

Voltammetric detection of stigmasterol at boron doped diamond electrode in mixed media

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Abstract

The aims of the study thesis was to suggest suitable solvent for oxidation of stigmasterol on boron doped diamond electrode. Cyclic voltammetry in mixed media of water and organic solvents was used for this purpose. First of all, the effect of organic solvent on potential window of boron doped diamond electrode was studied. Solvents used were methanole, isopropanole, *N*-dimethylformamide and acetonitrile; the water components was phosphate buffer (0,075 mol.l⁻¹, pH 3,0). It was deduced from the results, that suitable solvent for detection of stigmasterol on was the acetonitrile, which provided sufficiently large potential window in anodic area.

Keywords: boron doped diamond electrode, cyclic voltammetry, organic solvent, oxidation, stigmasterol

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