Title (en)

HYDROPHILIC CROSS-LINKING AGENTS FOR USE IN ENZYMATIC SENSORS

Title (de)

HYDROPHILE VERNETZUNGSMITTEL ZUR VERWENDUNG IN ENZYMATISCHEN SENSOREN

Title (fr)

AGENTS DE RETICULATION HYDROPHILES S'UTILISANT DANS DES CAPTEURS ENZYMATIQUES

Publication

EP 1587546 A4 20070214 (EN)

Application

EP 03814924 A 20031219

Priority

- US 0341060 W 20031219
- US 33550602 A 20021231

Abstract (en)

[origin: WO2004060297A2] An enzymatic sensor comprising an enzyme that generates a signal upon contact with an analyte; a substrate; and a cross-linking agent that comprises one or more hydrophilic moieties. The enzyme is immobilized in the substrate via the hydrophilic cross-linking agent. A biocompatible membrane, comprising the enzyme, substrate and the hydrophilic cross-linking agent, is applied to a sensor to produce an enzymatic sensor. The enzymatic sensor provides enhanced sensing capabilities by improving the diffusion of reactive species and thereby increasing the overall sensitivity and lifetime of the sensor. The incorporation of hydrophilic moieties into the cross-linking agent optimizes hydration of the sensor and creates hydrophilic channels or pathways for reactive species, such as H202 and the analyte of interest. The membrane and enzymatic sensor can be used in a method for detecting an analyte, such as glucose.

IPC 1-7

A61K 49/00; C12Q 1/26; C12N 1/00; C12N 11/18; C12N 9/96; C12N 9/02

IPC 8 full level

C12N 11/06 (2006.01); **C12Q 1/00** (2006.01)

CPC (source: EP)

C12N 11/06 (2013.01); **C12Q 1/006** (2013.01)

Citation (search report)

- [A] WO 9817995 A1 19980430 - MINIMED INC [US]
- [A] US 6462162 B2 20021008 - VAN ANTWERP WILLIAM PETER [US], et al
- See also references of WO 2004060297A3

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