



Laboratory Proficiency Testing Program

M12

Combination Pathogen Program in Meat Matrix
Salmonella & L. monocytogenes

09-08-2025 (Shipment Date)

10-08-2025 (Final Report Issue Date)

Round ID: M12-090825



CERT # 1782.01
Proficiency Testing Provider

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Report Authorization

This report has been authorized by Shane Flynn, Senior Director
of the AOAC laboratory Proficiency Testing Program.

Shane P Flynn

**REPORT TO PARTICIPANTS IN
THE AOAC® LABORATORY PROFICIENCY TESTING PROGRAM**

**COMBINATION MEAT MICROBIOLOGY PROGRAM
Salmonella and *L. monocytogenes***

1.0 Introduction

Test materials for the Combination Meat Microbiology Program (*Salmonella* and *L. monocytogenes*) were shipped to participants on September 8, 2025. Each laboratory was given a site identification number in order to maintain confidentiality. Participants were encouraged to analyze the samples on September 9, 2025 and urged to initiate analyses by Monday, September 15, 2025. The instruction packet on how to use the confidential online data submission system was posted online. The participants were to submit an electronic response online to verify the condition of the test materials upon receipt and confirm the safe handling of the test materials containing *Salmonella* and *L. monocytogenes* by participants. Participants were instructed to analyze the test materials according to procedures routinely used in their laboratories. The results were to be submitted to AOAC by September 23, 2025.

2.0 Preparation of Test Materials

Each set of test materials included eight samples, each containing approximately 25 grams of frozen ground or processed meat. All samples were for qualitative testing. The matrix was screened prior to spiking. Homogeneity is Appendix C, inoculation scheme is Appendix D and stability is Appendix E.

For samples 1-4 *Salmonella*, the following serotype was used for inoculation: *S. Enteritidis*. Duplicate samples were selected to verify the serotype. For the inoculation scheme, two samples were individually inoculated with *S. Enteritidis* at a low level (1 - 10 cells/g) one was inoculated with citrobacter and one was uninoculated.

For samples 5-8, *Listeria monocytogenes*, three duplicate samples were selected to verify the presence or absence of *Listeria monocytogenes*. Two sample were inoculated with *Listeria monocytogenes*, one sample was inoculated with *Listeria innocua* and one samples was uninoculated. For the inoculation scheme, samples were individually inoculated with approximately 276 cells/gram of organisms.

Samples were prepared by the following laboratory:

Mérieux NutriSciences Silliker®
Food Science Center 3600
Eagles Nest Drive, Bldg. A Crete,
IL 60417

3.0 Analyses Requested

Samples 1-4	<i>Salmonella</i> species	Indicate Present/Absent
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The participants had the option of identifying the serotype. Information on the method used for each analyses was requested.

Samples 5-8	<i>L. monocytogenes</i>	Indicate Present /Absent
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Information on the method used for each analyses was requested.

4.0 Results

Confidentiality of results will be maintained by issuing site identification codes to the participants. Results in reports will only be identified by the site identification code. Results of participants were compared to the expected results. There was inadequate information about the methodology used to group the results according to method for this shipment.

For laboratories using *Listeria* Genus Only methods/test kits - review the inoculation scheme (Appendix D) to distinguish what samples were positive for a *Listeria* spp. other than *L. monocytogenes*. AOAC will be modifying future reports to provide additional observations for labs using the *Listeria* Genus Only methods/test kits.

If a participant would like to appeal against the assessment of their performance in this proficiency testing scheme please contact staff at LPTP@AOAC.org

4.1 Comments and Recommendations

Most participating laboratories performed well. Two laboratories each reported one false positive for *Listeria monocytogenes*, while another laboratory reported one false positive for *Salmonella*. Additionally, one laboratory did not submit results for *Salmonella*. If you have any questions regarding result reporting, please contact the PT Staff at LPTP@AOAC.org before submitting your final results. Once results have been officially submitted, no changes can be made.

Individual laboratory results are in Appendix A

Appendix A
Results for (M12) Meat Microbiology Program
Salmonella and Listeria
Shipment on September 8, 2025
Site identification: 93235

Salmonella

Sample Number	Expected Results	Result for Site ID 93235 Presence or Absence of <i>Salmonella</i> Species	Evaluation	Result for Site ID 93235 O Antigen	Result for Site ID 93235 H Antigen
S1	Citrobacter	Absent	ACCEPTABLE	Not Tested	Not Tested
S2	S. Enteriditis O Antigen: D1 H Antigen: G complex	Present	ACCEPTABLE	D1	G Complex
S3	Uninoculated	Absent	ACCEPTABLE	Not Tested	Not Tested
S4	S. Enteriditis O Antigen: D1 H Antigen: G complex	Present	ACCEPTABLE	D1	G Complex

Appendix A

Listeria

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Sample Number	<i>Listeria monocytogenes</i> Expected Results	Result for Site ID 93235 Presence or Absence of <i>Listeria monocytogenes</i>	Evaluation	Special Comments
L5	Present	Present	ACCEPTABLE	Listeria monocytogenes
L6	Present	Present	ACCEPTABLE	Listeria monocytogenes
L7	Absent	Absent	ACCEPTABLE	
L8	Absent	Absent	ACCEPTABLE	Listeria innocua

Combination Meat Microbiology (M12) PROFICIENCY TESTING PROGRAM

Sample:	Enclosed are eight samples, each containing 25 grams of processed or ground meat. Shelf-life studies performed on samples stored frozen demonstrated that the samples remained stable for a period of at least 7 days if stored frozen. Please make every effort to analyze samples as soon as possible. Sample should arrive 10°C or below. These samples should be handled and analyzed in the same manner and following the same analytical standard operating procedures (SOPs) as routine samples.
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Ship Date:	0 -0 -2025
Start Analysis by Date:	0 -1 -2025
Result Due Date:	0 -2 -2025

Storage:	Store samples frozen (-20°C) until analysis date.
Thawing:	Thaw when ready to analyze by placing the samples into a plastic bag in cold water for 1 -2 hours. Do not refreeze the samples.

Analyze samples numbered 1 through 4 for the following:

Salmonella - Specify the method. Report as PRESENT or ABSENT.

If PRESENT, report the O and the H serotypes. If your laboratory does not test for O and H serotypes, report NOT TESTED.

Analyze samples numbered 5 through 8 for the following:

Listeria monocytogenes - Specify the method. Report as PRESENT or ABSENT.

Use the comment section to provide additional information.

Reporting	
Where to Report	https://pt2.aoac.org
How to Report	Step by step instructions for online reporting are available once online account is accessed

Questions and Comments

If you have questions regarding the M12 PT round, please contact LPTP@AOAC.org.

Test Material Provider:

Mérieux NutriSciences
Silliker® Food Science Center
3600 Eagles Nest Drive, Bldg. A
Crete, IL 60417

Appendix C

Homogeneity
Meat Microbiology - M12
Ship Date September 8, 2025

Results of Homogeneity Testing - *Salmonella*/25g Sample

	Inoculated in Same Batch	Inoculation Scheme	Results		O antigen	H antigen	Expected Serotype	
			Replicate 1	Replicate 2				
S-1		<i>Citrobacter</i>	Negative	Negative	NA	NA	NA	Passed
S-2		<i>S. Enteritidis</i>	Positive	Positive	D1	G complex	D1, G complex	Passed
S-3		Uninoculated	Negative	Negative	NA	NA	NA	Passed
S-4		<i>S. Enteritidis</i>						

Results of Homogeneity Testing - *Listeria* spp./25g Sample

	Inoculated in Same Batch	Inoculation Scheme	Results		Species	
			Replicate 1	Replicate 2		
L-5		<i>L. monocytogenes</i>	Positive	Positive	<i>L. monocytogenes</i>	Passed
L-6		<i>L. monocytogenes</i>				
L-7		Uninoculated	Negative	Negative	NA	Passed
L-8		<i>L. innocua</i>	Positive	Positive	<i>L. innocua</i>	Passed

NA = Not Applicable

Appendix D

Inoculation Scheme
Meat Microbiology - M12
Ship Date September 8, 2025

	Inoculation Scheme
S-1	<i>Citrobacter</i>
S-2	<i>S. Enteritidis</i>
S-3	Uninoculated
S-4	<i>S. Enteritidis</i>

	Inoculation Scheme
L-5	<i>L. monocytogenes</i>
L-6	<i>L. monocytogenes</i>
L-7	Uninoculated
L-8	<i>L. innocua</i>

Appendix E
Stability Analysis
Meat Microbiology - M12 Ship
Date: September 8, 2025
Analysis Date: September 23, 2025

Results of Stability Testing - *Salmonella*/25g Sample

	Inoculated in Same Batch	Inoculation Scheme	Results		O antigen	H antigen	Expected Serotype	
			Replicate 1	Replicate 2				
S-1		<i>Citrobacter</i>	Negative	Negative	NA	NA	NA	Passed
S-2		<i>S. Enteritidis</i>	Positive	Positive	D1	G complex	D1, G complex	Passed
S-3		Uninoculated	Negative	Negative	NA	NA	NA	Passed
S-4		<i>S. Enteritidis</i>						

Results of Stability Testing - *Listeria* spp./25g Sample

	Inoculated in Same Batch	Inoculation Scheme	Results		Species	
			Replicate 1	Replicate 2		
L-5		<i>L. monocytogenes</i>	Positive	Positive	<i>L. monocytogenes</i>	Passed
L-6		<i>L. monocytogenes</i>				
L-7		Uninoculated	Negative	Negative	NA	Passed
L-8		<i>L. innocua</i>	Positive	Positive	<i>L. innocua</i>	Passed

NA = Not Applicable