

Abstract

In this bachelor thesis voltammetric behavior of Diafenthiuron using carbon paste electrode was investigated. Methodes used in this thesis were differential pulse voltammetry, cyclic voltammetry and DC voltammetry. Britton-Robinson buffer of optimal pH in mixture with methanol was used as a base electrolyte. Optimal pH of Britton-Robinson buffer was pH 3 for DC voltammetry and cyclic voltammetry and pH 5 for differential pulse voltammetry.

Under optimal conditions limit of detection and limit of quantification for differential pulse voltammetry and DC voltammetry in 50% methanol were estimated. For differential pulse voltammetry detection limit was found to be $1,5 \cdot 10^{-5}$ mol/l and quantification limit was found to be $5 \cdot 10^{-5}$ mol/l. For DC voltammetry the detection limit was $1,7 \cdot 10^{-5}$ mol/l and quantification limit was $5,8 \cdot 10^{-5}$ mol/l.