



Vás zve na seminář:

FIA-ED: optimization of method for electrochemical study of doxorubicin

Mgr. Roman Guráň, Doc. RNDr. Pavel Kopel, Ph.D., Mgr. Ondřej Zítka, Ph.D.

Abstrakt

In the cancer treatment the drug doxorubicin, among others, is widely used. This drug has over its good cytostatic properties also cardiotoxic properties. For its negative properties there are still developed a new application possibilities that lead to reductions in dosage of this substance. Due to continuous development in this area it is necessary to establish low



concentrations of doxorubicin in various matrices. In this work, we focused on improving the electrochemical detection of doxorubicin in combination with flow injection analysis. The most suitable condition for the electrochemical detection of doxorubicin an alkaline pH was determined. Optimization of the buffer environment suitable for electrochemical detection using flow injection analysis (FIA-ED) was carried out in this work. Best detection was achieved using a Britton-Robinson buffer of pH 10. Decrease of pH lead to the reduction of the

signal intensity. These results suggest the possibility of improving the detection limits, when methods such as HPLC-ED are used, where buffers with substantially lower pH are commonly used.

pátek 19. 09. 2014, od 16:00

Ústav chemie a biochemie, Laboratoř metalomiky a nanotechnologií, Zemědělská 1, 613 00 Brno, Kontakt: kizek@sci.muni.cz

