

Title (en)

METHOD, DEVICE FOR CARRYING OUT THIS METHOD, AND SEPARATING MEANS FOR SEPARATING PARTICLES IN FREE-FLOW ELECTROPHORESIS

Title (de)

VERFAHREN SOWIE VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS UND TRENNMITTEL ZUM TRENNEN VON TEILCHEN IN DER FREE-FLOW-ELEKTROPHORESE

Title (fr)

PROCEDE ET DISPOSITIF CORRESPONDANT ET MOYEN DE SEPARATION DESTINE A LA SEPARATION DE PARTICULES PAR UNE ELECTROPHORESE A ECOULEMENT LIBRE

Publication

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Application

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Abstract (en)

[origin: WO03060504A1] The invention relates to a method, a device for carrying out this method, and to separating means for separating particles in free-flow electrophoresis (FFE). To this end, this free-flow electrophoresis (FFE) method, while using, in particular, a free-flow electrophoresis device having a separating space (14), a dosing pump for delivering a separating medium (8), electrodes (9, 10) for applying an electrical field to the separating medium (8), sample feeding locations (17) for adding a mixture of particles that is to be separated, and fractionating locations (18) for carrying away particles (1, 1', 1'') in the separating medium (8) that are separated using the FFE method, comprises the following steps: providing a separating medium (8); delivering the separating medium (8) by means of a dosing pump via media supply lines (15, 15') into the separating space (14); passing the separating medium (8) through the separating space (14); letting the separating medium (8) flow out via outlets (16); applying an electrical field to the separating medium (8); combining a particle (1', 1'') to be separated with selectable charge carries (4, 5) for producing charge-modified particles (7', 7'') that due to their selectively modified net-surface charge have, during the FFE, a different migration behavior than non-charge-modified particles (7); adding a mixture of particles (1, 1', 1'') that is to be separated to the separating medium (8) in the separating space (14) via the sample feeding locations (17); carrying away particles (1, 1', 1''), which are separated using the FFE method and contained in the separating medium, via fractionating locations (18), and; collecting the fractions with the separated particles. The inventive method is characterized in that guiding or focussing pads (12, 13) are formed between the separating medium (8) and at least one electrode (9, 10) by a pad medium (20), whereby this pad medium (20) has an electrical conductivity that is much greater than that of the separating medium (8) and is supplied via separate channels (15') to said focussing pads (12, 13).

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Citation (search report)

See references of WO 03060504A1

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

DOCDB simple family (publication)

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