

Abstract

Determination of the Biologically Active Substances using High Liquid Chromatography

V.

Thesis

Denisa Kokošková

Charles University in Prague, Faculty of Pharmacy in Hradci Králové

Department of Pharmaceutical Chemistry and Drug Control

In this thesis was optimized determination method of salicylic acid, as the main decomposition product, from acetylsalicylic acid, which is presented in Acylpyrin, Acylcoffin and Acifein. For evaluation was used high performance liquid chromatography with electrochemical detection. Through monolithic column was analyzed Phenomenex 100 x 4,6 mm, Onyx monolithic C8. Optimization and verifying of suggested conditions electrochemical detection was focused on exploration of mobile phase and sample dissolvent. Suitable mobile phase was 50mM phosphate buffer liquid (pH 2,5) and acetonitrile in ration 80 : 20. Flowing throw column was 1ml/min, temperature 25°C, injected volume 10 µl. Electrical potential was adjusted to values $E_1= 300$ mV, $E_2= 850$ mV. Range was 1 µA. Optimized method was validated, parameters were precision, accuracy, linearity, specificity, robustness, limit of quantitation and limit of detection. The sample stability of Acylpyrin tablets was monitored for 48 hours.