

Title (en)
ARRANGEMENT AND METHOD FOR THE ANALYSIS OF BIOLOGICAL SAMPLES

Title (de)
ANORDNUNG UND VERFAHREN ZUR ANALYSE BIOLOGISCHER PROBEN

Title (fr)
DISPOSITIF ET PROCÉDÉ D'ANALYSE D'ÉCHANTILLONS BIOLOGIQUES

Publication
EP 2089509 A2 20090819 (DE)

Application
EP 07819729 A 20071109

Priority
• EP 2007009736 W 20071109
• DE 102006053540 A 20061114

Abstract (en)
[origin: DE102006053540B3] Optospectroscopic analysis of a biological sample in fluids, comprises: fixing the biological sample in a sample holding unit; categorizing the particles that are optionally contained in the biological sample based on an analysis of the image data from the microscopic photographs of the biological sample and/or the particles-contained in it, and analyzing the biological sample within a measurement zone that can be positioned in the region of the biological sample, by Raman spectroscopic method. Optospectroscopic analysis of a biological sample in fluids, comprises: fixing the biological sample in a sample holding unit; categorizing the particles that are optionally contained in the biological sample based on an analysis of the image data from the microscopic photographs of the biological sample and/or the particles-contained in it, and analyzing the biological sample within a measurement zone that can be positioned in the region of the biological sample, by Raman spectroscopic method. Based on the results of the categorization procedure, the measurement zone is automatically positioned at defined sections or particles of the biological sample and the Raman spectroscopic analysis is confined to the region of this measurement zone. The fixing of the biological sample takes place by allowing the biological sample to flow through the sample holding unit, which is designed as a fluid cell, where the particles optionally contained in the biological sample are retained in the fluid cell and are fixed there reversibly, at least for the duration of the analysis. The particles are retained in the fluid cell by at least a single perforated plate with many holes that is arranged in the fluid cell and the holes in the perforated plate are arranged in rows and columns and structured in the form of a regular and implementable pattern. An independent claim is included for a device for optospectroscopic analysis of biological samples, comprising: sample holding unit for the local fixation of the biological sample in a measurement zone; excitation radiation unit, suitable for excitation of Raman scattered radiation by excitation radiation in an excitation zone within the measuring zone; and analysis unit, suitable for the spectral analysis of the Raman scattered radiation emitted by the biological sample in the excitation zone, where: the sample holding unit is a fluid cell that can be flowed through by the biological sample; the fluid cell exhibits an instrument that are suitable for retention and temporary reversible fixation of the particles contained in the biological sample; the fluid cell exhibits at least a first perforated plate with several holes with a first diameter as the retention part for holding back the particles, and the holes in the perforated plate are arranged in the perforated plate in rows and columns and structured in the form of a regular and implementable pattern.

IPC 8 full level
C12M 1/34 (2006.01)

CPC (source: EP KR US)
C12M 1/34 (2013.01 - KR); **G01N 15/1433** (2024.01 - EP US); **G01N 21/65** (2013.01 - EP KR US); **G01N 33/48** (2013.01 - KR); **G01N 35/10** (2013.01 - KR); **G06V 20/693** (2022.01 - EP US); **G01N 15/0272** (2013.01 - EP US); **G01N 21/658** (2013.01 - EP US); **G01N 2015/1006** (2013.01 - EP US); **G01N 2021/052** (2013.01 - EP US); **G01N 2021/651** (2013.01 - EP US)

Citation (examination)
US 2006170916 A1 20060803 - VOIGT THOMAS C [US], et al

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
DE 102006053540 B3 20080131; CA 2669382 A1 20080522; CA 2669382 C 20151229; EP 2089509 A2 20090819; JP 2010509601 A 20100325; JP 5328663 B2 20131030; KR 101493336 B1 20150213; KR 20090085095 A 20090806; US 2010315628 A1 20101216; US 8279434 B2 20121002; WO 2008058683 A2 20080522; WO 2008058683 A3 20080814

DOCDB simple family (application)
DE 102006053540 A 20061114; CA 2669382 A 20071109; EP 07819729 A 20071109; EP 2007009736 W 20071109; JP 2009536640 A 20071109; KR 20097011423 A 20071109; US 51479207 A 20071109