

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary

Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
Time Report Requested: 08:06:56
Lab: RTI

C Number:

R88007B

Study Gender:

Both

PWG Approval Date

See web page for date of PWG Approval

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F1 Pups - Litter A

Treatment Groups (ppm)

	0	5000	15000	40000
Total Pups (PND 0)	253	253	246	223
No. pups post cull (PND 4)				
Total Litters (PND 0)	19	18	19	19
No. litters post cull (PND 4)				

Pup Clinical Observations PND 0-4

Bruising	0	1 (0.4)	1 (0.4)	0
Abdomen	0	1 (5.6) PND 0-2	1 (5.3) PND 2-3	0
Bruising	0	0	0	1 (0.4)
Back	0	0	0	1 (5.3) PND 0-3
Bruising	4 (1.6)	1 (0.4)	0	0
Face	4 (21.1) PND 0-1	1 (5.6) PND 0	0	0
Bruising	0	1 (0.4)	0	0
Head	0	1 (5.6) PND 0-2	0	0
Bruising	1 (0.4)	2 (0.8)	0	0
Left Hind Paw	1 (5.3) PND 1	1 (5.6) PND 0	0	0

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F1 Pups - Litter A

	Treatment Groups (ppm)			
	0	5000	15000	40000
Bruising	1 (0.4)	2 (0.8)	0	1 (0.4)
Right Hind Paw	1 (5.3)	2 (11.1)	0	1 (5.3)
	PND 0	PND 0-3		PND 0-3
Cold To Touch	3 (1.2)	1 (0.4)	1 (0.4)	1 (0.4)
	2 (10.5)	1 (5.6)	1 (5.3)	1 (5.3)
	PND 0-3	PND 4	PND 2	PND 0
No Milk in Stomach	16 (6.3)	2 (0.8)	2 (0.8)	1 (0.4)
	3 (15.8)	2 (11.1)	2 (10.5)	1 (5.3)
	PND 0-4	PND 0-4	PND 0	PND 0
Pale	2 (0.8)	3 (1.2)	2 (0.8)	6 (2.7)
	2 (10.5)	3 (16.7)	2 (10.5)	4 (21.1)
	PND 0-3	PND 0-4	PND 1-2	PND 0-2
Pup - Found Dead	24 (9.5)	12 (4.7)	16 (6.5)	14 (6.3)
	13 (68.4)	7 (38.9)	11 (57.9)	7 (36.8)
	PND 0-3	PND 0-1	PND 0-3	PND 0-4
Pup Cannibalised	0	0	0	1 (0.4)
	0	0	0	1 (5.3)
				PND 0
Pup Missing - Presumed Dead	2 (0.8)	1 (0.4)	1 (0.4)	4 (1.8)
	2 (10.5)	1 (5.6)	1 (5.3)	4 (21.1)
	PND 1	PND 1	PND 1	PND 1-2

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F1 Pups - Litter A

	Treatment Groups (ppm)			
	0	5000	15000	40000
Staining	0	1 (0.4)	0	0
Nose/Snout; Red	0	1 (5.6) PND 4	0	0
Tail Damaged	1 (0.4) 1 (5.3) PND 1-3	2 (0.8) 2 (11.1) PND 0-4	0 0	0 0

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F1 Pups - Litter B

	Treatment Groups (ppm)			
	0	5000	15000	40000
Total Pups (PND 0)	255	238	293	224
No. pups post cull (PND 4)				
Total Litters (PND 0)	20	17	21	19
No. litters post cull (PND 4)				

Pup Clinical Observations PND 0-4

Bruising	0	0	1 (0.3)	0
Abdomen	0	0	1 (4.8) PND 0	0
Bruising	0	1 (0.4)	1 (0.3)	2 (0.9)
Face	0	1 (5.9) PND 0	1 (4.8) PND 0	2 (10.5) PND 0-1
Bruising	0	1 (0.4)	0	0
Head	0	1 (5.9) PND 2-3	0	0
Bruising	1 (0.4)	0	0	0
Left Hindlimb	1 (5.0) PND 1-2	0	0	0
Bruising	0	0	1 (0.3)	0
Multiple Sites (>2)	0	0	1 (4.8) PND 0	0

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F1 Pups - Litter B

	Treatment Groups (ppm)			
	0	5000	15000	40000
Bruising	1 (0.4)	0	0	0
Neck	1 (5.0)	0	0	0
	PND 1			
Bruising	1 (0.4)	0	0	0
Right Fore Paw	1 (5.0)	0	0	0
	PND 0-1			
Bruising	0	1 (0.4)	1 (0.3)	0
Right Hind Paw	0	1 (5.9)	1 (4.8)	0
		PND 0	PND 0	
Cold To Touch	1 (0.4)	1 (0.4)	2 (0.7)	6 (2.7)
	1 (5.0)	1 (5.9)	2 (9.5)	4 (21.1)
	PND 0	PND 0	PND 0	PND 0-1
No Milk in Stomach	4 (1.6)	0	3 (1.0)	5 (2.2)
	3 (15.0)	0	2 (9.5)	5 (26.3)
	PND 0-1		PND 0	PND 0-4
Pale	5 (2.0)	5 (2.1)	3 (1.0)	7 (3.1)
	3 (15.0)	4 (23.5)	3 (14.3)	4 (21.1)
	PND 0-1	PND 0-1	PND 0	PND 0-2
Pup - Found Dead	21 (8.2)	26 (10.9)	31 (10.6)	17 (7.6)
	14 (70.0)	12 (70.6)	13 (61.9)	9 (47.4)
	PND 0-3	PND 0-3	PND 0	PND 0-3

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F1 Pups - Litter B

	Treatment Groups (ppm)			
	0	5000	15000	40000
Pup Cannibalised	1 (0.4) 1 (5.0) PND 0	1 (0.4) 1 (5.9) PND 1	2 (0.7) 2 (9.5) PND 0-1	1 (0.4) 1 (5.3) PND 0
Pup Missing - Presumed Dead	2 (0.8) 2 (10.0) PND 1-2	1 (0.4) 1 (5.9) PND 2	5 (1.7) 4 (19.0) PND 1-4	5 (2.2) 5 (26.3) PND 1-2
Respiration Labored	0 0	0 0	2 (0.7) 2 (9.5) PND 0	1 (0.4) 1 (5.3) PND 0
Sore(s) On Body Left Hind Paw	0 0	0 0	0 0	1 (0.4) 1 (5.3) PND 0-2
Tail Damaged	0 0	1 (0.4) 1 (5.9) PND 0	1 (0.3) 1 (4.8) PND 4	0 0

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F1 Pups - Litter C

Treatment Groups (ppm)

	0	5000	15000	40000
Total Pups (PND 0)	228	202	272	159
No. pups post cull (PND 4)	191	170	246	148
Total Litters (PND 0)	20	14	20	17
No. litters post cull (PND 4)	20	14	20	17

Pup Clinical Observations PND 0-4

Bruising	0	1 (0.5)	0	0
Back	0	1 (7.1) PND 0	0	0
Bruising	2 (0.9)	0	0	0
Chest	1 (5.0) PND 0-3	0	0	0
Bruising	1 (0.4)	1 (0.5)	0	1 (0.6)
Face	1 (5.0) PND 0	1 (7.1) PND 0-1	0	1 (5.9) PND 1-2
Bruising	0	0	1 (0.4)	0
Head	0	0	1 (5.0) PND 0-1	0
Bruising	0	0	1 (0.4)	0
Left Hind Paw	0	0	1 (5.0) PND 1	0

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F1 Pups - Litter C

	Treatment Groups (ppm)			
	0	5000	15000	40000
Cold To Touch	1 (0.4)	1 (0.5)	0	2 (1.3)
	1 (5.0)	1 (7.1)	0	1 (5.9)
	PND 4	PND 0		PND 0
Lethargic	0	0	0	1 (0.6)
	0	0	0	1 (5.9)
				PND 4
No Milk in Stomach	1 (0.4)	1 (0.5)	5 (1.8)	11 (6.9)
	1 (5.0)	1 (7.1)	3 (15.0)	4 (23.5)
	PND 4	PND 0	PND 0-4	PND 0-4
Pale	3 (1.3)	0	2 (0.7)	6 (3.8)
	2 (10.0)	0	2 (10.0)	4 (23.5)
	PND 1-4		PND 1	PND 0-4
Pup - Found Dead	22 (9.6)	17 (8.4)	7 (2.6)	2 (1.3)
	8 (40.0)	8 (57.1)	6 (30.0)	1 (5.9)
	PND 0-4	PND 0-4	PND 0-2	PND 0
Pup Cannibalised	1 (0.4)	1 (0.5)	0	1 (0.6)
	1 (5.0)	1 (7.1)	0	1 (5.9)
	PND 0	PND 0		PND 0
Pup Missing - Presumed Dead	0	1 (0.5)	3 (1.1)	3 (1.9)
	0	1 (7.1)	2 (10.0)	2 (11.8)
		PND 1	PND 0-1	PND 1

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F1 Pups - Litter C

Treatment Groups (ppm)

	0	5000	15000	40000
Respiration	0	0	1 (0.4)	0
Labored	0	0	1 (5.0) PND 0	0
Sore(s) On Body	0	0	0	1 (0.6)
Back	0	0	0	1 (5.9) PND 1
Sore(s) On Body	0	1 (0.5)	0	0
Left Forelimb	0	1 (7.1) PND 0-4	0	0
Sore(s) On Body	1 (0.4)	0	0	0
Right Hindlimb	1 (5.0) PND 0	0	0	0
Pup Clinical Observations PND 5-21				
Abnormal Gait	0	0	0	1 (0.7)
	0	0	0	1 (5.9) PND 19-20
Cold To Touch	1 (0.5)	0	0	4 (2.7)
	1 (5.0) PND 7	0	0	3 (17.6) PND 7-15

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F1 Pups - Litter C

	Treatment Groups (ppm)			
	0	5000	15000	40000
Dehydrated	1 (0.5) 1 (5.0) PND 9-11	1 (0.6) 1 (7.1) PND 7-8	1 (0.4) 1 (5.0) PND 13	2 (1.4) 2 (11.8) PND 12-20
Eye Shut Bilateral	0 0	0 0	1 (0.4) 1 (5.0) PND 16-21	0 0
Hypoactive	0 0	0 0	0 0	1 (0.7) 1 (5.9) PND 20
Lethargic	0 0	0 0	0 0	1 (0.7) 1 (5.9) PND 14-18
No Milk in Stomach	3 (1.6) 3 (15.0) PND 5-9	1 (0.6) 1 (7.1) PND 5	0 0	9 (6.1) 6 (35.3) PND 5-15
Pale	2 (1.0) 2 (10.0) PND 5-9	0 0	0 0	2 (1.4) 2 (11.8) PND 5-15
Pup - Found Dead	0 0	2 (1.2) 2 (14.3) PND 6-16	4 (1.6) 3 (15.0) PND 6-9	11 (7.4) 3 (17.6) PND 5-14

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F1 Pups - Litter C

	Treatment Groups (ppm)			
	0	5000	15000	40000
Pup Cannibalised	0	1 (0.6)	0	1 (0.7)
	0	1 (7.1) PND 16	0	1 (5.9) PND 10
Pup Missing - Presumed Dead	4 (2.1)	4 (2.4)	2 (0.8)	3 (2.0)
	2 (10.0) PND 5-8	4 (28.6) PND 6-11	2 (10.0) PND 6	2 (11.8) PND 8-12
Respiration	0	0	0	2 (1.4)
Labored	0	0	0	2 (11.8) PND 9-11
Scab(s)	1 (0.5)	0	0	0
Left Forelimb	1 (5.0) PND 16	0	0	0
Sore(s) On Body	0	1 (0.6)	0	0
Left Forelimb	0	1 (7.1) PND 5	0	0
Tail Damaged	0	0	0	2 (1.4)
	0	0	0	2 (11.8) PND 16-20
Tail Tip Missing	1 (0.5)	0	0	0
	1 (5.0) PND 19-21	0	0	0

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F1 Pups - Litter D

	Treatment Groups (ppm)	
	40000	40000 NF
Total Pups (PND 0)	141	222
No. pups post cull (PND 4)		
Total Litters (PND 0)	15	17
No. litters post cull (PND 4)		
Pup Clinical Observations PND 0-4		
Bruising	0	3 (1.4)
Head	0	3 (17.6)
		PND 0-1
Bruising	0	1 (0.5)
Multiple Sites (>2)	0	1 (5.9)
		PND 0-2
Cold To Touch	0	4 (1.8)
	0	3 (17.6)
		PND 0-4
No Milk in Stomach	0	3 (1.4)
	0	3 (17.6)
		PND 0-4
Pale	0	6 (2.7)
	0	5 (29.4)
		PND 0-2

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F1 Pups - Litter D

	Treatment Groups (ppm)	
	40000	40000 NF
Pup - Found Dead	11 (7.8) 6 (40.0) PND 0-4	23 (10.4) 11 (64.7) PND 0-2
Pup Cannibalised	0 0	2 (0.9) 1 (5.9) PND 0
Pup Missing - Presumed Dead	4 (2.8) 4 (26.7) PND 0-1	0 0
Scab(s)	0	1 (0.5)
Abdomen	0	1 (5.9) PND 3
Sore(s) On Body	0	1 (0.5)
Abdomen	0	1 (5.9) PND 0-2

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F2 Pups - Litter A F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Total Pups (PND 0)	335	348	388	276
No. pups post cull (PND 4)				
Total Litters (PND 0)	25	24	30	23
No. litters post cull (PND 4)				

Pup Clinical Observations PND 0-4

Bruising	0	1 (0.3)	2 (0.5)	0
Abdomen	0	1 (4.2)	2 (6.7)	0
		PND 0-1	PND 0-3	
Bruising	0	1 (0.3)	0	0
Anus	0	1 (4.2)	0	0
		PND 0-1		
Bruising	0	1 (0.3)	3 (0.8)	1 (0.4)
Face	0	1 (4.2)	3 (10.0)	1 (4.3)
		PND 0-1	PND 0-1	PND 0-1
Bruising	2 (0.6)	0	3 (0.8)	1 (0.4)
Head	2 (8.0)	0	3 (10.0)	1 (4.3)
	PND 0		PND 0-1	PND 0
Bruising	1 (0.3)	0	0	0
Left Flank	1 (4.0)	0	0	0
	PND 0			

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F2 Pups - Litter A F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Bruising	0	0	0	1 (0.4)
Multiple Sites (>2)	0	0	0	1 (4.3) PND 0
Bruising	0	0	0	1 (0.4)
Neck	0	0	0	1 (4.3) PND 0
Bruising	1 (0.3)	0	1 (0.3)	0
Right Hind Paw	1 (4.0) PND 0-2	0	1 (3.3) PND 0-1	0
Cold To Touch	2 (0.6)	0	2 (0.5)	3 (1.1)
	2 (8.0) PND 0	0	2 (6.7) PND 0-1	3 (13.0) PND 0
Lethargic	0	2 (0.6)	0	0
	0	1 (4.2) PND 1-2	0	0
No Milk in Stomach	1 (0.3)	3 (0.9)	8 (2.1)	1 (0.4)
	1 (4.0) PND 0	2 (8.3) PND 1-2	3 (10.0) PND 0-2	1 (4.3) PND 0
Pale	0	3 (0.9)	7 (1.8)	8 (2.9)
	0	2 (8.3) PND 1-4	5 (16.7) PND 0-4	5 (21.7) PND 0-1

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F2 Pups - Litter A F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Pup - Found Dead	47 (14.0)	48 (13.8)	37 (9.5)	21 (7.6)
	15 (60.0)	15 (62.5)	17 (56.7)	10 (43.5)
	PND 0-4	PND 0-4	PND 0-4	PND 0-4
Pup Cannibalised	0	4 (1.1)	1 (0.3)	1 (0.4)
	0	3 (12.5)	1 (3.3)	1 (4.3)
		PND 0	PND 1	PND 0
Pup Missing - Presumed Dead	6 (1.8)	10 (2.9)	12 (3.1)	11 (4.0)
	5 (20.0)	4 (16.7)	7 (23.3)	10 (43.5)
	PND 1-3	PND 1-4	PND 1-4	PND 1-4
Respiration Audible	0	0	4 (1.0)	0
	0	0	1 (3.3) PND 4	0
Respiration Labored	2 (0.6)	0	0	1 (0.4)
	2 (8.0)	0	0	1 (4.3)
	PND 0			PND 0
Sore(s) On Body Nose/Snout	0	0	1 (0.3)	0
	0	0	1 (3.3)	0
			PND 0	
Tail Damaged	0	0	0	1 (0.4)
	0	0	0	1 (4.3) PND 4

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F2 Pups - Litter A F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Tail Missing	0	1 (0.3)	0	0
	0	1 (4.2)	0	0
		PND 2		

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F2 Pups - Litter B F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Total Pups (PND 0)	437	353	370	302
No. pups post cull (PND 4)				
Total Litters (PND 0)	33	28	30	25
No. litters post cull (PND 4)				
Pup Clinical Observations PND 0-4				
Bruising	4 (0.9)	1 (0.3)	0	2 (0.7)
Face	3 (9.1)	1 (3.6)	0	2 (8.0)
	PND 0-3	PND 1-2		PND 0-2
Bruising	0	2 (0.6)	0	0
Head	0	1 (3.6)	0	0
		PND 0-1		
Bruising	1 (0.2)	0	0	0
Multiple Sites (>2)	1 (3.0)	0	0	0
	PND 0			
Bruising	0	1 (0.3)	0	0
Neck	0	1 (3.6)	0	0
		PND 0		
Cold To Touch	2 (0.5)	1 (0.3)	2 (0.5)	2 (0.7)
	2 (6.1)	1 (3.6)	2 (6.7)	2 (8.0)
	PND 0-1	PND 3	PND 0-4	PND 0-1

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary
Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
Time Report Requested: 08:06:56
Lab: RTI

F2 Pups - Litter B F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Dehydrated	2 (0.5)	0	1 (0.3)	0
	2 (6.1)	0	1 (3.3)	0
	PND 1-2		PND 1-2	
Gasping	0	0	0	1 (0.3)
	0	0	0	1 (4.0)
				PND 0
No Milk in Stomach	11 (2.5)	2 (0.6)	2 (0.5)	0
	5 (15.2)	2 (7.1)	2 (6.7)	0
	PND 0-3	PND 3-4	PND 1-4	
Pale	4 (0.9)	0	1 (0.3)	3 (1.0)
	4 (12.1)	0	1 (3.3)	2 (8.0)
	PND 0-1		PND 0	PND 0-3
Pup - Found Dead	72 (16.5)	35 (9.9)	32 (8.6)	24 (7.9)
	24 (72.7)	13 (46.4)	16 (53.3)	11 (44.0)
	PND 0-4	PND 0	PND 0-3	PND 0-3
Pup Cannibalised	5 (1.1)	5 (1.4)	3 (0.8)	0
	4 (12.1)	4 (14.3)	3 (10.0)	0
	PND 0-1	PND 0	PND 0-2	
Pup Missing - Presumed Dead	9 (2.1)	5 (1.4)	15 (4.1)	9 (3.0)
	6 (18.2)	4 (14.3)	8 (26.7)	7 (28.0)
	PND 0-3	PND 1-4	PND 1-3	PND 0-4

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary
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Lab: RTI

F2 Pups - Litter B F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Respiration	0	0	0	1 (0.3)
Labored	0	0	0	1 (4.0) PND 1
Sore(s) On Body	0	0	1 (0.3)	0
Abdomen	0	0	1 (3.3) PND 0-4	0
Sore(s) On Body	0	1 (0.3)	0	0
Left Inguinal	0	1 (3.6) PND 1-3	0	0
Tail Missing	0	0	0	1 (0.3)
	0	0	0	1 (4.0) PND 0-4

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary
Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
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Lab: RTI

F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Total Pups (PND 0)	326	346	310	223
No. pups post cull (PND 4)	249	271	252	197
Total Litters (PND 0)	28	30	30	24
No. litters post cull (PND 4)	27	30	30	24

Pup Clinical Observations PND 0-4

Bruising	0	0	1 (0.3)	0
Abdomen	0	0	1 (3.3)	0
			PND 4	
Bruising	0	0	1 (0.3)	0
Back	0	0	1 (3.3)	0
			PND 0-1	
Bruising	0	3 (0.9)	1 (0.3)	0
Face	0	3 (10.0)	1 (3.3)	0
		PND 0-2	PND 0-2	
Bruising	0	1 (0.3)	0	0
Head	0	1 (3.3)	0	0
		PND 0		
Bruising	0	1 (0.3)	1 (0.3)	0
Left Hind Paw	0	1 (3.3)	1 (3.3)	0
		PND 0-3	PND 0-3	

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary
Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
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Lab: RTI

F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Bruising	1 (0.3)	0	0	0
Multiple Sites (>2)	1 (3.6)	0	0	0
	PND 3			
Bruising	0	1 (0.3)	1 (0.3)	0
Tail	0	1 (3.3)	1 (3.3)	0
		PND 0-2	PND 1	
Cold To Touch	1 (0.3)	2 (0.6)	4 (1.3)	0
	1 (3.6)	2 (6.7)	3 (10.0)	0
	PND 3-4	PND 0-1	PND 0-3	
Dehydrated	0	2 (0.6)	2 (0.6)	0
	0	2 (6.7)	1 (3.3)	0
		PND 3-4	PND 3-4	
Emaciated	1 (0.3)	1 (0.3)	0	0
	1 (3.6)	1 (3.3)	0	0
	PND 2	PND 3		
Loss of Limb Function	0	1 (0.3)	0	0
Left Hindlimb	0	1 (3.3)	0	0
		PND 0		
No Milk in Stomach	0	2 (0.6)	8 (2.6)	1 (0.4)
	0	2 (6.7)	4 (13.3)	1 (4.2)
		PND 0-1	PND 0-4	PND 2

Study Number: R88007B
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I05P: Pup Clinical Observations Summary
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Date Report Requested: 11/29/2018
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Lab: RTI

F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Pale	2 (0.6) 2 (7.1) PND 0-4	9 (2.6) 7 (23.3) PND 0-4	4 (1.3) 3 (10.0) PND 0-4	2 (0.9) 1 (4.2) PND 2-4
Pup - Found Dead	47 (14.4) 20 (71.4) PND 0-4	24 (6.9) 9 (30.0) PND 0-1	26 (8.4) 11 (36.7) PND 0-3	15 (6.7) 10 (41.7) PND 0-1
Pup Cannibalised	3 (0.9) 2 (7.1) PND 0	5 (1.4) 3 (10.0) PND 0-1	3 (1.0) 2 (6.7) PND 0	2 (0.9) 2 (8.3) PND 0
Pup Missing - Presumed Dead	3 (0.9) 3 (10.7) PND 0-4	7 (2.0) 7 (23.3) PND 0-2	19 (6.1) 8 (26.7) PND 0-4	8 (3.6) 5 (20.8) PND 0-2
Respiration Labored	0 0	0 0	1 (0.3) 1 (3.3) PND 1	0 0
Sore(s) On Body Abdomen	0 0	0 0	1 (0.3) 1 (3.3) PND 0	0 0
Sore(s) On Body Back	0 0	0 0	1 (0.3) 1 (3.3) PND 0	0 0

Study Number: R88007B
Test Type: RACB
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I05P: Pup Clinical Observations Summary
Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
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F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Sore(s) On Body	0	0	1 (0.3)	0
Head	0	0	1 (3.3) PND 0	0
Sore(s) On Body	0	1 (0.3)	0	0
Right Ear	0	1 (3.3) PND 4	0	0
Tail Short	0	1 (0.3)	0	0
	0	1 (3.3) PND 0	0	0
Tail Tip Missing	0	0	1 (0.3)	0
	0	0	1 (3.3) PND 4	0
Pup Clinical Observations PND 5-21				
Alopecia	1 (0.4)	0	0	1 (0.5)
Back	1 (3.7) PND 17-21	0	0	1 (4.2) PND 10-11
Alopecia	0	0	0	1 (0.5)
Head	0	0	0	1 (4.2) PND 10-11

Study Number: R88007B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

I05P: Pup Clinical Observations Summary
Test Compound: Butyl Paraben
CAS Number: 94-26-8

Date Report Requested: 11/29/2018
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F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Bruising	0	0	1 (0.4)	0
Abdomen	0	0	1 (3.3) PND 5	0
Bruising	0	0	1 (0.4)	0
Tail	0	0	1 (3.3) PND 13	0
Cold To Touch	1 (0.4) 1 (3.7) PND 5	1 (0.4) 1 (3.3) PND 11	0 0	2 (1.0) 1 (4.2) PND 7-16
Dehydrated	1 (0.4) 1 (3.7) PND 10	2 (0.7) 2 (6.7) PND 5-11	0 0	5 (2.5) 5 (20.8) PND 7-18
Eye Discharge	0	0	1 (0.4)	0
Right; Brown	0	0	1 (3.3) PND 16	0
Eye Discharge	0	0	1 (0.4)	0
Right; Red	0	0	1 (3.3) PND 21	0
Eye Missing	0	1 (0.4)	1 (0.4)	1 (0.5)
Bilateral	0	1 (3.3) PND 16-21	1 (3.3) PND 18-21	1 (4.2) PND 18

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I05P: Pup Clinical Observations Summary
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F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Fur Stained	0	0	0	2 (1.0)
Abdomen; Yellow	0	0	0	1 (4.2) PND 19
Nasal Discharge	0	1 (0.4)	1 (0.4)	0
Red	0	1 (3.3) PND 18	1 (3.3) PND 19	0
No Milk in Stomach	5 (2.0) 5 (18.5) PND 6-10	5 (1.8) 4 (13.3) PND 7-11	3 (1.2) 3 (10.0) PND 5-7	2 (1.0) 2 (8.3) PND 10-16
Pale	1 (0.4) 1 (3.7) PND 5	2 (0.7) 2 (6.7) PND 5-7	1 (0.4) 1 (3.3) PND 5	1 (0.5) 1 (4.2) PND 5
Pup - Found Dead	2 (0.8) 1 (3.7) PND 5-6	3 (1.1) 3 (10.0) PND 6-8	3 (1.2) 3 (10.0) PND 5-8	8 (4.1) 6 (25.0) PND 6-13
Pup Cannibalised	1 (0.4) 1 (3.7) PND 11	1 (0.4) 1 (3.3) PND 17	0 0	1 (0.5) 1 (4.2) PND 12
Pup Missing - Presumed Dead	8 (3.2) 4 (14.8) PND 6-12	2 (0.7) 2 (6.7) PND 6-12	5 (2.0) 3 (10.0) PND 5-7	12 (6.1) 9 (37.5) PND 6-19

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Date Report Requested: 11/29/2018
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Lab: RTI

F2 Pups - Litter C F1c Parental Females

	Treatment Groups (ppm)			
	0	5000	15000	40000
Respiration Audible	3 (1.2) 2 (7.4) PND 9-17	1 (0.4) 1 (3.3) PND 7-8	1 (0.4) 1 (3.3) PND 7	4 (2.0) 4 (16.7) PND 7-21
Respiration Labored	0 0	0 0	0 0	1 (0.5) 1 (4.2) PND 16
Sore(s) On Body Left Fore Paw	1 (0.4) 1 (3.7) PND 7-10	0 0	0 0	0 0
Tail Damaged	0 0	1 (0.4) 1 (3.3) PND 10-11	0 0	0 0
Tail Kinked	0 0	0 0	1 (0.4) 1 (3.3) PND 21	0 0
Tail Tip Missing	0 0	0 0	1 (0.4) 1 (3.3) PND 5-21	0 0

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Test Type: RACB
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LEGEND

Animals exhibiting clinical observations "within normal limits" were recorded as scheduled but are omitted from the table for clarity.

Upper row denotes the pup incidence N (%)

Middle row denotes the litter incidence N (%)

Lower row denotes the range of postnatal days the finding was seen for the group

No. live litters includes litters with ≥ 1 live pup

Percent incidence calculated using number of live pups or litters on PND 0 (pre cull) or PND 4 (post cull)

PND - Postnatal Day, pups pre-weaning

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

D Litter is crossover mating of F0 40000 ppm Females with F0 control Males and F0 naive Females with F0 40000 ppm Males (dose listed as 40000 NF are the F0 naive Females)

NF = Naive Females

**** END OF REPORT ****