

アリルクロリドのマウスを用いた
吸入による 13 週間毒性試験報告書

試験番号 : 0341

TABLES

TABLES

- TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE
- TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE
- TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE
- TABLE 4 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE
- TABLE 5 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

| | |
|-------------------------------------|---|
| <Method of Administration> | Inhalation |
| <Number of Groups> | Male 6, Female 6 |
| <Size of Groups> | 10 males and 10 females of each group |
| <Animals> | Strain and Species Crj:BDF1 mouse |
| | Animal Source Charles River Japan, Inc. |
| | Duration Held Before Study 2 wk |
| | Age When Placed on Study 6 wk |
| | Age When Killed 19 wk |
| <Doses> | Male and Female 0, 12.5, 25, 50, 100 or 200ppm |
| <Duration of Dosing> | 6 h/d, 5 d/wk for 13 wk |
| <Animal Maintenance> | Feed CRF-1 (Oriental Yeast Co., Ltd.) Sterilized by γ -ray Available <i>ad libitum</i> |
| | Water Filtrated and sterilized by ultraviolet ray Automatic watering system Available <i>ad libitum</i> |
| | Animal per Cage Single (stainless steel wire) |
| | Animal Room Environment Barrier system Temperature : 21±2°C Humidity : 55±15% Fluorescent light 12 h/d 15~17 room air changes /h |
| | Chamber Environment Barrier system Temperature : 20~24°C Humidity : 30~70% 15±1 air changes /h |
| <Type and Frequency of Observation> | Clinical Sign Observed 1 per day for mortality, Detailed clinical observation performed on once weekly before exposure. |
| | Body Weight Weighed 1 per week |
| | Food Consumption Weighed 1 per week |

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
(Continued) IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

<Urinalysis>

Urinalysis performed on all animals that survived to end of dosing period using fresh urine collection.

The following measurement parameters were examined;
pH, Protein, Glucose, Ketone body,
Occult blood, Urobilinogen.

<Hematology>

Hematological examination performed on scheduled sacrificed animals.

The following measurement parameters were examined;
Red blood cell (RBC), Hemoglobin, Hematocrit,
Mean Corpuscular Volume (MCV),
Mean Corpuscular hemoglobin (MCH),
Mean Corpuscular hemoglobin concentrate (MCHC),
Platelet, White blood cell (WBC), Differential WBC.

<Biochemistry>

Biochemical examination performed on scheduled sacrificed animals.

The following measurement parameters were examined;
Total protein, Albumin, A/G ratio,
Total bilirubin, Glucose, Total cholesterol,
Triglyceride, Phospholipid,
Glutamic oxaloacetic transaminase (GOT),
Glutamic pyruvic transaminase (GPT),
Lactate dehydrogenase (LDH),
Alkaline phosphatase (ALP),
 γ -Glutamyl transpeptidase (γ -GTP),
Creatine phosphokinase (CPK),
Urea nitrogen, Sodium, Potassium, Chloride,
Calcium, Inorganic phosphorus.

<Necropsy>

Necropsy performed on all animals.

<Organ Weight>

Organ weight measurement performed on scheduled sacrificed animals.

The following organs were weighed;
thymus, adrenal, testis, ovary, heart, lung, kidney, spleen, liver, brain.

<Histopathologic Examination>

Histopathologic examination performed on all animals.

The following organs were examined;
skin, nasal cavity, nasopharynx, larynx, trachea, lung,
bone marrow, lymph node, thymus, spleen, heart, tongue,
salivary gland, esophagus, stomach, small intestine,
large intestine, liver, gall bladder, pancreas, kidney, urinary bladder,
pituitary, thyroid, parathyroid, adrenal, testis, epididymis, seminal vesicle,
prostate, ovary, uterus, vagina, mammary gland,
brain, spinal cord, peripheral nerve, eye, harderian gland, muscle, bone.

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

| Week-Day on Study | 0ppm | | 12.5ppm | | | 25ppm | | | 50ppm | | | 100ppm | | | 200ppm | | |
|----------------------|-----------|--------------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|
| | Av.Wt. | No.of Surviv. <10> | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. |
| 0-0 | 22.0 (10) | 10/10 | 22.0 (10) | 100 | 10/10 | 22.0 (10) | 100 | 10/10 | 22.0 (10) | 100 | 10/10 | 22.0 (10) | 100 | 10/10 | 22.0 (10) | 100 | 10/10 |
| 1-7 | 22.4 (10) | 10/10 | 23.4 (10) | 104 | 10/10 | 22.8 (10) | 102 | 10/10 | 23.1 (10) | 103 | 10/10 | 23.4 (10) | 104 | 10/10 | 23.2 (10) | 104 | 10/10 |
| 2-7 | 24.4 (10) | 10/10 | 24.3 (10) | 100 | 10/10 | 23.7 (10) | 97 | 10/10 | 23.7 (10) | 97 | 10/10 | 24.1 (10) | 99 | 10/10 | 24.2 (10) | 99 | 10/10 |
| 3-7 | 25.0 (10) | 10/10 | 24.8 (10) | 99 | 10/10 | 24.4 (10) | 98 | 10/10 | 24.2 (10) | 97 | 10/10 | 24.8 (10) | 99 | 10/10 | 25.0 (10) | 100 | 10/10 |
| 4-7 | 26.0 (10) | 10/10 | 25.7 (10) | 99 | 10/10 | 24.9 (10) | 96 | 10/10 | 24.7 (9) | 95 | 9/10 | 25.6 (10) | 98 | 10/10 | 25.5 (10) | 98 | 10/10 |
| 5-7 | 26.5 (10) | 10/10 | 26.4 (10) | 100 | 10/10 | 25.7 (10) | 97 | 10/10 | 25.4 (9) | 96 | 9/10 | 26.4 (10) | 100 | 10/10 | 26.1 (10) | 98 | 10/10 |
| 6-7 | 26.8 (10) | 10/10 | 26.6 (10) | 99 | 10/10 | 25.6 (10) | 96 | 10/10 | 25.3 (9) | 94 | 9/10 | 26.9 (10) | 100 | 10/10 | 26.4 (10) | 99 | 10/10 |
| 7-7 | 27.4 (10) | 10/10 | 27.0 (10) | 99 | 10/10 | 26.2 (10) | 96 | 10/10 | 26.0 (9) | 95 | 9/10 | 27.5 (10) | 100 | 10/10 | 27.6 (10) | 101 | 10/10 |
| 8-7 | 27.9 (10) | 10/10 | 27.5 (10) | 99 | 10/10 | 26.2 (10) | 94 | 10/10 | 26.3 (9) | 94 | 9/10 | 27.1 (10) | 97 | 10/10 | 27.5 (10) | 99 | 10/10 |
| 9-7 | 28.1 (10) | 10/10 | 28.1 (10) | 100 | 10/10 | 27.3 (10) | 97 | 10/10 | 27.6 (9) | 98 | 9/10 | 27.7 (10) | 99 | 10/10 | 27.8 (10) | 99 | 10/10 |
| 10-7 | 28.8 (10) | 10/10 | 28.9 (10) | 100 | 10/10 | 27.9 (10) | 97 | 10/10 | 27.3 (9) | 95 | 9/10 | 28.7 (10) | 100 | 10/10 | 28.8 (10) | 100 | 10/10 |
| 11-7 | 29.0 (10) | 10/10 | 29.1 (10) | 100 | 10/10 | 28.7 (10) | 99 | 10/10 | 28.1 (9) | 97 | 9/10 | 29.2 (10) | 101 | 10/10 | 28.5 (10) | 98 | 10/10 |
| 12-7 | 29.6 (10) | 10/10 | 29.9 (10) | 101 | 10/10 | 29.1 (10) | 98 | 10/10 | 28.9 (9) | 98 | 9/10 | 29.2 (10) | 99 | 10/10 | 29.2 (10) | 99 | 10/10 |
| 13-7 | 30.5 (10) | 10/10 | 30.3 (10) | 99 | 10/10 | 29.7 (10) | 97 | 10/10 | 29.3 (9) | 96 | 9/10 | 29.5 (10) | 97 | 10/10 | 30.0 (10) | 98 | 10/10 |

< > : No.of effective animals, () : No.of measured animals Av.Wt. : g

TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

| Week-Day on Study | 0ppm | | 12.5ppm | | | 25ppm | | | 50ppm | | | 100ppm | | | 200ppm | | |
|----------------------|-----------|--------------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|-----------|-----------------------|------------------|
| | Av.Wt. | No.of Surviv. <10> | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. | Av.Wt. | % of cont. <10> | No.of Surviv. |
| 0-0 | 18.5 (10) | 10/10 | 18.6 (10) | 101 | 10/10 | 18.5 (10) | 100 | 10/10 | 18.6 (10) | 101 | 10/10 | 18.5 (10) | 100 | 10/10 | 18.6 (10) | 101 | 10/10 |
| 1-7 | 19.4 (10) | 10/10 | 19.5 (10) | 101 | 10/10 | 19.4 (10) | 100 | 10/10 | 19.1 (10) | 98 | 10/10 | 19.4 (10) | 100 | 10/10 | 19.0 (10) | 98 | 10/10 |
| 2-7 | 20.4 (10) | 10/10 | 20.1 (10) | 99 | 10/10 | 20.4 (10) | 100 | 10/10 | 19.8 (10) | 97 | 10/10 | 20.3 (10) | 100 | 10/10 | 20.2 (10) | 99 | 10/10 |
| 3-7 | 20.9 (10) | 10/10 | 21.1 (10) | 101 | 10/10 | 21.1 (10) | 101 | 10/10 | 21.1 (10) | 101 | 10/10 | 20.7 (10) | 99 | 10/10 | 21.2 (10) | 101 | 10/10 |
| 4-7 | 22.2 (10) | 10/10 | 21.7 (10) | 98 | 10/10 | 21.5 (10) | 97 | 10/10 | 21.5 (10) | 97 | 10/10 | 21.7 (10) | 98 | 10/10 | 21.2 (10) | 95 | 10/10 |
| 5-7 | 22.4 (10) | 10/10 | 22.6 (10) | 101 | 10/10 | 22.2 (10) | 99 | 10/10 | 22.3 (10) | 100 | 10/10 | 22.2 (10) | 99 | 10/10 | 21.7 (10) | 97 | 10/10 |
| 6-7 | 23.1 (10) | 10/10 | 23.1 (10) | 100 | 10/10 | 22.9 (10) | 99 | 10/10 | 22.7 (10) | 98 | 10/10 | 22.7 (10) | 98 | 10/10 | 22.3 (10) | 97 | 10/10 |
| 7-7 | 23.2 (10) | 10/10 | 23.3 (10) | 100 | 10/10 | 23.4 (10) | 101 | 10/10 | 23.4 (10) | 101 | 10/10 | 23.3 (10) | 100 | 10/10 | 23.1 (10) | 100 | 10/10 |
| 8-7 | 23.1 (10) | 10/10 | 23.8 (10) | 103 | 10/10 | 23.3 (10) | 101 | 10/10 | 23.0 (10) | 100 | 10/10 | 23.4 (10) | 101 | 10/10 | 23.0 (10) | 100 | 10/10 |
| 9-7 | 23.3 (10) | 10/10 | 24.0 (10) | 103 | 10/10 | 23.8 (10) | 102 | 10/10 | 23.2 (10) | 100 | 10/10 | 23.4 (10) | 100 | 10/10 | 22.9 (10) | 98 | 10/10 |
| 10-7 | 23.6 (10) | 10/10 | 24.2 (10) | 103 | 10/10 | 23.8 (10) | 101 | 10/10 | 23.8 (10) | 101 | 10/10 | 23.5 (10) | 100 | 10/10 | 23.1 (10) | 98 | 10/10 |
| 11-7 | 24.3 (10) | 10/10 | 24.6 (10) | 101 | 10/10 | 23.9 (10) | 98 | 10/10 | 23.8 (10) | 98 | 10/10 | 23.7 (10) | 98 | 10/10 | 23.0 (10) | 95 | 10/10 |
| 12-7 | 24.5 (10) | 10/10 | 24.6 (10) | 100 | 10/10 | 24.9 (10) | 102 | 10/10 | 23.8 (10) | 97 | 10/10 | 24.0 (10) | 98 | 10/10 | 23.9 (10) | 98 | 10/10 |
| 13-7 | 24.3 (10) | 10/10 | 25.2 (10) | 104 | 10/10 | 24.3 (10) | 100 | 10/10 | 24.3 (10) | 100 | 10/10 | 24.1 (10) | 99 | 10/10 | 24.1 (10) | 99 | 10/10 |

< > : No.of effective animals, () : No.of measured animals Av.Wt. : g

TABLE 4 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

| Week-Day on Study | 0ppm | | 12.5ppm | | 25ppm | | 50ppm | | 100ppm | | 200ppm | | | | | | |
|----------------------|----------|--------------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----|-------|
| | Av.FC. | No.of Surviv. <10> | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | | | |
| 1-7 | 4.0 (10) | 10/10 | 4.3 (10) | 108 | 10/10 | 4.0 (10) | 100 | 10/10 | 4.2 (10) | 105 | 10/10 | 4.2 (10) | 105 | 10/10 | 4.1 (10) | 103 | 10/10 |
| 2-7 | 4.2 (10) | 10/10 | 4.2 (10) | 100 | 10/10 | 4.1 (10) | 98 | 10/10 | 4.1 (10) | 98 | 10/10 | 3.9 (10) | 93 | 10/10 | 4.2 (10) | 100 | 10/10 |
| 3-7 | 4.2 (10) | 10/10 | 4.2 (10) | 100 | 10/10 | 4.2 (10) | 100 | 10/10 | 4.2 (10) | 100 | 10/10 | 4.3 (10) | 102 | 10/10 | 4.4 (10) | 105 | 10/10 |
| 4-7 | 4.3 (10) | 10/10 | 4.4 (10) | 102 | 10/10 | 4.2 (10) | 98 | 10/10 | 4.2 (9) | 98 | 9/10 | 4.2 (10) | 98 | 10/10 | 4.2 (10) | 98 | 10/10 |
| 5-7 | 4.2 (10) | 10/10 | 4.5 (10) | 107 | 10/10 | 4.4 (10) | 105 | 10/10 | 4.3 (9) | 102 | 9/10 | 4.3 (10) | 102 | 10/10 | 4.4 (10) | 105 | 10/10 |
| 6-7 | 4.3 (10) | 10/10 | 4.4 (10) | 102 | 10/10 | 4.3 (10) | 100 | 10/10 | 4.2 (9) | 98 | 9/10 | 4.2 (10) | 98 | 10/10 | 4.5 (10) | 105 | 10/10 |
| 7-7 | 4.3 (10) | 10/10 | 4.5 (10) | 105 | 10/10 | 4.5 (10) | 105 | 10/10 | 4.3 (9) | 100 | 9/10 | 4.3 (10) | 100 | 10/10 | 4.6 (10) | 107 | 10/10 |
| 8-7 | 4.4 (10) | 10/10 | 4.5 (10) | 102 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.2 (9) | 95 | 9/10 | 4.1 (10) | 93 | 10/10 | 4.4 (10) | 100 | 10/10 |
| 9-7 | 4.3 (10) | 10/10 | 4.6 (10) | 107 | 10/10 | 4.4 (10) | 102 | 10/10 | 4.4 (9) | 102 | 9/10 | 4.3 (10) | 100 | 10/10 | 4.5 (10) | 105 | 10/10 |
| 10-7 | 4.4 (10) | 10/10 | 4.7 (10) | 107 | 10/10 | 4.4 (10) | 100 | 10/10 | 4.4 (9) | 100 | 9/10 | 4.4 (10) | 100 | 10/10 | 4.6 (10) | 105 | 10/10 |
| 11-7 | 4.3 (10) | 10/10 | 4.6 (10) | 107 | 10/10 | 4.6 (10) | 107 | 10/10 | 4.4 (9) | 102 | 9/10 | 4.4 (10) | 102 | 10/10 | 4.4 (10) | 102 | 10/10 |
| 12-7 | 4.4 (10) | 10/10 | 4.7 (10) | 107 | 10/10 | 4.5 (10) | 102 | 10/10 | 4.5 (9) | 102 | 9/10 | 4.4 (10) | 100 | 10/10 | 4.5 (10) | 102 | 10/10 |
| 13-7 | 4.5 (10) | 10/10 | 4.6 (10) | 102 | 10/10 | 4.6 (10) | 102 | 10/10 | 4.5 (9) | 100 | 9/10 | 4.3 (10) | 96 | 10/10 | 4.6 (10) | 102 | 10/10 |

< > : No.of effective animals, () : No.of measured animals Av.FC. : g

TABLE 5 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

| Week-Day on Study | 0ppm | | 12.5ppm | | | 25ppm | | | 50ppm | | | 100ppm | | | 200ppm | | |
|----------------------|----------|--------------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|----------|-----------------------|------------------|
| | Av.FC. | No.of Surviv. <10> | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. | Av.FC. | % of cont. <10> | No.of Surviv. |
| 1-7 | 3.7 (10) | 10/10 | 3.8 (10) | 103 | 10/10 | 3.6 (10) | 97 | 10/10 | 3.5 (10) | 95 | 10/10 | 3.6 (10) | 97 | 10/10 | 3.4 (10) | 92 | 10/10 |
| 2-7 | 3.6 (10) | 10/10 | 3.6 (10) | 100 | 10/10 | 3.7 (10) | 103 | 10/10 | 3.7 (10) | 103 | 10/10 | 3.6 (10) | 100 | 10/10 | 3.7 (10) | 103 | 10/10 |
| 3-7 | 3.9 (10) | 10/10 | 3.9 (10) | 100 | 10/10 | 3.8 (10) | 97 | 10/10 | 3.8 (10) | 97 | 10/10 | 3.8 (10) | 97 | 10/10 | 3.9 (10) | 100 | 10/10 |
| 4-7 | 4.0 (10) | 10/10 | 4.0 (10) | 100 | 10/10 | 3.9 (10) | 98 | 10/10 | 3.9 (10) | 98 | 10/10 | 3.9 (10) | 98 | 10/10 | 3.8 (10) | 95 | 10/10 |
| 5-7 | 4.1 (10) | 10/10 | 4.1 (10) | 100 | 10/10 | 4.1 (10) | 100 | 10/10 | 4.0 (10) | 98 | 10/10 | 4.0 (10) | 98 | 10/10 | 4.0 (10) | 98 | 10/10 |
| 6-7 | 4.1 (10) | 10/10 | 4.1 (10) | 100 | 10/10 | 4.2 (10) | 102 | 10/10 | 4.1 (10) | 100 | 10/10 | 4.1 (10) | 100 | 10/10 | 4.1 (10) | 100 | 10/10 |
| 7-7 | 4.4 (10) | 10/10 | 4.4 (10) | 100 | 10/10 | 4.2 (10) | 95 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.2 (10) | 95 | 10/10 |
| 8-7 | 4.4 (10) | 10/10 | 4.4 (10) | 100 | 10/10 | 4.2 (10) | 95 | 10/10 | 4.1 (10) | 93 | 10/10 | 4.1 (10) | 93 | 10/10 | 4.1 (10) | 93 | 10/10 |
| 9-7 | 4.3 (10) | 10/10 | 4.3 (10) | 100 | 10/10 | 4.2 (10) | 98 | 10/10 | 4.2 (10) | 98 | 10/10 | 4.2 (10) | 98 | 10/10 | 4.2 (10) | 98 | 10/10 |
| 10-7 | 4.3 (10) | 10/10 | 4.3 (10) | 100 | 10/10 | 4.3 (10) | 100 | 10/10 | 4.1 (10) | 95 | 10/10 | 4.1 (10) | 95 | 10/10 | 4.2 (10) | 98 | 10/10 |
| 11-7 | 4.5 (10) | 10/10 | 4.6 (10) | 102 | 10/10 | 4.4 (10) | 98 | 10/10 | 4.1 (10) | 91 | 10/10 | 4.2 (10) | 93 | 10/10 | 4.3 (10) | 96 | 10/10 |
| 12-7 | 4.4 (10) | 10/10 | 4.2 (10) | 95 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.1 (10) | 93 | 10/10 | 4.2 (10) | 95 | 10/10 | 4.3 (10) | 98 | 10/10 |
| 13-7 | 4.4 (10) | 10/10 | 4.4 (10) | 100 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.3 (10) | 98 | 10/10 | 4.3 (10) | 98 | 10/10 |

< > : No.of effective animals, () : No.of measured animals Av.FC. : g