グリシドールのラットを用いた
吸入による 13 週間毒性試験報告書

試験番号：０３１６

TABLES

TABLES

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

<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
F344/DuCrj(Fischer)rat
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, 10, 20, 40, 80 or 160ppm
<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 *ad libitum*
Water
Filtrated and sterilized by ultraviolet ray
Automatic watering system
Available *ad libitum*
Animal per Cage
Single (stainless steel wire)
Animal Room Environment
Barrier system
Temperature : 21±2℃
Humidity : 60±10%
Fluorescent light 12 h/d
15~17 room air changes /h
Chamber Environment
Barrier system
Temperature : 20~24℃
Humidity : 30~70%
12±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 wk
Food Consumption
Weighed 1 per wk

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

<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, Bilirubin,
Occult blood, Urobilinogen.

<Hematology>

Hematological examination performed on schedule 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, Reticulocyte,
Prothrombin time (PT),
Activated partial thromboplastin time (APTT),
White blood cell (WBC), Differential WBC.

<Biochemistry>

Biochemistrical examination performed on schedule 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, Creatinine,
Sodium, Potassium, Chloride,
Calcium, Inorganic phosphorus.

<Necropsy>

Necropsy performed on all animals.

<Organ Weight>

Organ weight measurement performed on schedule 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, 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 RATS IN THE 13-WEEK INHALATION STUDY OF GLYCIDOL

Week-Day on Study	0ppm Av.Wt.	0ppm No.of Surviv. <10>	10ppm Av.Wt.	10ppm % of cont. <10>	10ppm No.of Surviv.	20ppm Av.Wt.	20ppm % of cont. <10>	20ppm No.of Surviv.	40ppm Av.Wt.	40ppm % of cont. <10>	40ppm No.of Surviv.	80ppm Av.Wt.	80ppm % of cont. <10>	80ppm No.of Surviv.	160ppm Av.Wt.	160ppm % of cont. <10>	160ppm No.of Surviv.
0-0	107 (10)	10/10	107 (10)	100	10/10	107 (10)	100	10/10	107 (10)	100	10/10	107 (10)	100	10/10	107 (10)	100	10/10
1-7	135 (10)	10/10	134 (10)	99	10/10	133 (10)	99	10/10	130 (10)	96	10/10	125 (10)	93	10/10	100 (9)	74	9/10
2-7	163 (10)	10/10	162 (10)	99	10/10	161 (10)	99	10/10	158 (10)	97	10/10	150 (10)	92	10/10	99 (7)	61	7/10
3-7	183 (10)	10/10	182 (10)	99	10/10	180 (10)	98	10/10	178 (10)	97	10/10	170 (10)	93	10/10	106 (7)	58	7/10
4-7	202 (10)	10/10	199 (10)	99	10/10	197 (10)	98	10/10	195 (10)	97	10/10	187 (10)	93	10/10	113 (6)	56	6/10
5-7	219 (10)	10/10	215 (10)	98	10/10	211 (10)	96	10/10	210 (10)	96	10/10	201 (10)	92	10/10	114 (6)	52	6/10
6-7	231 (10)	10/10	226 (10)	98	10/10	222 (10)	96	10/10	220 (10)	95	10/10	213 (10)	92	10/10	122 (6)	53	6/10
7-7	243 (10)	10/10	236 (10)	97	10/10	231 (10)	95	10/10	229 (10)	94	10/10	219 (10)	90	10/10	122 (6)	50	6/10
8-7	255 (10)	10/10	247 (10)	97	10/10	240 (10)	94	10/10	240 (10)	94	10/10	227 (10)	89	10/10	134 (5)	53	5/10
9-7	266 (10)	10/10	257 (10)	97	10/10	251 (10)	94	10/10	249 (10)	94	10/10	235 (10)	88	10/10	137 (5)	52	5/10
10-7	274 (10)	10/10	264 (10)	96	10/10	260 (10)	95	10/10	255 (10)	93	10/10	242 (10)	88	10/10	141 (5)	51	5/10
11-7	281 (10)	10/10	271 (10)	96	10/10	265 (10)	94	10/10	262 (10)	93	10/10	246 (10)	88	10/10	141 (5)	50	5/10
12-7	289 (10)	10/10	276 (10)	96	10/10	270 (10)	93	10/10	267 (10)	92	10/10	251 (10)	87	10/10	142 (5)	49	5/10
13-7	294 (10)	10/10	280 (10)	95	10/10	274 (10)	93	10/10	274 (10)	93	10/10	255 (10)	87	10/10	142 (5)	48	5/10

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

TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF GLYCIDOL

Week-Day on Study	0ppm		10ppm			20ppm			40ppm			80ppm			160ppm		
	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	94 (10)	10/10	94 (10)	100	10/10	95 (10)	101	10/10	95 (10)	101	10/10	95 (10)	101	10/10	95 (10)	101	10/10
1-7	112 (10)	10/10	110 (10)	98	10/10	108 (10)	96	10/10	109 (10)	97	10/10	104 (10)	93	10/10	83 (10)	74	10/10
2-7	126 (10)	10/10	123 (10)	98	10/10	121 (10)	96	10/10	122 (10)	97	10/10	116 (10)	92	10/10	78 (9)	62	9/10
3-7	135 (10)	10/10	130 (10)	96	10/10	128 (10)	95	10/10	128 (10)	95	10/10	124 (10)	92	10/10	81 (7)	60	7/10
4-7	142 (10)	10/10	138 (10)	97	10/10	133 (10)	94	10/10	134 (10)	94	10/10	129 (10)	91	10/10	83 (6)	58	6/10
5-7	149 (10)	10/10	143 (10)	96	10/10	139 (10)	93	10/10	137 (10)	92	10/10	134 (10)	90	10/10	88 (5)	59	5/10
6-7	153 (10)	10/10	147 (10)	96	10/10	142 (10)	93	10/10	139 (10)	91	10/10	138 (10)	90	10/10	88 (5)	58	5/10
7-7	156 (10)	10/10	150 (10)	96	10/10	147 (10)	94	10/10	143 (10)	92	10/10	141 (10)	90	10/10	91 (3)	58	3/10
8-7	162 (10)	10/10	153 (10)	94	10/10	150 (10)	93	10/10	145 (10)	90	10/10	142 (10)	88	10/10	99 (2)	61	2/10
9-7	164 (10)	10/10	156 (10)	95	10/10	152 (10)	93	10/10	149 (10)	91	10/10	148 (10)	90	10/10	101 (2)	62	2/10
10-7	169 (10)	10/10	160 (10)	95	10/10	155 (10)	92	10/10	152 (10)	90	10/10	148 (10)	88	10/10	105 (2)	62	2/10
11-7	173 (10)	10/10	162 (10)	94	10/10	157 (10)	91	10/10	153 (10)	88	10/10	152 (10)	88	10/10	99 (2)	57	2/10
12-7	175 (10)	10/10	165 (10)	94	10/10	159 (10)	91	10/10	155 (10)	89	10/10	152 (10)	87	10/10	104 (2)	59	2/10
13-7	179 (10)	10/10	166 (10)	93	10/10	162 (10)	91	10/10	156 (10)	87	10/10	153 (10)	85	10/10	100 (2)	56	2/10

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

TABLE 4 FOOD CONSUMPTION CHANGES OF MALE RATS IN THE 13-WEEK INHALATION STUDY OF GLYCIDOL

Week-Day on Study	0ppm		10ppm			20ppm			40ppm			80ppm			160ppm		
	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	13.2 (10)	10/10	13.0 (10)	98	10/10	13.2 (10)	100	10/10	12.1 (10)	92	10/10	11.2 (10)	85	10/10	6.3 (9)	48	9/10
2-7	14.3 (10)	10/10	14.0 (10)	98	10/10	14.3 (10)	100	10/10	13.6 (10)	95	10/10	13.0 (10)	91	10/10	7.4 (7)	52	7/10
3-7	15.4 (10)	10/10	15.3 (10)	99	10/10	15.8 (10)	103	10/10	14.7 (10)	95	10/10	14.7 (10)	95	10/10	8.4 (7)	55	7/10
4-7	16.2 (10)	10/10	15.4 (10)	95	10/10	16.0 (10)	99	10/10	15.5 (10)	96	10/10	15.0 (10)	93	10/10	9.6 (6)	59	6/10
5-7	15.8 (10)	10/10	15.0 (10)	95	10/10	15.1 (10)	96	10/10	14.9 (10)	94	10/10	14.6 (10)	92	10/10	8.6 (6)	54	6/10
6-7	15.6 (10)	10/10	14.7 (10)	94	10/10	15.0 (10)	96	10/10	14.8 (10)	95	10/10	15.3 (10)	98	10/10	9.0 (6)	58	6/10
7-7	16.0 (10)	10/10	15.3 (10)	96	10/10	15.3 (10)	96	10/10	14.7 (10)	92	10/10	14.2 (10)	89	10/10	8.6 (6)	54	6/10
8-7	15.3 (10)	10/10	14.4 (10)	94	10/10	14.5 (10)	95	10/10	14.6 (10)	95	10/10	14.6 (10)	95	10/10	9.2 (5)	60	5/10
9-7	15.5 (10)	10/10	14.5 (10)	94	10/10	14.4 (10)	93	10/10	14.6 (10)	94	10/10	14.2 (10)	92	10/10	9.0 (5)	58	5/10
10-7	16.0 (10)	10/10	14.4 (10)	90	10/10	14.3 (10)	89	10/10	14.2 (10)	89	10/10	14.1 (10)	88	10/10	9.8 (5)	61	5/10
11-7	15.3 (10)	10/10	14.6 (10)	95	10/10	14.5 (10)	95	10/10	14.2 (10)	93	10/10	13.9 (10)	91	10/10	9.3 (5)	61	5/10
12-7	15.5 (10)	10/10	14.2 (10)	92	10/10	14.2 (10)	92	10/10	14.1 (10)	91	10/10	13.9 (10)	90	10/10	9.7 (5)	63	5/10
13-7	15.2 (10)	10/10	14.1 (10)	93	10/10	14.1 (10)	93	10/10	14.5 (10)	95	10/10	13.6 (10)	89	10/10	9.3 (5)	61	5/10

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

TABLE 5 FOOD CONSUMPTION CHANGES OF FEMALE RATS IN THE 13-WEEK INHALATION STUDY OF GLYCIDOL

Week-Day on Study	0ppm Av.FC.	0ppm No.of Surviv. <10>	10ppm Av.FC.	10ppm % of cont. <10>	10ppm No.of Surviv.	20ppm Av.FC.	20ppm % of cont. <10>	20ppm No.of Surviv.	40ppm Av.FC.	40ppm % of cont. <10>	40ppm No.of Surviv.	80ppm Av.FC.	80ppm % of cont. <10>	80ppm No.of Surviv.	160ppm Av.FC.	160ppm % of cont. <10>	160ppm No.of Surviv.
1-7	11.3 (10)	10/10	10.3 (10)	91	10/10	10.9 (10)	96	10/10	10.3 (10)	91	10/10	9.0 (10)	80	10/10	4.8 (10)	42	10/10
2-7	11.4 (10)	10/10	10.8 (10)	95	10/10	11.0 (10)	96	10/10	10.8 (10)	95	10/10	10.3 (10)	90	10/10	5.8 (9)	51	9/10
3-7	11.4 (10)	10/10	10.9 (10)	96	10/10	10.9 (10)	96	10/10	10.7 (10)	94	10/10	10.7 (10)	94	10/10	6.6 (7)	58	7/10
4-7	11.5 (10)	10/10	11.1 (10)	97	10/10	10.8 (10)	94	10/10	10.9 (10)	95	10/10	10.7 (10)	93	10/10	7.1 (6)	62	6/10
5-7	11.2 (10)	10/10	10.5 (10)	94	10/10	10.3 (10)	92	10/10	10.2 (10)	91	10/10	10.2 (10)	91	10/10	6.7 (5)	60	5/10
6-7	10.9 (10)	10/10	10.1 (10)	93	10/10	10.2 (10)	94	10/10	9.8 (10)	90	10/10	10.2 (10)	94	10/10	7.0 (5)	64	5/10
7-7	10.8 (10)	10/10	10.0 (10)	93	10/10	10.2 (10)	94	10/10	9.9 (10)	92	10/10	9.6 (10)	89	10/10	6.3 (3)	58	3/10
8-7	10.6 (10)	10/10	9.7 (10)	92	10/10	9.9 (10)	93	10/10	9.4 (10)	89	10/10	9.7 (10)	92	10/10	6.6 (2)	62	2/10
9-7	10.9 (10)	10/10	10.1 (10)	93	10/10	9.9 (10)	91	10/10	9.8 (10)	90	10/10	9.9 (10)	91	10/10	6.7 (2)	61	2/10
10-7	10.6 (10)	10/10	9.6 (10)	91	10/10	9.4 (10)	89	10/10	9.4 (10)	89	10/10	9.3 (10)	88	10/10	7.5 (2)	71	2/10
11-7	11.0 (10)	10/10	9.9 (10)	90	10/10	9.4 (10)	85	10/10	9.1 (10)	83	10/10	9.4 (10)	85	10/10	6.7 (2)	61	2/10
12-7	10.8 (10)	10/10	10.2 (10)	94	10/10	9.8 (10)	91	10/10	9.5 (10)	88	10/10	9.4 (10)	87	10/10	7.6 (2)	70	2/10
13-7	11.3 (10)	10/10	9.8 (10)	87	10/10	9.9 (10)	88	10/10	9.4 (10)	83	10/10	9.5 (10)	84	10/10	6.6 (2)	58	2/10

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