

プロピオノニトリ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：0447

# TABLES

## TABLES

- TABLE 1 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 3 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 5 HEMATOLOGY OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 6 HEMATOLOGY OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 7 BIOCHEMISTRY OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 8 ORGAN WEIGHTS OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 9 ORGAN WEIGHTS OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE
- TABLE 10 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE (DEAD AND MORIBUND ANIMALS)
- TABLE 11 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE (DEAD AND MORIBUND ANIMALS)

TABLE 1  
SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Week-Day on Study	0ppm		6.3ppm		12.5ppm		25ppm		50ppm		100ppm						
	Av.Wt. < 5>	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.			
0-0	23.3 ( 5)	5/ 5	23.3 ( 5)	100	5/ 5	23.3 ( 5)	100	5/ 5	23.4 ( 5)	100	5/ 5	23.2 ( 5)	100	5/ 5	23.2 ( 5)	100	5/ 5
1-2	23.9 ( 5)	5/ 5	24.1 ( 5)	101	5/ 5	23.5 ( 5)	98	5/ 5	23.8 ( 5)	100	5/ 5	23.9 ( 5)	100	5/ 5	22.0 ( 2)	92	2/ 5
1-4	23.9 ( 5)	5/ 5	24.6 ( 5)	103	5/ 5	23.6 ( 5)	99	5/ 5	24.0 ( 5)	100	5/ 5	24.1 ( 5)	101	5/ 5	23.2 ( 2)	97	2/ 5
1-7	24.4 ( 5)	5/ 5	25.3 ( 5)	104	5/ 5	23.8 ( 5)	98	5/ 5	24.2 ( 5)	99	5/ 5	24.1 ( 5)	99	5/ 5	23.9 ( 2)	98	2/ 5
2-3	24.8 ( 5)	5/ 5	25.2 ( 5)	102	5/ 5	24.5 ( 5)	99	5/ 5	24.8 ( 5)	100	5/ 5	24.8 ( 5)	100	5/ 5	24.9 ( 2)	100	2/ 5
2-7	25.4 ( 5)	5/ 5	25.9 ( 5)	102	5/ 5	24.7 ( 5)	97	5/ 5	25.3 ( 5)	100	5/ 5	24.6 ( 5)	97	5/ 5	25.0 ( 2)	98	2/ 5

< > : No.of effective animals, ( ) : No.of measured animals      Av.Wt. : Average body weight (Unit : g).

TABLE 2  
SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Week-Day on Study	0ppm		6.3ppm		12.5ppm		25ppm		50ppm		100ppm						
	Av.Wt. < 5>	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.	Av.Wt. < 5>	% of cont.	No.of Surviv.			
0-0	18.3 ( 5)	5/ 5	18.3 ( 5)	100	5/ 5	18.3 ( 5)	100	5/ 5	18.3 ( 5)	100	5/ 5	18.3 ( 5)	100	5/ 5	18.3 ( 5)	100	5/ 5
1-2	18.3 ( 5)	5/ 5	18.3 ( 5)	100	5/ 5	17.9 ( 5)	98	5/ 5	18.6 ( 5)	102	5/ 5	17.8 ( 5)	97	5/ 5	- (-)	-	0/ 5
1-4	18.5 ( 5)	5/ 5	18.9 ( 5)	102	5/ 5	18.6 ( 5)	101	5/ 5	19.4 ( 5)	105	5/ 5	18.7 ( 5)	101	5/ 5	- (-)	-	0/ 5
1-7	18.7 ( 5)	5/ 5	19.4 ( 5)	104	5/ 5	18.7 ( 5)	100	5/ 5	19.6 ( 5)	105	5/ 5	18.8 ( 5)	101	5/ 5	- (-)	-	0/ 5
2-3	19.5 ( 5)	5/ 5	19.2 ( 5)	98	5/ 5	19.4 ( 5)	99	5/ 5	19.9 ( 5)	102	5/ 5	20.1 ( 5)	103	5/ 5	- (-)	-	0/ 5
2-7	19.8 ( 5)	5/ 5	20.0 ( 5)	101	5/ 5	19.9 ( 5)	101	5/ 5	20.7 ( 5)	105	5/ 5	20.2 ( 5)	102	5/ 5	- (-)	-	0/ 5

< > : No.of effective animals, ( ) : No.of measured animals      Av.Wt. : Average body weight (Unit : g).

TABLE 3 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Week-Day on Study	0ppm		6.3ppm			12.5ppm			25ppm			50ppm			100ppm		
	Av.Fc. < 5>	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.
1-7	4.4 ( 5)	5/ 5	4.6 ( 5)	105	5/ 5	4.3 ( 5)	98	5/ 5	4.5 ( 5)	102	5/ 5	4.1 ( 5)	93	5/ 5	3.7 ( 2)	84	2/ 5
2-7	4.4 ( 5)	5/ 5	4.5 ( 5)	102	5/ 5	4.3 ( 5)	98	5/ 5	4.6 ( 5)	105	5/ 5	4.4 ( 5)	100	5/ 5	4.7 ( 2)	107	2/ 5

< > : No.of effective animals, ( ) : No.of measured animals      Av.Fc. : Average food consumption (Unit : g).

TABLE 4 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Week-Day on Study	0ppm		6.3ppm			12.5ppm			25ppm			50ppm			100ppm		
	Av.Fc. < 5>	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.	Av.Fc.	% of cont.	No.of Surviv.
1-7	3.4 ( 5)	5/ 5	3.8 ( 5)	112	5/ 5	3.4 ( 5)	100	5/ 5	3.6 ( 5)	106	5/ 5	3.5 ( 5)	103	5/ 5	- (-)	-	0/ 5
2-7	3.6 ( 5)	5/ 5	3.8 ( 5)	106	5/ 5	3.8 ( 5)	106	5/ 5	3.8 ( 5)	106	5/ 5	4.0 ( 5)	111	5/ 5	- (-)	-	0/ 5

< > : No.of effective animals, ( ) : No.of measured animals      Av.Fc. : Average food consumption (Unit : g).

TABLE 5 HEMATOLOGY OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Group Name	Control	6.3 ppm	12.5 ppm	25 ppm	50 ppm	100 ppm
No. of examined animals	4	4	5	5	5	2
Platelet ( $10^3/\mu\text{L}$ )	1412 $\pm$ 41	1356 $\pm$ 48	1336 $\pm$ 69	1215 $\pm$ 160 *	1220 $\pm$ 90 *	1460 ?

Mean  $\pm$  S.D.  
<sup>\*)</sup> Significant difference,  $p < 0.05$  (Test of Dunnett)  
<sup>\*\*)</sup> Significant difference,  $p < 0.01$  (Test of Dunnett)  
<sup>?)</sup> The test of Dunnett could not be applied because number of data was less than three.

TABLE 6 HEMATOLOGY OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Group Name	Control	6.3 ppm	12.5 ppm	25 ppm	50 ppm	100 ppm
No. of examined animals	4	5	5	5	5	0
Red blood cell ( $10^6/\mu\text{L}$ )	10.98 $\pm$ 0.40	10.75 $\pm$ 0.40	10.82 $\pm$ 0.39	11.01 $\pm$ 0.30	10.36 $\pm$ 0.38	—
Hemoglobin (g/dL)	17.0 $\pm$ 0.6	16.4 $\pm$ 0.5	16.8 $\pm$ 0.4	16.9 $\pm$ 0.4	16.0 $\pm$ 0.6	—
Hematocrit (%)	50.3 $\pm$ 1.8	49.1 $\pm$ 1.4	49.2 $\pm$ 0.8	50.2 $\pm$ 1.0	47.6 $\pm$ 1.4 *	—

Mean  $\pm$  S.D.  
<sup>\*)</sup> Significant difference,  $p < 0.05$  (Test of Dunnett)  
<sup>\*\*)</sup> Significant difference,  $p < 0.01$  (Test of Dunnett)

TABLE 7 BIOCHEMISTRY OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Group Name	Control	6.3 ppm	12.5 ppm	25 ppm	50 ppm	100 ppm
No. of examined animals	4	5	5	5	5	2
Total protein (g/dL)	5.3 ± 0.1	5.2 ± 0.1	5.2 ± 0.2	5.1 ± 0.2	5.0 ± 0.2	4.6 ?
Albumin (g/dL)	3.4 ± 0.2	3.2 ± 0.1	3.3 ± 0.1	3.1 ± 0.2	3.1 ± 0.2	2.8 ?
Triglyceride (mg/dL)	20 ± 8	14 ± 5	10 ± 3 *	13 ± 5	11 ± 3 *	14 ?

Mean ± S.D.

\*) Significant difference,  $p < 0.05$  (Test of Dunnett)

\*\*) Significant difference,  $p < 0.01$  (Test of Dunnett)

?) The test of Dunnett could not be applied because number of data was less than three.

TABLE 8 ORGAN WEIGHTS OF MALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Group Name	Control	6.3 ppm	12.5 ppm	25 ppm	50 ppm	100 ppm	
No. of examined animals	5	5	5	5	5	2	
Body weight (g)	21.2 ± 0.6	21.7 ± 0.9	20.8 ± 0.7	21.1 ± 0.4	21.1 ± 1.1	21.7	?
Thymus (g)	0.044 ± 0.004	0.046 ± 0.003	0.041 ± 0.007	0.039 ± 0.009	0.041 ± 0.004	0.022	?
Thymus (%)	0.207 ± 0.016	0.212 ± 0.019	0.196 ± 0.030	0.184 ± 0.041	0.193 ± 0.022	0.099	?
Liver (g)	0.987 ± 0.037	1.017 ± 0.051	0.994 ± 0.057	1.024 ± 0.043	0.977 ± 0.063	1.148	?
Liver (%)	4.650 ± 0.143	4.687 ± 0.065	4.789 ± 0.238	4.848 ± 0.162	4.636 ± 0.171	5.302	?

Mean ± S.D.

<sup>\*)</sup> Significant difference, p<0.05 (Test of Dunnett)

<sup>\*\*)</sup> Significant difference, p<0.01 (Test of Dunnett)

<sup>?)</sup> The test of Dunnett could not be applied because number of data was less than three.

TABLE 9 ORGAN WEIGHTS OF FEMALE MICE IN THE 2-WEEK INHALATION STUDY OF PROPIONONITRILE

Group Name	Control	6.3 ppm	12.5 ppm	25 ppm	50 ppm	100 ppm	
No. of examined animals	5	5	5	5	5	0	
Body weight (g)	16.2 ± 0.4	16.4 ± 0.8	16.1 ± 0.5	16.7 ± 0.9	16.5 ± 0.6	—	
Liver (g)	0.739 ± 0.022	0.747 ± 0.014	0.764 ± 0.009	0.801 ± 0.033 *	0.800 ± 0.042 *	—	
Liver (%)	4.577 ± 0.121	4.552 ± 0.144	4.753 ± 0.169	4.810 ± 0.176	4.838 ± 0.173	—	

Mean ± S.D.

<sup>\*)</sup> Significant difference, p<0.05 (Test of Dunnett)

<sup>\*\*)</sup> Significant difference, p<0.01 (Test of Dunnett)

TABLE 10 INCIDENCES OF SELECTED LESIONS OF MALE MICE IN THE 2-WEEK  
 INHALATION STUDY OF PROPIONONITRILE  
 (DEAD AND MORIBUND ANIMALS)

Group		100 ppm
Number of examined animals		3
Organ	Grade	
Findings		
Nasal cavity Congestion	1+	3
Lung Congestion	1+	3
Grade	1+: Slight	



TABLE 11 INCIDENCES OF SELECTED LESIONS OF FEMALE MICE IN THE 2-WEEK  
 INHALATION STUDY OF PROPIONONITRILE  
 (DEAD AND MORIBUND ANIMALS)

Group		100 ppm
Number of examined animals		5
Organ Findings	Grade	
Nasal cavity Congestion	1+	2
Lung Congestion	1+	2
Hemorrhage	1+	2
Grade	1+: Slight	