

Title (en)

APPARATUS AND METHOD FOR MIXING AND SEPARATION EMPLOYING MAGNETIC PARTICLES

Title (de)

APPARAT UND VERFAHREN ZUM MISCHEN UND TRENNEN UNTER BENÜTZUNG MAGNETISCHER TEILCHEN

Title (fr)

DISPOSITIF ET PROCEDE DE MELANGE ET DE SEPARATION AU MOYEN DE PARTICULES MAGNETIQUES

Publication

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Application

EP 00905525 A 20000104

Priority

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Abstract (en)

[origin: WO0149419A1] An apparatus and method for carrying out the affinity separation of a target substance from a liquid test medium by mixing magnetic particles having surface immobilized ligand or receptor within the test medium to promote an affinity binding reaction between the ligand and the target substance. The test medium with the magnetic particles in a suitable container is removably mounted in an apparatus that creates a magnetic field gradient in the test medium. This magnetic gradient is used to induce the magnetic particles to move, thereby effecting mixing. The mixing is achieved either by movement of a magnet relative to a stationary container or movement of the container relative to a stationary magnet. In either case, the magnetic particles experience a continuous angular position change with the magnet. Concurrently with the relative angular movement between the magnet and the magnetic particles, the magnet is also moved along the length of the container causing the magnetic field gradient to sweep the entire length of the container. After the desired time, sufficient for the affinity reaction to occur, movement of the magnetic gradient is ended, whereby the magnetic particles are immobilized on the inside wall of the container nearest to the magnetic source. The remaining test medium is removed while the magnetic particles are retained on the wall of the container. The test medium or the particles may then be subjected to further processing.

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IPC 8 full level

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