

M12

Combination Pathogen Program in Meat Matrix

Salmonella & L. monocytogenes

6-03-19 (Shipment Date)

7-18-19 (Report Date)



Proficiency Testing Provider
Certificate 1782.01

AOAC INTERNATIONAL
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Report Authorization

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



**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 June 3, 2019. Each laboratory was given a site identification number in order to maintain confidentiality. Participants were encouraged to analyze the samples on June 4, 2019 and urged to initiate analyses by Monday, June 10, 2019. 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 also instructed to report results electronically. Participants were instructed to analyze the test materials according to procedures routinely used in their laboratories. Instructions were provided for all dilutions. The results were recorded and were to be submitted to AOAC by June 18, 2019.

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 of the samples were for qualitative testing. The matrix was screened prior to spiking.

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

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

Samples were prepared by the following laboratory:
Silliker Solution 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.

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

Individual laboratory results are in Appendix A

Results for (M12) Meat Microbiology Program

***Salmonella and Listeria* Shipment on
June 3, 2019**

Salmonella

Sample Number	Expected Results	Result for Site ID xxxxx Presence or Absence of <i>Salmonella</i> Species	Result for Site ID xxxxx O Antigen	Result for Site ID xxxxx H Antigen
S1	S.typhimurium O Antigen: B H Antigen: i, 1 complex	Absent	Not Tested	Not Tested
S2	S.typhimurium O Antigen: B H Antigen: i, 1 complex	Present	Not Tested	Not Tested
S3	Uninoculated	Absent	Not Tested	Not Tested
S4	Uninoculated	Absent	Not Tested	Not Tested

Appendix A
Listeria

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

Appendix B



The Scientific Association Dedicated to Analytical Excellence®

AOAC® Laboratory Proficiency Testing Program Combination Meat Microbiology (M12) Instructions

Enclosed are eight samples, each containing 25 grams of ground or processed 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. Results are due within 2 weeks of the shipment date.

Store samples frozen (-20 °C) until analysis date. 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 species - Specify the method. Report as POSITIVE or NEGATIVE. If POSITIVE, report the O and the H serotypes. If your laboratory does not test for O and H serotypes, fill in the boxes for NOT TESTED.

Analyze samples numbered 5 through 8 for the following:

Listeria monocytogenes - Specify the method. Report as POSITIVE or NEGATIVE. Use the comment section to provide additional information.

Appendix C
Homogeneity Results - Qualitative
Meat Microbiology - M12
Ship Date June 3, 2019

Results of Homogeneity Testing - *Salmonella* 25g Sample

		Results					
	Inoculation Scheme	Replicate 1	Replicate 2	O antigen	H antigen	Expected Serotype	
S-2	<i>S. Typhimurium</i>	positive	positive	B	i	B (O): i, 1 complex (H)	Passed
S-3	Uninoculated	negative	negative	NA	NA	NA	Passed

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

	Inoculation Scheme	Replicate 1	Replicate 2	
L-10	<i>L. innocua</i>	positive	positive	Passed
L-11	<i>L. monocytogenes</i>	positive	positive	Passed
L-12	Uninoculated	negative	negative	Passed

Appendix D
Inoculation Scheme
Meat Microbiology - M12
Ship Date June 3, 2019

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

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