Title (en)
ANALYTE CONCENTRATION MEASUREMENT

Title (de)
ANALYTENKONZENTRATIONSMESSUNG

Title (fr)
MESURE DE CONCENTRATION D'ANALYTES

Publication
EP 3167282 A1 20170517 (EN)

Application
EP 15747510 A 20150708

Priority
• GB 201412156 A 20140708
• GB 2015051973 W 20150708

Abstract (en)
[origin: WO2016005743A1] A method of determining analyte concentration uses a redox reaction in an electrochemical cell that has at least two electrodes, one of which is a working electrode, at least one electrode being exposed to at least one redox mediator. The method uses at least one cycle of pulses, each cycle having at least a first potential and a second potential. The method comprises applying a first potential to initiate an accumulation phase that forces accumulation of a mediator concentration gradient at or close to the working electrode with a concentration that decreases towards the bulk solution, applying a second potential to initiate a measurement phase and deplete the established mediator concentration gradient at the working electrode, measuring current associated with the second potential of each cycle, and using the measured current to determine analyte concentration. In this way, the effects of diffusion interfering factors (DIF), especially haematocrit (Hct) can be mitigated.

IPC 8 full level
G01N 27/327 (2006.01); **G01N 27/49** (2006.01)

CPC (source: CN EP KR RU)
G01N 27/327 (2013.01 - RU); **G01N 27/3274** (2013.01 - CN EP KR)

Citation (examination)
US 2009184004 A1 20090723 - CHATELIER RONALD C [AU], et al

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 2016005743 A1 20160114; AU 2015287447 A1 20161222; BR 112017000305 A2 20171031; CA 2953452 A1 20160114; CN 106687803 A 20170517; EP 3167282 A1 20170517; GB 201412156 D0 20140820; JP 2017519990 A 20170720; JP 6619367 B2 20191211; KR 20170028408 A 20170313; RU 2017103730 A 20180808; RU 2017103730 A3 20190114; RU 2680266 C2 20190219

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GB 2015051973 W 20150708; AU 2015287447 A 20150708; BR 112017000305 A 20150708; CA 2953452 A 20150708; CN 201580037065 A 20150708; EP 15747510 A 20150708; GB 201412156 A 20140708; JP 2016573879 A 20150708; KR 20177003207 A 20150708; RU 2017103730 A 20150708