Exp. No. 9889(115-208)

Table 1. Summary data on dose-finding study of 2-naphthylisobutyl ether
[Non-activation method : -S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]														
		TA100			TA1535			WP2uvrA			TA98			TA1537		
DMSO a)	0	103	100	84	9	7	9	22	20	22	16	22	14	10	13	9
	[	96	±	10][	8	±	1][	21	±	1][	17	±	4][	11	±	2]
2-naphthylisobutyl ether	8.19	89	89	92	11	11	12	20	24	17	12	12	15	7	7	9
	[	90	±	2][	11	±	1][	20	±	4][	13	±	2][	8	±	1]
	20.5	79*	89*	80*	7*	12*	7*	23	21	32	13	23	17	6*	8*	4*
	[	83	±	6][	9	±	3][	25	±	6][	18	±	5][	6	±	2]
	51.2	67*	83*	72*	6*	8*	11*	18	26	15	23	15	16	8*	5*	3*
	[	74	±	8][	8	±	3][	20	±	6][	18	±	4][	5	±	3]
	128	53*	54*	52*	9*	14*	10*	21	25	24	12*	19*	19*	6*	3*	3*
	[	53	±	1][	11	±	3][	23	±	2][	17	±	4][	4	±	2]
	320	48*	47*	42*	8*	6*	9*	18	14	13	14*	18*	14*	3*	7*	5*
	[	46	±	3][	8	±	2][	15	±	3][	15	±	2][	5	±	2]
	800	4*	4*	3*	6*	10*	13*	19	21	22	22*	21*	24*	6*	6*	7*
	[	4	±	1][	10	±	4][	21	±	2][	22	±	2][	6	±	1]
	2000 +	1*	2*	0*	6*	6*	5*	19	16	16	11*	14*	17*	3*	1*	3*
	[	1	±	1][	6	±	1][	17	±	2][	14	±	3][	2	±	1]
	5000 +	3*	0*	0*	10*	2*	2*	17	12	7	15*	14*	9*	2*	1*	1*
	[	1	±	2][	5	±	5][	12	±	5][	13	±	3][	1	±	1]
Positive control compound		AF-2			NaN_3			AF-2			AF-2			9-AA		
Dose(μg/plate)		0.01			0.5			0.01			0.1			80		
Revertant colonies		677	694	724	616	616	644	105	105	99	631	717	672	311	465	342
per plate	[	698	±	24][	625	±	16][	103	±	3][	673	±	43][	373	±	81]

AF-2: 2-(2-Furyl)-3-(5-nitro-2-furyl)acrylamide NaN_3: Sodium azide 9-AA: 9-Aminoacridine hydrochloride
a): Negative control (Dimethyl sulfoxide, 100 μL/plate)
* : Growth inhibition was observed.
+ : Visible precipitation was observed at the end of exposure period.

Exp. No. 9889(115-208)

Table 2. Summary data on dose-finding study of 2-naphthylisobutyl ether
[Activation method : +S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]														
		TA100			TA1535			WP2*uvrA*			TA98			TA1537		
DMSO a)	0	104	92	116	12	9	12	31	20	27	28	27	29	25	15	20
	[	104	±	12][	11	±	2][	26	±	6][	28	±	1][	20	±	5]
2-naphthylisobutyl ether	8.19	114	133	119	15	20	10	23	25	19	23	30	26	13	17	13
	[	122	±	10][	15	±	5][	22	±	3][	26	±	4][	14	±	2]
	20.5	119	112	110	12	17	13	19	17	20	31	24	30	10	11	19
	[	114	±	5][	14	±	3][	19	±	2][	28	±	4][	13	±	5]
	51.2	98	112	116	13	8	15	16	21	21	25	24	23	20	14	13
	[	109	±	9][	12	±	4][	19	±	3][	24	±	1][	16	±	4]
	128	86*	75*	91*	15	6	8	18	24	19	20	25	17	13*	10*	11*
	[	84	±	8][	10	±	5][	20	±	3][	21	±	4][	11	±	2]
	320	63*	68*	77*	6*	6*	7*	21	15	15	22	28	29	11*	6*	13*
	[	69	±	7][	6	±	1][	17	±	3][	26	±	4][	10	±	4]
	800	59*	56*	59*	6*	5*	4*	20	14	19	29*	20*	17*	4*	4*	6*
	[	58	±	2][	5	±	1][	18	±	3][	22	±	6][	5	±	1]
	2000 +	49*	58*	64*	12*	5*	13*	16	19	27	24*	31*	21*	12*	11*	16*
	[	57	±	8][	10	±	4][	21	±	6][	25	±	5][	13	±	3]
	5000 +	29*	39*	35*	11*	8*	5*	8	16	12	9*	11*	12*	2*	1*	3*
	[	34	±	5][	8	±	3][	12	±	4][	11	±	2][	2	±	1]
Positive control compound		2-AA			2-AA			2-AA			2-AA			2-AA		
Dose (μg/plate)		1			2			10			0.5			2		
Revertant colonies per plate		1149	1062	1013	355	381	330	561	614	623	343	357	388	146	127	161
	[	1075	±	69][	355	±	26][	599	±	34][	363	±	23][	145	±	17]

2-AA: 2-Aminoanthracene
a): Negative control (Dimethyl sulfoxide, 100 μL/plate)
* : Growth inhibition was observed.
+ : Visible precipitation was observed at the end of exposure period.

Exp. No. 9889(115-208)

Table 3. Summary data on dose-finding study of 2-naphthylisobutyl ether (Additional study)[Non-activation method : -S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]											
		TA100			TA1535			TA98			TA1537		
DMSO a)	0	88	93	104	12	13	15	18	26	30	5	9	8
	[	95	±	8][	13	±	2][	25	±	6][	7	±	2]
2-naphthylisobutyl ether	0.105	107	117	105	9	13	9				9	11	12
	[	110	±	6][	10	±	2]			[	11	±	2]
	0.262	99	114	109	5	9	6				9	5	6
	[	107	±	8][	7	±	2]			[	7	±	2]
	0.655	118	105	108	8	16	11	20	21	20	13	8	12
	[	110	±	7][	12	±	4][	20	±	1][	11	±	3]
	1.64	96	105	107	15	11	13	29	30	31	10	13	11
	[	103	±	6][	13	±	2][	30	±	1][	11	±	2]
	4.10	77	93	103	5	9	8	27	24	20	11	10	8
	[	91	±	13][	7	±	2][	24	±	4][	10	±	2]
	10.2	70*	88*	75*	7	9	8	20	25	24	8*	5*	4*
	[	78	±	9][	8	±	1][	23	±	3][	6	±	2]
	25.6	71*	77*	76*	3*	5*	9*	26	21	22	5*	2*	7*
	[	75	±	3][	6	±	3][	23	±	3][	5	±	3]
	64.0							16	21	14			
							[	17	±	4]			
	160							21*	22*	16*			
							[	20	±	3]			

Positive control compound	AF-2			NaN_3			AF-2			9-AA		
Dose(μg/plate)	0.01			0.5			0.1			80		
Revertant colonies	606	573	583	573	535	554	590	589	575	321	373	346
per plate [	587	±	17][	554	±	19][	585	±	8][	347	±	26]

AF-2: 2-(2-Furyl)-3-(5-nitro-2-furyl)acrylamide NaN_3: Sodium azide 9-AA: 9-Aminoacridine hydrochloride

a): Negative control (Dimethyl sulfoxide, 100 μL/plate)

* : Growth inhibition was observed.

Exp. No. 9889(115-208)

Table 4. Summary data on dose-finding study of 2-naphthylisobutyl ether (Additional study)[Activation method : +S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]								
		TA100			TA1535			TA1537		
DMSO a)	0	106	96	103	7	9	9	15	16	12
	[	102	±	5][	8	±	1][	14	±	2]
2-naphthylisobutyl ether	0.655	100	106	87	8	6	8			
	[	98	±	10][	7	±	1]			
	1.64	114	123	109	9	7	10	21	23	18
	[	115	±	7][	9	±	2][	21	±	3]
	4.10	115	128	139	15	11	12	22	20	25
	[	127	±	12][	13	±	2][	22	±	3]
	10.2	124	117	127	10	8	12	23	21	26
	[	123	±	5][	10	±	2][	23	±	3]
	25.6	97	103	116	8	5	6	17	21	23
	[	105	±	10][	6	±	2][	20	±	3]
	64.0	98	90	104	11	7	6	16	23	16
	[	97	±	7][	8	±	3][	18	±	4]
	160	75*	68*	75*	7*	8*	6*	16*	15*	14*
	[	73	±	4][	7	±	1][	15	±	1]
	400							5*	12*	15*
							[	11	±	5]
Positive control compound		2-AA			2-AA			2-AA		
Dose(μg/plate)		1			2			2		
Revertant colonies per plate		1007	973	905	356	323	349	126	122	119
	[	962	±	52][	343	±	17][	122	±	4]

2-AA: 2-Aminoanthracene
a): Negative control (Dimethyl sulfoxide, 100 μL/plate)
* : Growth inhibition was observed.

Exp. No. 9889(115-208)

Table 5. Summary data on bacterial reverse mutation test of 2-naphthylisobutyl ether
[Non-activation method : -S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]															
		TA100			TA1535			WP2*uvrA*			TA98			TA1537		
DMSO a)	0	94	101	96	9	14	20	20	22	19	21	20	16	12	12	15
	[	97	±	4][	14	±	6][	20	±	2][	19	±	3][	13	±	2]
2-naphthylisobutyl ether	0.305	92	100	105										13	16	8
	[	99	±	7]									[	12	±	4]
	0.610	89	98	96	12	8	19							12	8	11
	[	94	±	5][	13	±	6]						[	10	±	2]
	1.22	96	107	93	16	14	24							15	17	19
	[	99	±	7][	18	±	5]						[	17	±	2]
	2.44	102	92	93	13	10	27							15	11	13
	[	96	±	6][	17	±	9]						[	13	±	2]
	4.88	89	89	109	13	18	14				20	24	24	21	15	18
	[	96	±	12][	15	±	3]			[	23	±	2][	18	±	3]
	9.77	82	84	80	9	12	14				19	14	24	19*	16*	11*
	[	82	±	2][	12	±	3]			[	19	±	5][	15	±	4]
	19.5	84*	91*	79*	11	5	13				25	15	18	9*	5*	17*
	[	85	±	6][	10	±	4]			[	19	±	5][	10	±	6]
	39.1				5*	10*	15*				24	20	21			
				[	10	±	5]			[	22	±	2]			
	78.1										16	12	18			
										[	15	±	3]			
	156							17	17	16	16*	13*	23*			
							[	17	±	1][	17	±	5]			
	313							20	12	14	16*	16*	14*			
							[	15	±	4][	15	±	1]			
	625							21	19	18						
							[	19	±	2]						

a): Negative control (Dimethyl sulfoxide, 100 μL/plate)
* : Growth inhibition was observed.

Table 5. -Continued

Exp. No. 9889(115-208)

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]															
		TA100			TA1535			WP2*uvrA*			TA98			TA1537			
2-naphthylisobutyl ether	1250 +							16	13	24							
								[18	±	6]							
	2500 +							12	18	22							
								[17	±	5]							
	5000 +							10	13	16							
								[13	±	3]							
Positive control compound		AF-2			NaN_3			AF-2			AF-2			9-AA			
Dose(μg/plate)		0.01			0.5			0.01			0.1			80			
Revertant colonies per plate		531	602	550	585	603	627	110	92	107	806	743	805	334	390	317	
		[561	±	37][	605	±	21][	103	±	10][	785	±	36][	347	±	38]	

AF-2: 2-(2-Furyl)-3-(5-nitro-2-furyl)acrylamide NaN_3: Sodium azide 9-AA: 9-Aminoacridine hydrochloride
+ : Visible precipitation was observed at the end of exposure period.

Exp. No. 9889(115-208)

Table 6. Summary data on bacterial reverse mutation test of 2-naphthylisobutyl ether
[Activation method : +S9]

Compound	Dose (μg/plate)	Revertant colonies per plate [Mean±S.D.]														
		TA100			TA1535			WP2*uvrA*			TA98			TA1537		
DMSO a)	0	99	112	96	16	12	13	15	22	18	28	23	32	21	22	19
	[	102	±	9][	14	±	2][	18	±	4][	28	±	5][	21	±	2]
2-naphthylisobutyl ether	4.88	136	128	131	7	15	13							22	18	19
	[	132	±	4][	12	±	4]						[	20	±	2]
	9.77	118	116	112	16	13	16							25	22	23
	[	115	±	3][	15	±	2]						[	23	±	2]
	19.5	93	108	110	13	13	15				22	28	26	21	15	18
	[	104	±	9][	14	±	1]			[	25	±	3][	18	±	3]
	39.1	105	118	104	9	7	16				25	18	25	16	14	11
	[	109	±	8][	11	±	5]			[	23	±	4][	14	±	3]
	78.1	81*	86*	86*	8	10	12				23	25	23	22	12	21
	[	84	±	3][	10	±	2]			[	24	±	1][	18	±	6]
	156	70*	67*	87*	6*	11*	8*	22	25	23	20	22	28	12*	13*	13*
	[	75	±	11][	8	±	3][	23	±	2][	23	±	4][	13	±	1]
	313	54*	58*	53*	14*	13*	9*	23	20	20	19	21	24	16*	13*	12*
	[	55	±	3][	12	±	3][	21	±	2][	21	±	3][	14	±	2]
	625							22	16	14	23	26	32			
							[	17	±	4][	27	±	5]			
	1250							21	25	22	27*	19*	22*			
							[	23	±	2][	23	±	4]			
	2500 +							17	10	20						
							[	16	±	5]						
	5000 +							17	19	20						
							[	19	±	2]						
Positive control compound		2-AA			2-AA			2-AA			2-AA			2-AA		
Dose(μg/plate)		1			2			10			0.5			2		
Revertant colonies		934	924	980	361	387	372	507	530	509	398	408	349	162	149	175
per plate	[	946	±	30][	373	±	13][	515	±	13][	385	±	32][	162	±	13]

2-AA: 2-Aminoanthracene
a): Negative control (Dimethyl sulfoxide, 100 μL/plate)
* : Growth inhibition was observed.
+ : Visible precipitation was observed at the end of exposure period.