veriFLOW®
Listeria monocytogenes

LISTERIA MONOCYTOGENES

Protect your brand with the most robust detection tools in the food industry

Accuracy. Ease of use. Zero compromise.

THE CHALLENGE

HIGH STAKES IN FOOD PROTECTION CALLS FOR FASTER, MORE ROBUST TOOLS

New regulations, harsher penalties and numerous brand-threatening recalls have placed substantial pressures on food manufacturers. These market conditions require a paradigm change in food safety and quality monitoring programs.

VERIFLOW TECHNOLOGY

PROVEN PLATFORM DELIVERS ACCURACY, SPEED AND SENSITIVITY

Veriflow technology is proven to provide rapid, accurate, actionable detection of pathogen and spoilage indicators – with no compromises on ease of use and affordability. The technology is easily deployed on-site allowing you to identify microbial risks, take corrective action, and prevent large-scale contamination.

- Unsurpassed specificity across a wide spectrum of microbes
- Robust detection in both simple and complex matrices
- Sensitive and accurate to ensure confidence in your processes
- Reduces hold times and eliminates the need to ship at risk
- Saves money and resources throughout your process
- Meets the changing needs of the industry and allows you to protect your brand

VERIFLOW *LISTERIA MONOCYTOGENES*

Offers accurate detection with highest degree of confidence

Veriflow *Listeria monocytogenes* provides robust specificity and sensitivity across an extensive variety of environmental surfaces and multiple food and beverage matrices, without complex and time consuming sample preparation.

Unmatched specificity

- Broad inclusivity of 50 *Listeria monocytogenes* serotypes with 100% detection rate
- Correctly excludes all applicable strains tested

Unrivaled sensitivity

- Target amplification of a conserved gene marker for *Listeria monocytogenes*
- Successfully validated in Ready-to-Eat foods, milk and dairy products, nutraceuticals, confectionary goods and environmental surfaces
- Reliable results in even the most challenging matrices

Unsurpassed ease of use

- Results in 24 hours versus 3-4 days with traditional methods
- Streamlines your quality management processes
- Easily implemented on site with existing resources
- Eliminates the need for proprietary media, two-step enrichment, and DNA extraction sample preparation

INVISIBLE SENTINEL®

PERFORMANCE TESTED
AOAC
RESEARCH INSTITUTE
LICENSE NUMBER   051304

PRODUCT OVERVIEW

Veriflow *Listeria monocytogenes* is a molecular based assay for the presumptive detection of *Listeria monocytogenes*. The Veriflow system utilizes a game-changing technology that combines proven diagnostic principles for microbial detection with innovative, first-in-class scientific approaches. The robust platform performs at the highest levels of accuracy even in the most challenging matrices, with vastly simplified sample preparation. The Veriflow® system eliminates the need for sample purification, gel electrophoresis, or fluorophore-based detection of target amplification. Results are visualized immediately on a hand-held cassette with no need for complex data analysis.

PERFORMANCE VALIDATION

AOAC Certification

AOAC Performance Tested Methods℠ Program was utilized for validation and verification of assay performance. Samples of environmental surfaces and a variety of food matrices were inoculated and sampled according to directions outlined in the USDA/FSIS MLG 8.08 culture based reference method or AOAC 993.12 method. Replicate samples of environmental surfaces and a wide variety of matrices were inoculated at a low and high level with an additional un-inoculated control set.

Synopsis of the Results

The results of the validation study demonstrated the specificity, accuracy and reliability of the Veriflow® *Listeria monocytogenes* on environmental surfaces (stainless steel, sealed concrete, plastic, ceramic tile) and in a wide variety of matrices (hot dogs, deli turkey, milk and chocolate chips) foods. POD statistical analysis of all matrices tested indicate that there is no significant difference in performance between the methods at specific time points as assayed in this study, and importantly, no false positive or false negative results were observed in the entirety of the study. The successful validation of the assay is further supported by data from the inclusivity and exclusivity testing, indicating that the Veriflow® *Listeria monocytogenes* assay was able to accurately detect over 50 *Listeria monocytogenes* isolates while correctly excluding all non-specific bacteria tested.

Conclusion

Extensive testing was conducted to validate the sensitivity of the Veriflow *Listeria monocytogenes* assay. Over 160 samples were tested across a wide variety of challenging matrices without complex samples preparation after enrichment. The Veriflow® *Listeria monocytogenes* assay provides flexibility and ease of use for the end user while delivering accurate results across multiple surfaces with sampling by either swabs or sponges, and across a variety of food matrices, without complex sample preparation after enrichment. The Veriflow® system also offers significant time savings by producing accurate presumptive results after a standard enrichment time of only 24 hours.

SENSITIVITY

Matrix	Demonstrated equivalence to USDA MLG	External Validation	Client References
Stainless Steel	YES	YES	YES
Sealed Concrete	YES	YES	YES
Ceramic Tile	YES	YES	YES
Plastic	YES	YES	YES
Hot Dogs	YES	YES	YES
Deli Turkey	YES	YES	YES
Whey Powder	YES	YES	YES
2% Pasteurized Milk	YES	YES	YES
Chocolate Chip Cookies	YES	YES	YES
Pea Protein	YES	YES	YES
Pea Fiber	YES	YES	YES
Rice Protein	YES	YES	YES
Fructose	YES	YES	YES
Chia	YES	YES	YES
Vitamin Mineral Pre-Mix	YES	YES	YES
Cocoa	YES	YES	YES

VERIFLOW *LISTERIA MONOCYTOGENES* TECHNICAL SPECIFICATIONS

Specificity	50 *Listeria monocytogenes* serotypes
Time to Results	24 hours enrichment + 2 hour assay time
Matrix Compatibility	Wide variety of surfaces and matrices
Sensitivity	Zero tolerance detection
Assay Format	Qualitative
Test Stability	1 year expiration with proper storage
Enrichment	Single step enrichment in Invisible Sentinel Listeria Enrichment Broth (ISLB) or mLEB No selective supplements required
Sample Preparation	Molecular platform that eliminates need for DNA extraction or purification
Work Flow	Simple 3 step procedure
Results Interpretation	Immediate visualization on hand-held cassette - no complex data analysis

For more information or to place an order, please contact Invisible Sentinel at 215.966.6118 or www.invisiblesentinel.com

SPECIFICITY

Assay	Strains	Results	
Inclusivity	50 *Listeria monocytogenes* Serotypes	100 % Detection Rate	Correctly identified all strains tested
Exclusivity	39 Non-Listeria species	100 % Exclusion Rate	Correctly excluded all strains tested