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विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLO
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BITS Pilani
TECHNOLOGY
ENABLING
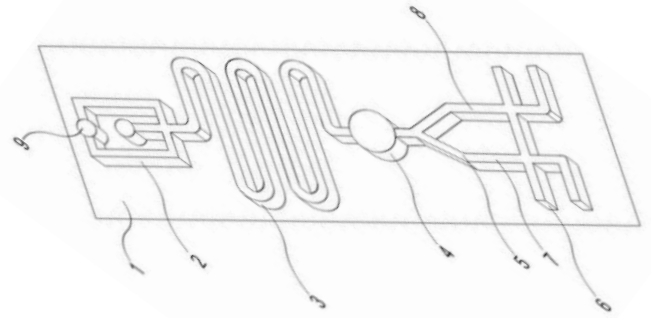**CENTRE**
DST Supported

PENDING

(IN202211068468)
Continuous flow microfluidic device for the separation and detection of microplastics in water samples

NEED

With increasing microplastic contamination in water sources, current detection methods are slow, expensive, and lack real-time capabilities. What if there was a way to identify microplastics in water instantly and accurately, without relying on bulky equipment?

TECHNOLOGY OVERVIEW

This invention introduces a microfluidic device that separates and detects microplastics in water. Using polymer-based channels, it employs optical sensors and hydrodynamic focusing for real-time, precise separation and detection, revolutionizing water quality monitoring.

TECHNOLOGY KEY FEATURES

Microfluidic device enables real-time detection and separation of microplastics from water samples using hydrodynamic focusing and optical sensors. The technology is highly efficient, portable, and designed for use in water quality monitoring.

[Read more here](#)

MARKET ANALYSIS

The global microfluidics market is expected to grow at a 19.7% CAGR, reaching USD 45.5 billion by 2033, driven by environmental concerns, growing demand for water quality monitoring, and advancements in sensor technology. (Source: MarketsandMarkets, 2023)

Target Industries

Water quality testing companies; environmental monitoring agencies; public health organizations focusing on waterborne contaminants

AT A GLANCE

- SDG 6: Clean Water and Sanitation; SDG 14: Life Below Water

Technology is available for licensing/ co-development.

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