Table 5-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 4)

Sex	Dose mg/kg	No.	pH									1) Protein						2) Ketone body						3) Glucose					
			5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	-	+-	+	++	+++	++++	-	+-	+	++	+++	++++	-	+-	+	++	+++	++++
Male	0	12	0	0	0	0	1	2	2	7	0	1	3	6	2	0	0	0	4	8	0	0	0	12	0	0	0	0	0
	8	6	0	0	0	1	1	2	1	1	0	0	0	5	1	0	0	1	4	1	0	0	0	6	0	0	0	0	0
	30	6	0	0	0	0	0	1	3	2	0	0	0	6	0	0	0	1	2	3	0	0	0	6	0	0	0	0	0
	125	12	0	0	1	5	0	2	3	1	0	1	2	6	3	0	0	1	2	9	0	0	0	12	0	0	0	0	0
Female	0	12	0	0	0	4	4	3	1	0	0	4	2	6	0	0	0	3	3	6	0	0	0	12	0	0	0	0	0
	8	6	0	0	0	2	1	1	2	0	0	1	2	2	1	0	0	1	2	3	0	0	0	6	0	0	0	0	0
	30	6	0	0	1	4	1	0	0	0	0	1	2	2	0	1	0	1	1	4	0	0	0	6	0	0	0	0	0
	125	12	0	0	1	10	0	1	0	0	0	4	2	4	2	0	0	3	3	6	0	0	0	12	0	0	0	0	0

1) - : <10 mg/dL +- : 10 - 25 mg/dL + : 26 - 85 mg/dL ++ : 86 - 250 mg/dL +++ : 251 - 600 mg/dL ++++ : >600 mg/dL
2) - : <5 mg/dL +- : 5 - 7.5 mg/dL + : 7.6 - 30 mg/dL ++ : 31 - 70 mg/dL +++ : 71 - 125 mg/dL ++++ : >125 mg/dL
3) - : <30 mg/dL +- : 30 - 60 mg/dL + : 61 - 125 mg/dL ++ : 126 - 250 mg/dL +++ : 251 - 750 mg/dL ++++ : >750 mg/dL

Table 5-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 4)

Sex	Dose mg/kg	No.	4) Occult blood					5) Bilirubin					6) Urobilinogen					7) Color		
			-	+-	+	++	+++	-	+	++	+++	++++	+-	+	++	+++	++++	LY	Y	DY
Male	0	12	12	0	0	0	0	11	1	0	0	0	10	1	1	0	0	0	12	0
	8	6	5	0	1	0	0	6	0	0	0	0	5	1	0	0	0	0	6	0
	30	6	5	1	0	0	0	6	0	0	0	0	5	1	0	0	0	0	6	0
	125	12	6	3	2	0	1	12	0	0	0	0	11	1	0	0	0	0	12	0
Female	0	12	12	0	0	0	0	10	2	0	0	0	8	4	0	0	0	0	12	0
	8	6	6	0	0	0	0	6	0	0	0	0	4	2	0	0	0	0	6	0
	30	6	6	0	0	0	0	6	0	0	0	0	5	1	0	0	0	0	6	0
	125	12	12	0	0	0	0	12	0	0	0	0	9	3	0	0	0	0	12	0

4) - : <0.03 mg/dL +- : 0.03 - 0.05 mg/dL + : 0.06 - 0.15 mg/dL ++ : 0.16 - 0.75 mg/dL +++ : >0.75 mg/dL
5) - : <0.5 mg/dL + : 0.5 - 1.5 mg/dL ++ : 1.6 - 5.0 mg/dL +++ : 5.1 - 10.0 mg/dL ++++ : >10.0 mg/dL
6) +- : <2.0 mg/dL + : 2.0 - 3.5 mg/dL ++ : 3.6 - 7.0 mg/dL +++ : 7.1 - 12.0 mg/dL ++++ : >12.0 mg/dL
7) LY : Light yellow Y : Yellow DY : Dark yellow

Table 5-3 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 4)

Sex	Dose mg/kg	No.	URINE SEDIMENT																																	
			RBC					WBC					SEC					SREC					Cast			CRYSTALLIZATION PS					CRYSTALLIZATION CO				
			-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	-	+-	+	++	+++	-	+-	+	++	+++
Male	0	12	12	0	0	0	0	12	0	0	0	0	0	12	0	0	0	12	0	0	0	0	12	0	0	9	3	0	0	0	12	0	0	0	0
	8	6	6	0	0	0	0	4	2	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	5	1	0	0	0	6	0	0	0	0
	30	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	5	1	0	0	0	6	0	0	0	0
	125	12	11	1	0	0	0	11	1	0	0	0	0	12	0	0	0	12	0	0	0	0	12	0	0	11	1	0	0	0	12	0	0	0	0
Female	0	12	12	0	0	0	0	11	1	0	0	0	0	12	0	0	0	11	1	0	0	0	12	0	0	10	2	0	0	0	12	0	0	0	0
	8	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	4	2	0	0	0	6	0	0	0	0
	30	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	6	0	0	0	0	6	0	0	0	0
	125	12	12	0	0	0	0	12	0	0	0	0	0	12	0	0	0	12	0	0	0	0	12	0	0	8	4	0	0	0	12	0	0	0	0

SEC : Squamous Epithelial Cell
SREC : Small Round Epithelial Cell
PS : Phosphate Salts
CO : Calcium Oxalate

\- : Negative
+- : Slight
\+ : Mild
++ : Moderate
+++ : Severe

Table 5-4 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Water intake and urinalysis (Week 4)

Sex	Dose mg/kg	No.		Water intake mL/24h	Urine volume mL/24h	Osmolality mOsm/kg
Male	0	12	Mean	31	7.7	2018
			S.D.	6	3.4	397
	8	6	Mean	30	6.4	2188
			S.D.	4	2.3	552
	30	6	Mean	38	8.3	1879
			S.D.	7	3.3	437
	125	12	Mean	34	6.7	2127
			S.D.	6	3.0	512
Female	0	12	Mean	30	5.3	1999
			S.D.	6	2.4	580
	8	6	Mean	35	5.7	2096
			S.D.	11	5.1	527
	30	6	Mean	34	4.8	2133
			S.D.	6	2.6	467
	125	12	Mean	35	4.7	2293
			S.D.	8	1.5	490

No significant difference in any treated groups from control group.

Table 5-5 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 2 of recovery)

Sex	Dose mg/kg	No.	pH									1) Protein						2) Ketone body						3) Glucose					
			5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	-	+-	+	++	+++	++++	-	+-	+	++	+++	++++	-	+-	+	++	+++	++++
Male	0	6	0	0	0	0	0	0	1	5	0	0	2	4	0	0	0	1	2	3	0	0	0	6	0	0	0	0	0
	125	6	0	0	0	0	0	1	1	3	1	0	2	4	0	0	0	2	3	1	0	0	0	6	0	0	0	0	0
Female	0	6	0	0	0	0	1	2	1	2	0	5	1	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0
	125	6	0	0	0	1	2	1	1	1	0	3	3	0	0	0	0	3	3	0	0	0	0	6	0	0	0	0	0

1) - : <10 mg/dL +- : 10 - 25 mg/dL + : 26 - 85 mg/dL ++ : 86 - 250 mg/dL +++ : 251 - 600 mg/dL ++++ : >600 mg/dL
2) - : <5 mg/dL +- : 5 - 7.5 mg/dL + : 7.6 - 30 mg/dL ++ : 31 - 70 mg/dL +++ : 71 - 125 mg/dL ++++ : >125 mg/dL
3) - : <30 mg/dL +- : 30 - 60 mg/dL + : 61 - 125 mg/dL ++ : 126 - 250 mg/dL +++ : 251 - 750 mg/dL ++++ : >750 mg/dL

Table 5-6 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 2 of recovery)

Sex	Dose mg/kg	No.	4) Occult blood					5) Bilirubin					6) Urobilinogen					7) Color		
			-	+-	+	++	+++	-	+	++	+++	++++	+-	+	++	+++	++++	LY	Y	DY
Male	0	6	6	0	0	0	0	6	0	0	0	0	5	1	0	0	0	0	6	0
	125	6	6	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	6	0
Female	0	6	6	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	6	0
	125	6	6	0	0	0	0	5	0	1	0	0	5	1	0	0	0	0	6	0

4) - : <0.03 mg/dL +- : 0.03 - 0.05 mg/dL + : 0.06 - 0.15 mg/dL ++ : 0.16 - 0.75 mg/dL +++ : >0.75 mg/dL
5) - : <0.5 mg/dL + : 0.5 - 1.5 mg/dL ++ : 1.6 - 5.0 mg/dL +++ : 5.1 - 10.0 mg/dL ++++ : >10.0 mg/dL
6) +- : <2.0 mg/dL + : 2.0 - 3.5 mg/dL ++ : 3.6 - 7.0 mg/dL +++ : 7.1 - 12.0 mg/dL ++++ : >12.0 mg/dL
7) LY : Light yellow Y : Yellow DY : Dark yellow

Table 5-7 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Urinalysis (Week 2 of recovery)

Sex	Dose mg/kg	No.	URINE SEDIMENT																																	
			RBC					WBC					SEC					SREC					Cast			CRYSTALLIZATION PS					CRYSTALLIZATION CO				
			-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	++	+++	-	+-	+	-	+-	+	++	+++	-	+-	+	++	+++
Male	0	6	6	0	0	0	0	5	1	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	3	3	0	0	0	6	0	0	0	0
	125	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	5	1	0	0	0	6	0	0	0	0
Female	0	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	5	1	0	0	0	6	0	0	0	0
	125	6	6	0	0	0	0	6	0	0	0	0	0	6	0	0	0	6	0	0	0	0	6	0	0	3	3	0	0	0	6	0	0	0	0

SEC : Squamous Epithelial Cell
SREC : Small Round Epithelial Cell
PS : Phosphate Salts
CO : Calcium Oxalate

\- : Negative
+- : Slight
\+ : Mild
++ : Moderate
+++ : Severe

Table 5-8 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Water intake and urinalysis (Week 2 of recovery)

Sex	Dose mg/kg	No.		Water intake mL/24h	Urine volume mL/24h	Osmolality mOsm/kg
Male	0	6	Mean	37	14.6	1765
			S.D.	7	6.0	360
	125	6	Mean	39	12.3	1942
			S.D.	5	3.1	250
Female	0	6	Mean	30	7.7	2076
			S.D.	13	3.9	325
	125	6	Mean	31	6.8	2368
			S.D.	6	1.2	271

No significant difference between treated group and control group.

Table 6-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Hematology (Day 28)

Sex	Dose mg/kg	No.		RBC X10⁴/μL	Hb g/dL	Ht %	MCV fL	MCH pg	MCHC %	Reticulocyte %	Platelet X10⁴/μL	PT s	APTT s	Fibrinogen mg/dL
	0	6	Mean	759	16.0	46	59.9	21.1	35.1	1.9	101.5	16.2	19.9	300
			S.D.	35	0.6	1	1.9	0.8	0.4	0.4	5.4	0.6	2.5	7
Male	8	6	Mean	773	16.1	46	59.8	20.8	34.8	2.0	96.1	17.9	21.9	296
			S.D.	20	0.4	1	1.0	0.4	0.5	0.1	4.1	2.8	3.0	31
	30	6	Mean	749	15.9	45	60.4	21.3	35.3	2.2	95.3	15.8	20.3	294
			S.D.	50	0.4	1	2.9	1.0	0.3	0.4	9.1	0.9	3.0	19
	125	6	Mean	771	16.2	46	59.8	21.0	35.2	2.1	90.5	17.1	19.7	308
			S.D.	20	0.7	2	1.9	0.6	0.5	0.4	12.7	1.2	1.8	24
	0	6	Mean	733	15.5	44	59.9	21.2	35.5	2.1	106.9	14.7	17.6	253
			S.D.	50	1.0	3	1.2	0.4	0.3	0.6	10.9	0.6	4.2	32
Female	8	6	Mean	748	15.5	44	58.6	20.7	35.3	2.1	111.5	14.7	16.4	245
			S.D.	32	0.3	1	2.0	0.8	0.4	0.5	6.6	0.2	0.9	18
	30	6	Mean	743	15.6	44	59.3	21.1	35.5	2.5	106.5	14.6	17.3	256
			S.D.	33	0.4	2	1.3	0.7	0.6	0.4	4.9	0.7	0.8	27
	125	6	Mean	749	15.6	44	58.6	20.8	35.6	1.9	93.7	14.5	16.5	272
			S.D.	40	0.6	2	1.0	0.5	0.4	0.3	13.5	0.3	1.4	23

No significant difference in any treated groups from control group.

Table 6-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Hematology (Day 28)

Sex	Dose mg/kg	No.		WBC	Differential leukocyte counts (%)							Erythroblast counts
				X10³/μL	Lymph.	Stab	Seg.	Eosino.	Baso.	Mono.	Others	(/200 leukocyte)
	0	6	Mean	112	86.2	0.3	12.6	0.2	0.0	0.8	0.0	0
			S.D.	22	4.8	0.3	4.5	0.3	0.0	0.5	0.0	0
Male	8	6	Mean	93	81.9	0.3	16.3	0.5	0.0	0.9	0.0	0
			S.D.	32	8.1	0.4	8.0	0.4	0.0	0.4	0.0	0
	30	6	Mean	103	83.4	0.3	14.6	0.5	0.0	1.2	0.0	0
			S.D.	16	4.2	0.3	4.4	0.4	0.0	0.6	0.0	0
	125	6	Mean	101	84.7	0.4	13.3	0.7	0.0	1.0	0.0	0
			S.D.	15	4.4	0.2	4.4	0.4	0.0	0.4	0.0	0
	0	6	Mean	104	84.4	0.5	14.1	0.3	0.0	0.7	0.0	0
			S.D.	29	6.8	0.4	6.5	0.4	0.0	0.6	0.0	0
Female	8	6	Mean	101	90.2	0.3	7.6	0.8	0.0	1.1	0.0	0
			S.D.	25	2.3	0.3	1.7	0.4	0.0	0.4	0.0	0
	30	6	Mean	97	86.3	0.5	12.0	0.0	0.0	1.3	0.0	0
			S.D.	31	3.9	0.3	4.0	0.0	0.0	0.5	0.0	0
	125	6	Mean	78	85.0	0.3	12.4	0.7	0.0	1.6*	0.0	0
			S.D.	22	4.6	0.3	4.2	0.7	0.0	0.7D	0.0	0

* : $p<0.05$ (Significant difference from control group)
D : Dunnett's test

Table 6-3 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Hematology (Week 2 of recovery)

Sex	Dose mg/kg	No.		RBC X10⁴/μL	Hb g/dL	Ht %	MCV fL	MCH pg	MCHC %	Reticulocyte %	Platelet X10⁴/μL	PT s	APTT s	Fibrinogen mg/dL
Male	0	6	Mean	799	16.1	45	56.8	20.1	35.5	2.5	115.0	15.0	22.4	266
			S.D.	23	0.6	2	1.6	0.7	0.5	0.5	7.2	1.0	2.1	20
	125	6	Mean	813	16.6	47	57.2	20.4	35.6	1.9*	113.5	16.2	22.4	317
			S.D.	23	0.4	1	1.1	0.5	0.5	0.3T	14.9	1.2	2.8	51
Female	0	6	Mean	743	15.9	45	59.7	21.4	35.8	2.3	99.9	13.2	17.5	223
			S.D.	24	0.4	1	0.9	0.4	0.4	0.3	5.4	0.7	1.2	21
	125	6	Mean	723	15.2*	43**	58.8	21.0	35.7	2.3	108.8*	12.5	15.0*	215
			S.D.	15	0.3T	1T	1.5	0.7	0.4	0.4	7.4T	1.0	2.3T	17

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
T : Student's t-test

Table 6-4 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Hematology (Week 2 of recovery)

Sex	Dose mg/kg	No.		WBC	Differential leukocyte counts (%)							Erythroblast counts
				$\times 10^2/\mu L$	Lymph.	Stab	Seg.	Eosino.	Baso.	Mono.	Others	(/200 leukocyte)
Male	0	6	Mean	112	89.4	0.3	9.1	0.3	0.0	0.9	0.0	0
			S.D.	10	1.0	0.3	1.2	0.3	0.0	0.6	0.0	0
	125	6	Mean	125	89.9	0.2	8.5	0.6	0.0	0.8	0.0	0
			S.D.	12	5.0	0.3	4.5	0.7	0.0	0.3	0.0	0
Female	0	6	Mean	70	82.7	0.4	15.4	0.8	0.0	0.7	0.0	0
			S.D.	15	4.6	0.4	4.8	0.4	0.0	0.3	0.0	0
	125	6	Mean	65	83.3	0.5	15.1	0.6	0.0	0.6	0.0	0
			S.D.	15	6.7	0.3	6.3	0.7	0.0	0.4	0.0	0

No significant difference between treated group and control group.

Table 7-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Blood chemistry (Day 28)

Sex	Dose mg/kg	No.		AST (GOT) IU/L	ALT (GPT) IU/L	LDH IU/L	γ-GTP IU/L	AlP IU/L	T.cho mg/dL	TG mg/dL	PL mg/dL	T.bili-rubin mg/dL	Glucose mg/dL	BUN mg/dL	Crea-tinine mg/dL
	0	6	Mean	60	28	69	1	721	50	49	93	0.1	129	11	0.26
			S.D.	5	3	26	0	125	9	20	11	0.0	9	1	0.02
Male	8	6	Mean	59	26	54	1	803	52	50	99	0.1	129	11	0.27
			S.D.	7	3	13	0	155	13	18	16	0.0	12	1	0.03
	30	6	Mean	55	25	58	1	1035*	55	60	103	0.1	141	10	0.26
			S.D.	4	1	13	0	266D	5	20	5	0.0	12	2	0.02
	125	6	Mean	67	34	60	1	1542**	64*	37	112*	0.1	131	13	0.25
			S.D.	16	11	16	0	259D	5D	18	5D	0.0	9	2	0.03
	0	6	Mean	55	22	50	1	472	62	13	119	0.1	118	13	0.29
			S.D.	7	3	8	0	123	14	4	24	0.0	5	3	0.02
Female	8	6	Mean	65	24	52	1	505	50	11	96	0.1	104	14	0.32
			S.D.	5	2	9	0	46	14	6	18	0.0	18	2	0.03
	30	6	Mean	53	20	50	1	436	68	10	124	0.1	123	15	0.30
			S.D.	2	2	6	0	65	8	4	13	0.0	11	1	0.04
	125	6	Mean	59	21	58	1	661*	86*	15	152*	0.1	124	14	0.30
			S.D.	15	2	18	0	173D	18D	11	29D	0.0	17	3	0.05

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
D : Dunnett's test

Table 7-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Blood chemistry (Day 28)

Sex	Dose mg/kg	No.		Na mmol/L	K mmol/L	Cl mmol/L	Ca mg/dL	P mg/dL	TP g/dL	Albumin g/dL	A/G
	0	6	Mean	143	4.7	107	9.5	8.3	6.0	2.6	0.76
			S.D.	1	0.3	1	0.2	0.3	0.2	0.0	0.04
Male	8	6	Mean	143	4.7	108	9.5	8.1	6.0	2.6	0.79
			S.D.	2	0.1	1	0.3	0.5	0.2	0.1	0.04
	30	6	Mean	142	4.6	106	9.7	8.4	6.0	2.7	0.80
			S.D.	2	0.1	1	0.2	0.6	0.2	0.1	0.03
	125	6	Mean	143	4.8	107	9.7	8.4	6.0	2.7	0.81
			S.D.	2	0.2	2	0.1	0.6	0.2	0.1	0.01
	0	6	Mean	143	4.4	109	9.9	7.6	6.2	2.8	0.82
			S.D.	2	0.2	2	0.1	0.4	0.1	0.1	0.04
Female	8	6	Mean	143	4.7	109	9.8	8.4*	6.1	2.7	0.80
			S.D.	2	0.4	2	0.2	0.3D	0.2	0.1	0.02
	30	6	Mean	144	4.2	110	9.7	7.8	6.3	2.8	0.82
			S.D.	1	0.2	1	0.1	0.7	0.2	0.1	0.04
	125	6	Mean	142	4.4	108	10.0	7.2	6.7	3.0	0.81
			S.D.	1	0.4	2	0.4	0.5	0.5	0.3	0.03

* : $p<0.05$ (Significant difference from control group)
D : Dunnett's test

Table 7-3 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Blood chemistry (Week 2 of recovery)

Sex	Dose mg/kg	No.		AST (GOT) IU/L	ALT (GPT) IU/L	LDH IU/L	γ-GTP IU/L	AlP IU/L	T.cho mg/dL	TG mg/dL	PL mg/dL	T.bili-rubin mg/dL	Glucose mg/dL	BUN mg/dL	Crea-tinine mg/dL
Male	0	6	Mean	67	30	53	1	599	55	48	99	0.1	135	12	0.27
			S.D.	7	4	11	0	141	8	29	11	0.0	11	1	0.02
	125	6	Mean	59	27	51	1	614	60	57	108	0.1	141	13	0.26
			S.D.	7	2	11	0	161	9	23	15	0.0	15	1	0.03
Female	0	6	Mean	59	21	47	1	331	61	13	116	0.1	119	15	0.32
			S.D.	5	3	6	1	59	8	9	13	0.0	13	2	0.04
	125	6	Mean	57	24	47	1	262	71	15	132	0.1	122	14	0.31
			S.D.	8	5	11	0	52	11	8	16	0.0	18	2	0.03

No significant difference between treated group and control group.

Table 7-4 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Blood chemistry (Week 2 of recovery)

Sex	Dose mg/kg	No.		Na mmol/L	K mmol/L	Cl mmol/L	Ca mg/dL	P mg/dL	TP g/dL	Albumin g/dL	A/G
Male	0	6	Mean	144	4.7	107	9.4	7.3	6.1	2.6	0.76
			S.D.	0	0.3	1	0.2	0.3	0.2	0.1	0.05
	125	6	Mean	143	4.7	106	9.6	7.5	6.3*	2.7	0.76
			S.D.	1	0.4	1	0.2	0.4	0.2T	0.1	0.03
Female	0	6	Mean	143	4.4	111	9.7	5.9	6.3	2.8	0.79
			S.D.	1	0.3	1	0.2	0.7	0.3	0.1	0.03
	125	6	Mean	143	4.3	110	9.6	5.6	6.8*	2.9	0.76
			S.D.	1	0.3	2	0.2	0.8	0.2T	0.2	0.04

* : $p<0.05$ (Significant difference from control group)
T : Student's t-test

Table 8-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Day 28)

Male

	Dose mg/kg		Body weight g	Brain g(g/100g BW)	Thymus mg(mg/100g BW)	Heart g(g/100g BW)	Liver g(g/100g BW)	Spleen g(g/100g BW)	Kidney (R+L) g(g/100g BW)	Adrenal (R+L) mg(mg/100g BW)
	0	No.	6	6	6	6	6	6	6	6
		Mean	364	2.02	530	1.13	10.63	0.73	2.67	61
		S.D.	30	0.06	122	0.10	1.27	0.14	0.26	6
Absolute	8	No.	6	6	6	6	6	6	6	6
		Mean	332	1.98	414	1.10	9.58	0.56*	2.40	55
		S.D.	39	0.05	121	0.15	1.76	0.06D	0.33	8
	30	No.	6	6	6	6	6	6	6	6
		Mean	376	2.02	462	1.13	12.01	0.66	2.74	55
		S.D.	22	0.06	58	0.06	1.06	0.10	0.16	5
	125	No.	6	6	6	6	6	6	6	6
		Mean	341	1.99	446	1.09	11.93	0.64	2.74	55
		S.D.	23	0.06	41	0.11	0.92	0.06	0.24	8
	0	No.		6	6	6	6	6	6	6
		Mean		0.56	145	0.31	2.92	0.20	0.74	17
		S.D.		0.06	27	0.03	0.15	0.03	0.04	2
Relative	8	No.		6	6	6	6	6	6	6
		Mean		0.60	124	0.33	2.87	0.17	0.72	17
		S.D.		0.08	30	0.02	0.24	0.02	0.02	2
	30	No.		6	6	6	6	6	6	6
		Mean		0.54	123	0.30	3.19*	0.17	0.73	15
		S.D.		0.03	17	0.02	0.14D	0.02	0.04	2
	125	No.		6	6	6	6	6	6	6
		Mean		0.59	131	0.32	3.50**	0.19	0.80**	16
		S.D.		0.05	10	0.02	0.09D	0.01	0.03D	2

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
D : Dunnett's test

Table 8-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Day 28)

Male

	Dose mg/kg		Testis (R+L) g(g/100g BW)	Epididymis (R+L) mg(mg/100g BW)
Absolute	0	No.	6	6
		Mean	3.06	841
		S.D.	0.22	67
	8	No.	6	6
		Mean	3.01	752
		S.D.	0.21	47
	30	No.	6	6
		Mean	3.16	796
		S.D.	0.32	64
	125	No.	6	6
		Mean	3.29	827
		S.D.	0.28	71
Relative	0	No.	6	6
		Mean	0.84	232
		S.D.	0.04	14
	8	No.	6	6
		Mean	0.92	229
		S.D.	0.12	31
	30	No.	6	6
		Mean	0.84	212
		S.D.	0.06	10
	125	No.	6	6
		Mean	0.97*	243
		S.D.	0.09D	22

* : $p<0.05$ (Significant difference from control group)
D : Dunnett's test

Table 8-3 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Day 28)

Female

	Dose mg/kg		Body weight g	Brain g(g/100g BW)	Thymus mg(mg/100g BW)	Heart g(g/100g BW)	Liver g(g/100g BW)	Spleen g(g/100g BW)	Kidney (R+L) g(g/100g BW)	Adrenal (R+L) mg(mg/100g BW)
	0	No.	6	6	6	6	6	6	6	6
		Mean	242	1.86	499	0.85	7.24	0.53	1.89	70
		S.D.	12	0.07	107	0.08	0.71	0.06	0.15	12
Absolute	8	No.	6	6	6	6	6	6	6	6
		Mean	226	1.97	467	0.80	6.45	0.53	1.71	70
		S.D.	20	0.10	141	0.08	0.61	0.09	0.13	3
	30	No.	6	6	6	6	6	6	6	6
		Mean	227	1.87	511	0.83	7.04	0.46	1.76	70
		S.D.	14	0.14	45	0.06	0.59	0.07	0.21	7
	125	No.	6	6	6	6	6	6	6	6
		Mean	223	1.90	445	0.80	7.88	0.41*	1.82	62
		S.D.	19	0.08	115	0.09	0.60	0.04D	0.10	6
	0	No.		6	6	6	6	6	6	6
		Mean		0.77	207	0.35	2.99	0.22	0.78	29
		S.D.		0.06	42	0.02	0.16	0.02	0.04	5
Relative	8	No.		6	6	6	6	6	6	6
		Mean		0.88*	205	0.35	2.85	0.23	0.75	31
		S.D.		0.08D	57	0.02	0.05	0.02	0.05	2
	30	No.		6	6	6	6	6	6	6
		Mean		0.83	225	0.37	3.10	0.20	0.77	31
		S.D.		0.05	15	0.02	0.15	0.04	0.09	4
	125	No.		6	6	6	6	6	6	6
		Mean		0.86	198	0.36	3.54**	0.18	0.82	28
		S.D.		0.05	37	0.03	0.16D	0.02	0.04	4

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
D : Dunnett's test

Table 8-4 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Day 28)

Female

	Dose mg/kg		Ovary (R+L) mg(mg/100g BW)	Uterus mg(mg/100g BW)
Absolute	0	No.	6	6
		Mean	85.6	486
		S.D.	7.7	91
	8	No.	6	6
		Mean	92.3	419
		S.D.	8.1	112
	30	No.	6	6
		Mean	92.5	499
		S.D.	4.2	95
	125	No.	6	6
		Mean	80.5	470
		S.D.	19.0	70
Relative	0	No.	6	6
		Mean	35.4	200
		S.D.	3.0	31
	8	No.	6	6
		Mean	41.1	185
		S.D.	5.6	44
	30	No.	6	6
		Mean	40.8	221
		S.D.	2.9	48
	125	No.	6	6
		Mean	36.1	213
		S.D.	7.9	43

No significant difference in any treated groups from control group.

Table 8-5 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Week 2 of recovery)

Male

	Dose mg/kg		Body weight g	Brain g(g/100g BW)	Thymus mg(mg/100g BW)	Heart g(g/100g BW)	Liver g(g/100g BW)	Spleen g(g/100g BW)	Kidney (R+L) g(g/100g BW)	Adrenal (R+L) mg(mg/100g BW)
Absolute	0	No.	6	6	6	6	6	6	6	6
		Mean	419	2.04	426	1.28	11.19	0.67	2.81	67
		S.D.	51	0.12	27	0.10	1.70	0.12	0.34	11
	125	No.	6	6	6	6	6	6	6	6
		Mean	410	2.07	415	1.39	12.47	0.69	3.02	59
		S.D.	37	0.08	87	0.20	1.53	0.11	0.29	10
Relative	0	No.		6	6	6	6	6	6	6
		Mean		0.49	103	0.31	2.67	0.16	0.67	16
		S.D.		0.06	10	0.03	0.14	0.03	0.06	2
	125	No.		6	6	6	6	6	6	6
		Mean		0.51	101	0.34	3.04**	0.17	0.74	14
		S.D.		0.04	15	0.03	0.14T	0.01	0.04	2

** : $p<0.01$ (Significant difference from control group)
T : Student's t-test

Table 8-6 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Week 2 of recovery)

Male

	Dose mg/kg		Testis (R+L) g(g/100g BW)	Epididymis (R+L) mg(mg/100g BW)
Absolute	0	No.	6	6
		Mean	2.98	1020
		S.D.	0.32	104
	125	No.	6	6
		Mean	3.45*	1080
		S.D.	0.22T	87
Relative	0	No.	6	6
		Mean	0.72	246
		S.D.	0.07	28
	125	No.	6	6
		Mean	0.85*	264
		S.D.	0.10T	17

* : $p<0.05$ (Significant difference from control group)
T : Student's t-test

Table 8-7 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Week 2 of recovery)

Female

	Dose mg/kg		Body weight g	Brain g(g/100g BW)	Thymus mg(mg/100g BW)	Heart g(g/100g BW)	Liver g(g/100g BW)	Spleen g(g/100g BW)	Kidney (R+L) g(g/100g BW)	Adrenal (R+L) mg(mg/100g BW)
Absolute	0	No.	6	6	6	6	6	6	6	6
		Mean	244	1.95	445	0.86	6.31	0.54	1.80	70
		S.D.	18	0.06	101	0.04	0.65	0.14	0.15	5
	125	No.	6	6	6	6	6	6	6	6
		Mean	260	2.02	432	0.89	7.27*	0.54	2.04	75
		S.D.	22	0.07	58	0.10	0.68T	0.07	0.26	7
Relative	0	No.		6	6	6	6	6	6	6
		Mean		0.80	183	0.35	2.58	0.22	0.74	29
		S.D.		0.04	43	0.02	0.12	0.05	0.04	2
	125	No.		6	6	6	6	6	6	6
		Mean		0.78	167	0.34	2.79**	0.21	0.78	29
		S.D.		0.08	24	0.01	0.08T	0.02	0.06	3

* : $p<0.05$; ** : $p<0.01$ (Significant difference from control group)
T : Student's t-test

Table 8-8 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Absolute and relative organ weight (Week 2 of recovery)

Female

	Dose mg/kg		Ovary (R+L) mg(mg/100g BW)	Uterus mg(mg/100g BW)
Absolute	0	No.	6	6
		Mean	86.4	642
		S.D.	6.5	163
	125	No.	6	6
		Mean	88.6	587
		S.D.	13.1	142
Relative	0	No.	6	6
		Mean	35.5	263
		S.D.	3.4	64
	125	No.	6	6
		Mean	34.1	226
		S.D.	3.9	51

No significant difference between treated group and control group.

Table 9-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Gross pathological findings (Day 28)

Organs / Findings	Sex:	M	M	M	M	F	F	F	F
	Dose(mg/kg):	0	8	30	125	0	8	30	125
	Number:	6	6	6	6	6	6	6	6
Epididymis									
Nodule		1	0	0	0	-	-	-	-
Kidney									
Dilatation,pelvic		0	0	1	0	0	0	0	0
Liver									
Area,small		0	0	1	0	0	0	0	0
Uterus									
Cyst		-	-	-	-	1	0	0	0

- : Not applicable

Table 9-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Gross pathological findings (Week 2 of recovery)

Organs / Findings	Sex:	M	M	F	F
	Dose(mg/kg):	0	125	0	125
	Number:	6	6	6	6
Epididymis					
Small		1	0	-	-
Testis					
Small		1	0	-	-

- : Not applicable

Table 10-1 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Histopathological findings (Day 28)

Organs / Findings	Sex:	M	M	M	M	F	F	F	F
	Dose(mg/kg):	0	8	30	125	0	8	30	125
	Number:	6	6	6	6	6	6	6	6
Adrenal									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Bone+Bone marrow,femoral									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Bone+Bone marrow,sternal									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Cerebellum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Cerebrum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Epididymis									
Number examined		6	0	0	6	-	-	-	-
Not remarkable		5	0	0	5	-	-	-	-
Granuloma,spermatic		1	0	0	1	-	-	-	-
mild		1	0	0	1	-	-	-	-
Eye									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	5	6	0	0	6
Fold/rosette,retinal		0	0	0	1	0	0	0	0
mild		0	0	0	1	0	0	0	0
Heart									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	5	6	0	0	6
Myocarditis,focal		0	0	0	1	0	0	0	0
minimal		0	0	0	1	0	0	0	0
Intestine,duodenum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Intestine,jejunum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Intestine,ileum(Peyer's patch)									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Intestine,cecum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	5
Cell infiltration,mucosal		0	0	0	0	0	0	0	1
minimal		0	0	0	0	0	0	0	1
Intestine,colon									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Intestine,rectum									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6

- : Not applicable

Table 10-2 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Histopathological findings (Day 28)

Organs / Findings	Sex:	M	M	M	M	F	F	F	F
	Dose(mg/kg):	0	8	30	125	0	8	30	125
	Number:	6	6	6	6	6	6	6	6
Kidney									
Number examined		6	6	6	6	6	0	0	6
Not remarkable		6	5	5	3	6	0	0	6
Dilatation,pelvic		0	0	1	0	0	0	0	0
mild		0	0	1	0	0	0	0	0
Dilatation,tubular,cystic		0	0	0	1	0	0	0	0
minimal		0	0	0	1	0	0	0	0
Regeneration,tubular		0	1	0	0	0	0	0	0
minimal		0	1	0	0	0	0	0	0
Eosinophilic body,tubular cell		0	0	0	3	0	0	0	0
minimal		0	0	0	2	0	0	0	0
mild		0	0	0	1	0	0	0	0
Liver									
Number examined		6	6	6	6	6	6	6	6
Not remarkable		5	5	2	0	3	2	2	1
Vacuolation,hepatocyte,periportal		1	1	3	1	3	4	4	2
minimal		1	1	0	1	2	1	1	0
mild		0	0	3	0	1	3	3	2
Necrosis,single cell,hepatocytic		0	0	0	4	0	0	0	2
minimal		0	0	0	4	0	0	0	2
Microgranuloma		0	0	0	1	1	0	0	4
minimal		0	0	0	1	1	0	0	4
Fibrosis,focal		0	0	1	1	0	0	0	0
minimal		0	0	0	1	0	0	0	0
mild		0	0	1	0	0	0	0	0
Hypertrophy,hepatocytic,central		0	0	1	6	0	0	0	3
minimal		0	0	1	2	0	0	0	2
mild		0	0	0	4	0	0	0	1
Lung(bronchus)									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		4	0	0	5	6	0	0	6
Mineralization,arterial wall		1	0	0	0	0	0	0	0
minimal		1	0	0	0	0	0	0	0
Pneumonia,focal		1	0	0	1	0	0	0	0
minimal		1	0	0	1	0	0	0	0
Metaplasia,osseous		1	0	0	0	0	0	0	0
minimal		1	0	0	0	0	0	0	0
Lymph node,mesenteric									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Lymph node,submandibular									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Muscle,femoral									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	5	0	0	6
Cell infiltration		0	0	0	0	1	0	0	0
minimal		0	0	0	0	1	0	0	0
Ovary									
Number examined		-	-	-	-	6	0	0	6
Not remarkable		-	-	-	-	6	0	0	6
Parathyroid									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6

- : Not applicable

Table 10-3 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Histopathological findings (Day 28)

Organs / Findings	Sex:	M	M	M	M	F	F	F	F
	Dose(mg/kg):	0	8	30	125	0	8	30	125
	Number:	6	6	6	6	6	6	6	6
Pituitary									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Prostate									
Number examined		6	0	0	6	-	-	-	-
Not remarkable		3	0	0	3	-	-	-	-
Cell infiltration,interstitial		3	0	0	3	-	-	-	-
minimal		3	0	0	3	-	-	-	-
Sciatic nerve									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Spinal cord,thoracic									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Spleen									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		5	0	0	5	4	0	0	6
Hematopoiesis,extramedullary		1	0	0	1	2	0	0	0
minimal		1	0	0	1	2	0	0	0
Stomach									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		5	0	0	6	6	0	0	6
Mineralization,mucosal		1	0	0	0	0	0	0	0
minimal		1	0	0	0	0	0	0	0
Testis									
Number examined		6	0	0	6	-	-	-	-
Not remarkable		6	0	0	6	-	-	-	-
Thymus									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Thyroid									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		4	0	0	4	4	0	0	6
Ectopic thymus		0	0	0	1	0	0	0	0
minimal		0	0	0	1	0	0	0	0
Cyst,ultimobranchial		2	0	0	1	2	0	0	0
minimal		2	0	0	1	2	0	0	0
Trachea									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Urinary bladder									
Number examined		6	0	0	6	6	0	0	6
Not remarkable		6	0	0	6	6	0	0	6
Uterus									
Number examined		-	-	-	-	6	0	0	6
Not remarkable		-	-	-	-	5	0	0	6
Cyst		-	-	-	-	1	0	0	0
mild		-	-	-	-	1	0	0	0

- : Not applicable

Table 10-4 A 28-day oral toxicity study of 2-Ethylhexyl vinyl ether in rats with a recovery period of 2 weeks

Histopathological findings (Week 2 of recovery)

Organs / Findings	Sex:	M	M	F	F
	Dose(mg/kg):	0	125	0	125
	Number:	6	6	6	6
Epididymis					
Number examined		1	0	-	-
Hypospermia		1	0	-	-
mild		1	0	-	-
Kidney					
Number examined		6	6	0	0
Not remarkable		5	5	0	0
Eosinophilic body,tubular cell		1	1	0	0
minimal		1	1	0	0
Liver					
Number examined		6	6	6	6
Not remarkable		0	5	4	5
Vacuolation,hepatocyte,periportal		3	0	1	1
minimal		0	0	1	0
mild		3	0	0	1
Microgranuloma		3	0	1	0
minimal		3	0	1	0
Hypertrophy,hepatocytic,central		0	1	0	0
minimal		0	1	0	0
Testis					
Number examined		1	0	-	-
Atrophy,seminiferous tubular		1	0	-	-
severe		1	0	-	-

- : Not applicable