

Title (en)
METHOD AND DEVICE FOR THE RAPID LIQUID CHROMATOGRAPHIC SEPARATION OF SUBSTANCE MIXTURES AND FOR THE IDENTIFICATION OF SUBSTANCES

Title (de)
VERFAHREN UND VORRICHTUNG ZUR SCHNELLEN FLÜSSIGCHROMATOGRAPHISCHEN TRENNUNG VON SUBSTANZGEMISCHEN UND IDENTIFIZIERUNG VON SUBSTANZEN

Title (fr)
PROCEDE ET DISPOSITIF POUR LA SEPARATION RAPIDE PAR CHROMATOGRAPHIE EN PHASE LIQUIDE DE MELANGES DE SUBSTANCES ET POUR L'IDENTIFICATION DE SUBSTANCES

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Application
EP 99952538 A 19991008

Priority

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Abstract (en)

[origin: DE19847439A1] Rapid liquid chromatographic substance separation and identification comprises software controlled two-stage separation using a second parallel fine separation, identification and isolation stage. Rapid liquid chromatographic separation and identification of substances is performed by software controlled two-stage separation comprising a first stage of initially separating a substance mixture and a second stage using two or more separation lines for parallel fine separation of the separated fractions and parallel identification and isolation of the finely separated fractions. An Independent claim is also included for an apparatus for carrying out the above process, comprising a separation column (10) with several parallel liquid chromatographic separation lines. Each line comprises a combination of separation column batteries (11-13) with collector column batteries (7-9), detector units (14) and fraction collector units (15.1,15.2,15.3). A pump unit (2), with three pumps (2.1, 2.2, 2.3) used for transporting the mobile phase, is connected to the separation column (10) and to the separation lines and software operated multi-way valves are positioned between the individual functional units. Preferred Features: The first separation stage involves initial separation of successive substances and the second stage involves successive and/or parallel fine separation of substances. A detector (14.1,14.2,14.3) is provided after each separation stage and a multi-way valve (3.5,3.6,3.7) is provided before each separation line, further separation columns being positioned downstream of the separation lines.

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Citation (search report)
See references of WO 0022429A1

Citation (third parties)
Third party :

- MANFREDI C. ET AL: "Vapor sorption in emptied clathrate samples of syndiotactic polystyrene", JOURNAL OF POLYMER SCIENCE, vol. 35, 1997, pages 133 - 140, XP001172887
- DE ROSA C. ET AL: "Crystal structure of the emptied clathrate form (e Form) of syndiotactic polystyrene", MACROMOLECULES, vol. 30, 1997, pages 4147 - 4152, XP001172886

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