DuPont Qualicon BAX® System
PCR ASSAY FOR SALMONELLA

PRODUCT DESCRIPTION

Salmonella is one of the most common causes of food-borne illness, with about 1.4 million cases of Salmonellosis occurring annually in the United States. Various serotypes have been associated with meat, poultry, eggs, milk, fish, sauces, cream-filled desserts, peanut butter, chocolate and other foods. With an increase in antibiotic resistance and an upward prevalence trend in broilers, food processors need fast and accurate testing methods. Traditional isolation from culture requires many steps and more than four days to get results.

Benefits

- Speed – Next-day results
- Accuracy – Automated DNA-based analysis vs. subjective plate counts
- Exceptional sensitivity – Reliably detects 10⁴ cfu/mL in enriched samples
- Ease of use – Tableted reagents reduce operator error
- Closed-cap system avoids amplicon contamination in the lab
- LIMS-compatible electronic data for easy storage, sharing and retrieval
- Designed for efficient workflow and reliable results

Features

- Results in 3.5 hours processing
- Validated on a wide variety of foods
- Also validated on environmental samples, including stainless steel, ceramic tile, plastic, epoxy coated tile and concrete
- Also validated on ground beef, trim and produce with 8-hour enrichment in BAX® System E. coli O157:H7 MP media
- Specificity ≥ 98%
- Excellent inclusivity/exclusivity

Certifications

AOAC Research Institute Performance Tested Method™ #100201 – Validated on meat, poultry, fruit and vegetable products, dairy, chocolate/bakery products, animal feeds, pasta and environmental samples
Emergency Response Validation (ERV) Certificate for detecting S. Typhimurium in peanut butter
AFNOR validation certificate #QUA-18/3-11/02 – Certified according to AFNOR validation rules for all human food products, animal feed and environmental samples
AOAC International Official Method #2003.09
NordVal #30

Adoptions

USDA-FSIS #MLG 4C.02

Validations and Approvals

USDA-NPIP
Brazil MAPA
Russia Rospotrebnadzor

Health Canada
People’s Republic of China AQSIQ
Danish Veterinary and Food Administration
Sample preparation

Standard Media:
Prepare 1:10 dilutions according to the sample type and incubate overnight at 35 ±1°C.
For samples requiring regrowth, transfer 10 µL of enriched sample to 500 µL of BHI and incubate at 35 ±1°C for 3 hours. Regrowth is not required for meat and poultry.
Step-by-step directions are detailed in the BAX® System User Guide, included with purchase.

BAX® System E. coli O157:H7 Media:
Stomach sample 1:10 in prepared BAX® System E. coli O157:H7 enrichment media.
Incubate for 8-24 hours at 42°C.

BAX® system protocol

8:00 Create rack file and warm up cycler.
8:05 Mix protease with lysis buffer and transfer 200 µL of lysis reagent to cluster tubes.
8:10 Transfer 5-µL samples to cluster tubes.
8:20 Heat cluster tubes for 20 minutes at 37°C, then 10 minutes at 95°C.
8:50 Cool cluster tubes for 5 minutes in cooling block, then transfer 50 uL to PCR tubes in cooling block.
9:00 Place sealed PCR tubes in cycler and run program.
12:30 Review results.