Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Figure S1. Images of homemade setup for AChE immobilization

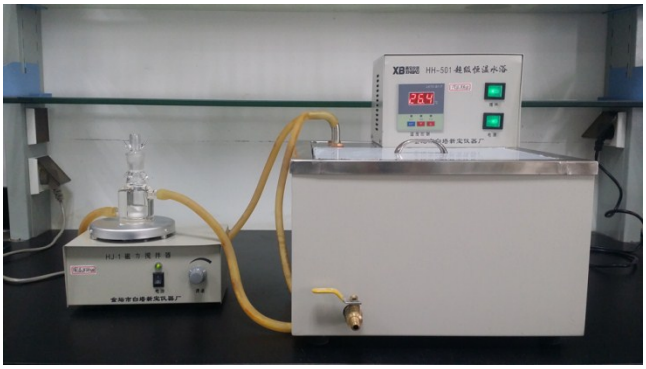

Figure S2. X-ray diffraction images of zeolite beta, zeolite ZSM-5 and zeolite Y

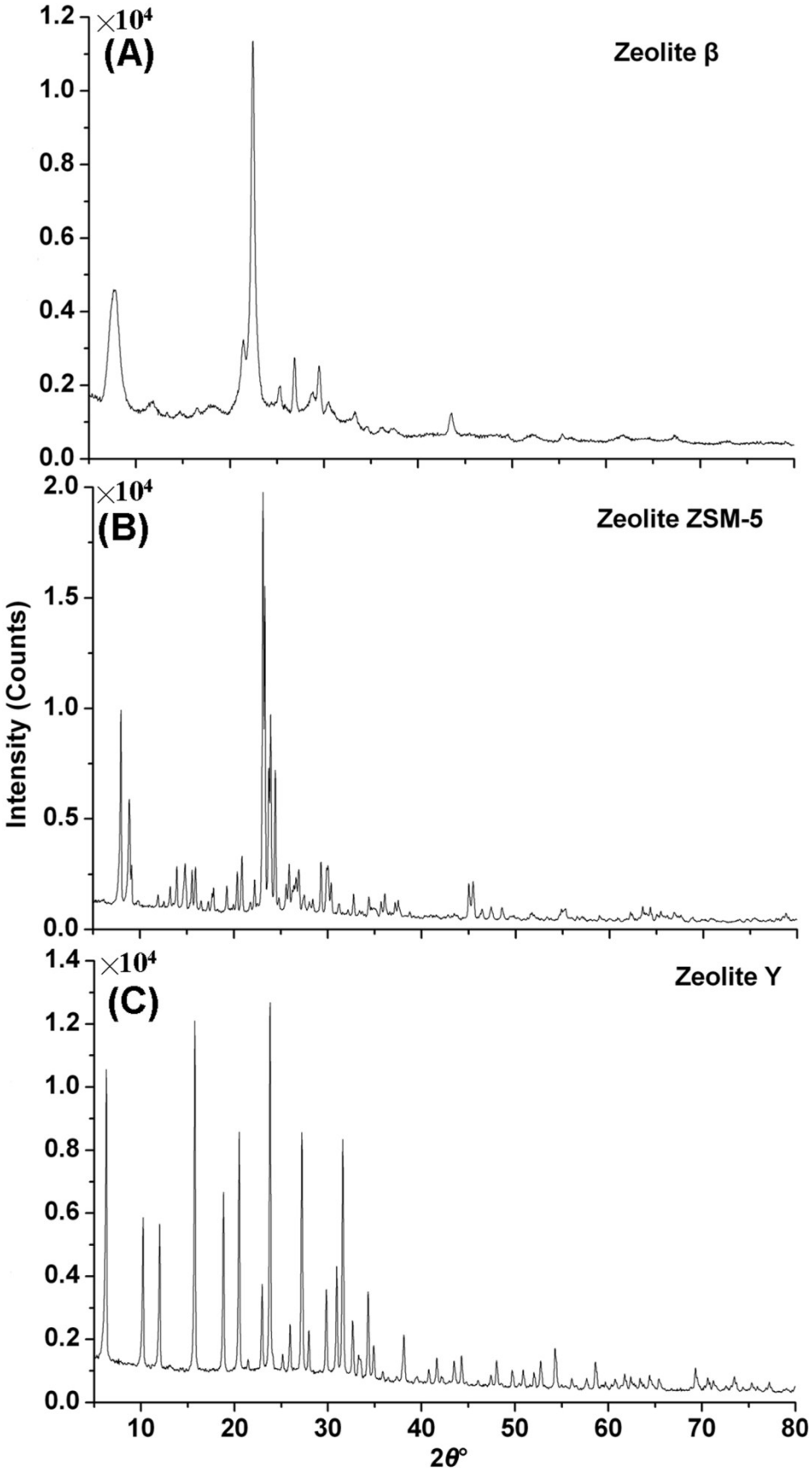

Figure S3. IR spetra of (A)zeolite beta, (B)AChE and (C) AChE immobilized zeolite beta

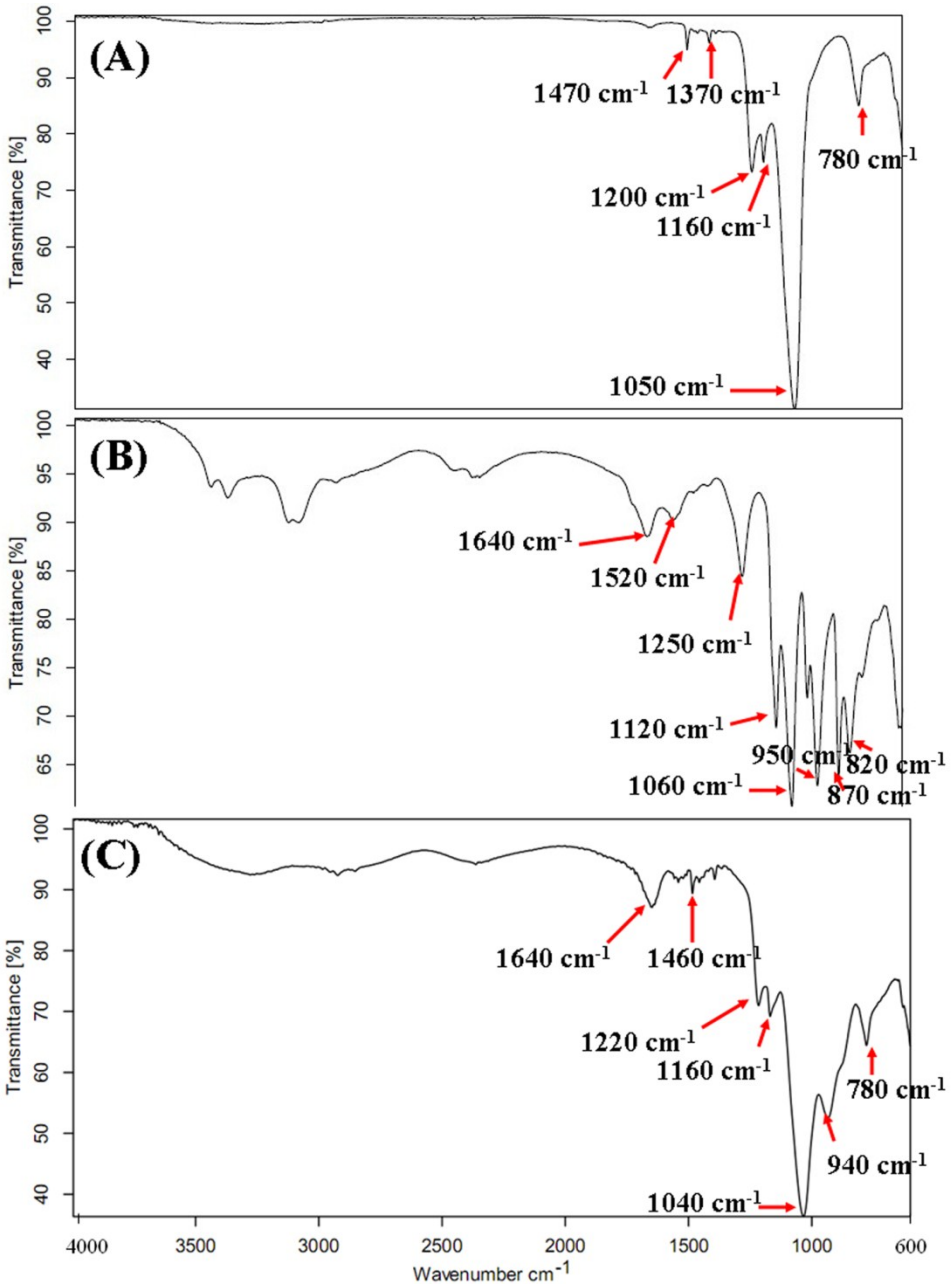

Figure S4. TEM images of blank magnetic nanoparticles(A) and AChE conjugated magnetic nanoparticles(B)

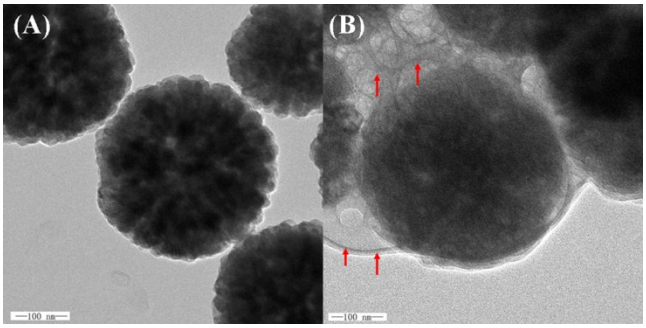

Figure S5. X-ray diffraction image of magnetic nanoparticles

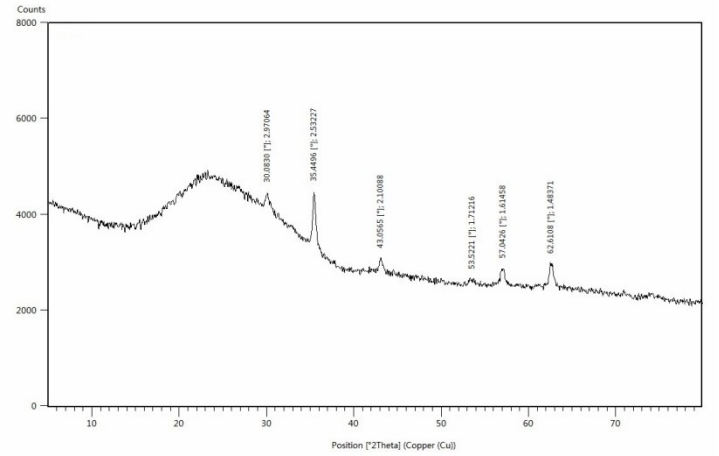

Figure S6. Magnetic curves of magnetic nanoparticles (Black) and AChE conjugated magnetic nanoparticles (Red)

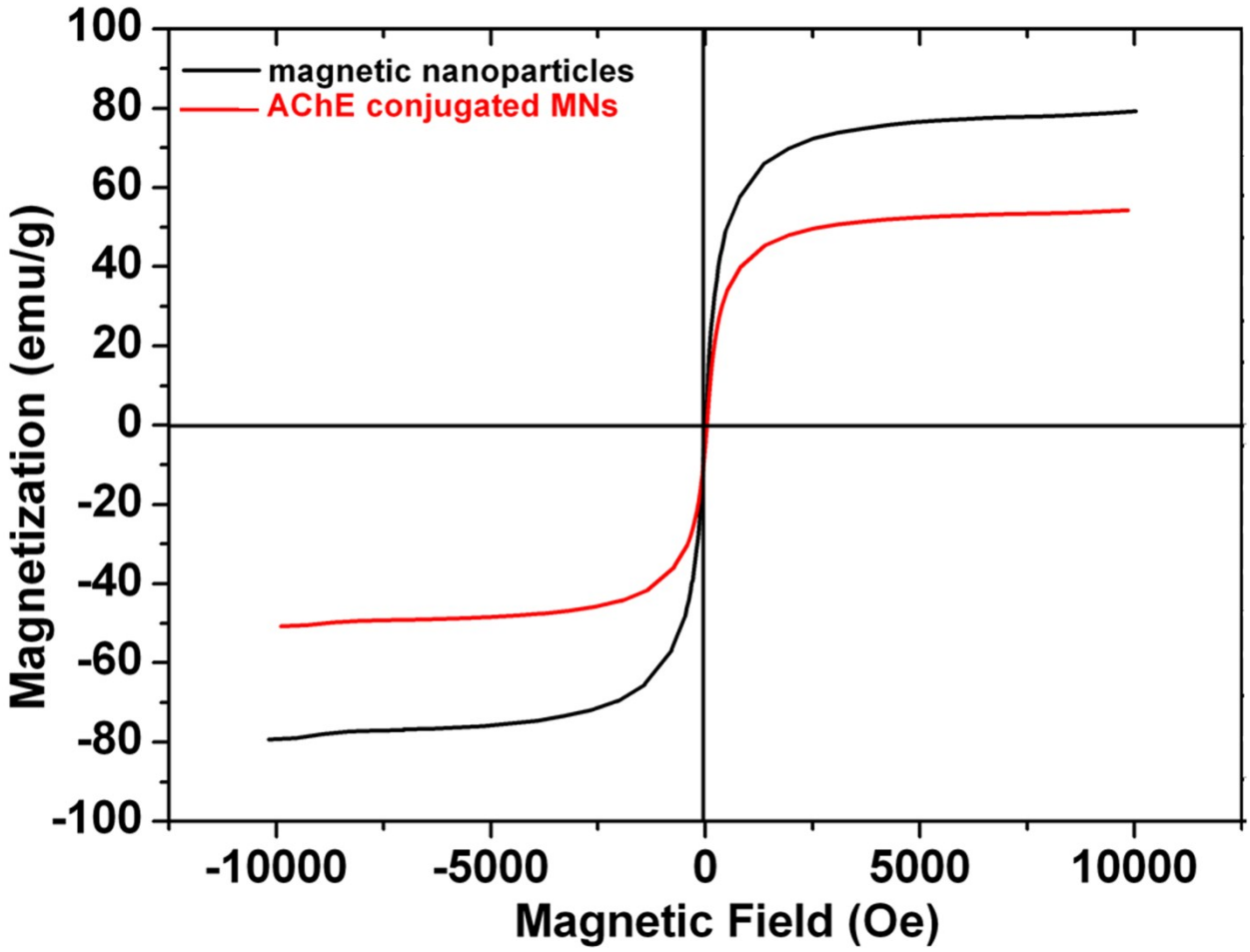

Figure S7. Effect of the amount of magnetic nanoparticles added on the percentage of conjugated AChE

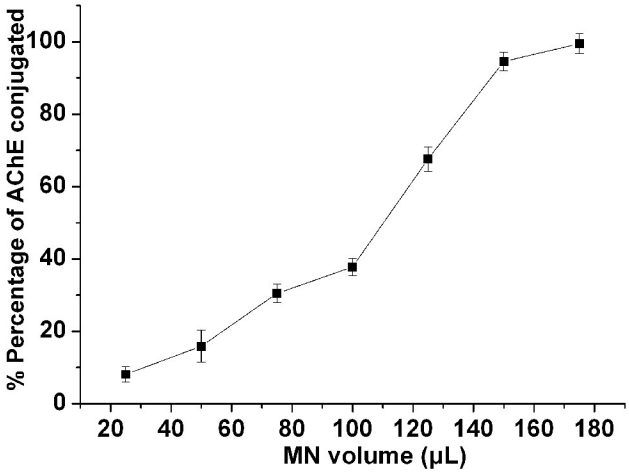

Figure S8. Effects of different types of zeolites, incubation time, temperature and buffer pH on the immobilized percentage of AChE, ** indicates P<0.05, as compared with pH 5.7 or 26 °C.

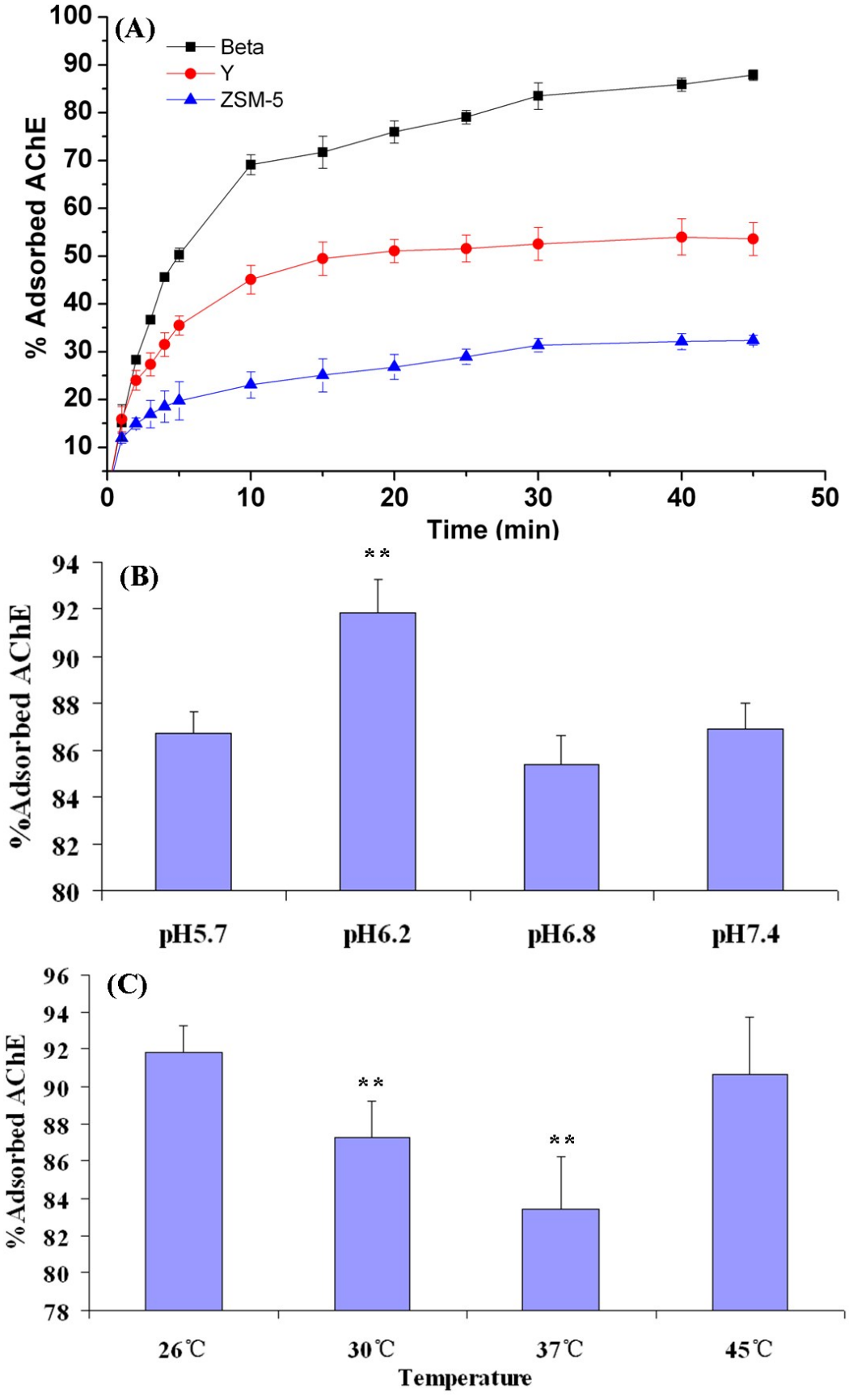

Figure S9. Effect of time on desorption behavior of AChE

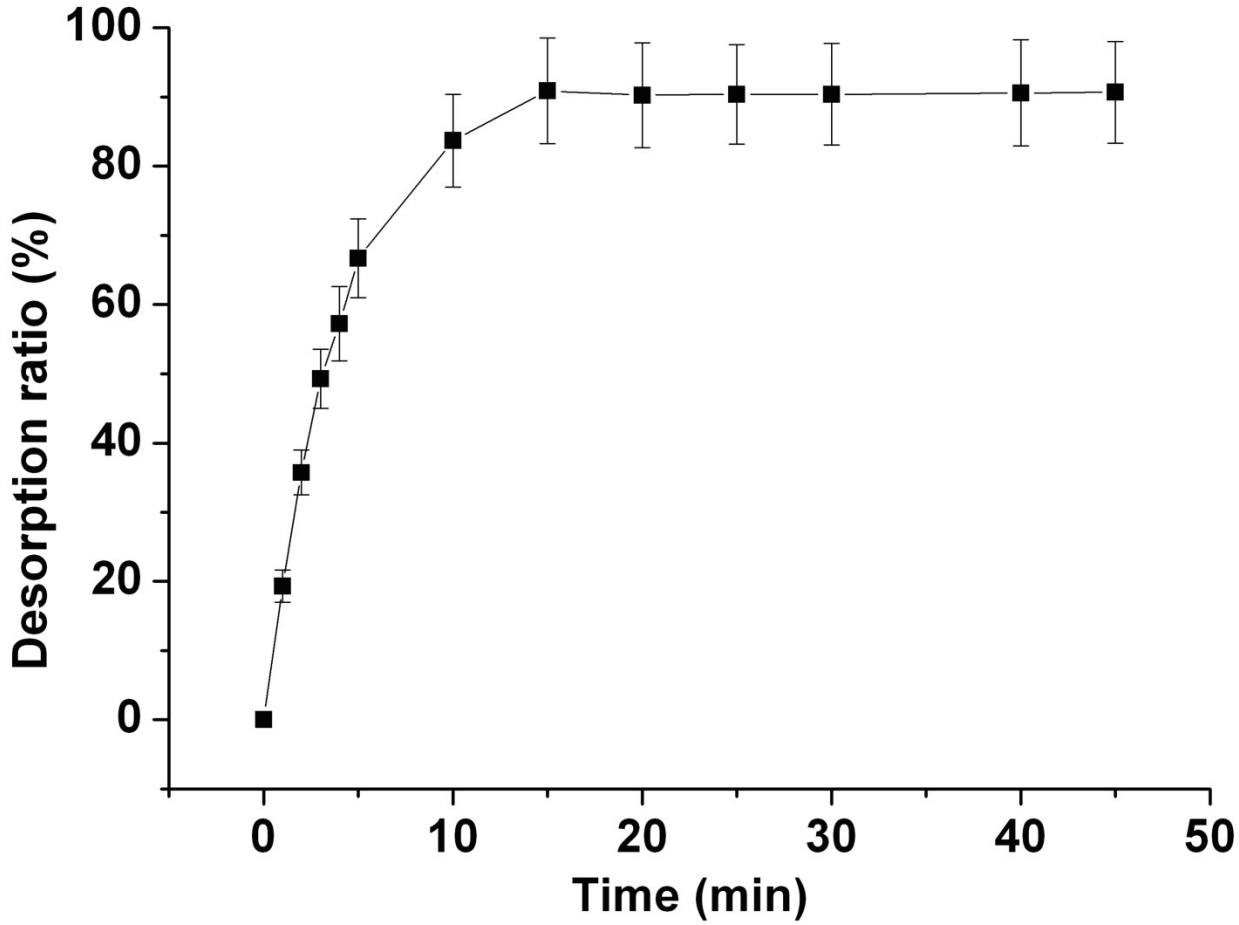

Figure S10. Schematic illustration of the possible mechanism of adsorption and desorption behavior of the AChE on zeolite beta

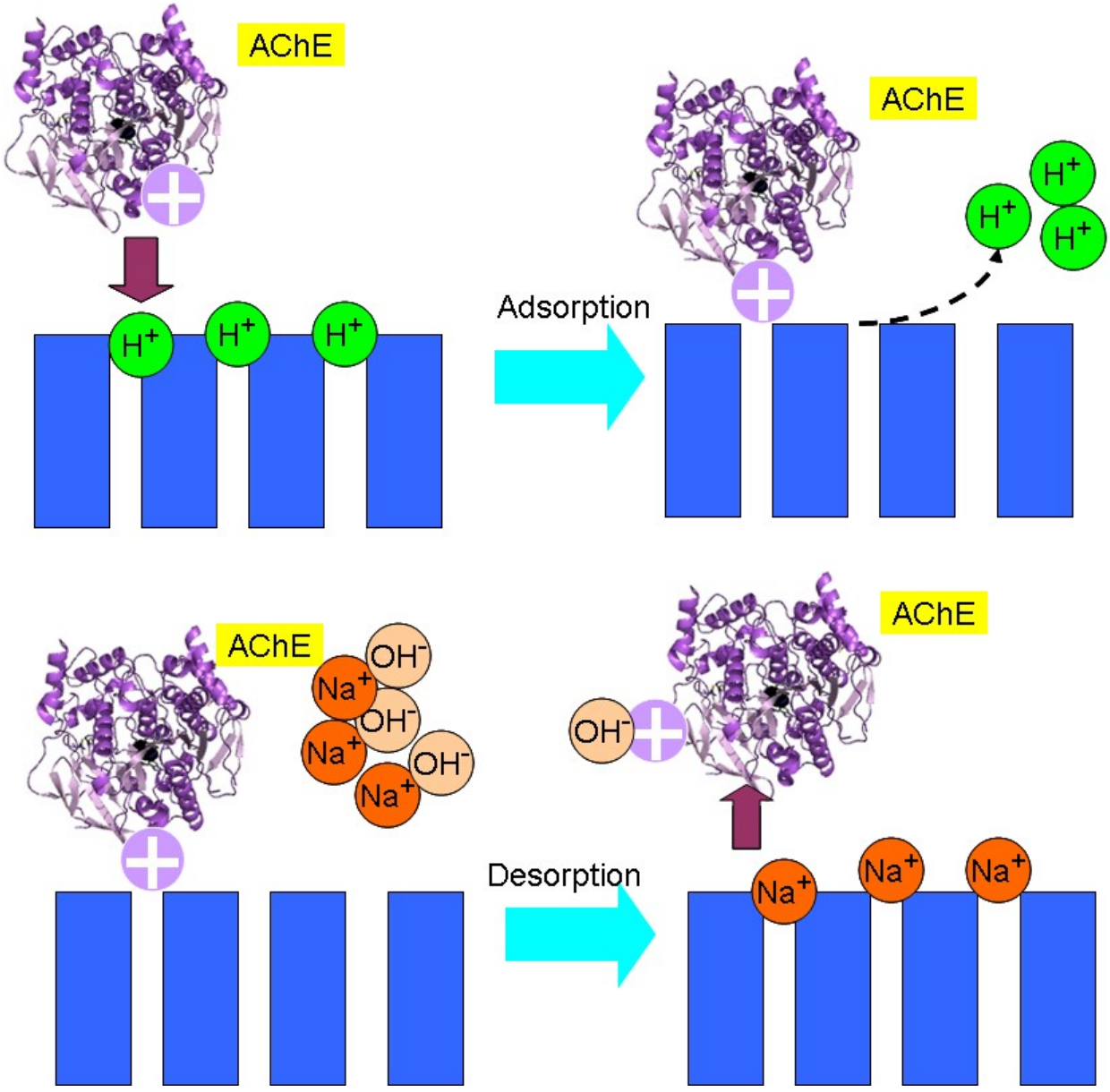

Figure S11. Effect of wash times and wash solvent, ** indicates P<0.05, as compared with wash_1 or 10% methanol-water.

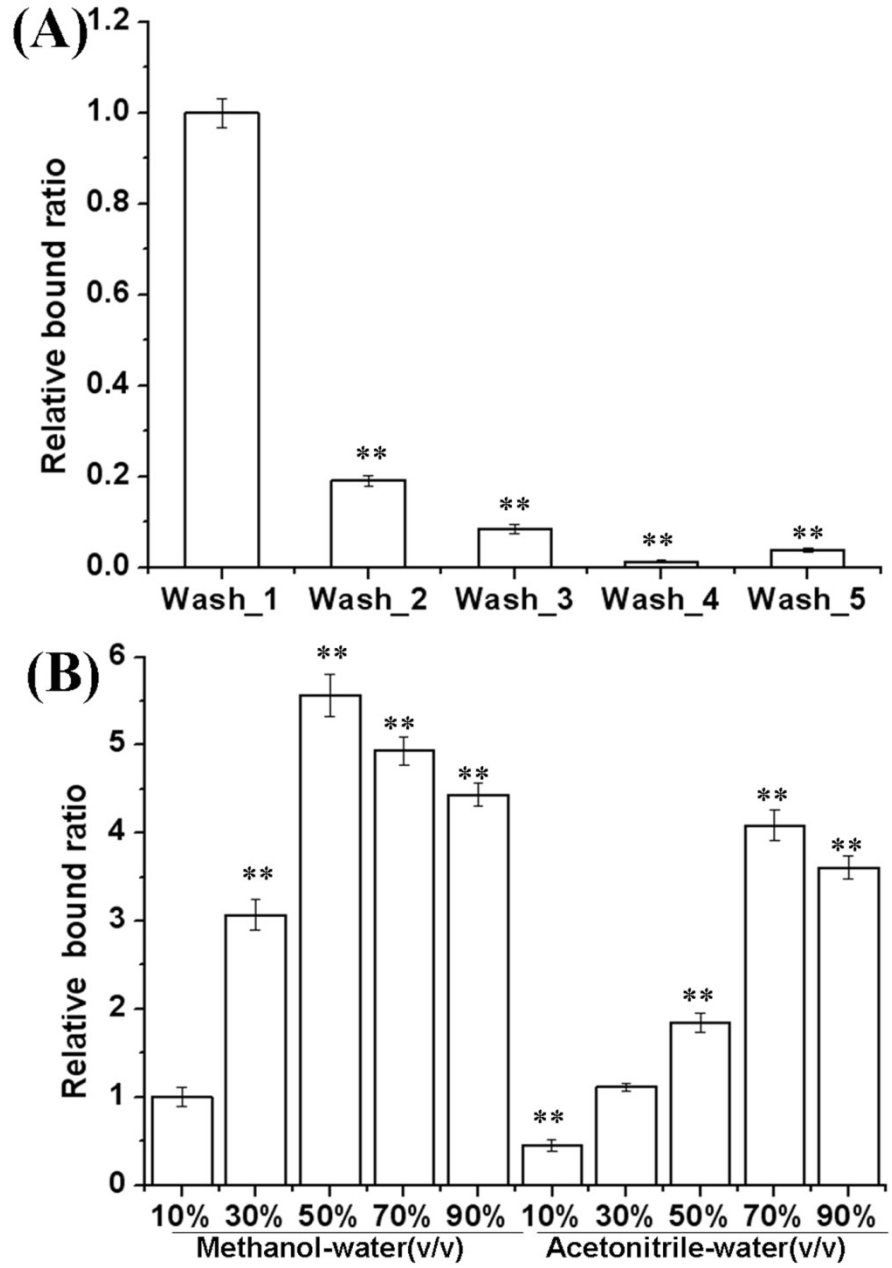

Figure S12. Optimization of multiple related parameters including ionic strength, pH, incubation time and temperature. ** indicates P<0.05, as compared with pH 5.7, 5 min incubation time, 10mM ion strength or 20 °C.

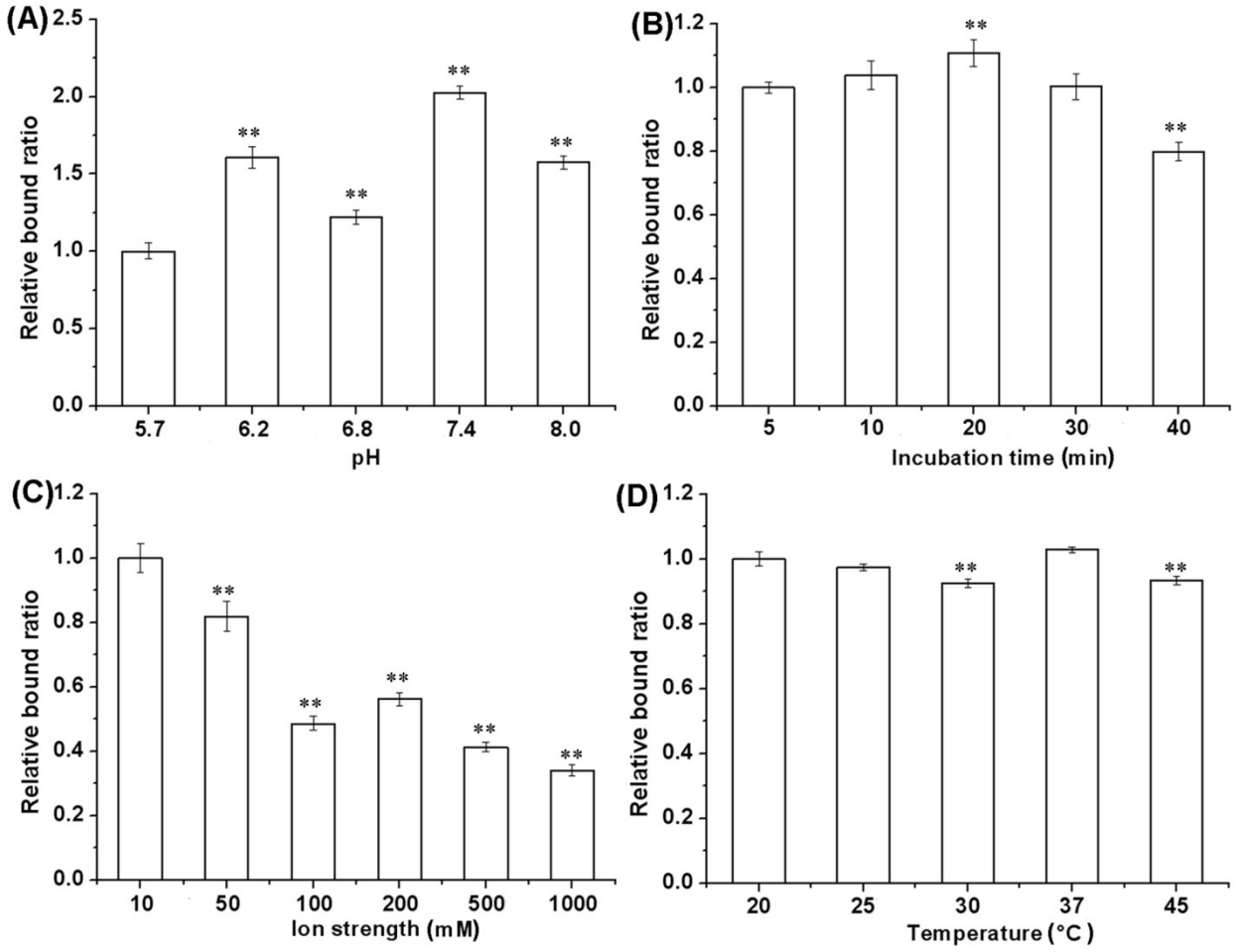

Figure S13. Specificity of the AChE immobilized zeolite based solid-phase extraction approach

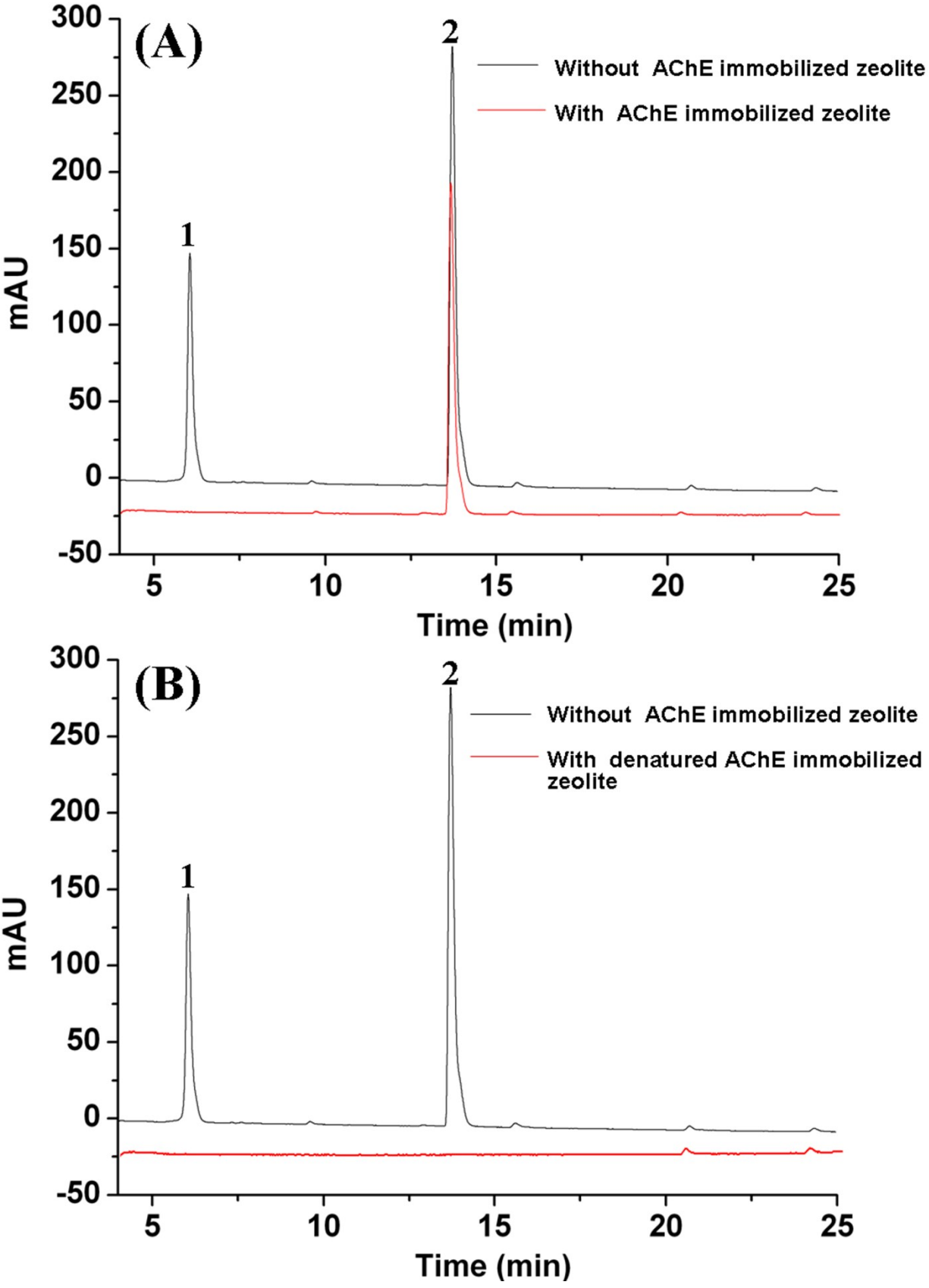

Figure S14. Reusability of the AChE immobilized zeolites and AChE conjugated magnetic nanoparticles for ten consecutive cycles

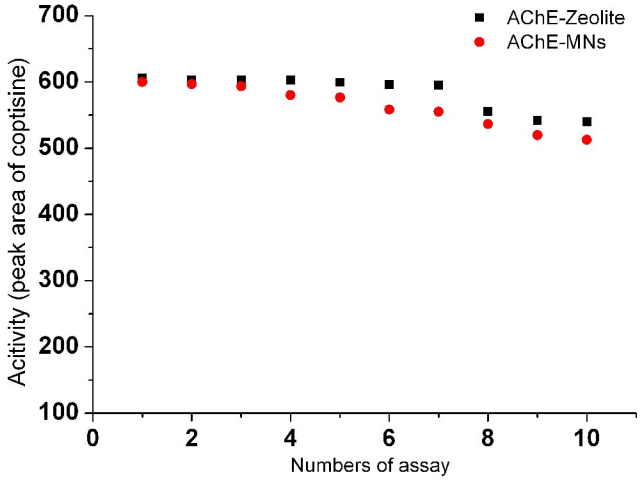

Figure S15. Total ion chromatograms of nine standard compounds

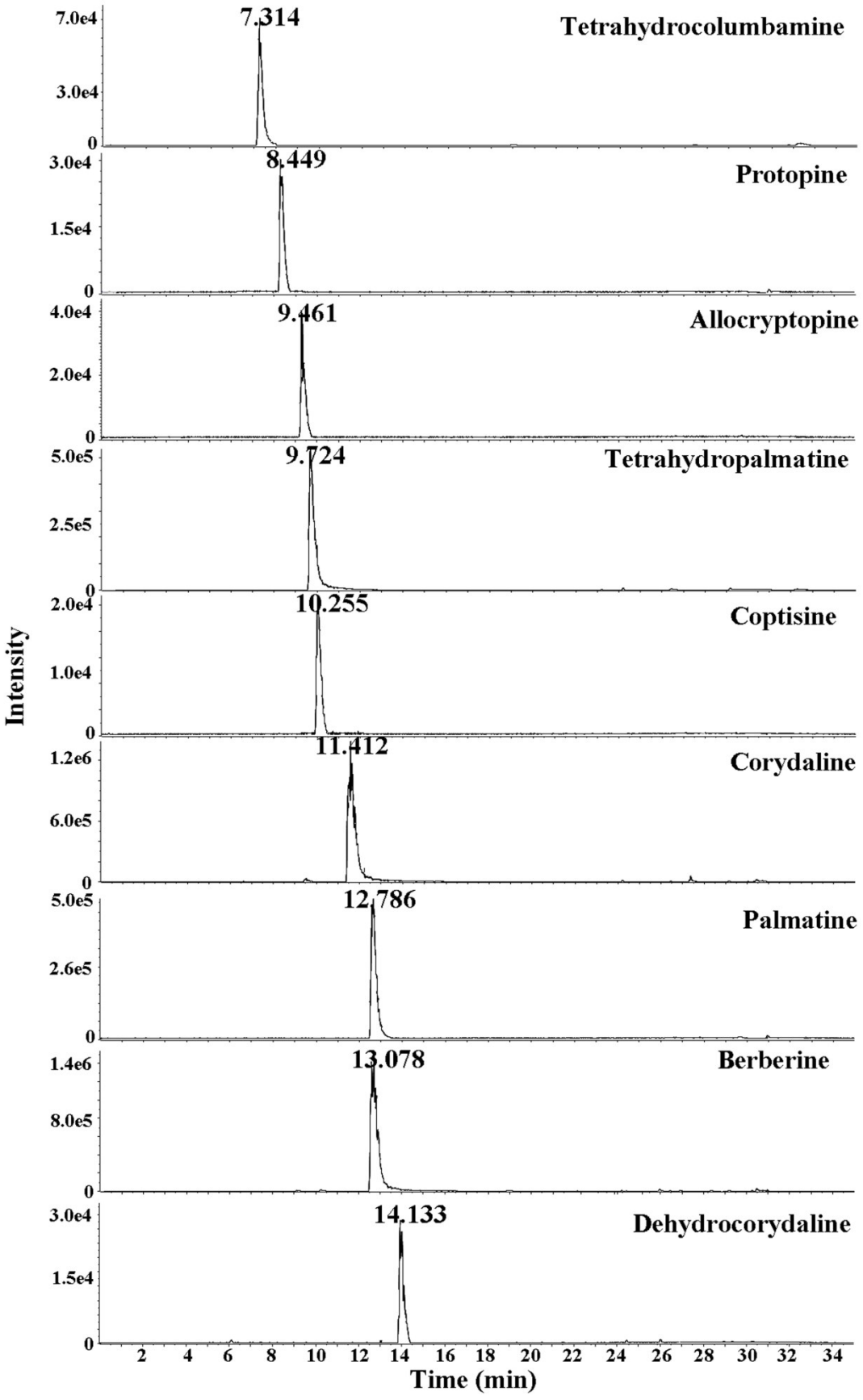

Figure S16. Chemical structures of constituents in crude extract of *Corydalis yanhusuo*

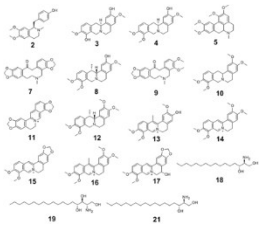

Figure S17. A Venn diagram demonstrating commonly and exclusively constituents by using the two SPE methods

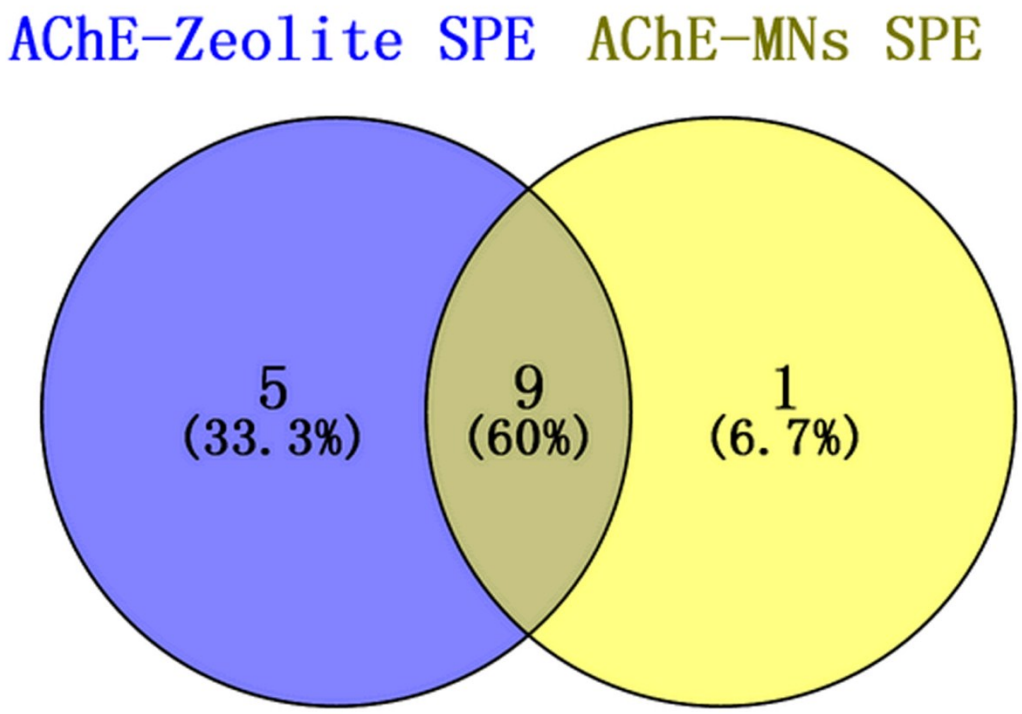

Figure S18. MS^2 spectra of (A) peak **4** with *m/z* 342.1710 Da, (B) peak **5** with *m/z* 356.1866 Da, (C) peak **7** with *m/z* 354.1348 Da

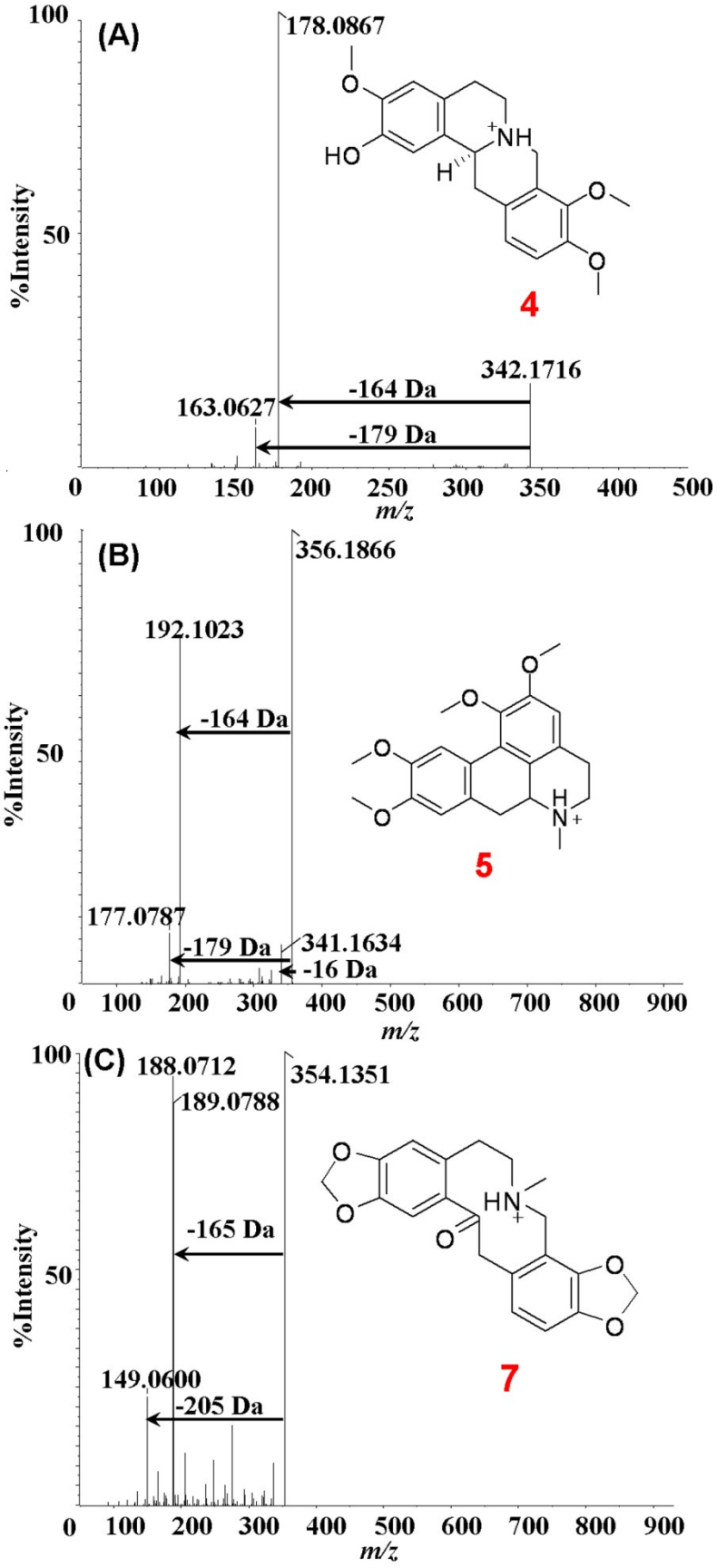

Figure S19. MS^2 spectra of (A) peak **8** with *m/z* 356.1867 Da, (B) peak **10** with *m/z* 356.1868 Da, (C) peak **14** with *m/z* 352.1558 Da