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Method for Rapid Detection and Characterization of Bacteria Colonies using Forward Light Scattering

A rapid, single-step method using light scattering patterns enables quick detection and characterization of bacterial pathogens, including Listeria and E. coli, for enhanced safety monitoring in food, water, and air.

Researchers at Purdue have developed a method to differentiate human pathogenic listeria monocytogenes from nonpathogenic species of Listeria in less than 48 hours by measuring light scattering patterns of bacterial colonies. Potential uses include monitoring bacterial pathogens in food, water, and air. This method is a simple, single-step alternative. In addition to Listeria, rapid detection and characterization of other bacteria, including E. coli, is possible.

Advantages:

-Simple, single-step alternative

-Results in less time

-Works on other bacteria

Potential Applications:

-Bacterial pathogen detection

-Food safety

-Water and air safety

TRL: 3

Intellectual Property:

Provisional-Patent, 2004-11-30, United States | Utility Patent, 2005-11-30, United States | PCT-Patent, N/A, WO

Technology ID

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Category

Agriculture, Nutrition, & AgTech/Food Safety & Traceability
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