

CAMPYLOBACTER



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 CAMPLYOBACTER

OFFERS HIGHEST LEVEL OF ACCURACY FOR THE MOST CHALLENGING MATRICES

Invisible Sentinel has placed specific emphasis on partnering with poultry processors and the technology has been proven to provide a high level of accuracy, especially when testing difficult matrices. Specifically, Veriflow *Campylobacter* provides robust specificity and sensitivity when testing in these very difficult situations and has been extensively validated in chicken carcass rinsates.

Unmatched specificity

- ▶ Broad inclusivity of 50 *Campylobacter* isolates with 100% detection rate
- ▶ Correctly excludes all 35 applicable isolates tested

Unrivaled sensitivity

- ▶ Target amplification of a conserved gene marker for *Campylobacter*
- ▶ Reliable results in even the most challenging matrices

Unsurpassed ease of use

- ▶ Results in 24 hours versus multiple days with traditional methods
- ▶ Does not require gas packs or microaerophilic enrichment conditions associated with conventional rapid methods
- ▶ Compatible with carcass rinsates across all steps of processing including boot swabs, re-hangs, and post chill samples
- ▶ Eliminates the need for two-step enrichment and DNA extraction sample preparation

PRODUCT OVERVIEW

Veriflow *Campylobacter* is a molecular based assay for presumptive detection of the most common foodborne *Campylobacter* species from chicken carcass rinsates. 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

Validation Overview

AOAC Performance Tested MethodsSM Program was utilized for validation and verification of assay performance. Samples of chicken carcass rinsates were inoculated and assessed by both the Veriflow method and USDA/FSIS MLG 5.09 method.

Synopsis of the Results

The results of the validation study demonstrated the specificity, accuracy and reliability of the Veriflow *Campylobacter* assay for the detection of *Campylobacter* in chicken carcass rinsates. 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 *Campylobacter* assay was able to accurately detect over 50 isolates while correctly excluding all non-specific bacteria tested.

Conclusion

The results of this study demonstrated the reliability of the Veriflow *Campylobacter* assay as compared to the traditional USDA/FSIS MLG 41.01 reference method for the detection of *Campylobacter* species and coli from chicken carcass rinsates. The results of the inclusivity and exclusivity testing indicated that the Veriflow *Campylobacter* assay was able to accurately detect *Campylobacter* species isolates while correctly excluding all non-specific bacteria tested. Importantly, no false positive or negative results were observed under the course of this study. For chicken carcass rinsates, accurate results were produced after a 24-hour enrichment in a non micro-aerobic environment compared to a 48 hour enrichment incubation period and additional 48 hour agar incubation period for the USDA/FSIS MLG method (1), followed by time-consuming conformational analysis. The robustness and lot-to-lot stability data also indicated that the assay is reproducible and rugged and that it can be manufactured consistently. The easy-to-follow protocol and elimination of materials required for microaerobic conditions makes the Veriflow *Campylobacter* assay a reliable and easy to use rapid detection method enrichment time of only 20 hours.

SPECIFICITY			
Assay	Strains	Results	
Inclusivity	50 <i>Campylobacter</i> isolates	100 % Detection Rate	Correctly identified all strains tested
Exclusivity	35 <i>Campylobacter</i> isolates	100 % Exclusion Rate	Correctly excluded all strains tested

SENSITIVITY			
Matrix	Demonstrated equivalence to USDA MLG	External Validation	Client References
Chicken carcass rinsates	YES	YES	YES

VERIFLOW STEC TECHNICAL SPECIFICATIONS	
Specificity	50 <i>Campylobacter</i> isolates
Time to Results	24 hours enrichment + 2 hour assay time
Matrix Compatibility	Validated in chicken carcass rinsates
Sensitivity	Zero tolerance detection
Assay Format	Qualitative
Test Stability	1 year expiration with proper storage
Enrichment	Single step enrichment Does not require gas packs or microaerophilic enrichment conditions
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



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