# Abstract

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Diploma Thesis Title: Testing of Chromatographic Qualities of Alternative Stationary Phases

Chromatographic qualities of HS F5 column were tested at selected groups of substances. For testing there were chosen substances from the following groups: beta-sympatholytics (acebutolol, bopindolol), neuroleptics (thioridazine, perphenazine), local anesthetics (lidocaine, prilocaine), tetracyclins (oxytetracyclin, minocyclin), methylxanthine derivates (caffeine, theophylline) and aniline. During the analysis the retention of the tested substances was investigated as influenced by the character of the mobile phase. Some of the substances showed U-shaped retention.

Three series of analysis were carried out at each tested group. In analysis number 1 acetonitrile – water was used as the mobile phase, in analysis number 2 the mobile phase was acetonitrile – phosphoric acid 0.085%, and in analysis number 3 it was acetonitrile – acetate buffer solution pH 7. In each analysis the acetonitrile percentage in the mobile phase was changed.

In the group of the substances tested the U-shaped retention was shown by beta-sympatholytic acebutolol, bopindolol in analysis series number 2 and 3; neuroleptics thioridazine, perphenazine in analysis series number 2 and thioridazine in analysis series number 3 as well; local anesthetics lidocaine, prilocaine in analysis series number 2; tetracyclins oxytetracyclin, minocyclin in analysis series number 2 and oxytetracyclin in analysis series number 1 as well.