

## Retention of some polar compounds as a function of ionic liquid modifier content in RP-HPLC

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Four commonly known equations, two linear (Soczewinski and Langmuir-type) and two quadratic, have been applied for investigation of influence of imidazolium ionic liquids modifiers on the retention-eluent composition relationships in reversed-phase high performance liquid chromatography. In this study, three ionic liquids (1-butyl-3-methylimidazolium tetrafluoroborate, 1-ethyl-3-methylimidazolium methylsulfate, and 1-octyl-3-methylimidazolium methylsulfate) were evaluated as mobile phase modifiers. In experiment, nine solutes belonging to three chemical classes, and namely: nucleic compounds (uridine 5'-monophosphate, inosine 5'-monophosphate, guanosine 5'-monophosphate, and hymidine 5'-monophosphate disodium salts), nitrogen-containing heterocycles (guanine and hypoxanthine), and amino benzoic acids (ortho-, meta-, and para-isomers of amino benzoic acid) were tested. Statistical evaluation of models of chromatographic retention was performed and discussed. The best correlations were achieved employing Langmuir-type and Soczewinski equations.