

Life Technologies Salmonella Enteritidis Detection Solution

The Challenge

The prevention of *Salmonella* Enteritidis (SE) contamination of egg products is becoming increasingly important to the shell egg industry. Traditional SE detection methods take up to two weeks, resulting in long inventory hold times and reducing the amount of time that fresh eggs can be available on store shelves. Recognizing the importance of rapid SE detection, Life Technologies has developed an SE solution that uses molecular methods to achieve rapid, accurate results with reduced hands-on time.

The Applied Biosystems Solution

The Applied Biosystems high-throughput SE testing solution provides results within 26 hours and allows egg producers to process hundreds of samples per day. This solution was developed using Life Technologies' extensive bioinformatics and assay design capability, and methods comparison studies are being conducted by Dr. Shelley Rankin, School of Veterinary Medicine, University of Pennsylvania.*

The Applied Biosystems SE Solution provides:

- Accurate test results in less than 26 hours
- Detection of Salmonella Enteritidis in environmental and liquid egg matrices
- The unrivaled sensitivity of real-time PCR
- A cost-effective solution with reduced labor and material costs



Figure 1. Applied Biosystems SE Testing Workflow.





The components of the Applied Biosystems SE testing workflow (Figure 1) include:

- PrepSEQ[™] Nucleic Acid Extraction Kit—a high throughput sample preparation chemistry that has been tested on a wide range of food types in addition to eggs*
- MagMAX[™] Express-96 Magnetic Particle processor—for high throughput sample processing using PrepSEQ[™] reagents*
- Applied Biosystems Salmonella Enteritidis Detection Kit—for highly specific SE detection
- Applied Biosystems 7500 Fast Real-Time PCR Instrument—for highly sensitive pathogen detection*

*Component is part of Life Technologies AOAC-validated *Salmonella* spp. workflow.

Life Technologies

For more than 25 years, Life Technologies has led the way in genetic innovation for life science research and validated markets. Today, Life Technologies is a molecular technology leader for the food industry. The Applied Biosystems Food Pathogen Detection System is a complete, easy-to-use system featuring optimized sample prep, sensitive and specific assays, robust instrumentation, and user-friendly software. Life Technologies provides customers with global training and support built on a dedication to real-time PCR leadership. Detection kits are also available for the following organisms: *Salmonella* spp., *Listeria monocytogenes*, *Listeria* spp., *E. coli* 0157:H7, *Campylobacter jejuni*, *Cronobacter sakazakii*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*.

For more information on the Applied Biosystems *Salmonella* Enteritidis Detection Solution, please contact your local Life Technologies representative.

