Test Type: MOG
Route: Dosing in Feed

Species/Strain: Rat/Sprague-Dawley

Study Number:

Study Gender:

PWG Approval Date

R14: Developmental Markers Summary
Test Compound: Bisphenol AF

CAS Number: 1478-61-1

MOG08002B

Both

See web page for date of PWG Approval

Date Report Requested: 07/17/2020 Time Report Requested: 11:02:49

Lab: RTI

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F1 Male

Generation	Cohort		Treatment Groups (ppm)			
			0	338	1125	3750
F1		PND 13				
		No. Examined (litters)	102 (23)	115 (24)	111 (25)	104 (22)
		No. of areolae/nipples per litter	0.00 ± 0.00	0.00 ± 0.00	0.01 ± 0.01	0.00 ± 0.00
		No. pups with areolae/nipples (%)	0 (0.00)	0 (0.00)	1 (0.90)	0 (0.00)
		No. litters with areolae/nipples (%)	0 (0.00)	0 (0.00)	1 (4.00)	0 (0.00)
		Testicular Descent				
		No. Examined (litters)	102 (23)	113 (24)	111 (25)	102 (22)
		No. Removed (litters)	0 (0)	0 (0)	0 (0)	1 (1)
		No. Not Attaining Testes Descent (litters)	0 (0)	0 (0)	1 (1)	11 (7)
		Day of Testes Descent				
		Mean Analysis				
		Litter Mean ± SE	18.0 ± 0.2	17.9 ± 0.2	17.7 ± 0.3	18.1 ± 0.5
		Proportional Hazards Analysis				
		Litter-based Model	p<0.001	p=0.999	p=0.999	p=0.005

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F2 Male

			Treatment Groups (ppm)			
Generation	Cohort		0	338	1125	
F2		PND 13				
		No. Examined (litters)	52 (17)	70 (19)	27 (7)	
		No. of areolae/nipples per litter	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	
		No. pups with areolae/nipples (%)	0 (0.00)	0 (0.00)	0 (0.00)	
		No. litters with areolae/nipples (%)	0 (0.00)	0 (0.00)	0 (0.00)	
		Testicular Descent				
		No. Examined (litters)	52 (17)	70 (19)	27 (7)	
		No. Removed (litters)	0 (0)	0 (0)	0 (0)	
		No. Not Attaining Testes Descent (litters)	1 (1)	0 (0)	0 (0)	
		Day of Testes Descent				
		Mean Analysis				
		Litter Mean ± SE	15.8 ± 0.4 **	16.4 ± 0.3	17.7 ± 0.3 *	
		Proportional Hazards Analysis				
		Litter-based Model	p=0.006	p=0.476	p=0.059	

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LEGEND

No. Examined (litters) = the number of animals or pups examined (number of litters)

The number of areolae/nipples per litter are shown as mean ± SEM

No. of pups with areolae/ nipples reported as number of affected pups (%)

No. of litters with areolae/ nipples reported as number of affected litters (%)

If measured, the No. of areolae/nipples at terminal sacrifice are shown as mean ± SEM

Statistical analysis for No. of areolae/nipples per litter endpoint for the F1 generation performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests. Statistical analysis for the same endpoint for the F2 generation performed using a bootstrapped Jonckheere trend test; pairwise comparisons were done using the Datta-Satten modified Wilcoxon tests with Hommel adjustment for multiple comparisons.

Statistical analysis of the No. pups with areolae/nipples (%) and No. litters with areolae/nipples (%) endpoints for the F1 generation was performed using Cochran-Armitage (trend) and Fisher Exact (pairwise) tests. Statistical analysis for the same endpoints for the F2 generation was performed using a Rao-Scott Cochran-Armitage test for both trend and pairwise tests.

No. Removed (litters) is the number of animals (number of litters contributing) that died or were removed prior to the end of the observation period and did not attain.

These animals were excluded from all analyses.

No. Not Attaining Testes Descent (litters) is the number of animals (number of litters contributing) that survived to the end of the observation period without attaining.

Summary statistics and mixed model results are presented for animals that attained during the observation period for Day of Testes Descent Mean Analysis endpoint.

Means of litter means presented for Day of Testes Descent Litter Mean ± SE. Trend and pairwise tests were based on mixed models for day of attainment with dose as a covariate and a random effect for litter. The Dunnett-Hsu adjustment was used for multiple comparisons.

Animals that did not attain by the end of the observation period were included in the proportional hazards analysis.

P-values for trend and pairwise comparisons for the Litter-based Model of the Proportional Hazards Analysis were calculated from a Cox proportional hazards model with random effect for litter and a Hommel adjustment for multiple comparisons.

Statistical significance for the control group indicates a significant trend test

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group

- * Statistically significant at P <= 0.05
- ** Statistically significant at P <= 0.01

The F1 3750 ppm animals were unable to produce a F2 generation, hence this group was not evaluated.

** END OF REPORT **