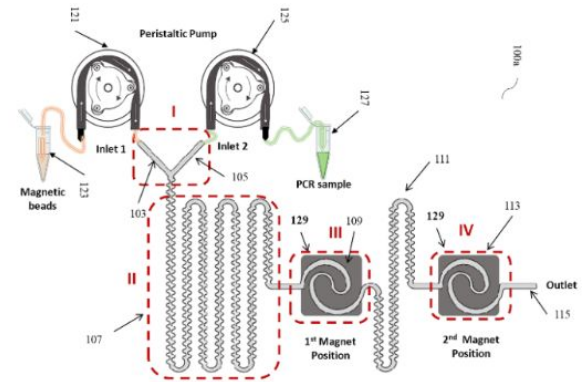


PENDING

(IN202411028434)

System and method of nucleic acid purification



NEED

Traditional nucleic acid purification methods are inefficient, requiring large sample volumes and often resulting in lower yields. What if a microfluidic chip device could purify DNA with higher yield using less sample?

TECHNOLOGY OVERVIEW

This microfluidic chip device offers a novel method for nucleic acid purification by utilizing magnetic nanoparticles in a serpentine microchannel. It provides higher DNA yields with smaller sample volumes and improved efficiency compared to traditional methods.

TECHNOLOGY KEY FEATURES

Microfluidic chip, serpentine microchannel, magnetic nanoparticles, permanent magnet for DNA binding and elution, peristaltic pumps, increased yield, reduced sample volume, efficient purification.

[Read more here](#)

MARKET ANALYSIS

The global microfluidic devices market is projected to grow at a CAGR of 17.2% from 2023 to 2033, driven by increased demand in diagnostics and biotechnology research. (Source: MarketsandMarkets, 2023)

Target Industries

1) Biotechnology and research labs focusing on DNA extraction and purification; 2) Diagnostic companies requiring high-throughput nucleic acid purification; 3) Pharmaceutical companies developing genetic therapies or products.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, Infrastructure)

Technology is available for licensing/ co-development.

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