

## **ABSTRACT**

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Title of thesis: HPLC analysis of selected isoflavones

The diploma thesis deals with the development of a method for determination of the concentration of selected isoflavones in samples of biological material by using HPLC. The method is applicable to both glycosylated (daidzeine, genistine and glycitine) and free forms of isoflavones (daidzeine, genisteine).

The Ascentis® Express RP column 2,7  $\mu\text{m}$ , 10 cm x 3 mm was used for analysis. The mobile phase was composed of a solution of formic acid and acetonitrile and the measurement was performed in a gradient elution mode. The constant flow rate of the mobile phase was set at 0.5 ml / min. The column was thermostated at 30 ° C. The sample injection volume was 10  $\mu\text{l}$ . UV detection was performed at 249 nm and 260 nm.

Six samples of biological material containing isoflavones were analyzed consequently. Based on the calibration previously carried out, concentrations of the isoflavones were determined in the biological samples.

Key words: HPLC, daidzine, genistine, glycitine, analysis