



AOAC-RI Validation of Hygiena’s BAX® System SalQuant® Methods for Poultry Rinsates, Ground Beef and Pork, Beef and Pork Trim, and MicroTally™ Manual Sampling Devices on Beef and Pork Trim

BAX® System Q7

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INTRODUCTION:

Process control and final product decisions based only on prevalence have shown limitations in reducing consumer risk. Therefore, adoption of validated quantification methodologies with low error and wide enumerable ranges should be utilized to make data-driven food safety decisions.

PURPOSE:

The aim of this certification study was to compare the performance of the candidate method, BAX® System Real-Time PCR Assay for *Salmonella* (KIT2006) utilizing the SalQuant® methodology, to the USDA-FSIS MLG Most Probable Number (MPN) quantitative reference method.

REGISTERED TRADEMARKS / GLOBAL CERTIFICATIONS:

BAX® System Real-Time PCR Assay for *Salmonella* AOAC-RI Performance Tested MethodsSM Certification Number 081201

MicroTally™ Manual Sample Device is a trademark of MicroTally.

METHODOLOGY:

Twenty samples per matrix were divided into 4 inoculation levels with *Salmonella* ATCC strains at low: 0.0–1.0 Log CFU/g(mL), medium: 1.5–2.5 Log CFU/g(mL), high: 2.5–3.5 Log CFU/g(mL), or uninoculated as negative controls, then cold-stressed for 48-72 hours. After the stress period, sample processing followed the Hygiena Pathogen Quantification Procedures Manual with incubation at 42 °C for 6 or 8 hours for SalQuant with reference method performed in parallel. Candidate results were compared to the reference results with statistical equivalence within 90% confidence intervals and mean difference of ± 0.50 Log10 CFU/g(mL) utilizing the AOAC-RI quantitative worksheet.

SIGNIFICANCE:

This certification provides the poultry, beef, and pork industries with an accurate, reliable, and validated quantification tool to reduce product hold-times, verify corrective actions, monitor process control, and promote faster data-driven diversion decisions which ultimately reduces consumer risk in animal protein products.

RESULTS:

The BAX SalQuant candidate method was comparable to the USDA-FSIS MLG MPN reference method at all inoculation levels for poultry rinsates, ground beef, ground pork, beef trim, pork trim, and MicroTally for beef and pork trim.

