TDMS No. 99007 - 06 Test Type: CHRONIC Route: DOSED FEED

Species/Strain: MICE/B6C3F1

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Goldenseal root powder

CAS Number: GOLDENSEALRT

F1\_Rev.1\_M3

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

Lab: SRI

C Number: C99007B

**Lock Date:** 08/29/2006

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

**TDMSE Version:** 2.0.0

Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Disposition Summary					
Animals Initially in Study	50	50	50	50	
Early Deaths					
Moribund Sacrifice		3	2	3	
Natural Death	7	9	3	2	
Survivors					
Natural Death		1			
Terminal Sacrifice	43	37	45	45	
Animals Examined Microscopically	50	50	50	50	
ALIMENTARY SYSTEM					
Intestine Large, Cecum	(47)	(46)	(48)	(50)	
Intestine Small, Duodenum	(44)	(43)	(47)	(50)	
Intestine Small, Jejunum	(46)	(43)	(47)	(48)	
Hyperplasia, Lymphoid	1 (2%)	1 (2%)	3 (6%)	2 (4%)	
Epithelium, Hyperplasia	. (270)	. (278)	3 (373)	1 (2%)	
Liver	(50)	(50)	(50)	(50)	
Angiectasis	(00)	(66)	(00)	1 (2%)	
Basophilic Focus	1 (2%)	3 (6%)	3 (6%)	3 (6%)	
Clear Cell Focus	10 (20%)	10 (20%)	11 (22%)	12 (24%)	
Cyst	10 (2070)	1 (2%)	11 (2270)	1 (2%)	
Eosinophilic Focus	7 (14%)	14 (28%)	14 (28%)	24 (48%)	
Fibrosis	7 (1470)	14 (2070)	1 (2%)	24 (4070)	
Hematopoietic Cell Proliferation		1 (2%)	1 (2%)		
Hemorrhage		1 (2%)	1 (270)		
Hepatodiaphragmatic Nodule	1 (2%)	1 (2%)			
Infiltration Cellular, Lymphocyte	1 (2%)	1 (2%)	4 (8%)	3 (6%)	
Infiltration Cellular, Mixed Cell	3 (6%)	6 (12%)	3 (6%)	4 (8%)	
Mixed Cell Focus	1 (2%)	7 (14%)	9 (18%)	6 (12%)	
Necrosis, Focal	2 (4%)	3 (6%)	5 (10%)	6 (12%)	
Tension Lipidosis	_ ( . / 0 /	1 (2%)	3 (1070)	· ( · = / · o /	
Bile Duct, Hyperplasia		1 (2%)			
Hepatocyte, Hyperplasia, Focal		. (270)	1 (2%)		
Hepatocyte, Hypertrophy			1 (2%)		
Hepatocyte, Vacuolization Cytoplasmic	6 (12%)	11 (22%)	15 (30%)	7 (14%)	
Hepatocyte, Vacuolization Cytoplasmic, Focal	J ( . = /0)	(22 /0)	1 (2%)	. ( , 0)	
Kupffer Cell, Pigmentation	1 (2%)	1 (2%)	2 (4%)	1 (2%)	
Mesentery	(6)	(3)	(12)	(1)	
Fibrosis	1 (17%)	(5)	1 (8%)	1 (100%)	
Inflammation, Suppurative	. (/)	1 (33%)	1 (8%)	. (,	
Fat, Necrosis	5 (83%)	1 (33%)	6 (50%)		

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED FEED

**TDMS No.** 99007 - 06

Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
_	(12)	(-0)	(=0)	(70)	
Pancreas	(49)	(50)	(50)	(50)	
Atrophy			1 (2%)		
Cyst			1 (2%)	4 (00()	
Infiltration Cellular, Lymphocyte	0 (40/)	F (400()		1 (2%)	
Acinus, Cytoplasmic Alteration	2 (4%)	5 (10%)		2 (4%)	
Acinus, Hyperplasia, Focal	1 (2%)	(50)	(50)	(50)	
Salivary Glands	(50)	(50)	(50)	(50)	
Infiltration Cellular, Lymphocyte	1 (2%)	1 (2%)	2 (4%)	1 (2%)	
Stomach, Forestomach	(50)	(50)	(50)	(50)	
Inflammation, Chronic	1 (2%)	0 (40()			
Ulcer	1 (2%)	2 (4%)	0 (00()	0 (40()	
Epithelium, Hyperplasia	3 (6%)	5 (10%)	3 (6%)	2 (4%)	
Stomach, Glandular	(50)	(50)	(50)	(50)	
Cyst		5 (10%)	3 (6%)	1 (2%)	
Edema	4 (00()	1 (2%)		4 (00()	
Erosion	1 (2%)			4 (8%)	
Epithelium, Hyperplasia	4 (00()			1 (2%)	
Glands, Cyst	1 (2%)				
Heart Cardiomyopathy Thrombosis Artery, Inflammation, Chronic	(50) 45 (90%) 1 (2%) 1 (2%)	(50) 42 (84%)	(50) 44 (88%)	(50) 44 (88%)	
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	
Accessory Adrenal Cortical Nodule	(55)	1 (2%)	1 (2%)	(00)	
Hypertrophy		(=75)	3 (6%)		
Hypertrophy, Focal	13 (26%)	18 (36%)	10 (20%)	5 (10%)	
Capsule, Hyperplasia	39 (78%)	37 (74%)	41 (82%)	37 (74%)	
Adrenal Medulla	(50)	(50)	(50)	(49)	
Hyperplasia	(/	(/	1 (2%)	(10)	
Islets, Pancreatic	(49)	(50)	(50)	(50)	
Hyperplasia	4 (8%)	12 (24%)	11 (22%)	4 (8%)	
Parathyroid Gland	(45)	(45)	(47)	(49)	
Cyst	( - /	( - /	3 (6%)	\ - <i>\</i>	
Pituitary Gland	(50)	(49)	(49)	(50)	
Pars Distalis, Cyst	2 (4%)	2 (4%)	1 (2%)	3 (6%)	
Pars Distalis, Hyperplasia, Focal	2 (4%)	<b>(</b> /	(/	1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)	
Follicle, Cyst	, ,	2 (4%)	4 (8%)	• •	
· · · · · · · · · · · · · · · · · · ·					

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC

**TDMS No.** 99007 - 06

Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder **CAS Number: GOLDENSEALRT**  Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Follicle, Degeneration, Focal Follicular Cell, Hyperplasia	5 (10%)	6 (12%)	6 (12%)	4 (8%) 1 (2%)	
GENERAL BODY SYSTEM					
None					
GENITAL SYSTEM					
Coagulating Gland	(0)	(1)	(0)	(0)	
Inflammation, Suppurative	(50)	1 (100%)	(50)	(50)	
Epididymis Cyst	(50)	(50) 1 (2%)	(50)	(50)	
Granuloma Sperm		1 (2%)	1 (2%)		
Preputial Gland	(50)	(50)	(50)	(50)	
Atrophy	(00)	(00)	1 (2%)	(00)	
Cyst	19 (38%)	17 (34%)	25 (50%)	13 (26%)	
Hyperplasia		1 (2%)	4 (8%)	2 (4%)	
Inflammation, Suppurative	1 (2%)	3 (6%)	4 (8%)	2 (4%)	
Inflammation, Chronic	1 (2%)	4 (8%)	3 (6%)	2 (4%)	
Bilateral, Cyst			1 (2%)		
Prostate	(50)	(50)	(50)	(50)	
Inflammation, Suppurative		1 (2%)	4 (00()		
Inflammation, Granulomatous		0 (40/)	1 (2%)		
Inflammation, Chronic Epithelium, Hyperplasia	2 (4%)	2 (4%) 1 (2%)	1 (20/)	3 (6%)	
Seminal Vesicle	2 (4%) (50)	(50)	1 (2%) (50)	(50)	
Inflammation, Suppurative	(30)	1 (2%)	(30)	(30)	
Testes	(50)	(50)	(50)	(50)	
Germinal Epithelium, Atrophy	1 (2%)	(30)	5 (10%)	2 (4%)	
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(50)	(50)	
Angiectasis	1 (2%)		` '	` ,	
Depletion Cellular		1 (2%)			
Hyperplasia	6 (12%)	17 (34%)	14 (28%)	14 (28%)	
Lymph Node	(2)	(5)	(2)	(2)	
Bronchial, Hyperplasia	4 (500()			1 (50%)	
Iliac, Hemorrhage	1 (50%)	4 (200/)			
Pancreatic, Hemorrhage Renal, Hemorrhage		1 (20%) 1 (20%)			
Lymph Node, Mandibular	(46)	(46)	(50)	(49)	
Lymph Node, Mandibulai	(40)	(40)	(30)	(49)	

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 99007 - 06
Test Type: CHRONIC
Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Atrophy			1 (2%)		
Hyperplasia, Lymphoid		3 (7%)	2 (4%)	2 (4%)	
Lymph Node, Mesenteric	(48)	(44)	(49)	(48)	
Atrophy		1 (2%)			
Hemorrhage	0 (40()	1 (2%)	4 (00()	4 (00()	
Hyperplasia, Histiocytic	2 (4%)	2 (50()	1 (2%)	1 (2%)	
Hyperplasia, Lymphoid Hyperplasia, Plasma Cell	3 (6%)	2 (5%)	2 (4%)	2 (4%)	
Spleen	(50)	(40)	1 (2%) (50)	(50)	
Atrophy	(50)	(49) 2 (4%)	1 (2%)	(50)	
Hematopoietic Cell Proliferation	23 (46%)	33 (67%)	27 (54%)	20 (40%)	
Hyperplasia	2 (4%)	33 (07 %)	27 (3478)	1 (2%)	
Lymphoid Follicle, Hyperplasia	4 (8%)	3 (6%)	4 (8%)	3 (6%)	
Thymus	(44)	(39)	(43)	(41)	
Atrophy	3 (7%)	8 (21%)	1 (2%)	2 (5%)	
Cyst	3 (1.70)	3 (= : 73)	2 (5%)	= (0,0)	
Hyperplasia, Lymphoid		1 (3%)	_ (3,73)		
Necrosis, Lymphoid		,		1 (2%)	
Skin Cyst Epithelial Inclusion Inflammation, Chronic Ulcer Epidermis, Hyperplasia Hair Follicle, Cyst	(50) 1 (2%) 1 (2%) 1 (2%)	(50) 1 (2%) 1 (2%) 1 (2%)	(50) 1 (2%)	(50)	
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	
Cranium, Hyperostosis	1 (2%)	(30)	(30)	(/	
Maxilla, Fibrosis	( /	1 (2%)			
Skeletal Muscle	(0)	(1)	(3)	(0)	
IERVOUS SYSTEM					
None					
None RESPIRATORY SYSTEM					
	(50)	(50)	(50)	(50)	

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Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Edema	4 (004)	1 (2%)			
Fibrosis	1 (2%)		4 (00()	2 (40()	
Infiltration Cellular, Histiocyte Infiltration Cellular, Lymphocyte	2 (4%) 3 (6%)		1 (2%)	2 (4%) 1 (2%)	
Alveolar Epithelium, Hyperplasia	6 (12%)	2 (4%)	3 (6%)	5 (10%)	
Nose	(50)	(50)	(50)	(50)	
Inflammation, Suppurative	, ,	, ,	1 (2%)	, ,	
Glands, Degeneration, Cystic	4 (004)	1 (2%)			
Nasolacrimal Duct, Inflammation, Suppurative	1 (2%)	(50)	(50)	(50)	
Trachea	(50)	(50)	(50)	(50)	
SPECIAL SENSES SYSTEM					
Eye	(46)	(50)	(49)	(50)	
Cataract			1 (2%)		
Inflammation, Acute	1 (2%)	4 (20()			
Cornea, Inflammation, Chronic Harderian Gland	(50)	1 (2%) (50)	(50)	(50)	
Atrophy	(30)	(50)	1 (2%)	(30)	
Hyperplasia	1 (2%)		( /		
Hyperplasia, Focal		1 (2%)		1 (2%)	
Infiltration Cellular, Lymphocyte			1 (2%)		
URINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	
Cyst	4 (8%)	3 (6%)	9 (18%)	2 (4%)	
Giomerulosclerosis		4 (00()	1 (2%)		
Hydronephrosis Infarct	2 (4%)	1 (2%) 4 (8%)		1 (2%)	
Infiltration Cellular, Lymphocyte	1 (2%)	2 (4%)	2 (4%)	2 (4%)	
Inflammation, Suppurative	1 (2%)	1 (2%)	2 (170)	2 (170)	
Metaplasia, Osseous	1 (2%)	1 (2%)	2 (4%)	3 (6%)	
Nephropathy	42 (84%)	43 (86%)	46 (92%)	48 (96%)	
Thrombosis	1 (2%)	4 (20()			
Bilateral, Hydronephrosis Papilla, Inflammation, Suppurative		1 (2%)	1 (2%)		
Papilla, Necrosis		1 (2%)	1 (2/0)		
Renal Tubule, Accumulation, Hyaline Droplet		1 (270)	1 (2%)		
Renal Tubule, Pigmentation				2 (4%)	
Urinary Bladder	(49)	(50)	(50)	(50)	
Calculus Gross Observation		1 (2%)		4 (051)	
Hemorrhage		4 (00/)	4 (00/)	1 (2%)	
Infiltration Cellular, Lymphocyte		1 (2%)	1 (2%)	1 (2%)	

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 99007 - 06
Test Type: CHRONIC
Route: DOSED FEED

Species/Strain: MICE/B6C3F1

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Goldenseal root powder

**CAS Number:** GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

Lab: SRI

B6C3F1 MICE MALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Inflammation, Chronic Transitional Epithelium, Hyperplasia		1 (2%) 1 (2%)			

\*\*\* END OF MALE \*\*\*

Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Disposition Summary					
Animals Initially in Study Early Deaths	50	50	50	50	
Moribund Sacrifice	4	2	2	3	
Natural Death Survivors	1	4	12	4	
Natural Death	1				
Terminal Sacrifice	44	44	36	43	
Animals Examined Microscopically	50	50	50	50	
LIMENTARY SYSTEM					
Gallbladder	(48)	(46)	(39)	(47)	
Inflammation, Chronic Intestine Large, Cecum	(40)	1 (2%)	(41)	(47)	
Cyst	(48)	(46)	(41)	(47) 1 (2%)	
Intestine Large, Rectum	(48)	(47)	(43)	(47)	
Intestine Small, Ileum	(48)	(46)	(39)	(47)	
Hyperplasia, Lymphoid	1 (2%)	,	` ,	, ,	
Intestine Small, Jejunum	(48)	(46)	(43)	(48)	
Hyperplasia, Lymphoid		1 (2%)	2 (5%)		
Inflammation, Suppurative	(50)	(50)	1 (2%)	(50)	
Liver	(50)	(50)	(49)	(50) 1 (2%)	
Angiectasis Basophilic Focus	1 (2%)		3 (6%)	1 (2%)	
Clear Cell Focus	I (∠/0)	2 (4%)	3 (0 /0)	2 (4%)	
Cyst		2 (470)	1 (2%)	2 (4%)	
Eosinophilic Focus	3 (6%)	3 (6%)	2 (4%)	4 (8%)	
Hematopoietic Cell Proliferation	3 (6%)	2 (4%)	2 (4%)	1 (2%)	
Hepatodiaphragmatic Nodule	, ,	, ,	, ,	1 (2%)	
Infarct				1 (2%)	
Infiltration Cellular, Lymphocyte	24 (48%)	24 (48%)	26 (53%)	21 (42%)	
Infiltration Cellular, Mixed Cell	7 (14%)	9 (18%)	10 (20%)	6 (12%)	
Inflammation, Acute Mixed Cell Focus		3 (6%)	2 (4%)	1 (2%) 4 (8%)	
Necrosis, Focal	1 (2%)	3 (6%) 1 (2%)	Z (470)	4 (0%)	
Tension Lipidosis	3 (6%)	1 (2%)			
Capsule, Fibrosis	J (070)	. (=/0)	1 (2%)		
Hepatocyte, Vacuolization Cytoplasmic	1 (2%)	3 (6%)	7 (14%)	4 (8%)	
Kupffer Cell, Pigmentation	, ,	, ,	, ,	1 (2%)	
Mesentery	(10)	(6)	(9)	(2)	
Hemorrhage	1 (10%)		1 (11%)		

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Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Infiltration Cellular, Lymphocyte			1 (11%)		
Fat, Necrosis	8 (80%)	6 (100%)	7 (78%)	2 (100%)	
Pancreas	(48)	(48)	(47)	(50)	
Atrophy	1 (2%)	1 (2%)	, ,	1 (2%)	
Cyst	1 (2%)	1 (2%)	1 (2%)	1 (2%)	
Infiltration Cellular, Lymphocyte				2 (4%)	
Inflammation, Granulomatous, Chronic		1 (2%)			
Acinus, Cytoplasmic Alteration	4 (8%)	2 (4%)	1 (2%)	1 (2%)	
Artery, Inflammation	, ,	, ,	1 (2%)	, ,	
Salivary Glands	(50)	(50)	(50)	(50)	
Fibrosis	1 (2%)	1 (2%)	1 (2%)	,	
Infiltration Cellular, Lymphocyte	2 (4%)	2 (4%)	5 (10%)	3 (6%)	
Stomach, Forestomach	(49)	(50)	(48)	(50)	
Cyst	( - /	()	2 (4%)	()	
Edema		1 (2%)	_ ( · / · /		
Infiltration Cellular, Lymphocyte		(=/-)	1 (2%)	1 (2%)	
Inflammation, Granulomatous, Chronic		1 (2%)	(=75)	(=,=,	
Inflammation, Chronic	1 (2%)	. (=/5)			
Ulcer	. (=73)	1 (2%)	2 (4%)	2 (4%)	
Epithelium, Hyperplasia		3 (6%)	3 (6%)	2 (4%)	
Stomach, Glandular	(49)	(49)	(48)	(50)	
Cyst	7 (14%)	4 (8%)	2 (4%)	6 (12%)	
Ulcer	. (1170)	. (670)	1 (2%)	0 (1270)	
Glands, Ectasia			. (270)	1 (2%)	
RDIOVASCULAR SYSTEM					
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy	39 (78%)	38 (76%)	37 (74%)	33 (66%)	
Mineralization	1 (2%)	00 (1070)	0. (,0)	33 (3373)	
DOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(48)	(50)	
Accessory Adrenal Cortical Nodule	1 (2%)	. (55()	. (55()		
		1 (2%)	1 (2%)	( (00()	
Angiectasis	. (00.1)				
Angiectasis Degeneration, Cystic	1 (2%)	. (221)	2 (4%)	1 (2%)	
Angiectasis Degeneration, Cystic Degeneration, Fatty		1 (2%)	2 (4%)	1 (2%)	
Angiectasis Degeneration, Cystic Degeneration, Fatty Hematopoietic Cell Proliferation	1 (2%)		2 (4%)	1 (2%)	
Angiectasis Degeneration, Cystic Degeneration, Fatty Hematopoietic Cell Proliferation Hyperplasia, Focal	1 (2%) 1 (2%)	1 (2%)	2 (470)	, ,	
Angiectasis Degeneration, Cystic Degeneration, Fatty Hematopoietic Cell Proliferation Hyperplasia, Focal Hypertrophy, Focal	1 (2%)	1 (2%) 1 (2%)	2 (470)	4 (8%)	
Angiectasis Degeneration, Cystic Degeneration, Fatty Hematopoietic Cell Proliferation Hyperplasia, Focal Hypertrophy, Focal Inflammation, Granulomatous, Chronic	1 (2%) 1 (2%)	1 (2%)	2 (470)	4 (8%)	
Angiectasis Degeneration, Cystic Degeneration, Fatty Hematopoietic Cell Proliferation Hyperplasia, Focal Hypertrophy, Focal	1 (2%) 1 (2%)	1 (2%) 1 (2%)	2 (4%) 47 (98%)	, ,	

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 99007 - 06
Test Type: CHRONIC
Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

Lab: SRI

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Adrenal Medulla	(50)	(50)	(49)	(50)	
Amyloid Deposition			1 (2%)		
Hyperplasia	1 (2%)	2 (4%)	2 (4%)		
Islets, Pancreatic	(48)	(49)	(48)	(50)	
Hyperplasia	4 (8%)	2 (4%)	1 (2%)	1 (2%)	
Parathyroid Gland	(45)	(44)	(48)	(47)	
Cyst		1 (2%)		1 (2%)	
Infiltration Cellular, Lymphocyte	1 (2%)	1 (2%)			
Pituitary Gland	(50)	(49)	(49)	(49)	
Angiectasis	1 (2%)	1 (2%)	1 (2%)		
Pars Distalis, Cyst	, ,	` ,	2 (4%)	3 (6%)	
Pars Distalis, Hyperplasia, Focal	8 (16%)	5 (10%)	6 (12%)	4 (8%)	
Thyroid Gland	(50)	(50)	(48)	(50)	
Inflammation, Suppurative	, ,	1 (2%)	` ,	,	
Follicle, Cyst		3 (6%)	2 (4%)	2 (4%)	
Follicle, Degeneration, Focal	18 (36%)	18 (36%)	16 (33%)	10 (20%)	
Follicular Cell, Hyperplasia	` '	` ,	1 (2%)	1 (2%)	

#### **GENERAL BODY SYSTEM**

None

#### **GENITAL SYSTEM**

Clitoral Gland	(50)	(50)	(49)	(50)
Cyst	2 (4%)	3 (6%)	4 (8%)	()
Ovary	(49)	(48)	(50)	(50)
Angiectasis	( - /	1 (2%)	()	()
Cyst	10 (20%)	14 (29%)	10 (20%)	12 (24%)
Hemorrhage	10 (20%)	6 (Ì3%)	7 (14%) <sup>′</sup>	5 (10%)
Mineralization	, ,	, ,	1 (2%)	, ,
Pigmentation			1 (2%)	
Thrombosis		1 (2%)	1 (2%)	
Bilateral, Cyst		1 (2%)	, ,	1 (2%)
Corpus Luteum, Hyperplasia	4 (8%)	1 (2%)		2 (4%)
Granulosa Cell, Hyperplasia	, ,	, ,		2 (4%)
Uterus	(50)	(49)	(50)	(50)
Fibrosis	, ,	, ,	, ,	1 (2%)
Hyperplasia, Cystic	48 (96%)	46 (94%)	45 (90%)	44 (88%)
Infiltration Cellular, Histiocyte		1 (2%)		
Inflammation, Suppurative	1 (2%)			1 (2%)
Inflammation, Granulomatous, Chronic		1 (2%)		
Thrombosis		2 (4%)	1 (2%)	
Myometrium, Hypertrophy				1 (2%)

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

Lab: SRI

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
HEMATOPOIETIC SYSTEM					
Bone Marrow	(49)	(50)	(50)	(50)	
Depletion Cellular				1 (2%)	
Hyperplasia	2 (4%)	2 (4%)	1 (2%)	2 (4%)	
Inflammation, Chronic			1 (2%)		
Myelofibrosis	6 (12%)	1 (2%)	5 (10%)	5 (10%)	
Lymph Node	(6)	(4)	(5)	(4)	
Iliac, Hyperplasia, Lymphoid			1 (20%)		
Pancreatic, Hyperplasia, Lymphoid	1 (17%)		1 (20%)		
Renal, Hyperplasia, Lymphoid	1 (17%)	4>	1 (20%)		
Lymph Node, Mandibular	(50)	(49)	(48)	(49)	
Hyperplasia, Lymphoid	6 (12%)	2 (4%)	4 (8%)	7 (14%)	
Pigmentation	1 (2%)	(40)	(40)	(40)	
Lymph Node, Mesenteric	(48)	(43)	(48)	(49)	
Ectasia	4 (20/)	3 (7%)	3 (6%)	2 (4%)	
Hyperplasia, Histiocytic	1 (2%)	1 (2%)	1 (2%)	1 (2%)	
Hyperplasia, Lymphoid Inflammation, Granulomatous, Chronic	4 (8%)	1 (2%) 1 (2%)	3 (6%)	4 (8%)	
Spleen	(48)	(48)	(47)	(49)	
Atrophy	(48)	(46)	1 (2%)	(49)	
Hematopoietic Cell Proliferation	5 (10%)	7 (15%)	8 (17%)	4 (8%)	
Lymphoid Follicle, Hyperplasia	24 (50%)	26 (54%)	18 (38%)	22 (45%)	
Thymus	(49)	(48)	(50)	(48)	
Atrophy	(43)	1 (2%)	1 (2%)	(40)	
Hemorrhage	1 (2%)	. (270)	(270)		
Hyperplasia, Lymphoid	4 (8%)	2 (4%)	4 (8%)	7 (15%)	
Necrosis, Lymphoid	(273)	1 (2%)	(0,0)	( ( ) )	
INTEGUMENTARY SYSTEM					
Mammary Gland	(49)	(49)	(48)	(50)	
Cyst	. ,	1 (2%)	, ,	, ,	
Hyperplasia		1 (2%)			
Skin	(50)	(50)	(50)	(50)	
Edema	1 (2%)				
Mineralization				1 (2%)	
Pigmentation				1 (2%)	
Subcutaneous Tissue, Infiltration Cellular,				1 (2%)	
Lymphocyte					

# MUSCULOSKELETAL SYSTEM

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 99007 - 06
Test Type: CHRONIC
Route: DOSED FEED

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
Bone Fracture	(50)	(50)	(50) 1 (2%)	(50)	
Maxilla, Fibrosis Skeletal Muscle Necrosis	(1)	(1)	(2) 1 (50%)	1 (2%) (0)	
ERVOUS SYSTEM					
Brain Compression Hemorrhage	(50)	(50) 1 (2%)	(50) 1 (2%)	(50)	
ESPIRATORY SYSTEM					
Lung Foreign Body Hemorrhage	(50) 2 (4%)	(50)	(50) 1 (2%) 2 (4%)	(50) 1 (2%)	
Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte Infiltration Cellular, Lymphocyte Inflammation, Suppurative	7 (14%)	2 (4%)	1 (2%) 1 (2%)	1 (2%) 1 (2%) 2 (4%)	
Inflammation, Chronic Metaplasia, Osseous Alveolar Epithelium, Hyperplasia Nose Foreign Body	1 (2%) 1 (2%) 1 (2%) (50)	3 (6%) (50)	2 (4%) (50) 1 (2%)	(50)	
Inflammation, Suppurative Glands, Degeneration, Cystic Glands, Inflammation Respiratory Epithelium, Hyperplasia			1 (2%) 2 (4%)	1 (2%) 1 (2%) 1 (2%)	
Trachea Glands, Degeneration, Cystic	(50)	(50)	(49)	(50) 1 (2%)	
PECIAL SENSES SYSTEM					
Eye Atrophy Cornea, Inflammation, Suppurative	(49) 1 (2%) 1 (2%)	(47)	(41)	(46)	
Harderian Gland Hyperplasia	(50)	(49)	(50) 1 (2%)	(50)	
Hyperplasia, Focal Inflammation, Chronic	5 (10%) 1 (2%)	2 (4%)	4 (8%)	2 (4%)	

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Test Type: CHRONIC
Route: DOSED FEED

**TDMS No.** 99007 - 06

Species/Strain: MICE/B6C3F1

Goldenseal root powder

CAS Number: GOLDENSEALRT

Date Report Requested: 08/14/2008 Time Report Requested: 12:25:59 First Dose M/F: 05/12/03 / 05/12/03

Lab: SRI

B6C3F1 MICE FEMALE	0 PPM	3000 PPM	9000 PPM	25000 PPM	
JRINARY SYSTEM					
Kidney	(50)	(49)	(50)	(50)	
Atrophy Casts Protein	2 (4%)	1 (2%)	1 (2%)		
Cyst	1 (2%)		( · · · )		
Hydronephrosis Infarct		1 (2%)	2 (60/)		
Infiltration Cellular, Lymphocyte	7 (14%)	1 (2%) 7 (14%)	3 (6%) 4 (8%)	9 (18%)	
Metaplasia, Osseous	1 (2%)	1 (2%)	1 (2%)	- (,	
Nephropathy	13 (26%)	19 (39%)	15 (30%)	15 (30%)	
Renal Tubule, Accumulation, Hyaline Droplet Renal Tubule, Dilatation		1 (2%)		2 (4%)	
Transitional Epithelium, Hyperplasia		1 (2%)			
Urinary Bladder	(49)	(49)	(50)	(50)	
Infiltration Cellular, Lymphocyte	7 (14%)	6 (12%)	5 (10%)	3 (6%)	

\*\*\* END OF REPORT \*\*\*