酢酸イソプロピルのマウスを用いた
吸入による2週間毒性試験報告書

試験番号：0552

APPENDICES

APPENDICES

APPENDICES (CONTINUED)

APPENDIX A 1

IDENTITY AND IMPURITY OF ISOPROPYL ACETATE IN THE 2-WEEK INHALATION STUDY

IDENTITY AND IMPURITY OF ISOPROPYL ACETATE IN THE 2-WEEK INHALATION STUDY

Test Substance : Isopropyl acetate (Wako Pure Chemical Industries, Ltd.)

Lot No. : KLR6631

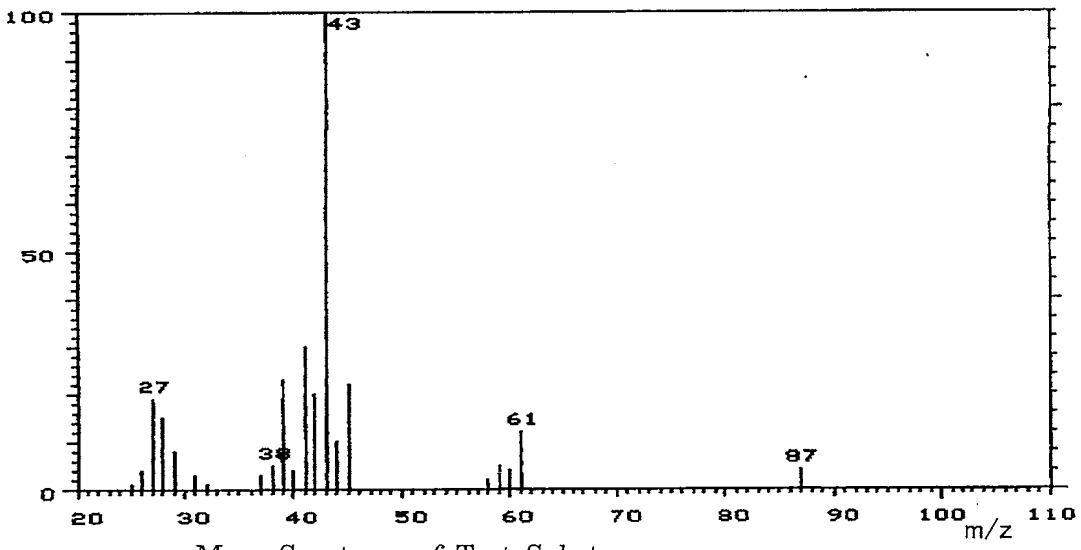
1. Spectral Data

Mass Spectrometry

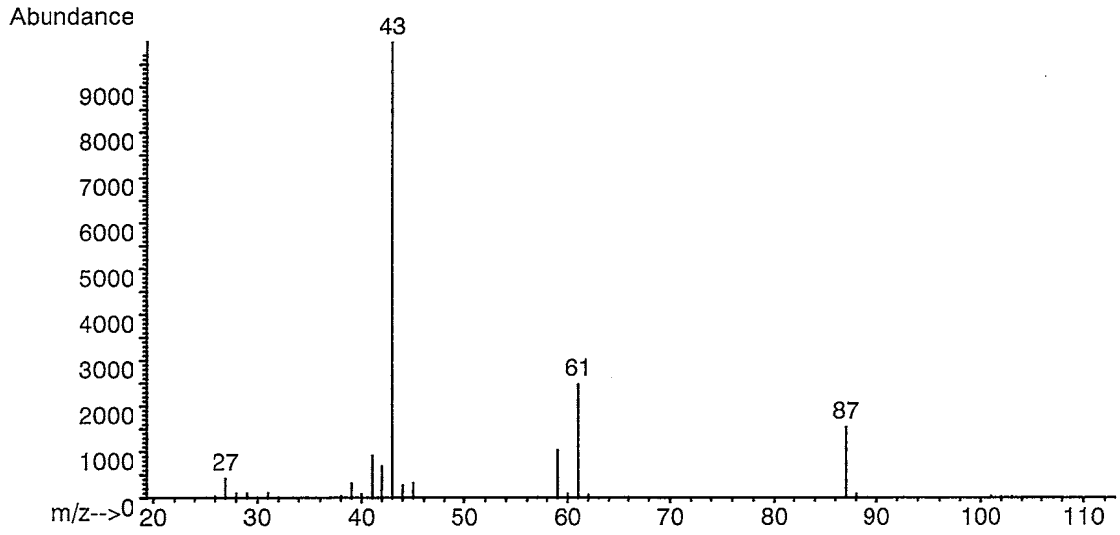
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data*

Result: The mass spectrum was consistent with literature spectrum.

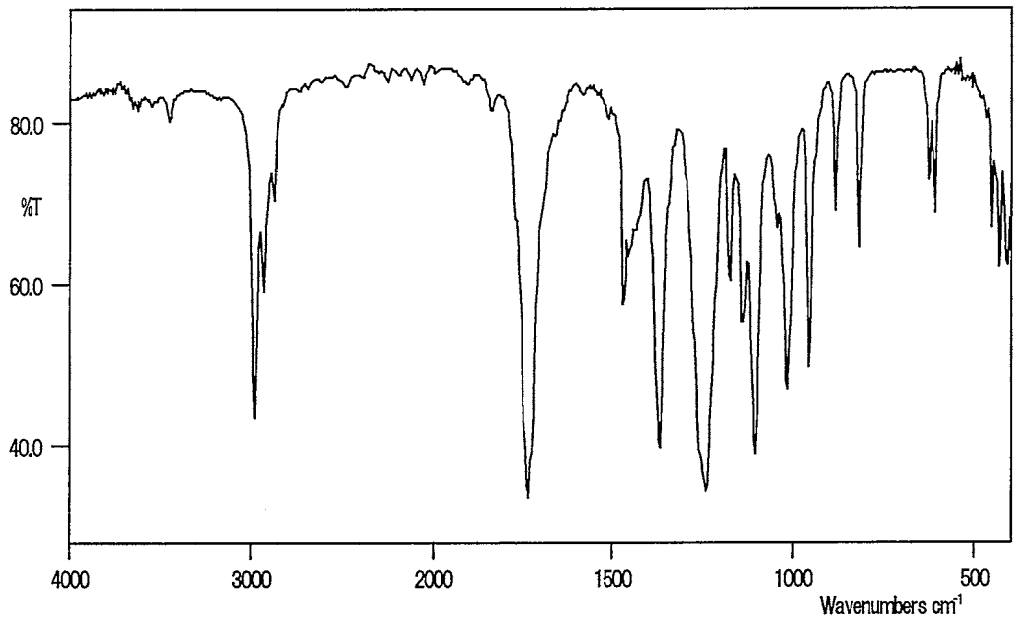
(*McLafferty FW, ed. 1994. Wiley Registry of Mass Spectral Data. 6th ed. New York, NY:John Wiley and Sons.)

Infrared Spectrometry

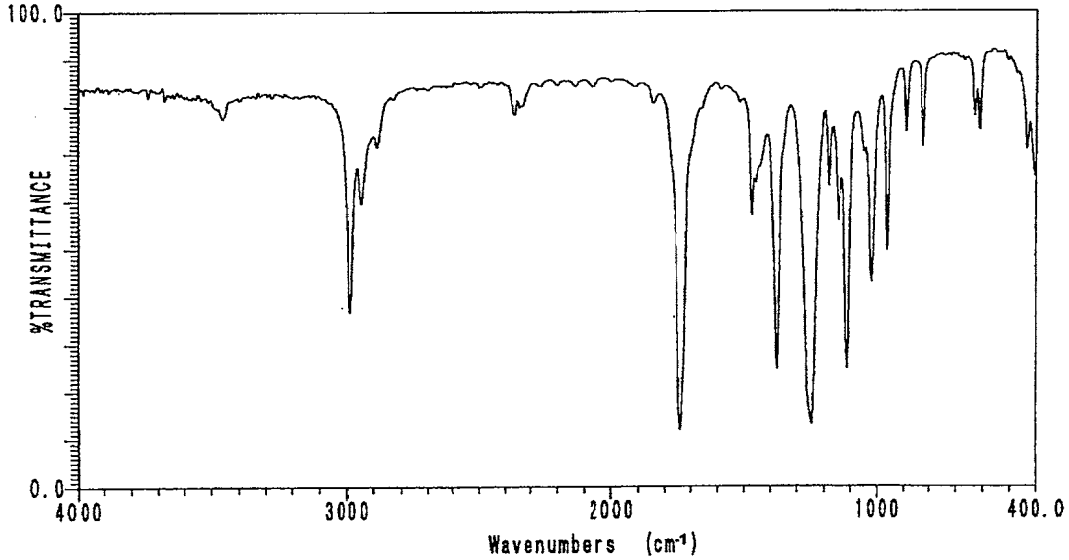
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 4 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Result: The infrared spectrum was consistent with literature spectrum.
(*Performed by Wako Pure Chemical Industries, Ltd.)

2. Impurity

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.53 mmϕ × 60 m)

Column Temperature: 80° C

Flow Rate : 15 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μL

Sample Name	Peak No.	Area (%)	Peak Name
	1	0.038	2-Propanol
Test Substance	2	99.962	Isopropyl acetate

Result: Gas chromatography indicated one major peak (peak No. 2) and one impurity. The impurity (peak No. 1) was identified as 2-propanol by comparing GC-MS with that of standard sample. The amount of 2-propanol in the test substance was 0.038% (The quantity value by the standard sample was 0.056%.) with a gas chromatograph.

3. Conclusion: The test substance was identified as isopropyl acetate by mass spectrum and infrared spectrum. Gas chromatography indicated one major peak (isopropyl acetate) and one impurity. The impurity was 2-propanol in the test substance.

APPENDIX A 2

STABILITY OF ISOPROPYL ACETATE IN THE 2-WEEK INHALATION STUDY

STABILITY OF ISOPROPYL ACETATE IN THE 2-WEEK INHALATION STUDY

Test Substance : Isopropyl acetate (Wako Pure Chemical Industries, Ltd.)

Lot No. : KLR6631

1. Sample : This lot was used from 2004.4.9 to 2004.4.22. Test substance was stored in a dark place at room temperature.

2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.53 mmϕ × 60 m)

Column Temperature: 80° C

Flow Rate : 15 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μL

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2004.04.07	1	1.992	0.038
	2	3.917	99.962
2004.04.30	1	1.975	0.037
	2	3.903	99.963

Result: Gas chromatography indicated one major peak (peak No.2) and one impurity (peak No. 1 < 0.1% of total area) analyzed on 2004.4.7 and one major peak (peak No.2) and one impurity (peak No. 1 < 0.1% of total area) analyzed on 2004.4.30. No new trace impurity peak in the test substance analyzed on 2004.4.30 was detected.

3. Conclusion: The test substance was stable for about 3 weeks in a dark place at room temperature.

APPENDIX B 1

CONCENTRATION OF ISOPROPYL ACETATE IN THE INHALATION CHAMBER OF THE 2-WEEK INHALATION STUDY

CONCENTRATION OF ISOPROPYL ACETATE IN THE INHALATION CHAMBER OF THE 2-WEEK INHALATION STUDY

Group Name	Concentration(ppm) Mean ± S.D.
Control	0.0 ± 0.0
500 ppm	501.5 ± 2.7
1000 ppm	1007.1 ± 8.0
2000 ppm	1999.5 ± 9.3
4000 ppm	3995.5 ± 22.2
8000 ppm	8002.8 ± 7.6

APPENDIX B 2

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-WEEK INHALATION STUDY OF ISOPROPYL ACETATE

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-WEEK INHALATION STUDY OF ISOPROPYL ACETATE

Group Name	Temperature (℃) Mean ± S.D.	Humidity (%) Mean ± S.D.	Ventilation Rate (L/min) Mean ± S.D.	Air Change (time/h) Mean
Control	21.9 ± 0.2	57.6 ± 1.3	105.0 ± 0.2	12.1
500 ppm	21.9 ± 0.2	56.0 ± 1.4	104.9 ± 0.4	12.1
1000 ppm	21.8 ± 0.2	55.8 ± 1.8	104.7 ± 0.3	12.1
2000 ppm	22.0 ± 0.2	54.2 ± 2.4	104.9 ± 0.3	12.1
4000 ppm	22.4 ± 0.2	51.8 ± 2.5	104.6 ± 0.2	12.1
8000 ppm	22.2 ± 0.3	52.0 ± 3.1	105.0 ± 0.3	12.1

APPENDIX C 1

CLINICAL OBSERVATION : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Administration Week-day 1-1 2	1-2 1	1-4 1	1-4 2	1-5 1	1-5 2	1-6 1	1-6 2	1-7 1	2-3 1	2-7 1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	5	3	0	4	0	1	1	-	-	-	-
PRONE	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	0	0	0	4	0	0	0	-	-	-	-
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	5	3	0	0	0	1	1	-	-	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	0	0	0	0	1	0	0	-	-	-	-
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	0	0	1	1	1	1	1	-	-	-	-
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	5	3	0	4	0	1	1	-	-	-	-

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Administration Week-day 1-1 2	1-2 1	1-4 1	1-4 2	1-5 1	1-5 2	1-6 1	1-6 2	1-7 1	2-3 1	2-7 1
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	5	3	0	4	0	1	1	-	-	-	-

APPENDIX C 2

CLINICAL OBSERVATION : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Administration Week-day 1-1 2	1-2 1	1-4 1	1-4 2	1-5 1	1-5 2	1-6 1	1-6 2	1-7 1	2-3 1	2-7 1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	4	2	-	-	-	-	-	-	-	-	-
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	4	2	-	-	-	-	-	-	-	-	-
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	1	0	0	0	0	0	0	0	0	0	0
	8000ppm	0	0	-	-	-	-	-	-	-	-	-
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	4	2	-	-	-	-	-	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0
	500ppm	0	0	0	0	0	0	0	0	0	0	0
	1000ppm	0	0	0	0	0	0	0	0	0	0	0
	2000ppm	0	0	0	0	0	0	0	0	0	0	0
	4000ppm	0	0	0	0	0	0	0	0	0	0	0
	8000ppm	4	2	-	-	-	-	-	-	-	-	-

APPENDIX D 1

BODY WEIGHT CHANGES : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day 0-0	1-2	1-4	1-7	2-3	2-7
Control	23.3± 0.7	23.2± 0.6	23.8± 0.5	24.5± 0.3	24.6± 0.5	25.3± 0.5
500ppm	23.1± 1.1	23.4± 0.7	23.6± 1.4	24.1± 1.1	24.5± 1.1	24.5± 1.7
1000ppm	23.1± 1.0	22.7± 0.8	23.3± 1.0	24.5± 0.6	24.9± 0.5	25.5± 1.0
2000ppm	23.2± 0.7	23.3± 0.6	23.5± 0.8	24.3± 0.9	24.7± 0.9	25.0± 1.0
4000ppm	23.2± 0.7	22.7± 1.1	23.6± 0.6	24.2± 0.7	24.9± 0.5	26.0± 0.7
8000ppm	23.2± 0.8	21.1± 1.3**	20.2± 3.2	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX D 2

BODY WEIGHT CHANGES : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
UNIT : g
REPORT TYPE : A1 2
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day 0-0	1-2	1-4	1-7	2-3	2-7
Control	19.0± 0.7	19.2± 0.8	19.7± 1.1	19.9± 0.8	20.8± 1.0	21.2± 0.8
500ppm	19.0± 0.8	19.0± 0.8	19.2± 0.8	19.8± 0.7	20.5± 0.8	20.8± 0.9
1000ppm	18.9± 1.0	18.8± 1.2	19.4± 1.1	19.9± 1.3	20.4± 1.0	21.1± 1.4
2000ppm	18.9± 0.8	19.5± 0.8	19.7± 0.9	20.0± 0.8	20.9± 0.8	21.3± 0.6
4000ppm	19.0± 0.6	17.7± 0.7	19.0± 0.4	19.4± 0.4	20.0± 1.1	20.7± 1.4
8000ppm	18.9± 0.8	18.6± 0.6 ?	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

? : Significant test is not applied, because No. of data in this group is less than 3.

APPENDIX E 1

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(6)	2-7(7)
Control	4.3± 0.2	4.1± 0.2
500ppm	4.1± 0.2	4.1± 0.6
1000ppm	4.3± 0.3	4.4± 0.2
2000ppm	4.2± 0.2	4.3± 0.2
4000ppm	3.9± 0.3	4.5± 0.2
8000ppm	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX E 2

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
UNIT : g
REPORT TYPE : A1 2
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(6)	2-7(7)
Control	3.7± 0.3	3.8± 0.3
500ppm	3.7± 0.2	3.6± 0.1
1000ppm	3.7± 0.3	3.6± 0.2
2000ppm	3.8± 0.1	3.9± 0.2
4000ppm	3.4± 0.1	3.6± 0.5
8000ppm	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX F 1

HEMATOLOGY : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV fℓ	MCH pg	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	5	11.21± 0.30	17.4± 0.5	54.9± 1.7	48.9± 0.8	15.5± 0.4	31.7± 0.8	1233± 52
500ppm	5	11.18± 0.53	17.2± 0.8	55.0± 2.8	49.2± 0.5	15.4± 0.1	31.3± 0.3	1293± 123
1000ppm	5	11.17± 0.29	17.3± 0.6	54.8± 2.0	49.1± 0.7	15.4± 0.3	31.5± 0.4	1268± 81
2000ppm	5	11.15± 0.17	17.3± 0.3	55.6± 1.0	49.9± 0.8	15.6± 0.1	31.2± 0.5	1197± 50
4000ppm	5	11.34± 0.44	17.7± 0.7	56.7± 3.0	50.0± 1.8	15.6± 0.1	31.2± 1.2	1165± 89
8000ppm	0	-	-	-	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	RETICULOCYTE %
Control	5	2.1± 0.3
500ppm	5	2.3± 0.4
1000ppm	5	2.3± 0.3
2000ppm	5	2.3± 0.1
4000ppm	5	2.6± 0.3
8000ppm	0	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%)
Control	5	3.56± 1.40	
500ppm	5	2.76± 2.23	
1000ppm	5	2.57± 1.04	
2000ppm	5	3.71± 3.25	
4000ppm	5	3.40± 2.42	
8000ppm	0	-	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX F 2

HEMATOLOGY : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	MCH p g	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	5	11.08± 0.35	17.2± 0.5	54.2± 1.8	48.9± 0.2	15.5± 0.2	31.7± 0.3	1066± 54
500ppm	5	11.24± 0.38	17.2± 0.5	54.9± 2.1	48.8± 1.2	15.3± 0.2	31.4± 0.6	1081± 64
1000ppm	5	11.38± 0.40	17.6± 0.5	55.1± 1.5	48.4± 1.0	15.4± 0.2	31.9± 0.4	1110± 46
2000ppm	5	11.35± 0.22	17.6± 0.3	55.4± 1.2	48.8± 0.9	15.5± 0.1	31.8± 0.6	1120± 92
4000ppm	5	11.31± 0.38	17.6± 0.5	55.4± 1.7	48.9± 0.6	15.6± 0.2	31.9± 0.3	1115± 126
8000ppm	0	-	-	-	-	-	-	-

Significant difference ; * : $P \leqq 0.05$ ** : $P \leqq 0.01$ Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	RETICULOCYTE %
Control	5	2.4± 0.4
500ppm	5	2.1± 0.7
1000ppm	5	2.2± 0.7
2000ppm	5	2.4± 0.4
4000ppm	5	2.5± 0.4
8000ppm	0	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%)
Control	5	2.90± 1.80	
500ppm	5	2.85± 1.63	
1000ppm	5	2.74± 1.92	
2000ppm	5	3.22± 2.16	
4000ppm	5	3.25± 1.31	
8000ppm	0	-	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX G 1

GROSS FINDINGS : SUMMARY, MOUSE : MALE : DEAD AND MORIBUND ANIMALS (2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	Group Name / NO. of Animals	Control 0	(%)	500ppm 0	(%)	1000ppm 0	(%)	2000ppm 0	(%)
lung	red zone		-	(-)	-	(-)	-	(-)	-	(-)

Organ	Findings	Group Name / NO. of Animals	4000ppm 0	(%)	8000ppm 5	(%)
lung	red zone		-	(-)	1	(20)

APPENDIX G 2

GROSS FINDINGS : SUMMARY, MOUSE : MALE : SACRIFICED ANIMALS (2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name / NO. of Animals	Control 5	(%)	500ppm 5	(%)	1000ppm 5	(%)	2000ppm 5	(%)
spleen	black zone		0	(0)	0	(0)	1	(20)	0	(0)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name	4000ppm	8000ppm
		NO. of Animals	5 (%)	0 (%)
spleen	black zone		0 (0)	- (-)

APPENDIX G 3

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE : SACRIFICED ANIMALS (2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name / NO. of Animals	Control 5 (%)	500ppm 5 (%)	1000ppm 5 (%)	2000ppm 5 (%)
spleen	black zone		0 (0)	0 (0)	0 (0)	1 (20)
kidney	hydronephrosis		0 (0)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name	4000ppm		8000ppm	
		NO. of Animals	5	(%)	0	(%)
spleen	black zone		1	(20)	-	(-)
kidney	hydronephrosis		1	(20)	-	(-)

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	21.5± 0.3	0.046± 0.008	0.008± 0.001	0.189± 0.006	0.120± 0.005	0.145± 0.009
500ppm	5	20.9± 1.1	0.037± 0.009	0.008± 0.002	0.184± 0.015	0.124± 0.011	0.140± 0.005
1000ppm	5	21.6± 0.6	0.043± 0.010	0.008± 0.002	0.184± 0.021	0.126± 0.009	0.141± 0.012
2000ppm	5	21.4± 0.8	0.044± 0.007	0.008± 0.001	0.178± 0.014	0.137± 0.011	0.144± 0.010
4000ppm	5	22.3± 0.4	0.039± 0.006	0.008± 0.001	0.184± 0.020	0.130± 0.009	0.150± 0.015
8000ppm	0	-	-	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.321± 0.015	0.038± 0.004	0.919± 0.039	0.423± 0.017
500ppm	5	0.361± 0.058	0.039± 0.011	0.934± 0.077	0.424± 0.021
1000ppm	5	0.339± 0.013	0.040± 0.007	0.953± 0.042	0.428± 0.004
2000ppm	5	0.340± 0.023	0.039± 0.005	0.960± 0.037	0.424± 0.013
4000ppm	5	0.349± 0.007	0.044± 0.004	1.045± 0.035**	0.425± 0.009
8000ppm	0	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	17.4± 0.6	0.060± 0.005	0.010± 0.002	0.016± 0.005	0.106± 0.005	0.130± 0.012
500ppm	5	17.2± 0.6	0.057± 0.009	0.010± 0.001	0.012± 0.002	0.107± 0.004	0.132± 0.004
1000ppm	5	17.6± 1.3	0.061± 0.004	0.010± 0.000	0.013± 0.003	0.105± 0.005	0.130± 0.009
2000ppm	5	17.8± 0.6	0.062± 0.008	0.009± 0.002	0.015± 0.007	0.108± 0.008	0.133± 0.007
4000ppm	5	17.8± 0.9	0.044± 0.010**	0.009± 0.001	0.018± 0.008	0.104± 0.012	0.131± 0.012
8000ppm	0	-	-	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.237± 0.006	0.042± 0.006	0.763± 0.030	0.420± 0.012
500ppm	5	0.233± 0.009	0.041± 0.006	0.761± 0.051	0.426± 0.016
1000ppm	5	0.234± 0.013	0.040± 0.003	0.765± 0.048	0.429± 0.008
2000ppm	5	0.251± 0.009	0.045± 0.003	0.811± 0.013	0.425± 0.009
4000ppm	5	0.245± 0.014	0.041± 0.004	0.863± 0.084	0.420± 0.014
8000ppm	0	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 1

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	21.5± 0.3	0.214± 0.038	0.035± 0.005	0.881± 0.024	0.560± 0.027	0.675± 0.038
500ppm	5	20.9± 1.1	0.178± 0.044	0.038± 0.011	0.881± 0.036	0.597± 0.046	0.671± 0.032
1000ppm	5	21.6± 0.6	0.200± 0.043	0.036± 0.008	0.848± 0.089	0.585± 0.043	0.651± 0.045
2000ppm	5	21.4± 0.8	0.205± 0.029	0.039± 0.003	0.832± 0.074	0.640± 0.064	0.673± 0.031
4000ppm	5	22.3± 0.4	0.175± 0.027	0.036± 0.005	0.827± 0.086	0.583± 0.035	0.674± 0.060
8000ppm	0	-	-	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	1.494± 0.074	0.179± 0.017	4.276± 0.168	1.970± 0.068
500ppm	5	1.737± 0.313	0.190± 0.058	4.477± 0.287	2.034± 0.087
1000ppm	5	1.567± 0.089	0.184± 0.026	4.404± 0.174	1.980± 0.054
2000ppm	5	1.591± 0.070	0.183± 0.018	4.490± 0.098	1.985± 0.108
4000ppm	5	1.568± 0.018	0.196± 0.019	4.689± 0.138**	1.910± 0.037
8000ppm	0	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 2

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	17.4± 0.6	0.346± 0.024	0.055± 0.010	0.089± 0.030	0.610± 0.021	0.744± 0.078
500ppm	5	17.2± 0.6	0.333± 0.042	0.057± 0.007	0.070± 0.010	0.622± 0.007	0.768± 0.043
1000ppm	5	17.6± 1.3	0.349± 0.021	0.058± 0.004	0.073± 0.012	0.599± 0.060	0.741± 0.054
2000ppm	5	17.8± 0.6	0.349± 0.038	0.053± 0.008	0.086± 0.036	0.609± 0.061	0.745± 0.024
4000ppm	5	17.8± 0.9	0.247± 0.046**	0.053± 0.005	0.104± 0.047	0.582± 0.043	0.737± 0.045
8000ppm	0	-	-	-	-	-	-

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0552
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	1.358± 0.024	0.241± 0.026	4.376± 0.092	2.408± 0.079
500ppm	5	1.356± 0.096	0.237± 0.027	4.421± 0.149	2.475± 0.049
1000ppm	5	1.334± 0.041	0.230± 0.018	4.354± 0.086	2.449± 0.137
2000ppm	5	1.406± 0.080	0.251± 0.018	4.548± 0.166	2.383± 0.120
4000ppm	5	1.386± 0.156	0.230± 0.025	4.851± 0.253**	2.365± 0.065
8000ppm	0	-	-	-	-

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX J

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY IN THE 2-WEEK INHALATION STUDY OF ISOPROPYL ACETATE

METHODS,UNITS AND DECIMAL PLACE FOR HEMATOLOGY IN THE 2-WEEK INHALATION STUDY OF ISOPROPYL ACETATE

Item	Method*)	Unit	Decimal place
Hematology			
Red blood cell (RBC)	Light scattering method	$\times 10^6/\mu L$	2
Hemoglobin (Hgb)	Cyanmethemoglobin method	g/dL	1
Hematocrit (Hct)	Calculated as RBC×MCV/10	%	1
Mean corpuscular volume (MCV)	Light scattering method	fL	1
Mean corpuscular hemoglobin (MCH)	Calculated as Hgb/RBC×10	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as Hgb/Hct×100	g/dL	1
Platelet	Light scattering method	$\times 10^3/\mu L$	0
Reticulocyte	Light scattering method	%	1
White blood cell (WBC)	Light scattering method	$\times 10^3/\mu L$	2

*) : Automatic blood cell analyzer (ADVIA120 : Bayer Corporation)