

## **ABSTRACT**

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Biophysics and Physical Chemistry

Candidate: Kateřina Brokešová

Supervisor: Ing. Martin Drastík, Ph. D.

Thesis title: The use of core-shell columns for fluconazole determination

A novel HPLC method for determination of fluconazole in dissolution test samples was developed and partly validated. A matrix formed by lactic and glycolic acid copolymer branched by different compounds was used as a drug carrier. Fluconazol was incorporated as the model drug. The concentration profile of fluconazole was studied by developed HPLC method during the dissolution test. A modern core-shell column Ascentis Express RP-Amide, 10 cm × 3.0 mm; 2.7 μm was employed. A mixture of acetate buffer pH 5.0:methanol (80:20) served as the mobile phase. The flow rate was 0.70 ml/min and the detection wavelength was 260 nm. The temperature of analysis was 50 °C. The retention time of fluconazole was 3.3 min and the whole analysis took just 4 min.

Keywords: fluconazole, core-shell column, HPLC, PLGA