

DUPONT™ BAX® SYSTEM

PCR Assay for *E. coli* O157:H7 MP

With the globalization of the world's food supply, pathogens are constantly emerging and evolving, presenting challenges to even the most sophisticated microbial testing systems. Recent research on *E. coli* O157:H7 indicates that its chromosomal architecture is considerably more complex and diversified than previously recognized. The multiplex BAX® System PCR assay has been fine-tuned to recognize not only standard but also new, unusual or modified varieties of *E. coli* O157:H7.



BAX® System PCR Assay *E. coli* O157:H7 MP

Part #D12404903

96 tests per kit

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

Store at 2-8°C

Stable to expiration date on label

BAX® System MP Media

Bulk powder

Part D12404925 - 2.5 kg makes 111 L

DuPont™ StatMedia™ soluble packets

Part D12614061 - 30 x 75.9 g packets make 101.25 L

Part D12745725 - 100 x 33.75 g packets make 150 L

Benefits

- Speed – PCR processing completes in 3.5 hours with the standard MP protocol (or about 2.5 hours with MP Express for beef)
- Accuracy – Automated DNA-based analysis instead of subjective plate counts
- Exceptional sensitivity – Reliably detects 10⁴ cfu/mL in enriched samples
- Ease of use – Tablet PCR reagents reduce operator error
- Closed-cap system avoids amplicon contamination in the lab
- LIMS-compatible data allows for easy storage, sharing and retrieval
- Designed for efficient workflow and ease of use

Features

- Optimized BAX® System MP media allows for shortened enrichment time (as few as 8 hours) for beef, trim and produce
- Can be used with standard enrichment media for food and environmental samples*
- MP Express option reduces cycling time by 60 minutes for beef and trim samples
- Specificity ≥ 99%
- Excellent inclusivity/exclusivity

Certifications



AOAC Research Institute Performance Tested Methodsm #050501 – Validated on raw ground beef, beef trim, spinach and lettuce



AFNOR validation certificate #QUA 18/04-03/08 – Certified according to AFNOR validation rules for raw beef, pork, lamb, and chicken; raw milk; fruits and vegetables; and ready-to-eat meals

Validations and Approvals

- **Health Canada** #MFLP-30, supplement 2*
- **People's Republic of China** AQSIIQ



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Sample Preparation

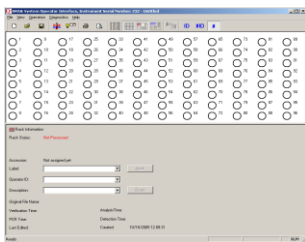


Homogenize raw ground beef, beef trim, spinach or lettuce samples in prepared BAX® System MP media (1:10 dilution). Incubate at 42°C for 8-24 hours, depending on the work flow of your lab. See the *BAX® System User Guide* for more information.

** Validated by Health Canada on meat, fruits, vegetables, dairy, animal feed and environmental with standard enrichment media. For enrichment protocols validated by Health Canada, see Supplement 2 to MFLP 30 at http://www.hc-sc.gc.ca/fn-an/res-rech/analy-meth/microbio/volume3/mflp30_sup_2-eng.php*

BAX® System Protocol

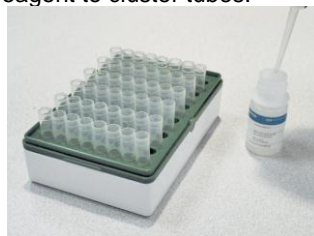
8:00 Create rack file and warm up cycler.



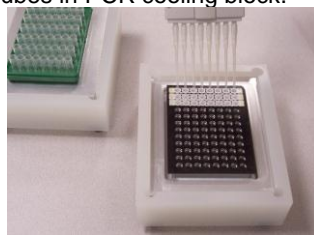
8:20 Heat cluster tubes for 20 minutes at 37°C, then 10 minutes at 95°C.



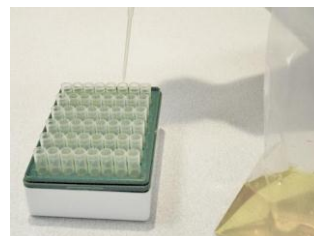
8:05 Mix protease with lysis buffer and transfer 200 µL of lysis reagent to cluster tubes.



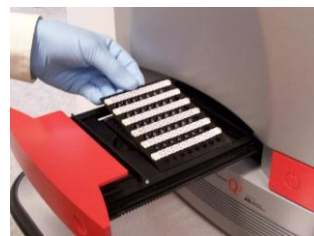
8:50 Cool cluster tubes for 5 minutes in lysate cooling block, then transfer 50 µL to PCR tubes in PCR cooling block.*



8:10 Transfer 20 µL samples to cluster tubes.



9:00 Place sealed PCR tubes in cycler and immediately click "NEXT" to run program.

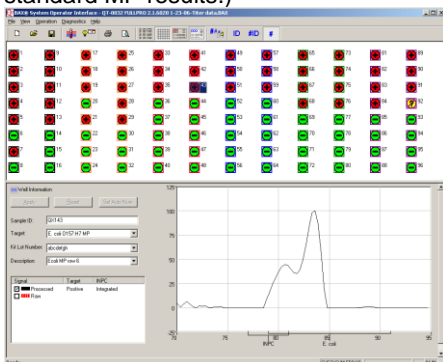


* PCR cooling block temperatures will vary depending on the instrument and software version used:

BAX® system original instrument (see Product Update 2A-052.7-0308)
 Software v.1.86 or lower – use chilled (4°C) PCR cooling block
 Software v.1.91 or higher – use frozen (-20°C) PCR cooling block

BAX® system Q7 instrument (see Product Update 2AQ-031.1-0408)
 All software versions – use frozen (-20°C) PCR cooling block

11:30 Review MP Express results. (Add 60 minutes for standard MP results.)



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