



## Veredus Laboratories launches VereBeef™ Detection Kit for the detection of multiple pathogens in raw beef trim

**Singapore, August 28, 2018** Veredus Laboratories, a leading provider of molecular detection tests announced today, the successful development of the VereBeef™ Detection Kit for qualitative detection of multiple pathogens in raw beef trim. The kit carries the all-important certification by the AOAC Research Institute, a wholly owned subsidiary of AOAC INTERNATIONAL.

VereBeef™ Detection Kit used in conjunction with the VerePLEX™ Biosystem is best described as an integration of both multiplex PCR and microarray on a Lab-on-Chip platform (VereChip™). It was specifically developed for the qualitative detection and differentiation of *Escherichia coli* (*E. coli*) O157:H7, *E. coli* O26, *E. coli* O45, *E. coli* O103, *E. coli* O111, *E. coli* O121, *E. coli* O145, STEC virulence factors (*stx1A*, *stx2A*, *eae*), and *Salmonella* spp. in a single test using raw beef trim samples. The effectiveness of the kit lies in its ability to detect multiple pathogens in raw beef trim with a minimum enrichment time of 8 hours for *E. coli* O157:H7 detection, and 10 hours for *Salmonella* and non-O157 STEC detection, respectively. What this translates to is a total turnaround time from sample to the answer in the range of 11 to 13 hours for multi-pathogen screening. This is a marked improvement when compared to similar products in the food safety industry where the expected turnaround times range between 15 and 24 hours for the detection of a single pathogen.

Veredus Laboratories worked in collaboration with the Agri-Food & Veterinary Authority of Singapore (AVA), the national authority entrusted with the mission to ensure a resilient supply of safe food, to create this detection kit which enables faster decisions to be made without compromising the sensitivity and specificity of the assay. The user-friendly kit offers ease of use in performing the process, from sample to result.

“The need to detect multiple pathogens with a shorter turnaround time, is one of many food safety challenges in our evolving global food landscape. AVA is happy to collaborate with industry partners like Veredus Laboratories to co-create solutions such as the VereBeef™ Detection Kit to combat such challenges effectively,” said Dr Paul Chiew, AVA’s Programme Chief (Food Safety).

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The AOAC PTM independent validation study was carried out by independent, certified laboratory, Q Laboratories, Inc. The VereBeef™ Detection Kit underwent extensive validation tests which included inclusivity-exclusivity, method comparison, robustness, lot-to-lot variability, and stability study. The inclusivity-exclusivity study underscored that VereBeef™ Detection Kit specifically detects and identifies different target strains when challenged in a blind randomized study with other organisms. VereBeef™ Detection Kit performance was compared to USDA/FSIS MLG methods for target organism detection in raw beef trim using (a) *E. coli* O157:H7 single inoculation and (b) *Salmonella* and non-O157 STEC dual-inoculation.

Mr. Patrick Bird, Microbiology R&D supervisor, Q Laboratories, Inc., said, “The VereBeef™ assay brings a new technology to the food industry that has not been seen before. This unique platform provides both sensitivity and specificity for the detection of *Salmonella* and STEC from a single sample enrichment. Results can be obtained next day, providing manufacturers and distributor key information on shipping or retaining samples.”

Emphasizing the importance of creating a commercially viable product that meets the market requirements, Dr Rosemary Tan, CEO and Founder of Veredus Laboratories Pte. Ltd., said “It is very important to identify and work with trusted partners in the field to understand the market needs and to build a product that meets or even exceeds the markets’ expectations while at the same time, being commercially viable. This has always been a challenge in our industry, but essential in creating business viability and continuing future product innovation.”

“VereBeef™ Detection Kit was specifically designed to answer a regulation need<sup>1</sup> set by the Food Safety and Inspection Service of United States Department of Agriculture (USDA), and to answer an anticipated requirement of being able to screen for more than one pathogen in one test,” continued Dr Rosemary Tan. “This kit will greatly improve the way tests are conducted in the industry to deliver quality results in good time, and in turn improving the production line efficiency of beef producers.”

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### **About Veredus Laboratories Pte Ltd**

Veredus was founded in 2003 and launched its first products in 2005. Veredus manufactures, markets and sells VerePLEX™ Biosystem to provide innovative multiplexed molecular solutions in the food safety, biosurveillance, infectious disease and custom testing markets. The VerePLEX™ Biosystem works in conjunction with VereChip™ - a Lab-on-Chip platform that combines Micro-Electro-Mechanical-Systems (MEMS) with micro-fluidics to integrate multiplexed nucleic acid amplification with microarray detection for rapid, cost-effective, and accurate analysis of biological materials.

Veredus Laboratories is now a wholly-owned subsidiary of Sekisui Chemical Co., Ltd.

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### **About AOAC**

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Note: The VereBeef™ Detection Kit is now available for purchase. More information on Veredus Laboratories Pte Ltd and its products can be found at [www.vereduslabs.com](http://www.vereduslabs.com).

<sup>1</sup> denotes Federal Register Notice (77 FR31975)

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