Title (en)

HIGH-THROUGHPUT SCREENING METHOD FOR DETERMINING THE ENANTIOSELECTIVITY OF CATALYSTS, BIOCATALYSTS, AND AGENTS

Title (de)

EIN HOCH-DURCHSATZ-SCREENING-VERFAHREN ZUR BESTIMMUNG DER ENANTIOSELEKTIVIT T VON KATALYSATOREN, BIOK ATALYSATOREN UND AGENZIEN

Title (fr)

PROCEDE DE SELECTION A HAUT RENDEMENT POUR LA DETERMINATION DE L'ENANTIOSELECTIVITE DE CATALYSEURS, DE BIOCATALYSEURS ET D'AGENTS

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Application

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Abstract (en)

[origin: WO03075031A1] The invention relates to a high-throughput screening method based on NMR spectroscopy for determining the enantioselectivity of reactions which show an asymmetric course. The reactions can be caused by chiral catalysts, agents, or biocatalysts such that said products can be evaluated regarding the enantioselectivity thereof. In one embodiment, isotope-marked pseudo-enantiomers or pseudo-prochiral substrates are used such that the enantioselectivity can be quantified by integrating the NMR signals of the respective substrates and/or products. The use of an automated setup of devices, including microtiter plates, robots, and high-throughput NMR devices, is decisive for the high-throughput process. In a second embodiment of the invention, the automated setup of devices is used to detect in a quantitative manner the products and/or educts that have been derivatized with enantiomer-pure agents in the form of diastereomers. At least 1000 ee determinations can be done per day with an accuracy of at least +/- 5 percent in both embodiments.

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