



विज्ञान एवं प्रौद्योगिकी विभाग DEPARTMENT OF **SCIENCE & TECHNOLOGY**



GRANTED (IN492882) A system for measuring viscosity and method thereof

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NEED

Accurate fluid viscosity measurement is critical for various industrial applications. Traditional methods often lack precision, leading to process inefficiencies. But what if viscosity could be measured through simple, continuous electrical responses?

TECHNOLOGY OVERVIEW

This system measures fluid viscosity using a microchannel, reference and secondary electrodes, and a power supply. The system determines viscosity based on time intervals between successive electrical responses as fluid flows through the microchannel.

TECHNOLOGY KEY FEATURES

Microfluidic design, multi-electrode system, electrical response-based viscosity measurement, integration with microprocessor and sensors, non-reactive materials (e.g., PLA), continuous flow compatibility.

MARKET ANALYSIS

The global market for viscosity measurement devices is expected to grow at a CAGR of 5.6% from 2023 to 2033, driven by increasing demand for precise measurements in industrial applications such as food, chemicals, and pharmaceuticals. [Source: MarketsandMarkets, 2023]

Target Industries

Chemical Manufacturing, Pharmaceutical Industry, Food and Beverage Industry. , Fluid analysis service providers, manufacturers of microfluidic devices, process optimization technology firms, chemical and pharmaceutical companies for quality control.

AT A GLANCE

 SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

<u>Read more here</u>

Technology is available for licensing/ co-development. Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre, BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

