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Determination of bacterial antigens using a multichannel immunoenzyme amperometric sensor

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Abstract

A procedure for the individual determination of the antigens of the conditionally pathogenic micro-organisms *Streptococcus pyogenes* and *Staphylococcus aureus* present in combination using a multichannel immunoenzyme amperometric sensor based on a screen-printed electrode was developed. Conditions for fabricating the biosensing part and for the operation of the sensor (the matrix component, the ratio between biocomponents, and the substrate concentration) were chosen. The determination limits of bacterial antigens obtained using the analytical device were equal to 5×10^{-9} mg/mL. It was found that bacterial antigens simultaneously present in serums from patients can be determined using the sensor developed. © Pleiades Publishing, Inc., 2006.

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