

Amperometric enzyme immunosensors for diagnosing certain infectious diseases

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Abstract

Amperometric enzyme immunosensors based on planar electrodes were developed for the rapid determination of some bacterial antigens. Conditions for the operation of analytical devices (matrix component, pH of the buffer solution, and the dilution of antibodies in the biosensing part of the sensor) were selected. The analytical characteristics of enzyme immunosensors (analytical ranges and determination limits) were estimated. The analytical devices were tested in determining pyogenic streptococcus and aurous staphylococcus antigens in the blood serum of patients suffering from infectious diseases. It was shown that the developed sensors can be used for diagnosing diseases caused by these microorganisms. © 2005 Pleiades Publishing, Inc.

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