



ChemTech

International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.9, pp674-680,2017

Study on the retention behavior of famotidine in hydrophilic interaction liquid chromatography

Marwah Adnan Abbas, Ashraf Saad Rasheed*

Department of Chemistry, College of Science, University of Baghdad, Al-Jadriya campus, 10071 Baghdad, Iraq

Abstract: Zwitterionic stationary phase with largely capacity was obtained by attachment sulfobetaine monomer ($\text{H}_2\text{C}=\text{CHC}_6\text{H}_4\text{CH}_2\text{N}^+(\text{CH}_3)_2-(\text{CH}_2)_5-\text{SO}_3^-$) onto a PS/DVB particles was investigated for chromatographic separation of famotidine. The retention behavior of famotidine was examined with eluent at various ACN contain, buffer concentrations and pH. The separation mechanism is based on partitioning in hydrophilic interaction liquid chromatography and ZIC ion exchange resulting in a mixed mode for the famotidine. A direct calibration graph was constructed for ZIC₅ stationary phase and it was found that the linear range (20-800 $\text{ng}\cdot\text{ml}^{-1}$), RSD% (0.74-2.03), LOD (3.56 $\text{ng}\cdot\text{ml}^{-1}$), LOQ (11.87 $\text{ng}\cdot\text{ml}^{-1}$).

Keywords: Zwitterionic chromatography, Sulfobetaine stationary phases, famotidine, Retention mechanism, ion exchange.

Ashraf Saad Rasheed *et al*/International Journal of ChemTech Research, 2017,10(9): 674-680.
