

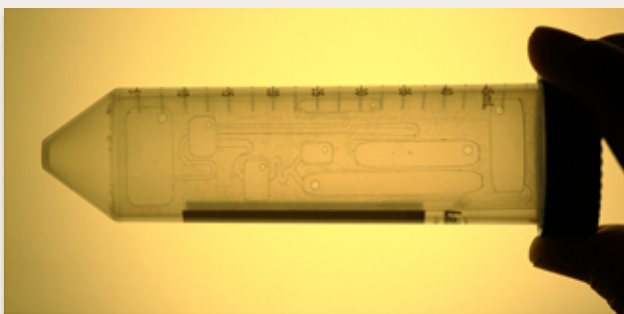
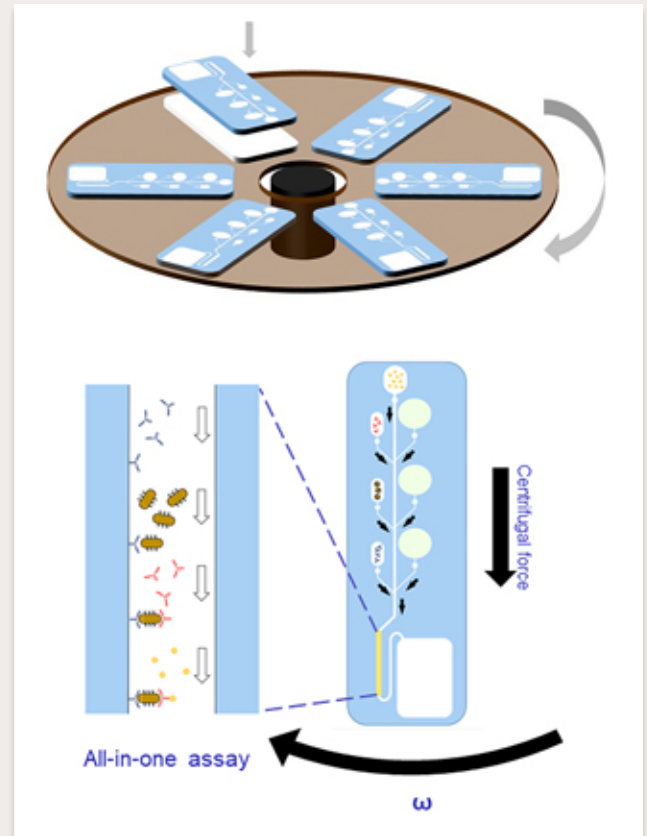
Centrifugal Microfluidic Device for Rapid Bacteria Detection

Technology Overview

Traditional immunoassays for bacteria detection are laborious, time-consuming and incapable of detecting low bacterial concentrations. This has greatly limited its applications in many areas. We have developed a centrifugal microfluidic immunoassay platform which can integrate the components of enzyme immunoassay (EIA) into a single device, while at the same time boosting its sensitivity in bacterial detection through pre-concentrating of the samples using centrifugal force.

Features & Specifications

The key features of the centrifugal microfluidic immunoassay platform include miniaturization, integration and automation. On the device, the flow of the liquids is driven by centrifugal forces and is precisely controlled by different microstructural components. Liquid bacteria samples and EIA reagents can flow sequentially to the designated place where they can react with each other and generate colour signal for detection. Preliminary results show that it can detect *E. coli* at 10^4 cell/ml, which is comparable to the sensitivity of traditional immunoassay methods. The device can be used with common laboratory centrifugal equipment without the need for trained personnel to operate.



Customer Benefits

With the device, the complicated and laborious traditional immunoassays detection process can be simplified and automated; hence, saving time and cost for customers.

Potential Applications

The device potentially provides solutions for bacteria detection in areas such as medical diagnosis, environmental monitoring and food safety control.