ABSTRACT

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Analytical Chemistry

Candidate: Zuzana Rojková-Kovačíková

Supervisor: Warunya Boonjob, Ph.D

Consultant: Doc. PharmDr. Hana Sklenářová, Ph.D.

Title of diploma thesis: Dispersive liquid-phase microextraction of propofol using Dual valve SIA system with fluorimetric detection

This thesis deals with determination of propofol using automated dispersive liquid – liquid microextraction (DLLME) in SIA system with fluorimetric detection. Amyl acetate was selected as the extraction solvent; acetonitrile was used as the disperser solvent. Measurement parameters in SIA system were optimized. The calibration curve was linear in the range of propofol concentration 8 – 64 µg/ml with the correlation coefficient 0.9945. The limit of detection (LOD = 0.83 µg/ml) and the limit of quantification (LOQ = 7.25 µg/ml) were calculated. Repeatability for concentrations 16 and 64 µg/ml was proved; the values of the relative standard deviations (RSDs) were 1.54% and 1.52%. The analysis time was 152 s in case of one sample injection.