

Different mobile phases and elution programs were optimized to separate seven basic pharmaceuticals using LC-QTOF/MS

Abstract :

Analysis of pharmaceuticals is very important, because these compounds have broad spectrum of chemicals and consider environmental emerging issue, so in this article several mobile phases and elution programs were optimized to separate 7 pharmaceutically active compounds with different therapeutic classes of pharmaceuticals using LC-QTOF/MS. A simple, reproducible and sensitive method for the separation of these compounds were provided using LC-QTOF/MS by gradient elution with a flow rate of 0.3 ml/min. The retention factor, selectivity, tailing factor and resolution were calculated for all compounds. Linearity for all compounds was satisfied in terms of  $R^2 > 0.99$ . Limit of detection and limit of quantitation for all compounds were (0.9-5  $\mu\text{g/l}$ ) and (3.2-16.6  $\mu\text{g/l}$ ) respectively.