

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>C Number:</b>	C55174D
<b>Lock Date:</b>	05/07/1993
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	05/09/1996

**Experiment Number:** 05162-09  
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**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 561
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202001

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	Harderian Gland	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
Harderian Gland			
Note: No corresponding microscopic lesion for enlarged Harder's Gland seen at necropsy.			
* Heart		Yolk Sac Carcinoma	Metastatic (Tissue Nos)
* Kidney		Nephropathy	Mild
* Liver	Centrilobular	Degeneration	Moderate
[ Degeneration TGLS = 4-4 ]			
* Lung		Yolk Sac Carcinoma	Metastatic (Tissue Nos)
[ Yolk Sac Carcinoma TGLS = 5-14 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 6-7 ]			
* Spleen		Fibrosis	Mild
[ Fibrosis TGLS = 2-12 ]			
* Stomach, Forestomach		Inflammation	Chronic, Mild
[ Inflammation TGLS = 7-13 ]			
* Testes	Germinal Epith	Atrophy	Moderate
[ Atrophy TGLS = 3-10 ]			
Tissue NOS		Yolk Sac Carcinoma	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
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**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 479
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202002

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

**MISSING**

\* Intestine Small, Ileum

**OBSERVATIONS**

* Epididymis	Arteriole	Inflammation	Chronic, Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Lung		Congestion	Moderate
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 1-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Prostate		Inflammation	Chronic Active, Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 1 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 394 <b>HISTO:</b> 9202003
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	Peripheral Nerve	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 3-12 ]			
* Pancreas	Acinus	Atrophy	Minimal
Spinal Cord		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Glandular		Ulcer	Minimal
[ Ulcer TGLS = 4-6+16 ]			

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 1 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b> 9202004
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Astrocytoma Malignant	
* Heart	Myocardium	Degeneration	Marked
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland		Astrocytoma Malignant	Metastatic (Brain)
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1,2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 1 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 302 <b>HISTO:</b> 9202005
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Osteosarcoma	
[ Osteosarcoma TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Lung		Osteosarcoma	Metastatic (Bone)
* Prostate		Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH	- Bone Osteosarcoma
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 1 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b> 9202006
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Testes	* Thymus
* Trachea			

OBSERVATIONS

Blood Vessel		Mineralization	Mild
* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 1-1 ]			
* Liver		Basophilic Focus	
	Centrilobular	Degeneration	Mild
[ Degeneration TGLS = 4-4 ]			
* Lung		Mineralization	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Stomach, Glandular		Mineralization	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder		Hemorrhage	Moderate
[ Hemorrhage TGLS = 2-6 ]			

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

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**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 683
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202007

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
		Necrosis	Moderate
	[ Necrosis TGLS = 5-12 ]		
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Marked
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Prostate		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-11 ]		
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
	[ Atrophy TGLS = 2-10 ]		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202008

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 4-1 ]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Spleen		Leukemia Mononuclear	
		Necrosis	Moderate
[ Leukemia Mononuclear TGLS = 1-1 ]			
[ Necrosis TGLS = 2-1 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

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**Route:** SKIN APPLICATION  
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**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 670
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202009

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	

**OBSERVATIONS**

Harderian Gland		Inflammation	Acute, Mild
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Cecum		Inflammation	Acute, Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Infarct	Minimal
		Inflammation	Acute, Moderate
Note: Bacteria noted in glomeruli, other vessels of kidney; a very sure sign of bacteremia. [ Infarct TGLS = 2-1 ]			
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Acute, Mild
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Inflammation	Acute, Moderate
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Interstitial Cell	Adenoma	
* Urinary Bladder		Inflammation	Chronic, Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

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**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
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**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 10

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 610

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202010

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Thymus	* Trachea		

**MISSING**

\* Urinary Bladder

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
Blood Vessel		Mineralization	Moderate
* Bone		Fibrous Osteodystrophy	Moderate
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Intestine Small, Jejunum		Diverticulum	
[ Diverticulum TGLS = 9-13 ]			
* Kidney		Infarct	Mild
[ Infarct TGLS = 10-12 ]		Nephropathy	Marked
[ Nephropathy TGLS = 6-1 ]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Mesentery		Hemorrhage	Moderate
[ Hemorrhage TGLS = 7-16 ]			
* Parathyroid Gland		Hyperplasia	Marked
[ Hyperplasia TGLS = 8-7 ]			
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
[ Degeneration TGLS = 2-14 ]			

\* PROTOCOL REQUIRED TISSUE

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**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
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**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 10	<b>TRT#:</b> 1 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 610 <b>HISTO:</b> 9202010
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Skin [ Adenoma TGLS = 1-15 ]	Sebaceous Gl	Adenoma	
* Spleen [ Leukemia Mononuclear TGLS = 3-1 ]		Leukemia Mononuclear	
* Stomach, Glandular		Mineralization	Moderate
* Testes [ Adenoma TGLS = 5-10 ] [ Atrophy TGLS = 4-10 ]	Interstit Cell Germinal Epith	Adenoma Atrophy	Marked
* Thyroid Gland	C Cell	Hyperplasia	Minimal

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PRIMARY CAUSE OF DEATH - Kidney Nephropathy

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\* PROTOCOL REQUIRED TISSUE

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**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 11

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 717

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202011

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla [ Pheochromocytoma Malignant TGLS = 6-12 ]		Pheochromocytoma Malignant	
* Heart	Myocardium	Degeneration Pheochromocytoma Malignant	Mild Metastatic (Adrenal Medulla)
* Kidney		Nephropathy	Mild
* Lung		Pheochromocytoma Malignant	Metastatic (Adrenal Medulla)
* Lymph Node, Mesenteric [ Ectasia TGLS = 5-6 ]		Ectasia	Moderate
* Mammary Gland [ Hyperplasia TGLS = 4-15 ]		Hyperplasia	Cystic, Minimal
Mesentery	Artery	Thrombosis	Moderate
* Pituitary Gland [ Adenoma TGLS = 7-14 ]	Pars Distalis	Adenoma	
* Prostate [ Necrosis TGLS = 3-13 ]		Necrosis	Marked
* Testes [ Adenoma TGLS = 2-10 ] [ Atrophy TGLS = 1-10 ]	Interstitial Cell Germinal Epith	Adenoma Atrophy	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Adrenal Medulla Pheochromocytoma Malignant

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 12

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202012

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 13

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 561

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202013

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Leukemia Mononuclear	
* Kidney		Degeneration	Minimal
* Liver		Nephropathy	Mild
		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 4-4 ]	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 1-1 ]	
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Moderate
		[ Adenoma TGLS = 3-10 ]	
		[ Atrophy TGLS = 2-10 ]	
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 14

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202014

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Brain	Chor Plexus	Thrombosis	Marked
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 2-13 ]			
Oral Mucosa	Gingival	Inflammation	Suppurative, Moderate
* Pancreas	Acinus	Atrophy	Minimal
* Preputial Gland		Inflammation	Granulomatous, Mild
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Keratoacanthoma	
[ Keratoacanthoma TGLS = 1-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 15

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202015

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
Oral Mucosa	Gingival	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland		Cyst	Minimal
	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202016

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Moderate
		Necrosis	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Marked
* Kidney		Cyst	Moderate
		Nephropathy	Marked
[ Cyst TGLS = 2-12 ]			
[ Nephropathy TGLS = 1-1 ]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
		Eosinophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 17

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 670

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202017

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
	Valve	Thrombosis	Mild
* Kidney		Nephropathy	Minimal
	[ Nephropathy TGLS = 4-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Forestomach		Ulcer	Marked
	[ Ulcer TGLS = 5-6+12 ]		
* Testes	Germinal Epith	Atrophy	Marked
	[ Atrophy TGLS = 2-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 18

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 582

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202018

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Thyroid Gland	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Inflammation	Granulomatous, Mild
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Atrophy	Marked
* Lymph Node, Mesenteric		Necrosis	Marked
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
* Spleen	Lymph Follic	Necrosis	Marked
[ Necrosis TGLS = 1-1 ]			
* Stomach, Forestomach		Inflammation	Chronic, Marked
* Stomach, Glandular		Inflammation	Chronic Active, Marked
[ Inflammation TGLS = 3-12 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 4-10 ]			
* Thymus		Atrophy	Marked

**PRIMARY CAUSE OF DEATH** - Lung Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 19                      **TRT#:** 1                      **SEX:** Male                      **DAY ON TEST:** 687  
**DOSE:** 0 MG/KG                      **DISP:** Moribund Sacrifice                      **HISTO:** 9202019

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Moderate
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		[ Hepatodiaphragmatic Nodule TGLS = 5-12 ]	
		[ Leukemia Mononuclear TGLS = 4-4+12 ]	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
		[ Fibrosis TGLS = 2-13 ]	
		[ Leukemia Mononuclear TGLS = 1-1 ]	
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Germinal Epith	Atrophy	Marked
	Interstit Cell	Hyperplasia	Moderate
		[ Atrophy TGLS = 3-10 ]	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**                      - Spleen    Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 20

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202020

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Cyst	Moderate
		Leukemia Mononuclear	
		Nephropathy	Moderate
	[ Cyst TGLS = 3-1 ]		
	[ Nephropathy TGLS = 4-1 ]		
* Liver		Basophilic Focus	
		Degeneration	Cystic, Minimal
		Hepatodiaphragmatic Nodule	
	[ Degeneration TGLS = 6-12 ]		
	[ Hepatodiaphragmatic Nodule TGLS = 5-12 ]		
* Lung		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[ Adenoma TGLS = 2-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 21

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202021

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
Harderian Gland		Squamous Cell Carcinoma	Metastatic (Oral Mucosa)
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 4-1 ]			
Oral Mucosa		Squamous Cell Carcinoma	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-12 ]			
* Skin		Keratoacanthoma	
[ Keratoacanthoma TGLS = 1-13 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 2-10 ]			
[ Atrophy TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Skin Keratoacanthoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 22

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 723

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202022

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Liver		Degeneration	Fatty, Moderate
* Lung		Inflammation	Granulomatous, Minimal
* Parathyroid Gland		Adenoma	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Stomach, Forestomach		Ulcer	Marked
[ Ulcer TGLS = 4-12 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 23	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 101
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202023

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

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**MISSING**

\* Mammary Gland

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**OBSERVATIONS**

* Intestine Small, Duodenum [ Ulcer TGLS = 6-13 ]	Ulcer	Marked
* Intestine Small, Jejunum [ Ulcer TGLS = 5-13 ]	Ulcer	Marked
* Kidney [ Nephroblastoma TGLS = 1-12 ]	Nephroblastoma	
* Spleen [ Fibrosis TGLS = 2-1 ]	Fibrosis	Minimal
* Stomach, Forestomach [ Hemorrhage TGLS = 7-13 ]	Hemorrhage	Mild
* Stomach, Glandular [ Ulcer TGLS = 8-6 ]	Ulcer	Mild

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**PRIMARY CAUSE OF DEATH** - Kidney Nephroblastoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 24

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 670

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202024

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Mammary Gland		Hyperplasia	Cystic, Mild
[ Hyperplasia TGLS = 2-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Marked
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 25

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 709

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202025

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Mild
* Heart	Myocardium	Leukemia Mononuclear	
* Kidney		Degeneration	Minimal
	[ Nephropathy TGLS = 5-1 ]	Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
	[ Adenoma TGLS = 3-10 ]		
	[ Atrophy TGLS = 2-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 26

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 687

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202026

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 1-1 ]			
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 27

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 619

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202027

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 2-10 ]			
[ Atrophy TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 28

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 645

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202028

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Leukemia Mononuclear	Moderate
	Atrium	Degeneration	Marked
	[ Thrombosis TGLS = 3-4 ]	Thrombosis	
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-4 ]		
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Forestomach		Inflammation	Chronic, Moderate
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 29

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 595

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202029

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Trachea	* Urinary Bladder		

**MISSING**

* Mammary Gland	* Thymus
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**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 30

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202030

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Marked
* Kidney		Cyst	Marked
		Leukemia Mononuclear	
		Nephropathy	Marked
		[ Cyst TGLS = 4-1 ]	
		[ Nephropathy TGLS = 5-1 ]	
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose		Inflammation	Chronic, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		[ Adenoma TGLS = 1-7 ]	
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 2-1 ]	
* Testes	Interstit Cell	Adenoma	
		[ Adenoma TGLS = 3-10 ]	
* Thyroid Gland	C Cell	Hyperplasia	Marked

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 30

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202030

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Follicular Cel

Hyperplasia

Moderate

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 31

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 687

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202031

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Thymus	* Trachea	* Urinary Bladder	

**MISSING**

\* Lymph Node, Mandibular

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
Blood Vessel		Mineralization	Marked
* Bone		Fibrous Osteodystrophy	Marked
* Heart	Myocardium	Degeneration	Moderate
	Myocardium	Mineralization	Marked
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Liver		Basophilic Focus	
* Lung		Mineralization	Marked
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 1-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 32

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 674

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202032

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 2-4 ]	
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 4-12 ]	
* Lymph Node, Mesenteric		Ectasia	Marked
		[ Ectasia TGLS = 5-13 ]	
Mesentery	Fat	Necrosis	Moderate
		[ Necrosis TGLS = 7-15 ]	
Oral Mucosa		Inflammation	Suppurative, Mild
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 3-1 ]	
* Stomach, Glandular		Ulcer	Moderate
		[ Ulcer TGLS = 6-14 ]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[ Adenoma TGLS = 1-10 ]	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 32	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 674
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202032

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 33

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 680

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202033

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	Lymph Node	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Trachea	* Urinary Bladder		

**MISSING**

\* Thymus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
Blood Vessel		Mineralization	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 5-1 ]			
* Lung		Mineralization	Moderate
Oral Mucosa		Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Preputial Gland		Inflammation	Granulomatous, Marked
[ Inflammation TGLS = 2-10 ]			
* Prostate		Inflammation	Suppurative, Marked
* Seminal Vesicle		Necrosis	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 3-10 ]			
[ Atrophy TGLS = 4-10 ]			
* Thyroid Gland	C Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 33

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 680

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202033

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 34

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 653

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202034

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Mesothelioma Malignant	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 7-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-4 ]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Congestion	Marked
	[ Congestion TGLS = 6-13 ]		
Oral Mucosa		Inflammation	Suppurative, Mild
* Pituitary Gland		Cyst	Mild
	[ Cyst TGLS = 8-7 ]		
* Spleen		Fibrosis	Moderate
	[ Fibrosis TGLS = 4-12 ]		
	[ Leukemia Mononuclear TGLS = 3-1 ]		
* Stomach, Forestomach		Inflammation	Chronic, Moderate
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 34

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 653

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202034

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 35

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 689

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202035

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Minimal
* Intestine Small, Duodenum		Ulcer	Mild
* Kidney		Nephropathy	Marked
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Degeneration	Fatty, Marked
	[ Degeneration TGLS = 2-4 ]	Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 1-12 ]	Mixed Cell Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Spleen		Leukemia Mononuclear	
* Testes	Germinal Epith	Atrophy	Marked
	[ Atrophy TGLS = 4-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 666

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202036

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	

MISSING

\* Urinary Bladder

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 696

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202037

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
Peripheral Nerve	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
* Mammary Gland		Hyperplasia	Cystic, Moderate
[ Hyperplasia TGLS = 3-15 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
Spinal Cord	Neuron	Degeneration	Minimal
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 694

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202038

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Bone		Osteosarcoma	
[ Osteosarcoma TGLS = 3-13 ]			
* Epididymis		Mesothelioma Malignant	
[ Mesothelioma Malignant TGLS = 2-11+12 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Liver	Centrilobular	Degeneration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 6-7 ]			
* Spleen		Fibrosis	Mild
* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	Tunic	Mesothelioma Malignant	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	Follicular Cel	Carcinoma	
[ Carcinoma TGLS = 5-7 ]			

PRIMARY CAUSE OF DEATH - Epididymis Mesothelioma Malignant

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 39	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 507
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202039

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
* Mammary Gland		Hyperplasia	Cystic, Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 40	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202040

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Fibroadenoma	
* Mammary Gland			
[ Fibroadenoma TGLS = 1-12 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Preputial Gland		Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Spleen	Lymph Follic	Atrophy	Moderate
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 4-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 41

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 663

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202041

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

**MISSING**

* Mammary Gland	* Parathyroid Gland
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**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Intestine Large, Cecum		Ulcer	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Artery	Thrombosis	Marked
[ Thrombosis TGLS = 3-12 ]			
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 42

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 673

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202042

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Cyst	Moderate
* Bone Marrow		Lymphoma Malignant	
* Heart	Myocardium	Degeneration	Minimal
	Atrium	Thrombosis	Marked
* Intestine Small, Duodenum		Ulcer	Moderate
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Lymphoma Malignant	
	[ Lymphoma Malignant TGLS = 4-4 ]	Necrosis	Minimal
	[ Necrosis TGLS = 9-14 ]		
* Lung		Lymphoma Malignant	
Lymph Node	Lumbar, Pancreatic, Renal	Lymphoma Malignant	
	[ Lymphoma Malignant TGLS = 6,7,8-12+13+16 ]		
* Pancreas	Artery	Inflammation	Chronic Active, Minimal
	Artery	Thrombosis	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 2-7 ]		
* Skin	Sebaceous GI	Adenoma	
	[ Adenoma TGLS = 1-15 ]		
* Spleen		Lymphoma Malignant	
	[ Lymphoma Malignant TGLS = 3-1 ]		

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 42	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 673
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202042

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Stomach, Forestomach		Ulcer	Marked
* Stomach, Glandular		Ulcer	Moderate
* Thyroid Gland	Follicular Cel	Adenoma	

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 702

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202043

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Stomach, Glandular		Ulcer	Moderate
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 1-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 44

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 710

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202044

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-5 ]			
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
Oral Mucosa		Inflammation	Suppurative, Moderate
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 45

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202045

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 3-1 ]		
* Liver		Basophilic Focus	
	[ Hepatodiaphragmatic Nodule TGLS = 4-12 ]	Hepatodiaphragmatic Nodule	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 5-7 ]		
* Spleen		Fibrosis	Moderate
	[ Fibrosis TGLS = 2-12 ]		
* Testes	Interstit Cell	Adenoma	
	[ Adenoma TGLS = 1-10 ]		
* Thymus	Artery	Inflammation	Chronic, Moderate
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 46

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202046

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-7 ]			
* Lung		Leukemia Mononuclear	
* Nose	Glands	Hyperplasia	Moderate
* Pancreas	Acinus	Atrophy	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 47

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202047

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 3-12 ]		
* Mammary Gland		Hyperplasia	Cystic, Moderate
	[ Hyperplasia TGLS = 1-12 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Testes	Interstitial Cell	Adenoma	
	[ Adenoma TGLS = 2-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 48

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202048

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Spleen		Fibrosis	Mild
[ Leukemia Mononuclear TGLS = 1-1 ]		Leukemia Mononuclear	
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 49                      **TRT#:** 1                      **SEX:** Male                      **DAY ON TEST:** 560  
**DOSE:** 0 MG/KG                      **DISP:** Moribund Sacrifice                      **HISTO:** 9202049

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Stomach, Glandular		Ulcer	Mild
[ Ulcer TGLS = 5-6 ]			
* Testes	Germinal Epith	Atrophy	Moderate
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**                      - Spleen    Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 50

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202050

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

**MISSING**

\* Thymus

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Mild
Lymph Node	Mediastinal	Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLS = 3-2 ]			
* Lymph Node, Mesenteric		Hematopoietic Cell Proliferation	Moderate
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Congestion	Mild
[ Congestion TGLS = 2-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 51

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 704

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202301

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
Note: No corresponding microscopic lesion for gross observation of brown cyst; suspect gross observation should have been entered for thyroid gland inst of adrenal gl			
* Heart	Myocardium	Degeneration	Mild
* Lung		Congestion	Mild
[ Congestion TGLS = 6-2+3 ]			
* Mammary Gland		Hyperplasia	Cystic, Moderate
[ Hyperplasia TGLS = 1-13 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Preputial Gland		Hyperplasia	Moderate
[ Hyperplasia TGLS = 4-10 ]			
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 3-12 ]			
* Thyroid Gland	Follicular Cel	Cyst	Mild
	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 52

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 723

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202302

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 4-1 ]			
* Liver		Leukemia Mononuclear	
* Lung	Interstitial	Inflammation	Chronic, Minimal
		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Subcut Tiss	Fibroma	
[ Fibroma TGLS = 1-12 ]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[ Fibrosis TGLS = 3-13 ]			
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 53

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202303

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Mild
	Valve	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Lung		Histiocytic Sarcoma	Metastatic (Pituitary Gland)
* Nose		Chondroma	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Carcinoma	
[ Carcinoma TGLS = 4-7 ]			
* Prostate		Inflammation	Suppurative, Moderate
Skeletal Muscle		Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 1-12 ]			
* Stomach, Glandular		Ulcer	Mild
[ Ulcer TGLS = 5-6+13 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 54

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202304

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Degeneration Pheochromocytoma Benign Leukemia Mononuclear	Cystic, Moderate
* Bone Marrow			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Cyst Nephropathy	Moderate Moderate
			[ Cyst TGLS = 4-1 ] [ Nephropathy TGLS = 3-1 ]
* Liver		Basophilic Focus Degeneration	Cystic, Mild
* Lung		Leukemia Mononuclear	
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
			[ Adenoma TGLS = 5-7 ]
* Spleen		Leukemia Mononuclear	
			[ Leukemia Mononuclear TGLS = 1-1 ]
* Testes	Bilateral, Interstit Cell	Adenoma	
			[ Adenoma TGLS = 2-10 ]
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 55	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 619
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202305

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

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**OBSERVATIONS**

* Adrenal Medulla [ Pheochromocytoma Benign TGLS = 1-7 ]		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Mild
* Kidney [ Nephropathy TGLS = 2-1 ]		Nephropathy	Marked
* Liver		Degeneration	Fatty, Mild
* Pituitary Gland [ Adenoma TGLS = 3-7 ]	Pars Distalis	Adenoma	
* Stomach, Forestomach [ Ulcer TGLS = 4-12 ]		Ulcer	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 56	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 538
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202306

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

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**AUTO PRECLUDES DIAG.**

* Intestine Small, Ileum	* Intestine Small, Jejunum
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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Pancreas	Artery	Inflammation	Chronic Active, Moderate
Note: Pancreatic lesion appears compatible with periarteritis (panarteritis) nodosa.			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Spleen		Fibrosis	Minimal
[ Fibrosis TGLS = 1-12 ]			

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 57

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 663

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202307

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-2+3 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-12 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Prostate		Inflammation	Suppurative, Mild
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thymus		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-2 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 58

TRT#: 3

SEX: Male

DAY ON TEST: 661

DOSE: 16 MG/KG

DISP: Natural Death

HISTO: 9202308

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                           |                             |                          |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex         | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                  | * Epididymis              | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Islets, Pancreatic     |
| * Liver                  | * Lymph Node, Mandibular  | * Lymph Node, Mesenteric    | * Nose                   |
| * Preputial Gland        | * Prostate                | * Salivary Glands           | * Seminal Vesicle        |
| * Skin                   | * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Testes                 | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder        |                           |                             |                          |

MISSING

- \* Parathyroid Gland

AUTO PRECLUDES DIAG.

- |                          |                            |
|--------------------------|----------------------------|
| * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|----------------------------|

OBSERVATIONS

- |                             |               |              |                  |
|-----------------------------|---------------|--------------|------------------|
| * Heart                     | Myocardium    | Degeneration | Marked           |
| * Kidney                    |               | Nephropathy  | Mild             |
| * Lung                      |               | Congestion   | Mild             |
| [ Congestion TGLS = 1-2+3 ] |               |              |                  |
| * Mammary Gland             |               | Hyperplasia  | Cystic, Moderate |
| [ Hyperplasia TGLS = 2-12 ] |               |              |                  |
| * Pancreas                  | Acinus        | Atrophy      | Moderate         |
| * Pituitary Gland           | Pars Distalis | Adenoma      |                  |
| [ Adenoma TGLS = 3-7 ]      |               |              |                  |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 59

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 554

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202309

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

**AUTO PRECLUDES DIAG.**

* Intestine Small, Ileum	* Intestine Small, Jejunum
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**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Moderate
* Brain		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Hyperplasia	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[ Hyperplasia TGLS = 3-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			

**PRIMARY CAUSE OF DEATH**

- Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 60

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 666

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202310

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Fibrous Osteodystrophy	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Lung	Interstitial	Inflammation	Chronic, Mild
* Mammary Gland		Hyperplasia	Cystic, Moderate
[ Hyperplasia TGLS = 3-12 ]			
Oral Mucosa		Inflammation	Suppurative, Mild
[ Squamous Cell Papilloma TGLS = 6-14 ]		Squamous Cell Papilloma	
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Pigmentation	Hemosiderin, Moderate
* Stomach, Forestomach	Epithelium	Hyperplasia	Moderate
[ Hyperplasia TGLS = 5-13 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 1-10 ]			

**PRIMARY CAUSE OF DEATH** - Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 61	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 681
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202311

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

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**AUTO PRECLUDES DIAG.**

\* Intestine Small, Jejunum

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 62

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202312

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Mild
[ Atrophy TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09  
Test Type: CHRONIC  
Route: SKIN APPLICATION  
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Diethanolamine  
CAS Number: 111-42-2

Date Report Requested: 10/16/2014  
Time Report Requested: 12:34:28  
First Dose M/F: NA / NA  
Lab: BAT

ANIMAL ID: 63                      TRT#: 3                      SEX: Male                      DAY ON TEST: 729  
DOSE: 16 MG/KG                      DISP: Terminal Sacrifice                      HISTO: 9202313

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Minimal
		Eosinophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 64	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 606
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202314

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

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**MISSING**

\* Lymph Node, Mandibular

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Salivary Glands		Schwannoma Malignant	
	[ Schwannoma Malignant TGLS = 1-12+13 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Kidney Nephropathy

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 65

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 610

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202315

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 14-23 ]		
* Lung		Leukemia Mononuclear	
Lymph Node	Bronchial, Deep Cervical, Mediastinal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5,9,10,11,12,13,15-15+17+18+19+20+22+24 ]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-13 ]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 8-14 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 2-7 ]		
* Skin	SOA	Keratoacanthoma	
	[ Keratoacanthoma TGLS = 1-12 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-21 ]		
* Stomach, Forestomach		Ulcer	Moderate
	[ Ulcer TGLS = 16-25 ]		
* Thymus		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 65	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 610
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202315

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Leukemia Mononuclear TGLS = 6-16 ]

* Thyroid Gland	C Cell	Hyperplasia	Mild
<b>PRIMARY CAUSE OF DEATH</b>	- Spleen Leukemia Mononuclear		

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 66

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202316

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Spleen		Fibrosis	Minimal
[ Fibrosis TGLS = 2-12 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 67	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 625
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202317

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Spleen	Lymph Follic	Atrophy	Moderate
		Congestion	Moderate
[ Congestion TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Carcinoma	

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 68	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202318

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Adrenal Medulla		Degeneration Pheochromocytoma Benign	Cystic, Moderate
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Preputial Gland		Hyperplasia	Mild
* Skin		Squamous Cell Papilloma	
[ Squamous Cell Papilloma TGLS = 1-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 69

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202319

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
Note: No microscopic lesion found to correspond with tan-colored deformity seen at necropsy.			
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 70

TRT#: 3

SEX: Male

DAY ON TEST: 577

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202320

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Epididymis              | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                   |                |              |        |
|-------------------|----------------|--------------|--------|
| * Heart           | Myocardium     | Degeneration | Mild   |
| * Kidney          |                | Nephropathy  | Mild   |
| * Pituitary Gland | Pars Distalis  | Adenoma      |        |
| * Testes          | Interstit Cell | Adenoma      |        |
| * Thyroid Gland   | C Cell         | Hyperplasia  | Marked |
| Zymbal's Gland    |                | Carcinoma    |        |

[ Carcinoma TGLS = 1-12+13 ]

PRIMARY CAUSE OF DEATH

- Zymbal's Gland Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 71

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202321

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-6 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
	[ Fibrosis TGLS = 2-1 ]		
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Testes	Interstitial Cell	Adenoma	
	[ Adenoma TGLS = 3-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 72

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 694

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202322

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 5-1 ]			
* Liver	Sinusoid	Congestion	Mild
[ Congestion TGLS = 4-4 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Spleen	Lymph Follic	Atrophy	Moderate
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 3-10 ]			
[ Atrophy TGLS = 2-10 ]			

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 73

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 723

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202323

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	

**MISSING**

\* Thymus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Bone		Fibrous Osteodystrophy	Mild
Eye		Cataract	Moderate
[ Cataract TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Prostate		Inflammation	Suppurative, Mild
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:28

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 74

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 577

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202324

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Hydronephrosis	Mild
		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 75

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 662

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202325

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Lung		Congestion	Moderate
[ Congestion TGLS = 3-2+3 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 1-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	Follicular Cel	Cyst	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 76

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 670

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202326

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Lung		Hemorrhage	Focal, Minimal
		Leukemia Mononuclear	
[ Hemorrhage TGLS = 6,7-2+3 ]			
Lymph Node	Renal	Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-13 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-12 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Hyperplasia	Moderate
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[ Fibrosis TGLS = 3-14 ]			
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 77

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202327

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
Blood Vessel		Mineralization	Marked
* Bone		Fibrous Osteodystrophy	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung	Alveolar Epith	Alveolar/Bronchiolar Carcinoma	
[ Alveolar/Bronchiolar Carcinoma TGLS = 5-3 ]		Hyperplasia	Moderate
[ Hyperplasia TGLS = 6,7-14+15 ]			
* Nose		Inflammation	Suppurative, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin		Keratoacanthoma	
[ Keratoacanthoma TGLS = 1-12 ]			
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 2-16 ]			
* Stomach, Glandular		Mineralization	Marked

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 77	<b>TRT#:</b> 3 <b>DOSE:</b> 16 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 702 <b>HISTO:</b> 9202327
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Testes [ Atrophy TGLS = 8-10 ]	Germinal Epith	Atrophy	Marked
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH - Kidney Nephropathy

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 78	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 542
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202328

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	Zymbal's Gland

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 3-12 ]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Skin	Subcut Tiss	Fibrosarcoma	
[ Fibrosarcoma TGLS = 1-13 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 79

TRT#: 3

SEX: Male

DAY ON TEST: 572

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202329

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Degeneration	Fatty, Mild
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Stomach, Forestomach		Inflammation	Chronic, Marked
[ Inflammation TGLS = 1-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 80

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202330

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Marked
* Epididymis		Leukemia Mononuclear	
		Mesothelioma Malignant	
	[ Mesothelioma Malignant TGLS = 4-11+13 ]		
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Marked
	[ Nephropathy TGLS = 6-1 ]		
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Mesentery		Mesothelioma Malignant	Metastatic (Epididymis)
	[ Mesothelioma Malignant TGLS = 3-6 ]		
* Nose		Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Marked
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Inflammation	Suppurative, Mild
	[ Inflammation TGLS = 2-10 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Moderate
	[ Fibrosis TGLS = 7-12 ]	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 80	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202330

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Testes [ Adenoma TGLS = 5-10 ]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 81

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 640

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202331

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 3-4 ]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Erythrophagocytosis	Moderate
		[ Erythrophagocytosis TGLS = 4-5 ]	
* Lymph Node, Mesenteric		Erythrophagocytosis	Moderate
		[ Erythrophagocytosis TGLS = 5-6 ]	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 1-1 ]	
* Stomach, Forestomach		Ulcer	Moderate
		[ Ulcer TGLS = 6-12 ]	
* Testes	Interstitial Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 81	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 640
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202331

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 82	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 463
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202332

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

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**MISSING**

\* Mammary Gland

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**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone		Osteosarcoma	
[ Osteosarcoma TGLS = 1-12+13+14+15 ]			
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Lung		Osteosarcoma	Metastatic (Bone)
[ Osteosarcoma TGLS = 2-2+3 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Bone Osteosarcoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 83

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 673

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202333

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Kidney		Nephropathy	Mild
* Liver		Hepatocellular Adenoma	
[ Hepatocellular Adenoma TGLS = 2-12 ]			
Oral Mucosa		Squamous Cell Carcinoma	
Note: The squamous cell carcinoma on slide #8 seems to come from the oral mucosa.			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Stomach, Forestomach		Ulcer	Mild
[ Ulcer TGLS = 3-13 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Oral Mucosa Squamous Cell Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 84

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 638

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202334

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Atrium	Thrombosis	Marked
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Mild
* Liver	Centrilobular	Necrosis	Moderate
[ Necrosis TGLS = 1-4 ]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 2-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 3-12 ]			
* Stomach, Glandular		Ulcer	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Heart Atrium Thrombosis

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 85

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 670

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202335

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
[ Pheochromocytoma Benign TGLS = 7-7 ]			
Eye		Degeneration	Marked
[ Degeneration TGLS = 9-13 ]			
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 6-1 ]			
* Liver		Basophilic Focus	
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 8-7 ]			
* Spleen		Fibrosarcoma	
[ Fibrosarcoma TGLS = 1,2-12 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 4-10 ]			
[ Atrophy TGLS = 5-10 ]			
* Thyroid Gland	Follicular Cel	Carcinoma	
[ Carcinoma TGLS = 3-7 ]			

**PRIMARY CAUSE OF DEATH** - Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 86	<b>TRT#:</b> 3 <b>DOSE:</b> 16 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 562 <b>HISTO:</b> 9202336
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Leukemia Mononuclear Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-14 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-12 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 5-13 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 2-10 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 87

TRT#: 3

SEX: Male

DAY ON TEST: 541

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202337

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Zymbal's Gland		Carcinoma	
[ Carcinoma TGLS = 2-12+13 ]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 88

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 688

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202338

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Kidney	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Carcinoma	
[ Carcinoma TGLS = 5-13 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-4 ]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Cystic, Moderate
[ Hyperplasia TGLS = 3-14 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 7-7 ]			
* Preputial Gland		Adenoma	
[ Adenoma TGLS = 1-12 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Stomach, Forestomach		Ulcer	Mild
[ Ulcer TGLS = 8-15 ]			
* Stomach, Glandular		Ulcer	Mild
* Testes	Interstit Cell	Hyperplasia	Marked
[ Hyperplasia TGLS = 4-10 ]			
* Thyroid Gland	Follicular Cel	Carcinoma	
	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 89

TRT#: 3

SEX: Male

DAY ON TEST: 599

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202339

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Marked
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 1,2-12+13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:28

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 90

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202340

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Kidney		Cyst	Moderate
		Nephropathy	Mild
* Liver		Eosinophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 91

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 642

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202341

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-13 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 2-12 ]			
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 92

TRT#: 3

SEX: Male

DAY ON TEST: 576

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202342

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Kidney		Nephropathy	Mild
* Mammary Gland		Hyperplasia	Cystic, Marked
[ Hyperplasia TGLS = 1-12 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 93

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 639

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202343

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Cecum		Ulcer	Moderate
[ Ulcer TGLS = 4-6+12 ]			
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 1-1 ]			
* Liver	Centrilobular	Degeneration	Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Prostate		Inflammation	Suppurative, Moderate
[ Inflammation TGLS = 3-11 ]			
* Spleen		Pigmentation	Hemosiderin, Moderate
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 94

TRT#: 3

SEX: Male

DAY ON TEST: 584

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202344

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
* Liver		Degeneration	Fatty, Moderate
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 95	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 560
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202345

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder

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**MISSING**

\* Thymus

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 96

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 695

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202346

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
Blood Vessel		Mineralization	Marked
* Bone		Fibrous Osteodystrophy	Marked
* Heart	Myocardium	Degeneration	Moderate
	Myocardium	Mineralization	Moderate
* Kidney		Cyst	Marked
		Nephropathy	Marked
			[ Cyst TGLS = 5-13 ]
			[ Nephropathy TGLS = 3-1 ]
* Liver		Hepatocellular Adenoma	
			[ Hepatocellular Adenoma TGLS = 4-12 ]
* Lung	Interstitialium	Inflammation	Chronic, Moderate
* Pancreas	Acinus	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
			[ Adenoma TGLS = 6-7 ]
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Glandular		Mineralization	Marked
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
			[ Adenoma TGLS = 2-10 ]

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 96	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 695
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202346

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Atrophy TGLS = 1-10 ]

* Thymus	Epithel Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Kidney Nephropathy

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>ANIMAL ID:</b> 97	<b>TRT#:</b> 3 <b>DOSE:</b> 16 MG/KG	<b>SEX:</b> Male <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 648 <b>HISTO:</b> 9202347
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Mild
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 2-12 ]			
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 4-13 ]			
* Stomach, Glandular		Ulcer	Mild
[ Ulcer TGLS = 5-13 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 98	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202348

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

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**MISSING**

\* Mammary Gland

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Salivary Glands		Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 99

TRT#: 3

SEX: Male

DAY ON TEST: 678

DOSE: 16 MG/KG

DISP: Natural Death

HISTO: 9202349

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

Blood Vessel		Mineralization	Marked
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
* Lung		Mineralization	Moderate
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Seminal Vesicle		Mineralization	Moderate
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1,2-10 ]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 100

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 509

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202350

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

**MISSING**

* Lymph Node, Mandibular	* Salivary Glands
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**OBSERVATIONS**

* Adrenal Cortex		Atrophy	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Pituitary Gland	Pars Distalis	Hypoplasia	
[ Hypoplasia TGLS = 2-12 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 1-10 ]			

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Hypoplasia

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 101

TRT#: 5

SEX: Male

DAY ON TEST: 618

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202201

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                           |                             |                          |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex         | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                  | * Epididymis              | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Islets, Pancreatic     | * Lung                    | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland          | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Preputial Gland        | * Prostate                | * Salivary Glands           | * Seminal Vesicle        |
| * Skin                   | * Spleen                  | * Stomach, Forestomach      | * Testes                 |
| * Thymus                 | * Trachea                 | * Urinary Bladder           |                          |

AUTO PRECLUDES DIAG.

- \* Intestine Small, Jejunum

OBSERVATIONS

- |                        |               |              |             |
|------------------------|---------------|--------------|-------------|
| * Heart                | Myocardium    | Degeneration | Mild        |
| * Kidney               |               | Nephropathy  | Moderate    |
| * Liver                |               | Degeneration | Fatty, Mild |
| * Pituitary Gland      | Pars Distalis | Adenoma      |             |
| [ Adenoma TGLS = 1-7 ] |               |              |             |
| * Stomach, Glandular   |               | Ulcer        | Minimal     |
| * Thyroid Gland        | C Cell        | Hyperplasia  | Mild        |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 102

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202202

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Marked
* Kidney		Nephropathy	Moderate
* Liver		Clear Cell Focus	
* Pancreas	Acinus	Atrophy	Mild
	Artery	Thrombosis	Moderate
[ Thrombosis TGLS = 2-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Glandular		Ulcer	Mild
[ Ulcer TGLS = 3-13 ]			
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 103

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202203

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Bone Marrow		Fibrosis	Moderate
		Leukemia Mononuclear	
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4,5-12+13 ]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
Zymbal's Gland		Carcinoma	
[ Carcinoma TGLS = 1-14 ]			

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 104

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202204

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 105      **TRT#:** 5      **SEX:** Male      **DAY ON TEST:** 689  
**DOSE:** 32 MG/KG      **DISP:** Moribund Sacrifice      **HISTO:** 9202205

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Marked
Eye		Cataract	Moderate
[ Cataract TGLS = 2-13 ]			
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 5-12 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 106

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202206

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin		Squamous Cell Papilloma	
[ Squamous Cell Papilloma TGLS = 1-12 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 107

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 723

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202207

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Marked
	Bilateral	Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Degeneration	Cystic, Minimal
		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Inflammation	Granulomatous, Mild
* Spleen		Fibrosis	Moderate
* Stomach, Forestomach		Ulcer	Moderate
	[ Ulcer TGLS = 4-6 ]		
* Testes	Interstitial Cell	Adenoma	
	[ Adenoma TGLS = 1-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Liver Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 108

TRT#: 5

SEX: Male

DAY ON TEST: 681

DOSE: 32 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202208

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1+12 ]			
* Liver		Degeneration	Cystic, Minimal
Lymph Node	Deep Cervical, Mediastinal	Carcinoma	Metastatic (Thyroid Gland)
Mesentery	Artery	Inflammation	Chronic, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Prostate		Inflammation	Suppurative, Marked
* Stomach, Forestomach		Inflammation	Chronic, Mild
[ Inflammation TGLS = 4-14 ]			
* Stomach, Glandular		Mineralization	Moderate
* Thyroid Gland		Adenoma	
		Carcinoma	
[ Carcinoma TGLS = 3-13 ]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 109

TRT#: 5

SEX: Male

DAY ON TEST: 702

DOSE: 32 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202209

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Moderate
[ Hypertrophy TGLS = 8-7 ]			
* Adrenal Medulla		Pheochromocytoma Benign	
[ Pheochromocytoma Benign TGLS = 8-7 ]			
* Bone		Fibrous Osteodystrophy	Marked
* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Brain	Medulla	Necrosis	Focal, Mild
Eye		Cataract	Marked
[ Cataract TGLS = 1-13 ]			
* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Hyperplasia	Marked
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 7-1 ]			
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Preputial Gland		Inflammation	Granulomatous, Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 109	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 702
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202209

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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		Leukemia Mononuclear	
[ Fibrosis TGLS = 5-1+12 ]			
[ Leukemia Mononuclear TGLS = 4-1 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 6-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 110

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202210

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[ Adenoma TGLS = 1-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 111      **TRT#:** 5      **SEX:** Male      **DAY ON TEST:** 694  
**DOSE:** 32 MG/KG      **DISP:** Moribund Sacrifice      **HISTO:** 9202211

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Cystic, Moderate
	[ Hyperplasia TGLS = 5-13 ]		
Oral Mucosa	Gingival	Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 2-7 ]		
* Skin	SOA, Sebaceous GI	Adenoma	
	[ Adenoma TGLS = 1-12 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-1 ]		
* Testes	Germinal Epith	Atrophy	Marked
	[ Atrophy TGLS = 6-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 112

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 663

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202212

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Adenoma	
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Mild
* Liver	Centrilobular	Degeneration	Mild
		Degeneration	Fatty, Moderate
		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 2-13 ]			
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 1-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 113      **TRT#:** 5      **SEX:** Male      **DAY ON TEST:** 715  
**DOSE:** 32 MG/KG      **DISP:** Moribund Sacrifice      **HISTO:** 9202213

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Liver		Degeneration	Fatty, Moderate
* Mammary Gland	Duct	Dilatation	Marked
[ Dilatation TGLS = 2-14 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 5-13 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Dermis, SOA	Fibrosis	Mild
[ Fibrosis TGLS = 1-12 ]			
* Stomach, Glandular		Ulcer	Marked
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 114	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 681
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202214

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Islets, Pancreatic		Hyperplasia	Minimal
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 1-1 ]			
* Liver		Degeneration	Fatty, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 115	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 709
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202215

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Marked
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Stomach, Forestomach		Ulcer	Mild
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 116

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 542

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202216

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Preputial Gland		Inflammation	Granulomatous, Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 117

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202217

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Mammary Gland		Carcinoma	
[ Carcinoma TGLS = 1-12 ]			
* Nose		Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Congestion	Mild
[ Congestion TGLS = 3-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 118

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 664

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202218

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Adenoma	
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-15 ]		
* Lung		Inflammation	Granulomatous, Mild
* Mammary Gland		Hyperplasia	Cystic, Moderate
	[ Hyperplasia TGLS = 4-14 ]		
Mesentery	Fat	Necrosis	Moderate
	[ Necrosis TGLS = 5-13 ]		
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Spleen		Fibrosis	Minimal
	[ Fibrosis TGLS = 3-12 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 119

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 527

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202219

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Testes	* Trachea	

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-17 ]			
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2,3-4+18 ]			
* Lung		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-2+3 ]			
Mesentery		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
Spinal Cord		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-16 ]			
* Stomach, Forestomach		Leukemia Mononuclear	
		Ulcer	Mild
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Marked
* Urinary Bladder		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 119

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 527

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202219

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 120

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 715

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202220

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Epididymis		Mesothelioma Malignant	
* Heart	Myocardium	Degeneration	Moderate
	Atrium	Thrombosis	Marked
	[ Thrombosis TGLS = 9-4 ]		
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver	Centrilobular	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]	Necrosis	Moderate
* Lung		Leukemia Mononuclear	
Lymph Node	Lumbar, Mediastinal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6,8-12+16 ]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 11-15 ]		
* Mammary Gland		Hyperplasia	Cystic, Moderate
	[ Hyperplasia TGLS = 1,2-13+14 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Minimal
	[ Degeneration TGLS = 10-7 ]		
* Preputial Gland		Inflammation	Granulomatous, Minimal
* Prostate		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Spleen		Hematopoietic Cell Proliferation	Marked
	[ Hematopoietic Cell Proliferation TGLS = 4-1 ]		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 120	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 715
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202220

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Stomach, Forestomach		Ulcer	Moderate
* Stomach, Glandular		Ulcer	Minimal
	[ Ulcer TGLS = 12-18 ]		
* Testes	Interstit Cell	Adenoma	
	[ Adenoma TGLS = 7-10 ]		
* Thymus		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-2+17 ]		
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH - Heart Atrium Thrombosis

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 121

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202221

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Preputial Gland		Inflammation	Granulomatous, Minimal
* Stomach, Forestomach	Epithelium	Hyperplasia	Minimal
[ Hyperplasia TGLS = 4-12 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 1-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 122

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202222

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Marked
* Kidney		Nephropathy	Moderate
Oral Mucosa	Gingival	Inflammation	Suppurative, Moderate
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Congestion	Mild
[ Congestion TGLS = 1-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 123

TRT#: 5

SEX: Male

DAY ON TEST: 504

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202223

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-4 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 124

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 499

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202224

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-4 ]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
Mesentery		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-12 ]		
* Testes	Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH**

- Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 125

TRT#: 5

SEX: Male

DAY ON TEST: 599

DOSE: 32 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202225

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

MISSING

\* Mammary Gland

OBSERVATIONS

* Kidney		Cyst	Marked
		Nephropathy	Marked
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 3-13 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Skin	Subcut Tiss	Inflammation	Suppurative, Focal, Moderate
	[ Inflammation TGLS = 1-12 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 126

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202226

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Minimal
* Kidney		Nephropathy	Moderate
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Adenoma	
[ Adenoma TGLS = 1-12 ]			
* Skin	Epidermis, SOA	Erosion	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 127

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 471

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202227

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Brain	Medulla	Demyelination	Focal, Mild
* Kidney		Nephropathy	Mild
* Liver	Centrilobular	Degeneration	Minimal
[ Degeneration TGLS = 1-4 ]			
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Moderate
[ Hyperplasia TGLS = 2-5 ]			
* Pancreas	Duct	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Salivary Glands		Inflammation	Chronic, Moderate
* Stomach, Glandular		Ulcer	Minimal
[ Ulcer TGLS = 6-13 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 128

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 659

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202228

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 1-12 ]		
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 129

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202229

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 130

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 568

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202230

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Small, Jejunum	Muscularis	Inflammation	Chronic, Moderate
[ Inflammation TGLS = 6-12 ]			
* Kidney		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Mild
Mesentery	Fat	Necrosis	Marked
[ Necrosis TGLS = 5-13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Seminal Vesicle		Fibrosis	Mild
[ Fibrosis TGLS = 2-10 ]			
* Spleen		Fibrosis	Mild
[ Fibrosis TGLS = 3-14 ]		Pigmentation	Hemosiderin, Moderate
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 7-15 ]			
* Testes			
Note: No corresponding microscopic lesion for gross observation of small testes.			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 131

TRT#: 5

SEX: Male

DAY ON TEST: 533

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202231

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla [ Pheochromocytoma Benign TGLS = 2-12 ]		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
* Pituitary Gland [ Adenoma TGLS = 1-7 ]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 132

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202232

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 133

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202233

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Adenoma	
[ Adenoma TGLS = 2-7 ]			
Tongue		Inflammation	Suppurative, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 134

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202234

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

**MISSING**

* Preputial Gland	* Thymus
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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 5-4 ]		
* Lymph Node, Mesenteric		Ectasia	Moderate
	[ Ectasia TGLS = 6-13 ]		
* Mammary Gland		Hyperplasia	Cystic, Marked
	[ Hyperplasia TGLS = 3-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
	[ Adenoma TGLS = 2-10 ]		
	[ Atrophy TGLS = 1-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 135

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202235

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Clear Cell Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Adenoma	
	Bilateral, Follicular Cel	Cyst	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 136

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202236

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Marked
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 137

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 710

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202237

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Fibrous Osteodystrophy	Moderate
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Pancreas	Acinus	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Skin		Schwannoma Malignant	
[ Schwannoma Malignant TGLS = 1-13 ]			
* Spleen		Fibrosis	Mild
[ Fibrosis TGLS = 3-12 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 138

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202238

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 139

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 635

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202239

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Trachea	* Urinary Bladder		

**MISSING**

\* Thymus

**OBSERVATIONS**

* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Moderate
* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Moderate
	Myocardium	Mineralization	Moderate
* Kidney		Cyst	Marked
		Nephropathy	Marked
	[ Cyst TGLS = 4-1 ]		
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 3-12 ]		
* Nose		Inflammation	Suppurative, Mild
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Forestomach		Ulcer	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
	[ Adenoma TGLS = 1-10 ]		
	[ Atrophy TGLS = 2-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 140

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202240

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Liver		Clear Cell Focus	
Lymph Node	Renal	Infiltration Cellular	Plasma Cell, Moderate
[ Infiltration Cellular TGLS = 6-13 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
	Pars Distalis	Hyperplasia	Mild
[ Degeneration TGLS = 5-12 ]			
* Preputial Gland		Hyperplasia	Moderate
[ Hyperplasia TGLS = 1-10 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 4-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 140

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202240

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

\* Thyroid Gland

C Cell

Hyperplasia

Marked

---

PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 141

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 556

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202241

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Bone Marrow		Histiocytic Sarcoma	
* Epididymis		Histiocytic Sarcoma	
* Heart	Myocardium	Degeneration	Minimal
* Intestine Small, Jejunum		Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 7-14 ]			
* Kidney		Nephropathy	Mild
* Liver		Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 4-4 ]			
* Lung		Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 6-2+3 ]			
Lymph Node	Mediastinal	Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 5-13 ]			
Mesentery		Histiocytic Sarcoma	
[ Histiocytic Sarcoma TGLS = 3-12 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Moderate
* Seminal Vesicle		Histiocytic Sarcoma	
* Spleen		Hematopoietic Cell Proliferation	Marked
[ Hematopoietic Cell Proliferation TGLS = 2-1 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thymus		Histiocytic Sarcoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 141

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 556

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202241

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

\* Thyroid Gland

C Cell

Hyperplasia

Moderate

---

PRIMARY CAUSE OF DEATH

- Mesentery Histiocytic Sarcoma

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 142

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202242

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

MISSING

\* Mammary Gland

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 143	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 729
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202243

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 144

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202244

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Marked
* Kidney		Nephropathy	Marked
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Exudate	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy	Marked
[ Adenoma TGLS = 2-10 ]			
[ Atrophy TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 145

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202245

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[ Adenoma TGLS = 3-7 ]			
* Skin		Squamous Cell Carcinoma	
[ Squamous Cell Carcinoma TGLS = 1-12 ]			
* Spleen		Congestion	Mild
[ Congestion TGLS = 2-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 4-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 146

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 702

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202246

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Inflammation	Chronic, Moderate
[ Inflammation TGLS = 4-12 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 147

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202247

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Liver		Degeneration	Fatty, Mild
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Stomach, Glandular		Mineralization	Mild
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 148

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202248

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Lung	Interstitialium	Inflammation	Chronic, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Spleen		Fibrosis	Moderate
[ Fibrosis TGLS = 2-1 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 149

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202249

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Bone                     | * Epididymis              | * Esophagus                 |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Parathyroid Gland       | * Preputial Gland           |
| * Prostate               | * Salivary Glands          | * Seminal Vesicle         | * Skin                      |
| * Stomach, Glandular     | * Testes                   | * Thymus                  | * Trachea                   |
| * Urinary Bladder        |                            |                           |                             |

**OBSERVATIONS**

- |                        |                                     |                         |                      |
|------------------------|-------------------------------------|-------------------------|----------------------|
| * Adrenal Medulla      |                                     | Pheochromocytoma Benign |                      |
| * Bone Marrow          |                                     | Hyperplasia             | Mild                 |
|                        |                                     | Leukemia Mononuclear    |                      |
| * Brain                | Medulla                             | Necrosis                | Focal, Mild          |
| * Heart                | Myocardium                          | Degeneration            | Moderate             |
| * Kidney               |                                     | Nephropathy             | Moderate             |
|                        | [ Nephropathy TGLS = 3-1 ]          |                         |                      |
| * Liver                |                                     | Degeneration            | Cystic, Mild         |
|                        |                                     | Eosinophilic Focus      |                      |
|                        |                                     | Leukemia Mononuclear    |                      |
| * Mammary Gland        |                                     | Hyperplasia             | Cystic, Marked       |
|                        | [ Hyperplasia TGLS = 4-13 ]         |                         |                      |
| * Nose                 |                                     | Inflammation            | Suppurative, Minimal |
| * Pancreas             | Acinus                              | Atrophy                 | Minimal              |
| * Pituitary Gland      | Pars Distalis                       | Adenoma                 |                      |
|                        | [ Adenoma TGLS = 5-7 ]              |                         |                      |
| * Spleen               |                                     | Fibrosis                | Moderate             |
|                        | [ Fibrosis TGLS = 2-1 ]             |                         |                      |
|                        | [ Leukemia Mononuclear TGLS = 1-1 ] |                         |                      |
| * Stomach, Forestomach |                                     | Ulcer                   | Moderate             |
|                        | [ Ulcer TGLS = 6-12 ]               |                         |                      |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 149

**TRT#:** 5

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202249

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Thyroid Gland

C Cell

Hyperplasia

Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:28

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 150

TRT#: 5

SEX: Male

DAY ON TEST: 710

DOSE: 32 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202250

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Marked
[ Atrophy TGLS = 1-6 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 151

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202101

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
[ Pheochromocytoma Benign TGLS = 4-7 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Liver		Degeneration	Fatty, Mild
* Mammary Gland		Adenoma	
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 5-12 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 152

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202102

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 3-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-4 ]		
* Lung	Alveolar Epith	Hyperplasia	Mild
		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Preputial Gland		Adenoma	
	[ Adenoma TGLS = 1-12 ]		
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 153      **TRT#:** 7      **SEX:** Male      **DAY ON TEST:** 729  
**DOSE:** 64 MG/KG      **DISP:** Terminal Sacrifice      **HISTO:** 9202103

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
[ Hyperkeratosis TGLS = 1-12 ]		Inflammation	Suppurative, Moderate
[ Inflammation TGLS = 3-13 ]			
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 154

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202104

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Lung		Alveolar/Bronchiolar Adenoma	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 155

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 431

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202105

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver	Midzonal	Vacuolization Cytoplasmic	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 156      **TRT#:** 7      **SEX:** Male      **DAY ON TEST:** 729  
**DOSE:** 64 MG/KG      **DISP:** Terminal Sacrifice      **HISTO:** 9202106

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
Mesentery	Fat	Necrosis	Marked
[ Necrosis TGLS = 2-13 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[ Adenoma TGLS = 4-7 ]			
* Preputial Gland		Adenoma	
[ Adenoma TGLS = 1-12 ]			
* Prostate		Inflammation	Suppurative, Moderate
* Testes	Interstit Cell	Hyperplasia	Moderate
[ Hyperplasia TGLS = 3-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 157

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202107

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Islets, Pancreatic		Adenoma	
* Kidney	Renal Tubule	Carcinoma	
		Nephropathy	Moderate
[ Carcinoma TGLS = 4-12 ]			
Lymph Node	Mediastinal	Ectasia	Moderate
	Thoracic	Schwannoma Malignant	
[ Ectasia TGLS = 6-2 ]			
[ Schwannoma Malignant TGLS = 1,5-13+14 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 3-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 158                      **TRT#:** 7                      **SEX:** Male                      **DAY ON TEST:** 632  
**DOSE:** 64 MG/KG                      **DISP:** Moribund Sacrifice                      **HISTO:** 9202108

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

**MISSING**

\* Intestine Large, Rectum

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Leukemia Mononuclear	
		Nephropathy	Moderate
[ Nephropathy TGLS = 4-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 3-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Granulomatous, Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-13 ]			
* Stomach, Forestomach		Ulcer	Marked
[ Ulcer TGLS = 5-14 ]			
* Thymus		Leukemia Mononuclear	

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 158

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 632

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202108

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 159

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 701

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202109

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Testes	* Thymus	* Trachea	* Urinary Bladder

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Atrium	Leukemia Mononuclear	
		Thrombosis	Moderate
	[ Thrombosis TGLS = 6-4 ]		
* Intestine Large, Rectum		Ulcer	Mild
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[ Adenoma TGLS = 7-7 ]		
* Preputial Gland		Adenoma	
	[ Adenoma TGLS = 1-12 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
	SOA	Ulcer	Minimal
	[ Ulcer TGLS = 2,3-13+14 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-1 ]		
* Stomach, Glandular		Ulcer	Mild
* Thyroid Gland	C Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 159

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 701

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202109

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 160

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 689

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202110

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-12 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 3-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 161

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 277

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202111

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**MISSING**

\* Mammary Gland

**AUTO PRECLUDES DIAG.**

\* Intestine Small, Ileum

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
Eye	Lens	Cataract	Moderate
[ Cataract TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Minimal
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Prostate		Inflammation	Suppurative, Moderate
* Stomach, Forestomach	Epithelium	Hyperplasia	Moderate
[ Hyperplasia TGLS = 2-13 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 162

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202112

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Cyst	Marked
		Nephropathy	Mild
	[ Cyst TGLS = 2-1+12 ]		
	[ Nephropathy TGLS = 1-1 ]		
* Liver		Clear Cell Focus	
		Degeneration	Cystic, Minimal
	[ Clear Cell Focus TGLS = 4-13 ]		
* Pancreas		Adenoma	
	Acinus	Atrophy	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[ Adenoma TGLS = 3-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 163

TRT#: 7

SEX: Male

DAY ON TEST: 587

DOSE: 64 MG/KG

DISP: Natural Death

HISTO: 9202113

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

\* Mammary Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

\* Esophagus

Note: No corresponding microscopic lesion for gross observation of esophageal rupture

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	

[ Adenoma TGLS = 2-7 ]

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 164

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 64 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202114

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
		Degeneration	Fatty, Minimal
* Kidney		Nephropathy	Moderate
* Lung		Inflammation	Granulomatous, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
	[ Adenoma TGLS = 1,2-10 ]		
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 165

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 577

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202115

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

**MISSING**

* Lymph Node, Mandibular	* Thymus
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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Degeneration	Mild
	Subcut Tiss	Schwannoma Malignant	
[ Schwannoma Malignant TGLS = 1-12 ]			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 3-10 ]			

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 166

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 728

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202116

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Trachea	* Urinary Bladder	

**AUTO PRECLUDES DIAG.**

* Intestine Small, Ileum	* Intestine Small, Jejunum	* Thyroid Gland
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**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-13 ]		
* Pancreas	Acinus	Atrophy	Mild
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
	Note: TGLs = 1-15 = no corresponding lesion in Skin, Epidermis, Skin SOA.		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-12 ]		
* Stomach, Forestomach		Ulcer	Mild
	[ Ulcer TGLS = 7-14 ]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[ Adenoma TGLS = 4-10 ]		
* Thymus		Leukemia Mononuclear	

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 166

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 728

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202116

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 167

TRT#: 7

SEX: Male

DAY ON TEST: 621

DOSE: 64 MG/KG

DISP: Natural Death

HISTO: 9202117

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Epididymis              | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Parathyroid Gland      |
| * Preputial Gland          | * Prostate                | * Salivary Glands           | * Seminal Vesicle        |
| * Skin                     | * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                        |               |              |                |
|------------------------|---------------|--------------|----------------|
| * Heart                | Myocardium    | Degeneration | Minimal        |
| * Kidney               |               | Nephropathy  | Moderate       |
| * Liver                |               | Degeneration | Fatty, Minimal |
| * Pancreas             | Acinus        | Atrophy      | Minimal        |
| * Pituitary Gland      | Pars Distalis | Adenoma      |                |
| [ Adenoma TGLS = 1-7 ] |               |              |                |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:29

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 168

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 530

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202118

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Bone                    | * Bone Marrow               |
| * Brain                  | * Epididymis               | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           | * Pancreas                  |
| * Preputial Gland        | * Prostate                 | * Salivary Glands         | * Seminal Vesicle           |
| * Skin                   | * Spleen                   | * Stomach, Glandular      | * Thymus                    |
| * Trachea                | * Urinary Bladder          |                           |                             |

**MISSING**

- \* Parathyroid Gland

**OBSERVATIONS**

- |                        |                   |                  |                   |
|------------------------|-------------------|------------------|-------------------|
| * Kidney               |                   | Nephropathy      | Moderate          |
| * Liver                |                   | Basophilic Focus |                   |
| * Nose                 |                   | Inflammation     | Suppurative, Mild |
| * Pituitary Gland      | Pars Distalis     | Adenoma          | Multiple          |
| * Stomach, Forestomach |                   | Ulcer            | Moderate          |
| * Testes               | Interstit Cell    | Adenoma          |                   |
| * Thyroid Gland        | Bilateral, C Cell | Adenoma          |                   |

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 169

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202119

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

**MISSING**

* Mammary Gland	* Pituitary Gland
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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Pituitary Gl			
Note: The pituitary gland was lost in necropsy/processing, and it is impossible to follow up the gross observation with micro exam.			
* Preputial Gland		Hyperplasia	Moderate
[ Hyperplasia TGLS = 2-12 ]			
* Skin		Inflammation	Chronic, Minimal
[ Inflammation TGLS = 1-13 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 170

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 64 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202120

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 2-4 ]	
* Lung		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 3-1 ]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[ Adenoma TGLS = 1-10 ]	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 171

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202121

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	

**MISSING**

* Mammary Gland	* Thymus
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**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Mild
* Brain		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 7-12 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Liver		Leukemia Mononuclear	
		Necrosis	Mild
[ Necrosis TGLS = 5-14 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 6-7 ]			
* Seminal Vesicle		Atrophy	Moderate
[ Atrophy TGLS = 4-10 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
[ Exudate TGLS = 2-13 ]			
* Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 171

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202121

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Leukemia Mononuclear TGLS = 1-5 ]

\* Thyroid Gland

Follicular Cel

Cyst

Moderate

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PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 172

TRT#: 7

SEX: Male

DAY ON TEST: 533

DOSE: 64 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202122

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Moderate
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Preputial Gland		Inflammation	Granulomatous, Mild
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 173

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 542

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202123

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear Nephropathy	Mild
* Liver	[ Leukemia Mononuclear TGLS = 2,3-4+12 ]	Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Spleen	[ Leukemia Mononuclear TGLS = 1-13 ]	Leukemia Mononuclear	
* Thyroid Gland		Cyst	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 174

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 641

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202124

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	Peripheral Nerve	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Skin	Epidermis, SOA	Acanthosis	Minimal
Spinal Cord		Gliosis	Moderate
* Testes	Interstit Cell	Hyperplasia	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 175

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 64 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202125

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Minimal
* Lung	Interstitial	Inflammation	Chronic, Minimal
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Adenoma	
	Follicular Cel	Cyst	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 176

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 656

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202126

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Accumulation, Hyaline Droplet	Moderate
		Nephropathy	Mild
	[ Nephropathy TGLS = 6-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-1 ]		
* Stomach, Forestomach		Ulcer	Minimal
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
	[ Adenoma TGLS = 5-10 ]		
	[ Atrophy TGLS = 4-10 ]		

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 177

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 688

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202127

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Forestomach		Ulcer	Marked
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Moderate
	[ Atrophy TGLS = 4-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 178

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202128

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Liver		Degeneration	Fatty, Minimal
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-13 ]		
Mesentery	Fat	Necrosis	Mild
	[ Necrosis TGLS = 3-12 ]		
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Spleen			
	Note: No corresponding microscopic observation for gross finding of enlarged spleen.		
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 179

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 643

**DOSE:** 64 MG/KG

**DISP:** Natural Death

**HISTO:** 9202129

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Testes	* Thymus
* Thyroid Gland	* Trachea		

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Small, Duodenum		Ulcer	Mild
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Moderate
* Sem Ves			
Note: Hemorrhage present in seminal vesicles, but cannot be coded in data capture system, because hemorrhage is not a menu item.			
* Stomach, Glandular		Mineralization	Marked
		Ulcer	Mild
* Urinary Bladder		Ulcer	Marked

[ Ulcer TGLS = 1-6 ]

**PRIMARY CAUSE OF DEATH**

- Urinary Bladder Ulcer

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 180

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 64 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202130

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Adenoma	
[ Adenoma TGLS = 1-12 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 181

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202131

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 182

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202132

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver		Eosinophilic Focus	
* Nose		Inflammation	Suppurative, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Testes	Interstitial Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 183

TRT#: 7

SEX: Male

DAY ON TEST: 533

DOSE: 64 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202133

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
Eye	Lens	Cataract	Moderate
[ Cataract TGLS = 2-13 ]			
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Skin	Dermis, SOA	Fibrosis	Mild
[ Fibrosis TGLS = 1-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
Zymbal's Gland		Carcinoma	
[ Carcinoma TGLS = 3-14+15 ]			

PRIMARY CAUSE OF DEATH

- Zymbal's Gland Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 184

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202134

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Marked
* Islets, Pancreatic		Hyperplasia	Marked
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Degeneration	Fatty, Mild
	[ Hepatodiaphragmatic Nodule TGLS = 3-13 ]	Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-12 ]		
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Inflammation	Chronic, Moderate
* Testes	Interstit Cell	Adenoma	
	[ Adenoma TGLS = 1-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 185

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202135

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
	SOA	Ulcer	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[ Adenoma TGLS = 3-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 186

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202136

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Moderate
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Spleen		Fibrosis	Minimal
[ Fibrosis TGLS = 1-1 ]			
* Stom Gland			
Note: The focus noted at trim in the glandular stomach proved on microscopic exam to be a patch of lymphoid tissue and not a lesion.			
* Testes	Interstit Cell	Adenoma	
[ Adenoma TGLS = 4-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 187

TRT#: 7

SEX: Male

DAY ON TEST: 642

DOSE: 64 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202137

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	

MISSING

\* Thymus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Nephropathy	Mild
* Liver		Eosinophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-13 ]			
* Skin		Schwannoma Malignant	
[ Schwannoma Malignant TGLS = 4-12 ]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[ Fibrosis TGLS = 3-14 ]			
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 188

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 561

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202138

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 3-10 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 189

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 709

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202139

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
[ Nephropathy TGLS = 3-1 ]			
* Stomach, Forestomach		Ulcer	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Moderate
[ Adenoma TGLS = 1-10 ]			
[ Atrophy TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 190

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202140

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Hyperplasia	Mild
[ Hyperplasia TGLS = 2-10 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 191	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 465
	<b>DOSE:</b> 64 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202141

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Rectum		Carcinoma	
[ Carcinoma TGLS = 2-12 ]			
* Kidney		Nephropathy	Moderate
* Liver		Hepatocellular Adenoma	
[ Hepatocellular Adenoma TGLS = 1-4 ]			
* Lung	Interstitial	Inflammation	Chronic, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Adenoma	

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**PRIMARY CAUSE OF DEATH** - Intestine Large, Rectum Carcinoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 192

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 640

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202142

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
[ Nephropathy TGLS = 1-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
* Parathyroid Gland		Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Stomach, Glandular		Ulcer	Moderate
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 193

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202143

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Islets, Pancreatic		Hyperplasia	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Mixed Cell Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 194

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 688

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202144

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder	Zymbal's Gland		

**MISSING**

\* Nose

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
[ Pheochromocytoma Benign TGLS = 1-12 ]			
* Brain		Degeneration	Marked
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Minimal
		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 2-4 ]			
* Mammary Gland		Hyperplasia	Cystic, Minimal
[ Hyperplasia TGLS = 3-13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 195

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 709

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202145

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6,7,8-4+13+14 ]		
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical, Mediastinal	Leukemia Mononuclear	
	Note: Right axillary lymph node had mononuclear cell leukemia, but rt. axillary l. node is not on the menu of sites. TGL note should be 9-15.		
	[ Leukemia Mononuclear TGLS = 11,13-16+17 ]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 10-5 ]		
* Nose		Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 12-7 ]		
* Preputial Gland		Inflammation	Granulomatous, Moderate
* Seminal Vesicle		Atrophy	Moderate
	[ Atrophy TGLS = 3-10 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
	Subcut Tiss	Fibroma	
	Epidermis, SOA	Hyperkeratosis	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 195	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 709
	<b>DOSE:</b> 64 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202145

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Fibroma TGLS = 1-12 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-1 ]			
* Testes	Germinal Epith	Atrophy	Marked
[ Atrophy TGLS = 2-10 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 196

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 64 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202146

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
[ Pheochromocytoma Benign TGLS = 4-7 ]			
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Cyst	Moderate
		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Acanthosis	Mild
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
[ Exudate TGLS = 1-12 ]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[ Adenoma TGLS = 2-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 197

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 541

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202147

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 4-1 ]		
* Liver		Degeneration	Fatty, Moderate
	[ Hepatodiaphragmatic Nodule TGLS = 2-4 ]	Hepatodiaphragmatic Nodule	
* Lung	Bronchus	Infiltration Cellular	Mononuclear CI, Mild
	Bronchus	Infiltration Cellular	Polymorphnuclr, Mild
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Stomach, Forestomach		Ulcer	Moderate
	[ Ulcer TGLS = 5-12 ]		
* Testes	Germinal Epith	Atrophy	Moderate
	[ Atrophy TGLS = 3-10 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 198

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 64 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202148

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Clear Cell Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 199

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 379

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202149

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

**MISSING**

\* Mammary Gland

**OBSERVATIONS**

* Bone [ Hyperostosis TGLS = 3-12 ]	Vertebra	Hyperostosis	Mild
* Heart	Myocardium Atrium	Degeneration Thrombosis	Minimal Moderate
* Intestine Large, Cecum		Ulcer	Mild
* Kidney		Nephropathy	Mild
* Liver [ Leukemia Mononuclear TGLS = 1-4 ]	Centrilobular	Degeneration Leukemia Mononuclear	Mild
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland  Note: suspect pituitary infarction [ Degeneration TGLS = 2-7 ]	Pars Distalis	Degeneration Infiltration Cellular Pigmentation	Cystic, Mild Mononuclear CI, Moderate Hemosiderin, Moderate
* Prostate		Inflammation	Suppurative, Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Pigmentation	Hemosiderin, Moderate
* Stomach, Forestomach [ Ulcer TGLS = 4-13 ]		Ulcer	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 199

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 379

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202149

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

\* Stomach, Glandular

Ulcer

Moderate

[ Ulcer TGLS = 4-13 ]

---

PRIMARY CAUSE OF DEATH

- Heart Atrium Thrombosis

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 200

**TRT#:** 7

**SEX:** Male

**DAY ON TEST:** 653

**DOSE:** 64 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202150

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Liver
* Lung	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Colon		Ulcer	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Mild
* Lymph Node, Mesenteric		Ectasia	Moderate
Note: Best diagnosis for this lymph node is "Cystic lymph node," but this choice is not on the morphology menu.			
[ Ectasia TGLS = 1-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Degeneration	Minimal
	Epidermis, SOA	Exudate	Minimal
* Stomach, Forestomach		Inflammation	Chronic, Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 201	<b>TRT#:</b> 2 <b>DOSE:</b> 0 MG/KG	<b>SEX:</b> Female <b>DISP:</b> Natural Death	<b>DAY ON TEST:</b> 678 <b>HISTO:</b> 9202051
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

---

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			

---

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 202	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 600
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202052

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

---

**OBSERVATIONS**

* Clitoral Gland		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Liver		Basophilic Focus	
Note: The gross lesion, "discoloration, pale," noted at necropsy corresponds to the fact that at least 30% of the animal's blood volume went into the abdominal cavity			
* Spleen		Hemangiosarcoma	
[ Hemangiosarcoma TGLS = 3,4-1+6 ]			

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**PRIMARY CAUSE OF DEATH** - Spleen Hemangiosarcoma

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 203

TRT#: 2

SEX: Female

DAY ON TEST: 730

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202053

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Medulla        | * Bone Marrow              | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    |
| * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    | * Ovary                     |
| * Pancreas               | * Salivary Glands          | * Skin                    | * Spleen                    |
| * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  | * Trachea                   |
| * Urinary Bladder        |                            |                           |                             |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                   |                |                                  |                              |
|-------------------|----------------|----------------------------------|------------------------------|
| * Adrenal Cortex  |                | Hyperplasia                      | Minimal                      |
| * Bone            |                | Fibrous Osteodystrophy           | Mild                         |
| * Brain           |                | Carcinoma                        | Metastatic (Pituitary Gland) |
| * Clitoral Gland  |                | Adenoma                          |                              |
| * Kidney          |                | Nephropathy                      | Moderate                     |
| * Liver           |                | Basophilic Focus                 |                              |
|                   |                | Hematopoietic Cell Proliferation | Mild                         |
|                   |                | Hepatocellular Adenoma           |                              |
| * Lung            | Alveolar Epith | Hyperplasia                      | Mild                         |
| * Pituitary Gland | Pars Distalis  | Carcinoma                        |                              |
|                   |                |                                  |                              |
|                   |                |                                  |                              |
|                   |                |                                  |                              |
| * Thyroid Gland   | C Cell         | Hyperplasia                      | Mild                         |
| * Uterus          |                | Polyp Stromal                    |                              |
|                   |                |                                  |                              |
|                   |                |                                  |                              |

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 204

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 579

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202054

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Degeneration	Cystic, Minimal
[ Adenoma TGLS = 2-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
Zymbal's Gland		Carcinoma	
[ Carcinoma TGLS = 1-11 ]			

**PRIMARY CAUSE OF DEATH**

- Zymbal's Gland Carcinoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 205

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202055

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus	Endometrium	Hyperplasia	Cystic, Minimal
[ Hyperplasia TGLS = 2-10 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 206

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202056

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**MISSING**

\* Nose

**OBSERVATIONS**

* Bone Marrow		Hyperplasia Leukemia Mononuclear	Marked
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 207

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202057

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Fibrosis	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 208

TRT#: 2

SEX: Female

DAY ON TEST: 730

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202058

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                   | * Bone Marrow              |
| * Brain                   | * Clitoral Gland            | * Esophagus              | * Intestine Large, Cecum   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   |
| * Nose                    | * Ovary                     | * Pancreas               | * Parathyroid Gland        |
| * Salivary Glands         | * Skin                      | * Spleen                 | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Thymus                    | * Trachea                | * Urinary Bladder          |
| * Uterus                  |                             |                          |                            |

OBSERVATIONS

- |                              |               |                   |         |
|------------------------------|---------------|-------------------|---------|
| * Heart                      | Myocardium    | Degeneration      | Minimal |
| * Intestine Large, Colon     |               | Parasite Metazoan |         |
| * Kidney                     |               | Nephropathy       | Minimal |
| * Liver                      |               | Basophilic Focus  |         |
| * Mammary Gland              |               | Fibroadenoma      |         |
| [ Fibroadenoma TGLS = 1-11 ] |               |                   |         |
| * Pituitary Gland            | Pars Distalis | Adenoma           |         |
|                              | Pars Distalis | Hyperplasia       | Mild    |
| [ Adenoma TGLS = 2-7 ]       |               |                   |         |
| * Thyroid Gland              | C Cell        | Adenoma           |         |

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 209

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 597

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202059

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Bone Marrow		Atrophy	Marked
* Heart	Myocardium	Degeneration	Minimal
	Atrium	Thrombosis	Mild
* Kidney		Nephropathy	Minimal
* Liver	Centrilobular	Basophilic Focus	
		Necrosis	Moderate
[ Necrosis TGLS = 2-4 ]			
* Lymph Node, Mandibular		Atrophy	Marked
* Lymph Node, Mesenteric		Atrophy	Marked
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Minimal
[ Degeneration TGLS = 3-7 ]			
* Stomach, Glandular		Ulcer	Marked
[ Ulcer TGLS = 4-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Heart Atrium Thrombosis

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 210

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202060

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland			
Note: No corresponding microscopic observation for white pituitary nodule seen at necropsy.			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 211

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202061

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Ovary		Cyst	Mild
[ Cyst TGLS = 1-10 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Thymus		Cyst	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 212

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202062

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                   | * Bone Marrow              |
| * Brain                   | * Clitoral Gland            | * Esophagus              | * Intestine Large, Cecum   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Kidney                    | * Lung                   | * Lymph Node, Mandibular   |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   | * Ovary                    |
| * Parathyroid Gland       | * Salivary Glands           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 | * Trachea                  |
| * Urinary Bladder         | * Uterus                    |                          |                            |

OBSERVATIONS

- |                          |               |                   |      |
|--------------------------|---------------|-------------------|------|
| * Heart                  | Myocardium    | Degeneration      | Mild |
| * Intestine Large, Colon |               | Parasite Metazoan |      |
| * Liver                  |               | Basophilic Focus  |      |
| * Pancreas               | Acinus        | Atrophy           | Mild |
| * Pituitary Gland        | Pars Distalis | Adenoma           |      |
| [ Adenoma TGLS = 1-7 ]   |               |                   |      |
| * Thyroid Gland          | C Cell        | Adenoma           |      |

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 213

**TRT#:** 2  
**DOSE:** 0 MG/KG

**SEX:** Female  
**DISP:** Natural Death

**DAY ON TEST:** 729  
**HISTO:** 9202063

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

**AUTO PRECLUDES DIAG.**

* Intestine Small, Ileum	* Intestine Small, Jejunum
--------------------------	----------------------------

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
Eye		Degeneration	Marked
[ Degeneration TGLS = 3-11 ]			
* Heart	Myocardium	Degeneration	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
Oral Mucosa	Gingival	Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland		Hemorrhage	Minimal
[ Hemorrhage TGLS = 4-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Stomach, Glandular		Ulcer	Mild
[ Ulcer TGLS = 5-12 ]			

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 214

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 658

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202064

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
Note: Ectopic liver tissue in pancreatic islet.			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin	SOA	Ulcer	Mild
[ Ulcer TGLS = 1-12 ]			

**PRIMARY CAUSE OF DEATH**

- Mammary Gland Fibroadenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 215	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 697
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202065

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

---

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Congestion	Moderate
[ Congestion TGLS = 3-2 ]			
* Mammary Gland		Fibroadenoma	Multiple
[ Fibroadenoma TGLS = 1,2-11+12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Thyroid Gland	C Cell	Adenoma	

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 216	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202066

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

---

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Hyperplasia	Mild
		Inflammation	Suppurative, Marked
[ Inflammation TGLS = 1-10 ]			
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 217

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202067

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Clitoral Gland [ Adenoma TGLS = 1-10 ]		Adenoma	
* Heart	Myocardium	Degeneration	Marked
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
Mesentery [ Necrosis TGLS = 3-11 ]	Fat	Necrosis	Mild
* Pituitary Gland [ Adenoma TGLS = 4-7 ]	Pars Distalis	Adenoma	Multiple
* Thyroid Gland	C Cell	Adenoma	
* Uterus [ Polyp Stromal TGLS = 2-10 ]		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:29

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 218

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202068

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 219

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202069

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Mammary Gland		Fibroadenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus		Sarcoma Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 220

**TRT#:** 2  
**DOSE:** 0 MG/KG

**SEX:** Female  
**DISP:** Moribund Sacrifice

**DAY ON TEST:** 606  
**HISTO:** 9202070

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
[ Leukemia Mononuclear TGLS = 9-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
Lymph Node	Lumbar, Mediastinal, Renal	Leukemia Mononuclear	
Note: Not all lymph nodes with leukemia could be coded because of the three-site limitation of the data capture system.			
[ Leukemia Mononuclear TGLS = 4,5,6,8,11,12+13-11+12+14+15+16+17+18 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 7-19 ]			
* Pituitary Gland		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-13 ]			
* Thymus		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 10-2 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 221

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202071

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

**MISSING**

* Parathyroid Gland	* Thymus
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**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Marked
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Fibrosarcoma	
[ Fibrosarcoma TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 222

TRT#: 2

SEX: Female

DAY ON TEST: 489

DOSE: 0 MG/KG

DISP: Natural Death

HISTO: 9202072

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland        | * Salivary Glands         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                        |               |                  |          |
|------------------------|---------------|------------------|----------|
| * Heart                | Myocardium    | Degeneration     | Minimal  |
| * Kidney               |               | Nephropathy      | Minimal  |
| * Liver                |               | Basophilic Focus |          |
| * Lung                 |               | Congestion       | Moderate |
| * Pituitary Gland      | Pars Distalis | Adenoma          |          |
| [ Adenoma TGLS = 1-7 ] |               |                  |          |

PRIMARY CAUSE OF DEATH

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:29

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 223

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 531

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202073

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                          |                           |                             |                          |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex         | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                  | * Clitoral Gland          | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Islets, Pancreatic     | * Lung                    | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland          | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland      | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Spleen                 | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland          | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**AUTO PRECLUDES DIAG.**

- \* Intestine Small, Jejunum

**OBSERVATIONS**

- |          |            |                  |         |
|----------|------------|------------------|---------|
| * Heart  | Myocardium | Degeneration     | Minimal |
| * Kidney |            | Nephropathy      | Minimal |
| * Liver  |            | Basophilic Focus |         |

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 224	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202074

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 1-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 225

TRT#: 2

SEX: Female

DAY ON TEST: 730

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202075

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Clitoral Gland		Adenoma	
Eye		Cataract	Marked
[ Cataract TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Oral Mucosa	Gingival	Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
[ Degeneration TGLS = 2-11 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 226

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 653

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202076

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09  
Test Type: CHRONIC  
Route: SKIN APPLICATION  
Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
Test Compound: Diethanolamine  
CAS Number: 111-42-2

Date Report Requested: 10/16/2014  
Time Report Requested: 12:34:29  
First Dose M/F: NA / NA  
Lab: BAT

ANIMAL ID: 227      TRT#: 2      SEX: Female      DAY ON TEST: 638  
DOSE: 0 MG/KG      DISP: Moribund Sacrifice      HISTO: 9202077

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-4 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
* Skin	Epidermis, SOA	Exudate	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH      - Spleen    Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 228

**TRT#:** 2  
**DOSE:** 0 MG/KG

**SEX:** Female  
**DISP:** Natural Death

**DAY ON TEST:** 652  
**HISTO:** 9202078

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Congestion	Mild
[ Congestion TGLS = 1-4 ]			
* Lung		Congestion	Mild
	Alveolar Epith	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
[ Congestion TGLS = 3-3 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 229

TRT#: 2

SEX: Female

DAY ON TEST: 632

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202079

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Brain	Medulla	Carcinoma	Metastatic (Pituitary Gland)
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Carcinoma	
[ Carcinoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 230	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202080

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Ovary		Cyst	Marked
[ Cyst TGLS = 2-10 ]			
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[ Adenoma TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 231

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202081

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Alveolar/Bronchiolar Adenoma	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 232

TRT#: 2

DOSE: 0 MG/KG

SEX: Female

DISP: Natural Death

DAY ON TEST: 671

HISTO: 9202082

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Ovary		Cyst	Marked
[ Cyst TGLS = 1-10+12 ]			
* Pancreas	Acinus	Atrophy	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 233

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202083

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Brain		Astrocytoma Malignant	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-11 ]		
* Mammary Gland		Fibroadenoma	
	[ Fibroadenoma TGLS = 1-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 234

TRT#: 2

SEX: Female

DAY ON TEST: 730

DOSE: 0 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202084

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 235

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 522

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202085

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Liver
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Intestine Large, Rectum		Parasite Metazoan	
* Lymph Node, Mandibular [ Hyperplasia TGLS = 2-12 ]		Hyperplasia	Lymphoid, Moderate
* Thyroid Gland Zymbal's Gland [ Carcinoma TGLS = 1-11+13+14 ]	C Cell	Hyperplasia Carcinoma	Mild

**PRIMARY CAUSE OF DEATH**

- Zymbal's Gland Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 236	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202086

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Marked
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-11 ]		
* Mammary Gland		Fibroadenoma	
	[ Fibroadenoma TGLS = 1-12 ]		
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
	[ Degeneration TGLS = 3-7 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate
Tongue		Inflammation	Suppurative, Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 237	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202087

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pancreas	Acinus	Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 238	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202088

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Cyst	Marked
		Nephropathy	Mild
[ Cyst TGLS = 1-1 ]			
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus		Polyp Stromal	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 239

TRT#: 2

SEX: Female

DAY ON TEST: 460

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202089

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Alveolar/Bronchiolar Adenoma	
	[ Alveolar/Bronchiolar Adenoma TGLS = 3-11 ]		
* Ovary		Cyst	Moderate
	[ Cyst TGLS = 2-10 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 240

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 622

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202090

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3,4-4+12 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1,2-1+11 ]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 241

TRT#: 2

SEX: Female

DAY ON TEST: 589

DOSE: 0 MG/KG

DISP: Natural Death

HISTO: 9202091

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Bone                    | * Bone Marrow               |
| * Brain                  | * Clitoral Gland           | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    |
| * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    | * Ovary                     |
| * Pancreas               | * Parathyroid Gland        | * Salivary Glands         | * Skin                      |
| * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    |
| * Trachea                | * Urinary Bladder          | * Uterus                  |                             |

OBSERVATIONS

- |                             |               |                  |          |
|-----------------------------|---------------|------------------|----------|
| * Kidney                    |               | Nephropathy      | Minimal  |
| * Liver                     |               | Basophilic Focus |          |
| * Lung                      |               | Congestion       | Moderate |
| [ Congestion TGLS = 2-2+3 ] |               |                  |          |
| * Pituitary Gland           | Pars Distalis | Adenoma          |          |
| [ Adenoma TGLS = 1-7 ]      |               |                  |          |
| * Thyroid Gland             | C Cell        | Hyperplasia      | Mild     |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 242

TRT#: 2

SEX: Female

DAY ON TEST: 438

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202092

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Bone                    | * Bone Marrow               |
| * Brain                  | * Clitoral Gland           | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      |
| * Ovary                  | * Pancreas                 | * Parathyroid Gland       | * Salivary Glands           |
| * Skin                   | * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    |
| * Trachea                | * Urinary Bladder          | * Uterus                  |                             |

OBSERVATIONS

- |                                     |        |                      |      |
|-------------------------------------|--------|----------------------|------|
| * Liver                             |        | Leukemia Mononuclear |      |
| [ Leukemia Mononuclear TGLS = 2-4 ] |        |                      |      |
| * Lung                              |        | Leukemia Mononuclear |      |
| * Pituitary Gland                   |        | Angiectasis          | Mild |
| [ Angiectasis TGLS = 3-7 ]          |        |                      |      |
| * Spleen                            |        | Leukemia Mononuclear |      |
| [ Leukemia Mononuclear TGLS = 1-1 ] |        |                      |      |
| * Thyroid Gland                     | C Cell | Hyperplasia          | Mild |

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 243

TRT#: 2

SEX: Female

DAY ON TEST: 648

DOSE: 0 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202093

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

MISSING

\* Pituitary Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Intestine Small, Duodenum		Ulcer	Mild
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
		Fibroadenoma	
* Mammary Gland			
[ Fibroadenoma TGLS = 1-12 ]			
* Spleen		Fibrosis	Minimal
		Leukemia Mononuclear	
[ Fibrosis TGLS = 4-11 ]			
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 244

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 506

**DOSE:** 0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202094

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Bone Marrow		Myelofibrosis	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Hematopoietic Cell Proliferation	Minimal
* Lymph Node, Mesenteric		Hyperplasia	Lymphoid, Moderate
[ Hyperplasia TGLS = 4-13 ]			
Mesentery	Fat	Necrosis	Marked
[ Necrosis TGLS = 1,2,3-11+12 ]			
* Pancreas		Necrosis	Marked
[ Necrosis TGLS = 5-6 ]			
* Spleen	Lymph Follic	Atrophy	Moderate
* Stomach, Forestomach	Epithelium	Hyperplasia	Mild
[ Hyperplasia TGLS = 6-6 ]			
* Thymus		Inflammation	Chronic, Marked
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH**

- Pancreas Necrosis

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 245

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202095

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Glandular		Hyperplasia	Mild
[ Hyperplasia TGLS = 2-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 246

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 650

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202096

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Congestion	Moderate
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-11 ]			
* Skin	Epidermis, SOA	Acanthosis	Mild
	Epidermis, SOA	Hyperkeratosis	Minimal
	SOA	Ulcer	Mild
[ Ulcer TGLS = 2-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 247

**TRT#:** 2  
**DOSE:** 0 MG/KG

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730  
**HISTO:** 9202097

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 248	<b>TRT#:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 0 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202098

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**MISSING**

\* Parathyroid Gland

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 249

TRT#: 2

DOSE: 0 MG/KG

SEX: Female

DISP: Natural Death

DAY ON TEST: 666

HISTO: 9202099

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

\* Adrenal Medulla

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Liver		Basophilic Focus	
	Centrilobular	Necrosis	Moderate
	[ Necrosis TGLS = 2-4 ]		
* Mammary Gland		Fibroadenoma	
	[ Fibroadenoma TGLS = 1-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Spleen	Lymph Follic	Atrophy	Marked
		Hematopoietic Cell Proliferation	Marked
* Stomach, Glandular		Ulcer	Mild
	[ Ulcer TGLS = 4-11 ]		
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 250

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 701

**DOSE:** 0 MG/KG

**DISP:** Natural Death

**HISTO:** 9202100

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-11 ]			
* Clitoral Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
[ Hyperplasia TGLS = 1-14 ]			
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-12 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 4-13 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thymus		Leukemia Mononuclear	

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 251	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202351

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Adenoma	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 252	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202352

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Mixed Cell Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 253

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202353

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Mixed Cell Focus	
		Fibroadenoma	
* Mammary Gland			
[ Fibroadenoma TGLS = 2-11 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Skin		Squamous Cell Papilloma	
[ Squamous Cell Papilloma TGLS = 1-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 254

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202354

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Kidney		Nephropathy	Minimal
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 255

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202355

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Marked
		Leukemia Mononuclear	
* Clitoral Gland		Inflammation	Suppurative, Moderate
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		[ Hepatodiaphragmatic Nodule TGLS = 3-12 ]	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		[ Fibroadenoma TGLS = 1-11 ]	
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
		[ Adenoma TGLS = 4-7 ]	
* Skin	Epidermis, SOA	Exudate	Minimal
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 2-1 ]	
* Thyroid Gland	Bilateral, C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 256

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202356

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-2+3 ]			
* Ovary		Cyst	Marked
[ Cyst TGLS = 1-10 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 6-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	Follicular Cel	Carcinoma	
[ Carcinoma TGLS = 2-7 ]			

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 257

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 589

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202357

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Atrium	Thrombosis	Marked
* Kidney		Nephropathy	Minimal
* Liver	Centrilobular	Degeneration	Mild
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
[ Degeneration TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
[ Hyperkeratosis TGLS = 1-11 ]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Heart Atrium Thrombosis

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 258	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202358

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 259

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 638

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202359

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Liver		Leukemia Mononuclear	
		Basophilic Focus	
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-4 ]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 3-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Stomach, Glandular		Ulcer	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 260

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 702

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202360

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Glandular	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Clear Cell Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical, Lumbar, Renal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1,3,7,8-11+13+14+15 ]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-5 ]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-6 ]		
* Mammary Gland		Fibroadenoma	
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Minimal
	[ Degeneration TGLS = 9-7 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 10-1 ]		
* Stomach, Forestomach		Ulcer	Marked
* Thymus		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-2 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 260	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 702
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202360

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Uterus [ Hypertrophy TGLS = 6-12 ]	Epithelium	Hypertrophy	Mild
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PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 261

TRT#: 4

SEX: Female

DAY ON TEST: 655

DOSE: 8 MG/KG

DISP: Natural Death

HISTO: 9202361

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

- \* Parathyroid Gland

AUTO PRECLUDES DIAG.

- \* Intestine Small, Ileum

OBSERVATIONS

* Kidney		Nephropathy	Minimal
* Lung		Congestion	Mild
[ Congestion TGLS = 3-2+3 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 2-12 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
	SOA	Ulcer	Minimal
[ Ulcer TGLS = 1-11 ]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 262

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202362

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Esophagus [ Necrosis TGLS = 1-11 ]	Periesoph Tiss	Necrosis	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland [ Adenoma TGLS = 2-7 ]	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 263	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202363

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 1-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 264

TRT#: 4

SEX: Female

DAY ON TEST: 544

DOSE: 8 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202364

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Esophagus               | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Parathyroid Gland        | * Salivary Glands         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                        |               |                    |          |
|------------------------|---------------|--------------------|----------|
| * Clitoral Gland       |               | Adenoma            |          |
| * Kidney               |               | Nephropathy        | Moderate |
| * Liver                |               | Basophilic Focus   |          |
|                        |               | Eosinophilic Focus |          |
| * Pancreas             | Acinus        | Atrophy            | Mild     |
| * Pituitary Gland      | Pars Distalis | Adenoma            |          |
| [ Adenoma TGLS = 1-7 ] |               |                    |          |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 265

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202365

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Nephropathy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 266	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202366

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pituitary Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**MISSING**

\* Parathyroid Gland

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
Oral Mucosa		Squamous Cell Carcinoma	
[ Squamous Cell Carcinoma TGLS = 1-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Adenoma	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 267

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202367

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
[ Clear Cell Focus TGLS = 1-11 ]			
* Lung	Interstitial	Inflammation	Chronic, Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 268

TRT#: 4

SEX: Female

DAY ON TEST: 699

DOSE: 8 MG/KG

DISP: Natural Death

HISTO: 9202368

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Medulla           | * Bone                   | * Bone Marrow              | * Brain                   |
| * Clitoral Gland            | * Esophagus              | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           |
| * Nose                      | * Ovary                  | * Pancreas                 | * Parathyroid Gland       |
| * Salivary Glands           | * Skin                   | * Spleen                   | * Stomach, Forestomach    |
| * Stomach, Glandular        | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           | * Uterus                 |                            |                           |

AUTO PRECLUDES DIAG.

- \* Intestine Large, Cecum

OBSERVATIONS

- |   |               |                            |         |
|---|---------------|----------------------------|---------|
| * Adrenal Cortex                          |               | Hyperplasia                | Mild    |
| * Heart                                   | Myocardium    | Degeneration               | Minimal |
| * Kidney                                  |               | Nephropathy                | Mild    |
| * Liver                                   |               | Basophilic Focus           |         |
|   |               | Hepatodiaphragmatic Nodule |         |
| [ Hepatodiaphragmatic Nodule TGLS = 1-4 ] |               |                            |         |
| * Pituitary Gland                         | Pars Distalis | Adenoma                    |         |
| [ Adenoma TGLS = 2-7 ]                    |               |                            |         |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 269

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202369

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
[ Adenoma TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	Multiple
[ Fibroadenoma TGLS = 2,3,4-11+13+14 ]			
* Ovary		Cyst	Marked
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 270

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 704

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202370

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Clitoral Gland		Inflammation	Suppurative, Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		Mixed Cell Focus	
	[ Hepatodiaphragmatic Nodule TGLS = 4-11 ]		
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
	[ Necrosis TGLS = 3-12 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-1 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 271

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 703

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202371

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Adenoma	
		Hyperplasia	Moderate
	[ Adenoma TGLS = 5-10 ]		
	[ Hyperplasia TGLS = 5-10 ]		
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
* Ovary		Cyst	Marked
	[ Cyst TGLS = 2-10 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Thyroid Gland	C Cell	Hyperplasia	Marked

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 272

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202372

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Marked
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin		Schwannoma Malignant	
[ Schwannoma Malignant TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder		Papilloma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 273

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 703

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202373

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Stomach, Glandular	* Trachea	* Uterus	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Brain		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
		Hyperplasia	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-4 ]		
* Lung		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-2+3 ]		
Lymph Node	Deep Cervical, Mediastinal, Renal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 8,9,10-11+13+16 ]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-15 ]		
* Pancreas		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-14 ]		
* Pituitary Gland		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 11-7 ]		
* Salivary Glands		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-5 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-12 ]		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 273	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 703
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202373

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Stomach, Forestomach [ Ulcer TGLS = 12-17 ]		Ulcer	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder [ Leukemia Mononuclear TGLS = 7-6 ]		Leukemia Mononuclear	

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PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 274

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202374

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

* Clitoral Gland [ Adenoma TGLS = 2-10 ]		Adenoma	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland [ Adenoma TGLS = 1-7 ]	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 275	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202375

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lymph Node, Mesenteric		Inflammation	Chronic Active, Mild
Oral Mucosa	Gingival	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 276

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202376

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 277

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 556

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202377

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Thymus

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-4 ]		
* Lung		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-2+3 ]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-6 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Thyroid Gland	C Cell	Hyperplasia	Moderate
Vagina		Infiltration Cellular	Polymorphnuclr, Moderate
	[ Infiltration Cellular TGLS = 3-11 ]		

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 278

TRT#: 4

DOSE: 8 MG/KG

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO: 9202378

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Bone                      | * Bone Marrow            | * Brain                    | * Clitoral Gland          |
| * Esophagus                 | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           |
| * Nose                      | * Ovary                  | * Pancreas                 | * Parathyroid Gland       |
| * Salivary Glands           | * Skin                   | * Spleen                   | * Stomach, Forestomach    |
| * Stomach, Glandular        | * Thymus                 | * Trachea                  | * Urinary Bladder         |
| * Uterus                    |                          |                            |                           |

OBSERVATIONS

- |   |               |                            |         |
|---|---------------|----------------------------|---------|
| * Adrenal Cortex                          |               | Hyperplasia                | Mild    |
| * Adrenal Medulla                         |               | Hyperplasia                | Minimal |
| * Heart                                   | Myocardium    | Degeneration               | Minimal |
| * Kidney                                  |               | Nephropathy                | Minimal |
| * Liver                                   |               | Basophilic Focus           |         |
|   |               | Hepatodiaphragmatic Nodule |         |
| [ Hepatodiaphragmatic Nodule TGLS = 1-4 ] |               |                            |         |
| * Pituitary Gland                         | Pars Distalis | Hyperplasia                | Mild    |
| * Thyroid Gland                           | C Cell        | Adenoma                    |         |

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 279

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202379

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Clitoral Gland		Hyperplasia	Moderate
[ Hyperplasia TGLS = 1-10 ]			
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 280

TRT#: 4

SEX: Female

DAY ON TEST: 541

DOSE: 8 MG/KG

DISP: Natural Death

HISTO: 9202380

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

AUTO PRECLUDES DIAG.

\* Intestine Small, Jejunum

OBSERVATIONS

Harderian Gland		Inflammation	Chronic, Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Lung		Congestion	Moderate
[ Congestion TGLS = 2-2+3 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland		Cyst	Mild
[ Cyst TGLS = 1-7 ]			

PRIMARY CAUSE OF DEATH

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 281	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202381

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 282	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 681
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202382

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

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**MISSING**

\* Parathyroid Gland

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 2-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 283

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202383

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Necrosis	Mild
[ Necrosis TGLS = 3,4,5-4+12 ]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Minimal
[ Adenoma TGLS = 6-13 ]			
* Skin		Trichoepithelioma	
[ Trichoepithelioma TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 284

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202384

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
* Liver		Basophilic Focus	
* Ovary		Cyst	Marked
[ Cyst TGLS = 1-10 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 285

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202385

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Adenoma	
* Bone Marrow		Hyperplasia	Marked
		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	Multiple
[ Adenoma TGLS = 1-11+12 ]			
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[ Hyperplasia TGLS = 2-13 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Carcinoma	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 286

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202386

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Skin	Conjunctiva	Schwannoma Malignant	
	[ Schwannoma Malignant TGLS = 1-12 ]		
* Thyroid Gland	C Cell	Adenoma	
* Uterus	Endometrium	Hyperplasia	Cystic, Mild
	[ Hyperplasia TGLS = 2-11 ]		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 287	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202387

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Clitoral Gland		Inflammation	Suppurative, Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 288

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 724

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202388

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Clitoral Gland [ Inflammation TGLS = 4-10 ]		Inflammation	Suppurative, Moderate
* Kidney		Nephropathy	Mild
* Liver  [ Hepatocellular Adenoma TGLS = 3-12 ]		Basophilic Focus Clear Cell Focus Hepatocellular Adenoma	
Mesentery [ Necrosis TGLS = 2-11 ]	Fat	Necrosis	Marked
* Pituitary Gland [ Adenoma TGLS = 1-7 ]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 289	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202389

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
	Pars Distalis	Hyperplasia	Minimal
[ Degeneration TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 290

TRT#: 4

SEX: Female

DAY ON TEST: 492

DOSE: 8 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202390

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney		Nephropathy	Minimal
* Mammary Gland		Adenoma	
[ Adenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 291	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 641
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202391

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 292

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 8 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202392

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate
	Follicular Cel	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 293	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 689
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202393

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 294

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 703

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202394

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

**MISSING**

\* Brain

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 9-2 ]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 5-5 ]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 8-6 ]	
* Mammary Gland		Fibroadenoma	Multiple
		[ Fibroadenoma TGLS = 1,2,3-12+13+14 ]	
Mesentery		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 6-11 ]	
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		[ Adenoma TGLS = 4-7 ]	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 294	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 703
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202394

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 7-15 ]			

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**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 295	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 8 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202395

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

---

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[ Hyperplasia TGLS = 1-7 ]			
* Spleen	Lymph Follic	Hyperplasia	Moderate
[ Hyperplasia TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 296

TRT#: 4

SEX: Female

DAY ON TEST: 730

DOSE: 8 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202396

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 297

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 323

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202397

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

**OBSERVATIONS**

\* Uterus  
[ Prolapse TGLS = 1-11 ]

Prolapse

**PRIMARY CAUSE OF DEATH**

- Uterus Prolapse

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 298

TRT#: 4

SEX: Female

DAY ON TEST: 597

DOSE: 8 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202398

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Mild
[ Ulcer TGLS = 2-11 ]			
* Thyroid Gland	C Cell	Adenoma	
	Follicular Cel	Cyst	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 299

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 666

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202399

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**MISSING**

* Lymph Node, Mandibular	* Parathyroid Gland
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**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Moderate
* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Cecum		Ulcer	Mild
* Kidney		Nephropathy	Minimal
* Liver	Portal	Fibrosis	Mild
	Oval Cell	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Hyperplasia TGLS = 5-14 ]			
* Lung	Interstitium	Inflammation	Chronic, Minimal
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 4-12 ]			
* Ovary		Necrosis	Marked
[ Necrosis TGLS = 2-10 ]			
* Pancreas		Necrosis	Marked
[ Necrosis TGLS = 3-11 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Pleura		Inflammation	Chronic, Moderate
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen	Lymph Follic	Atrophy	Marked
		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 299

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 666

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202399

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Uterus

Necrosis

Marked

Vagina

Infiltration Cellular

Polymorphnuclr, Minimal

[ Infiltration Cellular TGLS = 1-13 ]

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PRIMARY CAUSE OF DEATH

- Ovary Necrosis

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 300

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 722

**DOSE:** 8 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202400

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney	Renal Tubule	Pigmentation	Hemosiderin, Moderate
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Glandular		Ulcer	Minimal
[ Ulcer TGLS = 3-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 301

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202251

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Bone Marrow		Hyperplasia	Marked
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Ovary		Cyst	Marked
[ Cyst TGLS = 3-10 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Marked
Zymbal's Gland		Carcinoma	
[ Carcinoma TGLS = 1-11 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:29

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 302

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202252

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 303	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 694
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202253

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

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**MISSING**

\* Clitoral Gland

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Mammary Gland Fibroadenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 304

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202254

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
[ Exudate TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 305

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 695

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202255

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Trachea	* Urinary Bladder
* Uterus			

**MISSING**

\* Thymus

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Hyperplasia	Marked
		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-4 ]		
* Lung		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-2+3 ]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3,4-2 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-7 ]		
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Glandular		Ulcer	Moderate
	[ Ulcer TGLS = 7-11 ]		
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 305

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 695

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202255

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 306

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202256

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 307

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202257

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 308	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 719
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202258

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

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**AUTO PRECLUDES DIAG.**

\* Intestine Small, Ileum

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
[ Nephropathy TGLS = 1-1 ]			
* Lung		Congestion	Mild
[ Congestion TGLS = 2-2+3 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			

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**PRIMARY CAUSE OF DEATH** - UNCERTAIN

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 309

TRT#: 6

SEX: Female

DAY ON TEST: 730

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202259

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

MISSING

\* Thymus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Kidney		Nephropathy	Moderate
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
[ Exudate TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:29

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 310

TRT#: 6

SEX: Female

DAY ON TEST: 365

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202260

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Bone                    | * Bone Marrow               |
| * Brain                  | * Clitoral Gland           | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    |
| * Liver                  | * Lung                     | * Lymph Node, Mandibular  | * Lymph Node, Mesenteric    |
| * Mammary Gland          | * Nose                     | * Ovary                   | * Parathyroid Gland         |
| * Pituitary Gland        | * Salivary Glands          | * Skin                    | * Spleen                    |
| * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  | * Thyroid Gland             |
| * Trachea                | * Urinary Bladder          |                           |                             |

OBSERVATIONS

- |                               |        |               |         |
|-------------------------------|--------|---------------|---------|
| * Pancreas                    | Acinus | Atrophy       | Minimal |
| * Uterus                      |        | Polyp Stromal |         |
| [ Polyp Stromal TGLS = 1-11 ] |        |               |         |

PRIMARY CAUSE OF DEATH

- Uterus Polyp Stromal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 311	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 561
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202261

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
[ Adenoma TGLS = 1-11 ]			
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Spleen		Hematopoietic Cell Proliferation	Marked
[ Hematopoietic Cell Proliferation TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH** - Clitoral Gland Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 312	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202262

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Eosinophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 313

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 656

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202263

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Mixed Cell Focus	
* Lung		Congestion	Mild
[ Congestion TGLS = 4-2+3 ]			
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 5-12 ]			
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 3-13 ]			
* Ovary		Cyst	Marked
[ Cyst TGLS = 2-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Minimal
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 314

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 634

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202264

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
	[ Nephropathy TGLS = 1-1 ]		
* Liver		Basophilic Focus	
	Note: No corresponding microscopic finding for minute focus seen at necropsy.		
* Lung		Alveolar/Bronchiolar Carcinoma	
	[ Alveolar/Bronchiolar Carcinoma TGLS = 4-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Stomach, Forestomach	Epithelium	Hyperplasia	Moderate
	[ Hyperplasia TGLS = 5-13 ]		

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 315

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 697

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202265

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Necrosis	Acute, Moderate
* Heart	Myocardium	Degeneration	Minimal
	Atrium	Thrombosis	Marked
	[ Thrombosis TGLS = 2-4 ]		
* Kidney		Nephropathy	Minimal
	[ Nephropathy TGLS = 4-1 ]		
* Liver	Centrilobular	Degeneration	Mild
		Leukemia Mononuclear	
	[ Degeneration TGLS = 3-4 ]		
* Lung		Congestion	Mild
	[ Congestion TGLS = 5-2+3 ]		
* Ovary		Cyst	Marked
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Forestomach	Epithelium	Hyperplasia	Mild
	[ Hyperplasia TGLS = 7-11 ]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Heart Atrium Thrombosis

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 316

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202266

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
		Mixed Cell Focus	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-12 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 3-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
	Pars Distalis	Hyperplasia	Mild
[ Degeneration TGLS = 1-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 317      **TRT#:** 6      **SEX:** Female      **DAY ON TEST:** 490  
**DOSE:** 16 MG/KG      **DISP:** Moribund Sacrifice      **HISTO:** 9202267

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Cortex		Thrombosis	Moderate
* Adrenal Medulla		Necrosis	Mild
* Heart	Myocardium	Degeneration	Minimal
	Atrium	Thrombosis	Minimal
* Intestine Large, Rectum		Inflammation	Suppurative, Mild
* Kidney		Nephropathy	Minimal
* Liver	Centrilobular	Degeneration	Moderate
[ Degeneration TGLS = 3-4 ]			
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 2-12 ]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	SOA	Keratoacanthoma	
[ Keratoacanthoma TGLS = 1-11 ]			
* Stomach, Forestomach		Ulcer	Marked
[ Ulcer TGLS = 4-6 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**      - Heart Atrium Thrombosis

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 318	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202268

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[ Hyperplasia TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 319	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202269

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 320

TRT#: 6

SEX: Female

DAY ON TEST: 579

DOSE: 16 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202270

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

\* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 321

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202271

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Islets, Pancreatic		Hyperplasia	Minimal
* Kidney		Nephropathy	Mild
	[ Nephropathy TGLS = 1-1 ]		
* Liver		Basophilic Focus	
		Mixed Cell Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Marked
Tongue		Inflammation	Suppurative, Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 322

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 692

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202272

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**AUTO PRECLUDES DIAG.**

\* Intestine Small, Jejunum

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
	[ Leukemia Mononuclear TGLS = 3-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical, Mediastinal, Renal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6,8,9-2+13+14 ]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 7-11 ]		
* Ovary		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2-12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 322	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 692
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202272

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Leukemia Mononuclear TGLS = 5-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 10-15 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

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<b>PRIMARY CAUSE OF DEATH</b>	- Spleen	Leukemia Mononuclear
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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 323

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202273

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-11 ]		
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 324	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202274

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

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**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 3-1 ]			
* Ovary		Cyst	Marked
[ Cyst TGLS = 2-11 ]			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Stomach, Forestomach		Ulcer	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 325

TRT#: 6

SEX: Female

DAY ON TEST: 434

DOSE: 16 MG/KG

DISP: Natural Death

HISTO: 9202275

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                      |                        |                          |
|---------------------------|----------------------|------------------------|--------------------------|
| * Adrenal Cortex          | * Adrenal Medulla    | * Bone                 | * Bone Marrow            |
| * Brain                   | * Clitoral Gland     | * Esophagus            | * Heart                  |
| * Intestine Large, Rectum | * Islets, Pancreatic | * Lung                 | * Lymph Node, Mandibular |
| * Mammary Gland           | * Nose               | * Pituitary Gland      | * Salivary Glands        |
| * Skin                    | * Spleen             | * Stomach, Forestomach | * Thyroid Gland          |
| * Trachea                 |                      |                        |                          |

MISSING

- |                     |          |
|---------------------|----------|
| * Parathyroid Gland | * Thymus |
|---------------------|----------|

OBSERVATIONS

- |  |                            |         |
|--|----------------------------|---------|
| * Intestine Large, Cecum                   | Lymphoma Malignant         |         |
| * Intestine Large, Colon                   | Lymphoma Malignant         |         |
|  | Ulcer                      | Marked  |
| * Intestine Small, Duodenum                | Lymphoma Malignant         |         |
| * Intestine Small, Ileum                   | Lymphoma Malignant         |         |
| * Intestine Small, Jejunum                 | Lymphoma Malignant         |         |
| [ Lymphoma Malignant TGLS = 6-15 ]         |                            |         |
| * Kidney                                   | Nephropathy                | Minimal |
| * Liver                                    | Hepatodiaphragmatic Nodule |         |
|  | Lymphoma Malignant         |         |
| [ Hepatodiaphragmatic Nodule TGLS = 5-12 ] |                            |         |
| * Lymph Node, Mesenteric                   | Lymphoma Malignant         |         |
| [ Lymphoma Malignant TGLS = 4-14 ]         |                            |         |
| Mesentery                                  | Lymphoma Malignant         |         |
| [ Lymphoma Malignant TGLS = 3-13 ]         |                            |         |
| * Ovary                                    | Lymphoma Malignant         |         |
| [ Lymphoma Malignant TGLS = 1-11 ]         |                            |         |
| * Pancreas                                 | Lymphoma Malignant         |         |
| * Stomach, Glandular                       | Lymphoma Malignant         |         |
|  | Ulcer                      | Mild    |
| [ Ulcer TGLS = 7-16 ]                      |                            |         |

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 325

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 434

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202275

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Urinary Bladder

Lymphoma Malignant

\* Uterus

Lymphoma Malignant

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**PRIMARY CAUSE OF DEATH**

- Mesentery Lymphoma Malignant

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 326	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202276

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

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**MISSING**

\* Mammary Gland

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
	[ Nephropathy TGLS = 1-1 ]		
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Fibrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 327

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202277

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Liver		Mixed Cell Focus	
* Lung	Interstitial	Inflammation	Chronic, Minimal
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 328	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202278

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin	Epidermis	Fibrosis	Mild
[ Fibrosis TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 329

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202279

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Nose	* Ovary	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Bone Marrow		Hyperplasia	Marked
* Clitoral Gland		Leukemia Mononuclear	
[ Hyperplasia TGLS = 2-15 ]		Hyperplasia	Marked
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 7-16 ]		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 8-4 ]			
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical, Renal	Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 9,11-12+13 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 12-6 ]			
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 3-14 ]			
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 10-7 ]			

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 329	<b>TRT#:</b> 6 <b>DOSE:</b> 16 MG/KG	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b> 9202279
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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* Skin [ Hyperkeratosis TGLS = 1-10 ]	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen [ Fibrosis TGLS = 6-1+11 ] [ Leukemia Mononuclear TGLS = 5-1 ]		Fibrosis Leukemia Mononuclear	Minimal
* Thymus [ Leukemia Mononuclear TGLS = 4-2 ]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 330

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202280

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Ovary		Cyst	Moderate
[ Cyst TGLS = 1-10 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 331

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202281

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 332

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 677

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202282

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Marked
Eye	Antr Chamber	Inflammation	Suppurative, Marked
[ Inflammation TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Cecum		Ulcer	Mild
* Kidney		Nephropathy	Mild
* Liver	Serosa	Fibrosis	Minimal
* Lung		Inflammation	Granulomatous, Mild
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-13 ]			
* Nose		Inflammation	Suppurative, Minimal
* Pancreas		Inflammation	Chronic, Moderate
Peritoneum		Inflammation	Chronic, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	SOA	Ulcer	Moderate
[ Ulcer TGLS = 3-11 ]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
Vagina		Inflammation	Chronic, Moderate

**PRIMARY CAUSE OF DEATH** - Mammary Gland Fibroadenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 332

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 677

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202282

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 333

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 619

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202283

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
	Atrium	Thrombosis	Moderate
* Kidney		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 4-4 ]		
* Lung		Leukemia Mononuclear	
Mesentery		Inflammation	Chronic, Minimal
	[ Inflammation TGLS = 1-6 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 5-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
		Necrosis	Marked
	[ Leukemia Mononuclear TGLS = 2-1 ]		
	[ Necrosis TGLS = 3-11 ]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 334

TRT#: 6

SEX: Female

DAY ON TEST: 730

DOSE: 16 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202284

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Uterus

MISSING

\* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 335

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 648

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202285

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Rectum		Ulcer	Minimal
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Moderate
[ Degeneration TGLS = 3-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[ Fibrosis TGLS = 2-11 ]			
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 336	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202286

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**MISSING**

\* Parathyroid Gland

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
[ Nephropathy TGLS = 2-1 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
[ Hyperkeratosis TGLS = 1-11 ]			
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 337      **TRT#:** 6      **SEX:** Female      **DAY ON TEST:** 665  
**DOSE:** 16 MG/KG      **DISP:** Natural Death      **HISTO:** 9202287

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Inflammation	Suppurative, Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-12 ]		
* Lung		Congestion	Mild
	[ Congestion TGLS = 3-2+3 ]		
* Mammary Gland		Carcinoma	
	[ Carcinoma TGLS = 1-11 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 4-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 338

TRT#: 6

SEX: Female

DAY ON TEST: 727

DOSE: 16 MG/KG

DISP: Natural Death

HISTO: 9202288

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung	Interstitial	Inflammation	Chronic, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Sarcoma Stromal	
[ Sarcoma Stromal TGLS = 1-11 ]			

PRIMARY CAUSE OF DEATH

- Uterus Sarcoma Stromal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 339	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202289

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
		Mixed Cell Focus	
[ Hepatodiaphragmatic Nodule TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Thyroid Gland	C Cell	Hyperplasia	Marked

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:30

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 340

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 351

**DOSE:** 16 MG/KG

**DISP:** Natural Death

**HISTO:** 9202290

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                          |                           |                             |
|----------------------------|--------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex           | * Adrenal Medulla        | * Bone                    | * Bone Marrow               |
| * Brain                    | * Clitoral Gland         | * Esophagus               | * Heart                     |
| * Intestine Large, Cecum   | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Jejunum | * Islets, Pancreatic     | * Liver                   | * Lymph Node, Mandibular    |
| * Lymph Node, Mesenteric   | * Mammary Gland          | * Nose                    | * Ovary                     |
| * Pancreas                 | * Parathyroid Gland      | * Pituitary Gland         | * Salivary Glands           |
| * Skin                     | * Spleen                 | * Stomach, Forestomach    | * Stomach, Glandular        |
| * Thymus                   | * Thyroid Gland          | * Trachea                 | * Urinary Bladder           |
| * Uterus                   |                          |                           |                             |

**AUTO PRECLUDES DIAG.**

- \* Intestine Small, Ileum

**OBSERVATIONS**

- |          |              |                |        |
|----------|--------------|----------------|--------|
| * Kidney | Renal Tubule | Mineralization | Mild   |
| * Lung   |              | Congestion     | Marked |

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 341

TRT#: 6

SEX: Female

DAY ON TEST: 679

DOSE: 16 MG/KG

DISP: Natural Death

HISTO: 9202291

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Bone                    | * Bone Marrow               | * Brain                  |
| * Clitoral Gland           | * Esophagus               | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Salivary Glands        |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

MISSING

- \* Adrenal Medulla

OBSERVATIONS

- |                        |                |                |         |
|------------------------|----------------|----------------|---------|
| * Kidney               |                | Nephropathy    | Mild    |
| * Pituitary Gland      | Pars Distalis  | Adenoma        |         |
| [ Adenoma TGLS = 1-7 ] |                |                |         |
| * Skin                 | Epidermis, SOA | Hyperkeratosis | Minimal |
| * Thyroid Gland        | C Cell         | Hyperplasia    | Mild    |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 342

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 591

**DOSE:** 16 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202292

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Kidney		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 3-11 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Moderate
[ Ulcer TGLS = 4-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 343	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202293

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 344

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202294

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
[ Adenoma TGLS = 1-10 ]			
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 345	<b>TRT#:</b> 6 <b>DOSE:</b> 16 MG/KG	<b>SEX:</b> Female <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> 606 <b>HISTO:</b> 9202295
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland [ Fibroadenoma TGLS = 1-11 ]		Fibroadenoma	
* Pituitary Gland [ Adenoma TGLS = 2-7 ]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Mammary Gland Fibroadenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 346

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202296

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-11 ]		
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
	[ Fibroadenoma TGLS = 1-12 ]		
* Pancreas	Acinus	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 347	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202297

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus	Endometrium	Hyperplasia	Cystic, Minimal
[ Hyperplasia TGLS = 1-10 ]			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 348	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 16 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202298

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Marked

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 349

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202299

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**MISSING**

\* Parathyroid Gland

**OBSERVATIONS**

* Adrenal Medulla [ Pheochromocytoma Benign TGLS = 3-7 ]		Pheochromocytoma Benign	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland [ Fibroadenoma TGLS = 1-11 ]		Fibroadenoma	
* Pituitary Gland [ Hyperplasia TGLS = 2-7 ]	Pars Distalis	Hyperplasia	Marked
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 350

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 16 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202300

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 351	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202151

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

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**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
* Liver		Clear Cell Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 352

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 565

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202152

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 353

TRT#: 8

DOSE: 32 MG/KG

SEX: Female

DISP: Natural Death

DAY ON TEST: 728

HISTO: 9202153

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Brain	* Esophagus	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex [ Osteosarcoma TGLS = 6,8-12 ]		Osteosarcoma	Metastatic (Bone)
* Adrenal Medulla Blood Vessel Note: Blood vessel mineralization is on slide #4, but not slide #7.		Osteosarcoma	Metastatic (Bone)
* Bone [ Osteosarcoma TGLS = 3-13 ]		Osteosarcoma	
* Bone Marrow		Necrosis	Moderate
* Clitoral Gland [ Hyperplasia TGLS = 2-10 ]		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Mild
* Kidney [ Osteosarcoma TGLS = 7-1 ]		Osteosarcoma	Metastatic (Bone)
* Lung [ Osteosarcoma TGLS = 4-2+3 ]		Osteosarcoma	Metastatic (Bone)
* Mammary Gland		Fibroadenoma	
* Ovary [ Osteosarcoma TGLS = 5-10 ]		Osteosarcoma	Metastatic (Bone)
* Pituitary Gland [ Degeneration TGLS = 9-7 ]	Pars Distalis	Degeneration	Cystic, Minimal
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 353

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 728

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202153

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Exudate TGLS = 1-10 ]

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PRIMARY CAUSE OF DEATH

- Bone Osteosarcoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 354

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202154

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Clitoral Gland		Inflammation	Suppurative, Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
	[ Nephropathy TGLS = 4-1 ]		
* Liver		Basophilic Focus	
	[ Leukemia Mononuclear TGLS = 5-12 ]	Leukemia Mononuclear	
* Lung		Inflammation	Granulomatous, Mild
* Ovary		Cyst	Marked
	[ Cyst TGLS = 2-11 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-1 ]		
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 355

TRT#: 8

SEX: Female

DAY ON TEST: 486

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202155

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus

- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

- \* Bone
- \* Heart
- \* Intestine Small, Duodenum
- \* Liver
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

- \* Bone Marrow
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Kidney
- \* Pituitary Gland  
[ Adenoma TGLS = 1-7 ]

Pars Distalis

Nephropathy  
Adenoma

Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 356

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 642

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202156

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
	[ Hepatodiaphragmatic Nodule TGLS = 2-4 ]	Hepatodiaphragmatic Nodule	
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Atrophy	Moderate
	[ Atrophy TGLS = 3-10 ]		

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 357

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202157

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 4-11 ]		
* Lung			
	Note: Harderian gland tissue on slide #3 is a "floater." Probably was accidentally mixed with lung tissue by prosector, or stuck to lungs in the formalin jar.		
* Mammary Gland		Fibroadenoma	Multiple
	[ Fibroadenoma TGLS = 1,2-12+13 ]		
* Ovary		Cyst	Mild
	[ Cyst TGLS = 3-10 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 6-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 358	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 669
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202158

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Kidney		Nephropathy	Moderate
* Liver		Cyst	Moderate
[ Cyst TGLS = 3-12 ]			
* Ovary		Cyst	Marked
Note: No corresponding lesion for 4x3x3 mm ovarian green mass seen at necropsy.			
[ Cyst TGLS = 2-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			

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**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 359

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 515

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202159

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Lung		Inflammation	Granulomatous, Minimal
		Yolk Sac Carcinoma	Metastatic (Ovary)
Lymph Node	Inguinal	Yolk Sac Carcinoma	Metastatic (Ovary)
	Mediastinal	Yolk Sac Carcinoma	Metastatic (Ovary)
	[ Yolk Sac Carcinoma TGLS = 3-13 ]		
Mesentery		Yolk Sac Carcinoma	Metastatic (Ovary)
	[ Yolk Sac Carcinoma TGLS = 2-12 ]		
* Ovary		Yolk Sac Carcinoma	
	[ Yolk Sac Carcinoma TGLS = 1-11 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Yolk Sac Carcinoma	Metastatic (Ovary)

**PRIMARY CAUSE OF DEATH**

- Ovary Yolk Sac Carcinoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 360

TRT#: 8

SEX: Female

DAY ON TEST: 706

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202160

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Salivary Glands           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                                 |               |                    |         |
|---------------------------------|---------------|--------------------|---------|
| * Heart                         | Myocardium    | Degeneration       | Minimal |
| * Kidney                        |               | Nephropathy        | Mild    |
| [ Nephropathy TGLS = 2-1 ]      |               |                    |         |
| * Liver                         |               | Eosinophilic Focus |         |
| * Pituitary Gland               | Pars Distalis | Adenoma            |         |
| [ Adenoma TGLS = 3-7 ]          |               |                    |         |
| * Uterus                        |               | Sarcoma Stromal    |         |
| [ Sarcoma Stromal TGLS = 1-11 ] |               |                    |         |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 361	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 675
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Natural Death	<b>HISTO:</b> 9202161

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

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**MISSING**

\* Intestine Small, Jejunum

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**OBSERVATIONS**

* Kidney [ Nephropathy TGLS = 2-1 ]		Nephropathy	Mild
* Liver Note: No corresponding histopathologic finding for gross observation of hepatic deformity.			
* Lung [ Congestion TGLS = 3-2+3 ]		Congestion Inflammation	Moderate Granulomatous, Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal

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**PRIMARY CAUSE OF DEATH** - UNCERTAIN

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 362

TRT#: 8

SEX: Female

DAY ON TEST: 730

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202162

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
	[ Nephropathy TGLS = 2-1 ]		
* Liver		Hepatocellular Carcinoma	
	[ Hepatocellular Carcinoma TGLS = 1-11 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Stomach, Forestomach		Ulcer	Marked
* Stomach, Glandular		Ulcer	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 363

TRT#: 8

SEX: Female

DAY ON TEST: 629

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202163

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Lung	Alveolar Epith	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 2-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal

PRIMARY CAUSE OF DEATH - Heart Myocardium Degeneration

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 364

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202164

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Lung		Squamous Cell Carcinoma	Metastatic (Oral Mucosa)
Oral Mucosa		Squamous Cell Carcinoma	
[ Squamous Cell Carcinoma TGLS = 1-11 ]			
* Thymus		Thymoma Benign	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 365

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 699

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202165

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
	[ Nephropathy TGLS = 4-1 ]		
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic, Renal	Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 2,3-11+12 ]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-6 ]		
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 5-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 1-1 ]		
* Stomach, Forestomach		Ulcer	Marked
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 366

TRT#: 8

SEX: Female

DAY ON TEST: 731

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202166

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 367

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202167

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

**MISSING**

\* Clitoral Gland

**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Atrophy	Marked
[ Atrophy TGLS = 1-12 ]			
* Intestine Small, Duodenum		Ulcer	Moderate
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Leukemia Mononuclear	
[ Nephropathy TGLS = 4-1 ]		Nephropathy	Marked
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-11 ]			
Mesentery		Angiectasis	Moderate
[ Angiectasis TGLS = 3-13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 367

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202167

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 368

TRT#: 8

SEX: Female

DAY ON TEST: 430

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202168

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                           |                            |                          |
|--------------------------|---------------------------|----------------------------|--------------------------|
| * Adrenal Cortex         | * Adrenal Medulla         | * Bone                     | * Bone Marrow            |
| * Brain                  | * Clitoral Gland          | * Esophagus                | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Jejunum | * Islets, Pancreatic     |
| * Liver                  | * Lung                    | * Lymph Node, Mandibular   | * Lymph Node, Mesenteric |
| * Mammary Gland          | * Nose                    | * Ovary                    | * Pancreas               |
| * Parathyroid Gland      | * Salivary Glands         | * Spleen                   | * Stomach, Forestomach   |
| * Stomach, Glandular     | * Thymus                  | * Thyroid Gland            | * Trachea                |
| * Urinary Bladder        | * Uterus                  |                            |                          |

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- |                             |                          |
|-----------------------------|--------------------------|
| * Intestine Small, Duodenum | * Intestine Small, Ileum |
|-----------------------------|--------------------------|

OBSERVATIONS

- |                          |                |              |          |
|--------------------------|----------------|--------------|----------|
| * Heart                  | Myocardium     | Degeneration | Minimal  |
| * Kidney                 |                | Nephropathy  | Mild     |
| * Pituitary Gland        | Pars Distalis  | Adenoma      |          |
| [ Adenoma TGLS = 2-7 ]   |                |              |          |
| * Skin                   | Epidermis, SOA | Acanthosis   | Mild     |
|                          | SOA            | Ulcer        | Moderate |
| [ Ulcer TGLS = 1-10+11 ] |                |              |          |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 369

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202169

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Bone Marrow		Hyperplasia	Moderate
* Heart	Myocardium	Degeneration	Minimal
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 2-4 ]	
* Lung		Leukemia Mononuclear	
* Ovary		Cyst	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		[ Hyperplasia TGLS = 3-7 ]	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 1-1 ]	
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 370

TRT#: 8

SEX: Female

DAY ON TEST: 559

DOSE: 32 MG/KG

DISP: Natural Death

HISTO: 9202170

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 1-1 ]			
* Liver	Periportal	Degeneration	Mild
[ Degeneration TGLS = 2-4 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-11 ]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 371

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 572

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202171

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex	Bilateral	Hypertrophy	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[ Nephropathy TGLS = 3-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[ Angiectasis TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Ulcer	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 372

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202172

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Marked
	[ Nephropathy TGLS = 1-1 ]		
* Liver		Basophilic Focus	
	[ Hepatodiaphragmatic Nodule TGLS = 2-11 ]	Hepatodiaphragmatic Nodule	
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[ Adenoma TGLS = 3-7 ]		
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 373	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 621
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Moribund Sacrifice	<b>HISTO:</b> 9202173

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	Peripheral Nerve	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 2,3-14+15 ]			
* Lung		Inflammation	Granulomatous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
Spinal Cord		Glioma Malignant	
* Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH** - Spinal Cord Glioma Malignant

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 374

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202174

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

**OBSERVATIONS**

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus		Polyp Stromal	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 375	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202175

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

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**OBSERVATIONS**

* Kidney		Nephropathy	Moderate
* Liver		Mixed Cell Focus	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[ Hyperplasia TGLS = 1-11 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 376

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 395

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202176

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

**OBSERVATIONS**

* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Minimal
* Lung		Congestion	Marked
	[ Congestion TGLS = 1-2+3 ]		
* Pituitary Gl			
	Note: No corresponding lesion found for black pituitary focus seen at necropsy.		
* Uterus		Polyp Stromal	

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 377

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202177

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Salivary Glands	* Spleen	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

**MISSING**

* Clitoral Gland	* Parathyroid Gland	* Thymus
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**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 4-1 ]			
* Liver		Eosinophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Carcinoma	Multiple
[ Carcinoma TGLS = 1,2-11+12 ]			
* Ovary		Cyst	Moderate
[ Cyst TGLS = 3-13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Stomach, Forestomach		Ulcer	Moderate

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 378

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202178

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-12 ]			
* Ovary		Cyst	Marked
[ Cyst TGLS = 4-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
[ Degeneration TGLS = 1-7 ]			
* Salivary Glands		Atrophy	Minimal
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 379

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202179

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Mild
[ Nephropathy TGLS = 2-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-4 ]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
Skeletal Muscle		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-11 ]			
* Skin	Epidermis, SOA	Exudate	Minimal
	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 380      **TRT#:** 8      **SEX:** Female      **DAY ON TEST:** 700  
**DOSE:** 32 MG/KG      **DISP:** Natural Death      **HISTO:** 9202180

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
Mesentery	Fat	Necrosis	Moderate
[ Necrosis TGLS = 1-11 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Skin	Epidermis, SOA	Acanthosis	Minimal
	Epidermis, SOA	Exudate	Minimal
* Stomach, Forestomach	Epithelium	Hyperplasia	Minimal
[ Hyperplasia TGLS = 3-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH** - Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 381

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 656

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202181

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	Oviduct	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**MISSING**

\* Lymph Node, Mandibular

**OBSERVATIONS**

* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Hyperplasia	Marked
[ Hyperplasia TGLS = 6-10 ]			
* Heart	Myocardium	Degeneration	Mild
	Valve	Fibrosis	Minimal
* Intestine Small, Duodenum		Ulcer	Moderate
* Kidney		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-1 ]			
* Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-4 ]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Vagina	Muscularis	Hyperplasia	Marked

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**ANIMAL ID:** 381

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 656

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202181

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Hyperplasia TGLS = 3-11 ]

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**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 382

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202182

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Intestine Large, Colon		Ulcer	Moderate
* Intestine Small, Ileum	Muscularis	Inflammation	Chronic Active, Focal, Moderate
	[ Inflammation TGLS = 2-11 ]		
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Pancreas	Acinus	Atrophy	Minimal
	Artery	Inflammation	Chronic Active, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 1-7 ]		
* Skin	Epidermis, SOA	Exudate	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:30

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 383

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202183

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

**MISSING**

\* Thymus

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 1-4 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 2-7 ]		
* Thyroid Gland	C Cell	Adenoma	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 384

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202184

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 1-1 ]			
* Liver		Hepatodiaphragmatic Nodule	
[ Hepatodiaphragmatic Nodule TGLS = 2-12 ]			
* Nose		Inflammation	Chronic, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-11 ]			
* Stomach, Forestomach		Ulcer	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild
Tongue		Inflammation	Suppurative, Minimal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 385

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 609

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202185

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

**AUTO PRECLUDES DIAG.**

\* Intestine Small, Jejunum

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Lung		Congestion	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	

**PRIMARY CAUSE OF DEATH**

- UNCERTAIN

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 386

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 465

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202186

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Moderate
* Bone		Carcinoma	Metastatic (Thyroid Gland)
[ Carcinoma TGLS = 3-13+14 ]			
* Heart	Myocardium	Degeneration	Mild
	Myocardium	Mineralization	Minimal
* Kidney		Nephropathy	Mild
* Lung		Carcinoma	Metastatic (Thyroid Gland)
[ Carcinoma TGLS = 4-12 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Carcinoma	
[ Carcinoma TGLS = 1-11 ]			

**PRIMARY CAUSE OF DEATH**

- Thyroid Gland C Cell Carcinoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 387

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 668

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202187

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Pituitary Gland	* Salivary Glands
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

**MISSING**

* Intestine Small, Ileum	* Lymph Node, Mandibular
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**OBSERVATIONS**

Blood Vessel		Mineralization	Marked
[ Mineralization TGLS = 3-12 ]			
* Bone		Fibrous Osteodystrophy	Marked
* Heart	Myocardium	Mineralization	Marked
* Intestine Large, Colon		Mineralization	Moderate
* Intestine Large, Rectum		Mineralization	Moderate
* Intestine Small, Duodenum		Mineralization	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Liver		Cyst	Marked
[ Cyst TGLS = 1-13 ]			
* Lung		Fibrosis	Focal, Moderate
[ Fibrosis TGLS = 4-11 ]		Mineralization	Marked
* Parathyroid Gland		Hyperplasia	Marked
* Skin	Epidermis, SOA	Acanthosis	Minimal
* Spleen	Lymph Follic	Atrophy	Moderate
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 388

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202188

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
	[ Hepatodiaphragmatic Nodule TGLS = 2-11 ]		
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
	[ Hyperplasia TGLS = 4-3+12 ]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[ Adenoma TGLS = 3-7 ]		
* Spleen		Fibrosis	Mild
	[ Fibrosis TGLS = 1-1 ]		
* Thymus		Infiltration Cellular	Mononuclear CI, Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 389

TRT#: 8

SEX: Female

DAY ON TEST: 589

DOSE: 32 MG/KG

DISP: Moribund Sacrifice

HISTO: 9202189

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
	[ Nephropathy TGLS = 5-1 ]		
* Liver		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 3-4 ]		
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	[ Hyperplasia TGLS = 2-7 ]		
* Skin	Epidermis, SOA	Hyperkeratosis	Mild
* Spleen	Capsule	Leukemia Mononuclear	
		Pigmentation	Hemosiderin, Focal, Minimal
	[ Leukemia Mononuclear TGLS = 1-1 ]		
	[ Pigmentation TGLS = 4-11 ]		
* Stomach, Forestomach		Ulcer	Marked
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09

**Test Type:** CHRONIC

**Route:** SKIN APPLICATION

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Diethanolamine

**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 12:34:30

**First Dose M/F:** NA / NA

**Lab:** BAT

**ANIMAL ID:** 390

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 490

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202190

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

**MISSING**

\* Lymph Node, Mesenteric

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Lung		Congestion	Moderate
* Ovary		Cyst	Marked
[ Cyst TGLS = 1-10 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 391

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 584

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202191

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Minimal
* Liver		Degeneration	Cystic, Minimal
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-4 ]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[ Necrosis TGLS = 3-11 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 1-1 ]			
* Stomach, Forestomach		Inflammation	Chronic Active, Moderate
[ Inflammation TGLS = 4-12 ]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

**PRIMARY CAUSE OF DEATH** - Spleen Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 392

TRT#: 8

SEX: Female

DAY ON TEST: 731

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202192

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Mild
* Pancreas	Acinus	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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<b>ANIMAL ID:</b> 393	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 32 MG/KG	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 9202193

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

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**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
[ Nephropathy TGLS = 1-1 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 2-7 ]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 394

TRT#: 8

SEX: Female

DAY ON TEST: 730

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202194

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart	Myocardium	Degeneration	Moderate
* Kidney		Nephropathy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 395

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202195

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Moderate
* Liver	Centrilobular	Hematopoietic Cell Proliferation	Mild
		Necrosis	Moderate
[ Necrosis TGLS = 3-4 ]			
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
[ Degeneration TGLS = 1-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Spleen		Hematopoietic Cell Proliferation	Marked
[ Hematopoietic Cell Proliferation TGLS = 2-11 ]			
* Stomach, Glandular		Ulcer	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 396

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 703

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202196

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Cortex		Adenoma	
* Adrenal Medulla		Hyperplasia	Minimal
Blood Vessel		Mineralization	Mild
* Bone		Fibrous Osteodystrophy	Moderate
* Heart	Myocardium	Degeneration	Moderate
	Myocardium	Mineralization	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 1-1 ]			
* Liver			
Note: No corresponding microscopic lesion noted for mottled appearance of liver seen at necropsy			
* Lung		Mineralization	Minimal
* Lymph Node, Mandibular		Atrophy	Marked
* Pituitary Gland	Pars Distalis	Degeneration	Cystic, Mild
[ Degeneration TGLS = 3-11 ]			
* Stomach, Glandular		Mineralization	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Kidney Nephropathy

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 397

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 717

**DOSE:** 32 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:** 9202197

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

**OBSERVATIONS**

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Heart	Myocardium	Degeneration	Mild
* Kidney		Nephropathy	Marked
[ Nephropathy TGLS = 2-1 ]			
* Ovary		Cyst	Marked
[ Cyst TGLS = 1-10 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 3-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Stomach, Forestomach		Inflammation	Chronic Active, Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 398

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 32 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:** 9202198

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

**OBSERVATIONS**

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
Eye		Cataract	Marked
[ Cataract TGLS = 1-12 ]			
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal, Pancreatic, Renal	Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3,5,6-11+14+15 ]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-13 ]			
* Pancreas	Acinus	Atrophy	Minimal
* Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-1 ]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05162-09  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Diethanolamine  
**CAS Number:** 111-42-2

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 12:34:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**ANIMAL ID:** 399

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 646

**DOSE:** 32 MG/KG

**DISP:** Natural Death

**HISTO:** 9202199

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

**AUTO PRECLUDES DIAG.**

\* Intestine Small, Jejunum

**OBSERVATIONS**

* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Minimal
* Liver			
Note: No corresponding histopathologic finding for 2x2 mm focus identified at necropsy.			
* Lung		Congestion	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 1-7 ]			

**PRIMARY CAUSE OF DEATH**

- Pituitary Gland Pars Distalis Adenoma

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05162-09

Test Type: CHRONIC

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Diethanolamine

CAS Number: 111-42-2

Date Report Requested: 10/16/2014

Time Report Requested: 12:34:30

First Dose M/F: NA / NA

Lab: BAT

ANIMAL ID: 400

TRT#: 8

SEX: Female

DAY ON TEST: 730

DOSE: 32 MG/KG

DISP: Terminal Sacrifice

HISTO: 9202200

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart	Myocardium	Degeneration	Minimal
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Cystic, Minimal
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	Minimal
[ Hepatodiaphragmatic Nodule TGLS = 3-11,2-12 ]			
* Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-13 ]			
* Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 4-7 ]			
* Skin	Epidermis, SOA	Hyperkeratosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\*\* END OF REPORT \*\*

\* PROTOCOL REQUIRED TISSUE