

Study Number: R10997

Test Type: RACB

Route: Dosing in Feed

Species/Strain: Rat/Sprague-Dawley

C Number:

Study Gender:

PWG Approval Date

R20: Pup Necropsy (Gross Observations for Unweaned Pups) Summary

Test Compound: Diisobutyl Phthalate

CAS Number: 84-69-5

R10997

Both

See web page for date of PWG Approval

Date Report Requested: 12/03/2018

Time Report Requested: 09:28:36

Lab: RTI

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F1 Pups (Litter A)

Treatment Groups (ppm)

	0	1000	5000	10000
Disposition Summary				
Pups	285	298	279	264
Litters	21	23	21	22
Scheduled Sacrifice				
Scheduled Removal (Terminal)	257 (20)	267 (23)	258 (21)	236 (22)
Early Deaths				
Cannibalized	1 (1)	2 (2)	1 (1)	
Found Dead	24 (11)	22 (11)	16 (6)	22 (10)
Pup Missing - Presumed Dead	3 (3)	7 (4)	4 (4)	6 (5)
No. pups examined				
	25	24	17	22
No. Litters				
	12	12	7	10
Normal				
	0	0	0	0
ALIMENTARY SYSTEM				
Abdomen				
Stomach, Milk/food absent	19 (76.0)	10 (41.7)	9 (52.9)	12 (54.5)
	9 (75.0)	6 (50.0)	5 (71.4)	7 (70.0)
CARDIOVASCULAR SYSTEM				
Thorax (excluding heart)				
Ductus arteriosus, Closed	7 (28.0)	8 (33.3)	3 (17.6)	9 (40.9)
	1 (8.3)	6 (50.0)	3 (42.9)	4 (40.0)
Ductus arteriosus, Patent	13 (52.0)	9 (37.5)	8 (47.1)	10 (45.5)
	9 (75.0)	5 (41.7)	5 (71.4)	6 (60.0)

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	F1 Pups (Litter A)			
	Treatment Groups (ppm)			
	0	1000	5000	10000
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	1 (4.0)	2 (8.3)	2 (11.8)	5 (22.7)
	1 (8.3)	1 (8.3)	2 (28.6)	1 (10.0)
General, Autolyzed, unable to evaluate	2 (8.0)	6 (25.0)	2 (11.8)	3 (13.6)
	2 (16.7)	4 (33.3)	1 (14.3)	1 (10.0)
General, Cannibalized, unable to evaluate	3 (12.0)	1 (4.2)	4 (23.5)	0 (0.0)
	3 (25.0)	1 (8.3)	2 (28.6)	0 (0.0)
GENITAL SYSTEM				
No findings				
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
Head				
Cranium, Domed head	0 (0.0)	1 (4.2)	0 (0.0)	0 (0.0)
	0 (0.0)	1 (8.3)	0 (0.0)	0 (0.0)
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				

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F1 Pups (Litter A)

Treatment Groups (ppm)

	0	1000	5000	10000
Lung, all lobes, Air present	7 (28.0)	8 (33.3)	3 (17.6)	9 (40.9)
	1 (8.3)	6 (50.0)	3 (42.9)	4 (40.0)
Lung, all lobes, No air present	13 (52.0)	9 (37.5)	8 (47.1)	10 (45.5)
	9 (75.0)	5 (41.7)	5 (71.4)	6 (60.0)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, bilateral, Distended	1 (4.0)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)
Ureter, left, Distended	1 (4.0)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)
Ureter, right, Distended	1 (4.0)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)

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	F1 Pups (Litter B)			
	Treatment Groups (ppm)			
	0	1000	5000	10000
Disposition Summary				
Pups	267	305	287	282
Litters	21	23	21	22
Scheduled Sacrifice				
Scheduled Removal (Terminal)	247 (21)	280 (23)	262 (21)	268 (22)
Early Deaths				
Cannibalized	1 (1)		3 (2)	
Found Dead	18 (9)	24 (9)	17 (9)	8 (6)
Pup Missing - Presumed Dead	1 (1)	1 (1)	5 (4)	6 (3)
No. pups examined				
	18	24	19	8
No. Litters				
	9	9	10	6
Normal				
	0	0	0	0
ALIMENTARY SYSTEM				
Abdomen				
Stomach, Milk/food absent	15 (83.3)	16 (66.7)	9 (47.4)	5 (62.5)
	6 (66.7)	8 (88.9)	6 (60.0)	4 (66.7)
CARDIOVASCULAR SYSTEM				
Thorax (excluding heart)				
Ductus arteriosus, Closed	4 (22.2)	13 (54.2)	8 (42.1)	6 (75.0)
	3 (33.3)	5 (55.6)	7 (70.0)	5 (83.3)
Ductus arteriosus, Patent	14 (77.8)	11 (45.8)	10 (52.6)	2 (25.0)
	7 (77.8)	8 (88.9)	7 (70.0)	1 (16.7)

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F1 Pups (Litter B)

Treatment Groups (ppm)

	0	1000	5000	10000
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	2 (11.1)	8 (33.3)	7 (36.8)	1 (12.5)
	2 (22.2)	4 (44.4)	5 (50.0)	1 (16.7)
Abdomen, Cannibalized, unable to evaluate	0 (0.0)	0 (0.0)	1 (5.3)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (10.0)	0 (0.0)
General, Cannibalized, unable to evaluate	0 (0.0)	0 (0.0)	1 (5.3)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (10.0)	0 (0.0)
GENITAL SYSTEM				
No findings				
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
No findings				
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				
Lung, all lobes, Air present	6 (33.3)	13 (54.2)	6 (31.6)	6 (75.0)
	5 (55.6)	5 (55.6)	6 (60.0)	5 (83.3)

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F1 Pups (Litter B)

Treatment Groups (ppm)

	0	1000	5000	10000
Lung, all lobes, No air present	12 (66.7)	10 (41.7)	10 (52.6)	2 (25.0)
	6 (66.7)	7 (77.8)	7 (70.0)	1 (16.7)
Lung, right diaphragmatic lobe, No air present	0 (0.0)	0 (0.0)	1 (5.3)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (10.0)	0 (0.0)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, bilateral, Distended	2 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)
Ureter, left, Distended	0 (0.0)	0 (0.0)	2 (10.5)	0 (0.0)
	0 (0.0)	0 (0.0)	2 (20.0)	0 (0.0)
Ureter, right, Distended	0 (0.0)	1 (4.2)	0 (0.0)	0 (0.0)
	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)

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F1 Pups (Litter C)

Treatment Groups (ppm)

	0	1000	5000	10000
Disposition Summary				
Pups	209	224	211	222
Litters	21	22	20	21
Scheduled Sacrifice				
Mammary Gland Whole Mount	10 (10)	8 (8)	13 (11)	8 (8)
Pup Culled	7 (3)	13 (4)	7 (4)	11 (8)
Scheduled Removal (Terminal)	158 (21)	148 (21)	162 (20)	153 (18)
Early Deaths				
Cannibalized	3 (3)	1 (1)	2 (2)	2 (2)
Euthanized Moribund	1 (1)	1 (1)	4 (4)	1 (1)
Found Dead	27 (16)	37 (16)	14 (9)	26 (9)
Pup Missing - Presumed Dead	3 (2)	16 (5)	6 (5)	20 (8)
Removed, Other				1 (1)
Unscheduled Sacrifice			3 (3)	
No. pups examined				
	26	38	13	28
No. Litters				
	15	16	9	11
Normal				
	1 (1)	1 (1)		1 (1)
ALIMENTARY SYSTEM				
Abdomen				
Stomach, Milk/food absent	16 (61.5)	26 (68.4)	8 (61.5)	11 (39.3)
	10 (66.7)	9 (56.3)	5 (55.6)	6 (54.5)
CARDIOVASCULAR SYSTEM				
Thorax (excluding heart)				

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F1 Pups (Litter C)

Treatment Groups (ppm)

	0	1000	5000	10000
Ductus arteriosus, Closed	7 (26.9)	7 (18.4)	5 (38.5)	2 (7.1)
	3 (20.0)	7 (43.8)	2 (22.2)	2 (18.2)
Ductus arteriosus, Patent	9 (34.6)	18 (47.4)	3 (23.1)	9 (32.1)
	7 (46.7)	7 (43.8)	3 (33.3)	6 (54.5)
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	6 (23.1)	9 (23.7)	0 (0.0)	9 (32.1)
	6 (40.0)	6 (37.5)	0 (0.0)	4 (36.4)
Abdomen, Cannibalized, unable to evaluate	0 (0.0)	0 (0.0)	1 (7.7)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)
General, Autolyzed, unable to evaluate	2 (7.7)	1 (2.6)	2 (15.4)	5 (17.9)
	2 (13.3)	1 (6.3)	2 (22.2)	3 (27.3)
General, Cannibalized, unable to evaluate	0 (0.0)	0 (0.0)	2 (15.4)	2 (7.1)
	0 (0.0)	0 (0.0)	2 (22.2)	2 (18.2)
GENITAL SYSTEM				
No findings				
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
No findings				

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F1 Pups (Litter C)

Treatment Groups (ppm)

	0	1000	5000	10000
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				
Lung, all lobes, Air present	4 (15.4)	7 (18.4)	5 (38.5)	4 (14.3)
	2 (13.3)	7 (43.8)	2 (22.2)	3 (27.3)
Lung, all lobes, No air present	12 (46.2)	18 (47.4)	3 (23.1)	7 (25.0)
	8 (53.3)	7 (43.8)	3 (33.3)	5 (45.5)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, bilateral, Distended	0 (0.0)	1 (2.6)	1 (7.7)	0 (0.0)
	0 (0.0)	1 (6.3)	1 (11.1)	0 (0.0)
Ureter, bilateral, Enlarged	0 (0.0)	0 (0.0)	1 (7.7)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)
Ureter, left, Distended	0 (0.0)	0 (0.0)	1 (7.7)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)

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F2 Pups (Litter A) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Disposition Summary				
Pups	466	380	404	315
Litters	32	31	32	29
Scheduled Sacrifice				
Scheduled Removal (Terminal)	395 (32)	349 (30)	369 (32)	281 (29)
Early Deaths				
Cannibalized	2 (2)	5 (4)	1 (1)	
Found Dead	59 (24)	26 (17)	23 (13)	29 (16)
Pup Missing - Presumed Dead	10 (7)		11 (4)	5 (5)
No. pups examined				
	60	26	23	29
No. Litters				
	24	17	13	16
Normal				
	2 (2)	4 (4)	3 (3)	
ALIMENTARY SYSTEM				
Abdomen				
Stomach, Milk/food absent	34 (56.7)	6 (23.1)	11 (47.8)	22 (75.9)
	19 (79.2)	6 (35.3)	8 (61.5)	13 (81.3)
CARDIOVASCULAR SYSTEM				
Thorax (excluding heart)				
Ductus arteriosus, Closed	10 (16.7)	2 (7.7)	5 (21.7)	14 (48.3)
	8 (33.3)	2 (11.8)	2 (15.4)	6 (37.5)
Ductus arteriosus, Patent	33 (55.0)	9 (34.6)	13 (56.5)	14 (48.3)
	18 (75.0)	7 (41.2)	10 (76.9)	9 (56.3)

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F2 Pups (Litter A) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	13 (21.7)	15 (57.7)	7 (30.4)	7 (24.1)
	9 (37.5)	9 (52.9)	7 (53.8)	4 (25.0)
Abdomen, Cannibalized, unable to evaluate	2 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)
	2 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)
General, Autolyzed, unable to evaluate	8 (13.3)	1 (3.8)	1 (4.3)	0 (0.0)
	4 (16.7)	1 (5.9)	1 (7.7)	0 (0.0)
GENITAL SYSTEM				
No findings				
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
No findings				
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				
Lung, all lobes, Air present	13 (21.7)	2 (7.7)	5 (21.7)	14 (48.3)
	9 (37.5)	2 (11.8)	2 (15.4)	6 (37.5)

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F2 Pups (Litter A) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Lung, all lobes, No air present	29 (48.3)	9 (34.6)	14 (60.9)	14 (48.3)
	16 (66.7)	7 (41.2)	11 (84.6)	9 (56.3)
Lung, right diaphragmatic lobe, No air present	1 (1.7)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, bilateral, Distended	2 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)
Ureter, left, Distended	0 (0.0)	0 (0.0)	0 (0.0)	2 (6.9)
	0 (0.0)	0 (0.0)	0 (0.0)	2 (12.5)
Ureter, right, Distended	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.4)
	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.3)

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F2 Pups (Litter B) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Disposition Summary				
Pups	511	433	407	382
Litters	35	31	31	33
Scheduled Sacrifice				
Scheduled Removal (Terminal)	436 (34)	375 (31)	371 (31)	340 (33)
Early Deaths				
Cannibalized	8 (3)	3 (3)	1 (1)	4 (2)
Found Dead	56 (24)	48 (18)	31 (13)	29 (13)
Pup Missing - Presumed Dead	11 (10)	7 (5)	4 (3)	9 (7)
No. pups examined				
	63	51	32	33
No. Litters				
	24	19	13	14
Normal				
		2 (1)		1 (1)
ALIMENTARY SYSTEM				
Abdomen				
Stomach, Milk/food absent	39 (61.9)	35 (68.6)	25 (78.1)	20 (60.6)
	19 (79.2)	14 (73.7)	11 (84.6)	9 (64.3)
CARDIOVASCULAR SYSTEM				
Heart				
Auricular flap, bilateral, Abnormal	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.0)
	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)
Thorax (excluding heart)				

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F2 Pups (Litter B) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Ductus arteriosus, Closed	5 (7.9)	7 (13.7)	4 (12.5)	3 (9.1)
	4 (16.7)	5 (26.3)	2 (15.4)	3 (21.4)
Ductus arteriosus, Patent	42 (66.7)	31 (60.8)	23 (71.9)	22 (66.7)
	21 (87.5)	13 (68.4)	10 (76.9)	9 (64.3)
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	5 (7.9)	7 (13.7)	3 (9.4)	7 (21.2)
	2 (8.3)	6 (31.6)	2 (15.4)	4 (28.6)
Abdomen, Cannibalized, unable to evaluate	3 (4.8)	0 (0.0)	0 (0.0)	1 (3.0)
	1 (4.2)	0 (0.0)	0 (0.0)	1 (7.1)
General, Autolyzed, unable to evaluate	8 (12.7)	5 (9.8)	3 (9.4)	1 (3.0)
	4 (16.7)	5 (26.3)	1 (7.7)	1 (7.1)
General, Cannibalized, unable to evaluate	8 (12.7)	2 (3.9)	1 (3.1)	3 (9.1)
	2 (8.3)	2 (10.5)	1 (7.7)	2 (14.3)
GENITAL SYSTEM				
No findings				
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
No findings				

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CAS Number: 84-69-5

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Time Report Requested: 09:28:36
Lab: RTI

F2 Pups (Litter B) F1c Parental Females

Treatment Groups (ppm)

	0	1000	5000	10000
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				
Lung, all lobes, Air present	6 (9.5)	8 (15.7)	4 (12.5)	3 (9.1)
	5 (20.8)	5 (26.3)	2 (15.4)	3 (21.4)
Lung, all lobes, No air present	37 (58.7)	30 (58.8)	23 (71.9)	22 (66.7)
	19 (79.2)	13 (68.4)	10 (76.9)	9 (64.3)
Lung, right diaphragmatic lobe, No air present	4 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)
	4 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, left, Distended	0 (0.0)	2 (3.9)	1 (3.1)	1 (3.0)
	0 (0.0)	1 (5.3)	1 (7.7)	1 (7.1)
Ureter, right, Distended	0 (0.0)	0 (0.0)	1 (3.1)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (7.7)	0 (0.0)

Study Number: R10997
 Test Type: RACB
 Route: Dosing in Feed
 Species/Strain: Rat/Sprague-Dawley

R20: Pup Necropsy (Gross Observations for Unweaned Pups) Summary
 Test Compound: Diisobutyl Phthalate
 CAS Number: 84-69-5

Date Report Requested: 12/03/2018
 Time Report Requested: 09:28:36
 Lab: RTI

F2 Pups (Litter C) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Disposition Summary				
Pups	466	470	379	361
Litters	33	37	30	34
Scheduled Sacrifice				
Pup Culled	51 (18)	40 (16)	26 (14)	15 (8)
Scheduled Removal (Terminal)	306 (32)	339 (36)	272 (28)	277 (34)
Early Deaths				
Cannibalized	3 (3)	2 (2)	3 (3)	3 (3)
Euthanized Moribund		1 (1)		2 (2)
Found Dead	80 (26)	70 (26)	41 (17)	36 (18)
Pup Missing - Presumed Dead	26 (13)	18 (10)	37 (10)	28 (11)
No. pups examined				
	80	73	42	40
No. Litters				
	26	28	18	21
Normal				
	3 (3)	6 (5)	3 (3)	4 (4)
ALIMENTARY SYSTEM				
Abdomen				
Intestine, Enlarged	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.5)
	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)
Stomach, Enlarged	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.5)
	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)
Stomach, Milk/food absent	61 (76.3)	54 (74.0)	25 (59.5)	25 (62.5)
	22 (84.6)	24 (85.7)	14 (77.8)	16 (76.2)

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F2 Pups (Litter C) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
CARDIOVASCULAR SYSTEM				
Heart				
Atrial chamber, right, Enlarged	0 (0.0)	0 (0.0)	1 (2.4)	0 (0.0)
	0 (0.0)	0 (0.0)	1 (5.6)	0 (0.0)
Auricular flap, bilateral, Enlarged	1 (1.3)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (3.8)	0 (0.0)	0 (0.0)	0 (0.0)
Thorax (excluding heart)				
Ductus arteriosus, Closed	11 (13.8)	2 (2.7)	1 (2.4)	4 (10.0)
	7 (26.9)	2 (7.1)	1 (5.6)	4 (19.0)
Ductus arteriosus, Patent	42 (52.5)	50 (68.5)	15 (35.7)	20 (50.0)
	18 (69.2)	22 (78.6)	12 (66.7)	13 (61.9)
ENDOCRINE SYSTEM				
No findings				
GENERAL BODY SYSTEM				
General				
Abdomen, Autolyzed, unable to evaluate	19 (23.8)	10 (13.7)	16 (38.1)	8 (20.0)
	11 (42.3)	7 (25.0)	7 (38.9)	7 (33.3)
Abdomen, Cannibalized, unable to evaluate	0 (0.0)	0 (0.0)	2 (4.8)	0 (0.0)
	0 (0.0)	0 (0.0)	2 (11.1)	0 (0.0)
General, Autolyzed, unable to evaluate	4 (5.0)	2 (2.7)	1 (2.4)	1 (2.5)
	4 (15.4)	2 (7.1)	1 (5.6)	1 (4.8)
General, Cannibalized, unable to evaluate	0 (0.0)	4 (5.5)	1 (2.4)	2 (5.0)
	0 (0.0)	4 (14.3)	1 (5.6)	2 (9.5)
GENITAL SYSTEM				
No findings				

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F2 Pups (Litter C) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
HEMATOPOIETIC SYSTEM				
No findings				
INTEGUMENTARY SYSTEM				
No findings				
LYMPHOID SYSTEM				
No findings				
MUSCULOSKELETAL SYSTEM				
No findings				
NERVOUS SYSTEM				
No findings				
RESPIRATORY SYSTEM				
Thorax (excluding heart)				
Lung, all lobes, Air present	13 (16.3)	4 (5.5)	2 (4.8)	3 (7.5)
	7 (26.9)	4 (14.3)	2 (11.1)	3 (14.3)
Lung, all lobes, No air present	40 (50.0)	47 (64.4)	12 (28.6)	21 (52.5)
	17 (65.4)	21 (75.0)	10 (55.6)	14 (66.7)
Lung, right diaphragmatic lobe, No air present	0 (0.0)	1 (1.4)	2 (4.8)	0 (0.0)
	0 (0.0)	1 (3.6)	2 (11.1)	0 (0.0)
SPECIAL SENSES SYSTEM				
No findings				
URINARY SYSTEM				
Pelvis				
Ureter, bilateral, Distended	10 (12.5)	4 (5.5)	1 (2.4)	0 (0.0)
	7 (26.9)	4 (14.3)	1 (5.6)	0 (0.0)

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F2 Pups (Litter C) F1c Parental Females

	Treatment Groups (ppm)			
	0	1000	5000	10000
Ureter, bilateral, Enlarged	1 (1.3)	0 (0.0)	1 (2.4)	0 (0.0)
	1 (3.8)	0 (0.0)	1 (5.6)	0 (0.0)
Ureter, left, Distended	3 (3.8)	1 (1.4)	0 (0.0)	3 (7.5)
	3 (11.5)	1 (3.6)	0 (0.0)	3 (14.3)
Ureter, left, Enlarged	1 (1.3)	0 (0.0)	0 (0.0)	0 (0.0)
	1 (3.8)	0 (0.0)	0 (0.0)	0 (0.0)
Ureter, right, Distended	3 (3.8)	3 (4.1)	1 (2.4)	2 (5.0)
	3 (11.5)	2 (7.1)	1 (5.6)	2 (9.5)

Study Number: R10997

Test Type: RACB

Route: Dosing in Feed

Species/Strain: Rat/Sprague-Dawley

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LEGEND

Disposition Summary is Number of pups (litters represented)

Upper row denotes number of affected pups (%) and lower row the number of affected litters (%)

In multiple breeding/littering studies Litter A is the default designation for the first litter; subsequent litters would be B, C etc.

**** END OF REPORT ****