

Supplementary Information

for

**A novel extraction method for three ochratoxins in human urine
based on Polystyrene/polyethersulfone electrospun nanofibers coated
with copper nanoparticles**

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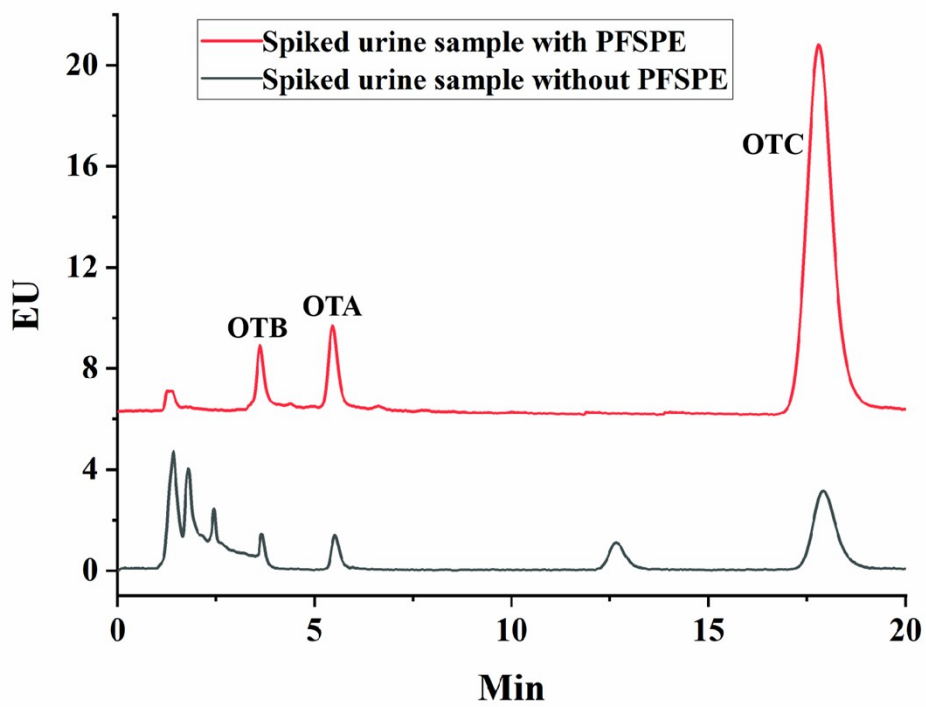
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1 **Part 1**

2 Preparation of artificial urine:

3 Dissolve the following substances separately in 200mL of deionized water: urine
4 (2.427 g), uric acid (0.034 g), creatinine (0.090 g), trisodium citrate (0.297 g), sodium
5 chloride (0.634 g), potassium chloride (0.45 g), ammonium chloride (0.161 g), calcium
6 chloride dihydrate (0.089 g), magnesium sulfate heptahydrate (0.1 g), sodium
7 bicarbonate (0.034 g), NaC_2O_4 (0.003 g), sodium sulfate (0.258 g), sodium dihydrogen
8 phosphate monohydrate (0.1 g), and sodium dihydrogen phosphate (0.011 g) were
9 added to 200 mL deionized water. The mixture was sonicated until completely
10 dissolved and store at 4 °C for later use.



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12 **Fig. S1.** Chromatogram of three ochratoxins in spiked urine sample with FPSPE (A)

13 and without PFSPE (B)

14 **Table S1.** Comparison of the proposed method with reported methods in literature.

Matrix	Method	Analyte	Recovery (%)	Adsorbents	Volume of organic reagents (mL)	LODs (ng/mL)	Ref.
Rice, wine	UPLC - MS/MS	OTA	82 - 109	C18	28	0.27	[1]
Chicken liver	HPLC - FLD	OTA	86.4 - 102.9	Graphene oxide	2.1	0.20	[2]
Grains	HPLC - FLD	OTA	78.9 - 106.4	GMA-NH ₂ -MIL-53@SMIPs	10.0	0.4	[3]
Urine	HPLC - FLD	OTA OTB OTC	71.3% - 92.0% (AR)	PS/PES- CuNPs nanofiber	0.7	0.108 - 0.162	This work

Table. S2. Determination of three ochratoxins in actual urine samples.

Sample	Detection level of analytes (ng/mL)			Sample	Detection level of analytes (ng/mL)		
	OTA	OTB	OTC		OTA	OTB	OTC
male1	ND	ND	ND	female1	ND	ND	ND
male2	ND	ND	0.31	female2	ND	ND	ND
male3	ND	ND	ND	female3	ND	ND	ND
male4	ND	ND	ND	female4	ND	ND	ND
male5	0.96	ND	ND	female5	ND	ND	ND
male6	ND	ND	ND	female6	ND	ND	ND
male7	ND	ND	ND	female7	ND	ND	0.48
male8	ND	ND	ND	female8	ND	ND	ND
male9	1.64	ND	ND	female9	ND	ND	ND
male10	ND	ND	ND	female10	ND	ND	ND
male11	ND	ND	ND	female11	ND	ND	ND
male12	ND	ND	ND	female12	ND	ND	0.33
male13	ND	ND	ND	female13	ND	ND	ND
male14	ND	ND	ND	female14	ND	ND	ND
male15	0.52	ND	ND	female15	ND	ND	ND

17 ND: no detection

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