

Title (en)
DEVICE AND PROCESS FOR RAPID ISOLATION OF A COMPOUND IN A SAMPLE

Title (de)
VORRICHTUNG UND VERFAHREN ZUR SCHNELLEN ISOLIERUNG EINER VERBINDUNG IN EINER PROBE

Title (fr)
DISPOSITIF ET PROCESSUS POUR ISOLEMENT RAPIDE D UN COMPOSÉ DANS UN ÉCHANTILLON

Publication
EP 2340122 A1 20110706 (EN)

Application
EP 09782627 A 20090904

Priority
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• EP 08015717 A 20080905
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Abstract (en)
[origin: EP2163305A1] A microfluidic device for rapid isolation of a compound or component contained in a sample together with other components consists of a matrix material containing an inlet for introducing said sample (5), a first (1) and a second (2) electrolyte reservoir having first and second electrodes, said electrodes embracing a membrane (4) between them, which membrane has an upper and a lower side, a sample trapping reservoir located adjacent the upper side of said membrane and said sample inlet (5). Said device further comprises a third electrolyte reservoir (6) having a third electrode (10), embracing with said first electrode a separation means capable of separating said component from the other components of said sample, said separating means (10) having an inlet and an exit, whereby said inlet is connected to said sample trapping reservoir (4) by a duct comprising a valve and said exit is connected to a recovery reservoir (7) and via a duct to said third electrode (6). With said device a component contained in a sample can be isolated from other components by introducing said sample into said device and applying a first electrical potential between the first and second electrode, whereby said membrane retains the component to be isolated and concentrates it over said membrane in a sample trapping reservoir. After turning off the first electrical potential a duct connecting the sample trapping reservoir with separation means is opened and an electric potential in a second electric circuit between the first electrode and the third electrode is applied. Thereby a flux transporting the components from the sample trapping reservoir through said separation means is generated and the isolated components after their passage through the separation means are recovered.

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Citation (search report)
See references of WO 2010026222A1

Cited by
US8986529B2; US8721858B2; US8562804B2; US8524061B2; US11041150B2; US11987789B2; US10415030B2; US10822603B2; US11674132B2; US12006496B2

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