Short Communication

Development of a New Point of Care Testing for Electrochemical Detection of Glucose in Blood

Hui Wang¹ and Kun Wang^{*}

¹ General Medicine, Liaoning Cancer Hospital and Institute, Shenyang, Liaoning 110041, China

² Obstetrics and Gynecology, Peace Branch of Northern Theatre General Hospital, Shenyang, Liaoning 110812, China

*E-mail: wangkgood@163.com

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Currently, blood glucose testing in the hospital is performed by an automated biochemistry analyzer in the laboratory and the point of care testing (POCT) meter. In this work, a POCT meter was fabricated with Pt-Pd nanowires. Combined with electrochemical synthesis techniques, an enzyme-free electrochemical sensor for glucose detection was constructed with a porous anodic alumina template with Pt-Pd standing on a gold electrode surface. Optimal conditions were determined in this work for glucose detection and also the sensitivity, stability, repeatability and interference resistance of the sensor for glucose detection were examined under simulated physiological conditions. In addition, the proposed POCT electrochemical sensor was adopted to compare the results with those of a biochemical instrument.

Keywords: Point of care; Electrochemical sensor; Glucose; Biochemical analyzer; Diabetes

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