

Effects of Concentration of Ionic Liquids on Resolution of Aminobenzoic Acids in PR-HPLC

정금주, Yulia Polyakova, 노경호*

인하대학교

(rowkho@inha.ac.kr*)

In this paper, three aminobenzoic acids with different directivity such as ortho-, para-, meta- were separated using different types of ionic liquids as an additive in the mobile phase in HPLC. And the three ionic liquids, 1-butyl-3-methylimidazolium tetrafluoroborate ([BMIm][BF₄]), 1-ethyl-3-methylimidazolium tetrafluoroborate ([EMIm][BF₄]), and 1-ethyl-3-methylimidazolium methylsulfate ([EMIm][MS]) were used. From these ionic liquids, [BMIm][BF₄] seemed to be the most suitable, because of the good resolution. Between the samples, the mobile phase composition was 25 vol. % of modifier (water:methanol=75:25 (vol. %)) with different concentrations of each ionic liquid. Separation of aminobenzoic acids was done on commercially available octadecyl silica column (4.6×150 mm i.d. and particle size 5 μm). Effects of counterions on different ionic liquids and their concentrations in the retention and separation of aminobenzoic acids were discussed and interpreted on the basis of intermolecular interactions.