Supplementary material

Preparation of magnetic zeolitic imidazolate framework-67 composites for the extraction of phthalate esters from environmental water samples

Qingsong Zhang※[a], Guangyang Liu※[b], Xiaolin Cao*[a], Jungang Yin[a], Ziping Zhang[a]

[a] College of Life Science, Yantai University, Yantai 264005, China
[b] Institute of Vegetables and Flowers, Chinese Academy of Agricultural Sciences, Key Laboratory of Vegetables Quality and Safety Control, Laboratory of Quality & Safety Risk Assessment for vegetable Products, Ministry of Agriculture and Rural Affairs of China, Beijing 100081, China

Synthesizing Fe_3O_4 nanoparticles

Fe_3O_4 nanoparticles were synthesized with a chemical co-precipitation method [1, 2]. Briefly, $FeCl_3$•$6H_2O$ (2.35 g) and $FeCl_2$•$4H_2O$ (0.9 g) were dissolved in 100 ml of ultrapure water with stirring under a water bath condition of 70 °C. Then, 10 mL of 25% ammonia solution were sequentially added, and the mixture with stirred vigorously under a water bath condition of 80 °C for 30 min. After cooled to room temperature, magnet was used to adsorb precipitation, and poured off the upper layer solution, then precipitation washed with ethanol and ultrapure water for several times until the pH level of the washing approached neutral.

※Co-first author
*Corresponding author.
E-mail address: Xiaolin Cao, aicaoxiaolin@126.com

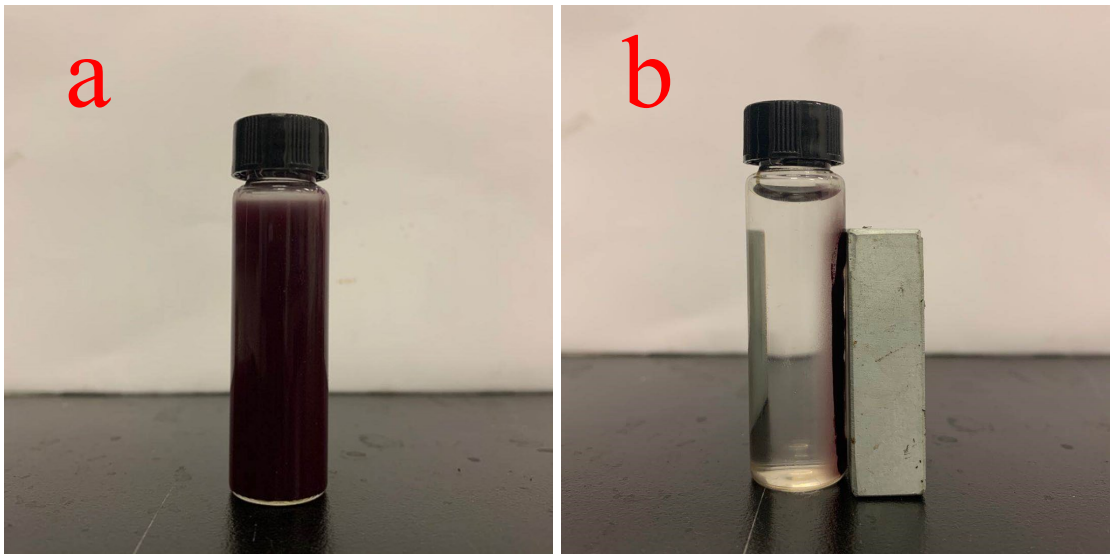

FIGURE S1 Magnetic separation graphs for Fe_3O_4/ZIF-67 with 50 mg Fe_3O_4

(a before separation, b after separation)

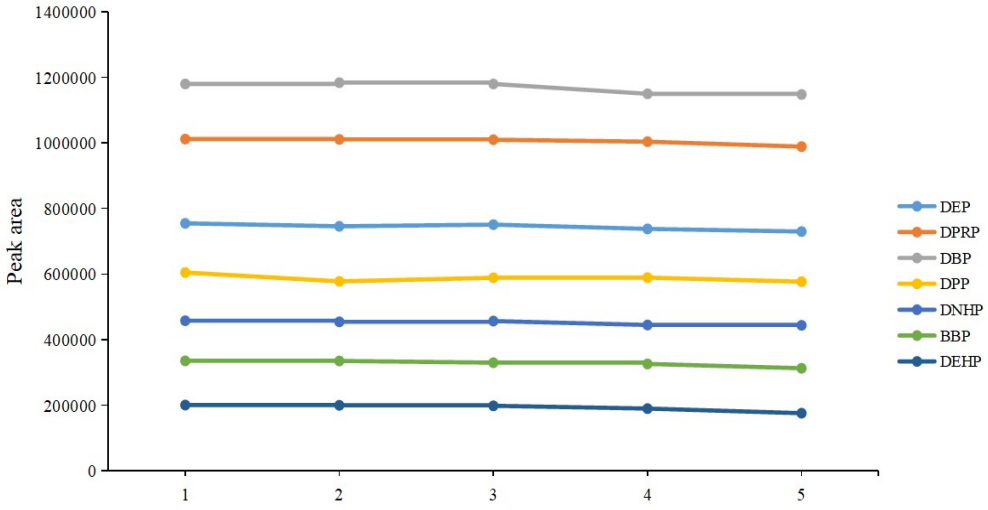

FIGURE S2 the repeatability study with five parallel experiments (n=3)

REFERENCES

1. S. Zhang, Z. Jiao and W. Yao, *Journal of Chromatography A*, 2014, **1371**, 74-81.

2. X. Cao, G. Liu, Y. She, Z. Jiang, F. Jin, M. Jin, P. Du, F. Zhao, Y. Zhang and J. Wang, *RSC Advances*, 2016, **114**, 113144-113151.