

Stochastic microsensors based on nanostructured materials used in the screening of whole blood for hepatitis B

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A study of the electrochemical active materials used for stochastic sensors' design was performed in order to identify the best materials for screening of whole blood for hepatitis B.

The electrochemical active materials proposed were from the classes of maltodextrins, cyclodextrins, porphyrins, and hemolysine. The matrix used was diamond paste.

The chronoamperometry was able to show the "signature" of the HBc Ag which is the biological substance responsible for hepatitis B, as well as to make a quantitative evaluation of the antigen in whole blood. The results obtained using the proposed microsensors were correlating very well with those obtained using the standard methods used in clinical analysis.

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