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## **Supplemental Material**

### **Measurement of Total and Free Urinary Phenol and Paraben Concentrations over the Course of Pregnancy: Assessing Reliability and Contamination of Specimens in the Norwegian Mother and Child Cohort Study**

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**Table S1.** Limit of detection (LOD), number and percent >LOD, geometric means, and coefficient of variation for quality control samples (n=15 aliquots from common urinary pool of 10 women).<sup>a</sup>

Analyte	LOD (µg/L)	Species	N (%) >LOD	GM (µg/L)	CV (%)	Between-batch CV (%)
Bisphenol-A	0.4	Total	15 (100)	8.6	7.9	<5%
		Free	15 (100)	6.9	6.2	<5%
Butyl Paraben	0.2	Total	15 (100)	4.2	7.0	<5%
		Free	15 (100)	2.9	8.0	<5%
Methyl Paraben	1.0	Total	15 (100)	862.6	12.8	10.2
		Free	15 (100)	14.3	8.7	<5%
Propyl Paraben	0.2	Total	15 (100)	8.0	6.0	<5%
		Free	15 (100)	0.3	24.2	<5%
Benzophenone-3	0.4	Total	15 (100)	46.1	11.3	<5%
		Free	2 (13)	NC	NC	NC
2,4-Dichlorophenol	0.2	Total	15 (100)	0.3	24.5	<5%
		Free	2 (13)	NC	NC	NC
2,5-Dichlorophenol	0.2	Total	2 (13)	NC	NC	NC
		Free	0 ( 0)	NC	NC	NC

LOD = Limit of detection; µg/L = micrograms per liter; GM = Geometric mean; CV = Coefficient of variation; NC = Not calculated due to insufficient sample size.

<sup>a</sup>Instrumental readings used for calculations with total concentrations; only values >LOD used for free fraction (instrumental readings below LOD not available). Quality control samples analyzed in three batches during a three week period.

**Table S2.** Spearman pairwise correlation coefficients for conjugated concentrations of phenols and parabens in micrograms per gram creatinine for complete study sample and subgroups.<sup>a</sup>

Analyte	Complete sample (n=45)			Random Sample (n=30)			High-BPA Subgroup (n=15)		
	17 & 23 weeks	23 & 29 weeks	17 & 29 weeks	17 & 23 weeks	23 & 29 weeks	17 & 29 weeks	17 & 23 weeks	23 & 29 weeks	17 & 29 weeks
BPA	0.32	0.30	0.34	0.29	0.18	0.29	0.25	0.43	0.40
Butyl paraben	0.39	0.43	0.41	0.24	0.45	0.38	0.66	0.49	0.56
Methyl paraben	0.17	0.42	0.19	0.20	0.61	0.25	0.32	0.16	0.27
Propyl paraben	0.56	0.65	0.62	0.51	0.62	0.62	0.68	0.69	0.65
BP-3 <sup>b</sup>	0.75	0.62	0.53	0.65	0.48	0.42	0.90	0.90	0.79

BPA = Bisphenol-A; BP-3 = Benzophenone-3

<sup>a</sup>Complete Sample (n = 45 participants, 135 samples); Random Sample = randomly selected participants with no previously measured BPA concentrations (n = 30 participants, 90 samples); High-BPA Subgroup = participants with high BPA concentrations in a previous random selection (n = 15 participants, 45 samples). <sup>b</sup>Total concentrations (rather than conjugated) used for comparison because 89% of samples had free concentrations below the detection limit, precluding the computation of conjugated concentrations.