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A Carcinogenicity Bioassay of Isobutyl 2-Cyanoacrylate (IBC) in Fischer-344 Rats-- One-Year Interim Sacrifice Report

(Volume 2 of 2)
(Part 2)

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DIVISION OF COMPARATIVE MEDICINE AND TOXICOLOGY

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LETTERMAN ARMY INSTITUTE OF RESEARCH
PRESIDIO OF SAN FRANCISCO, CALIFORNIA 94129

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A Carcinogenicity Bioassay of Isobutyl 2-Cyanoacrylate (IBC) in Fischer-344 Rats--One-Year Interim Sacrifice Report, Volume 2 of 2, Part 2 (Toxicology Series 144)--Brown et al

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In conducting the research described in this report, the investigation adhered to the "Guide for the Care and Use of Laboratory Animals," as promulgated by the Committee on Revision of the Guide for Laboratory Animal Facilities and Care, Institute of Laboratory Animal Resources, National Research Council.

This material has been reviewed by Letterman Army Institute of Research and there is no objection to its presentation and/or publication. The opinions or assertions contained herein are the private views of the author(s) and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense. *(AR 360-5)*

for Richard A. Ishimoto 30 Mar 88

Edwin S. Beatrice (date)
COL, MC
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This report covers the results from the first year of a two-year carcinogenicity bioassay of the tissue adhesive, isobutyl 2-cyanoacrylate (IBC). Four hundred seven 6-week old Fischer-344 rats were randomized into three groups (control, 10 ul IBC, and 100 ul IBC), each group containing both male and female animals. The IBC was administered by surgical implantation of liquid monomer directly onto the ventral capsule of the liver. The monomer was allowed to polymerize before two-layer closure of the abdominal incision.

Control animals received 100 ul of isotonic saline also by surgical implantation. Twenty-five animals were removed from the study during the first week after surgery because of underweight condition or post operative complications.

All animals were examined daily and weighed and palpated monthly. The animals presented with

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Item 19 contined:

a variety of transitory clinical signs sporadically throughout the year in addition to the more permanent sequelae of the surgical procedure (xyphoid protuberance, corneal opacity). These signs were observed in all dose groups and could not be attributed to compound administration. The weight gain of the two IBC treatment groups was comparable to that recorded for the control group. During the first year, 17 animals died or were sacrificed; three were unscheduled deaths and 14 were unscheduled sacrifices. At the end of the first year 60 animals, 10 males and 10 females from each of the three groups, were selected randomly for a scheduled interim sacrifice. Three hundred and five animals remained on study at the start of the second year.

A total of 77 animals (17 unscheduled and 60 scheduled) were evaluated at necropsy during the first year. Fourteen of 14 unscheduled animals and 39 of 40 scheduled animals that received the IBC had fibrotic adhesions between the liver and the omentum, peritoneal membrane, diaphragm, stomach, skin, and/or intestine. These lesions were characterized histologically as foreign body granulomatous reactions. Nine tumors were observed in three unscheduled (total four tumors) and five scheduled animals. The unscheduled animal tumors included an atriocava epithelial mesothelioma (10 ul IBC male), a mononuclear cell leukemia of splenic origin (10 ul IBC female), and a pituitary adenoma and mononuclear cell leukemia (100 ul IBC female) The scheduled animal tumors included an endometrial stromal polyp (10 ul IBC female), testicular mesothelioma (10 ul IBC male), adrenal gland cortical adenoma (10 ul IBC male), and pituitary adenomas (control and 10 ul IBC males). These tumors were spontaneous lesions and were considered incidental to IBC treatment. All other gross or histopathological findings were also considered incidental to IBC treatment or were sequelae of the surgical procedure.

Results of this study indicate that IBC has no effect on survival, weight gain, or the clinic condition of rats during the first year following its implantation. The only gross or histopathological finding observed in the first year attributed to the IBC treatment was the presence of adhesions on and a granulomatous reaction of the liver and those adjacent organs that came in contact with the IBC. No tumors were observed during the first year that could be attributed to IBC treatment.

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Volume II - Part 2

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Glossary of Tumor, Compound Related Findings and Frequently Observed Incidental Lesions for Isobutyl 2-Cyanoacrylate Carcinogenicity Assay - GLP Study 83009

RAT CHRONIC RENAL DISEASE

Rat chronic renal disease is prevalent in many strains of rat including the Fischer 344. The cause of the disease is unknown. It is a progressive disease in which the incidence and severity increase with age. Microscopic lesions may occur as early as three months, but severe lesions are rarely found in rats less than one year of age. Tubules, glomeruli, interstitium and small blood vessels are all involved.

Interstitial changes progress from small perivascular aggregates of lymphocytes in between the tubules to interstitial fibrosis and increased numbers of mononuclear leukocytes in later stages. Tubular changes start with dilation and filling of tubular lumens with hyaline material. Tubular epithelial cells eventually show degenerative changes such as vacuolation, accumulation of hyaline droplets and necrosis in severe cases. These cells may range from being flattened to being hyperplastic (during regenerative attempts) when they are large and pleomorphic. Tubular basement membranes frequently thicken and ultimately both cystic dilatation and tubular atrophy occur.

Glomerular changes usually become apparent by light microscopy a little later than tubulo-interstitial changes. Thickening of Bowman's capsular basement membranes, pericapsular fibrosis, increased numbers of cells in the glomerular tuft, mild thickening of capillary walls and glomerular mesangial matrix increase are early changes, which progress to glomerular sclerosis and/or atrophy with cystic dilatation of Bowman's space.

Hyalinization of the walls of small blood vessels and widespread mineralization of tubules, basement membranes, and necrotic epithelial cells are present in the severe stage of the disease.

Scoring Criteria: Rat Chronic Renal Disease

Score	
1 (trace)	Occasional aggregates of lymphocytes are present or adjacent to small blood vessels primarily located in the corticomedullary junctions. Low numbers of lymphocytes may be present in the interstitium between tubules. An occasional tubule may contain a hyaline cast or be dilated. Mineralization may be minimally present.
2 (mild)	From a few to several tubules may be dilated and/or contain hyaline material. Tubular epithelium may have degenerative changes. Thickening may be present in the region of tubular and Bowman's capsular basement membranes. Minimal interstitial fibrosis may be present around Bowman's capsule and tubules. Glomeruli may be hypercellular and a rare atrophic glomerulus may be present. Increased numbers of lymphocytes may be present in the interstitium. The renal capsule is still smooth. Changes may involve up to one fourth of the area examined.
3 (moderate)	Numerous tubules may be dilated or contain hyaline material. Occasional tubules may be either cystic or atrophied. Tubular regeneration may be apparent. Interstitial fibrosis is present as is periglomerular and peritubular basement membrane thickening. Glomerular tufts may have thickening of capillary loops, increased mesangial matrix, increased cellularity and occasional areas of sclerosis. Occasional glomeruli may be completely sclerotic or atrophied with or without cystic dilatation of Bowman's space. Capsular surfaces can be mildly irregular and up to one half of the area examined may be involved.

Score	
4 (marked)	Tubular dilatation and hyaline casts are spread throughout the section. Renal tubular necrosis and widespread mineralization may be present. Interstitial fibrosis will be apparent throughout the cortex. Cystic tubules and Bowman's spaces will be numerous. Glomerular changes will be apparent and widespread. Capsular surfaces will be irregular. Hyalinization of small vessel walls may be apparent.

CARDIOMYOPATHY OF THE FISCHER F344 RAT

Cardiomyopathy is a common disease of aging F344 rats. Younger rats may have a mild to moderate focal myocarditis. As the rats age the disease progresses to myocardial degeneration characterized by vacuolation and atrophy of muscle fibers. This is followed by fibrosis and loss of myofiber. All portions of the heart are not uniformly affected.

Grading of Cardiomyopathy

Score	
1 (trace)	From one to five small (2 mm in diameter) foci of lymphocytic infiltrates between myocardial fibers or around vessels in the myocardium.
2 (mild)	From 6 to 10 foci of lymphocytic infiltration and/or minimal to mild vacuolar changes in cardiomyofibers. Fibrosis that includes less than one-quarter section.
3 (moderate)	More than 10 foci of lymphocytic infiltration. Moderate to severe vacuolation of cardiomyofibers. Minimal to mild myofiber atrophy. Minimal to mild fibrosis in not more than one half of section.
4 (marked)	Greater than one third of the section involved. Moderate to severe myofiber atrophy and fibrosis.

HEPATITIS

Hepatitis consists of random, multifocal, small aggregates of lymphocytes, PMN, mononuclear and macrophage within the hepatic parenchyma. Hepatocellular degeneration and loss may accompany this change. Minimal to severe 3 foci-minimal.

BILE DUCT HYPERPLASIA

Aging F344 rats frequently have foci of increased numbers of bile ducts in portal areas. Early lymphocytic pericholangitis is seen. Later bile duct proliferation is apparent. Fibrosis may or may not ensue.

Scoring Bile Duct Hyperplasia

Score	
1 (trace)	1 to 3 portal areas have hyperplastic bile ducts.
2 (mild)	4 to 9 portal areas have hyperplastic bile ducts.
3 (moderate)	More than 9 portal areas have hyperplastic bile ducts. Pericholangiolar fibrosis and minimal sclerosis are present.
4 (marked)	Pericholangiolar fibrosis is from moderate to severe, with from mild to severe sclerosis in addition to hyperplasia.

NONNEOPLASTIC FOCI AND AREAS OF CELLULAR ALTERATIONS IN RAT LIVERS

Three distinctive types of cellular alteration called "foci" or "areas" may be present in rat livers. They are more common in older rats, but they can be seen in rats less than one year old. These lesions are named for the morphology of their cellular composition which may be clear cell, acidophilic (ground glass) and basophilic. These lesions are usually uniform in cell type, but they may occasionally contain mixtures of cell types.

A lesion smaller than or equal to the size of a lobule is called a focus. A lesion larger than a lobule is called an area. The architectured pattern of the lesion varies little from the normal. The cellular appearance and staining reaction within the lesion is distinctly different from the adjacent normal cells. Hepatic cords of the lesion merge imperceptibly with those of the surrounding tissue without compressing them.

Foci and areas of cellular alteration can occur singly or in multiples, and the types can occur singly or in any combination. Their distribution throughout the liver is not uniform, and they may coexist with any other possible type of hepatic lesion.

Clear Cell Focus (area)

Appears as an area of clear pale cells sharply delineated from surrounding liver tissue. The cells have an empty zone around the nucleus which contains glycogen. Cells may be enlarged or of normal cell size.

Acidophilic Cell Focus (area)

Appears as an acidophilic staining area and the cellular cytoplasm has the appearance of ground glass. There is usually cellular enlargement with enlarged nuclei and prominent nucleoli. Inclusions may be present in the cytoplasm. The cords may be slightly irregular.

Basophilic Cell Focus (area)

Appears as an area of basophilic staining cells which are smaller than normal. The plates may be tortuous due to increased numbers of cells.

Mixed Cell Focus (area)

The mixed cell focus lesion may contain mixtures of any of the three types described previously.

All types of foci and areas will be considered equal for scoring purposes. An acidophilic focus and a basophilic focus would be counted as two foci.

Score	
1 (trace)	One focus.
2 (mild)	Two to four foci - or - one area alone or in combination with from one to four foci.
3 (moderate)	Five to eight foci - or - two to three areas alone or two areas in combination with from one to four foci.
4 (marked)	Eight or more foci - or - four or more areas alone or three areas in combination with from one to four foci.

CHARACTERIZATION OF THE LESION PRODUCED LOCALLY BY BUCRYLATE®

The Bucrylate® is surrounded by a capsule of fibrous connective tissue. Inflammatory responses may or may not be present; however, when present, inflammation is characterized by macrophages and multinucleated giant cells adjacent to the Bucrylate®. Some small regions of the hepatic capsular surface are surrounded and sequestered by fibrous tissue. The hepatic tissue in these areas is usually atrophied and only a few islands of hepatocytes or an occasional bile duct remains.

Where the liver is adhered to adjacent structures, such as diaphragm, abdominal wall or intestine, the Bucrylate® is sequestered by fibrous connective tissue. The adjacent structures are joined by this fibrous tissue.

This lesion will be reported only as present (+) or absent (-).

MINERALIZATION OF PULMONARY ARTERIES AND AORTA

Focal, dense mineral deposits are frequently observed in the larger pulmonary arteries of F344 and other strains of rats. They are located beneath the endothelium in the vessel wall. Their etiology is unknown and they are not considered clinically important.

Scoring will be as follows:

Score	
1 (trace)	A single small focus of mineral which produces minimal distortion of the vessel wall.
2 (mild)	Two to three small foci which produce minimal distortion to the vessel wall.
3 (moderate)	Four or more small foci which distort the vessel wall minimally or one larger focus which causes moderate distortion of the vessel wall.
4 (marked)	More than one large focus which causes moderate distortion of the vessel wall.

TUMORS

Generally tumors will be reported as being present in a tissue. Severity is not indicated.

ATRIOCAVAL EPITHELIAL MESOTHELIOMA

Atriocaval epithelial mesothelioma is an infiltrative tumor of the myocardium. It is composed of glandular acini and anastomosing tubules lined primarily by cuboidal epithelial cells. The neoplastic structures may extend to the endocardial surface and are frequently filled with blood, blood clots, hemoglobin crystals and degenerating RBC's. The cells contain a modest amount of eosinophilic cytoplasm, round to oval nuclei with prominent nucleoli, and fine chromatin. The neoplastic cells may form clumps or sheets in some areas. Mitotic figures may be present in moderate numbers.

LARGE GRANULAR LYMPHOCYTE LEUKEMIA
(MONONUCLEAR CELL LEUKEMIA)

Large granular lymphocyte leukemia is usually seen in peripheral blood late in the course of disease; leukocyte counts are usually less than 100,000/mm^3. These cells may be seen in the blood vessels and sinusoids of various organs. They are characterized by dense pleomorphic nuclei and eosinophilic cytoplasm which is occasionally granular. Microscopic lesions are frequently found in the spleen, liver and lung. The kidney, heart and pancreas are less frequently involved. Lymph nodes may be infiltrated by neoplastic cells.

COMPOUND RELATED INFLAMMATORY REACTION

This lesion is quite similar regardless of location or organ involved. The Bucrylate® is surrounded by fibrous connective tissue. Usually there is a mild inflammatory response consisting of macrophages and multinucleated foreign body giant cells adjacent to the fibrous capsule. The presence of the material and associated fibrous reaction may cause secondary changes such as atrophy of parenchyma or compromise of circulation and its secondary consequences.

PITUITARY GLAND ADENOMA

Adenomas of the anterior pituitary gland are very common in aged F344 rats. These lesions vary greatly in size from small microscopic proliferations to large masses that compress adjacent brain tissue. The microscopic appearance and cellular morphology are also variable. Cells may be arranged in sheets, nests, or acini; they are usually nearly spherical cellular proliferations which compress adjacent normal pituitary tissue. The cellular component may be either acidophils, basophils or chromophobes with variable cellular pleomorphism and tinctorial characteristics. Most pituitary adenomas are quite vascular and vascular dilatation and hemorrhage are very common. Occasionally pituitary adenomas may be composed of two or more nodules, each having different cellular morphology.

ADRENAL GLAND CORTICAL ADENOMA

Adenomas of the adrenal cortex are very common in old F344 rats. These lesions vary greatly in size from small microscopic lesions to large masses which involve large areas of the cortex. Cortical adenomas are discrete areas of cellular proliferation of normal adrenal cortical cells, or they may vary considerably in size, staining characteristics, and cellular arrangement. Frequently cells in adenomas are highly vacuolated. Nuclei may be hyperchromatic and larger than normal. Few mitotic figures are present. Adrenal cortical adenomas are highly vascular, and sinusoidal dilatation and hemorrhage is common.

UTERUS-ENDOMETRIAL STROMAL POLYP

Endometrial stromal polyps are fairly common in older female F344 rats. These lesions consist of polypoid masses which protrude from the uterine wall into the uterine lumen. The mass is covered by typical endometrial surface epithelium which may be eroded in some areas. Relatively normal appearing uterine glands, some of which are dilated and cystic, are common. The glands are surrounded by a dense fibrovascular stroma containing abundant collagen and numerous blood vessels. Some smooth muscle cells may be present. Mitotic figures may be present in both stroma and epithelium but these are usually few in number. Focal ulceration of epithelium accompanied by inflammatory cell infiltration may be present.

TESTIS-MESOTHELIOMA

Mesotheliomas of the tunica vaginalis occur occasionally in the testes of male F344 rats. These lesions are located on the serosal surface of the testis or epididymis and are usually unilateral. They are composed of multiple, papillary fronds arising from the serosal surface. The papillary structures have a supporting connective tissue stalk containing blood vessels and are covered by mesothelial cells. The lining usually consists of a single layer of mesothelial cells, but occasionally these cells are piled up into small nodular proliferations. Mitotic figures are infrequent.

Individual Animal Pathology Reports

The Pathology animal number is followed by a three digit toxicology "in-life" animal number in parenthesis. This Toxicology number is a shortened version of the 84D00--- numbering system referenced in the text and Appendix B. The dates of death on these reports for interim sacrifice females are recorded as 28 Jan 1985 when in fact the females were necropsied on 29 Jan 1985. All organs were weighed on the date the necropsy occurred. The date given under the organ weight section of each individual report is the date the hand recorded data were entered into the computer.

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 1
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 1 (Tox No. 1) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 367.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	10.122	2.7580 %	5.0941	LOW
12-OCT-85	629/90	KIDNEYS	2.153	0.5866 %	1.0835	LOW
12-OCT-85	629/90	ADRENAL GLANDS	0.061	0.0166 %	0.0307	OK
12-OCT-85	629/90	TESTES	3.791	1.0330 %	1.9079	HIGH
12-OCT-85	629/90	HEART	1.029	0.2804 %	0.5179	LOW
12-OCT-85	629/90	BRAIN	1.987	0.5414 %	1.0000	OK
12-NOV-85	660/95	SPLEEN	0.641	0.1747 %	0.3226	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	
-ACUTE SUPPURATIVE PROSTATITIS	NOT SPECIFIED(MILD)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 2
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 2 (Tox No. 2) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 369.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	10.592	2.8705 %	5.4711	LOW
12-OCT-85	629/90	KIDNEYS	2.170	0.5881 %	1.1209	LOW
12-OCT-85	629/90	ADRENAL GLANDS	0.068	0.0184 %	0.0351	OK
12-OCT-85	629/90	TESTES	3.126	0.8472 %	1.6147	HIGH
12-OCT-85	629/90	HEART	1.094	0.2965 %	0.5651	LOW
12-OCT-85	629/90	BRAIN	1.936	0.5247 %	1.0000	OK
12-OCT-85	629/90	SPLEEN	0.686	0.1859 %	0.3543	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
TRACHEA	TISSUE IS MISSING
PARATHYROID	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 3
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 2 (Tox No. 2) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 369.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
JEJUNUM	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 4
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 3 (Tox No. 9) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 387.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	10.097	2.6090 %	5.3452	LOW
12-OCT-85	629/90	KIDNEYS	2.431	0.6282 %	1.2869	OK
12-OCT-85	629/90	ADRENAL GLANDS	0.065	0.0168 %	0.0344	OK
12-OCT-85	629/90	TESTES	3.101	0.8013 %	1.6416	HIGH
12-OCT-85	629/90	HEART	1.058	0.2734 %	0.5601	LOW
12-OCT-85	629/90	BRAIN	1.889	0.4881 %	1.0000	OK
12-OCT-85	629/90	SPLEEN	0.703	0.1817 %	0.3722	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO OMENTUM.	PRESENT	1/4 OF DIAPHRAMATIC SURFACE.
SKIN	CYST(S)	PRESENT	SUBCUTANEOUS AT DIAPHRAM, .5 X 1CM.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PANCREAS	

LETTERMAN ARMY INSTITUTE OF RESEARCH
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SPECIES: RAT/FISCHER-344

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STUDY NUMBER: GLP83009
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PAGE: 5
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 3 (Tox No. 9) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 387.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PANCREAS	
-PERITONITIS	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 4 (Tox No. 10) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 404.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	10.995	2.7215 %	5.5869	LOW
12-OCT-85	629/90	KIDNEYS	2.505	0.6200 %	1.2729	OK
12-OCT-85	629/90	ADRENAL GLANDS	0.052	0.0129 %	0.0264	OK
12-OCT-85	629/90	TESTES	3.186	0.7886 %	1.6189	HIGH
12-OCT-85	629/90	HEART	1.499	0.3710 %	0.7617	OK
12-OCT-85	629/90	BRAIN	1.968	0.4871 %	1.0000	OK
12-OCT-85	629/90	SPLEEN	0.661	0.1636 %	0.3359	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	BILATERAL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-HEPATITIS	NOT SPECIFIED(MILD)
-NECROSIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 4 (Tox No. 10) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 404.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PROSTATE	
-ACUTE SUPPURATIVE PROSTATITIS	NOT SPECIFIED(TRACE)
JEJUNUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 5 (Tox No. 13) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 407.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	12.565	3.0872 %	6.9458	OK
12-OCT-85	629/90	KIDNEYS	2.507	0.6160 %	1.3858	OK
12-OCT-85	629/90	ADRENAL GLANDS	0.093	0.0229 %	0.0514	HIGH
12-OCT-85	629/90	TESTES	3.344	0.8216 %	1.8485	HIGH
12-OCT-85	629/90	HEART	1.211	0.2975 %	0.6694	LOW
12-OCT-85	629/90	BRAIN	1.809	0.4445 %	1.0000	LOW
12-OCT-85	629/90	SPLEEN	0.758	0.1862 %	0.4190	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO OMENTUM.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
TRACHEA	TISSUE IS MISSING
SALIVARY GLAND	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LYMPH NODES	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-TELANGIECTASIS	NOT SPECIFIED(MODERATE)
-NECROSIS	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 5 (Tox No. 13) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 407.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING
STOMACH	
-SEROSAL FIBROSIS	NOT SPECIFIED (PRESENT)
SCIATIC NERVE	TISSUE IS MISSING
SKIN	
-COMPOUND PRESENT WITH ASSOCIATED INFLAMMATION\FIBROSIS	NOT SPECIFIED (PRESENT)
AD SEBACIOUS	TISSUE IS MISSING

ANIMAL NUMBER: 6 (Tox No. 22) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 420.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	12.495	2.9750 %	6.4407	LOW
12-OCT-85	629/90	KIDNEYS	2.620	0.6238 %	1.3505	OK
12-OCT-85	629/90	ADRENAL GLANDS	0.059	0.0140 %	0.0304	OK
12-OCT-85	629/90	TESTES	2.782	0.6624 %	1.4340	HIGH
12-OCT-85	629/90	HEART	0.931	0.2217 %	0.4799	LOW
12-OCT-85	629/90	BRAIN	1.940	0.4619 %	1.0000	LOW
12-OCT-85	629/90	SPLEEN	0.696	0.1657 %	0.3588	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	INVOLVES SMALL INTESTINE. ADHESION MEASURES 3 X 4CM.

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYMUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MARKED)
-NECROSIS	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
PANCREAS	
-ACINAR (EXOCRINE) ATROPHY	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 6 (Tox No. 22) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 420.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
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ANIMAL NUMBER: 7 (Tox No. 24) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 381.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-OCT-85	629/90	LIVER	14.292	3.7512 %	7.4866	OK
12-OCT-85	629/90	KIDNEYS	2.630	0.6903 %	1.3777	OK
12-OCT-85	629/90	ADRENAL GLANDS	0.063	0.0165 %	0.0330	OK
12-OCT-85	629/90	TESTES	3.273	0.8591 %	1.7145	HIGH
12-OCT-85	629/90	HEART	1.527	0.4008 %	0.7999	OK
12-OCT-85	629/90	BRAIN	1.909	0.5010 %	1.0000	OK
12-OCT-85	629/90	SPLEEN	0.738	0.1937 %	0.3866	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM AND STOMACH	PRESENT	ADHESION TO STOMACH MEASURES 3/4CM IN DIAMETER.

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MARKED)
-HEPATITIS	NOT SPECIFIED(TRACE)
-NECROSIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESE
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 8 (Tox ... 31) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 367.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.914	2.9738 %	5.3605	LOW
12-NOV-85	660/95	KIDNEYS	2.427	0.6613 %	1.1920	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.063	0.0172 %	0.0309	OK
13-OCT-85	630/90	TESTES	3.035	0.8270 %	1.4907	HIGH
13-OCT-85	630/90	HEART	1.209	0.3294 %	0.5938	OK
13-OCT-85	630/90	BRAIN	2.036	0.5548 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.644	0.1755 %	0.3163	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	DIFFUSE ADHESIONS TO PERITONEAL WALL.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	

ANIMAL NUMBER: 8 (Tox No. 31) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 367.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PROSTATE	
-ACUTE SUPPURATIVE PROSTATITIS	NOT SPECIFIED(TRACE)
TESTES	
-TUBULAR ATROPHY	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 9 (Tox No. 43) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 19-JUL-84 STUDY DAY OF DEATH: 179 STUDY WEEK OF DEATH: 26 TERMINAL BODY WEIGHT: 295.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.104	3.4251 %	5.2956	OK
13-OCT-85	630/90	KIDNEYS	2.054	0.6963 %	1.0765	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.068	0.0231 %	0.0356	HIGH
13-OCT-85	630/90	TESTES	2.837	0.9617 %	1.4869	HIGH
13-OCT-85	630/90	HEART	0.739	0.2505 %	0.3873	LOW
13-OCT-85	630/90	BRAIN	1.908	0.6468 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.856	0.2902 %	0.4486	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	LARGE LOBE
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	PROXIMAL ILEUM DISTENDED WITH INGESTA AND ADHERED TO LEFT SIDE OF ABDOMINAL WALL. A FISTULA HAS FORMED FROM THE ADHERED ILEUM THROUGH THE ABDOMINAL MUSCULATURE INTO SUBCUTANEOUS TISSUE. SUBCUTANEOUS SPACE CONTAINED ENCAPSULATED MASS OF GREEN INGESTA

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-NECROSIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
ILEUM	

ANIMAL NUMBER: 9 (Tox No. 43) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 19-JUL-84 STUDY DAY OF DEATH: 179 STUDY WEEK OF DEATH: 26 TERMINAL BODY WEIGHT: 295.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ILEUM	
COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
CECUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
TONGUE	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING
PITUITARY GLAND	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
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ANIMAL NUMBER: 10 (Tox No. 44) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 381.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	13.658	3.5848 %	7.1172	OK
13-OCT-85	630/90	KIDNEYS	2.501	0.6564 %	1.3033	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.067	0.0176 %	0.0349	OK
13-OCT-85	630/90	TESTES	3.119	0.8186 %	1.6253	HIGH
13-OCT-85	630/90	HEART	1.221	0.3205 %	0.6363	OK
13-OCT-85	630/90	BRAIN	1.919	0.5037 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.682	0.1790 %	0.3554	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	ADHESION ALSO INVOLVES OMENTUM AND PERITONEAL WALL.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-NECROSIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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ANIMAL NUMBER: 10 (Tox No. 44) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 381.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ILEUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
NOSE/TURBINATES	
-ACUTE INFLAMMATION	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 12 (Tox No. 48) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 380.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.871	2.8608 %	5.7671	LOW
13-OCT-85	630/90	KIDNEYS	2.459	0.6471 %	1.3045	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.072	0.0189 %	0.0382	OK
13-OCT-85	630/90	TESTES	3.260	0.8579 %	1.7294	HIGH
13-OCT-85	630/90	HEART	1.242	0.3268 %	0.6589	OK
13-OCT-85	630/90	BRAIN	1.885	0.4961 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.653	0.1718 %	0.3464	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	3 X 2CM AREA.

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATOCYTIC VACUOLIZATION	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
CECUM	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
STOMACH	

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ANIMAL NUMBER: 12 (Tox No. 48) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 380.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
STOMACH	
-VILLUS ATROPHY AND/OR AUTOLYSIS	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 1
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 17 (Tox No. 65) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 03-APR-84 STUDY DAY OF DEATH: 72 STUDY WEEK OF DEATH: 11 TERMINAL BODY WEIGHT: 245.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	8.003	3.2665 %	4.4412	OK
13-OCT-85	630/90	KIDNEYS	1.743	0.7114 %	0.9673	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.065	0.0265 %	0.0361	HIGH
13-OCT-85	630/90	TESTES	2.860	1.1673 %	1.5871	HIGH
13-OCT-85	630/90	HEART	0.712	0.2906 %	0.3951	LOW
13-OCT-85	630/90	BRAIN	1.802	0.7355 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.942	0.3845 %	0.5228	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	VENTRAL ABDOMEN
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	ILEUM ADHERED TO THE PERINEUM AND COMMUNICATES THROUGH THE RECTUS ABDOMINIS MUSCLE AND FORMS A 4 X 4 X 4 CM SUBCUTANEOUS POCKET FILLED WITH INGESTA

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
PROSTATE	TISSUE IS MISSING
COAG GL	TISSUE IS MISSING
EDIDIDYMIS	TISSUE IS MISSING

ANIMAL NUMBER: 17 (Tox No. 65) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 03-APR-84 STUDY DAY OF DEATH: 72 STUDY WEEK OF DEATH: 11 TERMINAL BODY WEIGHT: 245.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
BONE, FEMUR	
-HYPERPLASIA MYELOID	NOT SPECIFIED (PRESENT)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 51 (Tox No. 150) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 17-FEB-84 STUDY DAY OF DEATH: 26 STUDY WEEK OF DEATH: 4 TERMINAL BODY WEIGHT: 152.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	5.280	3.4737 %	3.2593	OK
13-OCT-85	630/90	KIDNEYS	1.190	0.7829 %	0.7346	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.060	0.0395 %	0.0370	HIGH
13-OCT-85	630/90	TESTES	2.110	1.3882 %	1.3025	HIGH
13-OCT-85	630/90	HEART	0.510	0.3355 %	0.3148	OK
13-OCT-85	630/90	BRAIN	1.620	1.0658 %	1.0000	HIGH
13-OCT-85	630/90	SPLEEN	0.210	0.1382 %	0.1296	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
PAWS/FEET	RED/BROWN CRUSTY MATERIAL.	PRESENT	
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	OMENTUM,STOMACH, LOOPS OF SMALL INTESTINE AND DIAPHRAGM ADHERED TO LIVER
STOMACH	DILATED	PRESENT	DISTENDED WITH FOOD
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	JEJUNUM DISTENDED WITH FOOD AND FLUID

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
PANCREAS	
-PERITONITIS	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 51 (Tox No. 150) SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 17-FEB-84 STUDY DAY OF DEATH: 26 STUDY WEEK OF DEATH: 4 TERMINAL BODY WEIGHT: 152.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
CECUM	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH — INDIVIDUAL ANIMAL DATA REPORT — PRINTED: 14-MAR-86
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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 69 (Tox No. 3) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 393.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.077	2.5641 %	5.1361	LOW
13-OCT-85	630/90	KIDNEYS	2.463	0.6267 %	1.2554	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.101	0.0257 %	0.0515	HIGH
13-OCT-85	630/90	TESTES	3.300	0.8397 %	1.6820	HIGH
13-OCT-85	630/90	HEART	1.455	0.3702 %	0.7416	OK
13-OCT-85	630/90	BRAIN	1.962	0.4992 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.676	0.1720 %	0.3445	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	..
LIVER	ADHERED TO OMENTUM.	PRESENT	. ADHESION ON STERNUM .5 CM; ADHESION TO MESENTRY .5 CM
SKIN	INCISION SITE	PRESENT	THICKENED TISSUE

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
SPLEEN	
-FIBROSIS CAPSULAR	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE ITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	

ANIMAL NUMBER: 69 (Tox No. 3) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 393.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
-B-MESOTHELIOMA	(PRESENT)
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-PROGRESSIVE RETINAL ATROPHY	NOT SPECIFIED(MILD)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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PRINTED: 14-MAR-86
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 70 (Tox No. 4) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 407.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.906	2.6796 %	5.7673	LOW
13-OCT-85	630/90	KIDNEYS	2.465	0.6057 %	1.3035	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.058	0.0143 %	0.0307	OK
13-OCT-85	630/90	TESTES	3.123	0.7673 %	1.6515	HIGH
13-OCT-85	630/90	HEART	0.946	0.2324 %	0.5003	LOW
13-OCT-85	630/90	BRAIN	1.891	0.4646 %	1.0000	LOW
13-OCT-85	630/90	SPLEEN	0.687	0.1688 %	0.3633	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO OMENTUM.	PRESENT	DIAPHRAGMATIC LOBE

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
PANCREAS	

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 70 (Tox No. 4) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 407.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PANCREAS	
-ACINAR (EXOCRINE) ATROPHY	NOT SPECIFIED(TRACE)
ADRENAL	
-B- CORTICAL ADENOMA	(PRESENT)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 71 (Tox No. 5) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 391.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.122	2.5887 %	5.0686	LOW
13-OCT-85	630/90	KIDNEYS	2.399	0.6136 %	1.2013	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.064	0.0164 %	0.0320	OK
13-OCT-85	630/90	TESTES	2.962	0.7575 %	1.4832	HIGH
13-OCT-85	630/90	HEART	1.177	0.3010 %	0.5894	OK
13-OCT-85	630/90	BRAIN	1.997	0.5107 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.660	0.1688 %	0.3305	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MARKED)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)

ANIMAL NUMBER: 71 (Tox No. 5) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 391.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
AD SEBACIOUS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
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SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 72 (Tox No. 11) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 360.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	9.419	2.6164 %	4.8904	LOW
13-OCT-85	630/90	KIDNEYS	2.182	0.6061 %	1.1329	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.076	0.0211 %	0.0395	HIGH
13-OCT-85	630/90	TESTES	2.960	0.8222 %	1.5369	HIGH
13-OCT-85	630/90	HEART	1.132	0.3144 %	0.5877	OK
13-OCT-85	630/90	BRAIN	1.926	0.5350 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.586	0.1628 %	0.3043	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM ADHESION

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
CECUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
STOMACH	
-GLANDULAR CYST(S)	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 73 (Tox No. 12) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 383.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT 85	630/90	LIVER	9.352	2.4418 %	4.8406	LOW
13-OCT-85	630/90	KIDNEYS	2.319	0.6055 %	1.2003	OK
13-OCT 85	630/90	ADRENAL GLANDS	0.058	0.0151 %	0.0300	OK
13-OCT-85	630/90	TESTES	2.985	0.7794 %	1.5450	HIGH
13-OCT-85	630/90	HEART	0.982	0.2564 %	0.5083	LOW
13-OCT-85	630/90	BRAIN	1.932	0.5044 %	1.0000	OK
12-NOV-85	660/95	SPLEEN	0.723	0.1888 %	0.3742	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	BILATERAL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-HEPATITIS	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	

LETTERMAN ARMY INSTITUTE OF RESEARCH
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ANIMAL NUMBER: 73 (Tox No. 12) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 383.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PROSTATE	
-ACUTE SUPPURATIVE PROSTATITIS	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
PANCREAS	
-ACINAR (EXOCRINE) ATROPHY	NOT SPECIFIED(MILD)
AD SEBACIOUS	TISSUE IS MISSING

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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 74 (Tox No. 14) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 405.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	12.039	2.9726 %	5.9688	LOW
13-OCT-85	630/90	KIDNEYS	2.796	0.6904 %	1.3862	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.087	0.0215 %	0.0431	HIGH
13-OCT-85	630/90	TESTES	3.291	0.8126 %	1.6316	HIGH
13-OCT-85	630/90	HEART	1.448	0.3575 %	0.7179	OK
13-OCT-85	630/90	BRAIN	2.017	0.4980 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.740	0.1827 %	0.3669	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO PERITONEAL WALL	PRESENT	VENTRAL MARGIN OF LIVER 2 CM ADHESION
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	TRACE	LEFT

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYMUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(MILD)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 74 (Tox No. 14) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 405.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING

ANIMAL NUMBER: 75 (Tox No. 15) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 419.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	11.523	2.7501 %	5.9214	LOW
13-OCT-85	630/90	KIDNEYS	2.684	0.6406 %	1.3792	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.083	0.0198 %	0.0427	OK
13-OCT-85	630/90	TESTES	3.149	0.7516 %	1.6182	HIGH
13-OCT-85	630/90	HEART	1.536	0.3666 %	0.7893	OK
13-OCT-85	630/90	BRAIN	1.946	0.4644 %	1.0000	LOW
13-OCT-85	630/90	SPLEEN	0.711	0.1697 %	0.3654	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
-NECROSIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(MILD)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

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ANIMAL NUMBER: 75 (Tox No. 15) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 419.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-PROGRESSIVE RETINAL ATROPHY	NOT SPECIFIED(MILD)

ANIMAL NUMBER: 76 (Fox No. 25) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 400.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	11.870	2.9675 %	5.9320	LOW
13-OCT-85	630/90	KIDNEYS	2.635	0.6587 %	1.3168	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.067	0.0168 %	0.0335	OK
13-OCT-85	630/90	TESTES	3.157	0.7893 %	1.5777	HIGH
13-OCT-85	630/90	HEART	1.058	0.2645 %	0.5287	LOW
13-OCT-85	630/90	BRAIN	2.001	0.5002 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.680	0.1700 %	0.3398	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	RIGHT WHITE SPOT MEASURES .5 X .5 CM

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
EYES & OPTIC N.	
-SCLERAL MINERALIZATION	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 77 (Tox No. 26) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 378.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	9.807	2.5944 %	5.0578	LOW
13-OCT-85	630/90	KIDNEYS	2.394	0.6333 %	1.2347	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.075	0.0198 %	0.0387	OK
13-OCT-85	630/90	TESTES	3.277	0.8669 %	1.6900	HIGH
13-OCT-85	630/90	HEART	0.981	0.2595 %	0.5059	LOW
13-OCT-85	630/90	BRAIN	1.939	0.5130 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.697	0.1844 %	0.3595	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MARKED)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	
-CHRONIC PROSTATITIS	NOT SPECIFIED(TRACE)
AD SEBACIOUS	TISSUE IS MISSING

ANIMAL NUMBER: 78 (Tox No. 29) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 350.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	9.667	2.7620 %	5.2653	LOW
13-OCT-85	630/90	KIDNEYS	2.307	0.6591 %	1.2565	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.076	0.0217 %	0.0414	HIGH
13-OCT-85	630/90	TESTES	2.971	0.8489 %	1.6182	HIGH
13-OCT-85	630/90	HEART	1.025	0.2929 %	0.5583	LOW
13-OCT-85	630/90	BRAIN	1.836	0.5246 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.602	0.1720 %	0.3279	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
RECTUM	TISSUE IS MISSING

ANIMAL NUMBER: 78 (Tox No. 29) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 350.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
PITUITARY GLAND	
-B- ADENOMA	(PRESENT)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 132 (Tox No. 194) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FOUND DEAD
DATE OF DEATH: 15-JAN-85 STUDY DAY OF DEATH: 359 STUDY WEEK OF DEATH: 52 TERMINAL BODY WEIGHT: 373.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	13.484	3.6150 %	6.6456	OK
13-OCT-85	630/90	KIDNEYS	2.826	0.7576 %	1.3928	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.070	0.0188 %	0.0345	OK
13-OCT-85	630/90	TESTES	2.843	0.7622 %	1.4012	HIGH
13-OCT-85	630/90	HEART	5.518	1.4794 %	2.7196	HIGH
13-OCT-85	630/90	BRAIN	2.029	0.5440 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	1.051	0.2818 %	0.5180	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO PERITONEAL WALL	PRESENT	VENTRAL ADHESION 2 X 2CM
SPLEEN	WHITE FOCI	PRESENT	2 MM WHITE AREA
HEART	GROWTH(S) / MASS(ES)	PRESENT	2 X 3 CM FIRM MULTINODULAR DARK RED MOTTLED MASS INVOLVING BASE OF HEART AND RIGHT ATRIUM. PERICARDIAL SAC CONTAINED 1-2 ML DARK RED UNCLOTTED FLUID

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-M- ATRIO-CAVAL EPITHELIAL MESOTHELIOMA	(PRESENT)
LUNGS	
-PULMONARY EDEMA	NOT SPECIFIED(MILD)
-VASCULAR CONGESTION	NOT SPECIFIED (PRESENT)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 132 (Tox No. 194) SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FOUND DEAD
DATE OF DEATH: 15-JAN-85 STUDY DAY OF DEATH: 359 STUDY WEEK OF DEATH: 52 TERMINAL BODY WEIGHT: 373.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
MAMMARY GLANDS	
-HYPERPLASIA AND/OR HYPERTROPHY OF THE ACINAR TISSUE	NOT SPECIFIED(TRACE)
EYES & OPTIC N.	
-CORNEAL VASCULARIZATION	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 137 (Tox No. 6) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 391.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	9.789	2.5036 %	4.9265	LOW
13-OCT-85	630/90	KIDNEYS	2.425	0.6202 %	1.2204	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.063	0.0161 %	0.0317	OK
13-OCT-85	630/90	TESTES	3.213	0.8217 %	1.6170	HIGH
13-OCT-85	630/90	HEART	1.102	0.2818 %	0.5546	LOW
13-OCT-85	630/90	BRAIN	1.987	0.5082 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.690	0.1765 %	0.3473	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	LEFT MILD; RIGHT MINIMAL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
PROSTATE	
-CHRONIC PROSTATITIS	NOT SPECIFIED(MILD)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 138 (Tox No. 7) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 400.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.801	2.7002 %	5.4331	LOW
13-OCT-85	630/90	KIDNEYS	2.452	0.6130 %	1.2334	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.071	0.0178 %	0.0357	OK
13-OCT-85	630/90	TESTES	3.166	0.7915 %	1.5926	HIGH
13-OCT-85	630/90	HEART	0.999	0.2498 %	0.5025	LOW
13-OCT-85	630/90	BRAIN	1.988	0.4970 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.661	0.1653 %	0.3325	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	PROMINENT LOBULAR MARKINGS	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 138 (Tox No. 7) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 400.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PITUITARY GLAND	TISSUE IS MISSING
AD SEBACIOUS	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 139 (Tox No. 8) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 323.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	8.735	2.7043 %	4.9490	LOW
13-OCT-85	630/90	KIDNEYS	2.201	0.6814 %	1.2470	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.079	0.0245 %	0.0448	HIGH
13-OCT-85	630/90	TESTES	2.261	0.7000 %	1.2810	HIGH
13-OCT-85	630/90	HEART	1.291	0.3997 %	0.7314	OK
13-OCT-85	630/90	BRAIN	1.765	0.5464 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.616	0.1907 %	0.3490	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	BILATERAL
SKIN	INCISION SITE	PRESENT	THICKENED TISSUE

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
SALIVARY GLAND	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
THYMUS	TISSUE IS MISSING
SPLEEN	
-FIBROSIS CAPSULAR	NOT SPECIFIED(TRACE)
LIVER	

ANIMAL NUMBER: 139 (Tox No. 8) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 323.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
CECUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
COLON	TISSUE IS MISSING
SKELETAL MUSCLE	TISSUE IS MISSING
SCIATIC NERVE	TISSUE IS MISSING
PITUITARY GLAND	
-B- ADENOMA	(PRESENT)

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ANIMAL NUMBER: 146 (Fox No. 16) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 390.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.194	2.6138 %	5.2197	LOW
13-OCT-85	630/90	KIDNEYS	2.436	0.6246 %	1.2473	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.049	0.0126 %	0.0251	OK
13-OCT-85	630/90	TESTES	3.257	0.8351 %	1.6677	HIGH
13-OCT-85	630/90	HEART	1.058	0.2713 %	0.5417	LOW
13-OCT-85	630/90	BRAIN	1.953	0.5008 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.658	0.1687 %	0.3369	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
COAG GL	TISSUE IS MISSING
TESTES	

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ANIMAL NUMBER: 140 (Tox No. 16) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 390.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 8
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 141 (Tox No. 17) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 418.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	11.924	2.8526 %	6.3561	LOW
13-OCT-85	630/90	KIDNEYS	2.736	0.6545 %	1.4584	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.054	0.0129 %	0.0288	OK
13-OCT-85	630/90	TESTES	3.332	0.7971 %	1.7761	HIGH
13-OCT-85	630/90	HEART	1.124	0.2689 %	0.5991	LOW
13-OCT-85	630/90	BRAIN	1.876	0.4488 %	1.0000	LOW
13-OCT-85	630/90	SPLEEN	0.752	0.1799 %	0.4009	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	ADHESION MEASURES .75 X .75 CM

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-FIBROSIS CAPSULAR NO COMPOUND	NOT SPECIFIED (PRESENT)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
COAG GL	TISSUE IS MISSING
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)

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ANIMAL NUMBER: 141 (Fox No. 17) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 418.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 142 (Ids No. 18) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 377.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	11.895	3.1552 %	5.7381	OK
13-OCT-85	630/90	KIDNEYS	2.575	0.6830 %	1.2422	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.072	0.0191 %	0.0347	OK
13-OCT-85	630/90	TESTES	3.368	0.8934 %	1.6247	HIGH
13-OCT-85	630/90	HEART	1.155	0.3064 %	0.5572	OK
13-OCT-85	630/90	BRAIN	2.073	0.5499 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.683	0.1812 %	0.3295	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	LEFT LATERAL LOBE, 1CM DIAMETER.

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-FIBROSIS CAPSULAR NO COMPOUND	NOT SPECIFIED (PRESENT)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 143 (Tox No. 19) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 390.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.068	2.5815 %	5.3157	LOW
13-OCT-85	630/90	KIDNEYS	2.373	0.6085 %	1.2529	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.060	0.0154 %	0.0317	OK
13-OCT-85	630/90	TESTES	3.260	0.8359 %	1.7212	HIGH
13-OCT-85	630/90	HEART	1.176	0.3015 %	0.6209	OK
13-OCT-85	630/90	BRAIN	1.894	0.4856 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.675	0.1731 %	0.3564	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
AORTA	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
-HEPATOCYTIC VACUOLIZATION	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 143 (Fox No. 19) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 390.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
AD SEBACIOUS	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 144 (Tox No. 21) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 386.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.907	2.8256 %	5.6251	LOW
12-NOV-85	660/95	KIDNEYS	2.509	0.6500 %	1.2940	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.049	0.0127 %	0.0253	OK
13-OCT-85	630/90	TESTES	3.091	0.8008 %	1.5941	HIGH
13-OCT-85	630/90	HEART	1.282	0.3321 %	0.6612	OK
13-OCT-85	630/90	BRAIN	1.939	0.5023 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.752	0.1948 %	0.3878	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	BILATERAL LINEAR INDENTATION OF CORNEA

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIA' HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(MILD)

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ANIMAL NUMBER: 144 (Tox No. 21) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 386.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SCIATIC NERVE	TISSUE IS MISSING
BONE, FEMUR	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 145 (Tox No. 23) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 430.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	11.776	2.7386 %	6.3108	LOW
13-OCT-85	630/90	KIDNEYS	2.803	0.6519 %	1.5021	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.087	0.0202 %	0.0466	HIGH
13-OCT-85	630/90	TESTES	2.596	0.6037 %	1.3912	OK
13-OCT-85	630/90	HEART	1.157	0.2691 %	0.6200	LOW
13-OCT-85	630/90	BRAIN	1.866	0.4340 %	1.0000	LOW
13-OCT-85	630/90	SPLEEN	0.716	0.1665 %	0.3837	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
ESOPHAGUS	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(MILD)
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 145 (Tox No. 23) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 430.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)
ILEUM	TISSUE IS MISSING
SCIATIC NERVE	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

ANIMAL NUMBER: 146 (Tox No. 27) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 378.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
13-OCT-85	630/90	LIVER	10.731	2.8389 %	5.9026	LOW
13-OCT-85	630/90	KIDNEYS	2.568	0.6794 %	1.4125	OK
13-OCT-85	630/90	ADRENAL GLANDS	0.080	0.0212 %	0.0440	HIGH
13-OCT-85	630/90	TESTES	3.153	0.8341 %	1.7343	HIGH
13-OCT-85	630/90	HEART	1.086	0.2873 %	0.5974	LOW
13-OCT-85	630/90	BRAIN	1.818	0.4810 %	1.0000	OK
13-OCT-85	630/90	SPLEEN	0.651	0.1722 %	0.3581	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
EXORBITAL LACRIM	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
TESTES	
-INTERSTITIAL CELL HYPERPLASIA	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 146 (Tox No. 27) SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 1
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 378.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(MILD)

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ANIMAL NUMBER: 205 (Tox No. 226) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 238.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.089	0.0374 %	0.0542	OK
14-OCT-85	631/91	LIVER	10.829	4.5500 %	6.5910	HIGH
14-OCT-85	631/91	KIDNEYS	1.767	0.7424 %	1.0755	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.069	0.0290 %	0.0420	HIGH
14-OCT-85	631/91	HEART	0.784	0.3294 %	0.4772	OK
14-OCT-85	631/91	BRAIN	1.643	0.6903 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.473	0.1987 %	0.2879	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	MILD	RIGHT EYE
EYES & OPTIC N.	CORNEAL DISCOLORATION.	PRESENT	RIGHT EYE, YELLOW/BROWN AND PROTRUDES,INVOLVES LENS.
LIVER	ADHERED TO DIAPHRAGM AND STOMACH	PRESENT	INVOLVES PERITONEAL WALL.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
URINARY BLADDER	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)

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ANIMAL NUMBER: 206 (Tox No. 230) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 215.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.075	0.0349 %	0.0420	OK
14-OCT-85	631/91	LIVER	6.235	2.9000 %	3.4950	LOW
14-OCT-85	631/91	KIDNEYS	1.549	0.7205 %	0.8683	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.069	0.0321 %	0.0387	HIGH
14-OCT-85	631/91	HEART	0.838	0.3898 %	0.4697	OK
14-OCT-85	631/91	BRAIN	1.784	0.8298 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.434	0.2019 %	0.2433	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM AND STOMACH	PRESENT	ADHESION INVOLVES INTESTINES AND OMENTUM.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
PANCREAS	
-PERITONITIS	NOT SPECIFIED(TRACE)
STOMACH	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 208(Tox No. 236) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FOUND DEAD
DATE OF DEATH: 19-JAN-85 STUDY DAY OF DEATH: 363 STUDY WEEK OF DEATH: 52 TERMINAL BODY WEIGHT: 248.00 (GMS)

<< O G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.198	0.0798 %	0.1106	HIGH
14-OCT-85	631/91	LIVER	14.778	5.9589 %	8.2513	HIGH
14-OCT-85	631/91	KIDNEYS	1.824	0.7355 %	1.0184	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.111	0.0448 %	0.0620	HIGH
14-OCT-85	631/91	HEART	1.074	0.4331 %	0.5997	OK
14-OCT-85	631/91	BRAIN	1.791	0.7222 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	7.061	2.8472 %	3.9425	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
SPLEEN	ENLARGED (SPLENOMEGALY)	PRESENT	ENLARGED, FRIABLE, RUPTURED
PITUITARY GLAND	CYST(S)	PRESENT	CYSTIC, BLACK, APPROX 3MM
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	
PERITONEAL CAV.	FLUID-FILLED	PRESENT	CONTAINED CLOTTED BLOOD
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	ADHERED TO PERITONEAL CAVITY, RIGHT SIDE, RED, FRIABLE; APPROX 40 CM FROM STOMACH
LYMPH NODES	ENLARGED	PRESENT	ANTERIOR MEDIASTINAL, RED

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LACRIMAL GLAND	TISSUE IS MISSING
SPLEEN	
-M- MONONUCLEAR CELL LEUKEMIA	(PRESENT)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
PITUITARY GLAND	

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STUDY START DATE: 23-JAN-84

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 208 (Fox No. 236) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FOUND DEAD
DATE OF DEATH: 19-JAN-85 STUDY DAY OF DEATH: 363 STUDY WEEK OF DEATH: 52 TERMINAL BODY WEIGHT: 248.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PITUITARY GLAND	
-B- ADENOMA	(PRESENT)

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ANIMAL NUMBER: 209 (LOS NO. 237) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28 JAN 85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 232.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.105	0.0453 %	0.0626	OK
14-OCT-85	631/91	LIVER	7.030	3.0302 %	4.1895	OK
14-OCT-85	631/91	KIDNEYS	1.767	0.7616 %	1.0530	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.079	0.0341 %	0.0471	HIGH
14-OCT-85	631/91	HEART	0.779	0.3358 %	0.4642	OK
14-OCT-85	631/91	BRAIN	1.678	0.7233 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.457	0.1970 %	0.2723	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	PINPOINT
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	INVOLVES OMENTUM AND PERITONEAL WALL.

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
EXORBITAL LACRIM	TISSUE IS MISSING
AORTA	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 209 (Tox No. 237) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 232.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
KIDNEY	
PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 211 (Tox No. 241) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 232.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.096	0.0414 %	0.0558	OK
14-OCT-85	631/91	LIVER	7.129	3.0728 %	4.1472	OK
14-OCT-85	631/91	KIDNEYS	1.672	0.7207 %	0.9727	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.112	0.0483 %	0.0652	HIGH
14-OCT-85	631/91	HEART	0.721	0.3108 %	0.4194	OK
14-OCT-85	631/91	BRAIN	1.719	0.7409 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.552	0.2379 %	0.3211	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	TRACE	BILATERAL.
LIVER	ABSCESS(ES)	PRESENT	SLIGHTLY RAISED ON DIAPHRAMATIC SURFACE,3MM DIAMETER. CONTAINS 3/4 X 1/2 X 1/2CM YELLOW CASEOUS MATERIAL.
STOMACH	GROWTH(S) / MASS(ES)	PRESENT	1CM DIAMETER ON GREATER CURVATURE.
CECUM	MASS(ES)	PRESENT	2-3MM NEAR JUNCTION OF CECUM AND COLON.
CECUM	ADHERENT TO OTHER ORGANS	PRESENT	ADHERED TO COLON

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
STOMACH	

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ANIMAL NUMBER: 211 (Fox No. 241) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 232.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
STOMACH	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
MAMMARY GLANDS	TISSUE IS MISSING

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ANIMAL NUMBER: 212 (Tox No. 258) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 239.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.093	0.0389 %	0.0552	OK
14-OCT-85	631/91	LIVER	8.690	3.6360 %	5.1573	OK
14-OCT-85	631/91	KIDNEYS	1.589	0.6649 %	0.9430	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.081	0.0339 %	0.0481	HIGH
14-OCT-85	631/91	HEART	0.891	0.3728 %	0.5288	OK
14-OCT-85	631/91	BRAIN	1.685	0.7050 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	1.214	0.5079 %	0.7205	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	INVOLVES PERITONEAL WALL WITH A FEW SMALL ADHESIONS TO SMALL INTESTINES.
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	1MM DIAMETER, BILATERAL.
SPLEEN	ENLARGED (SPLENOMEGALY)	MODERATE	ABOUT TWICE NORMAL SIZE.
JEJUNUM	FIBROUS ADHESIONS (TAGS)	PRESENT	4CM LENGTH ADHERED TOGETHER IN LOOP 30CM FROM STOMACH.
ILEUM	DILATATION	MODERATE	10CM FROM JEJUNAL LESION.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LUNGS	
-HYPERPLASTIC NODULE	NOT SPECIFIED(TRACE)
THYMUS	TISSUE IS MISSING
SPLEEN	

ANIMAL NUMBER: 212 (Tox No. 258) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 239.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SPLEEN	
-LYMPHOID HYPERPLASIA OF THE SPLENIC CORPUSCLES	NOT SPECIFIED(MODERATE)
LYMPH NODES	
-LYMPHOID HYPERPLASIA	NOT SPECIFIED(MODERATE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
-HEPATOCYTIC VACUOLIZATION	NOT SPECIFIED(TRACE)
JEJUNUM	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
SKIN	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

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ANIMAL NUMBER: 213 (Tox No. 259) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 224.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.102	0.0455 %	0.0601	OK
14-OCT-85	631/91	LIVER	6.644	2.9661 %	3.9151	LOW
14-OCT-85	631/91	KIDNEYS	1.629	0.7272 %	0.9599	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.078	0.0348 %	0.0460	HIGH
14-OCT-85	631/91	HEART	0.753	0.3362 %	0.4437	OK
14-OCT-85	631/91	BRAIN	1.697	0.7576 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.520	0.2321 %	0.3064	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	
EYES & OPTIC N.	OCCULAR DISCHARGE	PRESENT	BILATERAL
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	2 X 5CM AREA
UTERUS	HYDROMETRA	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
KIDNEY	

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ANIMAL NUMBER: 213 (Tox No. 259) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 224.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
JEJUNUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

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ANIMAL NUMBER: 214 (Tox No. 262) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 210.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.098	0.0467 %	0.0543	OK
14-OCT-85	631/91	LIVER	7.189	3.4233 %	3.9806	OK
14-OCT-85	631/91	KIDNEYS	1.504	0.7162 %	0.8328	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.062	0.0295 %	0.0343	HIGH
14-OCT-85	631/91	HEART	0.643	0.3062 %	0.3560	OK
14-OCT-85	631/91	BRAIN	1.806	0.8600 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.491	0.2338 %	0.2719	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	TRACE	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
JEJUNUM	TISSUE IS MISSING

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ANIMAL NUMBER: 214 (Tox No. 262) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 210.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 215 (Tox No. 263) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 199.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.121	0.0608 %	0.0699	OK
14-OCT-85	631/91	LIVER	6.585	3.3090 %	3.8042	OK
14-OCT-85	631/91	KIDNEYS	1.482	0.7447 %	0.8562	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.076	0.0382 %	0.0439	HIGH
14-OCT-85	631/91	HEART	0.712	0.3578 %	0.4113	OK
14-OCT-85	631/91	BRAIN	1.731	0.8698 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.452	0.2271 %	0.2611	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	RIGHT EYE, SEVERAL
SPLEEN	PROMINENT FIBROUS CAPSULE	TRACE	
LIVER	FIBROUS ADHESIONS (TAGS)	PRESENT	MULTIPLE ADHESIONS OF THE INTESTINES, LIVER AND OMENTUM.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-HEPATITIS	NOT SPECIFIED(TRACE)
-HEPATOCYTIC VACUOLIZATION	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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ANIMAL NUMBER: 216 (Tox No. 265) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 226.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.098	0.0434 %	0.0568	OK
14-OCT-85	631/91	LIVER	6.676	2.9540 %	3.8724	LOW
14-OCT-85	631/91	KIDNEYS	1.592	0.7044 %	0.9234	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.088	0.0389 %	0.0510	HIGH
14-OCT-85	631/91	HEART	0.804	0.3558 %	0.4664	OK
14-OCT-85	631/91	BRAIN	1.724	0.7628 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.524	0.2319 %	0.3039	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO PERITONEAL WALL	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
EXORBITAL LACRIM	TISSUE IS MISSING
AORTA	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 216 (Tox No. 265) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 226.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
JEJUNUM	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 217 (Tox No. 267) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 211.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.103	0.0488 %	0.0577	OK
14-OCT-85	631/91	LIVER	7.373	3.4943 %	4.1282	OK
14-OCT-85	631/91	KIDNEYS	1.523	0.7218 %	0.8527	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.077	0.0365 %	0.0431	HIGH
14-OCT-85	631/91	HEART	0.738	0.3498 %	0.4132	OK
14-OCT-85	631/91	BRAIN	1.786	0.8464 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.463	0.2194 %	0.2592	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
PERITONEAL CAV.	ADHESION(S)	PRESENT	SMALL INTESTINE ADHERED TO LIVER. HAS A 5MM BLACK DIVERTICULUM IN WALL OF INTESTINE AT ADHESION.
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	DIFFUSE.

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 217 (Tox No. 267) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 211.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
JEJUNUM	TISSUE IS MISSING
ILEUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
SCIATIC NERVE	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-METAPLASTIC BONE SCLERAL	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 221 (Tox No. 277) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 11-DEC-84 STUDY DAY OF DEATH: 324 STUDY WEEK OF DEATH: 47 TERMINAL BODY WEIGHT: 211.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.142	0.0673 %	0.0799	HIGH
14-OCT-85	631/91	LIVER	7.495	3.5521 %	4.2154	OK
14-OCT-85	631/91	KIDNEYS	1.502	0.7118 %	0.8448	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.072	0.0341 %	0.0405	HIGH
14-OCT-85	631/91	HEART	0.739	0.3502 %	0.4156	OK
14-OCT-85	631/91	BRAIN	1.778	0.8427 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.462	0.2190 %	0.2598	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	WITH TWO LOOPS ADHERED TO RIGHT SIDE OF ABDOMINAL WALL
EYES & OPTIC N.	OCCULAR DISCHARGE	PRESENT	RED MATERIAL ADHERED TO HAIR
WHOLE BODY	SKIN	PRESENT	SMALL FOCAL AREA ON VENTRAL SIDE OF TAIL: 1 CM CRUSTY RAISED

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
DUODENUM	
-COMPOUND RELATED REACTION WITH ASSOCIATED INFLAMMATION	NOT SPECIFIED (PRESENT)
RECTUM	TISSUE IS MISSING
BONE, STERNUM	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 231 (Tox No. 318) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 03-FEB-84 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 97.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.047	0.0485 %	0.0300	OK
14-OCT-85	631/91	LIVER	5.078	5.2351 %	3.2447	HIGH
14-OCT-85	631/91	KIDNEYS	1.112	1.1464 %	0.7105	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.036	0.0371 %	0.0230	HIGH
14-OCT-85	631/91	HEART	0.422	0.4351 %	0.2696	OK
14-OCT-85	631/91	BRAIN	1.565	1.6134 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.281	0.2897 %	0.1796	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM AND STOMACH	PRESENT	POSTERIOR SURFACE IS ADHERED BY TEST COMPOUND TO STOMACH AND SMALL INTESTINE. ANTERIOR SURFACE IS ADHERED TO DIAPHRAGM.
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	BILATERAL ROUGH GRANULAR AND OPAQUE SURFACE WITH A FOCAL 3-4 MM AREA

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
ILEUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING

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ANIMAL NUMBER: 231 (Tox No. 318) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 03-FEB-84 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 97.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
TONGUE	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING
BONE, STERNUM	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL VASCULARIZATION	NOT SPECIFIED(TRACE)
-CHRONIC KERATITIS	NOT SPECIFIED(MILD)
-IRIDOCYCLITIS	NOT SPECIFIED(MILD)

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ANIMAL NUMBER: 235 (Tox No. 333) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 29-AUG-84 STUDY DAY OF DEATH: 220 STUDY WEEK OF DEATH: 32 TERMINAL BODY WEIGHT: 196.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.096	0.0490 %	0.0523	OK
14-OCT-85	631/91	LIVER	6.425	3.2781 %	3.4995	OK
14-OCT-85	631/91	KIDNEYS	1.504	0.7673 %	0.8192	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.059	0.0301 %	0.0321	HIGH
14-OCT-85	631/91	HEART	0.571	0.2913 %	0.3110	LOW
14-OCT-85	631/91	BRAIN	1.836	0.9367 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.714	0.3643 %	0.3389	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	
WHOLE BODY	SUBCUTANEOUS	PRESENT	RIGHT FLANK: 4 X 4 CM MODERATELY FIRM WELL DEMARCATED MASS OVERLYING SKIN IS DARK BLUE/BLACK.
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	PROXIMAL ILEUM ADHERED TO ABDOMINAL WALL AND COMMUNICATES WITH SUBCUTANEOUS MASS VIA FISTULA THROUGH ABDOMINAL WALL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYMUS	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

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ANIMAL NUMBER: 235 (Tox No. 333) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 29-AUG-84 STUDY DAY OF DEATH: 220 STUDY WEEK OF DEATH: 32 TERMINAL BODY WEIGHT: 196.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING
TONGUE	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(MILD)
-CHRONIC KERATITIS	NOT SPECIFIED(TRACE)

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ANIMAL NUMBER: 245 (Tox No. 370) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 31-DEC-84 STUDY DAY OF DEATH: 344 STUDY WEEK OF DEATH: 50 TERMINAL BODY WEIGHT: 183.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.079	0.0432 %	0.0440	OK
14-OCT-85	631/91	LIVER	6.454	3.5268 %	3.5915	OK
14-OCT-85	631/91	KIDNEYS	1.565	0.8552 %	0.8709	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.062	0.0339 %	0.0345	HIGH
14-OCT-85	631/91	HEART	0.547	0.2989 %	0.3044	LOW
14-OCT-85	631/91	BRAIN	1.797	0.9820 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.559	0.3055 %	0.3111	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM AND STOMACH	PRESENT	STOMACH ADHERED TO PERITONEUM
WHOLE BODY	PERINEUM	PRESENT	HAIR STAINED YELLOW TO ORANGE AND WET
PERITONEAL CAV.	SMALL INTESTINE	PRESENT	ONE LOOP JEJUNUM AND CECUM ADHERED TO ABDOMINAL WALL WITH COMMON OPENING INTO SUBCUTANEOUS TISSUE WITH AREA FILLED WITH INGESTA
WHOLE BODY	SKIN	PRESENT	ABDOMEN: 2 X 1 CM RAISED BROWN TO BLACK AREA .5 CM HIGH

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-HEPATITIS	NOT SPECIFIED(TRACE)
CECUM	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
SKIN	

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ANIMAL NUMBER: 245 (Tox No. 370) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 31-DEC-84 STUDY DAY OF DEATH: 344 STUDY WEEK OF DEATH: 50 TERMINAL BODY WEIGHT: 183.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SKIN	
-COMPOUND PRESENT WITH ASSOCIATED INFLAMMATION\FIBROSIS	NOT SPECIFIED (PRESENT)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 249 (Tox No. 377) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FOUND DEAD
DATE OF DEATH: 15-JAN-85 STUDY DAY OF DEATH: 359 STUDY WEEK OF DEATH: 52 TERMINAL BODY WEIGHT: 184.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.152	0.0826 %	0.1058	HIGH
14-OCT-85	631/91	LIVER	8.714	4.7359 %	6.0682	HIGH
14-OCT-85	631/91	KIDNEYS	1.974	1.0728 %	1.3747	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.062	0.0337 %	0.0432	HIGH
14-OCT-85	631/91	HEART	0.739	0.4016 %	0.5146	OK
14-OCT-85	631/91	BRAIN	1.436	0.7804 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.393	0.2136 %	0.2737	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
URINARY BLADDER	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 252 (Tox No. 385) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 22-OCT-84 STUDY DAY OF DEATH: 274 STUDY WEEK OF DEATH: 40 TERMINAL BODY WEIGHT: 215.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.084	0.0391 %	0.0468	OK
14-OCT-85	631/91	LIVER	6.902	3.2102 %	3.8473	OK
14-OCT-85	631/91	KIDNEYS	1.463	0.6805 %	0.8155	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.046	0.0214 %	0.0256	HIGH
14-OCT-85	631/91	HEART	0.695	0.3233 %	0.3874	OK
14-OCT-85	631/91	BRAIN	1.794	0.8344 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.667	0.3102 %	0.3718	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	TO INCLUDE INTESTINES
OVARIES	HEMORRHAGE(S)	PRESENT	LEFT IS SURROUNDED BY A SMALL RED FLUID FILLED SAC
WHOLE BODY	SKIN	PRESENT	5 X 5 CM LUMP ON LEFT LATERAL ASPECT WITH 2 X 2 CM BLACK AREA IN CENTER. LUMP HAS ERODED THROUGH ABDOMINAL WALL TO SKIN
PERITONEAL CAV.	ADHESION(S)	PRESENT	SMALL INTESTINES, DIAPHRAGM,ABDOMINAL WALL, LIVER. LUMP ON DISTAL ILEUM WHICH HAS PERFORATED THROUGH ABDOMINAL WALL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
ILEUM	

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ANIMAL NUMBER: 252 (Tox No.385) SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 22-OCT-84 STUDY DAY OF DEATH: 274 STUDY WEEK OF DEATH: 40 TERMINAL BODY WEIGHT: 215.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ILEUM	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
PANCREAS	
-PERITONITIS	NOT SPECIFIED(TRACE)
STOMACH	
-COMPOUND RELATED INFLAMMATORY REACTION	NOT SPECIFIED (PRESENT)
SKIN	
-PROCEDURE RELATED GRANULOMATOUS CELLULITIS SUBCUTIS	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 274 (Tox No. 229) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 204.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.096	0.0471 %	0.0556	OK
14-OCT-85	631/91	LIVER	5.527	2.7093 %	3.1985	LOW
14-OCT-85	631/91	KIDNEYS	1.392	0.6824 %	0.8056	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.064	0.0314 %	0.0370	HIGH
14-OCT-85	631/91	HEART	0.742	0.3637 %	0.4294	OK
14-OCT-85	631/91	BRAIN	1.728	0.8471 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.416	0.2039 %	0.2407	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	BILATERAL
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1-2 CM

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
RECTUM	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 275 (Tox No. 231) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 199.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.144	0.0724 %	0.0784	HIGH
14-OCT-85	631/91	LIVER	5.861	2.9452 %	3.1905	LOW
14-OCT-85	631/91	KIDNEYS	1.572	0.7899 %	0.8557	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.079	0.0397 %	0.0430	HIGH
14-OCT-85	631/91	HEART	0.654	0.3286 %	0.3560	OK
14-OCT-85	631/91	BRAIN	1.837	0.9231 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.428	0.2151 %	0.2330	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	TRACE	LEFT
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	WHITE, BILATERAL
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
RECTUM	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)

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DIV OF RES SUPP, PATH SERV GP — STUDY NUMBER: GLP83009 — PAGE: 3
SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 276 (Tox No. 234) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 201.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.120	0.0597 %	0.0705	OK
14-OCT-85	631/91	LIVER	6.037	3.0035 %	3.5470	OK
14-OCT-85	631/91	KIDNEYS	1.664	0.8279 %	0.9777	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.086	0.0428 %	0.0505	HIGH
14-OCT-85	631/91	HEART	0.835	0.4154 %	0.4906	OK
14-OCT-85	631/91	BRAIN	1.702	0.8468 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.447	0.2224 %	0.2626	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	LEFT
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	RIGHT 1 X 2 MM WHITE OPACITY

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 277 (Tox No. 239) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 225.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.143	0.0636 %	0.0781	OK
14-OCT-85	631/91	LIVER	6.433	2.8591 %	3.5153	LOW
14-OCT-85	631/91	KIDNEYS	1.596	0.7093 %	0.8721	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.090	0.0400 %	0.0492	HIGH
14-OCT-85	631/91	HEART	0.807	0.3587 %	0.4410	OK
14-OCT-85	631/91	BRAIN	1.830	0.8133 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.522	0.2320 %	0.2852	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED TO PERITONEAL WALL	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
URINARY BLADDER	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

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PAGE: 5
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 277 (Tox No. 239) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 225.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING

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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 278 (Tox No. 244) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 191.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.130	0.0681 %	0.0718	HIGH
14-OCT-85	631/91	LIVER	5.919	3.0990 %	3.2684	OK
14-OCT-85	631/91	KIDNEYS	1.477	0.7733 %	0.8156	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.050	0.0262 %	0.0276	HIGH
14-OCT-85	631/91	HEART	0.617	0.3230 %	0.3407	OK
14-OCT-85	631/91	BRAIN	1.811	0.9482 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.418	0.2188 %	0.2308	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	TRACE	BILATERAL
KIDNEY	CYST	PRESENT	1 MM CORTICAL, LEFT
UTERUS	POLYP	PRESENT	LEFT HORN, ENDOMETRIAL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LUNGS	
-PLEURITIS WITH SUBADJACENT CHRONIC PNEUMONIA	NOT SPECIFIED(MILD)
THYMUS	
-PLEURITIS	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
UTERUS	

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 278 (Tox No. 244) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 191.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
UTERUS	
-ENDOMETRIAL STROMAL POLYP	NOT SPECIFIED (PRESENT)
MAMMARY GLANDS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
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INDIVIDUAL ANIMAL DATA REPORT
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 279 (Tox No. 246) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 239.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.098	0.0410 %	0.0569	OK
14-OCT-85	631/91	LIVER	6.636	2.7766 %	3.8537	LOW
14-OCT-85	631/91	KIDNEYS	1.778	0.7439 %	1.0325	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.080	0.0335 %	0.0465	HIGH
14-OCT-85	631/91	HEART	0.814	0.3406 %	0.4727	OK
14-OCT-85	631/91	BRAIN	1.722	0.7205 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.447	0.1870 %	0.2596	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	FOCAL CORNEAL OPACITY	PRESENT	1MM WHITE FOCUS

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
SKIN	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING
PITUITARY GLAND	
-CYST(S)	NOT SPECIFIED (PRESENT)

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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 280 (Tox No. 247) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 209.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.512	0.2450 %	0.2936	HIGH
14-OCT-85	631/91	LIVER	7.124	3.4086 %	4.0849	OK
14-OCT-85	631/91	KIDNEYS	1.621	0.7756 %	0.9295	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.082	0.0392 %	0.0470	HIGH
14-OCT-85	631/91	HEART	0.729	0.3488 %	0.4180	OK
14-OCT-85	631/91	BRAIN	1.744	0.8344 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.454	0.2172 %	0.2603	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	LEFT
EYES & OPTIC N.	CORNEAL OPACITY	TRACE	RIGHT, SMALL PUNCTATE OPACITY
OVARIES	CYST(S) WITHIN OVARY	PRESENT	.5 CM
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	2.5 CM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
-HEPATOCYTIC VACUOLIZATION	NOT SPECIFIED(MILD)

ANIMAL NUMBER: 280 (Tox No. 247) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 209.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
URINARY BLADDER	TISSUE IS MISSING
PANCREAS	TISSUE IS MISSING
NOSE/TURBINATES	
-ACUTE INFLAMMATION	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 281 (Tox No. 249) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 220.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.091	0.0414 %	0.0509	OK
14-OCT-85	631/91	LIVER	5.940	2.7000 %	3.3240	LOW
14-OCT-85	631/91	KIDNEYS	1.553	0.7059 %	0.8691	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.062	0.0282 %	0.0347	HIGH
14-OCT-85	631/91	HEART	0.916	0.4164 %	0.5126	OK
14-OCT-85	631/91	BRAIN	1.787	0.8123 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.482	0.2191 %	0.2697	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	OCCULAR DISCHARGE	PRESENT	RED DISCOLORATION AROUND THE EYES, BILATERAL
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	1 CM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
EXORBITAL LACRIM	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MILD)
-HEPATITIS	NOT SPECIFIED(TRACE)
EYES & OPTIC N.	

ANIMAL NUMBER: 281 (Tox No. 249) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 220.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)
AD SEBACIOUS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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PRINTED: 14-MAR-86
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 282 (Tox No. 250) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 219.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.092	0.0420 %	0.0527	OK
14-OCT-85	631/91	LIVER	5.951	2.7174 %	3.4084	LOW
14-OCT-85	631/91	KIDNEYS	1.518	0.6932 %	0.8694	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.065	0.0297 %	0.0372	HIGH
14-OCT-85	631/91	HEART	0.836	0.3817 %	0.4788	OK
14-OCT-85	631/91	BRAIN	1.746	0.7973 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.482	0.2201 %	0.2761	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	LEFT 1MM WHITE FOCI
LIVER	ADHERED TO PERITONEAL WALL	PRESENT	1CM IN DIAMETER

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
SALIVARY GLAND	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
URINARY BLADDER	TISSUE IS MISSING

ANIMAL NUMBER: 282 (Tox No. 250) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 219.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
BONE, FEMUR	TISSUE IS MISSING
PITUITARY GLAND	
-CYST(S)	NOT SPECIFIED (PRESENT)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 283 (Tox No. 251) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 212.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.083	0.0392 %	0.0451	OK
14-OCT-85	631/91	LIVER	5.732	2.7038 %	3.1118	LOW
14-OCT-85	631/91	KIDNEYS	1.469	0.6929 %	0.7975	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.068	0.0321 %	0.0369	HIGH
14-OCT-85	631/91	HEART	0.654	0.3085 %	0.3550	OK
14-OCT-85	631/91	BRAIN	1.842	0.8689 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.483	0.2278 %	0.2622	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	MILD	RIGHT
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	1 CM

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL PIGMENTATION	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
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PAGE: 1
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 317 (Tox No. 344) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 12-MAR-84 STUDY DAY OF DEATH: 50 STUDY WEEK OF DEATH: 8 TERMINAL BODY WEIGHT: 170.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.100	0.0588 %	0.0645	OK
14-OCT-85	631/91	LIVER	6.800	4.0000 %	4.3871	HIGH
14-OCT-85	631/91	KIDNEYS	1.320	0.7765 %	0.8516	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.040	0.0235 %	0.0258	HIGH
14-OCT-85	631/91	HEART	0.570	0.3353 %	0.3677	OK
14-OCT-85	631/91	BRAIN	1.550	0.9118 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.420	0.2471 %	0.2710	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ADHERED-DIAPHRAGM & PERITONEUM.	PRESENT	ADHERED TO STERNAL AREA

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)
JEJUNUM	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING

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ANIMAL NUMBER: 317 (Tox No. 344) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 12-MAR-84 STUDY DAY OF DEATH: 50 STUDY WEEK OF DEATH: 8 TERMINAL BODY WEIGHT: 170.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
TONGUE	TISSUE IS MISSING
SKIN	
-NON-SUPPURATIVE DERMATITIS	NOT SPECIFIED(TRACE)
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)
-CORNEAL VASCULARIZATION	NOT SPECIFIED(TRACE)
-CHRONIC KERATITIS	NOT SPECIFIED(MODERATE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 335 (Tox No. 421) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 04-JUN-84 STUDY DAY OF DEATH: 134 STUDY WEEK OF DEATH: 20 TERMINAL BODY WEIGHT: 172.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.057	0.0331 %	0.0337	OK
14-OCT-85	631/91	LIVER	5.602	3.2570 %	3.3109	OK
14-OCT-85	631/91	KIDNEYS	1.251	0.7273 %	0.7394	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.056	0.0326 %	0.0331	HIGH
14-OCT-85	631/91	HEART	0.631	0.3669 %	0.3729	OK
14-OCT-85	631/91	BRAIN	1.692	0.9837 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.375	0.2180 %	0.2216	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	EMACIATED	PRESENT	
EYES & OPTIC N.	CRUSTY MATERIAL, PERIORBITAL	PRESENT	RED
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	LEFT, CENTRALLY LOCATED, 2 MM
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	ATTACHED IN TWO AREAS: LEFT LOBE 5 X 8 MM RECTANGULAR ATTACHMENT. MIDDLE: IRREGULAR 15 X 10 MM ATTACHMENT WITH TEST COMPOUND

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
RECTUM	TISSUE IS MISSING
TONGUE	TISSUE IS MISSING
EYES & OPTIC N.	

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ANIMAL NUMBER: 335 (Tox No. 421) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 04-JUN-84 STUDY DAY OF DEATH: 134 STUDY WEEK OF DEATH: 20 TERMINAL BODY WEIGHT: 172.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EYES & OPTIC N.	
·CHRONIC KERATITIS	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 340 (Tox No. 434) SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 02-OCT-84 STUDY DAY OF DEATH: 254 STUDY WEEK OF DEATH: 37 TERMINAL BODY WEIGHT: 200.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.088	0.0440 %	0.0479	OK
14-OCT-85	631/91	LIVER	7.289	3.6445 %	3.9700	OK
14-OCT-85	631/91	KIDNEYS	1.414	0.7070 %	0.7702	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.071	0.0355 %	0.0387	HIGH
14-OCT-85	631/91	HEART	0.686	0.3430 %	0.3736	OK
14-OCT-85	631/91	BRAIN	1.836	0.9180 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.458	0.2290 %	0.2495	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	BILATERAL,4-5 WHITE FOCI RANDOMLY DISTRIBUTED OVER CORNEA, APPROXIMATELY .1 -.5 MM
LIVER	ADHERED TO DIAPHRAGM.	PRESENT	FOCAL AREA APPROXIMATELY .5 CM AT DISTAL END STERNUM
WHOLE BODY	CHIN	PRESENT	.VENTRAL MANDIBLE HAS 1 CM AREA OF HAIR LOSS

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-CAPSULAR FOREIGN GRANULOMATOUS REACTION	NOT SPECIFIED (PRESENT)
-HEPATITIS	NOT SPECIFIED(TRACE)
PANCREAS	
-ACINAR (EXOCRINE) ATROPHY	NOT SPECIFIED(MILD)
RECTUM	TISSUE IS MISSING

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DATE OF DEATH: 02-OCT-84 STUDY DAY OF DEATH: 254 STUDY WEEK OF DEATH: 37 TERMINAL BODY WEIGHT: 200.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(MODERATE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 341 (Tox No. 227) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 219.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.082	0.0374 %	0.0468	OK
14-OCT-85	631/91	LIVER	5.601	2.5575 %	3.1933	LOW
14-OCT-85	631/91	KIDNEYS	1.552	0.7087 %	0.8848	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.072	0.0329 %	0.0410	HIGH
14-OCT-85	631/91	HEART	0.782	0.3571 %	0.4458	OK
14-OCT-85	631/91	BRAIN	1.754	0.8009 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.454	0.2073 %	0.2588	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	LEFT 1MM RAISED WHITE SPOT. ADJACENT WHITE ROUGH AREA ON CORNEA MEASURES 1-2 MM.
LIVER	FOCI	PRESENT	2 SLIGHTLY RAISED FOCI MEASURING 2MM ON DIAPHRAGMATIC SURFACE

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-FIBROSIS CAPSULAR NO COMPOUND	NOT SPECIFIED (PRESENT)
URINARY BLADDER	TISSUE IS MISSING
UTERUS	
-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 341 (Tox No. 227) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 219.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING
PITUITARY GLAND	
-CYST(S)	NOT SPECIFIED (PRESENT)
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)
-CORNEAL VASCULARIZATION	NOT SPECIFIED(TRACE)
-CHRONIC KERATITIS	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 342 (Tox No. 233) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 210.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.121	0.0576 %	0.0701	OK
14-OCT-85	631/91	LIVER	5.881	2.8005 %	3.4073	LOW
14-OCT-85	631/91	KIDNEYS	1.445	0.6881 %	0.8372	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.081	0.0386 %	0.0469	HIGH
14-OCT-85	631/91	HEART	0.731	0.3481 %	0.4235	OK
14-OCT-85	631/91	BRAIN	1.726	0.8219 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.379	0.1805 %	0.2196	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EXORBITAL LACRIM	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 342 (Tox No. 233) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 210.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
RECTUM	TISSUE IS MISSING
SCIATIC NERVE	TISSUE IS MISSING
PITUITARY GLAND	
-CYST(S)	NOT SPECIFIED (PRESENT)

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ANIMAL NUMBER: 343 (Tox No. 235) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 199.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.172	0.0864 %	0.0961	HIGH
14-OCT-85	631/91	LIVER	5.425	2.7261 %	3.0307	LOW
14-OCT-85	631/91	KIDNEYS	1.567	0.7874 %	0.8754	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.104	0.0523 %	0.0581	HIGH
14-OCT-85	631/91	HEART	0.728	0.3658 %	0.4067	OK
14-OCT-85	631/91	BRAIN	1.790	0.8995 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.450	0.2261 %	0.2514	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
URINARY BLADDER	TISSUE IS MISSING
LEUM	TISSUE IS MISSING
SCIATIC NERVE	TISSUE IS MISSING

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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 344 (Tox No. 240) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 04-DEC-84 STUDY DAY OF DEATH: 317 STUDY WEEK OF DEATH: 46 TERMINAL BODY WEIGHT: 170.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	1.810	1.0647 %	0.5096	EXCLUDE
14-OCT-85	631/91	LIVER	12.482	7.3424 %	3.5141	EXCLUDE
14-OCT-85	631/91	KIDNEYS	3.550	2.0882 %	0.9994	EXCLUDE
14-OCT-85	631/91	ADRENAL GLANDS	1.831	1.0771 %	0.5155	EXCLUDE
14-OCT-85	631/91	HEART	2.835	1.6676 %	0.7981	EXCLUDE
14-OCT-85	631/91	BRAIN	3.552	2.0894 %	1.0000	EXCLUDE
14-OCT-85	631/91	SPLEEN	8.765	5.1559 %	2.4676	EXCLUDE

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
PERITONEAL CAV.	MESENTARY	PRESENT	.FAT IS DIFFUSELY YELLOW
ADRENAL	CONGESTED / RED	PRESENT	MULTIPLE PINPOINT RED FOCI ON CORTEX, BILATERAL
THYROID GLANDS	PALE AND / OR TAN COLOR	PRESENT	PALE YELLOW
LIVER	ROUNDED EDGES	PRESENT	CAPSULE DIFFUSELY ROUGH
LIVER	PROMINENT LOBULAR MARKINGS	TRACE	PALE ACCENTUATED LOBULAR PATTERN
KIDNEY	FOCI	PRESENT	.CORTICOMEDULLARY JUNCTION HAD NUMEROUS 1 MM GOLDEN BROWN FOCI
SPLEEN	ENLARGED (SPLENOMEGALY)	PRESENT	TWO MULTILOBULATED ADJACENT MASSES: 1 X 2 CM RED BROWN; 1 X 1 CM YELLOW WHITE. ONE WITH 2 PALE YELLOW FOCI ON CAPSULAR SURFACE 5 X 3 MM AND 2 X 2 MM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYMUS	TISSUE IS MISSING
SPLEEN	
-INFARCTION	NOT SPECIFIED(MARKED)

ANIMAL NUMBER: 344 (Tox No. 240) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 04-DEC-84 STUDY DAY OF DEATH: 317 STUDY WEEK OF DEATH: 46 TERMINAL BODY WEIGHT: 170.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SPLEEN	
-M- MONONUCLEAR CELL LEUKEMIA	(PRESENT)

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ANIMAL NUMBER: 345 (Tox No. 242) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 13-DEC-84 STUDY DAY OF DEATH: 326 STUDY WEEK OF DEATH: 47 TERMINAL BODY WEIGHT: 199.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.078	0.0392 %	0.0427	OK
14-OCT-85	631/91	LIVER	7.306	3.6714 %	4.0033	OK
14-OCT-85	631/91	KIDNEYS	2.122	1.0663 %	1.1627	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.059	0.0296 %	0.0323	HIGH
12-NOV-85	660/95	HEART	0.694	0.3487 %	0.3803	OK
14-OCT-85	631/91	BRAIN	1.825	0.9171 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.447	0.2246 %	0.2449	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
PERITONEAL CAV.	LARGE INTESTINE	PRESENT	OUTER SURFACE HAS 2 RED FOCI .5 X .5 CM AND 2 X 2 MM

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(MILD)

ANIMAL NUMBER: 346 (Tox No. 243) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 243.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.190	0.0782 %	0.1096	HIGH
14-OCT-85	631/91	LIVER	6.149	2.5305 %	3.5461	LOW
14-OCT-85	631/91	KIDNEYS	1.680	0.6914 %	0.9689	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.136	0.0560 %	0.0784	HIGH
14-OCT-85	631/91	HEART	0.773	0.3181 %	0.4458	OK
14-OCT-85	631/91	BRAIN	1.734	0.7136 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.472	0.1942 %	0.2722	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CORNEAL OPACITY	PRESENT	RIGHT; SMALL PUNCTATE OPACITIES

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
ESOPHAGUS	TISSUE IS MISSING
AORTA	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
SKELETAL MUSCLE	TISSUE IS MISSING

ANIMAL NUMBER: 346 (Tox No. 243) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 243.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SCIATIC NERVE	TISSUE IS MISSING

Brown--710

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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 347 (Tox No. 245) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 212.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.108	0.0509 %	0.0635	OK
14-OCT-85	631/91	LIVER	6.684	3.1528 %	3.9295	OK
14-OCT-85	631/91	KIDNEYS	1.532	0.7226 %	0.9006	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.069	0.0325 %	0.0406	HIGH
14-OCT-85	631/91	HEART	0.786	0.3708 %	0.4621	OK
14-OCT-85	631/91	BRAIN	1.701	0.8024 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.496	0.2340 %	0.2916	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	OCCULAR DISCHARGE	PRESENT	BILATAERAL RED DISCOLORATION AROUND EYES

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
PARATHYROID	TISSUE IS MISSING
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)

ANIMAL NUMBER: 347 (Tox No. 245) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 212.00 (GMS)

Brown--712

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
URINARY BLADDER	TISSUE IS MISSING
UTERUS	
-PYOMETRA	NOT SPECIFIED(TRACE)
EYES & OPTIC N.	
-CORNEAL MINERALIZATION	NOT SPECIFIED(TRACE)
AD SEBACIOUS	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
STUDY NUMBER: GLP83009
STUDY START DATE: 23-JAN-84

PRINTED: 14-MAR-86
PAGE: 13
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 348 (Tox No. 248) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 194.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.071	0.0366 %	0.0398	OK
14-OCT-85	631/91	LIVER	5.590	2.8814 %	3.1299	LOW
14-OCT-85	631/91	KIDNEYS	1.479	0.7624 %	0.8281	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.078	0.0402 %	0.0437	HIGH
14-OCT-85	631/91	HEART	0.803	0.4139 %	0.4496	OK
14-OCT-85	631/91	BRAIN	1.786	0.9206 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.426	0.2196 %	0.2385	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(MODERATE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 349 (Tox No. 252) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 209.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.108	0.0517 %	0.0632	OK
14-OCT-85	631/91	LIVER	5.414	2.5904 %	3.1679	LOW
14-OCT-85	631/91	KIDNEYS	1.452	0.6947 %	0.8496	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.073	0.0349 %	0.0427	HIGH
14-OCT-85	631/91	HEART	0.807	0.3861 %	0.4722	OK
14-OCT-85	631/91	BRAIN	1.709	0.8177 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.469	0.2244 %	0.2744	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
UTERUS	HYDROMETRA	PRESENT	DIFFUSE ENLARGEMENT, TWICE THE SIZE OF NORMAL

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EXORBITAL LACRIM	TISSUE IS MISSING
THYMUS	TISSUE IS MISSING
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
-FOCUS BASOPHILIC	NOT SPECIFIED(MILD)
-FOCUS CLEAR	NOT SPECIFIED(MILD)
UTERUS	
-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)	NOT SPECIFIED (PRESENT)

ANIMAL NUMBER: 349 (Tox No. 252) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 209.00 (GMS)

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
COLON	TISSUE IS MISSING
STOMACH	TISSUE IS MISSING

LETTERMAN ARMY INSTITUTE OF RESEARCH
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SPECIES: RAT/FISCHER-344

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PAGE: 16
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 350 (Tox No. 253) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SACRIFICED MORIBUND
DATE OF DEATH: 30-MAR-84 STUDY DAY OF DEATH: 68 STUDY WEEK OF DEATH: 10 TERMINAL BODY WEIGHT: 159.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.089	0.0560 %	0.0541	OK
14-OCT-85	631/91	LIVER	5.085	3.1981 %	3.0931	OK
14-OCT-85	631/91	KIDNEYS	1.194	0.7509 %	0.7263	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.049	0.0308 %	0.0298	HIGH
14-OCT-85	631/91	HEART	0.571	0.3591 %	0.3473	OK
14-OCT-85	631/91	BRAIN	1.644	1.0340 %	1.0000	HIGH
14-OCT-85	631/91	SPLEEN	0.400	0.2516 %	0.2433	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	CONJUNCTIVITIS	PRESENT	BILATERAL. RIGHT EYE VASCULARIZATION OF THE CORNEA

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
URINARY BLADDER	TISSUE IS MISSING
RECTUM	TISSUE IS MISSING
MAMMARY GLANDS	TISSUE IS MISSING

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SPECIES: RAT/FISCHER-344 — STUDY START DATE: 23-JAN-84 — STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 352 (Tox No. 255) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 204.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BOD. WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.135	0.0662 %	0.0751	HIGH
14-OCT-85	631/91	LIVER	5.136	2.5176 %	2.8581	LOW
14-OCT-85	631/91	KIDNEYS	1.482	0.7265 %	0.8247	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.058	0.0284 %	0.0323	HIGH
14-OCT-85	631/91	HEART	0.662	0.3245 %	0.3684	OK
14-OCT-85	631/91	BRAIN	1.797	0.8809 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.409	0.2005 %	0.2276	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
UTERUS	THICKEN	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
UTERUS	
-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)	NOT SPECIFIED (PRESENT)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
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PRINTED: 14-MAR-86
PAGE: 2
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 353 (Tox No. 261) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 205.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.103	0.0502 %	0.0568	OK
14-OCT-85	631/91	LIVER	5.665	2.7634 %	3.1264	LOW
14-OCT-85	631/91	KIDNEYS	1.461	0.7127 %	0.8063	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.056	0.0273 %	0.0309	HIGH
14-OCT-85	631/91	HEART	0.621	0.3029 %	0.3427	OK
14-OCT-85	631/91	BRAIN	1.812	0.8839 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.501	0.2444 %	0.2765	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
EYES & OPTIC N.	IRREGULAR EYE SURFACE.	PRESENT	RIGHT CORNEA

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART	
-CARDIOMYOPATHY	NOT SPECIFIED(TRACE)
LIVER	
-BILE DUCTULE EPITHELIAL HYPERPLASIA	NOT SPECIFIED(TRACE)
-HEPATITIS	NOT SPECIFIED(TRACE)
KIDNEY	
-PROGRESSIVE RENAL DISEASE	NOT SPECIFIED(TRACE)

LETTERMAN ARMY INSTITUTE OF RESEARCH
DIV OF RES SUPP, PATH SERV GP
SPECIES: RAT/FISCHER-344

INDIVIDUAL ANIMAL DATA REPORT
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PAGE: 3
STUDY TYPE: CHRONIC/2 YR CARCINOGENIC

ANIMAL NUMBER: 354 (Tox No. 264) SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2
DATE OF DEATH: 28-JAN-85 STUDY DAY OF DEATH: 372 STUDY WEEK OF DEATH: 54 TERMINAL BODY WEIGHT: 197.00 (GMS)

<< O R G A N W E I G H T S >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
14-OCT-85	631/91	OVARIES	0.087	0.0442 %	0.0493	OK
14-OCT-85	631/91	LIVER	5.467	2.7751 %	3.0957	LOW
14-OCT-85	631/91	KIDNEYS	1.512	0.7675 %	0.8562	OK
14-OCT-85	631/91	ADRENAL GLANDS	0.073	0.0371 %	0.0413	HIGH
14-OCT-85	631/91	HEART	0.708	0.3594 %	0.4009	OK
14-OCT-85	631/91	BRAIN	1.766	0.8964 %	1.0000	OK
14-OCT-85	631/91	SPLEEN	0.527	0.2675 %	0.2984	HIGH

<< G R O S S O R G A N O B S E R V A T I O N S >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED	PRESENT	

<< M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
MAMMARY GLANDS	TISSUE IS MISSING
PITUITARY GLAND -CYST(S)	NOT SPECIFIED (PRESENT)
EYES & OPTIC N. -CHRONIC KERATITIS	NOT SPECIFIED(TRACE)

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