

Title (en)

METHOD AND APPARATUS FOR AUTOMATED CARBOHYDRATE MAPPING AND SEQUENCING

Title (de)

VERFAHREN UND VORRICHTUNG ZUR AUTOMATISCHEN KOHLENHYDRATKARTIERUNG UND -SEQUENZIERUNG

Title (fr)

PROCEDE ET DISPOSITIF AUTOMATISES DE CARTOGRAPHIE ET DE SEQUEN AGE DES GLUCIDES

Publication

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Application

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Abstract (en)

[origin: WO9533989A1] Methods and apparatus are disclosed for improved mapping and sequencing of carbohydrate polymers. In one aspect, the improvement includes a means for coupling two capillary electrophoresis (CE) tubes in such a way so as to (i) efficiently transfer a selected sample component from a first CE capillary to a second CE capillary or, (ii) introduce a supplementary reagent into the separation path between the two capillaries, e.g., an internal standard, binding agent, enzyme, and the like. In an additional aspect, the invention includes improved apparatus and methods for electrophoresis of labeled carbohydrates in which a sample carbohydrate labeled with a first label is separated by CE and its migration behavior is compared with an internal standard labeled with one or more second labels which are distinguishable from the first label. In yet another aspect, the invention includes improved method and apparatus for sequencing carbohydrates in which a sample mixture is separated in a first CE dimension, a component of the sample mixture is selected, the selected component is incubated with an enzyme reagent, the reaction products are separated in a second CE dimension, the electrophoretic behavior of the reaction products is correlated with the known specificity of the enzyme reagent, and the process is repeated to determine the complete sequence of the carbohydrate sample.

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