

**Modified silver nanoparticles enhanced single drop micro extraction of  
tartrazine in food sample coupled with diffuse reflectance fourier  
transform infrared spectroscopic analysis**

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**Supplementary data:**

**Fig S1. The effect of concentration of modified AgNPs in the extraction efficiency of tartrazine and extraction efficiency of pure solvent.** (Standard conditions: Tartrazine concentration:  $10 \text{ ng mL}^{-1}$ ; drop volume:  $5 \text{ }\mu\text{L}$ ; pH: 3; Stirring rate: 300 rpm; Solvent: toluene (for  $n=6$ ).

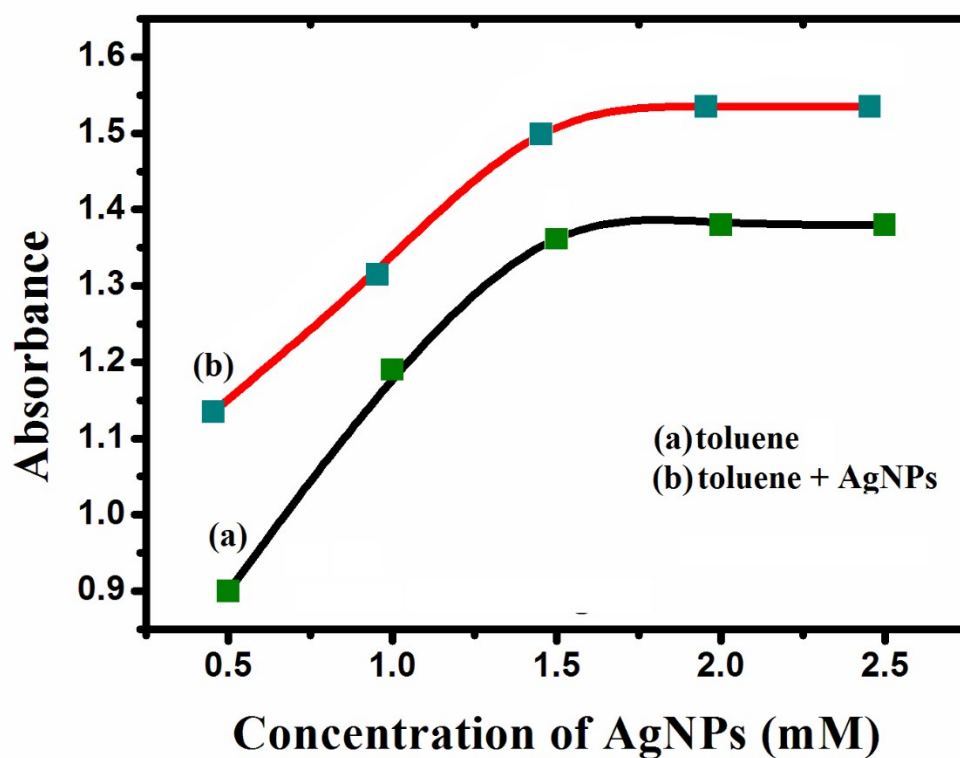


Fig S2 UV-Vis Absorption spectrum of tartrazine and sunset yellow.

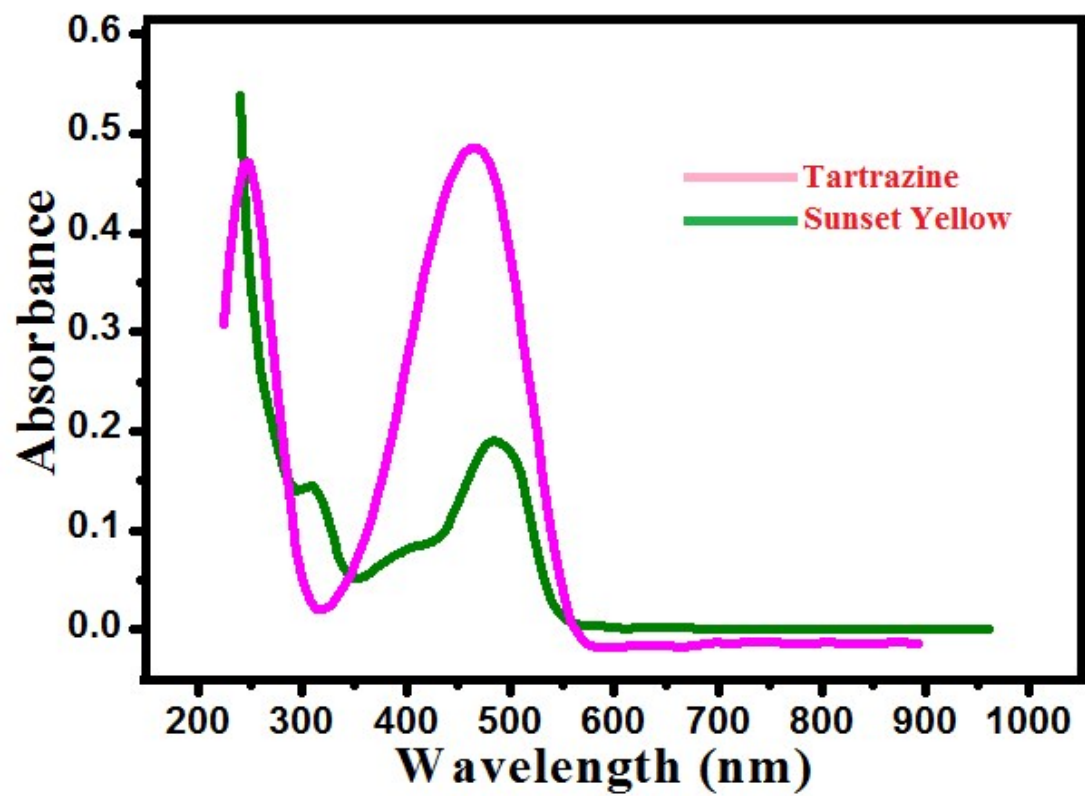
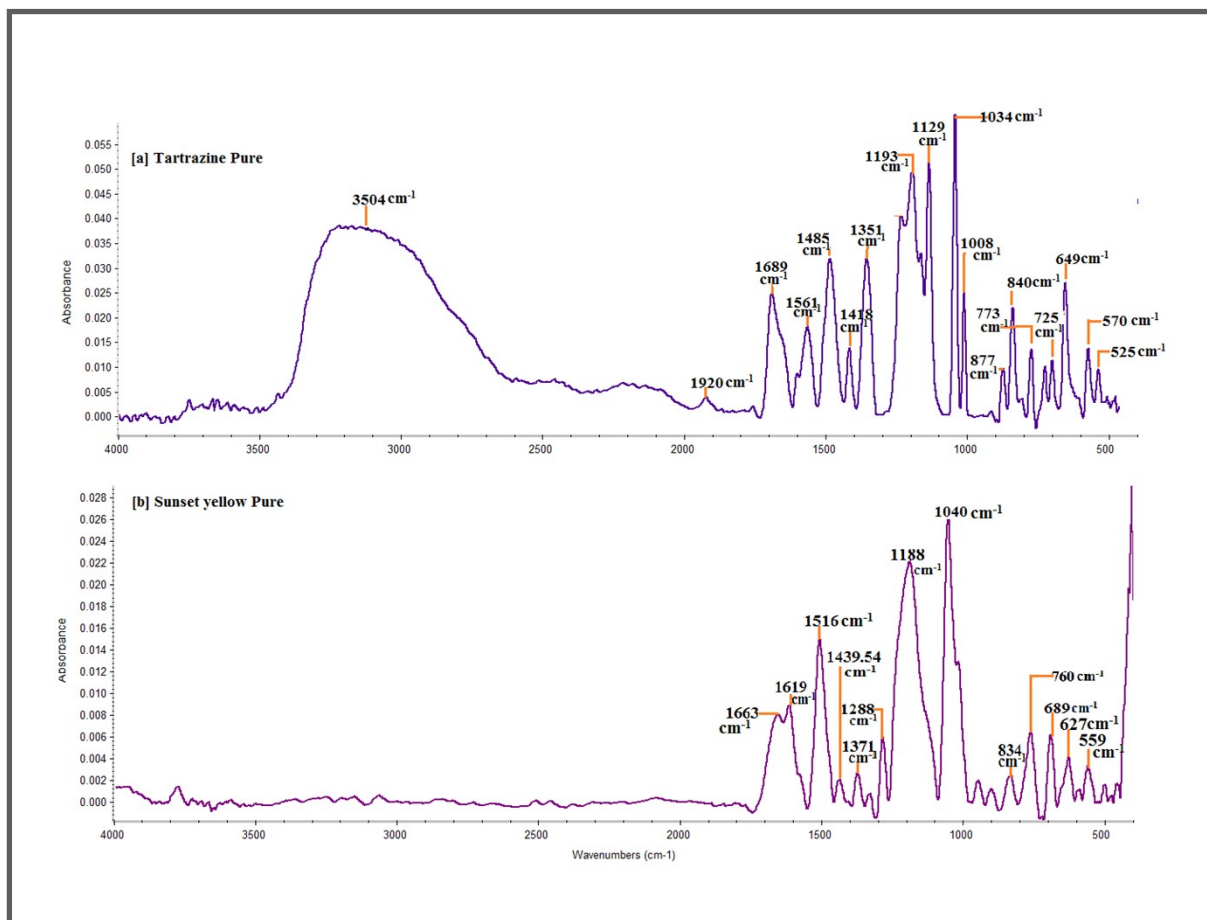
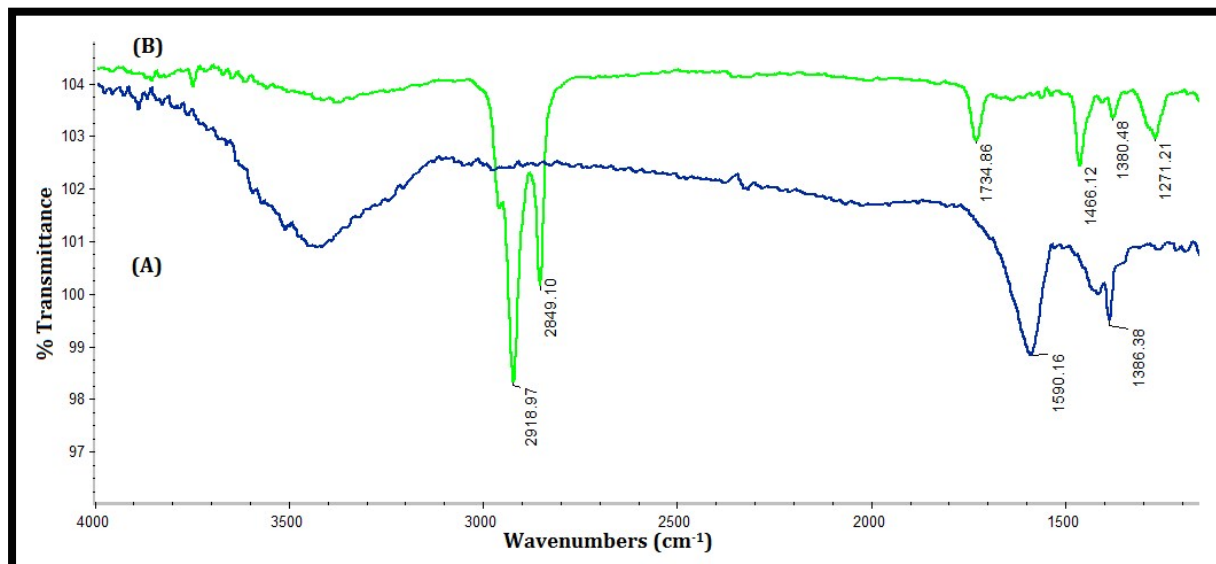


Fig S3



**Fig S4:** The FTIR spectra of (a) Silver nanoparticle (pure) in aqueous medium and (B) modified by dodecanethiol in toluene. The unprocessed spectra shows presence of thiol ligands (at 2849.10  $\text{cm}^{-1}$  and 2918.97  $\text{cm}^{-1}$ ) alkyl chains.



**Fig. S5.** (a) Chromatograms for tartrazine sample analysed (candy sample spiked with 10 ng mL<sup>-1</sup>).

