

Fast, Reliable Food Testing Solutions

Get Accurate Results from a Proven Technology Leader





Leading the Way in Molecular Technology

Solutions for Food



For more than 25 years, Applied Biosystems has led the way in genetic innovation for life science research and validated markets. Today, Applied Biosystems is a molecular technology leader for the food industry. The Applied Biosystems Pathogen Detection System is a complete food testing solution featuring streamlined sample preparation, sensitive and specific assays, robust instrumentation, and intuitive software—all designed to work together. The Applied Biosystems Pathogen Detection System offers speed, accuracy, sensitivity, and global support to give you the highest confidence in your food testing results—every time.

Accurate Results from the Leaders in Real-Time PCR

A High-Performance Platform that Gives Fast Results

Built on a solid reputation for excellence, the Applied Biosystems 7500 Fast Real-Time PCR System is an integral part of the Applied Biosystems Pathogen Detection System, and offers speed, sensitivity, and outstanding specificity. Fully optimized for Fast cycling, the 7500 Fast System delivers high-quality results in under 40 minutes. Real-time PCR is a proven method for pathogen detection and has been applied successfully to a wide range of food borne pathogens, including *Salmonella*, *Listeria monocytogenes*, and *E. coli* O157:H7.



MicroSEQ® *Listeria monocytogenes* Detection Kit



MicroSEQ® *Salmonella* spp. Detection Kit

Easy-to-use Detection Kits

Applied Biosystems new MicroSEQ® Pathogen Detection Kits offer maximum ease of use, reliability, and consistency of results. The reagents in these kits are lyophilized into preformatted assay beads. The beads hold the active enzyme, the target-specific primer and probe set, Internal Positive Control (IPC) and other reagents for PCR, and no mixing is required. The kits use specially designed reaction tubes that remain closed throughout the assay process. Once the sample is added, the tubes are closed and remain that way until detection is complete, greatly reducing the chances of contamination.

EXCEPTIONAL SPEED AND SENSITIVITY

The Applied Biosystems Pathogen Detection System is faster and more sensitive than other methods, detecting cell concentrations as low as 10^3 – 10^4 cfu/mL after enrichment. This level of sensitivity ensures the detection of many pathogens in less than 24 hours, as compared to several days with conventional methods.

Applied Biosystems Pathogen Detection System

Primary Enrichment

16–24 hrs

DNA Sample Prep

1–2.5 hrs

Analysis

40 mins

Immunoassays

Primary Enrichment

18–24 hrs

Secondary Enrichment

18–24 hrs

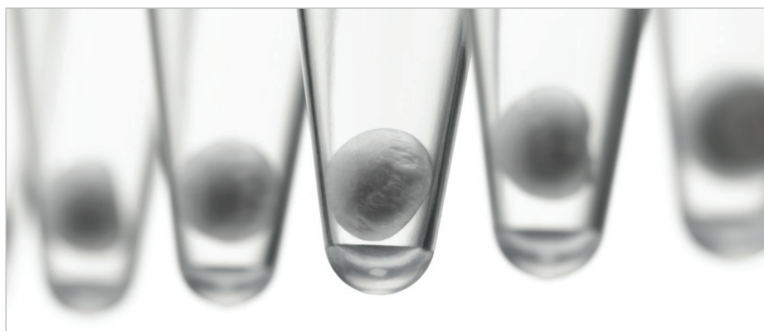
Traditional Culture

Primary Enrichment

1 day

Secondary Enrichment

1–2 days



TWO LEVELS OF SPECIFICITY

Unlike SYBR® Green-based assays, the Applied Biosystems Pathogen Detection System provides two levels of specificity for confident pathogen detection, reducing false positive and false negative results.

Level 1: Target-specific TaqMan® primers identify the DNA sequence of the organism in the sample.

Level 2: TaqMan probes confirm the identification of the organism and emit a fluorescent signal only if the unique genetic signature of the pathogen has been recognized.

Our TaqMan® Pathogen Detection Kits are based on universal assay conditions. You can run any combination of these assays together in the same sample run to test for multiple pathogens. The growing portfolio of kits includes:

- *Salmonella enterica*
Certified by AOAC and AFNOR



ABI 29/01-09/07

- *Campylobacter jejuni*
- *Cronobacter sakazakii*
- *E. coli* O157:H7
- *Listeria monocytogenes*
- *Pseudomonas aeruginosa*
- *Staphylococcus aureus*



TaqMan® Pathogen Detection Kits

Total Time:
18–27 hrs

Analysis

10 mins–2 hrs

Total Time:
1.5–2 days

**Selective
Isolation**

1–2 days

Confirmation

1–2 days

Total Time:
3–7 days

Streamlined Sample Preparation

Sample Preparation Tailored for Quality

Applied Biosystems PrepSEQ™ Sample Preparation Kits efficiently remove inhibitors present in food and environmental samples that interfere with target DNA amplification in real-time PCR. For lower sample numbers, the PrepSEQ Rapid Spin Sample Preparation Kit provides a simple, cost-effective way to prepare high-quality DNA from broth cultures. For automated high-throughput applications, the PrepSEQ Nucleic Acid Extraction Kit prepares high-quality microbial DNA from broth cultures when used with the Applied Biosystems MagMAX™ Express-96 Sample Preparation System.

Simplified Workflow

The streamlined sample preparation protocol easily integrates into the laboratory workflow with minimal operator training. The protocols have been tested on a wide range of samples, including chocolate, infant formula, and soft cheeses. Even samples with difficult-to-lyse bacteria, such as *Listeria monocytogenes*, produce excellent results.



PrepSEQ™ Rapid Spin Sample Preparation Kit



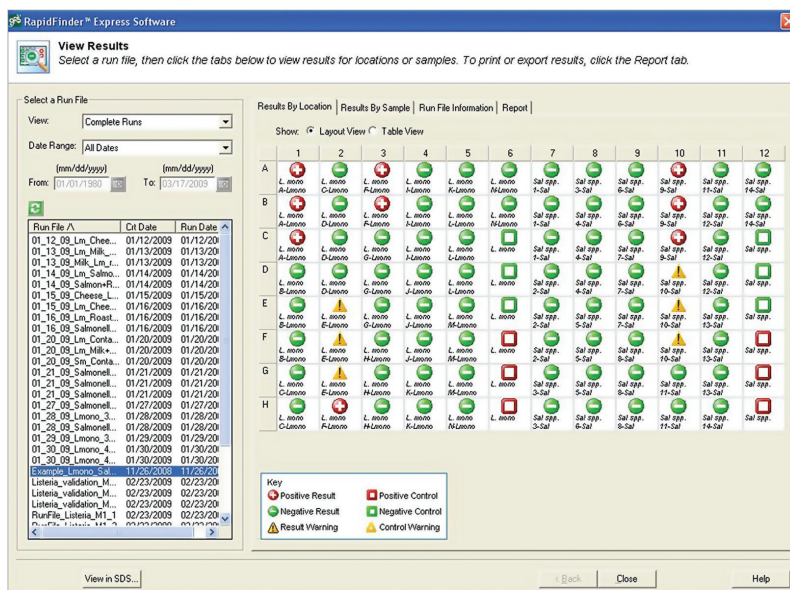
PrepSEQ™ Nucleic Acid Extraction Kit and MagMAX™ Express Sample Preparation System

Intuitive Software Solutions

Critical Decisions Require Reliable Software

RapidFinder™ Express Software is easy to use and guides you through each step of the assay—from run file set up to final results.

Amplification, detection, data collection, and analysis are fully automated. The software also has options to use flags, notifications, and prompts that enable you to quickly interpret the data with ease.



RapidFinder™ Express Software. Results are displayed in an intuitive, easy-to-read format with presence/absence calls.

Global Service and Support Helps You Succeed

Unmatched Track Record of Quality Service

Applied Biosystems products are backed by one of the world's most reliable service and support organizations.

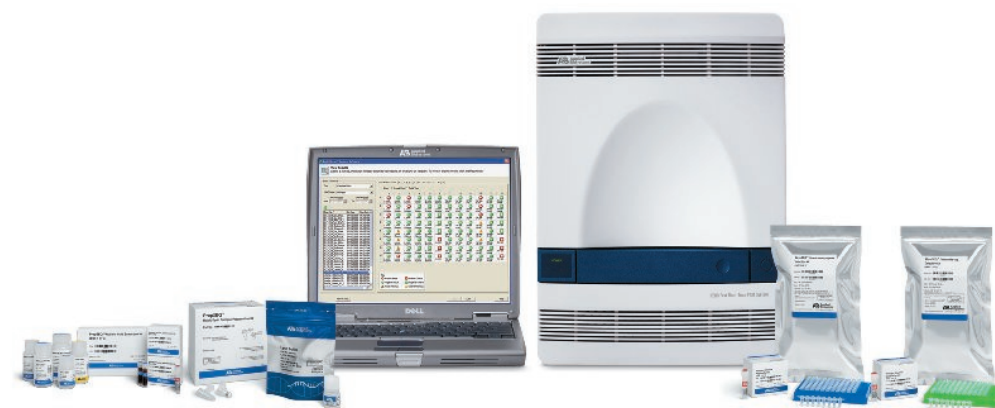
Our global service professionals are trained and dedicated to keep your system running at peak performance 24 hours a day, seven days a week. With Applied Biosystems, you can feel confident that we have the solutions you need—over the phone, or on the web, you can depend on us.



A Complete, Integrated System

With the Applied Biosystems Pathogen Detection System, you get powerful solutions that aid in the rapid detection of harmful food pathogens. Applied Biosystems is committed to your success, offering not only the highest quality instruments, reagents, and software but also the most comprehensive global technical service and support organization available. We are committed to continued innovation, striving to provide reliable and fast solutions for food testing.

For the most current information on the Applied Biosystems Pathogen Detection System, visit www.appliedbiosystems.com/foodsafety.



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Purchase of the MicroSEQ® Pathogen Detection Kits and TaqMan® Pathogen Detection Kits includes an immunity from suit under patents specified in the product insert to use only the amount purchased solely in the environmental testing, quality control/quality assurance testing, food and agricultural testing applications fields, and also for the purchaser's own internal research. No other patent rights are conveyed expressly, by implication, or by estoppel. For further information contact the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

The Applied Biosystems 7500 Fast Real-Time PCR System is covered by US Patent No. 6,814,934, EP876562, and other patents owned by Applied Biosystems Corporation. For further information contact the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

The PrepSEQ™ Nucleic Acid Extraction Kit or portions thereof is manufactured and sold under license from GE Healthcare under U.S. Patent Nos. 5,523,231 and 5,681,946 and other foreign patents. End Users are specifically not authorized to and are forbidden from reselling, transferring or distributing any products either as a stand alone product or as a component of another product.

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