

Title (en)

DEVICE, USE OF SAID DEVICE, AND SEPARATION AGENT FOR SEPARATING PARTICLES BY MEANS OF FREE FLOW ELECTROPHORESIS

Title (de)

VORRICHTUNG, VERWENDUNG DER VORRICHTUNG UND TRENNMITTEL ZUM TRENNEN VON TEILCHEN IN DER FREE-FLOW-ELEKTROPHORESE

Title (fr)

DISPOSITIF, UTILISATION ASSOCIEE ET AGENT DE SEPARATION POUR SEPARER DES PARTICULES PAR ELECTROPHORESE LIBRE

Publication

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Application

EP 03729399 A 20030120

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Abstract (en)

[origin: WO03060503A1] The invention relates to a free flow electrophoresis device, an associated method and separation agents for separating particles by means of one such device. Said FFE device comprises at least one separation chamber (14) through which a separation agent (8) can flow, said separation chamber being defined by a bottom, a cover, and a spacer for maintaining a distance between the same. The inventive FFE device comprises a dosing pump for transporting the separation agent (8) which is supplied to the separation chamber by means of admissions (15, 15') and leaves the same via outlets (16); electrodes (9, 10) for creating an electrical field in the separation agent (8); sample loading sites (17) for adding a mixture of particles (1, 1', 1'') to be separated; and fractioning sites (18) for removing the particles which are separated by means of FFE in the separation agent (8). Said FFE device comprises selectable charge carriers (4, 5) for combining with the particles to be separated (1', 1'') and for producing charge-modified particles (7', 7'') which - due to their selectively variable net surface charge - exhibit a different migration behaviour in the FFE device, to particles (7) which are not charge-modified. The inventive device is characterised in that it comprises guiding or focussing cushions (12, 13) arranged between the separation agent (8) and at least one electrode (9, 10). Said focussing cushions (12, 13) consist of a medium (20) which exhibits highly increased electrical conductivity in relation to the separation agent (8). Furthermore, said device comprises separate channels (15') for supplying said medium (20) to the focussing cushions (12, 13).

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Citation (search report)

See references of WO 03060503A1

Citation (examination)

- VÖLKL A. ET AL: "Isolation of rat hepatic peroxisomes by means of immune free flow electrophoresis", ELECTROPHORESIS, vol. 18, 1997, pages 774 - 780, XP007901237
- BONDY B. ET AL: "Sodium chloride in separation medium enhances cell compatibility of free electrophoresis", ELECTROPHORESIS, vol. 16, 1995, pages 92 - 97, XP008008220

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