

عنوان مقاله:

تعیین حساس سیستم‌آمین با استفاده از حسگر الکتروشیمیایی یکبار مصرف بر پایه الکتروود صفحه چاپی اصلاح شده

محل انتشار:

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خلاصه مقاله:

In the present study, the cysteamine electrochemical features were explored by La₂O₃/Co₃O₄ nanocomposite-modified screen printed electrode (La₂O₃/Co₃O₄/SPE) using voltammetry, chronoamperometry, and differential pulse voltammetry (DPV) techniques. The synthesized La₂O₃/Co₃O₄ nanocomposite qualities were considered by SEM, FT-IR, and XRD analyses. Exploiting the modified SPE electrode with La₂O₃/Co₃O₄ nanocomposite, the cysteamine electrooxidation kinetics was significantly enhanced by reducing the anodic over-potential. The constructed La₂O₃/Co₃O₄/SPE revealed voltammetric reactions of high sensitivity for cysteamine, resulting in a highly appropriate means of trace levels cysteamine measurement. The electrooxidation peak currents for cysteamine were found to change linearly in relation to its concentrations (1.0–700.0 μM) in detection limit of 0.3 μM. La₂O₃/Co₃O₄/SPE was utilized for the cysteamine quantification in real specimens.

کلمات کلیدی:

Cysteamine, Screen Printed Electrode, Electrooxidation, Voltammetry, La₂O₃/Co₃O₄ nanocomposite

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