

## ABSTRACT

### **ANALYTICAL EVALUATION OF ACTIVE SUBSTANCE BY LIQUID CHROMATOGRAPHY II.**

Diploma thesis

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The subject of this diploma thesis is a determination of active substances by liquid chromatography. In particular it deals with an evaluation of phenobarbital in biological matrix.

Solid phase microextraction (SPME) and high performance liquid chromatography (HPLC) with UV detector (218 nm) and reversed phase C<sub>18</sub> column were used.

The mobile phase consisted of methanol and phosphate buffer in a ratio of 50:50. The flow rate was set to 0,4 ml/min. 20 µl of sample solution was injected on the chromatographic column. Phenobarbital was dissolved in a mixture of methanol and buffer in a ratio of 80:20.

For the SPME extraction from water solution was used carbowax/TPR fibre. The analyte was desorbed into methanol. The extraction time was 20 minutes.

Phenobarbital extraction from rabbit plasma was performed in the same way, but PDMS/DVB fibre instead of carbowax/TPR fibre was used.

Phenobarbital in rabbit plasma was quantified by means of calibration curve.