Abstract

This thesis deals with determination of a mixture of carvacrol with thymol and eugenol by HPLC with electrochemical detection. Carbon paste electrode was used as the working electrode. The separation was performed on Kromasil-C18, 250x4,6 mm column. For the comparison, UV spectrophotometric detection at 275 nm was used besides electrochemical detection. Optimal separation conditions were found: mobile phase consisting of acetonitrile and phosphate buffer in ratio 60:40, the optimal buffer pH was pH 4. As the optimum potential of working electrode during electrochemical detection, potential +1.1 V was found. Under the obtained optimal conditions, calibration dependences were measured. Limit of quantification for carvacrol was found to be $9{,}6 \cdot 10^{-7}$ mol dm^{-3} using UV spectrophotometric detection and $4{,}0 \cdot 10^{-8}$ mol dm^{-3} using electrochemical detection.