Electronic Supporting information files for

Spectrofluorimetric determination of zearalenone using dispersive liquid-liquid microextraction coupled to micro-solid phase extraction onto magnetic nanoparticles

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1) Effect of dispersive solvent volume

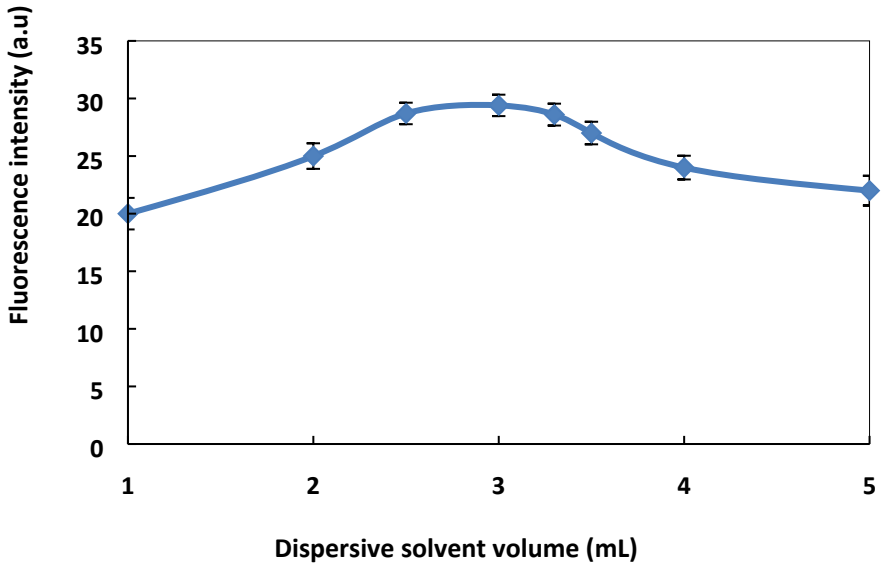

Fig. S1 Effect of dispersive solvent volume. Conditions: dispersive solvent type, MeCN 80 % containing 5 μg L^{-1} of ZEN; extraction solvent volume and type, 310 μL of 1-Heptanol; water volume, 15 mL; equilibration time, 120 s; adsorbent amount, 80 mg; adsorption time, 5 min; desorption time, 5 min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 μL of diethyl ether; without salt addition. Error bars represent the standard deviation for three experiments.

2. Effect of extraction solvent volume

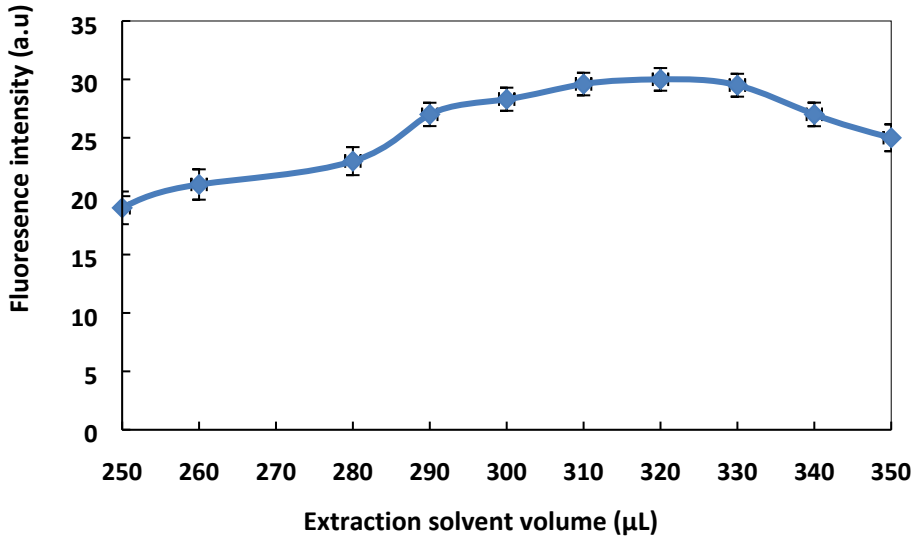

Fig. S2. Effect of the extraction solvent volume. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent type, 1-Heptanol; water volume, 15 mL; equilibration time, 120 s; adsorbent amount, 80 mg; adsorption time, 5 min; desorption time, 5min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether;without salt addition. Error bars represent the standard deviation for three experiments.

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3. Effect of salt addition

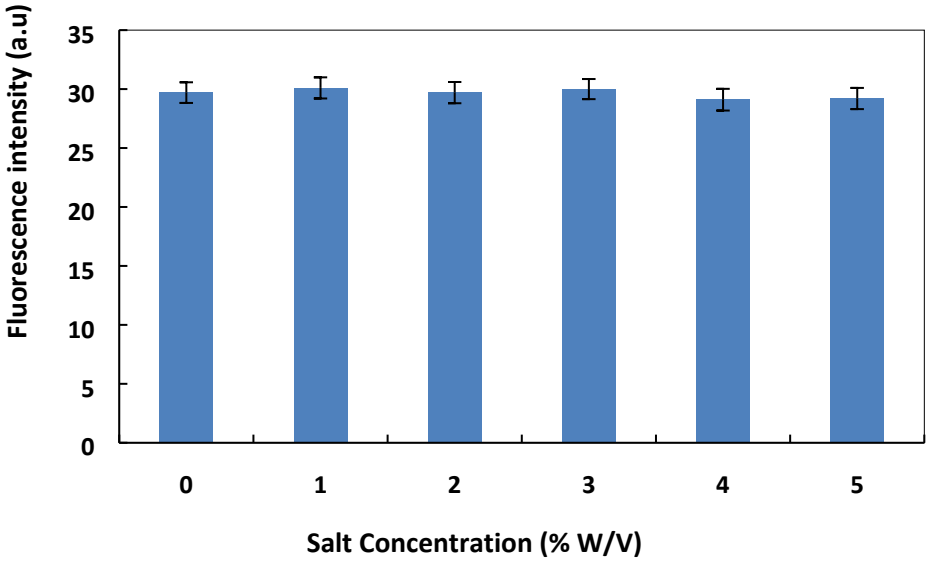

Fig. S3. Effect of salt addition. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 Ml; equilibration time, 120 s; adsorbent amount, 80 mg; adsorption time, 5 min; desorption time, 5min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether..Error bars represent the standard deviation for three experiments.

4. Effect of Water volume

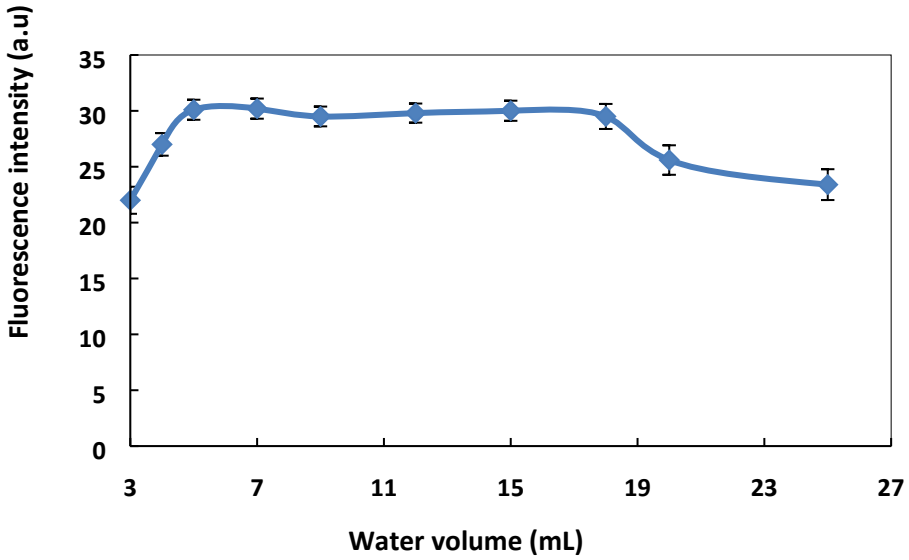

Fig. S4. Effect of the water volume. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; equilibration time, 120 s; adsorbent amount, 80 mg; adsorption time, 5 min; desorption time, 5 min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition. Error bars represent the standard deviation for three experiments.

5. Effect of equilibration time

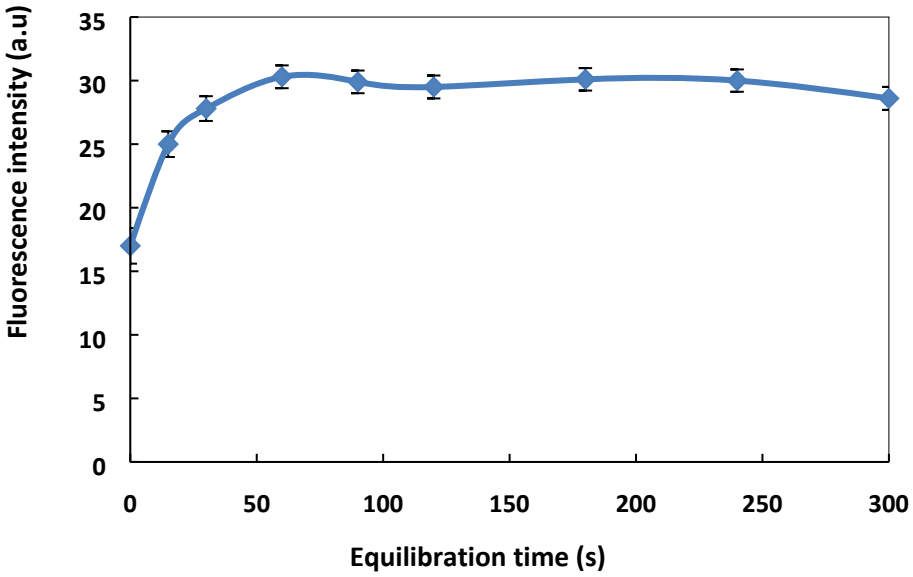

Fig. S5. Effect of the equilibration time. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; adsorbent amount, 80 mg; adsorption time, 5 min; desorption time, 5 min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition Error bars represent the standard deviation for three experiments.

6. Effect of adsorbent amount

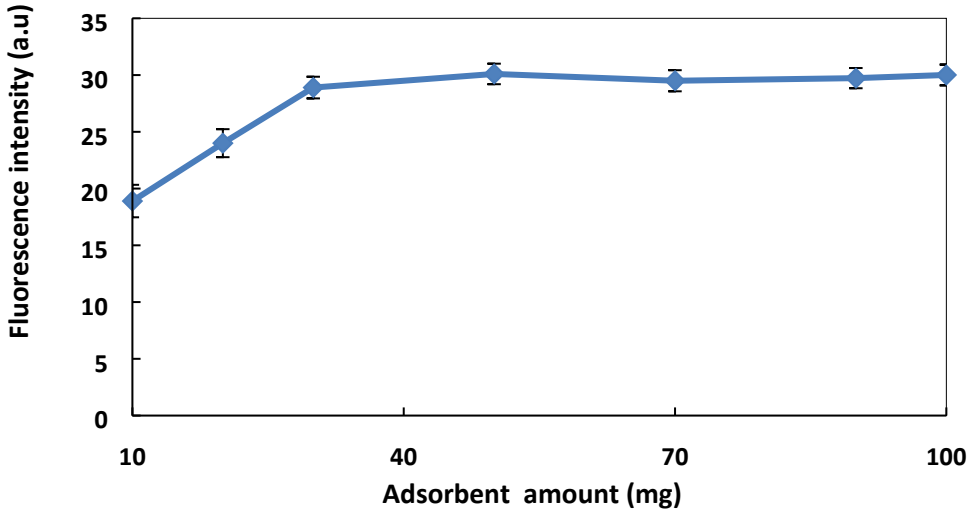

Fig. S6. Effect of the adsorbent amount. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; equilibration time, 60 s; adsorption time, 5 min; desorption time, 5 min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition. Error bars represent the standard deviation for three experiments.

7. Effect of adsorption time

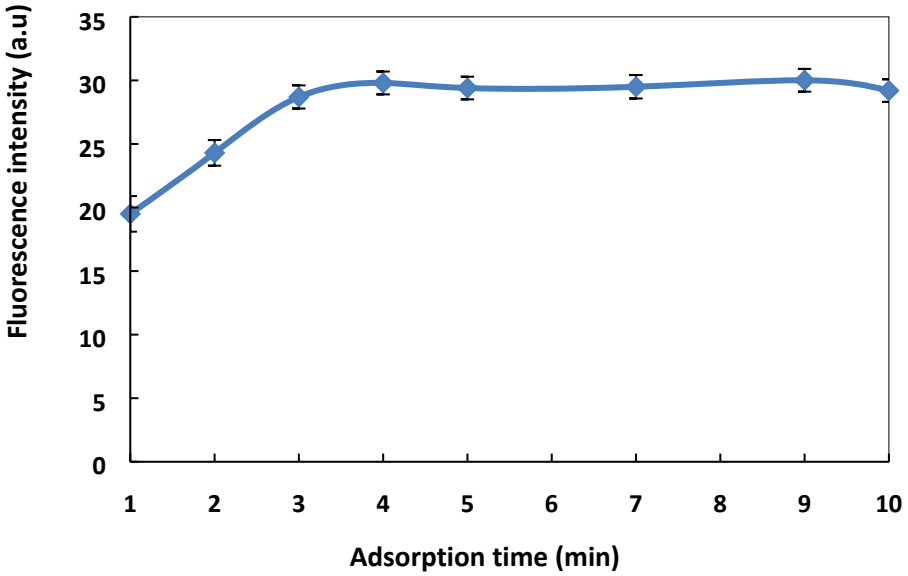

Fig. S7. Effect of the adsorption time. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; equilibration time, 60 s; adsorbent amount, 50 mg; desorption time, 5 min, desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition Error bars represent the standard deviation for three experiments.

8. Effect of desorption solvent volume

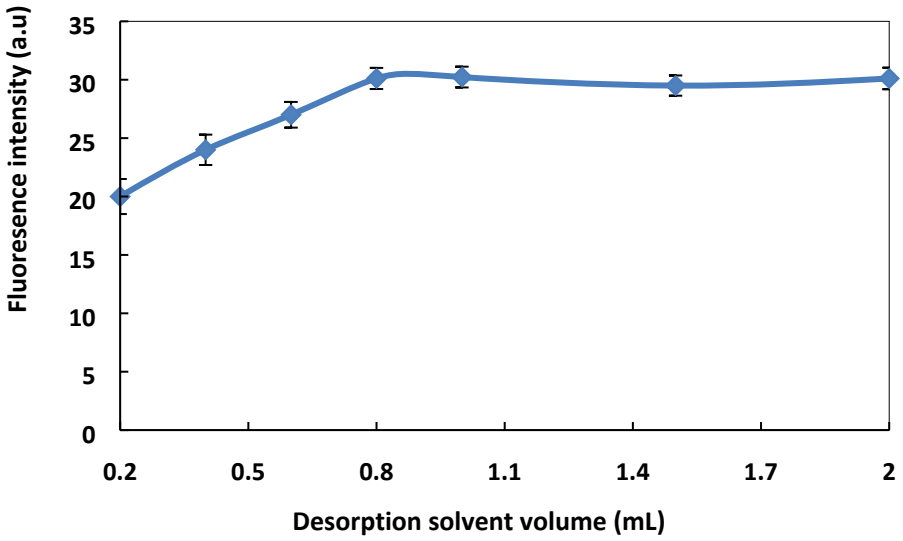

Fig. S8. Effect of desorption solvent volume. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; equilibration time, 60 s; adsorbent amount, 50 mg; adsorption time, 3 min; desorption time, 5 min; desorption solvent type, MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition Error bars represent the standard deviation for three experiments.

9. Effect of desorption time

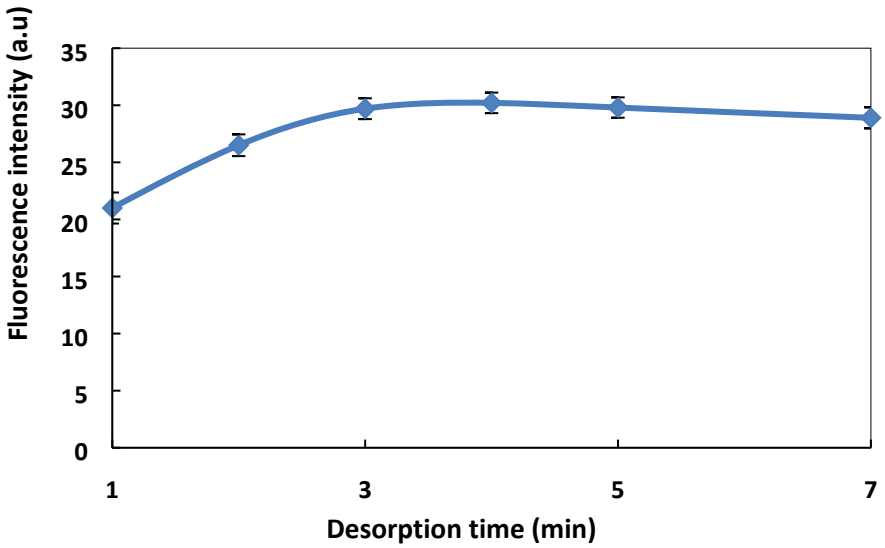

Fig. S9. Effect of desorption time. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; equilibration time, 60 s; adsorbent amount, 50 mg; adsorption time, 3 min; desorption solvent volume and type, 1 mL of MeCN; reconstituting solvent, 300 µL of diethyl ether; without salt addition. Error bars represent the standard deviation for three experiments.

10. Effect of reconstituting solvent

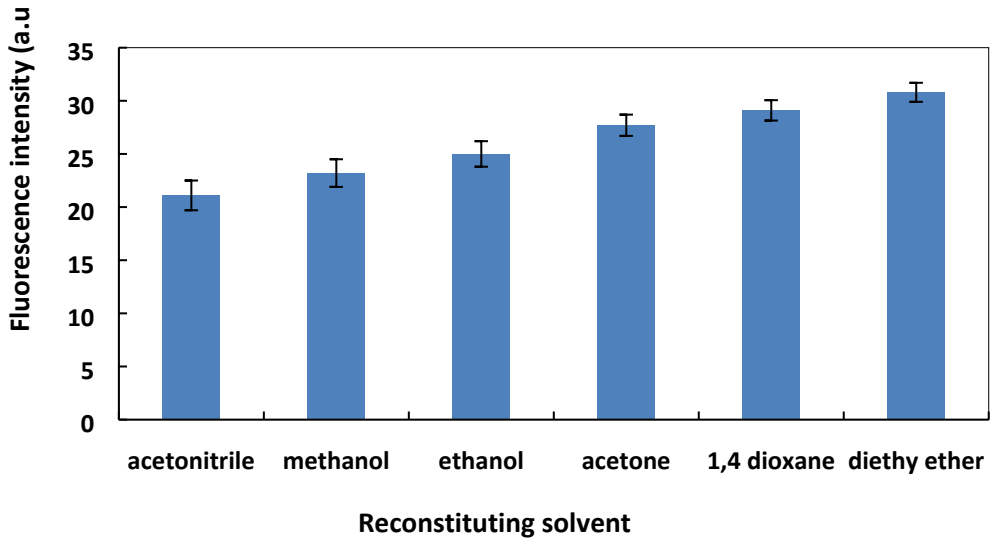

Fig. S10. Effect of reconstituting solvent. Conditions: dispersive solvent volume and type, 3 mL of MeCN 80 % containing 5 µg L^{-1} of ZEN; extraction solvent volume and type, 320 µL of 1-Heptanol; water volume, 15 mL; equilibration time, 60 s; adsorbent amount, 50 mg; adsorption time, 3 min; desorption time, 4 min; desorption solvent volume and type, 1 mL of MeCN; without salt addition. Error bars represent the standard deviation for three experiments.