

论文

对乙酰氨基酚在导电聚合物修饰电极上的电化学反应及其伏安测定

汪振辉;张永花;周漱萍

河南师范大学化学与环境科学学院,河南省高校环境科学与工程重点学科开放实验室,河南新乡453002

摘要:

目的 研制具分子识别功能的导电聚合物修饰电极及其电化学性质,建立对乙酰氨基酚(ACOP)测定方法。方法 以吡啶橙单体在玻碳电极(GCE)表面用电化学方法制备聚吡啶橙(POAO)修饰电极。结果 GCE表面形成了导电POAO聚合膜,对ACOP有明显的分子识别和电催化功能,使ACOP的氧化过电位降低128mV。结论 POAO电极稳定耐用,寿命至少3个月,可用于药物制剂中ACOP的定量测定。

关键词: 对乙酰氨基酚 聚吡啶橙修饰电极 伏安法

ELECTROCHEMICAL BEHAVIOR OF ACETAMINOPHEN AT POLY(ACRIDINE ORANGE) MODIFIED ELECTRODE AND ITS DETERMINATION BY VOLTAMMETRY

ANG Zhen-hui; ZHANG Yong-hua; ZHOU Shu-ping

Abstract:

AIM To study the conducting polymer modified electrode which has the molecule recognition characteristics. A novel method for the determination of acetaminophen (ACOP) was established using this polymer electrode. METHODS The acridine orange as monomer, the poly (acridine orange) (POAO) modified electrode was polymerized on a glassy carbon electrode by cyclic voltammetry. The polymer electrode used as working electrode, ACOP was determined by multiple semi-differential voltammetry. RESULTS The POAO modified electrode showed molecular recognition and electrocatalysis characteristics for ACOP, the oxidative overpotential of ACOP could be decreased by 128 mV. CONCLUSION The life of the modified electrode was three months, and it can be used for the determination of ACOP in pharmaceutical preparations.

Keywords: poly (acridine orange) modified electrode voltammetry acetaminophen

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