Abstract

The aim of the thesis is to study the relationship between the structure of *N*-benzylsalicylthioamide derivatives and their retention behavior in high-pressure liquid chromatography. Furthermore, the influence of various substituents on electron absorption spectra in ultraviolet spectral range was studied. All studied derivatives have two absorption maxima in ultraviolet spectral range at 260 nm and 293 nm. The substitution of an auxochrome on the acyl ring leads to bathrochromic shift and hyperchromic shift, especially of the first absorption maxima. The presence of an auxochrome on the amide ring leads to hyperchromic shift as well. HPLC reversed-phase chromatography, using XDB-C18 ZORBAX column and mobile phase with various composition of acetonitrile, was used to obtain retention times of the derivatives. Using this data, the correlation equations between retention factor (mobile phase with no acetonitrile), resp. slope of the dependence of the logarithm of retention factor on the volume fracture of acetonitrile in mobile phase, and partition coefficient octanol-water, resp. hydrophobic substituent constants, were derived.

Key words: QSAR, HPLC, spectrometry, benzylsalicylthioamides