

ABSTRACT

Charles University in Prague, Pharmaceutical Faculty in Hradec Králové

Department of Pharmaceutical Chemistry and Drug Control

Candidate: Mgr. Petra Blažková

Consultant: Doc. RNDr. Jaroslav Sochor, Csc.

ANALYSIS OF PHENOBARBITAL IN BLOOD OF SPME METHOD COUPLED OFF-LINE WITH HPLC

The purpose of the work presented in this thesis was an analytical evaluation of active ingredients using High Performance Liquid Chromatography. The core of the work was an evaluation of phenobarbital level in biological material using Solid Phase Microextraction method in off-line conjunction with HPLC.

The wavelength used for detection was 218 nm. C18 HPLC column was used to perform the analysis. Mobile phase was a mixture of 50 parts of methanol and 50 parts of water. The flow rate was set to 0,6 ml/min. Sample amount was 20 µl. A mixture of 80 parts of methanol and 20 parts of a buffer was used as a solvent to dissolve phenobarbital.

PDMS/DVB fibre was used to extract the drug from a blood sample by SPME. Sorption and desorption time was 20 minutes. The drug was desorbed into methanol.

A calibration curve was created for the quantitative analysis of phenobarbital in rabbit blood. The conditions under which the experiment was undertaken were validated.