

Title (en)

NON-INVASIVE BODY FLUID SAMPLING AND ANALYSIS

Title (de)

NICHTINVASIVE KÖRPERFLUSSENTNAHME UND -ANALYSE

Title (fr)

SYSTEME, PROCEDE ET DISPOSITIF POUR LE PRELEVEMENT NON-INVASIF ET L'ANALYSE DE FLUIDES ORGANIQUES

Publication

EP 1225831 A2 20020731 (EN)

Application

EP 01918770 A 20010316

Priority

- US 0108489 W 20010316
- US 18997100 P 20000317

Abstract (en)

[origin: WO0170330A2] A system, method, and device for non-invasive body fluid sampling is provided. According to one embodiment of the present invention, the system includes a controller that controls the generation of ultrasound; an ultrasonic applicator that applies the ultrasound to an area of biological membrane; a receiver that contacts the area of biological membrane and receives body fluid through and out of the area of biological membrane; and a meter that interacts with the receiver and detects the presence of at least one analyte in the body fluid in the receiver. The receiver may include a membrane and a medium, such as a hydrogel, a fluid, or a liquid, that is contained in the membrane. According to one embodiment of the present invention, the method includes the steps of (1) identifying an area of biological membrane having a permeability level; (2) increasing the permeability level of the area of biological membrane; (3) contacting the area of biological membrane with a receiver; (4) extracting body fluid through and out of the area of biological membrane; (5) providing an external force to enhance the body fluid extraction; (6) collecting the body fluid in the receiver; (7) analyzing the collected body fluid for the presence of at least one analyte; and (8) providing the results of the step of analyzing the body fluid.

IPC 1-7

A61B 5/00

IPC 8 full level

A61B 5/00 (2006.01); **A61B 5/15** (2006.01); **A61M 37/00** (2006.01); **G01N 33/48** (2006.01)

CPC (source: EP)

A61B 5/14514 (2013.01); **A61B 5/14532** (2013.01); **A61M 37/0092** (2013.01); **A61M 2037/0007** (2013.01)

Citation (search report)

See references of WO 0170330A2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0170330 A2 20010927; **WO 0170330 A3 20020523**; AU 4580901 A 20011003; AU 781149 B2 20050505; CA 2374751 A1 20010927; CA 2374751 C 20091013; EP 1225831 A2 20020731; JP 2003527613 A 20030916; JP 2012068263 A 20120405

DOCDB simple family (application)

US 0108489 W 20010316; AU 4580901 A 20010316; CA 2374751 A 20010316; EP 01918770 A 20010316; JP 2001568521 A 20010316; JP 2011270093 A 20111209