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DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
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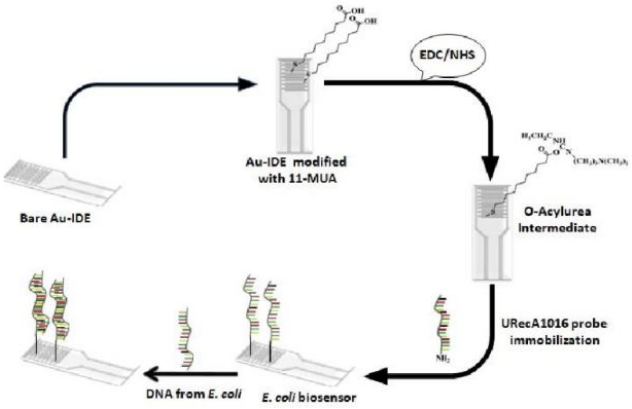
PENDING

(IN202011046287) Polynucleotide sequence for the detection of *Escherichia coli*



NEED

E. coli contamination in food and water leads to health risks, including outbreaks. What if there was a more efficient way to detect harmful strains quickly and accurately?

MARKET ANALYSIS

The global market for pathogen detection in food safety is projected to grow at a CAGR of 7.5%, reaching $7.8 billion by 2033. Key drivers include the increasing demand for food safety and stringent regulations. (Source: Grand View Research, 2023)

TECHNOLOGY OVERVIEW

This invention provides a synthetic nucleic acid sequence for detecting E. coli strains, specifically targeting the ygfO gene. The technology enables rapid and specific detection through probes, kits, and devices, ensuring better monitoring of food and water safety.

Target Industries

1) Food Safety Industry focusing on pathogen detection. 2) Water Purification Industry ensuring safe water supply. 3) Biotechnology & Diagnostics companies developing detection kits and devices.

TECHNOLOGY KEY FEATURES

1) Targets ygfO genetic marker of E. coli. 2) 24-nucleotide long synthetic oligonucleotide. 3) Hybridization-based detection method. 4) Detects harmful strains like O157:H7. 5) Includes probes and kits for efficient detection.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production)

Read more here

Technology is available for licensing/ co-development.

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