Abstract:

Differential pulse voltammetry was used to study the behaviour of triclosan at a carbon paste electrode. The influence of various pH values of Britton-Robinson buffer and various amounts of methanol was studied. Optimal found value of pH was pH 11 and there was no difference in voltammetric signal in the media with various amounts of added methanol. Accumulation on the electrode surface was negligible and did not result in significant triclosan signal increase.

The limit of detection of $1{,}2 \cdot 10^{-7}$ mol dm^{-3} and the limit of quantification of $2{,}0 \cdot 10^{-7}$ mol dm^{-3} triclosan were found.

Real samples were studied by differential pulse voltammetry, high-performance liquid chromatography and spectrophotometry. The results were compared and applicability of differential pulse voltammetry to real samples without special preparation step was evaluated. Surfactants present in samples obscured the voltammetric determination of triclosan in some samples even in case of the utilization of standard addition method.