

# DUPONT™ BAX® SYSTEM

## PCR Assay for Genus *Listeria* 24E

*Listeria* species are indicator organisms whose detection can indicate that pathogenic *Listeria monocytogenes* is present. *L. monocytogenes* can cause serious illness in persons with heightened susceptibility, especially pregnant women and immunocompromised persons. Traditional culture methods can take four days or more to get results, and many rapid methods require a two-stage, 48-hour enrichment. With this BAX® System 24E assay, however, accurate and reliable results are available the next day with a single-step, 24-hour enrichment.



### Benefits

- Speed – Single-stage enrichment complete in only 24 hours
- Accuracy – Automated DNA-based analysis
- Exceptional sensitivity – Detects 10<sup>4</sup> cfu/mL
- 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

- PCR processing completes in 3.5 hours
- Can be run in mixed batches with other BAX® System standard assays
- Validated on meat, seafood, dairy, vegetable and environmental samples
- Detects all species of *Listeria* except some strains of *L. grayi*
- 100% exclusivity
- Next-day results with proprietary 24 LEB Complete media

### Certifications



**AOAC Research Institute** Performance Tested Method<sup>SM</sup> #050903 - Validated on frankfurters, spinach, shrimp, queso fresco and stainless steel



**AFNOR Certification** #QUA 18/06-07/08 - Certified according to NF Validation rules for human food products\* and environmental surfaces.

\*Smoked fish requires use of 24 LEB Buffer Supplement, which was also validated as an optional addition for charcuteries.

#### BAX® System PCR Assay Genus *Listeria* 24E

Part # D13608135

96 tests per kit; store at 2-8°C

PCR tubes with tablets, optical caps, lysing agents, protease, lysis buffer

#### 24 LEB Media

24 LEB Complete

Part D14654989 / Oxoid CM1154

2.5-kg tub; store at 10-30°C

24 LEB Buffer Supplement

AFNOR-required for some matrices

Part D15407304 / Oxoid BO1204K

20 tubes of 10 mL; store at 2-8°C



## Sample Preparation



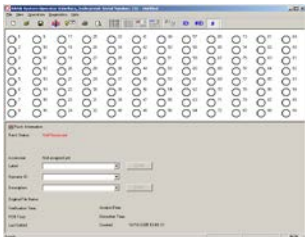
### Sample Enrichment

**Food** – Homogenize samples (1:10) in room-temperature (25-30°C) prepared 24 LEB\* using filterless stomacher bags. Incubate for 24 hours at 37°C.

**Environmental Surfaces** – Wipe 4 x 4 in (10 x 10 cm) area with sponge pre-moistened in D/E neutralizing broth. Add to 90 mL room-temperature (25-30°C) prepared 24 LEB\* and mix. Incubate for 24 hours at 37°C.

## BAX® System Protocol

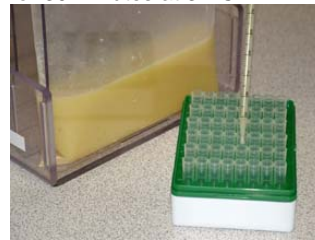
**10:00** Create rack file and warm up cyclor.



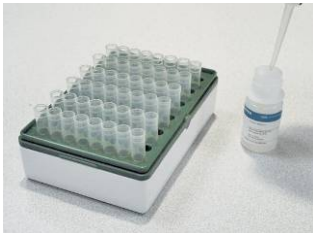
**10:05** Dilute Lysing agent 1 with 1.8 mL sterile water, and combine in 4:1 ratios with Lysing agent 2.



**10:10** Transfer 50 µL of combined agents to cluster tubes, then add 0.5 mL enriched sample and incubate for 30 minutes at 37°C.



**10:50** Mix protease with lysis buffer and transfer 200 µL of lysis reagent to new cluster tubes.



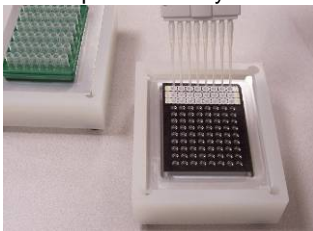
**10:55** Transfer 5 µL of lysate to cluster tubes.



**11:00** Heat cluster tubes for 30 minutes at 55°C, then 10 minutes at 95°C. Cool for 5 minutes in lysis cooling block.



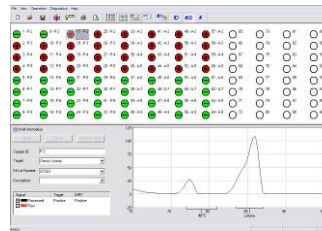
**11:45** Hydrate PCR tablets in second cooling block with 50 µL of chilled lysate.



**11:50** Place sealed PCR tubes in cyclor and run program.



**3:20** Review results.



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