

Title (en)

REVERSIBLE ELECTROCHEMICAL SENSORS FOR POLYIONS

Title (de)

REVERSIBLE ELEKTROCHEMISCHE SENSOREN FÜR POLYIONEN

Title (fr)

CAPTEURS ELECTROCHIMIQUES REVERSIBLES DE POLYIONS

Publication

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Application

EP 06800512 A 20060727

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Abstract (en)

[origin: KR20080053460A] The present invention is directed to a reversible electrochemical sensor for polyions. The sensor uses active extraction and ion stripping, which are controlled electrochemically. Spontaneous polyion extraction is suppressed by using membranes containing highly lipophilic electrolytes that possess no ion-exchange properties. Reversible extraction of polyions is induced by constant current pulse of fixed duration applied across the membrane. Subsequently, polyions are removed by applying a constant stripping potential. The sensors provide excellent stability and reversibility and allow for measurements of heparin concentration in whole blood samples via protamine titration. The sensors can also monitor a polyion concentration and an enzyme activity, wherein the polyion decomposition is directly proportional to the enzyme activity in a sample. Additionally, the sensors can monitor an enzyme inhibitor activity. Also, an immunoassay can be used to detect analytes by employing one of a polyion and an enzyme as markers.

IPC 8 full level

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