

ABSTRACT

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Analytical Chemistry

Candidate: Michaela Majorová

Supervisor: Doc. RNDr. Dalibor Šatínský, Ph.D.

Title of the diploma thesis: HPLC in nutraceuticals analysis of chlorogenic acids

A new UHPLC method was developed and validated for determination of chlorogenic acids and their di-substituted derivatives in nutraceuticals and the developed method was used for determination of chlorogenic acids in nutraceuticals Kilostop (Astina Pharm, a.s.), Zelená káva Extra (Medicura natural), Maxivitalis Zelená káva (Simply You Pharmaceuticals), Vieste Zelená káva Premium (Volt Retail), Zelená káva bylinný extrakt (Topvet), Zelená káva (VITO LIFE) a Kyselina chlorogenová (VITO LIFE). The analysis was performed on the Ascentis Express® RP-Amide (100 x 2.1 mm; 2.7 µm) column using gradient elution program with mobile phase consisted of mixture of acetonitrile and 5% aqueous solution of formic acid at flow rate of 0.9 ml/min, the PDA detector wavelength was set at 325 nm and the column temperature was 30°C.

Keywords: UHPLC, chlorogenic acid, green coffee extract, RP-Amide column, nutraceuticals