

A sensitive and selective spectrophotometric method for 2-chlorophenol based on solid phase extraction with mixed hemimicelle magnetic nanoparticles

Siriboon Mukdasai^a, Nattaya Butwong^b, Chunpen Thomas^c, Somkiat Srijaranai^a,
Supalax Srijaranai^{a*}

^a *Materials Chemistry Research Center, Department of Chemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand*

^b *Department of Applied Chemistry, Faculty of Sciences and Liberal Arts, Rajamangala University of Technology Isan, Nakhon Ratchasima, 30000, Thailand*

^c *Department of Physics, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand*

* Corresponding author Tel.: +66 43 009700 ext. 42175; fax: +66 43 202373

E-mail address: supalax@kku.ac.th (S. Srijaranai)

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1. Characterization and behavior of CTAB on Fe₃O₄ NPs by FT-IR

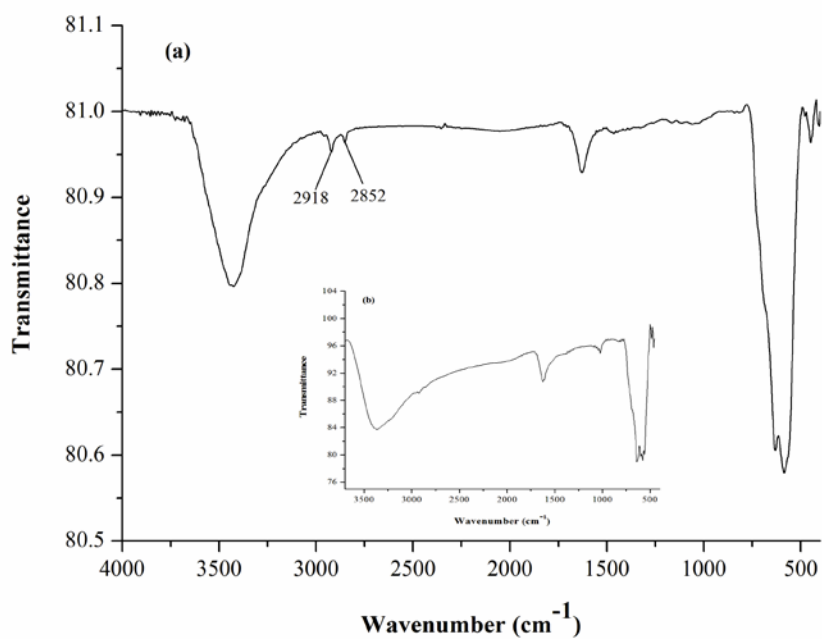


Fig. S1. The FT-IR spectra of (a) Fe₃O₄ NPs and (b) the CTAB coated Fe₃O₄ NPs.

2. Characterization and behavior of CTAB on Fe₃O₄ NPs by VSM

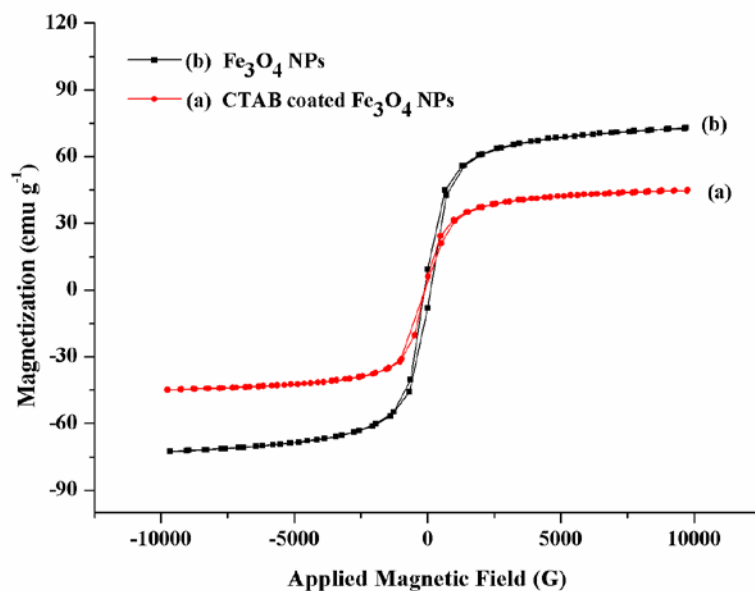


Fig. S2. VSM magnetization curves of (a) CTAB coated Fe₃O₄ NPs and (b) Fe₃O₄ NPs.

3. Effect of type and volume of the desorption solvent and desorption time

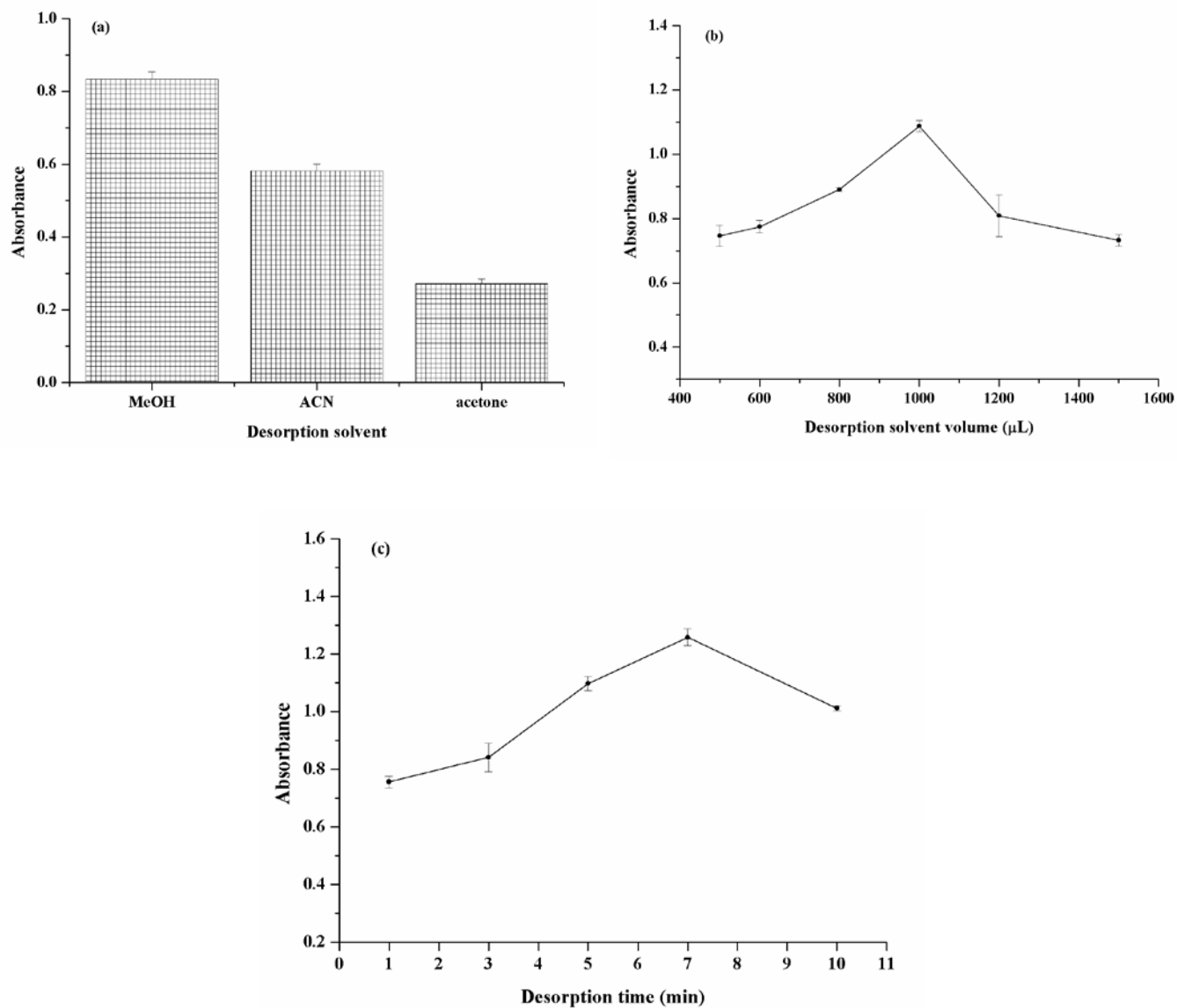


Fig. S3. The optimization for desorption of 2-CP derivative :

(a) desorption solvent ; *Extraction conditions:* CTAB coated Fe_3O_4 NPs 20 mg, vortex time 60s, desorption time 7 min and 1000 μL of desorption solvents.

(b) desorption solvent volume; *Extraction conditions:* as described in Fig. S3 (a) except MeOH was used as the desorption solvent.

(c) desorption time; *Extraction conditions:* as described in Fig. S3 (a and b) except MeOH 1000 μL was used as the desorption solvent.