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(71) 申请人: 南京岚煜生物科技有限公司 (LANSON BIOTECHNOLOGY CO., LTD.) [CN/CN]; 中国江苏省南京市江宁区科学园乾德路 6 号, Jiangsu 211100 (CN)。

(72) 发明人: 许行尚 (XU, Xingshang); 中国江苏省南京市江宁区科学园乾德路 6 号, Jiangsu 211100 (CN)。 陈杰弗瑞 (CHEN, Jeffery); 中国江苏省南京市江宁区科学园乾德路 6 号, Jiangsu 211100

(CN)。 王龙 (WANG, Long); 中国江苏省南京市江宁区科学园乾德路 6 号, Jiangsu 211100 (CN)。

(74) 代理人: 南京正联知识产权代理有限公司 (NANJING ZHENGLIAN INTELLECTUAL PROPERTY AGENCY CO., LTD.); 中国江苏省南京市汉中门大街一号金鹰汉中新城 27 层, Jiangsu 210029 (CN)。

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(54) Title: ELECTROCHEMICAL DETECTION METHOD BASED ON SCREEN-PRINTED ELECTRODE

(54) 发明名称: 基于丝网印刷电极的电化学检测方法

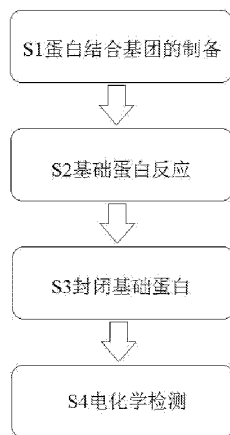


图 1

- S1 Preparation of a protein binding group
S2 Basic protein reaction
S3 Basic protein blocking
S4 Electrochemical detection

(57) Abstract: An electrochemical detection method based on a screen-printed electrode. The method specifically comprises the following steps: S1, the preparation of a protein binding group, involving: treating a working electrode on a screen-printed electrode substrate, wherein the protein binding group is adhered to the working electrode; S2, basic protein reaction, involving: adding a basic protein, and an active group in the basic protein reacting with the protein binding group in step S1; S3, basic protein blocking, involving: performing, by using a blocking solution, a blocking treatment on the basic protein which has been subjected to reaction in step S2, so as to obtain a screen-printed electrode to be subjected to detection; and S4, electrochemical detection, involving: adding a detection reagent that contains a target protein, performing a specific reaction on the basic protein and the target protein, and performing electrochemical analysis on data collected from the working electrode after reaction, so as to obtain a detection result. Data is collected for electrochemical analysis, such that results of different detection items can be obtained according to different basic proteins and target proteins; and the electrochemical detection method has high sensitivity.

(57) 摘要: 一种基于丝网印刷电极的电化学检测方法, 具体包括以下步骤: S1 蛋白结合基团的制备: 对丝网印刷电极基片上的工作电极进行处理, 粘附有蛋白结合基团; S2 基础蛋白反应: 加入基础蛋白, 基础蛋白上的活性基团与步骤 S1 中的蛋白结合基团进行反应; S3 封闭基础蛋白: 采用封闭液对步骤 S2 中反应后的基础蛋白进行封闭处理, 得到待检测丝网印刷电极; S4 电化学检测: 加入含有目标蛋白的检测试剂, 基础蛋白与目标蛋白进行特异反应, 并对反应后的工作电极采集数据进行电化学分析, 得出检测结果。采集数据进行电化学分析, 根据不同的基础蛋白和目标蛋白即可得出不同检测项目的结果, 灵敏度高。

[见续页]

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