

Title (en)
SUBSTANCE CONCENTRATION MEASUREMENT USING A COOLING DEVICE WITH ENDOTHERMIC REACTION

Title (de)
STOFFKONZENTRATIONSMESSUNG UNTER VERWENDUNG EINER KÜHLVORRICHTUNG MIT ENDOTHERMER REAKTION

Title (fr)
APPAREILS ET PROCÉDÉS DE MESURE METTANT EN OEUVRE UN DISPOSITIF DE REFROIDISSEMENT À SUBSTANCES COMBINÉES

Publication
EP 3013229 A2 20160504 (EN)

Application
EP 14739644 A 20140623

Priority
• US 201361838329 P 20130623
• US 2014043716 W 20140623

Abstract (en)
[origin: WO2014209908A2] A measurement apparatus includes a cooling device including two separated, different substances exhibiting an endothermic reaction when combined to decrease a temperature of the cooling device and a contacting mechanism to contact an assay surface with the cooling device. The apparatus includes a temperature measurement device to measure a temperature of the assay surface and an infrared radiation detector to measure infrared radiation emitted or absorbed. A data processor is configured to determine a concentration of a substance in the subject's body using the measured temperature and the infrared radiation. A measurement method includes using the cooling device and decreasing a temperature of the assay surface to a lower temperature, then measuring a temperature of the assay surface during an increase of the temperature. An infrared radiation detector measures infrared radiation emitted from or absorbed by the assay surface during the temperature increase from the lower temperature.

IPC 8 full level
A61B 5/145 (2006.01); **A61B 5/1455** (2006.01); **A61F 7/10** (2006.01); **B65D 81/32** (2006.01)

CPC (source: EP)
A61B 5/01 (2013.01); **A61B 5/14532** (2013.01); **A61B 5/1455** (2013.01); **A61F 7/106** (2013.01); **B65D 81/3211** (2013.01); **A61F 2007/0096** (2013.01); **A61F 2007/0276** (2013.01)

Citation (search report)
See references of WO 2014209908A2

Citation (examination)
US 2009259407 A1 20091015 - GERLITZ JONATHAN [IL]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2014209908 A2 20141231; WO 2014209908 A3 20150226; WO 2014209908 A4 20150423; WO 2014209908 A9 20150514;
CN 105338899 A 20160217; CN 105338899 B 20190820; EP 3013229 A2 20160504; JP 2016523148 A 20160808; JP 6594302 B2 20191023

DOCDB simple family (application)
US 2014043716 W 20140623; CN 201480035578 A 20140623; EP 14739644 A 20140623; JP 2016521891 A 20140623