	0*	16*	10*
	10000	(150)	(127*)	(16)	(13*)	(22)	(27*)	(0*)	(0*)	(9*)	(9*)
Judgement		-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity											
Positive		AF2	2AA	NaN <sub>3</sub>	2AA	AF2	2AA	AF2	2AA	9AA	2AA
Control		(812)	(1208)	(160)	(221)	(237)	(608)	(466)	(347)	(206)	(208)

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	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
H <sub>2</sub> O	( 124 )	( 124 )	( 12 )	( 15 )	( 24 )	( 35 )	( 20 )	( 26 )	( 14 )	( 17 )
	141	101	7	11	25	30	20	29	8	13
	155	137	7	11	22	49	17	28	20	14
156	( 148 )	( 119 )	( 7 )	( 11 )	( 24 )	( 40 )	( 19 )	( 29 )	( 14 )	( 14 )
	94	141	7	14	26	33	25	26	17	16
	114	141	13	6	18	28	18	25	15	13
313	( 104 )	( 141 )	( 10 )	( 10 )	( 22 )	( 31 )	( 22 )	( 26 )	( 16 )	( 15 )
	106	131	8	22	20	36	21	26	18	26
	121	116	16	13	24	20	16	30	18	18
625	( 114 )	( 124 )	( 12 )	( 18 )	( 22 )	( 28 )	( 19 )	( 28 )	( 18 )	( 22 )
	135	123	10	11	20	28	13	33	21	15
	165	128	6	17	26	30	17	21	14	13
1250	( 150 )	( 126 )	( 8 )	( 14 )	( 23 )	( 29 )	( 15 )	( 27 )	( 18 )	( 14 )
	134	120	10	15	30	32	21	23	18	18
	124	101	11	14	25	34	26	22	15	20
2500	( 129 )	( 111 )	( 11 )	( 15 )	( 28 )	( 33 )	( 24 )	( 23 )	( 17 )	( 19 )
	124	109	17	13	29	26	30*	31*	18	9
	117	115	8	11	40	36	25*	29*	8	14
5000	( 121 )	( 112 )	( 13 )	( 12 )	( 35 )	( 31 )	( 28* )	( 30* )	( 13 )	( 12 )
	137	116*	20	14*	29	32*	16*	0*	21*	15*
	139	122*	11	11*	38	25*	34*	0*	10*	20*
10000	( 138 )	( 119* )	( 16 )	( 13* )	( 34 )	( 29* )	( 25* )	( 0* )	( 16* )	( 18* )
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity	AF2	2AA	NaN <sub>3</sub>	2AA	AF2	2AA	AF2	2AA	9AA	2AA
Positive Control	( 779 )	( 1227 )	( 376 )	( 266 )	( 254 )	( 895 )	( 539 )	( 367 )	( 382 )	( 195 )

		Experimental Data					
Con. $\mu$ g/ plate	Number of Revertants/plate						
	Base-substitution						
	TA102		TA104		WP2uvrA/pKM101		
	S9-	S9+	S9-	S9+	S9-	S9+	
<u>H<sub>2</sub>O</u>	( 233 )	( 277 )	( 242 )	( 319 )	( 133 )	( 199 )	
	214	252	208	335	130	195	
	238	258	252	320	119	181	
<u>0.153</u>	( 226 )	( 255 )	( 230 )	( 328 )	( 125 )	( 188 )	
	206	259	234	322	136	184	
	220	246	249	297	105	201	
<u>0.610</u>	( 213 )	( 253 )	( 242 )	( 310 )	( 121 )	( 193 )	
	233	245	271	352	130	200	
	223	269	260	326	134	177	
<u>2.44</u>	( 228 )	( 257 )	( 266 )	( 339 )	( 132 )	( 189 )	
	202	246	213	298	122	167	
	212	262	266	346	134	194	
<u>9.77</u>	( 207 )	( 254 )	( 240 )	( 322 )	( 128 )	( 181 )	
	220	291	216	360	139	166	
	232	258	195	331	123	177	
<u>39.1</u>	( 226 )	( 275 )	( 206 )	( 346 )	( 131 )	( 172 )	
	239	235	258	310	144	180	
	222	268	271	331	119	183	
<u>156</u>	( 231 )	( 252 )	( 265 )	( 321 )	( 132 )	( 182 )	
	208	275	259	295	123	191	
	207	252	242	325	108	159	
<u>625</u>	( 208 )	( 264 )	( 251 )	( 310 )	( 116 )	( 175 )	
	238	260	260	279	144	213	
	236	255	248	291	130	171	
<u>2500</u>	( 237 )	( 258 )	( 254 )	( 285 )	( 137 )	( 192 )	
	230	243*	402	344*	116*	214*	
	233	227*	391	355*	163	197*	
<u>10000</u>	( 232 )	( 235* )	( 397 )	( 350* )	( 140* )	( 206* )	
Judgement	-	-	-	-	-	-	
Specific Mutagenicity							
Positive	BLM	2AA	PA	2AA	AF2	2AA	
Control	( 623 )	(1411 )	(1999 )	(1014 )	(2401 )	(1152 )	

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	Base-substitution						
	TA102		TA104		WP2uvrA/pKM101		
	S9-	S9+	S9-	S9+	S9-	S9+	
<u>H<sub>2</sub>O</u>	( 271 )	( 302 )	( 296 )	( 383 )	( 152 )	( 219 )	
	262	311	301	350	158	204	
	275	319	300	320	152	185	
<u>156</u>	( 269 )	( 315 )	( 301 )	( 335 )	( 155 )	( 195 )	
	245	316	282	356	170	227	
	286	309	310	385	139	195	
<u>313</u>	( 266 )	( 313 )	( 296 )	( 371 )	( 155 )	( 211 )	
	239	325	305	362	135	226	
	238	307	318	337	159	205	
<u>625</u>	( 239 )	( 316 )	( 312 )	( 350 )	( 147 )	( 216 )	
	248	305	316	352	149	214	
	300	324	317	373	153	204	
<u>1250</u>	( 274 )	( 315 )	( 317 )	( 363 )	( 151 )	( 209 )	
	268	330	313	325	157	234	
	262	319	298	342	159	209	
<u>2500</u>	( 265 )	( 325 )	( 306 )	( 334 )	( 158 )	( 222 )	
	309	325	320	364	183	208	
	248	297	336	356	141	221	
<u>5000</u>	( 279 )	( 311 )	( 328 )	( 360 )	( 162 )	( 215 )	
	269	230*	476	488*	200	220*	
	222	208*	541	476*	186	209*	
<u>10000</u>	( 246 )	( 219* )	( 509 )	( 482* )	( 193 )	( 215* )	
Judgement	—	—	—	—	—	—	
Specific Mutagenicity							
Positive	BLM	2AA	PA	2AA	AF2	2AA	
Control	( 924 )	(1564 )	(1266 )	( 946 )	(2463 )	(1069 )	