Electronic Supplementary Material (ESI) for Analytical Methods. This journal is © The Royal Society of Chemistry 2020

A dispersive solid phase extraction adsorbent based on aptamer modified chitosan nanofibers 1 for zearalenone separation in corn, wheat, and beer samples 2 3 Luying Liu<sup>1, 2</sup>, Yanxia Ma<sup>1</sup>, Xiaoting Zhang<sup>1</sup>, Xixiang Yang<sup>1\*</sup>, Xiaogang Hu<sup>1\*</sup> 4 <sup>1</sup> Key Laboratory of Theoretical Chemistry of Environment, Ministry of Education, Guangzhou Key Laboratory of Analytical Chemistry for Biomedicine, School of Chemistry, South China Normal 7 University, Guangzhou, P.R. China 8 <sup>2</sup> Department of Chemistry, Guangdong University of Education, Guangzhou, P.R. China 9 Running title: Aptamer functionalized dispersive solid phase extraction \*Corresponding author: X. G. Hu; Address: Room L2-220, School of Chemistry, South China 11 Normal University, Guangzhou Higher Education Mega Center, Guangzhou, 12 13 P.R. China; E. mail: huxg@scnu.edu.cn; Tel.: +86-20-39310967; Fax.: +86-20-39310187. 14 X. X. Yang; Address: Room L2-220, School of Chemistry, South China 15 Normal University, Guangzhou Higher Education Mega Center, Guangzhou, 16 P.R. China; E. mail: yangxx@m.scnu.edu.cn; Tel.: +86-20-39310967; Fax.: 17 +86-20-39310187. 18 Non-standard abbreviations: Apt-CNF: aptamer modified chitosan nanofibers; CNF: chitosan 19 nanofibers; CP: chitosan power; dSPE: dispersive solid phase extraction; EDC: 1-ethyl-3-20

- 21 (3-dimethylaminopropyl carbodiimide; NHS: N-hydroxysuccinimide; ScrApt-CNF:
- scrambled aptamer modified chitosan nanofibers; SPE: solid phase extraction; ZEN:
- zearalenone.
- 24 **Keywords:** Aptamer; Chitosan nanofiber; Dispersive solid phase extraction; Zearalenone.

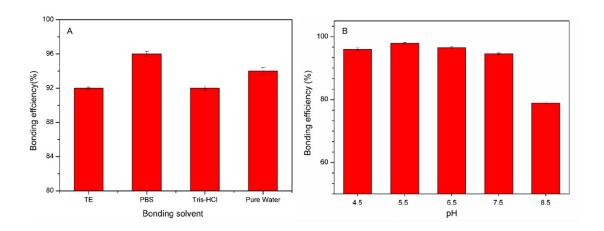


Fig S1. The effect of solvent (A) and pH (B) on the aptamer bonding efficiency.

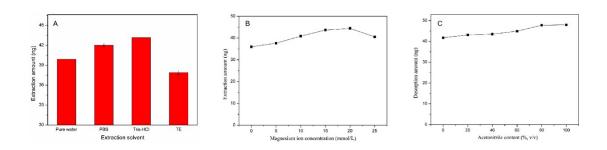


Fig S2. The effect of the dSPE conditions on performance of Apt-CNF for ZEN extraction. A: extraction solvent; B: magnesium ion concentration; C: volume ratio of acetonitrile in water.