

# BAX<sup>®</sup> System Q7

PRECISE AND POWERFUL MOLECULAR PATHOGEN DETECTION





## RAPID FOOD SAFETY YOU CAN RELY ON

Food companies, service labs and government regulators around the world rely on the **Hygiena® BAX® System**, which uses the polymerase chain reaction to detect unwanted bacteria in raw ingredients, finished products and environmental samples.

Introduced more than 20 years ago, the **BAX System** was the first DNA-based detection method for the food industry. Now, the automated, user-friendly system is easy to operate, utilizing real-time or traditional PCR assays, tableted reagents and optimized media to minimize hands-on time and free technicians for other tasks. Today the **BAX System** is the leading PCR instrument in ISO-17025 labs worldwide.

## GLOBALLY APPROVED & TRUSTED

For companies whose food products are regulated by the United States Department of Agriculture (USDA), the **BAX System** can be utilized for routine testing with the confidence of using the same method adopted by the USDA Food Safety & Inspection Service (FSIS).

Third-party certifiers, such as AOAC and AFNOR require extensive validation of **BAX System** performance before granting their seals of approval. The world's largest and most reputable food labs rely on the **BAX System** to meet customers demands for accurate and reliable results. Government labs in the US, Canada, Brazil, Denmark, China and other countries have adopted the **BAX System** as an approved method for detection.





### SIGNIFICANT TIME AND LABOR SAVINGS

**BAX System** results are often available within 24 hours after sample incubation starts, instead of days or weeks later after colonies have grown.

### IMPROVED OPERATIONAL EFFICIENCIES

Accurate results mean fewer re-tests, shorter storage time for products on hold, and less waste of truly safe food. **BAX System** PCR tablets feature an internal positive control, ensuring every test is run properly. The closed tube system prevents contamination.

### EXCEPTIONAL SENSITIVITY

Studies show that **BAX System** DNA-based technology can detect as low as one colony-forming unit per sample, in volumes ranging from 25 to 375 g.

### SUPERIOR SPECIFICITY

While phenotypic tests can cross-react with bacteria exhibiting similar behavior or traits, the **BAX System** addresses the unique genetic structure of the target for fewer false positive results.

## YOUR PARTNER IN FOOD SAFETY

Validation support for difficult matrices  
Advanced troubleshooting with field team  
Rapid technical support & online resources  
Portfolio of hygiene monitoring systems,  
allergen tests, sample collection products, and more



# BAX SYSTEM BENEFITS

## CONFIDENCE

Clear and reproducible results, independent of operator technique.

## RELIABILITY

Automated cycling, detection and analysis without the need for expert skills.

## EASE OF USE

Simplified sample prep with minimal hands-on time.

## SPEED

High capacity load, up to 96 samples per batch.

## CONVENIENCE

Pre-packaged PCR reagent tablets provide consistency, stability and long shelf-life.

## ELECTRONIC DATA

LIMS-compatible system allows for easy storage, retrieval and printing.

## SUPPORT

World-class customer-focused assistance to answer your questions and keep your operation running smoothly.

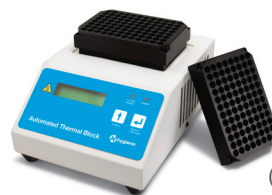
## SYSTEM COMPONENTS

**BAX System** cycler/  
detector • Computer  
work station • **BAX**  
**System** application and  
Microsoft® Windows® OS  
• Installation and training



## START-UP PACKAGE

Heating & cooling blocks • Capping/decapping  
tools • Cluster tubes and holders •  
Pipettes and tips • User documentation



(optional upgrade to  
**Hygiena Automated  
Thermal Block**)



# THE POWER OF PCR MEETS THE SIMPLICITY OF BAX

To generate the highest level of confidence in pathogen detection results, the **BAX System** uses the polymerase chain reaction (PCR) to deliver the most accurate, reliable, and easy to use detection platform. While other methods rely on physical or biochemical properties of their targets, PCR amplifies and detects a target organism's DNA. A target's DNA is highly stable, and unaffected by environmental stresses that can affect other detection methods. During PCR, carefully designed primers target specific genetic sequences possessed only by target organisms, eliminating expensive false-positive results. The **BAX System** combines this gold-standard technology with sophisticated but simple methods to provide clear “yes” or “no” results and easy-to-read amplification profiles, with no need for subjective or expert interpretation.

## 1. CLEAR POSITIVE/NEGATIVE RESULTS

Sophisticated algorithms interpret the amplification profile and provide clear Positive (red) or Negative (green) results that do not require expert interpretation.

## 2. MIX & MATCH

Shared protocols for select assays allow for “mix and match” processing, enhancing efficiency and reducing waste.

## 3. TRACK & TRACE

Capture sample identification information, lot data, and select from numerous assay targets to keep testing organized.

## 4. POSITIVE CONTROL ALWAYS INCLUDED

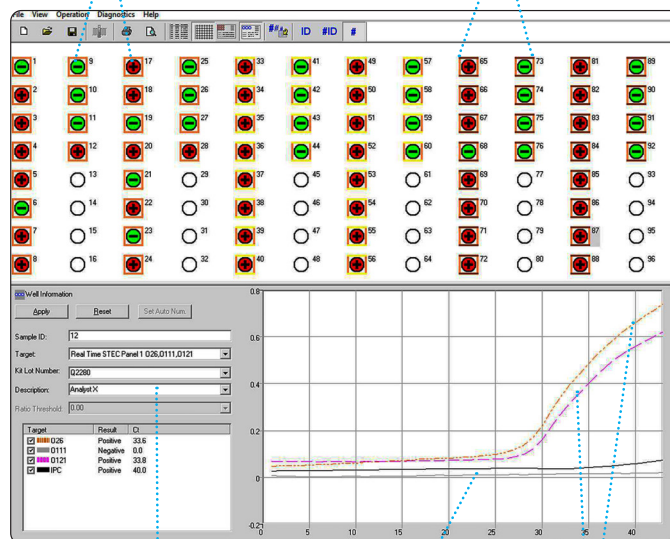
An internal positive control is included with every assay to validate negative results and give you peace of mind.

## 5. MULTI-TARGET

The **BAX System** Q7's multi-wavelength real-time detection capabilities identify multiple targets in a simple sample.

## 1. CLEAR POSITIVE /NEGATIVE

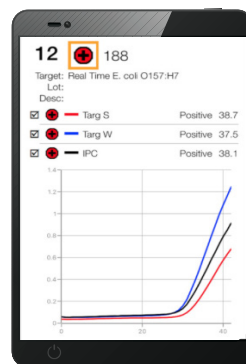
## 2. MIX & MATCH



## 3. TRACK AND TRACE

## 5. MULTI-TARGET

## 4. INTERNAL POSITIVE CONTROL

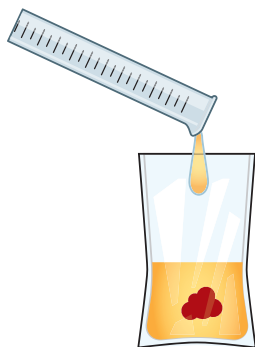


## RESULTS ON THE GO

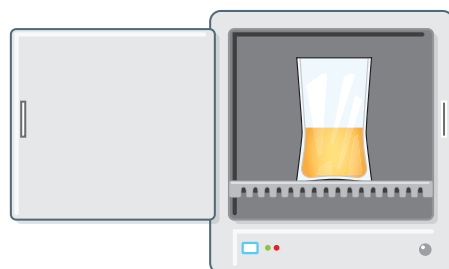
Review **BAX System** result files on your smartphone or tablet with **BAXApp**. Troubleshoot on the go or review results from multiple sites in a central location. **BAXApp** is free in the Google Play store and App Store.



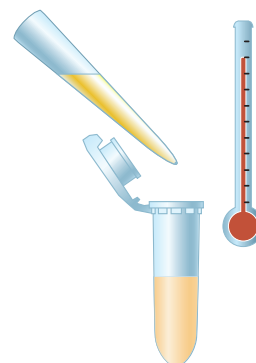
# EASY-TO-USE PROCESS



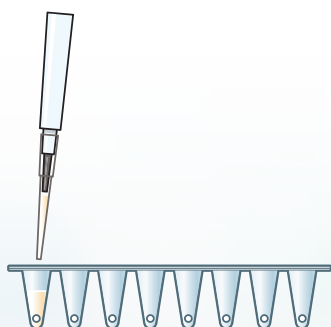
- 1 ENRICH**  
Collect your sample and mix it with enrichment media.



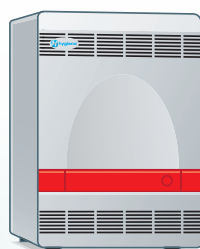
- 2 INCUBATE**  
Allow the sample to heat for designated time.



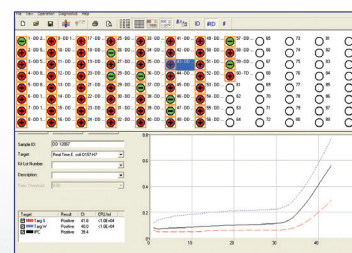
- 3 LYSE**  
Add sample to lysis reagent and heat cluster tubes to rupture the cell wall and release DNA into the solution.



- 4 HYDRATE**  
Transfer lysate to the tablet in each PCR tube.



- 5 LOAD**  
Place the PCR tubes into the BAX System instrument for automated analysis.



- 6 REVIEW**  
Results are displayed as clear yes or no icons in about one hour for most assays.





# WIDE RANGE OF TARGETS

Each assay is validated for a variety of food and/or surface matrices, against one or more third-party validation schemes. Learn more at [hygiena.com](http://hygiena.com)

## REAL-TIME ASSAYS

*Salmonella*

*E. coli* O157: H7

STEC Screening  
(stx and eae)

STE<sup>C</sup> Panel 1

(*E. coli* O26, O111, O121)

STE<sup>C</sup> Panel 2

(*E. coli* O45, O103, O145)

*Listeria* spp.

*L. mono*

*Shigella*

*Campylobacter*

(*jejuni*, *coli*, *lari*)

*Staphylococcus aureus*

*Vibrio*

(*cholerae*, *parahaemolyticus*, *vulnificus*)

## STANDARD ASSAYS

*Salmonella*

*Salmonella* 2

*E. coli* O157: H7 MP

*Listeria* spp. 24E

*Listeria* spp.

*L. mono* 24E

*L. mono*

Yeast and Mold

*Cronobacter*

(*E. sakazakii*)



### SEEKING A SIMPLE SOLUTION?

**BAX System X5** Instrument is a small footprint system for smaller throughput labs. The **BAX System X5** instrument has standard assays for *Salmonella*, *E. coli* O157: H7, *Listeria* spp. and *L. monocytogenes*.

Learn more at [hygiena.com/BAX](http://hygiena.com/BAX)





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