Title (en)

AN AUTOMATED, HIGH THROUGHPUT METHOD FOR SCREENING A PLURALITY OF COMPOUNDS USING MASS SPECTROMETRY

Title (de)

AUTOMATISIERTES VERFAHREN MIT HOHEM DURCHSATZ ZUR UNTERSUCHUNG VON PROBEN MITTELS MASSENSPEKTROMETRIE

Title (fr)

PROCEDE AUTOMATISE A HAUT DEBIT PERMETTANT DE CRIBLER UNE PLURALITE DE COMPOSES PAR SPECTROMETRIE DE MASSE

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Application

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Abstract (en)

[origin: WO9856028A1] The present invention is directed to a method for the rapid testing of a plurality of compounds for non-covalent interaction with at least one target. The method includes the steps of providing a continuous flow of a mobile phase into a mass spectrometer; providing settings for the mass spectrometer for detecting at least one target in the mobile phase; sequentially injecting individual samples of a plurality of mixtures, wherein each mixture comprises the at least one target and at least one compound of interest, into the mobile phase for delivery into the mass spectrometer; and obtaining a mass spectrum that indicates for each mixture the presence or absence of a complex of a target and a compound of interest. Preferably, each sample is completely injected into the mobile phase within less than 5 minutes, and more preferably within less than 1 minute and even more preferably within less than 30 seconds. The method of the invention may be multiplexed by forming a mixture containing one target and a plurality of compounds of interest; one compound of interest and a plurality of targets of receptor proteins or receptor-ligand complexes. The plurality of mixtures are typically formed in a plurality of addressable locations, such as the wells of a multiple-well plate. Samples of the mixtures are then obtained from the addressable locations, and sequentially injected into the mobile phase for delivery to the mass spectrometer. The relative strength of the interaction between the target and the compound of interest within each complex also may be determined by dissociating at least one complex of a target and a compound of interest.

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