

# DuPont Qualicon BAX<sup>®</sup> System

## PCR ASSAY FOR GENUS *Listeria* 24E

### PRODUCT DESCRIPTION

*Listeria* species are indicator organisms whose detection can indicate that pathogenic *Listeria monocytogenes* is present. *Listeria 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<sup>®</sup> system 24E assay, however, accurate and reliable results are available the next day with a single-step, 24-hour enrichment.



#### BAX<sup>®</sup> System PCR Assay Genus *Listeria* 24E

Part # D13608135

96 tests per kit

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

Store at 2-8°C

#### 24 LEB Media

24 LEB Base

Part # D13921126 or Oxoid CM1107 –  
500-g bottle

Store at 10-30°C

24 LEB Selective Supplement

Part #D13921133 or Oxoid SR0243 –  
10-vial pack

Store at 2-8°C

24 LEB Buffer Supplement (AFNOR-  
required for some matrices only)

Oxoid BO1204E – 24 bottles of 10 mL

Oxoid BO1204M – 10 bottles of 100 mL

Store at 2-8°C

#### Genus *Listeria* 24E Bundle for Environmental Samples

Part # D14175606

1 PCR assay + 1 bottle 24 LEB Base +  
2 packs 24 LEB Selective Supplement

### 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<sup>®</sup> 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 24-hr *Listeria* Enrichment Broth (24 LEB)
  - 96 food tests use 2 bottles of base and 5 packs (50 vials) of supplement
  - 96 environmental tests use 1 bottle of base and 2 packs (20 vials) of supplement

### Certifications



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



**AFNOR** validation certificate #QUA 18/06-07/08 - Certified according to AFNOR validation rules for human food products\* and environmentals.

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



The miracles of science<sup>™</sup>

**Sample preparation**



**Enrichment**

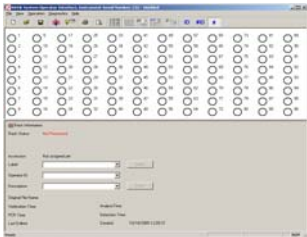
This assay requires 24 LEB for best results. See package insert for media preparation.

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

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

**BAX® system protocol**

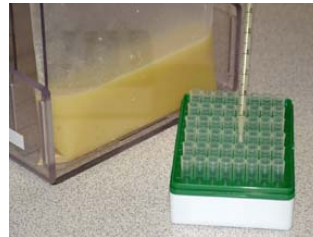
**10:00** Create rack file and warm up cycler.



**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.



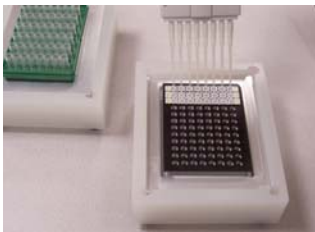
**10:55** Transfer 5 µL of lysate to cluster tubes.



**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.



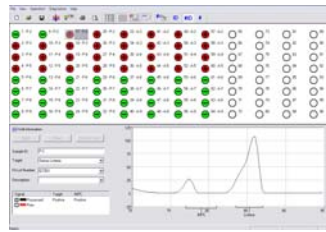
**11:45** Hydrate PCR tablets in second cooling block with 50 µL of chilled lysate.



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



**3:20** Review results.



DuPont Qualicon  
 ESL Bldg 400, PO Box 80400  
 Wilmington, DE 19880-0400 USA  
 800-863-6842 or 302-695-5300  
 Fax: 302-695-5301  
 Europe: +00 800 3876 6838  
 Singapore: +65 6586 3635  
[www.qualicon.com](http://www.qualicon.com)

