

ABSTRACT

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Title of diploma thesis: Sequential injection chromatography – comparison of spectrophotometric detectors.

Following diploma thesis compares precision and performance of sequential injection chromatography and ultrahigh performance liquid chromatography. For this experiment were used standard solutions of phenolic acids with different concentrations. Both chromatographic systems (sequential injection chromatography and ultrahigh performance liquid chromatography) were set to the same conditions of measurement. For the separation was used the same core-shell column (Ascentis[®] Express C18).

For the detection was used the same chromatographic detector. The separations of all the components were performed by gradient elution using binary mobile phases composed of acetonitrile and acetic acid (at pH 2.7). The values of calibrations and repeatability demonstrate that sequential injection chromatography provides almost the same precision and performance as ultrahigh liquid chromatography.