3M Food Safety Unveils Innovative Molecular Detection System for Dangerous Foodborne Pathogens

Release Date:
Lunes, Diciembre 12, 2011 8:30 am CST

Terms:
Company (English)  Product and Brand (English)

Ciudad de origen y fecha de la noticia:
ST. PAUL, Minn.

ST. PAUL, Minn.--(BUSINESS WIRE)--After decades of transforming the food processing industry with 3M™ Petrifilm™ Plates, 3M is once again revolutionizing the industry – this time in the area of pathogen detection. Today, 3M Food Safety introduces the 3M™ Molecular Detection System: a fast, accurate and easy-to-use method of detecting dangerous pathogens, like Salmonella, E. coli O157 and Listeria, that can shut down businesses and threaten public health.

Available worldwide, the 3M Molecular Detection System is based on an innovative combination of unique technologies involving isothermal DNA amplification and bioluminescence detection. The system was designed with 3M’s customer testing needs in mind, which translates into a compact, simple, robust system that offers easy implementation and low maintenance without compromising accuracy and reliability.

“Leveraging 3M’s record of innovation, including close collaboration with our customers, we believe we’ve found a transformational solution that makes for a faster and simpler way of accurately detecting pathogens,” said Francine Savage, vice president and general manager, 3M Food Safety. “Just as 3M Petrifilm Plates succeeded by melding sophistication with simplicity, the 3M Molecular Detection System optimizes technicians’ time and productivity, improving bottom lines, protecting brands and ensuring public health.”

Sensitive, uncompromised results in a compact unit

The 3M Molecular Detection System delivers highly sensitive results by targeting and amplifying nucleic acid in enriched samples. The automated technology has been evaluated with a variety of food types, including produce, meats, processed foods, pet food and food processing-related environmental samples. The instrument is sleek and compact – taking up less counter space than a laptop computer, making it portable and adaptable to various lab environments.

“Pathogen testing has now been made simple and affordable,” said Niki Montgomery, 3M Food Safety global marketing development manager. “Food processors will benefit greatly from the system’s affordable accuracy and fast time to results, minimizing downtime in the lab. Numerous organisms can be tested in a single run and it was designed to help our customers perform fewer repeat tests and make critical decisions faster.”

Three assays available, validation efforts underway

As part of the 3M Molecular Detection System platform, individual, pathogen-specific assays, or procedural tests, will be sold as test kits. Each assay test kit uses the same software interface and same DNA extraction protocol for testing between one and 96 samples per run. Assays for Salmonella, E. coli O157 (including H7) and Listeria are available immediately; a test for Listeria monocytogenes is expected in early 2012. 3M will continue to invest in developing a full portfolio of pathogen testing solutions to address customer needs.

Independent laboratory studies with the 3M Molecular Detection System are currently underway to pursue global method recognitions.

“In our evaluation of the Listeria species assay, we liked the small footprint of the system as well as the quick delivery of results after sample enrichment,” said Dr. Martin Wiedmann, a professor in Cornell University’s Department of Food Science who studied the system’s analyses of samples taken from meat-packing, seafood processing and retail locations. “This system definitely illustrates the potential of isothermal methods for rapid detection of foodborne pathogens.”

For more information, www.3M.com/3MMolecularDetectionSystem

3M Food Safety is a leader of innovative solutions that help the food and beverage industries optimize the quality and safety of their products to enable consumer protection. At every step, 3M Food Safety provides solutions that help mitigate risk, improve operational efficiencies and impact the bottom line.

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Its culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With $27 billion in sales, 3M employs about 80,000 people worldwide and has operations in more than 65 countries. For more information, visit www.3M.com or follow @3MNews on Twitter.


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