

Title (en)

A FREQUENCY-SHIFT CMOS MAGNETIC BIOSENSOR ARRAY WITH SINGLE BEAD SENSITIVITY AND NO EXTERNAL MAGNET

Title (de)

CMOS-MAGNETBIOSENSOR-ARRAY MIT FREQUENZVERSCHIEBUNG UND EINZELKÜGELCHENEMPFINDLICHKEIT SOWIE OHNE EXTERNEN MAGNETEN

Title (fr)

GROUPEMENT DE BIOCAPTEURS MAGNÉTIQUES CMOS À DÉCALAGE DE FRÉQUENCE AVEC SENSIBILITÉ DE SAILLIE ANNULAIRE ET SANS AIMANT EXTERNE

Publication

EP 2326950 A2 20110601 (EN)

Application

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- US 39932009 A 20090306

Abstract (en)

[origin: WO2010031016A2] According to one aspect, an integrated magnetic particle measurement device for detecting a presence or absence of magnetic particles in a sample volume includes at least one sensor cell having a differential sensor pair. An active sensor oscillator frequency is responsive to one or more magnetic particles situated within a sample volume. The sensor cell is configured to be operative in the absence of an externally applied magnetic field. A frequency measurement circuit provides as a time-multiplexed output a first count representative of the active sensor oscillator frequency and a second count representative of the reference sensor oscillator frequency. A calculated difference between the first count and the second count is indicative of a presence or an absence of one or more magnetic particles within the sample volume. An integrated magnetic particle measurement system array and a method for detecting one or more magnetic particles are also described.

IPC 8 full level

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CPC (source: EP)

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