

Supplementary Materials

Comparison of bisphenols in human urine, whole blood, serum and plasma: levels, optimal matrix identification and health risk

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Supplementary Table 1. Information of the analytes for mass spectrum

	Parent ion	Product ion	Retention time	DP(eV)	EP(eV)	CE(eV)
BPA	227.0	212.0	10.13	-100	-10	-25
¹³ C ₁₂ -BPA	239.0	224.0	10.12	-100	-10	-25
BPS	249.2	108.1	6.69	-100	-10	-36
¹³ C ₁₂ -BPS	261.1	113.9	6.68	-170	-10	-36
BPF	199.0	92.8	8.83	-80	-10	-28
D ₁₀ -BPF	208.9	97.1	8.72	-100	-10	-32
BPP	345.0	330.0	12.85	-90	-10	-30
BPZ	267.0	173.0	11.69	-100	-10	-36
BPAF	335.0	265.0	11.19	-100	-10	-30
¹³ C ₁₂ -BPAF	347.2	277.1	11.19	-15	-10	-28
BPAP	289.0	274.0	11.25	-90	-10	-35

BPA: bisphenol A; BPS: bisphenol S; BPF: bisphenol F; BPP: bisphenol P; BPAF: bisphenol AF; BPAP: bisphenol AP; BPZ: bisphenol Z; ¹³C₁₂-BPA: ¹³C₁₂-bisphenol A;

¹³C₁₂-BPS: ¹³C₁₂-bisphenol S; ¹³C₁₂-BPAF: ¹³C₁₂-bisphenol AF; D₁₀-BPF:

D₁₀-bisphenol F; DP: declustering potential; EP: entrance potential; CE: collision energy.

Supplementary Table 2. Instrumental condition of HPLC-MS/MS

Time (min)	Ultra-pure water (%)	Methanol (%)
0.00-1.00	80	20
1.00-12.00	5	95
12.00-13.00	95	5

Supplementary Table 3. The Standard curve, relative standard deviation (R²), limits of detection (LOD), relative standard deviation (RSD), and recoveries measured in the analytical methods used for the detection of BPs

	Standard curve	R ²	LOD(μg/L)	RSD(%)	Recovery (%)
BPA	$y = 0.0867x + 0.05093$	0.9978	0.017	4.31	78.9 ~ 92.5
BPS	$y = 0.14150x + 0.01248$	0.9984	0.002	5.70	83.2 ~ 101.2
BPF	$y = 0.10943x + 0.08482$	0.9976	0.022	5.37	77.6 ~ 112.3
BPP	$y = 0.8409x + 0.01314$	0.9978	0.006	4.50	70.5 ~ 100.5
BPAF	$y = 0.06114x + 0.01076$	0.9964	0.002	5.40	76.3 ~ 105.7
BPAP	$y = 0.00446x + 6.72305e^{-5}$	0.9979	0.006	5.37	88.8 ~ 119.5
BPZ	$y = 1.67013x + 0.02555$	0.9998	0.010	4.59	73.2 ~ 115.7

BPA: bisphenol A; BPS: bisphenol S; BPF: bisphenol F; BPP: bisphenol P; BPAF:

bisphenol AF; BPAP: bisphenol AP; BPZ: bisphenol Z; R²: relative standard deviation;

LOD: limits of detection; RSD: relative standard deviation.