MicroVal Study (2023LR127): Qualitative Method

Report for the Validation of the InviScreen® *Salmonella* spp. Detection Kit for the Detection of *Salmonella* Species in a Broad Range of Foods

Version 2
January 14, 2025

Method(s)/Kit(s):

InviScreen® *Salmonella* spp. Detection Kit

Instrument(s) and Software:

Bio-Rad CFX96 Deep Well

Applied Biosystems QuantStudio™ 5 Real-Time PCR System

MicroVal Expert Laboratory:

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Report issued and authorized by:

Erin Crowley; Q Laboratories, Chief Scientific Officer

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The report is prepared in accordance with the following guidance:

1. ISO 16140-2:2016
2. MicroVal Technical committee interpretation of ISO 16140-2

Company: ALS Life Sciences Portugal

Expert Laboratory: Q Laboratories

Method/Kit name: InviScreen® *Salmonella* spp. Detection Kit

Reference method:

1. ISO 6579-1:2017 Microbiology of the food chain – Horizontal method for detection, enumeration and serotyping of *Salmonella* – Part 1: Detection of *Salmonella* spp.

2. ISO 6579-1:2017/Amd 1:2020 Microbiology of the food chain – Horizontal method for detection, enumeration and serotyping of *Salmonella* – Part 1: Detection of *Salmonella* spp. – Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC

Scope of the Validation: The validation is for a broad range of food claim and includes the following 6 categories:

- Heat Processed and Raw Milk and Dairy Products (25 g)
- Raw and Ready-to-eat (RTE) Meat Products (25 g)
- Raw Poultry Products (25 g)
- RTE and RTRH Poultry Products (25 g)
- Eggs and Egg Products (25 g)
- Fresh Produce and Fruits (25 g)

Certification organization: Lloyd's Register

1 Introduction

This project, a MicroVal validation study based on ISO 16140-2:2016 evaluated the InviScreen® *Salmonella* spp. Detection Kit in a broad range of foods. This validation evaluated the use of pre-warmed (37±1°C) BPW-ISO as the primary enrichment media for 25 g sample sizes

The scope of the validation study is provided in **Table 1**.

Table 1. Scope of the InviScreen® *Salmonella* spp. Detection Kit validation study

Category	Sample Size	Enrichment	Instrumentation
Heat Processed and Raw Milk and Dairy Products	25 g	1:10 dilution Scheme in pre-warmed (37±1°C) BPW-ISO	Bio-Rad CFX96 (Deep Well) with standard settings Applied Biosystems QuantStudio™ 5 Real-Time PCR System with standard settings
Raw and RTE Meat Products			
Raw Poultry Products			
RTE/RTRH Poultry Products			
Eggs and Egg Products			
Fresh Produce and Fruits			

The evaluation was performed by Q Laboratories as the MicroVal Expert Laboratory and consisted of :

- Method Comparison Study (MCS)
  - Sensitivity study
  - Relative level of detection (RLOD) study
  - Inclusivity and exclusivity Study
- Interlaboratory Study

2 Method protocols

2.1 Reference method

All work was conducted using the ISO 6579-1:2017 Microbiology of the food chain – Horizontal method for detection, enumeration and serotyping of *Salmonella* – Part 1: Detection of Salmonella spp.reference method, and ISO 6579-1:2017/Amd 1:2020 Microbiology of the food chain – Horizontal method for detection, enumeration and serotyping of *Salmonella* – Part 1: Detection of *Salmonella* spp. – Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC. A detailed description is given in **Annex A**.

2.2 Alternative method

2.2.1 Principle

The InviScreen® *Salmonella* spp. Detection Kit allows for real-time PCR detection of Salmonella spp. from a broad range of food products. The method consists of four steps: enrichment, DNA extraction, real-time PCR detection, and

interpretation of results. The real-time PCR assay can be performed with two commercially available real-time PCR instruments equipped for detection of fluorescence emissions in the FAM and VIC or HEX channels. Sample results are interpreted as summarized in **Table 2**.

Table 2. Summary of Result Interpretation

FAM Channel (*Salmonella* spp.)	VIC/HEX Channel (Internal Amplification Control)	Result
CT≤35	+/-	Positive
-	+	Negative
-	-	Inconclusive
? (incomplete amplification curve)	+/-	Inconclusive

2.2.2 Protocol

Samples were diluted in accordance with all parts of ISO 6887 parts 1-5 unless otherwise specified in the IFU. Sample preparations of alternative method samples were conducted according to the instructions for use (IFU) as referenced in detailed **Annex B**.

A summary is outlined as follows:

1. For the food categories, a summary of the different enrichment protocols of the InviScreen® *Salmonella* spp. Detection Kit are provided in **Table 3**.

Table 3. Summary of the Alternative Enrichment protocols

Category	Sample Size	Enrichment	Incubation Time[1]	Incubation Temperature
Heat Processed and Raw Milk and Dairy Products*	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C
Raw and RTE Meat Products*	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
Raw Poultry Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
RTE/RTRH Poultry Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
Eggs and Egg Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C
Fresh Produce and Fruits	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C

[1]All test portions were evaluated at the minimum enrichment time point (8 or 16 hours); *Combined categories

2. Following enrichment, DNA extraction was conducted following the InviScreen® *Salmonella* spp. Detection Kit according to package instructions with a 1 mL aliquot of sample enrichment.

3. PCR master mix was prepared according to package instructions and 20 µL was pipetted to PCR reaction tubes. A 5 µL aliquot of lysate was transferred to each corresponding PCR reaction tube with PCR master mix

4. Samples were analyzed on the following two real-time PCR instruments: Bio-Rad CFX96 (Deep Well) with standard settings Applied Biosystems QuantStudio™ 5 Real-Time PCR System with standard settings.

5. Confirmation of positive results

   i. Confirmation of positive results in context of ISO general rules: Confirmations were performed by diverting a portion of the alternative method's incubated enrichment to that of the ISO 6579-1:2017 reference method. This began with a transfer of the primary enrichment to the secondary enrichment broths MKTTn and RVS at both the minimum enrichment time (8 hours and 16 hours) and maximum enrichment time (16 hours for those claiming 8 hours). The validation included confirmations on both XLD and Rapid *Salmonella* agar by the ISO 6579 reference method.

To assist laboratories the alternative method samples were also stored for 72 h at 2-8 ºC. All presumptive positive and discrepant result samples were reanalyzed by the InviScreen® *Salmonella* spp. Detection Kit and confirmed following the ISO 6579-1:2017 reference method.

2.3 Study design

For all categories, there is no shared primary enrichment step for the reference and alternative method. **An unpaired study design** was utilized, and different test portions coming from the same batch of product (item) were used.

3 Method comparison study

The method comparison study was performed by the Expert Laboratory to compare the alternative method to the reference method. The method comparison study is comprised of three parts: sensitivity study, relative limit of detection (RLOD), and inclusivity and exclusivity study.

3.1 Sensitivity Study

The sensitivity study (SE) is the ability of the method selected to detect the analyte by either the reference or the alternative method. The sensitivity study is a comparative study between the reference method and alternative method using a broad range of food types. During the sensitivity study the alternative method must demonstrate that it can provide equivalent or better results than the standard reference method.

3.1.1 Number and nature of samples

A total of 400 samples were analyzed in the sensitivity study. The categories, sample types, and number of samples analyzed for each type are presented in **Table 4a** through **4d** below.

Table 4a. Summary of categories, sample types and number of samples analyzed for the alternative method – CFX 8 hour*

Category	Type	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	13	27
	Raw milk-based products (high fat content/and or high background microflora)	10	10
	Pasteurized or dry milk and dairy products	9	11
Total = 80 samples		**32**	**48**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	10	11
	Raw, frozen meat	12	10
	Cooked meat products	11	10
Total = 64 samples		**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	10	10
	Raw, ready to cook poultry (processed)	11	10
	Raw, frozen poultry	11	10
Total = 62 samples		**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	10	13
	Frozen cooked poultry	10	10
	Cured/smoked, Fermented/dried meat products	10	12
Total = 65 samples		**30**	**35**
Overall Combined Total = 271 samples		**127**	**144**

*8 hour time point not claimed for Dairy, Egg and Produce categories

Table 4b. Summary of categories, sample types and number of samples analyzed for the alternative method – QS5 8 hour*

Category	Type	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	13	27
	Raw milk-based products (high fat content/and or high background microflora)	10	10
	Pasteurized or dry milk and dairy products	10	10
Total = 80 samples		**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	10	11
	Raw, frozen meat	12	10
	Cooked meat products	11	10
Total = 64 samples		**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	10	10
	Raw, ready to cook poultry (processed)	11	10
	Raw, frozen poultry	11	10
Total = 62 samples		**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	10	13
	Frozen cooked poultry	10	10
	Cured/smoked, Fermented/dried meat products	11	11
Total = 65 samples		**31**	**34**
Overall Combined Total = 271 samples		**129**	**142**

*8 hour time point not claimed for Dairy, Egg and Produce categories

Table 4c. Summary of categories, sample types and number of samples analyzed for the alternative method – CFX 16 hour

Category	Type	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	13	27
	Raw milk-based products (high fat content/and or high background microflora)	10	10
	Pasteurized or dry milk and dairy products	10	10
Total = 80 samples		**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	10	11
	Raw, frozen meat	12	10
	Cooked meat products	11	10
Total = 64 samples		**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	10	10
	Raw, ready to cook poultry (processed)	11	10
	Raw, frozen poultry	11	10
Total = 62 samples		**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	10	13
	Frozen cooked poultry	10	10
	Cured/smoked, Fermented/dried meat products	11	11
Total = 65 samples		**31**	**34**
Eggs and Egg Products	Eggs (unprocessed)	11	10
	Egg products (heat processed)	10	12
	Dried egg products	10	15
Total = 68 samples		**31**	**37**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	10	10
	Cut ready-to-eat fruits	11	10
	Leafy greens	11	9
Total = 61 samples		**32**	**29**
Overall Combined Total = 400 samples		**192**	**208**

Table 4d. Summary of categories, sample types and number of samples analyzed for the alternative method – QS5 16 hour

Category	Type	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	13	27
	Raw milk-based products (high fat content/and or high background microflora)	10	10
	Pasteurized or dry milk and dairy products	10	10
Total = 80 samples		**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	10	11
	Raw, frozen meat	12	10
	Cooked meat products	11	10
Total = 64 samples		**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	10	10
	Raw, ready to cook poultry (processed)	11	10
	Raw, frozen poultry	11	10
Total = 62 samples		**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	10	13
	Frozen cooked poultry	10	10
	Cured/smoked, Fermented/dried meat products	11	11
Total = 65 samples		**31**	**34**
Eggs and Egg Products	Eggs (unprocessed)	11	10
	Egg products (heat processed)	10	12
	Dried egg products	10	15
Total = 68 samples		**31**	**37**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	10	10
	Cut ready-to-eat fruits	11	10
	Leafy greens	11	9
Total = 61 samples		**32**	**29**
Overall Combined Total = 400 samples		**192**	**208**

3.1.2 Artificial contamination of samples

A total of 20.83% of the 192 positive samples tested by the Expert Lab were naturally contaminated. Sample types were sourced from the United States, France and Germany (raw milk and dairy).

For the samples analyzed in the validation sensitivity study, a total of 40 *Salmonella* spp. strains were used following seeding protocols**.** For artificially contaminated samples, 130 samples were inoculated at a level equal to or below 3 CFU/sample, 9 samples were inoculated at a level greater than three but less than 4 CFU/sample, and 13 samples were inoculated at a level between 4-10 CFU/sample. Four different seeding protocols were used:

1. Seeding with heat stressed cells (10±1 minute at 50±1 °C) at 2-8 °C for 48-72 h.
2. Seeding with diluted overnight cultures at 2-8 °C for 48-72 h.
3. Seeding with diluted overnight cultures at -20 °C for two weeks.
4. Seeding with a lyophilized culture at 20-25 °C for two weeks.

Raw data and results for inoculated samples generated during the sensitivity portion of the study can be found in **Annex D**. The repartition of the positive samples is given in **Table 6** and related **Figure 1** provides a visual representation.

Table 6. Repartition of positive samples

	Artificial Contamination (CFU)			Naturally Contaminated	Total
	≤ 3	3 < x < 4	4 < x ≤ 10		
Positive Samples	130	9	13	40	192
%	67.71%	4.69%	6.77%	20.83%	100.0%

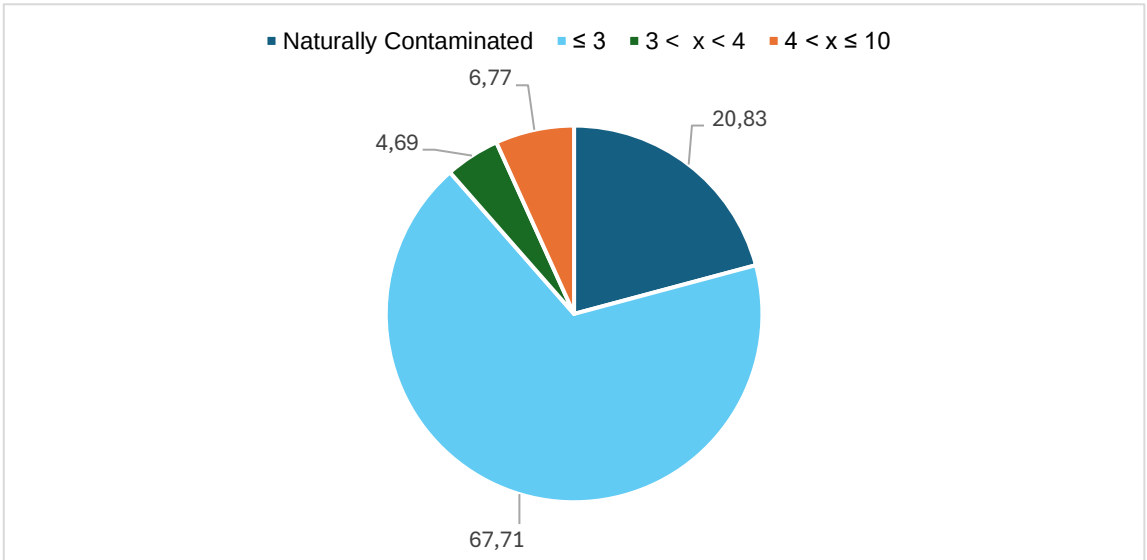


Figure 1. Repartition of the positive samples

3.1.3 Test Results

Results obtained for the sensitivity testing completed during the validation study are summarized below in **Table 7a** through **7d**. Raw data is presented in **Annex E**.

Based on the data obtained during the MCS study, it was determined that a longer enrichment time was necessary for the Egg and Produce products. Following presentation of the Dairy category data to the MVTC, it was determined that the 8 hour time point will not be claimed for these three categories.

Table 7a. Summary of results obtained with the reference and alternative methods for the study- CFX 8 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	13	27
	Raw milk-based products (high fat content/and or high background microflora)	4	10	2	4	0	0	10	10
	Pasteurized or dry milk and dairy products	5	11	1	3	0	0	9	11
Total = 80 samples		**18**	**48**	**6**	**8**	**0**	**0**	**32**	**48**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	10	11
	Raw, frozen meat	5	10	2	5	0	0	12	10
	Cooked meat products	5	10	3	3	0	0	11	10
Total = 64 samples		**14**	**31**	**9**	**10**	**0**	**0**	**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	10	10
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	11	10
	Raw, frozen poultry	6	10	3	2	0	0	11	10
Total = 62 samples		**17**	**30**	**9**	**6**	**0**	**0**	**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	10	13
	Frozen cooked poultry	4	10	2	4	0	0	10	10
	Cured/smoked, Fermented/dried meat products	3	12	4	3	0	0	10	12
Total = 65 samples		**11**	**35**	**10**	**9**	**0**	**0**	**30**	**35**
Overall Combined Total = 271 samples		**60**	**144**	**34**	**33**	**0**	**0**	**127**	**144**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive deviation, ND: Negative deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 7b. Summary of results obtained with the reference and alternative methods for the study- QS5 8 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	N+	N-
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	13	27
	Raw milk-based products (high fat content/and or high background microflora)	5	10	2	3	0	0	10	10
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	10	10
Total = 80 samples		20	47	8	5	0	0	**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	10	11
	Raw, frozen meat	5	10	2	5	0	0	12	10
	Cooked meat products	5	10	3	3	0	0	11	10
Total = 64 samples		14	31	9	10	0	0	33	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	10	10
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	11	10
	Raw, frozen poultry	5	10	3	3	0	0	11	10
Total = 62 samples		16	30	9	7	0	0	32	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	10	13
	Frozen cooked poultry	4	10	2	4	0	0	10	10
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	11	11
Total = 65 samples		11	34	11	9	0	0	**31**	**34**
Overall Combined Total = 271 samples		61	142	37	31	0	0	**129**	**142**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive deviation, ND: Negative deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 7c. Summary of results obtained with the reference and alternative methods for the study- CFX 16 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	N+	N
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	13	27
	Raw milk-based products (high fat content/and or high background microflora)	4	10	2	4	0	0	10	10
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	10	10
Total = 80 samples		19	47	8	6	0	0	**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	10	11
	Raw, frozen meat	6	10	2	4	0	0	12	10
	Cooked meat products	5	10	3	3	0	0	11	10
Total = 64 samples		15	31	9	9	0	0	**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	10	10
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	11	10
	Raw, frozen poultry	6	10	3	2	0	0	11	10
Total = 62 samples		17	30	9	6	0	0	**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	10	14
	Frozen cooked poultry	4	10	2	4	0	0	10	10
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	11	11
Total = 65 samples		11	34	11	9	0	0	**31**	**34**
Eggs and Egg Products	Eggs (unprocessed)	4	10	4	3	0	0	11	10
	Egg products (heat processed)	3	12	2	5	0	0	10	12
	Dried egg products	3	15	4	3	0	0	10	15
Total = 68 samples		10	37	10	11	0	0	**31**	**37**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	2	10	4	4	0	0	10	10
	Cut ready-to-eat fruits	4	10	4	3	0	0	11	10
	Leafy greens	4	9	4	3	0	0	11	9
Total = 61 samples		10	29	12	10	0	0	**32**	**29**
Overall Combined Total = 400 samples		**82**	**208**	**59**	**51**	**0**	**0**	**192**	**208**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive deviation, ND: Negative deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 7c. Summary of results obtained with the reference and alternative methods for the study- QS5 16 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	N+	N
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	13	27
	Raw milk-based products (high fat content/and or high background microflora)	5	10	2	3	0	0	10	10
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	10	10
Total = 80 samples		20	47	8	5	0	0	**33**	**47**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	10	11
	Raw, frozen meat	6	10	2	4	0	0	12	10
	Cooked meat products	5	10	3	3	0	0	11	10
Total = 64 samples		15	31	9	9	0	0	**33**	**31**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	10	10
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	11	10
	Raw, frozen poultry	6	10	3	2	0	0	11	10
Total = 62 samples		17	30	9	6	0	0	**32**	**30**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	10	13
	Frozen cooked poultry	4	10	2	4	0	0	10	10
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	11	11
Total = 65 samples		11	34	11	9	0	0	**31**	**34**
Eggs and Egg Products	Eggs (unprocessed)	4	10	4	3	0	0	11	10
	Egg products (heat processed)	3	12	2	5	0	0	10	12
	Dried egg products	3	15	4	3	0	0	10	15
Total = 68 samples		10	37	10	11	0	0	**31**	**37**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	2	10	4	4	0	0	10	10
	Cut ready-to-eat fruits	4	10	4	3	0	0	11	10
	Leafy greens	4	9	4	3	0	0	11	9
Total = 61 samples		10	29	12	10	0	0	**32**	**29**
Overall Combined Total = 400 samples		**83**	**208**	**59**	**50**	**0**	**0**	**192**	**208**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive deviation, ND: Negative deviation, N+: Total number of positive samples, N-: Total number of negative samples

3.1.4 Calculation of relative trueness (RT), sensitivity (SE), and false positive ratio (FPR)

The formulas presented in **Table 8** were used to calculate RT, SE, and FPR. Results were calculated considering all confirmation protocols. Final calculated results are presented in **Table 9a** through **9d**, below.

Table 8. Formulas used to determine RT, SE, and FPR

Sensitivity for the alternative method*	$SE_{alt} = \frac{(PA+PD)}{(PA+ND+PD)} \times 100\%$
Sensitivity for the reference method	$SE_{ref} = \frac{(PA+ND)}{(PA+ND+PD)} \times 100\%$
Relative trueness	$RT = \frac{(PA+NA)}{N} \times 100\%$
False positive ratio for the alternative method	$FPR = \frac{(FP)}{NA} \times 100\%$

* Where ND = ND + PPND, NA = NA + PPNA and FP= PPNA+PPND

Table 9a. Results for calculation of the relative trueness (RT), sensitivity (SE) and the false positive ratio (FPR) for the InviScreen® *Salmonella* spp. Detection Kit – CFX 8 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	SE alt %	SE ref %	RT %	FPR %
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	92.3	76.9	90.0	0.0
	Raw milk-based products (high fat content/and or high background microflora)	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Pasteurized or dry milk and dairy products	5	11	1	3	0	0	66.7	88.9	80.0	0.0
Total = 80 samples		**18**	**48**	**6**	**8**	**0**	**0**	**75.0**	**81.3**	**82.5**	**0.0**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	80.0	60.0	71.4	0.0
	Raw, frozen meat	5	10	2	5	0	0	58.3	83.3	68.2	0.0
	Cooked meat products	5	10	3	3	0	0	72.7	72.7	71.4	0.0
Total = 64 samples		**14**	**31**	**9**	**10**	**0**	**0**	**69.7**	**72.7**	**70.3**	**0.0**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	80.0	70.0	75.0	0.0
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	81.8	72.7	76.2	0.0
	Raw, frozen poultry	6	10	3	2	0	0	81.8	72.7	76.2	0.0
Total = 62 samples		**17**	**30**	**9**	**6**	**0**	**0**	**81.3**	**71.9**	**75.8**	**0.0**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	80.0	60.0	73.9	0.0
	Frozen cooked poultry	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Cured/smoked, Fermented/dried meat products	3	12	4	3	0	0	70.0	60.0	68.2	0.0
Total = 65 samples		**11**	**35**	**10**	**9**	**0**	**0**	**70.0**	**66.7**	**70.8**	**0.0**
Overall Combined Total = 271 samples		**60**	**144**	**34**	**33**	**0**	**0**	**74.0**	**73.2**	**75.3**	**0.0**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive Deviation, ND: Negative Deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 9b. Results for calculation of the relative trueness (RT), sensitivity (SE) and the false positive ratio (FPR) for the InviScreen® *Salmonella* spp. Detection Kit – QS5 8 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	SE alt %	SE ref %	RT %	FPR %
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	92.3	76.9	90.0	0.0
	Raw milk-based products (high fat content/and or high background microflora)	5	10	2	3	0	0	70.0	80.0	75.0	0.0
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	90.0	70.0	80.0	0.0
Total = 60 samples		**20**	**47**	**8**	**5**	**0**	**0**	**84.8**	**75.8**	**83.8**	**0.0**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	80.0	60.0	71.4	0.0
	Raw, frozen meat	5	10	2	5	0	0	58.3	83.3	68.2	0.0
	Cooked meat products	5	10	3	3	0	0	72.7	72.7	71.4	0.0
Total = 60 samples		**14**	**31**	**9**	**10**	**0**	**0**	**69.7**	**72.7**	**70.3**	**0.0**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	80.0	70.0	75.0	0.0
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	81.8	72.7	76.2	0.0
	Raw, frozen poultry	5	10	3	3	0	0	72.7	72.7	71.4	0.0
Total = 60 samples		**16**	**30**	**9**	**7**	**0**	**0**	**78.1**	**71.9**	**74.2**	**0.0**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	80.0	60.0	73.9	0.0
	Frozen cooked poultry	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	72.7	54.5	63.6	0.0
Total = 60 samples		**11**	**34**	**11**	**9**	**0**	**0**	**71.0**	**64.5**	**69.2**	**0.0**
Overall Combined Total = 271 samples		**61**	**142**	**37**	**31**	**0**	**0**	**76.0**	**71.3**	**74.9**	**0.0**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive Deviation, ND: Negative Deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 9c. Results for calculation of the relative trueness (RT), sensitivity (SE) and the false positive ratio (FPR) for the InviScreen® *Salmonella* spp. Detection Kit – CFX 16 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	SE alt %	SE ref %	RT %	FPR %
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	92.3	76.9	90.0	0.0
	Raw milk-based products (high fat content/and or high background microflora)	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	90.0	70.0	80.0	0.0
Total = 80 samples		19	47	8	6	0	0	81.8	75.8	82.5	0.0
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	80.0	60.0	71.4	0.0
	Raw, frozen meat	6	10	2	4	0	0	66.7	83.3	72.7	0.0
	Cooked meat products	5	10	3	3	0	0	72.7	72.7	71.4	0.0
Total = 64 samples		15	31	9	9	0	0	72.7	72.7	71.9	0.0
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	80.0	70.0	75.0	0.0
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	81.8	72.7	76.2	0.0
	Raw, frozen poultry	6	10	3	2	0	0	81.8	72.7	76.2	0.0
Total = 62 samples		17	30	9	6	0	0	81.3	71.9	75.8	0.0
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	80.0	60.0	73.9	0.0
	Frozen cooked poultry	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	72.7	54.5	63.6	0.0
Total = 65 samples		11	34	11	9	0	0	71.0	64.5	69.2	0.0
Eggs and Egg Products	Eggs (unprocessed)	4	10	4	3	0	0	72.7	63.6	66.7	0.0
	Egg products (heat processed)	3	12	2	5	0	0	50.0	80.0	68.2	0.0
	Dried egg products	3	15	4	3	0	0	70.0	60.0	72.0	0.0
Total = 68 samples		10	37	10	11	0	0	64.5	67.7	69.1	0.0
Fresh Produce and Fruits	Cut ready-to-eat vegetables	2	10	4	4	0	0	60.0	60.0	60.0	0.0
	Cut ready-to-eat fruits	4	10	4	3	0	0	72.7	63.6	66.7	0.0
	Leafy greens	4	9	4	3	0	0	72.7	63.6	65.0	0.0
Total = 61 samples		10	29	12	10	0	0	68.8	62.5	63.9	0.0
Overall Combined Total = 400 samples		**82**	**208**	**59**	**51**	**0**	**0**	**73.4**	**69.3**	**72.5**	**0.0**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive Deviation, ND: Negative Deviation, N+: Total number of positive samples, N-: Total number of negative samples

Table 9d. Results for calculation of the relative trueness (RT), sensitivity (SE) and the false positive ratio (FPR) for the InviScreen® *Salmonella* spp. Detection Kit – QS5 16 hour

Category	Type	PA*	NA	PD	ND	PPND	PPNA	SE alt %	SE ref %	RT %	FPR %
Heat Processed and Raw Milk and Dairy Products	Raw milk	9	27	3	1	0	0	92.3	76.9	90.0	0.0
	Raw milk-based products (high fat content/and or high background microflora)	5	10	2	3	0	0	70.0	80.0	75.0	0.0
	Pasteurized or dry milk and dairy products	6	10	3	1	0	0	90.0	70.0	80.0	0.0
Total = 60 samples		20	47	8	5	0	0	84.8	75.8	83.8	0.0
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0	80.0	60.0	71.4	0.0
	Raw, frozen meat	6	10	2	4	0	0	66.7	83.3	72.7	0.0
	Cooked meat products	5	10	3	3	0	0	72.7	72.7	71.4	0.0
Total = 60 samples		15	31	9	9	0	0	72.7	72.7	71.9	0.0
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	5	10	3	2	0	0	80.0	70.0	75.0	0.0
	Raw, ready to cook poultry (processed)	6	10	3	2	0	0	81.8	72.7	76.2	0.0
	Raw, frozen poultry	6	10	3	2	0	0	81.8	72.7	76.2	0.0
Total = 60 samples		17	30	9	6	0	0	81.3	71.9	75.8	0.0
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0	80.0	60.0	73.9	0.0
	Frozen cooked poultry	4	10	2	4	0	0	60.0	80.0	70.0	0.0
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0	72.7	54.5	63.6	0.0
Total = 60 samples		11	34	11	9	0	0	71.0	64.5	69.2	0.0
Eggs and Egg Products	Eggs (unprocessed)	4	10	4	3	0	0	72.7	63.6	66.7	0.0
	Egg products (heat processed)	3	12	2	5	0	0	50.0	80.0	68.2	0.0
	Dried egg products	3	15	4	3	0	0	70.0	60.0	72.0	0.0
Total = 60 samples		10	37	10	11	0	0	64.5	67.7	69.1	0.0
Fresh Produce and Fruits	Cut ready-to-eat vegetables	2	10	4	4	0	0	60.0	60.0	60.0	0.0
	Cut ready-to-eat fruits	4	10	4	3	0	0	72.7	63.6	66.7	0.0
	Leafy greens	4	9	4	3	0	0	72.7	63.6	65.0	0.0
Total = 60 samples		10	29	12	10	0	0	68.8	62.5	63.9	0.0
Overall Combined Total = 198 samples		**83**	**208**	**59**	**50**	**0**	**0**	**74.0**	**69.3**	**72.8**	**0.0**

* Where PA: Positive agreement, NA: Negative agreement, PD: Positive Deviation, ND: Negative Deviation, N+: Total number of positive samples, N-: Total number of negative samples

The summary of obtained results for all categories are presented in **Table 10** below.

Table 10. Summary of results for all categories

Instrument		Results for all the categories (%)*
CFX 8 hour	**Sensitivity for the alternative method**	74.0%
	Sensitivity for the reference method	73.2%
	Relative trueness	75.3%
	False positive ratio for the alternative method	0.0%
QS5 8 hour	**Sensitivity for the alternative method**	76.0%
	Sensitivity for the reference method	71.3%
	Relative trueness	74.9%
	False positive ratio for the alternative method	0.0%
CFX 16 hour	**Sensitivity for the alternative method**	73.4%
	Sensitivity for the reference method	69.3%
	Relative trueness	72.5%
	False positive ratio for the alternative method	0.0%

QS5 16 hour	**Sensitivity for the alternative method**	74.0%
	Sensitivity for the reference method	69.3%
	Relative trueness	72.8%
	False positive ratio for the alternative method	0.0%

* Where ND = ND + PPND, NA = NA + PPNA and FP= PPNA+PPND

The sensitivity values are similar between the alternative method protocols and enrichment according to the reference standard.

3.1.5 Analysis of deviations and discordant results

For the InviScreen® *Salmonella* spp. Detection Kit a total of 10 negative discordant results were observed on the CFX-96 PCR instrument and 5 negative discordant results were observed on the QS5 instrument. A total of 8 negative discordant results were observed at 8 hours incubation and 7 negative discordant results were observed at 16 hours incubation. Overall, 15 negative discordant results (false negatives) were observed over a total of 10 samples (2.5% of all samples). There were no positive discordant results (false positives) observed for the study. A summary of the discordant results are presented in **Table 11** below.

All negative discordant results were evaluated in subsequent replicates (analyzed in triplicate) to evaluate root-cause, and all results were in agreement with the original result. All samples were contaminated at a level below 3 CFU or naturally contaminated. These levels of contamination may have been at or below the level of detection for the assay.

Table 11. Summary of observed discordant results

Item	Inoculation Level	CANDIDATE (25 g)																	ISO REFERENCE STANDARD (25 g)							Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result(16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hr	16 Hr	8 Hr	16 Hr	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Frozen Raw Boneless Skinless Chicken Thighs	5.6 (7,6,5,9,1)	47	34.84	16.70	-	29.04	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	107	t	t	t	t	*Salmonella* spp.	Pos	ND/PA	PA
Pure Beef Patties (85% Lean)	2.6 (1,0,4,5,3)	148	-	23.28	-	24.50	t	t	ng	ng	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	208	m	m	m	t	*Salmonella* spp.	Pos	ND	PA
Original Turkey Jerky	1.6 (2,0,2,1,3)	286	-	17.61	34.57	16.52	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	346	ng	ng	ng	ng		Neg	NA/PD	PD
Spinach and Arugula Mix	1.6 (2,0,3,0,3)	481[a]		-		-						t	t	t	t	*Salmonella* spp		Pos	541	t	t	t	t	*Salmonella* spp.	Pos	Not claimed	ND
Spinach, Arugula, and other Mix	2.4 (4,3,5,0,0)	491[a]		-		-						t	t	t	t	*Salmonella* spp		Pos	551	t	t	t	t	*Salmonella* spp.	Pos	Not claimed	ND
Raw Milk	Naturally contaminated	604	-	-	-	-	at	at	ng	ng		m	m	t	t	*Salmonella* spp	Neg	Pos	664	at	at	ng	ng		Neg	NA	NA
Kaltbach Le Cremeux	Naturally contaminated	623	-	-	34.26	34.67	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp	Pos	Pos	683	m	t	m	t	*Salmonella spp.*	Pos	ND/ PA	ND/ PA
Part Skim Shredded Mozzarella Cheese	1.6 (2,2,1,0,3)	646	-	24.11	33.08	23.55	m	m	m	m	*Salmonella* spp	t	t	t	t	*Salmonella spp.*	Pos	Pos	706	ng	ng	ng	ng		Neg	NA/ PD	PD
Pepper Jack Cheese	1.2 (0,1,1,4,0)	648	-	16.32	33.38	15.62	m	t	m	t	*Salmonella* spp	t	m	t	m	*Salmonella spp.*	Pos	Pos	708	ng	ng	at	at		Neg	ND/ PD	PD
Guyere Cheese	Naturally contaminated	660	-	17.86	32.74	14.87	m	t	m	t	*Salmonella* spp	m	t	m	t	*Salmonella spp.*	Pos	Pos	720	m	t	m	t	*Salmonella spp.*	Pos	ND/ PA	PA

[a] Samples not claimed at 8 hour per enrichment protocol.

As expected from the unpaired study, deviations were observed, as different primary enrichment schemes were used between the compared methods.

For each category, the difference between (ND-PD) was calculated, and then compared to the Acceptability Limits (AL) defined in the ISO 16140-2:2016 standard. Analysis of discordant results according to EN ISO 16140-2:2016 are presented in **Table 12a** through **12d** below.

Table 12a. Analysis of discordant results for the InviScreen® *Salmonella* spp. Detection Kit – CFX 8 hour

Category	Type	ND*	PD	ND-PD	AL
Heat Processed and Raw Milk and Dairy Products	Raw milk	3	1		
	Raw milk-based products (high fat content/and or high background microflora)	2	4		
	Pasteurized or dry milk and dairy products	1	3		
Total		6	8	**2**	**3**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	2		
	Raw, frozen meat	2	5		
	Cooked meat products	3	3		
Total		9	10	**1**	**3**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	3	2		
	Raw, ready to cook poultry (processed)	3	2		
	Raw, frozen poultry	3	2		
Total		9	6	**-3**	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	2		
	Frozen cooked poultry	2	4		
	Cured/smoked, Fermented/dried meat products	4	3		
Total		10	9	**-1**	**3**
Overall Combined Total		**34**	**33**	**-1**	**5**

* Where ND = ND + PPND and NA = NA + PPNA

Table 12b. Analysis of discordant results for the InviScreen® *Salmonella* spp. Detection Kit – QS5 8 hour

Category	Type	ND*	PD	ND-PD	
				AL	
Heat Processed and Raw Milk and Dairy Products	Raw milk	3	1		
	Raw milk-based products (high fat content/and or high background microflora)	2	3		
	Pasteurized or dry milk and dairy products	3	1		
Total		8	5	**-3**	**3**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	2		
	Raw, frozen meat	2	5		
	Cooked meat products	3	3		
Total		9	10	**1**	**3**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	3	2		
	Raw, ready to cook poultry (processed)	3	2		
	Raw, frozen poultry	3	3		
Total		9	7	**-2**	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	2		
	Frozen cooked poultry	2	4		
	Cured/smoked, Fermented/dried meat products	5	3		
Total		11	9	**-2**	**3**
Overall Combined Total		**37**	**31**	**-6**	**5**

* Where ND = ND + PPND and NA = NA + PPNA

Table 12c. Analysis of discordant results for the InviScreen® *Salmonella* spp. Detection Kit – CFX 16 hour

Category	Type	ND*change to PD	PD	ND-PD	
				AL	
Heat Processed and Raw Milk and Dairy Products	Raw milk	3	1		
	Raw milk-based products (high fat content/and or high background microflora)	2	4		
	Pasteurized or dry milk and dairy products	3	1		
Total		8	6	**-2**	**3**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	2		
	Raw, frozen meat	2	4		
	Cooked meat products	3	3		
Total		9	9	**0**	**3**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	3	2		
	Raw, ready to cook poultry (processed)	3	2		
	Raw, frozen poultry	3	2		
Total		9	6	**-3**	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	2		
	Frozen cooked poultry	2	4		
	Cured/smoked, Fermented/dried meat products	5	3		
Total		11	9	**-2**	**3**
Eggs and Egg Products	Eggs (unprocessed)	4	3		
	Egg products (heat processed)	2	5		
	Dried egg products	4	3		
Total		10	11	**1**	**3**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	4	4		
	Cut ready-to-eat fruits	4	3		
	Leafy greens	4	3		
Total		12	10	**-2**	**3**
Overall Combined Total		**59**	**51**	**-8**	**6**

* Where ND = ND + PPND and NA = NA + PPNA

Table 12a. Analysis of discordant results for the InviScreen® *Salmonella* spp. Detection Kit – QS5 16 hour

Category	Type	ND*	PD	ND-PD	
				AL	
Heat Processed and Raw Milk and Dairy Products	Raw milk	3	1		
	Raw milk-based products (high fat content/and or high background microflora)	2	3		
	Pasteurized or dry milk and dairy products	3	1		
Total		8	5	**-3**	**3**
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	2		
	Raw, frozen meat	2	4		
	Cooked meat products	3	3		
Total		9	9	**0**	**3**
Raw Poultry Products	Raw, ready to cook poultry (unprocessed)	3	2		
	Raw, ready to cook poultry (processed)	3	2		
	Raw, frozen poultry	3	2		
Total		9	6	**-3**	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	2		
	Frozen cooked poultry	2	4		
	Cured/smoked, Fermented/dried meat products	5	3		
Total		11	9	**-2**	**3**
Eggs and Egg Products	Eggs (unprocessed)	4	3		
	Egg products (heat processed)	2	5		
	Dried egg products	4	3		
Total		10	11	**1**	**3**
Fresh Produce and Fruits	Cut ready-to-eat vegetables	4	4		
	Cut ready-to-eat fruits	4	3		
	Leafy greens	4	3		
Total		12	10	**-2**	**3**
Overall Combined Total		**59**	**50**	**-9**	**6**

* Where ND = ND + PPND and NA = NA + PPNA

For all categories analyzed, the (ND+PPND)-PD is lower than the acceptability limit (AL).

3.1.6 PCR inhibition

During analysis zero samples produced an “Invalid” result**.** Should PCR inhibition be observed per the instruction of use (IFU), it is recommended to perform a 1:2 and 1:10 dilution of the DNA extract in DNAse/RNAse free water and repeat the Real Time PCR reaction.

3.1.7 Enrichment broth storage

For the validation study, enrichment broth (pre-warmed (37 ± 1 °C) BPW-ISO) was stored at 2-8 °C for 72 h, and all confirmed positive and discrepant samples were tested again. Cold storage was performed from aliquots taked at both at the minimum enrichment time point (8 hours) and after the maximum enrichment time (16 hours).

A total of 33 changes were observed as summarized in **Table 14**.

Table 14. Enrichment broth storage changes observed

Category	Sample No	Results before storage				Results after storage			
		CFX	QS5	Confirmation	Agreement	CFX	QS5	Confirmation	Agreement
Heat Processed and Raw Milk and Dairy Products (8 Hr)	784	+	+	+	PA	-	+	-	ND/PPND
	786	+	+	+	PA	-	+	-	ND/PPND
	787	+	+	+	PA	-	+	-	ND/PPND
	789	+	+	+	PA	-	+	-	ND/PPND
	790	+	+	+	PA	-	+	-	ND/PPND
	623		+	+	PA		-	+	ND
	635	+		+	PA	-		+	ND
	645	+		+	PD	-		+	NA
	646		+	+	PD		-	+	NA
	648		+	+	PD		-	+	NA
	650	+	+	+	PA	-	-	+	ND
Heat Processed and Raw Milk and Dairy Products (16 Hr)	784	+	+	+	PA	+	+	-	PPND
	786	+		+	PA	-		+	ND
	787	+		+	PA	-		+	ND
	789	+	+	+	PA	+	-	-	PPND/ND
	790	+		+	PA	-		+	ND
	623		+	+	PA		-	+	ND
Raw Poultry Products (8 Hr)	4	+	+	-	PD	-	-	-	NA
	30		+	+	PA		-	+	ND
	47	+		+	PA	-		+	ND
	51	+		+	PA	-		+	ND
Raw Poultry Products (16 Hr)	4		+	-	PD		-	-	NA
	51	+		+	PA	-		+	ND
	53	+		+	PA	-		+	ND
	56	+		+	PA	-		+	ND
RTE/RTRH Poultry Products (8 or 16 hours?)	254		+	-	PD		-	-	NA
Eggs and Egg Products (16 hour)	416	+		-	PD	-		-	NA
Fresh Produce and Fruits (16 hour)	487		+	+	PA		-	+	ND
	490		+	-	PD		-	-	NA
	514		+	+	PA		-	+	ND
	521		+	+	PA		-	+	ND
	522		+	-	PD		-	-	NA
	529	+	+	-	PD	-	-	-	NA

Of the 33 changes observed, 17 were for the Heat Processed and Raw Milk and Dairy Products category, eight (8) for the Raw Poultry Products category, and six (6) for the Fresh Produce and Fruits category. The remaining two (2) changes were observed in the RTE/RTRH Poultry Products and Eggs and Egg Products categories. For the Heat Processed and Raw Milk and Dairy Products, the majority of the observed changes occurred from naturally contaminated raw milk samples. The samples from this category underwent a change from positive to negative including confirmation. The level of contamination may have been low enough to be below the detection of the assay to recover. All other observed changes went from a positive result to a negative result all of which were negative discordant results (false negatives).

Due to the significant number of observed changes the following categories **will not be claimed** for enrichment broth storage:

- Heat Processed and Raw Milk and Dairy Products category
- Raw Poultry Products
- Fresh Produce and Fruits.

All remaining categories will be claimed for enrichment broth storage.

For the categories that will be claimed for enrichment broth storage, a total of 3 negative discordant results were observed on the CFX instrument and 2 negative discordant results were observed on the QS5 instrument. A total of 4 negative discordant results were observed at 8 hours incubation and 1 negative discordant result was observed at 16 hours incubation. Overall, 4 negative discordant results (false negatives) were observed (1.0% of all samples).The discordant results are provided in **Table 15** below.

All negative discordant results were evaluated in subsequent replicates (analyzed in triplicate) to evaluate root-cause, and all results were in agreement with the original result. All samples were contaminated at a level below 3 CFU, this level of contamination may have been at or below the level of detection for the assay.

Table 15. Enrichment broth storage discordant results

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Pure Beef Patties (85% Lean)	2.6 (1,0,4,5,3)	148	-	25.01	-	23.22	t	t	ng	ng	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	208	m	t	m	t	*Salmonella* spp.	Pos	ND	PA
Chicken Chunks- White Meat	1.0 (1,0,1,2,1)	254	33.35	14.69	-	14.40	m	t	at	t	*Salmonella* spp.	m	t	at	t	*Salmonella* spp.	Pos	Pos	314	ng	ng	ng	ng		Neg	PD/NA	PD
Original Turkey Jerky	1.6 (2,0,2,1,3)	286	-	17.51	34.22	17.45	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	346	ng	ng	ng	ng		Neg	NA/PD	PD
Dried Egg Whites 8	0.8 (1,3,0,0,0)	416[a]		-		34.06						t	t	ng	ng	*Salmonella* spp.		Pos	476	ng	ng	ng	ng		Neg	Not claimed	NA/PD

[a] Samples not claimed at 8 hour per enrichment protocol.

Interpretation of the sensitivity study results for the categories that will be claimed for enrichment broth storage are presented in **Table 16a** through **16d** below.

Table 16a. Interpretation of sensitivity study results after storage of the enrichment broth – CFX 8 hour

Category	Type	PA	NA	PD	ND	PPND	PPNA	ND-PD	AL
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0		
	Raw, frozen meat	5	10	2	5	0	0		
	Cooked meat products	5	10	3	3	0	0		
Total		14	31	9	10	0	0	1	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0		
	Frozen cooked poultry	4	10	2	4	0	0		
	Cured/smoked, Fermented/dried meat products	3	12	4	3	0	0		
Total		11	35	10	9	0	0	-1	**3**
All Categories		**25**	**66**	**19**	**19**	**0**	**0**	0	

Table 16b. Interpretation of sensitivity study results after storage of the enrichment broth – QS5 8 hour

Category	Type	PA	NA	PD	ND	PPND	PPNA	ND-PD	AL
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0		
	Raw, frozen meat	5	10	2	5	0	0		
	Cooked meat products	5	10	3	3	0	0		
Total		14	31	9	10	0	0	1	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0		
	Frozen cooked poultry	4	10	2	4	0	0		
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0		
Total		11	34	11	9	0	0	-2	**3**
All Categories		**25**	**65**	**20**	**19**	**0**	**0**	-1	

Table 16C. Interpretation of sensitivity study results after storage of the enrichment broth – CFX 16 hour

Category	Type	PA	NA	PD	ND	PPND	PPNA	ND-PD	AL
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0		
	Raw, frozen meat	6	10	2	4	0	0		
	Cooked meat products	5	10	3	3	0	0		
Total		15	31	9	9	0	0	0	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	13	4	2	0	0		
	Frozen cooked poultry	4	10	2	4	0	0		
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0		
Total		11	34	11	9	0	0	-2	**3**
Eggs and Egg Products	Eggs (unprocessed)	3	10	4	3	0	0		
	Egg products (heat processed)	2	12	2	4	0	0		
	Dried egg products	1	16	2	1	0	0		
Total		6	38	8	8	0	0	0	**3**
All Categories		**32**	**103**	**28**	**26**	**0**	**0**	-2	**5**

Table 16d. Interpretation of sensitivity study results after storage of the enrichment broth – QS5 16 hour

Category	Type	PA	NA	PD	ND	PPND	PPNA	ND-PD	AL
Raw and RTE Meat Products	Raw, ready-to-cook meat (unprocessed)	4	11	4	2	0	0		
	Raw, frozen meat	6	10	2	4	0	0		
	Cooked meat products	5	10	3	3	0	0		
Total		15	31	9	9	0	0	0	**3**
RTE/RTRH Poultry Products	Ready to eat poultry	4	14	3	2	0	0		
	Frozen cooked poultry	4	10	2	4	0	0		
	Cured/smoked, Fermented/dried meat products	3	11	5	3	0	0		
Total		11	35	10	9	0	0	-1	**3**
Eggs and Egg Products	Eggs (unprocessed)	3	10	4	3	0	0		
	Egg products (heat processed)	2	12	2	4	0	0		
	Dried egg products	1	15	2	2	0	0		
Total		6	37	8	9	0	0	1	**3**
All Categories		**95**	**164**	**46**	**37**	**0**	**0**	0	**6**

For all categories analyzed, the (ND+PPND)-PD is lower than the acceptability limit (AL).

3.2 Relative level of detection study

The relative limit of detection (RLOD) is the level of detection (LOD) at P = 0.50 (LOD_{50}) of the alternative method divided by the level of detection at P = 0.50 (LOD_{50}) of the reference method.

The RLOD is defined as the ratio of the alternative and reference methods:

$$RLOD = \frac{LOD_{alt}}{LOD_{ref}}$$

3.2.1 Experimental design

Per category, one food type and one relevant target micro-organism for this food type was chosen in the RLOD study, as shown in **Table 17**, below. Three levels of contamination were evaluated for the matrix/strain combination. This combination consisted of:

- 5 uninoculated test portions, analyzed as the negative control level
- 20 test portions, evaluated at the theoretical level of detection (low level)
- 5 test portions, evaluated just above the theoretical detection threshold

A total of 30 test portions were analyzed per RLOD. All test portions were compared to the ISO 6579-1:2017 reference standard and carried out according to

ISO 16140-2:2016. A total plate count was performed on the day of analysis to determine the total microbial load.

Table 17. List of selected types and strains as tested within the RLOD study

Category	Type/Item	Strain	Origin	Inoculation and Storage	Replicates
Heat Processed and Raw Milk and Dairy Products (25 g)	Raw Milk	*Salmonella Agona* (B) ATCC 51957	Not Available	Overnight culture; Held at 2-8°C for 48-72 h	5 uninoculated
					20 low
					5 high
Raw and RTE Meat Products (25 g)	Raw Ground Beef	*Salmonella* Anatum (E1) ATCC 9270	Pork Liver	Overnight culture; Held at 2 -8°C for 48-72 h	5 uninoculated
					20 low
					5 high
Raw Poultry (25 g)	Raw Ground Turkey	*Salmonella* Newport (C2) ATCC 6962	Food Poisoning Outbreak	Overnight culture; Held at 2 -8°C for 48-72 h	5 uninoculated
					20 low
					5 high
RTE/RTRH Poultry (25 g)	Deli Turkey	*Salmonella* Enteritidis ATCC 4931 (I)	Case of gastroenteritis in Copenhagen	Heat stressed at 50°C for 10 minutes; Held at 2 -8°C for 48-72 h	5 uninoculated
					20 low
					5 high
Eggs and Egg Products (25 g)	Liquid egg, pasteurized	*Salmonella* Pullorum (D1) ATCC 13036	Not Available	Heat stressed at 50°C for 10 minutes; Held at 2 -8°C for 48-72 h	5 uninoculated
					20 low
					5 high
Fresh Produce and Fruits (25 g)	Cut Cantaloupe	*Salmonella* Typhimurium (B) QL 011414.2	Egg	Overnight culture; Held at 2 -8°C for 48-72 h	5 uninoculated
					20 low
					5 high

3.2.2 Test sample preparations

Three levels of artificial contamination were prepared for each type:

- Negative control level: One uninoculated lot x 5 test portions
- Low level: One inoculated lot between 0.2 and 2.0 CFU/sample x 20 test portions, providing fractional recovery (5-15 positive results out of 20)
- High level: One inoculated lot between 2.0 and 8.0 CFU/sample x 5 test portions, contaminated at a higher level

A bulk lot of the matrix was inoculated at each level, homogenized, and stored, as described in **Table 17**.

3.2.3 RLOD study results

The tabulated raw data for the RLOD study is given in **Annex F**.

The RLOD calculations were performed using the Excel spread sheet https://standards.iso.org/iso/16140/ (version 06-07-2015) of the international standard as described in EN ISO 16140-2: 2016. The RLOD per type is given in **Table 18a** and **18b** below with the Acceptability Limits (AL).

Based on the data obtained during the MCS study, it was determined that a longer enrichment time was necessary for the Egg and Produce products and therefore 8 hours will not be claimed for these two categories

Table 18a. RLOD before and after confirmation of the alternative method results – 8 Hour*

Name	RLOD	AL	RLODL	RLODU	b=ln(RLOD)	sd(b)	z-Test statistic	p-value
Raw Milk (25 mL)	**0.652**	0.265	1.609	-0.427	0.451	0.946	1.656	0.652
Raw Ground Beef (25 g)	**1.000**	0.403	2.480	0.000	0.454	0.000	1.000	1.000
Raw Ground Turkey (25 g)	**0.597**	0.206	1.729	-0.516	0.532	0.971	1.668	0.597
Deli Turkey (25 g)	**1.152**	0.471	2.817	0.142	0.447	0.316	0.752	1.152
Combined	**0.828**	0.514	1.333	-0.189	0.238	0.793	1.572	0.828

Table 18b. RLOD before and after confirmation of the alternative method results – 16 Hour

Name	RLOD	AL	RLODL	RLODU	b=ln(RLOD)	sd(b)	z-Test statistic	p-value
Raw Milk (25 mL)	**0.652**	0.265	1.609	-0.427	0.451	0.946	1.656	0.652
Raw Ground Beef (25 g)	**1.000**	0.403	2.480	0.000	0.454	0.000	1.000	1.000
Raw Ground Turkey (25 g)	**0.597**	0.206	1.729	-0.516	0.532	0.971	1.668	0.597
Deli Turkey (25 g)	**1.152**	0.471	2.817	0.142	0.447	0.316	0.752	1.152
Liquid egg, pasteurized (25 g)	**0.776**	0.202	2.978	-0.254	0.673	0.378	1.294	0.776
Cut Cantaloupe (25 g)	**1.388**	0.501	3.844	0.328	0.509	0.643	0.520	1.388
Combined	**0.898**	0.597	1.352	-0.107	0.205	0.525	1.400	0.898

3.2.4 Calculation of the LOD_{50}

Additionally, the LOD_{50} value was calculated according to the Wilrich & Wilrich POD-LOD calculation program (version 10, 2021-04-05), to provide an easy access to end-users who will run the method verification according to the NF EN ISO 16140-3:2021 (**Table 19** below).

Table 19. Presentation of LOD_{50}

Results of the PODLOD calculations											
Matrix					$LOD_{50\%}$ = 50% limit of detection in cfu/g or cfu/ml			$LOD_{95\%}$ = 95% limit of detection in cfu/g or cfu/ml			Test statistic matrix effect
No. i	Designation Matrix$_i$	Matrix effect F_i	Log matrix effect f_i	SD of log matrix effect s_{fi}	Detection limit $d_{0.5,i}$	Lower conf. limit $d_{0.5,i,L}$	Upper conf. limit $d_{0.5,i,U}$	Detection limit $d_{0.95,i}$	Lower conf. limit $d_{0.95,i,L}$	Upper conf. limit $d_{0.95,i,U}$	$\lvert z_i \rvert$
1	Raw Milk	0.025	-3.688	0.264	1.108	0.653	1.880	4.790	2.824	8.124	1.4E-06
2	Raw Ground Beef	0.024	-3.726	0.291	1.150	0.643	2.058	4.972	2.779	8.896	0.002
3	Raw Ground Turkey	0.032	-3.436	0.297	0.861	0.475	1.560	3.722	2.055	6.743	0.014
4	Deli Turkey	0.019	-3.951	0.267	1.441	0.846	2.456	6.230	3.655	10.616	1.3E-07
5	Liquid egg, pasteruized	0.014	-4.278	0.317	1.998	1.059	3.769	8.636	4.579	16.289	1.8E-04
6	Cut Cantaloupe	0.024	-3.750	0.325	1.179	0.615	2.258	5.094	2.658	9.759	0.015
Combined results		0.022	-3.817	0.118	1.261	0.996	1.597	5.451	4.304	6.903	0.022
		based on the data of matrices 1, 2, 3, 4, 5 and 6									

3.2.5 Conclusion RLOD study

The RLOD values (using the confirmed alternative method results) meet the acceptability limit of 2.5 for unpaired test portions for all food types tested.

4 Inclusivity/exclusivity study

4.1 Inclusivity and exclusivity study protocol

For the inclusivity evaluation, 105 *Salmonella* spp. including both enterica and bongori species were evaluated. All strains were cultured in BHI medium at 37±1°C. Dilutions were done to inoculate 10-100 cells/225 mL of pre-warmed (37±1°C) BPW-ISO. The inoculated broth was incubated for 8-16 hours at 37±1°C and analyzed by InviScreen® *Salmonella* spp. Detection Kit at the minimum enrichment time (8 hours).

For the exclusivity evaluation, 30 isolates closely related to *Salmonella* spp. were cultured in non-selective media and tested undiluted by the InviScreen® *Salmonella* spp. Detection Kit. The broth was incubated at conditions optimal for growth. All inclusivity and exclusivity cultures were randomized and blind coded prior to analysis.

The InviScreen® *Salmonella* spp. Detection Kit correctly detected all 105 *Salmonella* strains, while excluding all non-*Salmonella* strains. Tabulated raw data for the inclusivity/exclusivity is given in **Annex G**.

5 Interlaboratory Study

5.1 General Overview

The inter-laboratory study is a study performed by multiple laboratories testing identical samples at the same time, the results of which are used to estimate alternative-method performance parameters.

A total of 16 sample sets were sent to 12 laboratories. Three laboratories, not involved in the development or validation of the method agreed to analyze two sets of samples at their location. The study was conducted with RTE deli turkey samples inoculated with *Salmonella* Enteritidis ATCC 4931 in an unpaired study design. Samples were inoculated and sent on Friday November 1, 2024, as described below:

- 36 blind coded samples (25 g) for analysis of *Salmonella* with the ALS method (red label)

- 36 blind coded samples (25 g) for analysis of *Salmonella* by the ISO 6579 reference method (blue label)

- 1 RTE deli turkey sample (marked “APC”) for aerobic mesophilic flora enumeration by ISO 4833 method

- USB temperature probe

All participants were trained on the ILS procedures during virtual meetings held on 31 October and 1 November 2024.

Preparation of Inoculum and Test Portions

The *Salmonella* Enteritidis ATCC 4931 culture used in this evaluation was propagated onto Tryptic Soy Agar with 5% Sheep Blood (SBA) from a Q Laboratories frozen stock culture stored at -70°C. A single, well-isolated colony from SBA was transferred into brain heart infusion (BHI) broth and incubated at 37 ± 2 °C for 18-24 hours. Appropriate dilutions were prepared based on previously established growth curves for both low and high inoculation levels, resulting in fractional positive outcomes for the low level. A bulk lot of the RTE deli turkey was inoculated with a liquid inoculum and mixed thoroughly by hand kneading to ensure an even distribution of microorganisms. The matrix was inoculated on the day of shipment so that all test portions would have been held for 96 hours by the day testing was initiated.

The inoculated test product was packaged into separate 25 g samples in sterile Whirl-Pak® bags and shipped to the collaborators.

The targeted inoculation levels were:

- A control level at 0 CFU/25 g
- A low level at 0.2-2 CFU/25g (level providing fractional positive results)
- A high level at 2-5 CFU/25 g.

Blinded samples were placed in isothermal boxes, which contained cooling blocks, and express-shipped to the different laboratories. A temperature probe containing a sensor was added to the package to register the temperature profile during the transport, the package delivery and storage until analyses.

The samples were shipped via Federal Express or DHL priority express in isotherm packages according to IATA regulations for Category B Biological

Substances. The temperature conditions had to stay lower or equal to 8°C during transport.

The *Salmonella* detection was performed by the reference and the alternative methods using either the CFX-96 or QS5 instruments. The minimum incubation time was tested for the alternative method, i.e. 8 h at 37°C. The analyses were started on Wednesday 7th or Thursday 8th November 2024.

Stability Data

In order to detect *Salmonella* spp., the EN ISO 6579 method was performed to screen five deli turkey test portions (25 g) before the inoculation. All the results were negative. The APC of the product was 1.4 x 10^2 CFU/g prior to inoculation.

Inoculum Level Verification

To determine the level of Salmonella in the food type, a 5-tube most probable number (MPN) was conducted by the coordinating laboratory on the day of the initiation of analysis using the ISO 6579 reference method. The MPN for each contamination level was determined by analyzing 5 x 50 g test portions, the reference method test portions from the collaborating laboratories that analyzed sample sets (132 x 25 g) and 5 x 10 g test portions. The MPN and 95% confidence intervals were calculated using the LCF MPN Calculator, Version 1.6, (http://www.lcfltd.com/customer/LCFMPNCalculator.exe), provided by AOAC Research Institute (RI). Table 19 presents the MPN results for the ILS evaluation.

Table 19: MPN Data

RTE Deli Turkey *Salmonella Enteritidis* ATCC 4931					
Target Low Level Inoculation (0.2-2 CFU/25g)					
Replicate	**A**	**B**	**C**	**D**	**E**
5 x 10 g	**-**	**-**	**+**	**+**	**-**
132 x 25 g (reference test portions)	**59/132**				
5 x 50 g	**+**	**-**	**+**	**+**	**-**
MPN	**0.60**				
Low Conf. Limit MPN/Test Portion	**0.47**				
Upper Conf. Limit MPN/Test Portion	**0.77**				
Target High Inoculation Level (2-10 CFU/25 g)					
5 x 10 g	**+**	**+**	**+**	**+**	**-**
132 x 25 g (reference test portions)	**132/132**				
5 x 50 g	**+**	**+**	**+**	**+**	**+**
MPN	**6.22**				
Low Conf. Limit MPN/Test Portion	**2.98**				
Upper Conf. Limit MPN/Test Portion	**13.07**				

Stability of Test Portions

All participants provided the data from the temperature probe and the APC result and reported to the Expert Laboratory on the Sample Receipt Confirmation forms provided. Table 20 summarizes the temperature data and Table 21 summarizes the APC result/participant. The average APC result obtained by the collaborators was 2.3 x 10^3 CFU/g with low and high data points of <1.0 x10^1 CFU/g and 1.5 x 10^4 CFU/g.

Table 20- Temperature Data by Laboratory

Laboratory	Temperature Data (°C)
A*	**N/A***
B	**3.5**
C*	**N/A**
D1*	**N/A**
D2*	**N/A**
E	**0.7**
F	**0.5**
G	**1.5**
H1	**2.5**
H2	**2.4**
I	**2.6**
J	**3.8**
K1	**2.8**
K2	**3.0**
L	**2.4**

*Samples did not arrive at location and were excluded from analysis

Table 21 – APC Data by Laboratory

Laboratory	APC Result (CFU/g)
A*	N/A
B	2.3 x 10^2
C*	N/A
D1*	N/A
D2*	N/A
E	<1.0 x10^1
F	3.0 x 10^3
G	7.5 x 10^1
H1	2.8 x 10^3
H2	3.7 x 10^3
I	<1.0 x10^1
J	1.5 x 10^4
K1	4.0 x 10^1
K2	4.0 x 10^1
L	6.4 x 10^1

*Samples did not arrive at location and were excluded from analysis

Results

Table 22 summarizes the collaborative study results for each participant. For each level (L0, L1, L2) 12 unpaired test portions were evaluated by each collaborator. There were three laboratories that did not receive their samples due to customs and import permit issues. Those labs were excluded from the evaluation. Results for the raw data can be found in Appendix H.

Table 22 Results of the ILS Study by Participant and Inoculation Level

Laboratory*	Alternative Method Presumptive Result			Alternative Method Confirmed Result			ISO 6579 Reference Method			Thermocycler Used
Inoculation Level	L_0	L_1	L_2	L_0	L_1	L_2	L_0	L_1	L_2	
A	-	-	-	-	-	-	-	-	-	
B	0	4	12	0	4	12	0	3	12	CFX-96
C	-	-	-	-	-	-	-	-	-	
D1										
D2										
E	0	7	12	0	7	12	0	4	12	CFX-96
F	0	4	12	0	4	12	0	5	12	QS5
G	0	7	12	0	7	12	0	5	12	CFX-96
H1	0	7	12	0	7	12	0	4	12	QS5
H2	0	8	12	0	8	12	0	7	12	QS5
I	0	3	12	0	3	12	0	5	12	CFX-96
J	0	6	12	0	6	12	0	7	12	CFX-96
K1	0	6	12	0	6	12	0	5	12	QS5
K2	0	4	12	0	4	12	0	8	12	QS5
L	0	3	12	0	3	12	0	6	12	CFX-96

**Laboratory A,C and D did not receive samples in time and were excluded from the analysis.*

Expert Laboratory

The Expert Lab analyzed a set of test portions on the day of testing initiation. Table 23 provides the results from the quality control testing performed by

the Expert Lab.

Table 23 Expert Lab Results

Method	Alternative Method Presumptive Result			Alternative Method Confirmed Result			ISO 6579 Reference Method		
Level	**L_0**	**L_1**	**L_2**	**L_0**	**L_1**	**L_2**	**L_0**	**L_1**	**L_2**
Day of Analysis	0	7	12	0	7	12	0	*6*	12

Calculation of Specificity Percentage
The specificity of the reference and alternative method are calculated using level L0. These values are obtained from the following equations, where N_ is the total number of tests at L0, and P_0 and CP_0 are the number of false positive results with the uninoculated controls.

$$SP_{ref} = \left(1 - \left(\frac{P_0}{N\_}\right)\right) x\ 100\ \% = \qquad SP_{alt} = \left(1 - \left(\frac{CP_0}{N\_}\right)\right) x\ 100\ \% =$$

A 100.0% specificity was obtained for the reference method and 100.0% specificity for the alternative method.

Calculation of Sensitivity (SEalt, Seref), Relative Trueness and False Positive Ratio for the Alternative Method (FPR)

From the data obtained in the ILS, fractional positive results were obtained for the low inoculation level (L1). This level was used for the calculation. The data used for the calculation is presented in Table 24 below

Table 24: Summary of agreements and deviations for the ILS for L1

	Reference Method Positive (R+)	**Reference Method Negative (R-)**
Alternative Method Positive (A+)	Positive Agreement (+/+) 41	Positive Deviation (-/+) 11
Alternative Method Negative (A-)	Negative Deviation (+/-) 11	Negative Agreement (-/-) 69

Using the values in Table 24, the sensitivity of the reference and alternative methods were determined, along with relative trueness and false positive rate. Calculations for each statistic is provided below. Additionally, the requirement of fractional positive results was obtained for both the alternative and reference method. A summary of results in presented in Table 25.

Figure 1: Calculation for the Sensitivity of the Alternative Method

$$SE_{alt} = \frac{(PA+PD)}{(PA+PD+ND)} \; x\; 100\% =$$

Figure 2: Calculation for the Sensitivity of the Reference Method

$$SE_{ref} = \frac{(PA+ND)}{(PA+PD+ND)} \; x\; 100\% =$$

Figure 3: Calculation for the Relative Trueness

$$RT = \frac{(PA+NA)}{N} \; x\; 100\% =$$

Figure 4: Calculation for the False Positive Rate of the Alternative Method

$$FPR = \frac{FP}{NA} \; x\; 100\% =$$

Table 25: Summary of Statistical Analysis of the ILS Study

Sensitivity for the Alternative Method	82.54%
Sensitivity for the Reference Method	82.54%
Relative Trueness	83.33%
False Positive Ratio for the Alternative Method	0.00 %

For an unpaired study, the difference between (ND – PD) at L1 shall not be higher than the AL. The AL is defined as [(ND-PD)max] and is calculated using the following equations and the sum of (ND+PD) are calculated for the level where fractional recovery was obtained (L_1). The values found for (ND – PD) and (ND + PD) shall not be higher than the acceptability limits (AL).

$$(p+)_{ref} = \frac{P_x}{N_x}$$

Where

P_X is the number of samples with a positive result obtained with the reference method at the fractional level for all collaborators

N_X is the number of samples tested at the fractional level with the reference method by all collaborators

$$(p+)_{alt} = \frac{CP_x}{N_x}$$

Where

CP_X is the number of samples with a confirmed positive result obtained with the alternative method at the fractional level for all collaborators

N_X is the number of samples tested at the fractional level with the alternative method by all collaborators

$$(\text{ND-PD})_{\max} = \sqrt{3N_x \times \left((p+)_{\text{ref}} + (p+)_{\text{alt}} - 2\left((p+)_{\text{ref}} \times (p+)_{\text{alt}}\right)\right)}$$

Where

N_X is the number of samples tested at the fractional level with the reference method by all collaborators

The results of the alternative method when compared to the AL are presented in Table 22.

Table 26: Evaluation of the AL for the alternative method

N_X	132
$(p+)_{ref}$	0.4
$(p+)_{alt}$	0.4
$(ND\text{-}PD)_{max}$	13.8
(ND – PD)	0

The value obtained during the ILS is lower than the AL as determined by $(ND\text{-}PD)_{max}$ indicated the alternative method.

Evaluation of the RLOD Between Laboratories

The RLOD for the ILS was calculated using the available Excel spread sheet (http://standards.iso.org/iso/16140) as listed in ISO 1614-2:2016. These results are provided for informational purposes only.

Table 27: RLOD Between Laboratories

Method	Method Effect	Log Method Effect	SD of log Method Effect	$LOD_{50\%}$ = 50% limit of detection in CFU per sample size			$LOD_{95\%}$ = 95% limit of detection in CFU per sample size		
				Detection Limt	Lower Conf. Limit	Upper Conf. Limit	Detection Limit	Lower Conf. Limit	Upper Conf. Limit
Reference	1.014	0.014	0.121	0.68	0.54	0.87	2.95	2.32	3.77
Alternative	1.014	0.014	0.121	0.68	0.54	0.87	2.95	2.32	3.77

Conclusion	The methods are not significantly different at the 5% significance level (change in deviance of the model with method effects to the null model $D_{method} = 0$ with 1 degree of freedom, p-value 1).
	The relative limit of detection (RLOD) of the alternative method, as compared to the reference method, is 1 with a 90% confidence interval of 0.75 - 1.33.

Conclusion Interlaboratory Study

The data obtained during the ILS meets the criteria set forth in ISO 16140-2:2016 and indicates that the alternative method, the ALS InviScreen *Salmonella* method is considered equivalent to the ISO 6579 reference method.

6 Conclusions

Method Comparison Study

Overall, the conclusions are:

For categories analyzed, the observed values(ND+PPND)-PD, were lower than the acceptability limit (AL) (observed values ≤ AL).

1. **8 hour enrichment**
   - Raw and RTE Meat Products
   - Raw Poultry Products
   - RTE/RTRH Poultry Products
2. **16 hour enrichment**
   - Heat-processed and Raw Milk and Dairy Products
   - Raw and RTE Meat Products
   - Raw Poultry Products
   - RTE/RTRH Poultry Products
   - Eggs and Egg Products
   - Fresh Produce and Fruits

For the following categories, the observed values(ND+PPND)-PD, were lower than the acceptability limit (AL) (observed values ≤ AL) after enrichment broth storage:

- Raw and RTE Meat Products
- RTE/RTRH Poultry Products
- Eggs and Egg Products

The RLOD values (using the confirmed alternative method results) meet the acceptability limit, which is 2.5 for unpaired studies, for all categories tested.

The InviScreen® *Salmonella* spp. Detection Kit correctly detected all 105 *Salmonella* species, while excluding all non-*Salmonella* species.

Interlaboratory Study

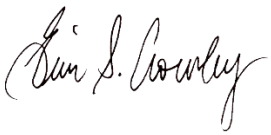
The data obtained during the ILS meets the criteria set forth in ISO 16140-2:2016 and indicates that the alternative method, the ALS InviScreen *Salmonella* spp method is considered equivalent to the ISO 6579-1:2017 reference method.

General Conclusion

The InviScreen® *Salmonella* spp. Detection Kit offers flexibility for the analysis of a broad range of foods. The performances of this alternative methods meet the requirements for the Method Comparison study as outlined in the ISO 16140-2 validation standard.

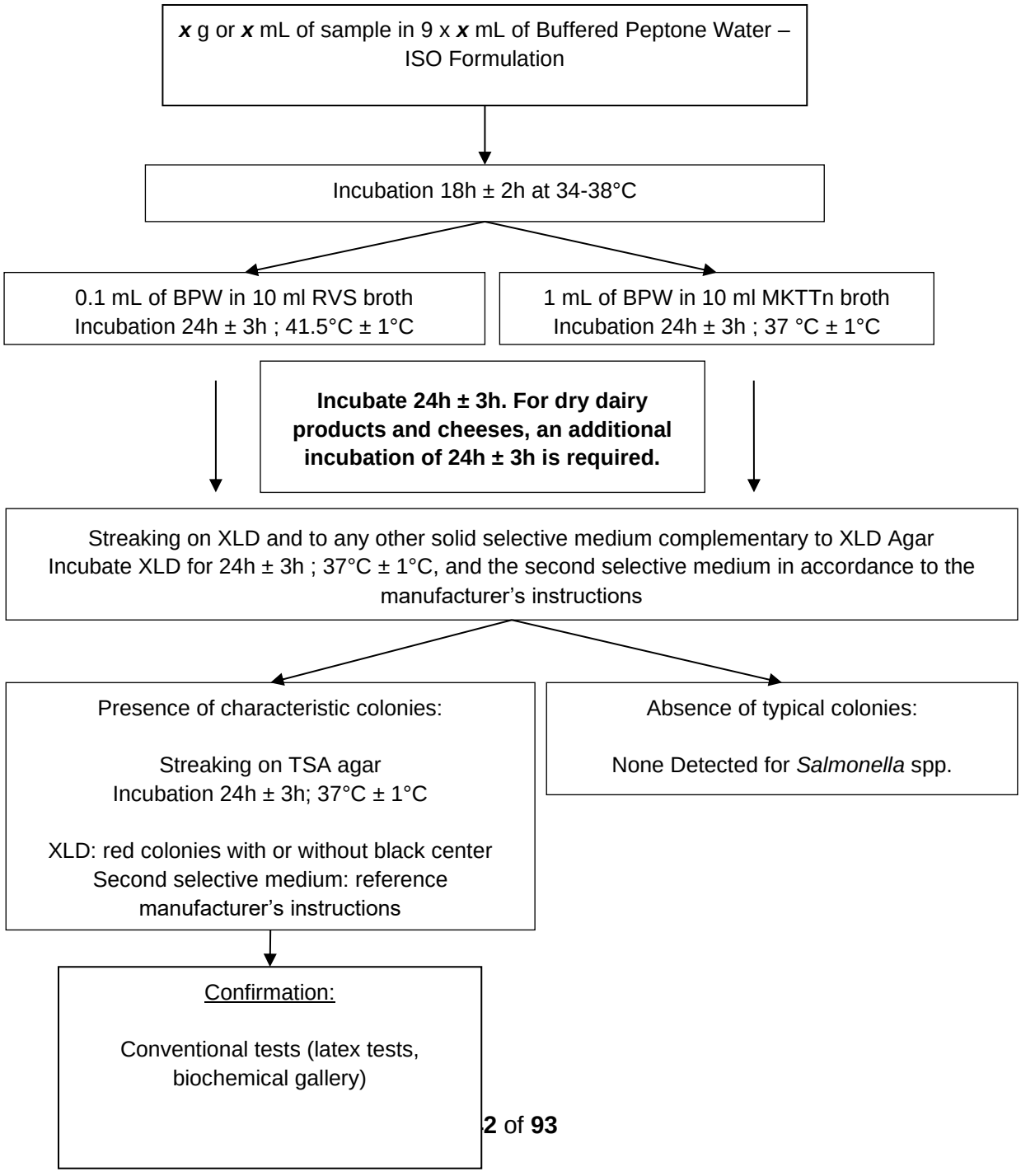
On the January 14, 2025,

I attest to the validation of the verification and the conformity of the report, both the opinion and interpretation. I attest to the validation of the results of the analysis carried out were under A2LA accreditation.



Erin S. Crowley; Chief Scientific Officer, Q Laboratories

ANNEX A: Flow Diagram of the Reference Method



ANNEX B: Flow Diagram of the Alternative Method

ENRICHMENT:

Category	Sample Size	Enrichment	Incubation Time[1]	Incubation Temperature
Heat Processed and Raw Milk and Dairy Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C
Raw and RTE Meat Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
Raw Poultry Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
RTE/RTRH Poultry Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	8-16 h	37±1°C
Eggs and Egg Products	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C
Fresh Produce and Fruits	25 g	1:10 (225 mL) with pre-warmed (37±1°C) BPW-ISO	16-24 h	37±1°C

↓

LYSIS:

Fast Lysis Procedure according to package insert (1 mL of enrichment)[2]
Centrifuge 1 mL aliquots tubes at max. speed (>10.000 x g) for 2 min and carefully discard the supernatant.

↓

PCR:

Preparation of reaction mixture using Fast Lysis Procedure (20 µL per sample and control), followed by addition of lysate (5 µL of lysate)

↓

Load and run PCR on CFX96 and QuantStudio 5 Fast instruments

↓

CONFIRMATION[1]:

- According to the ISO general rules
  - Option 1: Any ISO 16410-6:2019 validated confirmation method from isolated colonies on XLD or selective agar (RAPID' *Salmonella* agar was used in validation).
  - Option 2: ISO 6579-1:2017 confirmation procedure from XLD or selective agar (RAPID'*Salmonella* Agar was used in validation)

[1] All test portions were evaluated at the minimum enrichment time point (8 or 16 hours);
[2] Possible to hold samples for 72 hours at 2-8°C prior to DNA extraction for the following categories only: Raw and RTE Meat Products, RTE/RTRH Poultry Products, and Eggs and Egg Products

ANNEX C: Method Technical Product Information

Reference provided Package Insert

ANNEX D: Artificial Contaminations

Item	Inoculating Strain	Inoculation Level	Level of Injury	Sample No	Sample No
Raw Goats Milk	*S.* Menhaden QL 024.20	0.2 (0,0,1,0,0)		774	801
Raw Camel Milk	*S.* Menhaden QL 024.20	1.6 (3,0,2,0,3)		775	802
Raw Goats Milk	*S.* Tennessee QL 11037.3	5.4 (6,6,8,4,3)		777	804
Raw Goats Milk	*S.* Tennessee QL 11037.3	2.6 (7,0,1,5,0)		778	805
Raw Camel Milk	*S.* Tennessee QL 11037.3	1.4 (4,0,0,3,0)		783	810
Raw Bovine Milk	Natural Contamination			784	811
Raw Bovine Milk	*S.* Typhimurium ATCC BAA-215	1.8 (0,2,2,5,0)		785	812
Raw Bovine Milk	Natural Contamination			786	813
Raw Bovine Milk	Natural Contamination			787	814
Raw Bovine Milk	*S.* Typhimurium ATCC BAA-215	2.0 (3,1,1,2,3)		788	815
Raw Bovine Milk	Natural Contamination			789	816
Raw Bovine Milk	Natural Contamination			790	817
Raw Bovine Milk	*S.* Typhimurium ATCC BAA-215	2.8 (5,6,1,1,1)		791	818
Fourme d'Ambert	Natural Contamination			622	682
Kaltbach Le Cremeux	Natural Contamination			623	683
Buttermilk Bleu Affinee	Natural Contamination			624	684
Fontina Val D'Aosta	Natural Contamination			626	686
Comte HOP Reserve	Natural Contamination			628	688
Roquefort Sociele Bee	Natural Contamination			629	689
Raw Milk French Raclette	Natural Contamination			630	690
Fourme d'Ambert	Natural Contamination			633	693
Buttermilk Bleu Affinee	Natural Contamination			635	695
Fontina Val D'Aosta	Natural Contamination			637	697
4% Milkfat cottage cheese	*S.* Poona NCTC 4840	1.0 (0,3,2,0,0)	0.62	641	701
Whole Milk Yogurt	Natural Contamination			642	702
1% Low Fat Milk	*S.* Poona NCTC 4840	1.2 (0,1,1,4,0)	0.58	645	705
Part Skim Shredded Mozzarella Cheese	*S.* Poona NCTC 4840	1.6 (2,2,1,0,3)	0.66	646	706
Pepper Jack Cheese	*S.* Poona NCTC 4840	1.2 (0,1,1,4,0)	0.64	648	708
Smoked Provolone Cheese	*S.* Poona NCTC 4840	1.0 (1,1,1,1,1)	0.54	649	709
Cheddar and Gruyere Cheese Blend	*S.* Pomona ATCC 10729	0.8 (3,0,1,0,0)	0.62	650	710
Whole Milk Yogurt-Vanilla	*S.* Pomona ATCC 10729	1.0 (2,0,1,1,1)	0.60	652	712
Low Fat Skim Milk	*S.* Pomona ATCC 10729	1.0 (0,2,1,1,1)	0.52	655	715
Guyere Cheese	Natural Contamination			660	720

Item	Inoculating Strain	Inoculation Level	Level of Injury	Sample No	Sample No
Boneless Pork Chops	*S.*Typhimurium ATCC 14028	1.2 (1,2,3,0,0)		122	182
Shaved Beef Steak	Natural Contamination			123	183
Ground Bison (90% Lean)	*S.*Typhimurium ATCC 14028	1.6 (0,5,0,1,2)		125	185
Raw Ground Beef Patties (80% Lean)	Natural Contamination			126	186
Diced Beef	*S.*Typhimurium ATCC 14028	1.6 (2,3,0,0,0)		130	190
Fresh Ground Pork	Natural Contamination			132	192
Raw Ground Bison (90% Lean)	Natural Contamination			134	194
Raw Ground Sirloin Beef Patties (93% Lean)	*S.*Typhimurium ATCC 14028	1.4 (4,3,0,0,0)		136	196
Fresh Raw Ground Beef (80% Lean)	S.Anatum ATCC 9270	1.6 (1,3,0,0,4)		138	198
Lamb Chop	*S.*Seftenberg QL 11031.2	1.8 (0,0,4,3,2)		723	745
Raw Ground Beef Crumbles (80% Lean)	Natural Contamination			142	202
Raw Angus Chuck Beef Patties	S.Anatum ATCC 9270	1.8 (1,1,1,3,3)		143	203
Raw Thin and Seasoned Beef Patties	S.Anatum ATCC 9270	2.0 (1,3,2,2,2)		144	204
Spicy Sicilian Pork Meatballs	Natural Contamination			146	206
Pure Beef Patties (85% Lean)	S.Anatum ATCC 9270	2.6 (1,0,4,5,3)		148	208
Frozen Sliced Beef Liver	Natural Contamination			149	209
Frozen Pork Scrapple	Natural Contamination			150	210
Frozen Raw Ground Beef (80% Lean)	S.Anatum ATCC 9270	2.0 (7,1,3,0,0)		152	212
Raw Frozen Meatballs- Pork	*S.* Enteritidis QL 341302-20	1.8 (2,3,3,1,0)		155	215
Raw Frozen Meatballs- Pork	*S.* Enteritidis QL 341302-20	1.0 (1,0,2,0,2)		156	216
Raw Beef Patties (91% Lean)	*S.* Enteritidis QL 341302-20	3.8 (3,3,0,4,4)		157	217
Raw Diced Beef Liver	Natural Contamination			159	219
Sliced Smoked Ham - Boneless	*S.* Enteritidis QL 341302-20	1.8 (5,1,1,1,1)	0.56	161	221
Brown Sugar Sliced Country Ham	*S.* Heidelberg QL 341302-48	1.0 (1,1,1,1,1)	0.64	162	222
Cubed Ham (96% Fat Free)	*S.* Heidelberg QL 341302-48	0.4 (0,0,0,1,1)	0.54	163	223
Sliced Ham Steaks (97% Fat Free)	Natural Contamination			164	224
Pork Liverwurst Pate with Bacon added	*S.* Heidelberg QL 341302-48	0.8 (1,2,0,1,0)	0.56	165	225
Honey Cured Sliced Ham	*S.* Heidelberg QL 341302-48	3.2 (4,6,0,0,6)	0.66	168	228
Ultra-thin sliced Roast Beef with Seasoning	*S.* Galiema QL 024.2	1.4 (3,1,0,1,2)	0.54	169	229
Sliced Ham with Sugar seasoning	*S.* Galiema QL 024.2	2.2 (3,5,1,1,1)	0.55	172	232
Smoked Ham Flanks (95% Fat Free)	*S.* Galiema QL 024.2	1.8 (2,2,1,2,2)	0.52	174	234
Thin Sliced Roast Beef	*S.* Galiema QL 024.2	0.4 (2,0,0,0,0)	0.65	177	237
Sliced Roast Beef with Seasoning	*S.* Galiema QL 024.2	1.6 (3,0,0,4,1)	0.60	179	239

Item	Inoculating Strain	Inoculation Level	Sample No	Sample No
Chicken Tenderloins	Natural Contaminaiton		2	62
Boneless Skinless Chicken Breast	*S.*arizonae NCTC 7303	3.4 (0,1,4,1,11)	4	64
Turkey Breast Skinless	Natural Contaminaiton		7	67
Chicken Wing Drumettes with Skin	Natural Contaminaiton		9	69
Chicken Breast with Skin	*S.*arizonae NCTC 7303	4.6 (5,8,6,1,3)	14	74
Raw Chicken Breast	*S.* Melagridis QL 12704-1	2.4 (5,4,3,0,0)	765	792
Raw Chicken Thigh	*S.* Melagridis QL 12704-1	2.4 (0,2,4,6,0)	766	793
Raw Chicken Tenderloins	*S.* Melagridis QL 12704-1	2.2 (3,5,0,2,1)	767	794
Raw Turkey Breast	*S.* Melagridis QL 12704-1	1.2 (1,1,2,1,1)	768	795
Raw Turkey Breast with Skin	*S.* Melagridis QL 12704-1	1.4 (3,0,0,4,0)	769	796
Raw Ground Turkey (93% Lean)	Natural Contaminaiton		21	81
Raw Ground Chicken Breast (98 % Lean)	*S.* Enteritidis USDA AR12	3.8 (3,7,7,1,1)	22	82
Raw Ground Turkey (93% Lean)	Natural Contaminaiton		24	84
Raw Ground Chicken Patties (92% Lean)	Natural Contaminaiton		27	87
Raw Ground Turkey (85% Lean)	Natural Contaminaiton		29	89
Raw Ground Chicken Breast (93% Lean)	*S.* Enteritidis USDA AR12	3.0 (8,1,1,2,3)	30	90
Raw Turkey Burger Patties (93% Lean)	*S.* Enteritidis QL 341302-18	3.4 (6,6,2,3,0)	32	92
Raw Ground Turkey (85% Lean)	*S.* Enteritidis QL 341302-18	2.6 (3,2,2,1,5)	35	95
Raw Turkey Sausage Links (95% Lean)	*S.* Enteritidis QL 341302-18	4.2 (4,2,9,6,0)	38	98
Raw Turkey Sausage	*S.* Menhaden QL 024.20	1.8 (5,0,2,1,1)	770	797
Raw Breakfast Turkey Sausage Patties	*S.* Menhaden QL 024.20	2.4 (3,3,3,1,2)	771	798
Frozen Raw Diced Chicken Breast	*S.* Enteritidis QL 341302-18	3.6 (2,3,6,3,4)	42	102
Frozen Raw Ground Turkey Breast (85% Lean)	*S.* Heidelberg QL 341302-27	4.4 (6,5,3,3,5)	44	104
Frozen Raw Boneless Chicken Breast with Rib Meat	*S.* Heidelberg QL 341302-27	4.2 (4,7,6,2,2)	45	105
Frozen Raw Chicken Tenderloins	*S.* Heidelberg QL 341302-27	4.8 (8,9,3,3,1)	46	106
Frozen Raw Boneless Skinless Chicken Thighs	*S.* Heidelberg QL 341302-27	5.6 (7,6,5,9,1)	47	107
Frozen Raw Chicken Wings with Bone	*S.* Heidelberg QL 341302-27	1.8 (3,2,2,2,0)	49	109
Frozen Raw Chicken Breast with Skin	*S.* Indiana NCTC 17304	4.6 (2,4,2,9,6)	50	110
Frozen Raw Whole Chicken Wings	*S.* Indiana NCTC 17304	5.0 (5,9,7,3,1)	51	111
Frozen Raw Chicken Tenderloins	*S.* Indiana NCTC 17304	5.8 (8,9,4,6,2)	53	113
Frozen Raw Chicken Tenderloins	*S.* Indiana NCTC 17304	4.0 (4,4,6,3,3)	56	116
Frozen Raw Boneless and Skinless Duck Breast	*S.* Indiana NCTC 17304	4.4 (3,5,6,3,5)	58	118

Item	Inoculating Strain	Inoculation Level	Level of Injury	Sample No	Sample No
Honey Turkey Breast	*S.*Typhi QL 16078-2A	2.0 (2,3,2,2,1)	0.56	242	302
Chicken Chunks- White Meat	*S.* Typhi QL 16078-2A	1.4 (1,1,3,2,0)	0.58	244	304
Rotisserie Seasoned Sliced Chicken Breast	*S.* Typhi QL 16078-2A	1.8 (0,3,3,2,1)	0.64	247	307
Chicken Breast Chunks- with Rib Meat	*S.* Typhi QL 16078-2A	2.2 (2,2,1,3,3)	0.62	248	308
Oven Roasted Sliced Turkey Breast	*S.* Typhi QL 16078-2A	1.6 (0,3,2,1,2)	0.60	250	310
Honey Turkey Breast	*S.* Typhi FSL R6-0540	1.8 (5,1,1,1,1)	0.50	252	312
Chicken Chunks- White Meat	*S.*Typhi FSL R6-0540	1.0 (1,0,1,2,1)	0.66	254	314
Sliced Chicken	*S.*Seftenberg QL 11031.2	1.8 (2,3,3,1,0)	0.50	727	749
Chicken Breast Meat Chunks	*S.*Seftenberg QL 11031.2	0.4 (1,0,0,1,0)	0.52	728	750
Turkey Slices	*S.*Seftenberg QL 11031.2	3 (2,2,5,0,6)	0.54	729	751
Diced Popcorn Chicken with Rib Meat	*S.* Livingstone QL 227163-2R	2.8 (2,2,2,6,2)	0.66	262	322
Boneless Skinless Sliced Chicken Breast Strips	*S.* Livingstone QL 227163-2R	1.4 (1,2,1,3,0)	0.72	263	323
Crispy Chicken Breast with Rib Meat	*S.* Livingstone QL 227163-2R	1.6 (0,0,2,2,4)	0.60	264	324
Lightly Breaded Chicken Breast Chunks with Rib Meat	*S.* Livingstone QL 227163-2R	2.6 (3,3,4,0,5)	0.64	266	326
Seasoned Chicken Breast Strips	*S.* Livingstone QL 227163-2R	1.8 (1,1,4,3,0)	0.68	268	328
Grilled Chicken Breast- Diced Pieces	*S.* Arizonae QL 11007	3.6 (1,3,5,7,2)	0.50	270	330
Breaded Chicken Nuggets	*S.* Arizonae QL 11007	2.6 (2,0,3,2,6)	0.52	271	331
Popcorn Chicken	*S.* Arizonae QL 11007	1.6 (2,3,2,0,1)	0.54	272	332
Grilled Chicken Breast Strips	*S.* Arizonae QL 11007	1.0 (0,2,3,0,0)	0.56	273	333
Diced Chicken Breast with Oven Roast Seasoning	*S.* Arizonae QL 11007	1.8 (1,2,4,0,2)	0.56	277	337
Mild Original Turkey Stick	*S.* Jerusalem QL 024.12	3.0 (2,4,3,3,3)	0.62	281	341
Smoke Sausage Turkey Bites	*S.* Jerusalem QL 024.12	2.2 (0,0,4,3,4)	0.60	284	344
Smoked Turkey Pepperoni	*S.*Jerusalem QL 024.12	1.8 (2,2,2,2,1)	0.60	285	345
Original Turkey Jerky	*S.* Jerusalem QL 024.12	1.6 (2,0,2,1,3)	0.58	286	346
Turkey Pepperoni	*S.* Jerusalem QL 024.12	1.6 (0,1,3,1,3)	0.56	288	348
Smoked Turkey Sausage Bites	*S.* Newport ATCC 6962	1.6 (0,0,3,2,3)	0.54	290	350
Original Turkey Jerky	*S.* Newport ATCC 6962	2.4 (5,2,3,1,1)	0.62	292	352
Chicken Jerky Sticks	*S.* Newport ATCC 6962	2.4 (3,1,3,3,2)	0.68	293	353
	S. Newport ATCC 6962	1.0 (1,1,1,1,1)	0.56	297	357
Turkey Pepperoni	*S.*Seftenberg QL 11031.2	4.4 (8,9,1,1,3)	0.54	730	752
Turkey Jerky	*S.* Oranienberg QL 024.3	2.4 (5,4,3,0,0)	0.66	731	753

Item	Inoculating Strain	Inoculation Level	Level of Injury	Sample No	Sample No
Whole Shell Egg 1	*S.*Westhampton QL 227400-1	0.4 (2,0,0,0,0)		361	421
Whole Shell Egg 4	*S.*Westhampton QL 227400-1	0.6 (1,1,1,0,0)		364	424
Whole Shell Egg 5	*S.*Westhampton QL 227400-1	1.6 (3,1,3,1,0)		365	425
Whole Shell Egg 7	*S.*Westhampton QL 227400-1	0.8 (0,0,2,1,1)		367	427
Whole Shell Egg 10	*S.*Westhampton QL 227400-1	1.0 (1,2,1,1,0)		370	430
Whole Shell Egg 11	*S.*Sylvenia QL 227400-36	1.6 (3,3,1,1,0)		371	431
Whole Shell Egg 12	*S.*Sylvenia QL 227400-36	1.6 (6,1,0,1,0)		372	432
Whole Shell Egg 14	*S.*Sylvenia QL 227400-36	1.2 (2,2,1,1,0)		374	434
Whole Shell Egg 18	*S.*Sylvenia QL 227400-36	1.0 (1,1,1,1,1)		378	438
Whole Shell Egg 19	*S.*Sylvenia QL 227400-36	0.2 (1,0,0,0,0)		379	439
Whole Shell Egg	*S.* Oranienberg QL 024.3	1.4 (0,0,1,2,4)		732	754
Liquid Whole Egg 1	*S.* Arizonae NCTC 7315	0.4 (1,0,0,1,0)	0.72	381	441
Liquid Whole Egg 2	*S.* Arizonae NCTC 7315	0.6 (1,0,2,0,0)	0.68	385	445
Liquid Egg Whites 5	*S.* Arizonae NCTC 7315	0.4 (0,0,1,1,0)	0.64	387	447
Liquid Egg Whites 6	*S.*Heidelberg QL 341302-49	0.8 (0,0,3,1,0)	0.62	388	448
Liquid Egg Whites 8	*S.*Heidelberg QL 341302-49	1.6 (3,3,2,0,1)	0.60	391	451
Liquid Whole Eggs 4	*S.*Heidelberg QL 341302-49	2.2 (3,5,2,1,0)	0.58	393	453
Liquid Egg Whites 12	*S.*Heidelberg QL 341302-49	1.6 (3,3,2,0,1)	0.56	396	456
Liquid Whole Egg 5	*S.*Heidelberg QL 341302-49	0.8 (0,3,1,0,0)	0.58	399	459
Liquid Whole Egg	*S.* Oranienberg QL 024.3	5.2 (5,6,7,3,5)	0.50	733	755
Liquid Whole Egg	*S.* Oranienberg QL 024.3	0.4 (0,0,0,1,1)	0.76	734	756
Dried Whole Eggs 1	*S.* Kaitaan QL 024.7	1.6 (1,4,0,2,1)		401	461
Dried Whole Eggs 3	*S.* Kaitaan QL 024.7	0.8 (0,0,0,1,3)		405	465
Dried Egg Whites 3	*S.* Kaitaan QL 024.7	1.2 (1,0,3,2,0)		407	467
Dried Egg Whites 5	*S.* Kaitaan QL 024.7	1.4 (1,0,1,2,3)		411	471
Dried Egg Whites 8	*S.* Pullorum ATCC 13036	0.8 (1,3,0,0,0)		416	476
Dried Whole Egg	*S.* Oranienberg QL 024.3	0.8 (2,2,0,0,0)		735	757
Dried Egg Whites	*S.* Orthmarshen QL 0243.13	2.4 (3,0,4,0,5)		736	758
Dried Whole Egg	*S.* Orthmarshen QL 0243.13	2.6 (0,0,3,3,7)		737	759
Dried Egg Whites	*S.* Orthmarshen QL 0243.13	2.6 (6,4,0,2,1)		738	760
Dried Whole Egg	*S.* Orthmarshen QL 0243.13	1.6 (0,1,2,2,3)		739	761

Item	Inoculating Strain	Inoculation Level	Sample No	Sample No
Spinach and Arugula Mix	*S.* Munchen ATCC BAA 1594	1.6 (2,0,3,0,3)	481	541
Shredded Broccoli Slaw	*S.* Munchen ATCC BAA 1594	1.0 (1,1,0,1,2)	483	543
Mixed Cabbage Coleslaw	*S.* Munchen ATCC BAA 1594	0.6 (0,0,0,3,0)	485	545
Shredded Babby Carrots	*S.* Munchen ATCC BAA 1594	1.6 (2,1,1,2,2)	487	547
Mixed Greens with Romaine Lettuce	*S.* Munchen ATCC BAA 1594	0.4 (1,0,0,0,1)	489	549
Shredded Stir Fry Vegetables	*S.* Preston QL 024.16	1.8 (3,3,2,0,1)	490	550
Spinach, Arugula, and other Mix	*S.* Preston QL 024.16	2.4 (4,3,5,0,0)	491	551
Vegetable Blend with Cucumber and Carrot Mix	*S.* Preston QL 024.16	2.2 (1,1,4,3,2)	494	554
Mixed Shredded Broccoli	*S.* Preston QL 024.16	1.8 (2,4,0,1,2)	496	556
Shredded Cabbage with Carrots	*S.* Preston QL 024.16	1.4 (3,0,0,4,0)	498	558
Honeydew	*S.* Schalkwijk QL 024.10	3.4 (5,3,1,2,6)	501	561
Watermelon	Natural Contamination		502	562
Dragon Fruit	*S.* Schalkwijk QL 024.10	2.8 (8,0,4,1,1)	505	565
Cantaloupe	*S.* Schalkwijk QL 024.10	1.0 (1,1,0,3,0)	506	566
Pineapple, Strawberry, and Kiwi Mix	Natural Contamination		507	567
Mangos	*S.* Schalkwijk QL 024.10	0.2 (0,0,1,0,0)	509	569
Honeydew #2	*S.* Schalkwijk QL 024.10	2.4 (6,3,1,2,0)	511	571
Seedless Watermelon	*S.* Diarizonae QL 011414.1	0.6 (3,0,0,0,0)	512	572
Diced Strawberries	*S.* Diarizonae QL 011414.1	0.4 (0,0,2,0,0)	514	574
Cut Cantaloupe	Natural Contamination		516	576
Diced Mangos	*S.* Diarizonae QL 011414.1	1.4 (0,0,1,5,1)	519	579
Cilantro	*S.* Diarizonae QL 011414.1	2.0 (2,2,2,2,2)	521	581
Kale	*S.* Diarizonae QL 011414.1	0.6 (0,1,1,1,0)	522	582
Green Onions	Natural Contamination		524	584
Spinach	*S.* Poona ATCC BAA-139	1.6 (0,1,1,3,3)	526	586
Red Leaf Lettuce	*S.* Poona ATCC BAA-139	1.8 (5,0,0,4,0)	527	587
Romaine Hearts	Natural Contamination		529	589
Romaine Lettuce	*S.* Poona ATCC BAA-139	1.4 (1,1,1,2,2)	530	590
Kale	Natural Contamination		532	592
Green Onions	*S.* Poona ATCC BAA-139	1.6 (1,0,3,3,1)	534	594
Red Lettuce	*S.* Poona ATCC BAA-139	1.4 (0,0,7,0,0)	537	597
Baby Spinach	*S.* Orthmarshen QL 0243.13	2.8 (3,5,0,6,0)	741	763

ANNEX E: Raw Data of Sensitivity Study

Results KEY	
ng	No growth
at	Atypical, Growth of non- target
t	Typical, Growth of only target
m	Mixed, Atypical and typical growth
+	Indicates a positive reaction or result
-	Indicates a negative reaction or result

Sensitivity – Raw Data

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Raw Milk	Raw Milk		601	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	661	at	at	at	at		Neg	NA	NA
	Raw Milk		602	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	662	at	at	at	at		Neg	NA	NA
	Raw Milk		603	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	663	at	at	ng	ng		Neg	NA	NA
	Raw Milk		604	-	-	-	-	at	at	ng	ng		m	m	t	t	Salmonella *spp.*	Neg	Pos	664	at	at	ng	ng		Neg	NA	NA
	Raw Milk		605	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	665	at	at	ng	ng		Neg	NA	NA
	Raw Milk		606	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	666	at	at	ng	ng		Neg	NA	NA
	Raw Milk		607	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	667	at	at	ng	ng		Neg	NA	NA
	Raw Milk		608	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	668	at	at	ng	ng		Neg	NA	NA
	Raw Milk		609	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	669	at	at	ng	ng		Neg	NA	NA
	Raw Milk		610	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	670	at	at	ng	ng		Neg	NA	NA
	Raw Milk		611	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	671	at	at	ng	ng		Neg	NA	NA
	Raw Milk		612	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	672	at	at	ng	ng		Neg	NA	NA
	Raw Milk		613	-	-	-	-	at	at	at	at		at	at	at	ng		Neg	Neg	673	at	at	ng	ng		Neg	NA	NA
	Raw Milk		614	-	-	-	-	at	at	at	at		at	at	at	ng		Neg	Neg	674	at	at	ng	ng		Neg	NA	NA
	Raw Milk		615	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	675	at	at	ng	at		Neg	NA	NA
	Raw Milk		616	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	676	at	at	ng	ng		Neg	NA	NA
	Raw Milk		617	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	677	at	at	ng	ng		Neg	NA	NA
	Raw Milk		618	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	678	at	at	ng	at		Neg	NA	NA
	Raw Milk		619	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	679	at	at	ng	at		Neg	NA	NA
	Raw Milk		620	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	680	at	at	ng	at		Neg	NA	NA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)															ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA			8 Hr	16 Hr
Raw Milk	Raw Kefir	3.6 (4,5,3,6,0)	772	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	799	ng	ng	ng	ng		Neg	NA	NA
	Raw Goats Milk		773	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	800	at	at	at	at		Neg	NA	NA
	Raw Goats Milk	0.2 (0,0,1,0,0)	774	28.62	20.91	23.98	20.74	t	t	t	m	*Salmonella* spp.	t	t	t	m	*Salmonella* spp.	Pos	Pos	801	m	t	m	at	*Salmonella* spp.	Pos	PA	PA
	Raw Camel Milk	1.6 (3,0,2,0,3)	775	29.73	19.35	25.91	18.74	t	m	t	ng	*Salmonella* spp.	m	t	m	at	*Salmonella* spp.	Pos	Pos	802	at	ng	at	at		Neg	PD	PD
	Raw Kefir		776	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	803	ng	ng	ng	ng		Neg	NA	NA
	Raw Goats Milk	5.4 (6,6,8,4,3)	777	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	804	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
	Raw Goats Milk	2.6 (7,0,1,5,0)	778	27.92	19.78	26.18	20.16	m	at	m	m	*Salmonella* spp.	m	m	m	at	*Salmonella* spp.	Pos	Pos	805	at	at	at	at		Neg	PD	PD
	Raw Camel Milk		779	-	-	-	-	ng	ng	at	ng		at	at	at	at		Neg	Neg	806	at	at	at	at		Neg	NA	NA
	Raw Kefir		780	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	807	ng	ng	ng	ng		Neg	NA	NA
	Raw Goats Milk		781	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	808	at	at	at	at		Neg	NA	NA
	Raw Goats Milk		782	-	-	-	-	at	ng	at	ng		at	at	at	ng		Neg	Neg	809	at	at	at	at		Neg	NA	NA
	Raw Camel Milk	1.4 (4,0,0,3,0)	783	28.39	19.78	24.46	19.04	m	t	m	ng	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	810	m	m	m	at	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk		784	33.75	33.39	25.97	34.37	m	ng	ng	ng	*Salmonella* spp.	m	ng	m	ng	*Salmonella* spp.	Pos	Pos	811	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk	1.8 (0,2,2,5,0)	785	32.44	14.96	31.93	13.50	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	812	ng	ng	at	ng		Neg	PD	PD
	Raw Bovine Milk		786	33.80	29.17	31.59	30.40	m	ng	m	ng	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	813	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk		787	33.54	33.73	31.92	33.28	m	ng	ng	m	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	814	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk	2.0 (3,1,1,2,3)	788	31.58	15.52	30.20	12.64	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	815	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk		789	34.23	34.12	34.37	31.97	t	ng	t	ng	*Salmonella* spp.	t	ng	m	ng	*Salmonella* spp.	Pos	Pos	816	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk		790	33.78	26.21	33.30	24.92	t	ng	t	ng	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	817	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Bovine Milk	2.8 (5,6,1,1,1)	791	32.88	14.79	33.38	13.57	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	818	t	t	t	t	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Raw milk-based products (high fat content/and or high background microflora)	Raw Butter		621	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	681	at	at	ng	ng		Neg	NA	NA
	Fourme d'Ambert		622	31.91	18.12	29.77	15.02	t	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	682	ng	ng	ng	ng		Neg	PD	PD
	Kaltbach Le Cremeux		623	-	-	34.26	34.67	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	683	m	t	m	t	*Salmonella* spp.	Pos	ND/ PA	ND/ PA
	Buttermilk Bleu Affinee		624	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	684	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
	Bayley Hazen Blue		625		-	-	-	ng	ng	ng	ng		ng	at	ng	ng		Neg	Neg	685	ng	ng	ng	ng		Neg	NA	NA
	Fontina Val D'Aosta		626	33.37	28.11	31.29	27.18	t	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	686	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Roquefort ADP Papillon Black		627	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	687	ng	ng	ng	ng		Neg	NA	NA
	Comte HOP Reserve		628	33.22	17.02	30.59	14.24	t	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	688	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Roquefort Sociele Bee		629	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	689	m	m	m	t	*Salmonella* spp.	Pos	ND	ND
	Raw Milk French Raclette		630	30.51	18.64	28.58	16.61	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	690	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Bleu d'Auvergne		631	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	691	ng	ng	ng	ng		Neg	NA	NA
	Raw Butter		632	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	692	ng	ng	ng	ng		Neg	NA	NA
	Fourme d'Ambert		633	32.63	18.69	30.73	16.90	m	t	m	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	693	ng	ng	ng	ng		Neg	PD	PD
	Kaltbach Le Cremeux		634	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	694	ng	ng	ng	ng		Neg	NA	NA
	Buttermilk Bleu Affinee		635	33.90	15.88	31.84	13.58	t	t	m	t	*Salmonella* spp..	m	t	m	t	*Salmonella* spp.	Pos	Pos	695	m	m	m	t	*Salmonella* spp.	Pos	PA	PA
	Bayley Hazen Blue		636	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	696	ng	ng	ng	ng		Neg	NA	NA
	Fontina Val D'Aosta		637	-	-	-	-	ng	ng	ng	ng		at	ng	at	ng		Neg	Neg	697	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
	Roquefort ADP Papillon Black		638	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	698	ng	ng	ng	ng		Neg	NA	NA
	Comte HOP Reserve		639	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	699	ng	ng	ng	ng		Neg	NA	NA
	Roquefort Sociele Bee		640	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	700	ng	ng	ng	ng		Neg	NA	NA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Pasteurized or dry milk and dairy products	4% Milkfat cottage cheese	1.0 (0,3,2,0,0)	641	35.16	30.86	32.41	28.26	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	701	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Whole Milk Yogurt		642	34.23	27.20	31.59	24.97	m	m	m	m	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	702	m	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Buttermilk		643	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	703	ng	ng	ng	ng		Neg	NA	NA
	Heavy Whipping Cream		644	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	704	ng	ng	ng	ng		Neg	NA	NA
	1% Low Fat Milk	1.2 (0,1,1,4,0)	645	34.65	30.85	32.66	30.55	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	705	ng	ng	ng	ng		Neg	PD	PD
	Part Skim Shredded Mozzarella Cheese	1.6 (2,2,1,0,3)	646	-	24.11	33.08	23.55	m	m	m	m	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	706	ng	ng	ng	ng		Neg	NA /PD	PD
	Sharp Shredded Cheddar Cheese		647	-	-	-	-	ng	ng	ng	ng		ng	at	ng	ng		Neg	Neg	707	ng	ng	ng	ng		Neg	NA	NA
	Pepper Jack Cheese	1.2 (0,1,1,4,0)	648	-	16.32	33.38	15.62	m	t	m	t	*Salmonella* spp.	t	m	t	m	*Salmonella* spp.	Pos	Pos	708	ng	ng	at	at		Neg	ND /PD	PD
	Smoked Provolone Cheese	1.0 (1,1,1,1,1)	649	-	-	-	-	ng	ng	ng	ng		ng	ng	at	ng		Neg	Neg	709	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
	Cheddar and Gruyere Cheese Blend	0.8 (3,0,1,0,0)	650	34.79	18.13	33.77	11.91	m	t	m	t	*Salmonella* spp..	m	t	m	t	*Salmonella* spp.	Pos	Pos	710	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Whole Milk Cottage Cheese		651	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	711	ng	ng	ng	ng		Neg	NA	NA
	Whole Milk Yogurt-Vanilla	1.0 (2,0,1,1,1)	652	32.23	28.13	30.59	26.32	m	m	m	m	*Salmonella* spp.	t	t	m	t	*Salmonella* spp.	Pos	Pos	712	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Buttermilk		653	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	713	ng	ng	ng	ng		Neg	NA	NA
	Heavy Whipping Cream		654	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	714	ng	ng	ng	ng		Neg	NA	NA
	Low Fat Skim Milk	1.0 (0,2,1,1,1)	655	33.84	32.26	33.33	29.76	t	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	715	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Skim Mozzarella Cheese Slices		656	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	716	ng	ng	ng	ng		Neg	NA	NA
	Sharp Cheddar Cheese Slices		657	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	717	ng	at	ng	ng		Neg	NA	NA
	Pepper Jack Cheese		658	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	718	ng	ng	ng	ng		Neg	NA	NA
	Provolone Cheese		659	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	719	ng	ng	ng	ng		Neg	NA	NA
	Gruyere Cheese		660	-	17.86	32.74	14.87	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	720	m	t	m	t	*Salmonella* spp.	Pos	ND/ PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result(16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result		
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA			8 Hr	16 Hr
Raw, ready-to-cook meat (unprocessed)	Diced Pork		121	-	-	-	-	ng	ng	at	ng		at	at	at	at		Neg	Neg	181	ng	ng	ng	ng		Neg	NA	NA
	Boneless Pork Chops	1.2 (1,2,3,0,0)	122	34.02	21.26	23.94	22.25	m	t	m	t	*Salmonella spp.*	m	t	m	t	*Salmonella spp.*	Pos	Pos	182	m	m	t	m	*Salmonella spp.*	Pos	PA	PA
	Shaved Beef Steak		123	20.41	15.17	19.97	14.59	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	183	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Ground Lamb		124	-	-	-	-	at	ng	at	ng		at	at	at	at		Neg	Neg	184	at	at	at	ng		Neg	NA	NA
	Ground Bison (90% Lean)	1.6 (0,5,0,1,2)	125	-	-	-	-	ng	ng	at	ng		at	at	at	ng		Neg	Neg	185	m	t	m	t	*Salmonella spp.*	Pos	ND	ND
	Raw Ground Beef Patties (80% Lean)		126	23.24	18.34	23.46	18.32	t	t	m	t	*Salmonella spp.*	m	m	m	t	*Salmonella spp.*	Pos	Pos	186	at	at	at	at		Neg	PD	PD
	Ground Fresh Pork		127	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	187	at	at	at	at		Neg	NA	NA
	Raw Ground Sirloin Beef Patties (90% Lean)		128	-	-	-	-	at	ng	at	ng		at	at	at	at		Neg	Neg	188	at	at	at	at		Neg	NA	NA
	Fresh Boneless Beef Steak		129	-	-	-	-	ng	ng	at	at		at	at	at	at		Neg	Neg	189	at	at	at	ng		Neg	NA	NA
	Diced Beef	1.6 (2,3,0,0,0)	130	34.93	24.05	28.02	24.56	t	t	m	t	*Salmonella spp.*	m	m	t	t	*Salmonella spp.*	Pos	Pos	190	m	m	t	t	*Salmonella spp.*	Pos	PA	PA
	Boneless Pork Chops		131	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	191	at	at	at	at		Neg	NA	NA
	Fresh Ground Pork		132	25.80	18.46	28.78	18.35	t	t	m	t	*Salmonella spp.*	m	m	m	t	*Salmonella spp.*	Pos	Pos	192	m	m	t	t	*Salmonella spp.*	Pos	PA	PA
	Fresh Ground Lamb		133	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	193	at	at	at	ng		Neg	NA	NA
	Raw Ground Bison (90% Lean)		134	21.93	17.17	21.32	17.27	t	t	t	t	*Salmonella spp.*	m	t	t	t	*Salmonella spp.*	Pos	Pos	194	at	at	at	ng		Neg	PD	PD
	Raw Ground Beef Patties (90% Lean)		135	-	-	-	-	at	ng	at	at		at	at	at	at		Neg	Neg	195	ng	ng	at	at		Neg	NA	NA
	Raw Ground Sirloin Beef Patties (93% Lean)	1.4 (4,3,0,0,0)	136	29.96	18.34	31.36	18.16	m	t	m	m	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	196	at	at	at	ng		Neg	PD	PD
	Diced Stew Beef Pieces		137	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	197	at	at	at	ng		Neg	NA	NA
	Fresh Raw Ground Beef (80% Lean)	1.6 (1,3,0,0,4)	138	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	198	m	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Raw Shaved Beef Steak		139	-	-	-	-	at	ng	ng	ng		at	ng	at	ng		Neg	Neg	199	at	ng	ng	ng		Neg	NA	NA
	Raw Diced Pork		140	-	-	-	-	ng	ng	at	at		at	at	at	at		Neg	Neg	200	at	ng	at	ng		Neg	NA	NA
	Lamb Chop	1.8 (0,0,4,3,2)	723	30.07	20.11	31.55	19.71	t	t	t	t	*Salmonella spp.*	t	t	m	t	*Salmonella spp.*	Pos	Pos	745	at	ng	at	ng		Neg	PD	PD

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result(16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result		
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA			8 Hr	16 Hr
Raw, frozen meat	Frozen Raw Ground Beef Burgers (80% Lean)		141	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	201	ng	ng	ng	ng		Neg	NA	NA
	Raw Ground Beef Crumbles (80% Lean)		142	18.26	15.43	18.06	15.55	m	t	t	t	*Salmonella spp.*	m	m	m	t	*Salmonella spp.*	Pos	Pos	202	at	at	at	at		Neg	PD	PD
	Raw Angus Chuck Beef Patties	1.8 (1,1,1,3,3)	143	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	203	m	m	m	m	*Salmonella spp.*	Pos	ND	ND
	Raw Thin and Seasoned Beef Patties	2.0 (1,3,2,2,2)	144	22.39	16.45	23.08	16.66	m	t	m	m	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	204	at	at	at	at		Neg	PD	PD
	Italian Style Pork Meatballs		145	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	205	at	at	ng	ng		Neg	NA	NA
	Spicy Sicilian Pork Meatballs		146	-	-	-	-	ng	ng	at	ng		at	at	at	at		Neg	Neg	206	m	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Pure Beef Patties (91% Lean)		147	-	-	-	-	m	at	m	at		at	at	at	at		Neg	Neg	207	at	at	at	at		Neg	NA	NA
	Pure Beef Patties (85% Lean)	2.6 (1,0,4,5,3)	148	-	23.28	-	24.50	t	t	ng	ng	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	208	m	m	m	t	*Salmonella spp.*	Pos	ND	PA
	Frozen Sliced Beef Liver		149	31.21	29.14	34.18	29.99	m	at	m	m	*Salmonella spp.*	m	at	m	m	*Salmonella spp.*	Pos	Pos	209	m	at	m	m	*Salmonella spp.*	Pos	PA	PA
	Frozen Pork Scrapple		150	18.53	15.35	18.43	15.42	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	210	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Raw Beef Burgers (80% Lean)		151	-	-	-	-	ng	ng	ng	ng		at	ng	at	at		Neg	Neg	211	at	ng	at	ng		Neg	NA	NA
	Frozen Raw Ground Beef (80% Lean)	2.0 (7,1,3,0,0)	152	-	-	-	-	at	at	at	ng		at	at	at	at		Neg	Neg	212	m	m	t	t	*Salmonella spp.*	Pos	ND	ND
	Raw Chuck Beef Patties		153	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	213	at	at	at	at		Neg	NA	NA
	Raw Angus Sirloin Beef Patties		154	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	214	at	at	at	at		Neg	NA	NA
	Raw Frozen Meatballs- Pork	1.8 (2,3,3,1,0)	155	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	215	m	m	m	m	*Salmonella spp.*	Pos	ND	ND
	Raw Frozen Meatballs- Pork	1.0 (1,0,2,0,2)	156	26.11	18.03	28.27	18.78	t	t	t	t	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	216	at	at	at	at	*Salmonella spp.*	Pos	PA	PA
	Raw Beef Patties (91% Lean)	3.8 (3,3,0,4,4)	157	23.31	16.72	24.50	17.37	m	m	t	t	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	217	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Raw Bison Patties (85% Lean)		158	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	218	at	at	at	at		Neg	NA	NA
	Raw Diced Beef Liver		159	31.59	29.84	33.81	30.94	m	at	m	m	*Salmonella spp.*	at	at	m	m	*Salmonella spp.*	Pos	Pos	219	m	m	m	m	*Salmonella spp.*	Pos	PA	PA
	Raw Pork Sausage		160	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	220	ng	ng	ng	ng		Neg	NA	NA
	Frozen Pork Sausage		724	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	746	at	ng	ng	at		Neg	NA	NA
	Frozen Burger Patties		725	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	747	ng	ng	ng	at		Neg	NA	NA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result\(16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Cooked meat products	Sliced Smoked Ham - Boneless	1.8 (5,1,1,1,1)	161	23.32	14.69	24.08	13.74	t	t	t	t	*Salmonella spp.*	t	m	t	t	*Salmonella spp.*	Pos	Pos	221	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Brown Sugar Sliced Country Ham	1.0 (1,1,1,1,1)	162	22.33	13.18	23.17	13.90	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	222	ng	ng	ng	ng		Neg	PD	PD
	Cubed Ham (96% Fat Free)	0.4 (0,0,0,1,1)	163	25.31	19.66	26.83	20.78	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	223	ng	ng	ng	ng		Neg	PD	PD
	Sliced Ham Steaks (97% Fat Free)		164	24.08	13.58	26.36	14.58	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	224	at	ng	ng	ng		Neg	PD	PD
	Pork Liverwurst Pate with Bacon added	0.8 (1,2,0,1,0)	165	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	225	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Cooked Hardwood Smoked Bacon		166	-	-	-	-	ng	ng	ng	ng		ng	ng	at	at		Neg	Neg	226	ng	ng	at	at		Neg	NA	NA
	Traditional Sliced Roast Beef		167	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	227	ng	ng	ng	ng		Neg	NA	NA
	Honey Cured Sliced Ham	3.2 (4,6,0,0,6)	168	25.94	13.75	26.92	14.04	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	228	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Ultra-thin sliced Roast Beef with Seasoning	1.4 (3,1,0,1,2)	169	-	-	-	-	ng	ng	ng	ng		at	at	ng	ng		Neg	Neg	229	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Smoked Thinly Sliced Ham		170	-	-	-	-	ng	ng	ng	ng		at	ng	ng	ng		Neg	Neg	230	at	ng	ng	ng		Neg	NA	NA
	Sliced Ham - Boneless		171	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	231	ng	ng	ng	ng		Neg	NA	NA
	Sliced Ham with Sugar seasoning	2.2 (3,5,1,1,1)	172	-	-	-	-	ng	ng	ng	ng		at	ng	ng	ng		Neg	Neg	232	t	t	t	m	*Salmonella spp.*	Pos	ND	ND
	Diced Ham (99% Fat Free)		173	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	233	ng	ng	ng	ng		Neg	NA	NA
	Smoked Ham Flanks (95% Fat Free)	1.8 (2,2,1,2,2)	174	21.93	13.20	22.07	14.42	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	234	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Pork Liver Pate		175	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	235	ng	ng	ng	ng		Neg	NA	NA
	Cooked Bacon		176	-	-	-	-	ng	ng	ng	ng		ng	ng	at	ng		Neg	Neg	236	ng	ng	ng	ng		Neg	NA	NA
	Thin Sliced Roast Beef	0.4 (2,0,0,0,0)	177	24.23	14.10	25.23	14.19	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	237	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Uncured Sliced Ham		178	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	238	ng	ng	ng	ng		Neg	NA	NA
	Sliced Roast Beef with Seasoning	1.6 (3,0,0,4,1)	179	25.23	14.00	27.01	14.18	t	t	t	m	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	239	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Sliced Smoked Ham - Honey Seasoning		180	-	-	-	-	ng	ng	ng	ng		at	ng	ng	ng		Neg	Neg	240	ng	ng	ng	ng		Neg	NA	NA
	Roast Beef		726	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	748	ng	ng	ng	ng		Neg	NA	NA

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Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Raw, ready to cook poultry (unprocessed)	Chicken Gizzards and Hearts		1	-	-	-	-	ng	ng	at	at		at	ng	ng	ng		Neg	Neg	61	at	at	at	at		Neg	NA	NA
	Chicken Tenderloins		2	27.07	23.33	25.45	24.04	t	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	62	at	ng	at	ng		Neg	PD	PD
	Boneless Skinless Chicken Thighs		3	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	63	at	ng	at	ng		Neg	NA	NA
	Boneless Skinless Chicken Breast	3.4 (0,1,4,1,11)	4	32.49	31.32	32.99	28.53	m	m	m	m	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	64	m	at	m	at		Neg	PD	PD
	Turkey Wings with Skin		6	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	66	at	at	at	at		Neg	NA	NA
	Turkey Breast Skinless		7	-	-	-	-	at	at	at	at		ng	at	ng	ng		Neg	Neg	67	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
	Chicken Drumsticks with Skin		8	-	-	-	-	at	at	at	at		ng	at	ng	at		Neg	Neg	68	ng	ng	t	t		Neg	NA	NA
	Chicken Wing Drumettes with Skin		9	28.51	24.28	26.03	24.30	t	t	t	t	*Salmonella* spp..	t	t	t	t	*Salmonella* spp..	Pos	Pos	69	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Chicken Gizzards		11	-	-	-	-	at	at	at	at		at	ng	ng	ng		Neg	Neg	71	at	at	at	ng		Neg	NA	NA
	Chicken Thighs with Skin		13	-	-	-	-	at	at	at	at		at	ng	at	ng		Neg	Neg	73	at	at	at	at		Neg	NA	NA
	Chicken Breast with Skin	4.6 (5,8,6,1,3)	14	-	-	-	-	at	at	at	at		at	ng	at	ng		Neg	Neg	74	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
	Skinless Chicken Breast with Rib Meat		15	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	75	at	at	at	at		Neg	NA	NA
	Chicken Drumsticks with Skin		17	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	77	at	at	at	at		Neg	NA	NA
	Chicken Tenderloins		19	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	79	at	at	at	at		Neg	NA	NA
	Skinless Chicken Breast		20	-	-	-	-	at	at	at	at		at	ng	ng	ng		Neg	Neg	80	at	at	at	at		Neg	NA	NA
	Raw Chicken Breast	2.4 (5,4,3,0,0)	765	28.36	21.44	26.44	20.73	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	792	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Raw Chicken Thigh	2.4 (0,2,4,6,0)	766	33.32	29.53	30.92	28.42	m	t	m	m	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	793	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
	Raw Chicken Tenderloins	2.2 (3,5,0,2,1)	767	33.56	31.15	30.47	31.06	m	t	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	794	m	t	m	m	*Salmonella* spp.	Pos	PA	PA
	Raw Turkey Breast	1.2 (1,1,2,1,1)	768	24.93	20.03	22.81	20.08	m	t	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	795	m	t	m	m	*Salmonella* spp.	Pos	PA	PA
	Raw Turkey Breast with Skin	1.4 (3,0,0,4,0)	769	24.78	20.11	23.39	20.10	t	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	796	at	at	at	at		Neg	PD	PD

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Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Raw, ready to cook poultry (processed)	Raw Ground Turkey (93% Lean)		21	23.88	21.76	22.07	21.91	m	m	t	t	*Salmonella* spp.	t	t	t	t	Salmonella *spp.*	Pos	Pos	81	at	at	at	ng		Neg	PD	PD
	Raw Ground Chicken Breast (98 % Lean)	3.8 (3,7,7,1,1)	22	-	-	-	-	at	at	at	at		at	at	at	ng		Neg	Neg	82	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
	Raw Gound Turkey Breast (99% Lean)		23	-	-	-	-	at	ng	at	ng		at	ng	at	ng		Neg	Neg	83	at	at	at	at		Neg	NA	NA
	Raw Ground Turkey (93% Lean)		24	25.28	18.86	23.00	18.93	t	t	t	t	*Salmonella* spp.	m	t	t	t	Salmonella *spp.*	Pos	Pos	84	at	at	at	at		Neg	PD	PD
	Raw Turkey Burger Patties (93% Lean)		26	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	86	at	at	at	at		Neg	NA	NA
	Raw Ground Chicken Patties (92% Lean)		27	21.30	16.43	19.78	15.97	t	t	t	t	*Salmonella* spp.	t	t	t	t	Salmonella *spp.*	Pos	Pos	87	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Turkey Breakfast Sausage (93% Lean)		28	-	-	-	-	at	at	at	at		at	ng	at	ng		Neg	Neg	88	at	at	at	at		Neg	NA	NA
	Raw Ground Turkey (85% Lean)		29	-	-	-	-	ng	ng	ng	ng		at	ng	at	at		Neg	Neg	89	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
	Raw Ground Chicken Breast (93% Lean)	3.0 (8,1,1,2,3)	30	18.69	17.16	31.95	19.11	t	t	m	t	*Salmonella* spp.	m	m	t	t	Salmonella *spp.*	Pos	Pos	90	m	m	m	m	*Salmonella* spp.	Pos	PA	PA
	Raw Turkey Burger Patties (93% Lean)	3.4 (6,6,2,3,0)	32	31.42	21.04	31.71	21.97	t	t	t	t	*Salmonella* spp.	t	t	t	t	Salmonella *spp.*	Pos	Pos	92	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Raw Ground Chicken Breast (98 % Lean)		33	-	-	-	-	t	t	t	t		ng	ng	ng	ng		Neg	Neg	93	ng	ng	at	ng		Neg	NA	NA
	Raw Ground Chicken (90 % Lean)		34	-	-	-	-	at	ng	at	ng		at	at	at	at		Neg	Neg	94	at	at	at	at		Neg	NA	NA
	Raw Ground Turkey (85% Lean)	2.6 (3,2,2,1,5)	35	34.44	19.73	30.61	11.58	m	t	t	t	*Salmonella* spp.	m	m	t	t	Salmonella *spp.*	Pos	Pos	95	m	m	m	m	*Salmonella* spp.	Pos	PA	PA
	Raw Ground Chicken Patties (90% Lean)		36	-	-	-	-	at	at	at	at		at	at	ng	ng		Neg	Neg	96	at	at	at	at		Neg	NA	NA
	Raw Chicken Breakfast Sausage (90% Lean)		37	-	-	-	-	at	ng	at	at		at	at	at	at		Neg	Neg	97	at	at	at	at		Neg	NA	NA
	Raw Turkey Sausage Links (95% Lean)	4.2 (4,2,9,6,0)	38	30.17	18.48	28.12	16.23	1	t	t	t	*Salmonella* spp.	t	t	t	t	Salmonella *spp.*	Pos	Pos	98	at	at	m	m		Neg	PD	PD
	Raw Ground Turkey Breast (99% Lean)		39	-	-	-	-	at	ng	at	ng		at	ng	at	ng		Neg	Neg	99	at	at	at	at		Neg	NA	NA
	Raw Ground Turkey (83% Lean)		40	-	-	-	-	ng	ng	ng	ng		at	ng	at	ng		Neg	Neg	100	at	at	at	ng		Neg	NA	NA
	Ground Chicken		721	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	743	at	at	ng	ng		Neg	NA	NA
	Raw Turkey Sausage	1.8 (5,0,2,1,1)	770	22.79	15.60	22.02	14.69	t	t	t	ng	*Salmonella* spp.	m	m	m	m	Salmonella *spp.*	Pos	Pos	797	t	t	m	m	*Salmonella* spp.	Pos	PA	PA
	Raw Breakfast Turkey Sausage Patties	2.4 (3,3,3,1,2)	771	22.53	16.01	21.36	15.33	t	ng	m	at	*Salmonella* spp.	m	ng	t	at	Salmonella *spp.*	Pos	Pos	798	t	ng	m	at	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)															ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA			8 Hr	16 Hr
Raw, frozen poultry	Frozen Raw Boneless Duck Breast with Skin		41	-	-	-	-	at	at	at	at		at	at	at	ng		Neg	Neg	101	ng	at	at	at		Neg	NA	NA
	Frozen Raw Diced Chicken Breast	3.6 (2,3,6,3,4)	42	27.02	18.15	25.97	15.94	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	102	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Frozen Uncooked Chicken Wings with Skin		43	-	-	-	-	at	at	at	at		ng	ng	ng	at		Neg	Neg	103	at	at	at	at		Neg	NA	NA
	Frozen Raw Ground Turkey Breast (85% Lean)	4.4 (6,5,3,3,5)	44	30.62	18.16	27.13	13.60	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	104	ng	ng	ng	ng		Neg	PD	PD
	Frozen Raw Boneless Chicken Breast with Rib Meat	4.2 (4,7,6,2,2)	45	33.47	23.18	30.83	23.76	m	t	t	t	*Salmonella* spp.	m	m	t	t	*Salmonella* spp.	Pos	Pos	105	at	at	at	at		Neg	PD	PD
	Frozen Raw Chicken Tenderloins	4.8 (8,9,3,3,1)	46	29.48	26.69	28.13	14.20	t	t	m	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	106	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	Frozen Raw Boneless Skinless Chicken Thighs	5.6 (7,6,5,9,1)	47	34.84	16.70	-	29.04	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	107	t	t	t	t	*Salmonella* spp.	Pos	PA/ND	PA
	Frozen Raw Diced Chicken Breast with Rib Meat		48	-	-	-	-	at	at	at	at		at	at	at	ng		Neg	Neg	108	at	at	at	at		Neg	NA	NA
	Frozen Raw Chicken Wings with Bone	1.8 (3,2,2,2,0)	49	17.35	17.61	25.85	13.26	t	t	t	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	109	t	at	m	at		Neg	PD	PD
	Frozen Raw Chicken Breast with Skin	4.6 (2,4,2,9,6)	50		-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	110	at	t	at	t	*Salmonella* spp.	Pos	ND	ND
	Frozen Raw Whole Chicken Wings	5.0 (5,9,7,3,1)	51	31.28	17.35	28.79	15.42	at	t	at	t	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	111	at	t	at	t	*Salmonella* spp.	Pos	PA	PA
	Frozen Raw Boneless and Skinless Chicken Tenderloins		52	-	-	-	-	ng	ng	at	ng		at	ng	ng	ng		Neg	Neg	112	at	at	at	at		Neg	NA	NA
	Frozen Raw Chicken Tenderloins	5.8 (8,9,4,6,2)	53	32.06	20.07	26.92	17.44	at	t	at	t	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	113	at	t	at	t	*Salmonella* spp.	Pos	PA	PA
	Frozen Raw Boneless Chicken Thighs with Skin		54	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	114	at	at	at	at		Neg	NA	NA
	Frozen Raw Chicken Drumlets		55	-	-	-	-	at	at	at	at		ng	ng	ng	ng		Neg	Neg	115	at	at	at	at		Neg	NA	NA
	Frozen Raw Chicken Tenderloins	4.0 (4,4,6,3,3)	56	29.88	19.36	31.91	11.74	at	t	at	t	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	116	at	t	at	t	*Salmonella* spp.	Pos	PA	PA
	Frozen Raw Boneless and Skinless Chicken Breast		57	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	117	at	at	at	at		Neg	NA	NA
	Frozen Raw Boneless and Skinless Duck Breast	4.4 (3,5,6,3,5)	58	-	-	-	-	at	at	at	at		ng	ng	ng	ng		Neg	Neg	118	at	t	at	t	*Salmonella* spp.	Pos	ND	ND
	Frozen Raw Ground Turkey Breast (99% Lean)		59	-	-	-	-	at	at	at	at		ng	ng	ng	ng		Neg	Neg	119	at	at	at	at		Neg	NA	NA
	Frozen Raw Boneless Skinless Chicken Thighs		60	-	-	-	-	at	at	at	at		at	ng	ng	ng		Neg	Neg	120	at	at	at	at		Neg	NA	NA
	Frozen Chicken Wing		722	-	-	-	-	ng	ng	ng	ng		at	at	at	ng		Neg	Neg	744	at	at	at	at		Neg	NA	NA

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Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Ready to eat poultry	Roasted Turkey Breast		241	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	301	ng	ng	ng	ng		Neg	NA	NA
	Honey Turkey Breast	2.0 (2,3,2,2,1)	242	23.85	16.65	23.28	15.07	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	302	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Wildflower Honey Turkey Breast		243	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	303	ng	ng	ng	ng		Neg	NA	NA
	Chicken Chunks- White Meat	1.4 (1,1,3,2,0)	244	25.35	15.71	18.74	14.45	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	304	ng	ng	ng	ng		Neg	PD	PD
	Shredded Chicken Breast with Rib Meat		245	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	305	ng	ng	ng	ng		Neg	NA	NA
	Thin Sliced Honey Cured Turkey Deli Meat		246	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	306	ng	ng	ng	ng		Neg	NA	NA
	Rotisserie Seasoned Sliced Chicken Breast	1.8 (0,3,3,2,1)	247	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	307	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Chicken Breast Chunks- with Rib Meat	2.2 (2,2,1,3,3)	248	22.88	15.79	23.27	14.89	t	t	t	m	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	308	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Mesquite Seasoned Sliced Turkey Breast		249	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	309	ng	ng	ng	ng		Neg	NA	NA
	Oven Roasted Sliced Turkey Breast	1.6 (0,3,2,1,2)	250	26.23	14.22	26.90	14.15	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	310	ng	ng	ng	ng		Neg	PD	PD
	Oven Roasted Turkey Breast Chunks		251	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	311	ng	ng	ng	ng		Neg	NA	NA
	Honey Turkey Breast	1.8 (5,1,1,1,1)	252	32.28	19.01	34.27	17.00	t	t	ng	ng	*Salmonella spp.*	t	t	ng	ng	*Salmonella spp.*	Pos	Pos	312	t	t	ng	ng	*Salmonella spp.*	Pos	PA	PA
	Wildflower Honey Turkey Breast		253	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	313	ng	ng	ng	ng		Neg	NA	NA
	Chicken Chunks- White Meat	1.0 (1,0,1,2,1)	254	34.76	16.14	33.45	15.06	t	t	ng	ng	*Salmonella spp.*	t	t	ng	ng	*Salmonella spp.*	Pos	Pos	314	ng	ng	ng	ng		Neg	PD	PD
	Shredded Chicken Breast		255	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	315	ng	ng	ng	ng		Neg	NA	NA
	Honey Turkey Breast Deli Slices		256	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	316	at	ng	ng	ng		Neg	NA	NA
	Rotisserie Chicken		257	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	317	ng	ng	ng	ng		Neg	NA	NA
	Sodium Free Chicken Breast Chunks		258	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	318	ng	ng	ng	ng		Neg	NA	NA
	Mesquite Seasoned Sliced Turkey Breast		259	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	319	ng	ng	ng	ng		Neg	NA	NA
	Oven Roasted Turkey Slices		260	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	320	ng	ng	ng	ng		Neg	NA	NA
	Sliced Chicken	1.8 (2,3,3,1,0)	727	26.20	16.33	24.71	14.65	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos		749	ng	ng	ng		Neg	PD	PD
	Chicken Breast Meat Chunks	0.4 (1,0,0,1,0)	728	25.53	16.07	25.51	13.75	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos		750	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Turkey Slices	3 (2,2,5,0,6)	729	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg		751	t	t	t	*Salmonella spp.*	Pos	ND	ND

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Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Frozen cooked poultry	Frozen Chicken Breast with Rib Meat		261	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	321	ng	ng	ng	ng		Neg	NA	NA
	Diced Popcorn Chicken with Rib Meat	2.8 (2,2,2,6,2)	262	26.00	16.69	26.27	15.78	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	322	ng	ng	ng	ng		Neg	PD	PD
	Boneless Skinless Sliced Chicken Breast Strips	1.4 (1,2,1,3,0)	263	-	-	-	-	at	at	ng	ng		at	at	at	ng		Neg	Neg	323	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Crispy Chicken Breast with Rib Meat	1.6 (0,0,2,2,4)	264	25.07	16.97	25.97	15.93	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	324	ng	ng	ng	ng		Neg	PD	PD
	Smoked Flavored Oven Roasted Chicken Wings		265	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	325	ng	ng	ng	ng		Neg	NA	NA
	Lightly Breaded Chicken Breast Chunks with Rib Meat	2.6 (3,3,4,0,5)	266	27.73	17.89	29.33	15.66	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	326	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Oven Roasted Diced Chicken Breast- Skinless and Boneless		267	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	327	ng	ng	ng	ng		Neg	NA	NA
	Seasoned Chicken Breast Strips	1.8 (1,1,4,3,0)	268	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	328	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Breaded Chicken Strips with Rib Meat		269	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	329	ng	ng	ng	ng		Neg	NA	NA
	Grilled Chicken Breast-Diced Pieces	3.6 (1,3,5,7,2)	270	30.09	25.17	30.35	24.86	t	t	t	t	*Salmonella spp.*	m	m	m	m	*Salmonella spp.*	Pos	Pos	330	at	m	m	m	*Salmonella spp.*	Pos	PA	PA
	Breaded Chicken Nuggets	2.6 (2,0,3,2,6)	271	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	331	m	t	m	t	*Salmonella spp.*	Pos	ND	ND
	Popcorn Chicken	1.6 (2,3,2,0,1)	272	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	332	m	t	m	t	*Salmonella spp.*	Pos	ND	ND
	Grilled Chicken Breast Strips	1.0 (0,2,3,0,0)	273	31.30	29.33	34.14	29.07	m	m	m	t	*Salmonella spp.*	t	m	t	t	*Salmonella spp.*	Pos	Pos	333	at	at	m	t	*Salmonella spp.*	Pos	PA	PA
	Crispy Chicken Tenders		274	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	334	ng	ng	ng	ng		Neg	NA	NA
	Smoked and Seasoned Chicken Wings		275	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	335	ng	ng	ng	ng		Neg	NA	NA
	Frozen Chicken Breast Chunks		276	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	336	ng	ng	ng	ng		Neg	NA	NA
	Diced Chicken Breast with Oven Roast Seasoning	1.8 (1,2,4,0,2)	277	34.08	25.25	31.05	29.80	m	t	m	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	337	m	t	m	t	*Salmonella spp.*	Pos	PA	PA
	Seasoned Chicken Tenders		278	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	338	ng	ng	ng	ng		Neg	NA	NA
	Breaded Chicken Tenders		279	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	339	ng	ng	ng	ng		Neg	NA	NA
	Grilled Chicken Breast-Diced Pieces		280	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	340	at	at	at	at		Neg	NA	NA

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Category	Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
			Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
				8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Cured/smoked, Fermented/dried meat products	Mild Original Turkey Stick	3.0 (2,4,3,3,3)	281	24.08	15.85	25.14	14.35	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	341	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Turkey Pepperoni		282	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	342	ng	ng	ng	ng		Neg	NA	NA
	Semi-Dry Turkey Snack Bites with Mild Seasoning		283	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	343	ng	ng	ng	ng		Neg	NA	NA
	Smoke Sausage Turkey Bites	2.2 (0,0,4,3,4)	284	25.24	15.85	27.74	14.85	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	344	ng	ng	ng	ng		Neg	PD	PD
	Smoked Turkey Pepperoni	1.8 (2,2,2,2,1)	285	25.34	15.66	28.17	14.68	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	345	ng	ng	ng	ng		Neg	PD	PD
	Original Turkey Jerky	1.6 (2,0,2,1,3)	286	-	17.61	34.57	16.52	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	346	ng	ng	ng	ng		Neg	NA/ PD	PD
	Mini Turkey Sticks- Snack Bites		287	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	347	ng	ng	ng	ng		Neg	NA	NA
	Turkey Pepperoni	1.6 (0,1,3,1,3)	288	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	348	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Turkey Snack Bites with Original Seasoning		289	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	349	ng	ng	ng	ng		Neg	NA	NA
	Smoked Turkey Sausage Bites	1.6 (0,0,3,2,3)	290	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	350	t	t	t	t	*Salmonella spp.*	Pos	ND	ND
	Turkey Pepperoni		291	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	351	ng	ng	ng	ng		Neg	NA	NA
	Original Turkey Jerky	2.4 (5,2,3,1,1)	292	25.29	15.81	26.60	14.85	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	352	ng	ng	ng	ng		Neg	PD	PD
	Chicken Jerky Sticks	2.4 (3,1,3,3,2)	293	25.38	15.34	27.75	14.59	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	353	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
	Honey and Brown sugar Turkey Stick Bites		294	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	354	ng	ng	ng	ng		Neg	NA	NA
	All Natural Turkey Pepperoni		295	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	355	ng	ng	ng	ng		Neg	NA	NA
	Turkey Pepperoni with Smoked Flavor		296	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	356	ng	ng	ng	ng		Neg	NA	NA
		1.0 (1,1,1,1,1)	297	24.85	15.45	21.59	15.68	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	357	t	t	t	t	*Salmonella spp.*	Pos	PA	PA
			298	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	358	ng	ng	ng	ng		Neg	NA	NA
			299	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	359	ng	ng	ng	ng		Neg	NA	NA
			300	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	360	ng	ng	ng	ng		Neg	NA	NA
	Turkey Pepperoni	4.4 (8,9,1,1,3)	730	24.72	14.52	24.24	11.97	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella spp.*	Pos	Pos	752	ng	ng	ng	ng		Neg	PD	PD
	Turkey Jerky	2.4 (5,4,3,0,0)	731	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	753	t	t	t	t	*Salmonella spp.*	Pos	ND	ND

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)												ISO REFERENCE STANDARD (25 g)									Final Agreement 16 Hr
			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX	QS5	Result	MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]	Final Result	
				16 Hour	16 Hour		XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Eggs (Unprocessed)	Whole Shell Egg 1	0.4 (2,0,0,0,0)	361	-	-	Neg	ng	ng	ng	ng				Neg	421	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Whole Shell Egg 2		362	-	-	Neg	ng	ng	ng	ng				Neg	422	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 3		363	-	-	Neg	ng	ng	ng	ng				Neg	423	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 4	0.6 (1,1,1,0,0)	364	-	-	Neg	ng	ng	ng	ng				Neg	424	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Whole Shell Egg 5	1.6 (3,1,3,1,0)	365	17.90	16.26	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	425	ng	ng	ng	ng				Neg	PD
	Whole Shell Egg 6		366	-	-	Neg	ng	ng	ng	ng				Neg	426	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 7	0.8 (0,0,2,1,1)	367	17.65	15.97	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	427	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Whole Shell Egg 8		368	-		Neg	ng	ng	ng	ng				Neg	428	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 9		369	-	-	Neg	ng	ng	ng	ng				Neg	429	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 10	1.0 (1,2,1,1,0)	370	15.83	15.51	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	430	ng	ng	ng	ng				Neg	PD
	Whole Shell Egg 11	1.6 (3,3,1,1,0)	371	17.32	16.41	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	431	ng	ng	ng	ng				Neg	PD
	Whole Shell Egg 12	1.6 (6,1,0,1,0)	372	-	-	Neg	ng	ng	ng	ng				Neg	432	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Whole Shell Egg 13		373	-	-	Neg	ng	ng	ng	ng				Neg	433	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 14	1.2 (2,2,1,1,0)	374	21.25	21.00	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	434	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Whole Shell Egg 15		375	-	-	Neg	ng	ng	ng	ng				Neg	435	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 16		376	-	-	Neg	ng	ng	ng	ng				Neg	436	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 17		377	-	-	Neg	ng	ng	ng	ng				Neg	437	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg 18	1.0 (1,1,1,1,1)	378	18.22	16.46	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	438	ng	ng	ng	ng				Neg	PD
	Whole Shell Egg 19	0.2 (1,0,0,0,0)	379	17.97	15.73	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	439	t	t	t	t	+	+	*Salmonella* spp..	Pos	PA
	Whole Shell Egg 20		380	-	-	Neg	ng	ng	ng	ng				Neg	440	ng	ng	ng	ng				Neg	NA
	Whole Shell Egg	1.4 (0,0,1,2,4)	732	18.89	21.14	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	754	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Category	Item	Inoculation Level	CANDIDATE (25 g)												ISO REFERENCE STANDARD (25 g)										Final Agreement 16 Hr
			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation									
				CFX	QS5		MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]	Final Result	
				16 Hour	16 Hour	Result	XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Egg Products (Heat Processed)	Liquid Whole Egg 1	0.4 (1,0,0,1,0)	381	19.67	18.17	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	441	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Liquid Egg Whites 1		382	-	-	Neg	ng	ng	at	at				Neg	442	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 2		383	-	-	Neg	ng	ng	ng	ng				Neg	443	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 3		384	-	-	Neg	ng	ng	ng	ng				Neg	444	ng	ng	ng	ng				Neg	NA
	Liquid Whole Egg 2	0.6 (1,0,2,0,0)	385	-	-	Neg	ng	ng	ng	ng				Neg	445	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Liquid Egg Whites 4		386	-	-	Neg	ng	ng	ng	ng				Neg	446	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 5	0.4 (0,0,1,1,0)	387	-	-	Neg	ng	ng	ng	ng				Neg	447	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Liquid Egg Whites 6	0.8 (0,0,3,1,0)	388	-	-	Neg	ng	ng	ng	ng				Neg	448	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Liquid Whole Egg 3		389	-	-	Neg	ng	ng	ng	ng				Neg	449	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 7		390	-	-	Neg	ng	ng	ng	ng				Neg	450	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 8	1.6 (3,3,2,0,1)	391	17.00	15.23	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	451	ng	ng	ng	ng				Neg	PD
	Liquid Egg Whites 9		392	-	-	Neg	ng	ng	ng	ng				Neg	452	ng	ng	ng	ng				Neg	NA
	Liquid Whole Eggs 4	2.2 (3,5,2,1,0)	393	18.80	16.55	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	453	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Liquid Egg Whites 10		394	-	-	Neg	ng	ng	ng	ng				Neg	454	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 11		395	-	-	Neg	ng	ng	ng	ng				Neg	455	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 12	1.6 (3,3,2,0,1)	396	32.65	34.48	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	456	ng	ng	ng	ng				Neg	PD
	Liquid Egg Whites 13		397	-	-	Neg	ng	ng	ng	ng				Neg	457	ng	ng	ng	ng				Neg	NA
	Liquid Egg Whites 14		398	-	-	Neg	ng	ng	ng	ng				Neg	458	ng	ng	ng	ng				Neg	NA
	Liquid Whole Egg 5	0.8 (0,3,1,0,0)	399	-	-	Neg	ng	ng	ng	ng				Neg	459	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Liquid Egg Whites 15		400	-	-	Neg	ng	ng	ng	ng				Neg	460	ng	ng	ng	ng				Neg	NA
	Liquid Whole Egg	5.2 (5,6,7,3,5)	733	15.01	13.56	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	755	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Liquid Whole Egg	0.4 (0,0,0,1,1)	734	-	-	Neg	at	at	at	at				Neg	756	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND

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Category	Item	Inoculation Level	CANDIDATE (25 g)												ISO REFERENCE STANDARD (25 g)									Final Agreement 16 Hr
			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation									
				CFX	QS5		MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]	Final Result	
				16 Hour	16 Hour	Result	XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Dried Egg Products	Dried Whole Eggs 1	1.6 (1,4,0,2,1)	401	-	-	Neg	ng	ng	ng	ng				Neg	461	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Dried Whole Eggs 2		402	-	-	Neg	at	at	at	ng				Neg	462	at	at	at	at				Neg	NA
	Dried Egg Whites 1		403	-	-	Neg	ng	ng	ng	ng				Neg	463	ng	ng	ng	ng				Neg	NA
	Dried Egg Whites 2		404	-	-	neg	ng	ng	ng	ng				Neg	464	ng	ng	ng	ng				Neg	NA
	Dried Whole Eggs 3	0.8 (0,0,0,1,3)	405	-	-	Neg	ng	ng	ng	ng				Neg	465	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Dried Whole Eggs 4		406	-	-	Neg	at	at	ng	ng				Neg	466	ng	ng	ng	ng				Neg	NA
	Dried Egg Whites 3	1.2 (1,0,3,2,0)	407	20.88	19.56	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	467	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Dried Egg Whites 4		408	-	-	Neg	ng	ng	ng	ng				Neg	468	ng	ng	ng	ng				Neg	NA
	Dried Whole Eggs 5		409	-	-	Neg	ng	ng	ng	ng				Neg	469	ng	ng	ng	ng				Neg	NA
	Dried Whole Eggs 6		410	-	-	Neg	at	at	at	at				Neg	470	at	at	at	at				Neg	NA
	Dried Egg Whites 5	1.4 (1,0,1,2,3)	411	14.08	14.32	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	471	ng	ng	ng	ng				Neg	PD
	Dried Egg Whites 6		412	-	-	Neg	ng	ng	ng	ng				Neg	472	ng	ng	ng	ng				Neg	NA
	Dried Whole Eggs 7		413	-	-	Neg	ng	ng	ng	ng				Neg	473	ng	ng	ng	ng				Neg	NA
	Dried Whole Eggs 8		414	-	-	Neg	at	at	at	at				Neg	474	at	at	ng	ng				Neg	NA
	Dried Egg Whites 7		415	-	-	Neg	ng	ng	ng	ng				Neg	475	ng	ng	ng	ng				Neg	NA
	Dried Egg Whites 8	0.8 (1,3,0,0,0)	416	34.80	33.64	Pos	t	t	ng	ng	+	+	*Salmonella* spp.	Pos	476	ng	ng	ng	ng				Neg	PD
	Dried Whole Eggs 9		417	-	-	Neg	ng	ng	ng	ng				Neg	477	ng	at	ng	ng				Neg	NA
	Dried Whole Eggs 10		418	-	-	Neg	ng	ng	ng	ng				Neg	478	ng	ng	ng	ng				Neg	NA
	Dried Egg Whites 9		419	-	-	Neg	ng	ng	ng	ng				Neg	479	ng	ng	ng	ng				Neg	NA
	Dried Egg Whites 10		420	-	-	Neg	ng	ng	ng	ng				Neg	480	ng	ng	ng	ng				Neg	NA
	Dried Whole Egg		735	16.28	15.43	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	757	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Dried Egg Whites		736	14.01	13.58	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	758	ng	ng	ng	ng				Neg	PD
	Dried Whole Egg		737	17.06	15.14	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	759	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Dried Egg Whites		738	-	-	Neg	ng	ng	ng	ng				Neg	760	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Dried Whole Egg		739	16.79	15.99	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	761	ng	ng	ng	ng				Neg	PD

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			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX	QS5		MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]	Final Result	
				16 Hour	16 Hour	Result	XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Cut Ready-to-eat Vegetables	Spinach and Arugula Mix	1.6 (2,0,3,0,3)	481	-	-	Neg	t	t	t	t	+	+	*Salmonella* spp.	Pos	541	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Broccoli and Greens Salad Mix		482	-	-	Neg	at	at	at	at				Neg	542	at	at	at	at				Neg	NA
	Shredded Broccoli Slaw	1.0 (1,1,0,1,2)	483	20.56	21.83	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	543	at	at	at	at				Neg	PD
	Mixed Veggie Blend with Iceberg Lettuce		484	-	-	Neg	at	at	at	at				Neg	544	at	at	at	at				Neg	NA
	Mixed Cabbage Coleslaw	0.6 (0,0,0,3,0)	485	-	-	Neg	at	at	at	at				Neg	545	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Broccoli Slaw Mix		486	-	-	Neg	at	at	at	at				Neg	546	at	at	at	at				Neg	NA
	Shredded Babby Carrots	1.6 (2,1,1,2,2)	487	25.70	31.41	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	547	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Shredded Cole Slaw Cabbage with Carrots		488	-	-	Neg	at	at	at	at				Neg	548	at	at	at	at				Neg	NA
	Mixed Greens with Romaine Lettuce	0.4 (1,0,0,0,1)	489	28.40	28.49	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	549	at	at	at	at				Neg	PD
	Shredded Stir Fry Vegetables	1.8 (3,3,2,0,1)	490	32.11	29.34	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	550	at	at	at	at				Neg	PD
	Spinach, Arugula, and other Mix	2.4 (4,3,5,0,0)	491	-	-	Neg	t	t	t	t	+	+	*Salmonella* spp.	Pos	551	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Shredded Broccoli		492	-	-	Neg	at	at	at	at				Neg	552	at	at	at	at				Neg	NA
	Shredded Broccoli with other Mixed Vegetables		493	-	-	Neg	at	at	at	at				Neg	553	at	at	at	at				Neg	NA
	Vegetable Blend with Cucumber and Carrot Mix	2.2 (1,1,4,3,2)	494	16.04	14.80	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	554	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Mixed Shredded Cabbage		495	-	-	Neg	at	at	at	at				Neg	555	at	at	at	at				Neg	NA
	Mixed Shredded Broccoli	1.8 (2,4,0,1,2)	496	-	-	Neg	at	at	at	at				Neg	556	t	t	t	t	+	+	*Salmonella* spp.	Pos	ND
	Shredded Carrots		497	-	-	Neg	at	at	at	at				Neg	557	at	at	at	at				Neg	NA
	Shredded Cabbage with Carrots	1.4 (3,0,0,4,0)	498	20.07	19.12	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	558	at	at	at	at				Neg	PD
	Mixed Salad Blend		499	-	-	Neg	at	at	at	at				Neg	559	at	at	at	at				Neg	NA
	Shredded Stir Fry Vegetables		500	-	-	Neg	at	at	at	at				Neg	560	at	at	at	at				Neg	NA

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			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
				CFX	QS5		MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]	Final Result	
				16 Hour	16 Hour	Result	XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Cut Ready-to-eat Fruit	Honeydew	3.4 (5,3,1,2,6)	501	22.38	22.93	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	561	at	at	at	at				Neg	PD
	Watermelon		502	20.14	20.81	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	562	m	m	m	m	+	+	*Salmonella* spp.	Pos	PA
	Pineapple Chunks		503	-	-	Neg	at	at	at	at				Neg	563	at	at	at	at				Neg	NA
	Strawberries		504	-	-	Neg	at	at	at	at				Neg	564	at	at	at	at				Neg	NA
	Dragon Fruit	2.8 (8,0,4,1,1)	505	15.48	15.46	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	565	at	at	at	at				Neg	PD
	Cantaloupe	1.0 (1,1,0,3,0)	506	18.75	18.71	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	566	m	m	m	m	+	+	*Salmonella* spp.	Pos	PA
	Pineapple, Strawberry, and Kiwi Mix		507	19.92	20.57	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	567	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Clementines		508	-	-	Neg	at	at	at	at				Neg	568	at	at	at	at				Neg	NA
	Mangos	0.2 (0,0,1,0,0)	509	18.13	17.91	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	569	at	at	at	at				Neg	PD
	Mixed Grapes		510	-	-	Neg	at	at	at	at				Neg	570	at	at	at	at				Neg	NA
	Honeydew #2	2.4 (6,3,1,2,0)	511	20.92	20.78	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	571	at	at	at	at				Neg	PD
	Seedless Watermelon	0.6 (3,0,0,0,0)	512	-	-	Neg	at	at	at	at				Neg	572	m	m	m	m	+	+	*Salmonella* spp.	Pos	ND
	Pineapple Wedges		513	-	-	Neg	at	at	at	at				Neg	573	at	at	at	at				Neg	NA
	Diced Strawberries	0.4 (0,0,2,0,0)	514	28.98	27.68	Pos	t	t	t	t	+	+	*Salmonella* spp..	Pos	574	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Cubed Dragon Fruit Chunks		515	-	-	Neg	at	at	at	at				Neg	575	at	at	at	at				Neg	NA
	Cut Cantaloupe		516	-	-	Neg	at	at	at	at				Neg	576	m	m	m	m	+	+	*Salmonella* spp.	Pos	ND
	Pineapple Spirals		517	-	-	Neg	at	at	at	at				Neg	577	at	at	at	at				Neg	NA
	Clementines		518	-	-	Neg	at	at	at	at				Neg	578	at	at	at	at				Neg	NA
	Diced Mangos	1.4 (0,0,1,5,1)	519	-	-	Neg	at	at	at	at				Neg	579	m	m	m	m	+	+	*Salmonella* spp..	Pos	ND
	Cut Grapes		520	-	-	Neg	at	at	at	at				Neg	580	at	at	at	at				Neg	NA
	Cut Mangos		740	-	-	Neg	ng	ng	ng	ng				Neg	762	ng	ng	ng	ng				Neg	NA

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			Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)							Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								Final Result	
				CFX	QS5		MKTTn		RVS		Poly O	Poly H	Identification[1]			MKTTn		RVS		Poly O	Poly H	Identification[1]		
				16 Hour	16 Hour	Result	XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
Leafy Greens	Cilantro	2.0 (2,2,2,2,2)	521	29.72	27.36	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	581	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Kale	0.6 (0,1,1,1,0)	522	26.16	28.77	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	582	at	at	at	at				Neg	PD
	Romaine Lettuce		523	-	-	Neg	at	at	at	at				Neg	583	at	at	at	at				Neg	NA
	Green Onions		524	-	-	Neg	at	at	at	at				Neg	584	m	m	m	m	+	+	*Salmonella* spp.	Pos	ND
	Parsley		525	-	-	Neg	at	at	at	at				Neg	585	at	at	at	at				Neg	NA
	Spinach	1.6 (0,1,1,3,3)	526	-	-	Neg	at	at	at	at				Neg	586	m	m	m	m	+	+	*Salmonella* spp.	Pos	ND
	Red Leaf Lettuce	1.8 (5,0,0,4,0)	527	20.04	20.00	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	587	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Baby Spinach		528	-	-	Neg	at	at	at	at				Neg	588	at	at	at	at				Neg	NA
	Romaine Hearts		529	29.69	29.66	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	589	at	at	at	at				Neg	PD
	Romaine Lettuce	1.4 (1,1,1,2,2)	530	-	-	Neg	at	at	at	at				Neg	590	m	m	m	m	+	+	*Salmonella* spp.	Pos	ND
	Cilantro		531	-	-	Neg	at	at	at	at				Neg	591	at	at	at	at				Neg	NA
	Kale		532	34.42	29.35	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	592	at	at	at	at				Neg	PD
	Iceberg Lettuce		533	-	-	Neg	at	at	at	at				Neg	593	at	at	at	at				Neg	NA
	Green Onions	1.6 (1,0,3,3,1)	534	32.37	31.88	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	594	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA
	Parsley		535	-	-	Neg	at	at	at	at				Neg	595	at	at	at	at				Neg	NA
	Spinach		536	-	-	Neg	at	at	at	at				Neg	596	at	at	at	at				Neg	NA
	Red Lettuce	1.4 (0,0,7,0,0)	537	20.00	20.65	Pos	t	t	t	t	+	+	*Salmonella* spp.	Pos	597	at	at	at	at				Neg	PD
	Baby Spinach		538	-	-	Neg	at	at	at	at				Neg	598	at	at	at	at				Neg	NA
	Romaine Hearts		539	-	-	Neg	at	at	at	at				Neg	599	at	at	at	at				Neg	NA
	Romaine Lettuce		540	-	-	Neg	at	at	at	at				Neg	600	at	at	at	at				Neg	NA
	Baby Spinach	2.8 (3,5,0,6,0)	741	18.68	-		m	t	m	t	+	+	*Salmonella* spp.	Pos	763	t	t	t	t	+	+	*Salmonella* spp.	Pos	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Sensitivity – 2 – 8° C, 72 hour hold

Item	Inoculation Level	CANDIDATE (25 g)																	ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Raw Goats Milk	0.2 (0,0,1,0,0)	774	26.60	22.36	27.21	22.50	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	801	m	t	m	at	*Salmonella* spp.	Pos	PA	PA
Raw Camel Milk	1.6 (3,0,2,0,3)	775	28.22	18.56	28.78	18.12	t	t	m	m	*Salmonella* spp.	t	t	m	m	*Salmonella* spp.	Pos	Pos	802	at	ng	at	at		Neg	PD	PD
Raw Goats Milk	5.4 (6,6,8,4,3)	777	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	804	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
Raw Goats Milk	2.6 (7,0,1,5,0)	778	28.19	18.28	25.74	18.14	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	805	at	at	at	at		Neg	PD	PD
Raw Camel Milk	1.4 (4,0,0,3,0)	783	28.01	19.10	28.79	17.69	m	t	m	m	*Salmonella* spp.	m	t	m	m	*Salmonella* spp.	Pos	Pos	810	m	m	m	at	*Salmonella* spp.	Pos	PA	PA
Raw Bovine Milk		784	-	27.11	30.91	33.18	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	811	t	t	t	t	*Salmonella* spp.	Pos	ND/PPND	PPND
Raw Bovine Milk	1.8 (0,2,2,5,0)	785	32.21	13.75	31.07	13.04	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	812	ng	ng	at	ng		Neg	PD	PD
Raw Bovine Milk		786	-	-	31.92	26.69	ng	ng	ng	ng		m	t	m	t	*Salmonella* spp.	Neg	Pos	813	t	t	t	t	*Salmonella* spp.	Pos	ND/PPND	ND/PA
Raw Bovine Milk		787	-	-	32.20	32.25	ng	ng	ng	ng		t	t	m	t	*Salmonella* spp.	Neg	Pos	814	t	t	t	t	*Salmonella* spp.	Pos	ND/PPND	ND/PA
Raw Bovine Milk	2.0 (3,1,1,2,3)	788	31.18	13.53	30.41	12.03	m	m	m	t	*Salmonella* spp.	m	m	m	t	*Salmonella* spp.	Pos	Pos	815	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Bovine Milk		789	-	27.80	31.91	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	816	t	t	t	t	*Salmonella* spp.	Pos	ND/PPND	PPND/ND
Raw Bovine Milk		790	-	-	33.01	26.54	ng	ng	ng	ng		m	t	t	t	*Salmonella* spp.	Neg	Pos	817	t	t	t	t	*Salmonella* spp.	Pos	ND/PPND	ND/PA
Raw Bovine Milk	2.8 (5,6,1,1,1)	791	31.48	14.05	31.93	13.35	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	818	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Fourme d'Ambert		622	33.50	18.53	28.87	17.59	t	m	t	t	*Salmonella* spp.	t	m	t	t	*Salmonella* spp.	Pos	Pos	682	ng	ng	ng	ng		Neg	PD	PD
Kaltbach Le Cremeux		623	-	-	-	-	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	683	m	t	m	t	*Salmonella* spp.	Pos	ND*	ND*
Buttermilk Bleu Affinee		624	-	-	-	-	ng	ng	ng	ng		ng	at	ng	ng		Neg	Neg	684	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
Fontina Val D'Aosta		626	34.85	28.45	32.54	26.31	m	t	m	t	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	686	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Comte HOP Reserve		628	33.65	17.19	28.22	14.61	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	688	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Roquefort Sociele Bee		629	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	689	m	m	m	t	*Salmonella* spp.	Pos	ND	ND
Raw Milk French Raclette		630	33.53	21.84	30.63	19.38	t	m	t	t	*Salmonella* spp.	m	m	t	t	*Salmonella* spp.	Pos	Pos	690	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Fourme d'Ambert		633	33.34	18.41	31.95	15.73	t	t	t	t	*Salmonella* spp.	t	m	t	t	*Salmonella* spp.	Pos	Pos	693	ng	ng	ng	ng		Neg	PD	PD
Buttermilk Bleu Affinee		635	-	16.38	32.29	14.03	t	t	t	t	*Salmonella* spp.	t	m	t	t	*Salmonella* spp.	Pos	Pos	695	m	m	m	t	*Salmonella* spp.	Pos	ND*	PA
Fontina Val D'Aosta		637	-	-	-	-	at	ng	at	ng		at	ng	at	ng		Neg	Neg	697	m	t	m	t	*Salmonella* spp.	Pos	ND	ND

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
4% Milkfat cottage cheese	1.0 (0,3,2,0,0)	641	34.79	29.82	30.71	27.65	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	701	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Whole Milk Yogurt		642	34.95	26.84	32.46	24.54	m	m	m	m	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	702	m	t	t	t	*Salmonella* spp.	Pos	PA	PA
1% Low Fat Milk	1.2 (0,1,1,4,0)	645	-	34.43	28.44	26.92	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	705	ng	ng	ng	ng		Neg	NA/PD	PD
Part Skim Shredded Mozzarella Cheese	1.6 (2,2,1,0,3)	646	-	24.55	-	22.70	m	m	m	m	*Salmonella spp.*	t	t	t	t	*Salmonella* spp.	Pos	Pos	706	ng	ng	ng	ng		Neg	NA	PD
Pepper Jack Cheese	1.2 (0,1,1,4,0)	648	-	16.73	-	12.50	m	m	m	m	*Salmonella spp.*	t	t	t	t	*Salmonella* spp.	Pos	Pos	708	ng	ng	at	at		Neg	NA	PD
Smoked Provolone Cheese	1.0 (1,1,1,1,1)	649	-	-	-	-	at	at	ng	ng		at	at	at	at		Neg	Neg	709	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
Cheddar and Gruyere Cheese Blend	0.8 (3,0,1,0,0)	650	-	17.78	-	18.30	t	t	ng	ng	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	710	m	t	m	t	*Salmonella* spp.	Pos	ND	PA
Whole Milk Yogurt-Vanilla	1.0 (2,0,1,1,1)	652	34.04	26.78	30.24	27.13	m	m	m	m	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	712	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Low Fat Skim Milk	1.0 (0,2,1,1,1)	655	34.32	31.58	31.94	30.28	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	715	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Gruyere Cheese		660	-	17.82	34.90	16.02	m	m	m	m	*Salmonella spp.*	m	m	m	m	*Salmonella* spp.	Pos	Pos	720	m	t	m	t	*Salmonella* spp.	Pos	ND/PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																	ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Boneless Pork Chops	1.2 (1,2,3,0,0)	122	34.57	21.78	34.99	20.40	t	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	182	m	m	m	t	*Salmonella* spp.	Pos	PA	PA
Shaved Beef Steak		123	21.36	17.59	20.27	15.63	t	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	183	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Ground Bison (90% Lean)	1.6 (0,5,0,1,2)	125	-	-	-	-	ng	ng	at	ng		ng	ng	at	ng		Neg	Neg	185	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Raw Ground Beef Patties (80% Lean)		126	23.71	18.55	21.93	13.84	t	t	m	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	186	at	at	at	at		Neg	PD	PD
Diced Beef	1.6 (2,3,0,0,0)	130	35.52	26.03	33.84	24.21	t	t	m	t	*Salmonella* spp.	t	t	m	t	*Salmonella* spp.	Pos	Pos	190	m	m	m	t	*Salmonella* spp.	Pos	PA	PA
Fresh Ground Pork		132	27.66	19.29	26.06	16.47	m	t	m	t	*Salmonella* spp.	m	m	t	t	*Salmonella* spp.	Pos	Pos	192	m	m	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Ground Bison (90% Lean)		134	22.24	19.34	19.39	16.81	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	194	at	at	at	at		Neg	PD	PD
Raw Ground Sirloin Beef Patties (93% Lean)	1.4 (4,3,0,0,0)	136	30.21	18.73	29.36	16.58	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	196	at	at	at	at		Neg	PD	PD
Fresh Raw Ground Beef (80% Lean)	1.6 (1,3,0,0,4)	138	-	-	-	-	at	ng	at	ng		at	ng	at	ng		Neg	Neg	198	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
Lamb Chop	1.8 (0,0,4,3,2)	723	30.60	14.32	28.13	19.70	t	t	t	t	*Salmonella* spp	t	t	m	t	*Salmonella* spp	Pos	Pos	745	at	ng	at	ng		Neg	PD	PD
Raw Ground Beef Crumbles (80% Lean)		142	19.88	17.31	11.51	14.70	m	t	m	t	*Salmonella* spp..	t	t	m	t	*Salmonella* spp.	Pos	Pos	202	at	at	at	at		Neg	PD	PD
Raw Angus Chuck Beef Patties	1.8 (1,1,1,3,3)	143	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	203	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
Raw Thin and Seasoned Beef Patties	2.0 (1,3,2,2,2)	144	28.24	17.19	22.98	12.56	m	t	m	t	*Salmonella* spp..	m	m	t	t	*Salmonella* spp..	Pos	Pos	204	at	at	at	at		Neg	PD	PD
Spicy Sicilian Pork Meatballs		146	-	-	-	-	ng	ng	ng	at		ng	ng	at	at		Neg	Neg	206	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Pure Beef Patties (85% Lean)	2.6 (1,0,4,5,3)	148	-	25.01	-	23.22	t	t	ng	ng	Salmonella spp.	m	m	m	m	Salmonella spp.	Pos	*Pos*	*208*	*m*	*t*	*m*	*t*	*Salmonella spp.*	*Pos*	*ND*	*PA*
Frozen Sliced Beef Liver		149	32.30	30.46	30.51	30.46	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	209	m	m	m	m	*Salmonella* spp.	Pos	PA	PA
Frozen Pork Scrapple		150	19.96	16.12	17.49	14.77	m	m	m	m	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	210	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Frozen Raw Ground Beef (80% Lean)	2.0 (7,1,3,0,0)	152	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	212	m	m	t	t	*Salmonella* spp.	Pos	ND	ND
Raw Frozen Meatballs- Pork	1.8 (2,3,3,1,0)	155	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	215	m	m	m	t	*Salmonella* spp.	Pos	ND	ND
Raw Frozen Meatballs- Pork	1.0 (1,0,2,0,2)	156	24.63	19.36	24.70	17.15	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	216	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Beef Patties (91% Lean)	3.8 (3,3,0,4,4)	157	24.31	17.09	25.53	15.38	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	217	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Diced Beef Liver		159	33.14	30.45	30.53	31.25	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	219	m	m	m	m	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Sliced Smoked Ham - Boneless	1.8 (5,1,1,1,1)	161	23.73	13.19	23.02	12.87	t	t	t	t	*Salmonella* spp.	m	m	t	t	*Salmonella* spp.	Pos	Pos	221	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Brown Sugar Sliced Country Ham	1.0 (1,1,1,1,1)	162	22.38	14.22	21.29	13.86	m	m	t	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	222	ng	ng	ng	ng		Neg	PD	PD
Cubed Ham (96% Fat Free)	0.4 (0,0,0,1,1)	163	26.28	20.09	26.89	18.32	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	223	ng	ng	ng	ng		Neg	PD	PD
Sliced Ham Steaks (97% Fat Free)		164	23.27	14.97	21.84	12.72	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	224	at	at	at	at		Neg	PD	PD
Pork Liverwurst Pate with Bacon added	0.8 (1,2,0,1,0)	165	-	-	-	-	ng	ng	ng	ng		at	ng	ng	ng		Neg	Neg	225	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Honey Cured Sliced Ham	3.2 (4,6,0,0,6)	168	24.47	13.38	26.47	16.05	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp..	Pos	Pos	228	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Ultra-thin sliced Roast Beef with Seasoning	1.4 (3,1,0,1,2)	169	-	-	-	-	at	at	at	ng		at	at	ng	ng		Neg	Neg	229	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Sliced Ham with Sugar seasoning	2.2 (3,5,1,1,1)	172	-	-	-	-	at	ng	ng	ng		at	ng	ng	ng		Neg	Neg	232	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Smoked Ham Flanks (95% Fat Free)	1.8 (2,2,1,2,2)	174	21.30	15.07	23.85	21.30	t	t	t	t	*Salmonella* spp.	m	m	t	t	*Salmonella* spp.	Pos	Pos	234	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Thin Sliced Roast Beef	0.4 (2,0,0,0,0)	177	22.74	16.22	22.96	17.97	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	237	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Sliced Roast Beef with Seasoning	1.6 (3,0,0,4,1)	179	24.68	16.37	23.32	16.43	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	239	t	t	t	t	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Chicken Tenderloins		2	28.56	25.75	26.82	24.52	t	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	62	at	ng	at	ng		Neg	PD	PD
Boneless Skinless Chicken Breast	3.4 (0,1,4,1,11)	4	-	33.59	-	-	at	ng	m	t	*Salmonella spp.*	m	t	m	t	*Salmonella spp.*	Pos	Pos	64	at	at	at	at		Neg	NA	NA/ PD
Turkey Breast Skinless		7	-	-	-	-	at	ng	at	ng		at	at	at	at		Neg	Neg	67	m	t	t	t	*Salmonella* spp.	Pos	ND	ND
Chicken Wing Drumettes with Skin		9	29.06	26.38	27.41	23.96	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	69	m	t	t	t	*Salmonella* spp.	Pos	PA	PA
Chicken Breast with Skin	4.6 (5,8,6,1,3)	14	-	-	-	-	at	ng	at	at		at	at	at	at		Neg	Neg	74	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
Raw Chicken Breast	2.4 (5,4,3,0,0)	765	29.48	22.02	28.69	22.42	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	792	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Chicken Thigh	2.4 (0,2,4,6,0)	766	34.73	29.40	34.79	29.54	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	793	m	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Chicken Tenderloins	2.2 (3,5,0,2,1)	767	33.72	31.42	31.87	32.10	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	794	m	t	m	m	*Salmonella* spp.	Pos	PA	PA
Raw Turkey Breast	1.2 (1,1,2,1,1)	768	23.06	20.15	23.00	20.95	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	795	m	t	m	m	*Salmonella* spp.	Pos	PA	PA
Raw Turkey Breast with Skin	1.4 (3,0,0,4,0)	769	24.17	20.18	24.60	19.70	m	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	796	at	at	at	at		Neg	PD	PD
Raw Ground Turkey (93% Lean)		21	24.93	23.71	19.55	22.49	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	81	at	at	at	at		Neg	PD	PD
Raw Ground Chicken Breast (98 % Lean)	3.8 (3,7,7,1,1)	22	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	82	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
Raw Ground Turkey (93% Lean)		24	26.31	20.52	24.81	19.97	m	t	m	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	84	at	at	at	at		Neg	PD	PD
Raw Ground Chicken Patties (92% Lean)		27	21.57	18.73	20.22	17.89	m	t	m	t	*Salmonella* spp.	m	t	m	m	*Salmonella* spp.	Pos	Pos	87	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Raw Ground Turkey (85% Lean)		29	-	-	-	-	ng	ng	ng	ng		at	at	at	at		Neg	Neg	89	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Raw Ground Chicken Breast (93% Lean)	3.0 (8,1,1,2,3)	30	33.87	23.89	-	23.29	m	t	m	t	*Salmonella spp.*	m	m	m	m	*Salmonella* spp.	Pos	Pos	90	m	m	m	m	*Salmonella* spp.	Pos	ND/ PA	PA
Raw Turkey Burger Patties (93% Lean)	3.4 (6,6,2,3,0)	32	33.66	23.97	30.28	23.80	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	92	t	t	m	t	*Salmonella* spp.	Pos	PA	PA
Raw Ground Turkey (85% Lean)	2.6 (3,2,2,1,5)	35	33.31	19.46	29.74	12.36	t	t	t	t	*Salmonella* spp.	m	t	m	t	*Salmonella* spp.	Pos	Pos	95	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Raw Turkey Sausage Links (95% Lean)	4.2 (4,2,9,6,0)	38	29.31	18.95	27.73	17.07	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	98	at	ng	at	ng		Neg	PD	PD
Raw Turkey Sausage	1.8 (5,0,2,1,1)	770	21.41	15.82	19.04	13.66	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	797	t	t	m	m	*Salmonella* spp.	Pos	PA	PA
Raw Breakfast Turkey Sausage Patties	2.4 (3,3,3,1,2)	771	21.71	16.06	21.70	16.06	m	m	m	m	*Salmonella* spp.	m	m	m	m	*Salmonella* spp.	Pos	Pos	798	t	ng	m	at	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)								Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation								
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Frozen Raw Diced Chicken Breast	3.6 (2,3,6,3,4)	42	25.73	18.29	24.16	16.79	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	102	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Frozen Raw Ground Turkey Breast (85% Lean)	4.4 (6,5,3,3,5)	44	31.03	20.28	29.97	16.25	t	t	t	t	*Salmonella* spp.	m	t	t	t	*Salmonella* spp.	Pos	Pos	104	ng	ng	ng	ng		Neg	PD	PD
Frozen Raw Boneless Chicken Breast with Rib Meat	4.2 (4,7,6,2,2)	45	34.06	23.39	32.06	17.94	m	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	105	at	at	at	at		Neg	PD	PD
Frozen Raw Chicken Tenderloins	4.8 (8,9,3,3,1)	46	29.14	18.70	27.29	10.50	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	106	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Frozen Raw Boneless Skinless Chicken Thighs	5.6 (7,6,5,9,1)	47	-	33.33	-	32.68	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	107	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Frozen Raw Chicken Wings with Bone	1.8 (3,2,2,2,0)	49	29.33	16.50	26.69	13.50	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	109	at	at	at	at		Neg	NA	NA
Frozen Raw Chicken Breast with Skin	4.6 (2,4,2,9,6)	50	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	110	at	t	at	at	*Salmonella* spp.	Pos	ND	ND
Frozen Raw Whole Chicken Wings	5.0 (5,9,7,3,1)	51	-	-	32.70	12.73	at	t	at	ng	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	111	at	t	at	at	*Salmonella* spp.	Pos	ND/ PA	ND/ PA
Frozen Raw Chicken Tenderloins	5.8 (8,9,4,6,2)	53	27.37	-	28.19	19.26	at	t	at	at	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	113	at	t	at	t	*Salmonella* spp.	Pos	PA	ND/ PA
Frozen Raw Chicken Tenderloins	4.0 (4,4,6,3,3)	56	29.21	-	32.50	26.33	at	t	at	t	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	116	at	t	at	t	*Salmonella* spp.	Pos	PA	ND/ PA
Frozen Raw Boneless and Skinless Duck Breast	4.4 (3,5,6,3,5)	58	-	-	-	-	at	ng	at	ng		at	ng	at	ng		Neg	Neg	118	at	t	at	t	*Salmonella* spp.	Pos	ND	ND

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Honey Turkey Breast	2.0 (2,3,2,2,1)	242	23.60	15.57	23.72	13.98	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	302	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Chicken Chunks- White Meat	1.4 (1,1,3,2,0)	244	23.68	14.81	24.65	12.56	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	304	ng	ng	ng	ng		Neg	PD	PD
Rotisserie Seasoned Sliced Chicken Breast	1.8 (0,3,3,2,1)	247	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	307	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Chicken Breast Chunks- with Rib Meat	2.2 (2,2,1,3,3)	248	21.73	14.72	22.01	13.10	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	308	t	t	t	t	*Salmonella* spp.	Neg	PA	PA
Oven Roasted Sliced Turkey Breast	1.6 (0,3,2,1,2)	250	25.08	13.43	26.79	13.63	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	310	ng	ng	ng	ng		Neg	PD	PD
Honey Turkey Breast	1.8 (5,1,1,1,1)	252	30.06	17.17	30.69	17.58	at	t	at	t	*Salmonella* spp.	at	t	at	t	*Salmonella* spp.	Pos	Pos	312	m	t	ng	ng	*Salmonella* spp.	Pos	PA	PA
Chicken Chunks- White Meat	1.0 (1,0,1,2,1)	254	33.35	14.69	-	14.40	m	t	at	t	Salmonella spp.	m	t	at	t	Salmonella spp.	Pos	Pos	314	ng	ng	ng	ng		Neg	PD/NA	PD
Sliced Chicken	1.8 (2,3,3,1,0)	727	25.27	16.08	15.08	10.82	t	t	t	t	*Salmonella* spp.	t	t	m	t	*Salmonella* spp.	Pos	Pos	749	ng	ng	ng	ng		Neg	PD	PD
Chicken Breast Meat Chunks	0.4 (1,0,0,1,0)	728	23.13	16.66	21.55	12.33	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	750	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Turkey Slices	3 (2,2,5,0,6)	729	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	751	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Diced Popcorn Chicken with Rib Meat	2.8 (2,2,2,6,2)	262	27.64	15.49	33.62	15.66	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	322	ng	ng	at	ng		Neg	PD	PD
Boneless Skinless Sliced Chicken Breast Strips	1.4 (1,2,1,3,0)	263	-	-	-	-	at	at	at	at		at	at	at	at		Neg	Neg	323	m	m	m	m	*Salmonella* spp.	Pos	ND	ND
Crispy Chicken Breast with Rib Meat	1.6 (0,0,2,2,4)	264	23.49	15.36	33.71	15.17	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	324	ng	ng	at	ng		Neg	PD	PD
Lightly Breaded Chicken Breast Chunks with Rib Meat	2.6 (3,3,4,0,5)	266	27.38	15.87	27.90	16.76	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	326	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Seasoned Chicken Breast Strips	1.8 (1,1,4,3,0)	268	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	328	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Grilled Chicken Breast- Diced Pieces	3.6 (1,3,5,7,2)	270	31.31	23.65	26.91	25.95	m	m	m	m	*Salmonella* spp.	m	at	m	m	*Salmonella* spp..	Pos	Pos	330	at	at	m	m	*Salmonella* spp.	Pos	PA	PA
Breaded Chicken Nuggets	2.6 (2,0,3,2,6)	271	-	-	-	-	ng	ng	ng	ng		at	ng	ng	ng		Neg	Neg	331	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
Popcorn Chicken	1.6 (2,3,2,0,1)	272	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	332	m	t	m	t	*Salmonella* spp.	Pos	ND	ND
Grilled Chicken Breast Strips	1.0 (0,2,3,0,0)	273	33.31	28.72	28.56	28.84	m	at	m	m	*Salmonella* spp.	m	at	m	m	*Salmonella* spp.	Pos	Pos	333	m	at	m	t	*Salmonella* spp.	Pos	PA	PA
Diced Chicken Breast with Oven Roast Seasoning	1.8 (1,2,4,0,2)	277	32.34	23.81	31.30	27.92	m	t	ng	ng	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	337	m	t	m	t	*Salmonella* spp.	Pos	PA	PA

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)																ISO REFERENCE STANDARD (25 g)							Final Agreement	
		Sample No	Candidate Rapid Method				ISO 6579-1:2017 (8 Hour)					ISO 6579-1:2017 (16 Hour)					Final Result (8 Hr)	Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation							
			CFX		QS5		MKTTn		RVS		Identification[1]	MKTTn		RVS		Identification[1]				MKTTn		RVS		Identification[1]	Final Result	8 Hr	16 Hr
			8 Hour	16 Hour	8 Hour	16 Hour	XLD	RSA	XLD	RSA		XLD	RSA	XLD	RSA					XLD	RSA	XLD	RSA				
Mild Original Turkey Stick	3.0 (2,4,3,3,3)	281	23.30	14.22	30.12	12.71	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	341	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Smoke Sausage Turkey Bites	2.2 (0,0,4,3,4)	284	25.29	14.95	29.08	14.98	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	344	ng	ng	ng	ng		Neg	PD	PD
Smoked Turkey Pepperoni	1.8 (2,2,2,2,1)	285	23.82	14.25	28.73	11.70	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	345	ng	ng	ng	ng		Neg	PD	PD
Original Turkey Jerky	1.6 (2,0,2,1,3)	286	-	17.51	34.22	17.45	t	t	t	t	*Salmonella spp.*	t	t	t	t	*Salmonella* spp.	Pos	Pos	346	ng	ng	ng	ng		Neg	NA/PD	PD
Turkey Pepperoni	1.6 (0,1,3,1,3)	288	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	348	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Smoked Turkey Sausage Bites	1.6 (0,0,3,2,3)	290	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	350	t	t	t	t	*Salmonella* spp.	Pos	ND	ND
Original Turkey Jerky	2.4 (5,2,3,1,1)	292	24.15	15.09	25.78	15.21	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	352	ng	ng	ng	ng		Neg	PD	PD
Chicken Jerky Sticks	2.4 (3,1,3,3,2)	293	23.72	13.22	25.17	12.66	t	t	ng	ng	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	353	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
	1.0 (1,1,1,1,1)	297	24.19	15.41	26.88	14.59	t	t	ng	ng	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	357	t	t	t	t	*Salmonella* spp.	Pos	PA	PA
Turkey Pepperoni	4.4 (8,9,1,1,3)	730	23.11	15.79	33.63	16.79	t	t	t	t	*Salmonella* spp.	t	t	t	t	*Salmonella* spp.	Pos	Pos	752	ng	ng	ng	ng		Neg	PD	PD
Turkey Jerky	2.4 (5,4,3,0,0)	731	-	-	-	-	ng	ng	ng	ng		ng	ng	ng	ng		Neg	Neg	753	t	t	t	t	*Salmonella* spp.	Pos	ND	ND

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)									ISO REFERENCE STANDARD (25 g)							Final Agreement
		Sample No	Candidate Rapid Method		ISO 6579-1:2017 (16 Hour)					Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
			CFX	QS5	MKTTn		RVS		Identification[1]			MKTTn		RVS		Identification[1]	Final Result	
			16 Hour	16 Hour	XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA			16 Hr
Whole Shell Egg 1	0.4 (2,0,0,0,0)	361	-	-	ng	ng	ng	ng		Neg	421	m	t	m	t	*Salmonella* spp.	Pos	ND
Whole Shell Egg 4	0.6 (1,1,1,0,0)	364	-	-	at	ng	at	ng		Neg	424	m	t	m	t	*Salmonella* spp.	Pos	ND
Whole Shell Egg 5	1.6 (3,1,3,1,0)	365	14.39	12.88	m	t	m	t	*Salmonella* spp.	Pos	425	ng	ng	ng	ng		Neg	PD
Whole Shell Egg 7	0.8 (0,0,2,1,1)	367	14.72	11.67	m	t	m	t	*Salmonella* spp.	Pos	427	t	t	m	t	*Salmonella* spp.	Pos	PA
Whole Shell Egg 10	1.0 (1,2,1,1,0)	370	14.35	13.19	t	t	m	t	*Salmonella* spp.	Pos	430	ng	ng	ng	ng		Neg	PD
Whole Shell Egg 11	1.6 (3,3,1,1,0)	371	14.11	12.69	t	t	t	t	*Salmonella* spp.	Pos	431	ng	ng	ng	ng		Neg	PD
Whole Shell Egg 12	1.6 (6,1,0,1,0)	372	-	-	ng	ng	ng	ng		Neg	432	t	t	t	t	*Salmonella* spp.	Pos	ND
Whole Shell Egg 14	1.2 (2,2,1,1,0)	374	16.86	15.48	m	t	m	t	*Salmonella* spp.	Pos	434	m	t	m	t	*Salmonella* spp.	Pos	PA
Whole Shell Egg 18	1.0 (1,1,1,1,1)	378	15.75	14.40	t	t	t	t	*Salmonella* spp.	Pos	438	ng	ng	ng	ng		Neg	PD
Whole Shell Egg 19	0.2 (1,0,0,0,0)	379	14.55	14.32	t	t	t	t	*Salmonella* spp.	Pos	439	t	t	t	t	*Salmonella* spp.	Pos	PA
Whole Shell Egg	1.4 (0,0,1,2,4)	732	16.15	11.65	t	t	t	t	*Salmonella* spp.	Pos	754	t	t	t	t	*Salmonella* spp.	Pos	PA
Liquid Whole Egg 1	0.4 (1,0,0,1,0)	381	19.88	20.01	t	m	t	t	*Salmonella* spp.	Pos	441	m	m	t	t	*Salmonella* spp.	Pos	PA
Liquid Whole Egg 2	0.6 (1,0,2,0,0)	385	-	-	ng	ng	ng	ng		Neg	445	m	m	m	t	*Salmonella* spp.	Pos	ND
Liquid Egg Whites 5	0.4 (0,0,1,1,0)	387	-	-	ng	ng	ng	ng		Neg	447	t	t	t	t	*Salmonella* spp.	Pos	ND
Liquid Egg Whites 6	0.8 (0,0,3,1,0)	388	-	-	ng	ng	ng	ng		Neg	448	t	t	t	t	*Salmonella* spp.	Pos	ND
Liquid Egg Whites 8	1.6 (3,3,2,0,1)	391	16.34	15.20	t	t	t	t	*Salmonella* spp.	Pos	451	ng	ng	ng	ng		Neg	PD
Liquid Whole Eggs 4	2.2 (3,5,2,1,0)	393	15.65	14.61	t	m	t	t	*Salmonella* spp.	Pos	453	t	t	t	t	*Salmonella* spp.	Pos	PA
Liquid Egg Whites 12	1.6 (3,3,2,0,1)	396	31.09	28.69	t	t	t	t	*Salmonella* spp.	Pos	456	at	ng	ng	ng		Neg	PD
Liquid Whole Egg 5	0.8 (0,3,1,0,0)	399	-	-	ng	ng	ng	ng		Neg	459	t	m	t	t	*Salmonella* spp.	Pos	ND
Liquid Whole Egg	5.2 (5,6,7,3,5)	733	14.09	14.75	t	t	t	t	*Salmonella* spp	Pos	755	t	t	t	t	*Salmonella* spp	Pos	PA
Liquid Whole Egg	0.4 (0,0,0,1,1)	734	-	-	ng	ng	ng	ng		Neg	756	t	t	t	t	*Salmonella* spp	Pos	ND

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Item	Inoculation Level	CANDIDATE (25 g)									ISO REFERENCE STANDARD (25 g)							Final Agreement
		Sample No	Candidate Rapid Method		ISO 6579-1:2017 (16 Hour)					Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
			CFX	QS5	MKTTn		RVS		Identification[1]			MKTTn		RVS		Identification[1]	Final Result	
			16 Hour	16 Hour	XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA			16 Hr
Dried Whole Eggs 1	1.6 (1,4,0,2,1)	401	-	-	ng	ng	ng	ng		Neg	461	t	t	t	t	*Salmonella* spp.	Pos	ND
Dried Whole Eggs 3	0.8 (0,0,0,1,3)	405	-	-	ng	ng	ng	ng		Neg	465	t	t	t	t	*Salmonella* spp.	Pos	ND
Dried Egg Whites 3	1.2 (1,0,3,2,0)	407	20.69	20.25	t	t	t	t	*Salmonella* spp.	Pos	467	t	t	t	t	*Salmonella* spp.	Pos	PA
Dried Egg Whites 5	1.4 (1,0,1,2,3)	411	15.53	13.67	t	t	t	t	*Salmonella* spp.	Pos	471	ng	ng	ng	ng		Neg	PD
Dried Egg Whites 8	0.8 (1,3,0,0,0)	416	-	34.06	t	t	ng	ng	*Salmonella* spp.	Pos	476	ng	ng	ng	ng		Neg	NA/PD
Dried Whole Egg	0.8 (2,2,0,0,0)	735	16.34	16.36	t	t	t	t	*Salmonella* spp.	Pos	757	t	t	t	t	*Salmonella* spp.	Pos	PA
Dried Egg Whites	2.4 (3,0,4,0,5)	736	14.50	11.43	t	t	t	t	*Salmonella* spp.	Pos	758	ng	ng	ng	ng		Neg	PD
Dried Whole Egg	2.6 (0,0,3,3,7)	737	16.25	14.80	t	t	t	t	*Salmonella* spp.	Pos	759	t	t	t	t	*Salmonella* spp.	Pos	PA
Dried Egg Whites	2.6 (6,4,0,2,1)	738	-	-	ng	ng	ng	ng		Neg	760	t	t	t	t	*Salmonella* spp.	Pos	ND
Dried Whole Egg	1.6 (0,1,2,2,3)	739	16.56	15.94	t	t	t	t	*Salmonella* spp.	Pos	761	ng	ng	ng	ng		Neg	PD

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)									ISO REFERENCE STANDARD (25 g)							Final Agreement
		Sample No	Candidate Rapid Method		ISO 6579-1:2017 (16 Hour)					Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
			CFX	QS5	MKTTn		RVS		Identification[1]			MKTTn		RVS		Identification[1]	Final Result	
			16 Hour	16 Hour	XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA			16 Hr
Spinach and Arugula Mix	1.6 (2,0,3,0,3)	481	-	-	t	t	t	t	*Salmonella* spp.	Pos	541	t	t	t	t	*Salmonella* spp.	Pos	ND
Shredded Broccoli Slaw	1.0 (1,1,0,1,2)	483	20.93	22.23	t	t	t	t	*Salmonella* spp.	Pos	543	at	at	at	at		Neg	PD
Mixed Cabbage Coleslaw	0.6 (0,0,0,3,0)	485	-	-	at	at	at	at		Neg	545	t	t	t	t	*Salmonella* spp.	Pos	ND
Shredded Babby Carrots	1.6 (2,1,1,2,2)	487	24.07	-	t	t	t	t	*Salmonella* spp.	Pos	547	t	t	t	t	*Salmonella* spp.	Pos	PA/ND
Mixed Greens with Romaine Lettuce	0.4 (1,0,0,0,1)	489	26.81	28.81	t	t	t	t	*Salmonella* spp.	Pos	549	at	at	at	at		Neg	PD
Shredded Stir Fry Vegetables	1.8 (3,3,2,0,1)	490	30.91	-	t	t	t	t	*Salmonella* spp.	Pos	550	at	at	at	at		Neg	PD/NA
Spinach, Arugula, and other Mix	2.4 (4,3,5,0,0)	491	-	-	t	t	t	t	*Salmonella* spp.	Pos	551	t	t	t	t	*Salmonella* spp.	Pos	ND
Vegetable Blend with Cucumber and Carrot Mix	2.2 (1,1,4,3,2)	494	17.40	14.37	t	t	t	t	*Salmonella* spp.	Pos	554	t	t	t	t	*Salmonella* spp.	Pos	PA
Mixed Shredded Broccoli	1.8 (2,4,0,1,2)	496	-	-	at	at	at	at		Neg	556	t	t	t	t	*Salmonella* spp.	Pos	ND
Shredded Cabbage with Carrots	1.4 (3,0,0,4,0)	498	20.45	18.18	t	t	t	t	*Salmonella* spp.	Pos	558	at	at	at	at		Neg	PD
Honeydew	3.4 (5,3,1,2,6)	501	23.20	23.17	t	t	t	t	*Salmonella* spp.	Pos	561	at	at	at	at		Neg	PD
Watermelon		502	21.59	15.65	t	t	t	t	*Salmonella* spp.	Pos	562	t	t	t	t	*Salmonella* spp.	Pos	PA
Dragon Fruit	2.8 (8,0,4,1,1)	505	15.83	14.68	t	t	t	t	*Salmonella* spp.	Pos	565	at	at	at	at		Neg	PD
Cantaloupe	1.0 (1,1,0,3,0)	506	19.23	19.25	t	t	t	t	*Salmonella* spp.	Pos	566	t	t	t	t	*Salmonella* spp.	Pos	PA
Pineapple, Strawberry, and Kiwi Mix		507	21.51	20.77	t	t	t	t	*Salmonella* spp.	Pos	567	t	t	t	t	*Salmonella* spp.	Pos	PA
Mangos	0.2 (0,0,1,0,0)	509	20.08	19.72	t	t	t	t	*Salmonella* spp.	Pos	569	at	at	at	at		Neg	PD
Honeydew #2	2.4 (6,3,1,2,0)	511	22.09	22.35	t	t	t	t	*Salmonella* spp.	Pos	571	at	at	at	at		Neg	PD
Seedless Watermelon	0.6 (3,0,0,0,0)	512	-	-	at	at	at	at		Neg	572	t	t	t	t	*Salmonella* spp.	Pos	ND
Diced Strawberries	0.4 (0,0,2,0,0)	514	30.51	-	t	t	t	t	*Salmonella* spp.	Pos	574	t	t	t	t	*Salmonella* spp.	Pos	PA/ND
Cut Cantaloupe		516	-	-	at	at	at	at		Neg	576	t	t	t	t	*Salmonella* spp.	Pos	ND
Diced Mangos	1.4 (0,0,1,5,1)	519	-	-	at	at	at	at		Neg	579	t	t	t	t	*Salmonella* spp.	Pos	ND

[1]Obtained through biochemical galleries and Poly O and H serology

Item	Inoculation Level	CANDIDATE (25 g)									ISO REFERENCE STANDARD (25 g)							Final Agreement
		Sample No	Candidate Rapid Method		ISO 6579-1:2017 (16 Hour)					Final Result (16 Hr)	Sample No	ISO 6579-1:2017 Confirmation						
			CFX	QS5	MKTTn		RVS		Identification[1]			MKTTn		RVS		Identification[1]	Final Result	
			16 Hour	16 Hour	XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA			16 Hr
Cilantro	2.0 (2,2,2,2,2)	521	29.84	-	t	t	t	t	*Salmonella* spp.	Pos	581	t	t	t	t	*Salmonella* spp.	Pos	PA/ND
Kale	0.6 (0,1,1,1,0)	522	33.99	-	t	t	t	t	*Salmonella* spp.	Pos	582	at	at	at	at		Neg	PD/NA
Green Onions		524	-	-	at	at	at	at		Neg	584	t	t	t	t	*Salmonella* spp.	Pos	ND
Spinach	1.6 (0,1,1,3,3)	526	-	-	at	at	at	at		Neg	586	t	t	t	t	*Salmonella* spp.	Pos	ND
Red Leaf Lettuce	1.8 (5,0,0,4,0)	527	20.43	13.63	t	t	t	t	*Salmonella* spp.	Pos	587	t	t	t	t	*Salmonella* spp.	Pos	PA
Romaine Hearts		529	-	-	t	t	t	t	*Salmonella* spp.	Pos	589	at	at	at	at		Neg	NA
Romaine Lettuce	1.4 (1,1,1,2,2)	530	-	-	at	at	at	at		Neg	590	t	t	t	t	*Salmonella* spp.	Pos	ND
Kale		532	29.33	32.39	t	t	t	t	*Salmonella* spp.	Pos	592	at	at	at	at		Neg	PD
Green Onions	1.6 (1,0,3,3,1)	534	32.01	27.95	t	t	t	t	*Salmonella* spp.	Pos	594	t	t	t	t	*Salmonella* spp.	Pos	PA
Red Lettuce	1.4 (0,0,7,0,0)	537	20.28	18.34	t	t	t	t	*Salmonella* spp.	Pos	597	at	at	at	at		Neg	PD
Baby Spinach	2.8 (3,5,0,6,0)	741	19.37	12.05	m	m	m	t	*Salmonella* spp.	Pos	763	t	t	t	t	*Salmonella* spp.	Pos	PA

[1]Obtained through biochemical galleries and Poly O and H serology

ANNEX F: Raw Data of RLOD Study

Matrix	APC[1] (CFU/g)	*Salmonella* Pathogen Screen[2] (25 g test portions)
Raw Milk	4.6×10^4	0/5
Raw Ground Beef	2.8×10^5	0/5
Raw Ground Turkey	3.2×10^5	0/5
Deli Turkey	1.8×10^2	0/5
Liquid Egg, Pasteurized	1.2×10^1	0/5
Cut Cantaloupe	5.2×10^4	0/5

[1]APC conducted in accordance with ISO 4833-1.

[2]*Salmonella* screen conducted following the ISO 6579 – 1:2017 reference method

Inoculation Level	Raw Milk (25 g)																					Raw Milk (25 g)									
	Sample No	Candidate Rapid Method					ISO 6579-1:2017 (8 Hour)							ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation							
		CFX		QS5		Result	MKTTn		RVS		Poly O	Poly H	Identification	MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result
		8 Hour	16 Hour	8 Hour	16 Hour		XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA				
0.0	304	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	336	at	at	at	at				Neg
	311	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	344	at	at	at	at				Neg
	318	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	349	at	at	at	at				Neg
	323	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	352	at	at	at	at				Neg
	327	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	354	at	at	at	at				Neg
1.6	301	32.61	33.05	31.82	34.56	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	331	t	t	t	t	+	+	*Salmonella* spp.	Pos
	302	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	332	at	at	at	at				Neg
	303	31.55	33.21	33.60	33.40	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	334	t	t	t	t	+	+	*Salmonella* spp.	Pos
	307	33.95	34.01	32.28	32.83	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	335	at	at	at	at				Neg
	308	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	337	t	t	t	t	+	+	*Salmonella* spp.	Pos
	309	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	338	t	t	t	t	+	+	*Salmonella* spp.	Pos
	312	30.81	32.35	32.71	32.48	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	339	at	at	at	at				Neg
	313	30.88	34.11	32.84	32.60	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	341	at	at	at	at				Neg
	314	33.63	32.52	30.71	31.94	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	342	at	at	at	at				Neg
	317	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	343	t	t	t	t	+	+	*Salmonella* spp.	Pos
	319	32.55	33.09	32.82	32.71	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	345	at	at	at	at				Neg
	320	33.81	32.17	32.85	32.58	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	348	t	t	t	t	+	+	*Salmonella* spp.	Pos
	321	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	350	at	at	at	at				Neg
	322	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	351	at	at	at	at				Neg
	324	32.13	32.86	32.36	32.47	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	353	at	at	at	at				Neg
	325	32.46	32.61	32.25	32.08	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	355	t	t	t	t	+	+	*Salmonella* spp.	Pos
	326	31.67	34.17	33.57	32.26	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	356	t	t	t	t	+	+	*Salmonella* spp.	Pos
	328	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	357	at	at	at	at				Neg
	329	31.76	28.50	32.89	32.58	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	Salmonella Spp.	Pos	359	at	at	at	at				Neg
	330	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	360	t	t	t	t	+	+	*Salmonella* spp.	Pos
4.2	305	16.32	15.12	16.62	15.25	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	333	t	t	t	t	+	+	*Salmonella* spp.	Pos
	306	16.35	14.94	16.14	14.74	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	340	t	t	t	t	+	+	*Salmonella* spp.	Pos
	310	16.21	15.08	16.03	15.45	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	346	t	t	t	t	+	+	*Salmonella* spp.	Pos
	315	16.65	15.17	16.55	14.99	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	347	t	t	t	t	+	+	*Salmonella* spp.	Pos
	316	16.35	15.22	15.29	15.48	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	358	t	t	t	t	+	+	*Salmonella* spp.	Pos

Inoculation Level	Raw Ground Beef (25 g)																				Raw Ground Beef (25 g)								
	Sample No	Candidate Rapid Method					ISO 6579-1:2017 (8 Hour)							ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation							
		CFX		QS5		Result	MKTTn		RVS		Poly O	Poly H	Identification	MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result
		8 Hour	16 Hour	8 Hour	16 Hour		XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA				
0.0	7	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	36	at	at	at	at				Neg
	15	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	42	at	at	at	at				Neg
	20	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	48	at	at	at	at				Neg
	21	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	54	at	at	ng	at				Neg
	27	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	56	at	at	at	at				Neg
1.0	1	25.19	19.56	24.51	18.30	Pos	m	m	t	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	31	m	m	m	m	+	+	*Salmonella* spp.	Pos
	3	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	34	at	at	at	at				Neg
	4	24.95	19.75	24.26	18.53	Pos	m	m	t	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	35	m	m	m	m	+	+	*Salmonella* spp.	Pos
	5	-	-	-	-	Neg	st	at	at	at				at	at	at	at				Neg	37	at	at	at	at				Neg
	6	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	38	m	m	m	m	+	+	*Salmonella* spp.	Pos
	9	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	39	m	m	m	m	+	+	*Salmonella* spp.	Pos
	11	26.45	20.04	25.54	19.38	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	43	at	at	at	at				Neg
	12	25.42	20.62	24.30	19.52	Pos	m	m	t	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	44	at	at	at	at				Neg
	13	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	45	at	at	at	at				Neg
	16	24.65	19.75	23.36	17.71	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	46	m	m	m	m	+	+	*Salmonella* spp.	Pos
	17	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	47	at	at	at	at				Neg
	18	25.01	20.28	24.94	18.51	Pos	m	m	m	t	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	49	at	at	at	at				Neg
	19	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	50	at	at	at	at				Neg
	23	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	51	at	at	at	at				Neg
	24	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	52	at	at	at	at				Neg
	25	27.01	19.04	25.78	17.14	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	53	m	m	m	at	+	+	*Salmonella* spp.	Pos
	26	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	57	m	m	m	m	+	+	*Salmonella* spp.	Pos
	28	26.54	19.12	25.48	16.76	Pos	m	m	at	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	58	at	at	at	at				Neg
	29	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	59	at	at	at	at				Neg
	30	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	60	m	m	m	m	+	+	*Salmonella* spp.	Pos
3.6	2	23.65	18.96	22.67	16.43	Pos	m	m	t	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	32	m	m	m	m	+	+	*Salmonella* spp.	Pos
	8	24.66	19.97	24.03	18.99	Pos	a	m	m	t	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	33	m	m	m	m	+	+	*Salmonella* spp.	Pos
	10	25.16	19.45	24.24	17.93	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	40	m	m	m	m	+	+	*Salmonella* spp.	Pos
	14	24.67	19.11	23.17	16.99	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	41	m	m	m	m	+	+	*Salmonella* spp.	Pos
	22	25.73	18.89	24.99	16.88	Pos	m	m	t	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	55	m	m	m	t	+	+	*Salmonella* spp.	Pos

Inoculation Level	Raw Ground Turkey (25 g)																					Raw Ground Turkey (25 g)								
	Sample No	Candidate Rapid Method					ISO 6579-1:2017 (8 Hour)							ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation							
		CFX		QS5		Result	MKTTn		RVS		Poly O	Poly H	Identification	MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result
		8 Hour	16 Hour	8 Hour	16 Hour		XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA				
0.0	62	-	-	-	-	Neg	at	ng	at	at				at	at	at	at				Neg	94	at	at	at	ng				Neg
	66	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	99	at	at	at	ng				Neg
	70	-	-	-	-	Neg	at	at	at	at				at	at	at	ng				Neg	102	at	at	at	at				Neg
	76	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	108	at	at	at	at				Neg
	82	-	-	-	-	Neg	at	at	at	at				at	ng	at	at				Neg	113	at	at	at	at				Neg
0.8	61	30.04	19.82	28.52	10.97	Pos	m	t	m	t	+	+	*Salmonella* spp.	t	t	m	t	+	+	*Salmonella* spp.	Pos	91	at	at	at	at				Neg
	63	-	-	-	-	Neg	at	ng	at	ng				at	ng	at	ng				Neg	92	t	m	m	t	+	+	*Salmonella* spp.	Pos
	64	31.39	19.45	24.36	17.57	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	m	m	t	+	+	*Salmonella* spp.	Pos	93	at	ng	at	ng				Neg
	67	-	-	-	-	Neg	at	at	at	at				at	ng	at	at				Neg	95	m	t	m	t	+	+	*Salmonella* spp.	Pos
	69	32.07	19.70	32.94	17.44	Pos	t	t	m	t	+	+	*Salmonella* spp.	t	t	m	t	+	+	*Salmonella* spp.	Pos	96	at	at	at	at				Neg
	71	-	-	-	-	Neg	at	ng	at	ng				at	ng	at	ng				Neg	98	at	at	at	at				Neg
	72	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	100	m	m	m	t	+	+	*Salmonella* spp.	Pos
	74	31.56	17.43	26.77	16.04	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	m	t	t	+	+	*Salmonella* spp.	Pos	103	at	at	at	at				Neg
	75	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	104	at	at	at	at	+	+	*Salmonella* spp.	Pos
	77	-	-	-	-	Neg	at	at	at	at				at	at	ng	at				Neg	105	at	at	at	at				Neg
	78	30.98	17.22	34.03	13.57	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	107	m	m	m	m	+	+	*Salmonella* spp.	Pos
	80	30.42	15.64	31.92	13.73	Pos	t	m	m	t	+	+	*Salmonella* spp.	t	m	m	t	+	+	*Salmonella* spp.	Pos	109	t	m	m	m	+	+	*Salmonella* spp.	Pos
	81	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	110	at	at	at	at				Neg
	83	-	-	-	-	Neg	at	at	at	at				at	at	at	ng				Neg	111	at	at	at	at				Neg
	85	34.16	16.98	32.37	15.69	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	m	m	+	+	*Salmonella* spp.	Pos	112	at	at	at	at				Neg
	86	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	114	at	at	at	at				Neg
	87	34.56	17.36	30.51	10.93	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	t	m	+	+	*Salmonella* spp.	Pos	115	at	at	at	at				Neg
	88	34.93	16.89	31.41	12.86	Pos	m	m	m	m	+	+	*Salmonella* spp.	t	m	m	m	+	+	*Salmonella* spp.	Pos	116	at	at	at	at				Neg
	89	-	-	-	-	Neg	at	at	at	at				at	at	at	at				Neg	119	at	at	at	at				Neg
	90	-	-	-	-	Neg	at	at	at	at				at	ng	at	at				Neg	120	at	at	at	at				Neg
4.0	65	30.55	20.01	29.16	16.27	Pos	t	t	m	t	+	+	*Salmonella* spp.	t	t	m	t	+	+	*Salmonella* spp.	Pos	97	t	t	t	t	+	+	*Salmonella* spp.	Pos
	68	30.33	17.23	27.96	16.23	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	m	t	t	+	+	*Salmonella* spp.	Pos	101	m	m	t	t	+	+	*Salmonella* spp.	Pos
	73	32.58	18.36	30.81	14.81	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	m	+	+	*Salmonella* spp.	Pos	106	t	t	m	t	+	+	*Salmonella* spp.	Pos
	79	28.94	16.16	31.20	13.12	Pos	m	m	m	t	+	+	*Salmonella* spp.	m	t	m	t	+	+	*Salmonella* spp.	Pos	117	m	m	m	t	+	+	*Salmonella* spp.	Pos
	84	30.96	16.99	29.67	16.24	Pos	m	m	m	m	+	+	*Salmonella* spp.	m	m	t	m	+	+	*Salmonella* spp.	Pos	118	m	m	t	t	+	+	*Salmonella* spp.	Pos

Inoculation Level	Deli Turkey (25 g)																				Deli Turkey (25 g)								
	Sample No	Candidate Rapid Method					ISO 6579-1:2017 (8 Hour)							ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation							
		CFX		QS5		Result	MKTTn		RVS		Poly O	Poly H	Identification	MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result
		8 Hour	16 Hour	8 Hour	16 Hour		XLD	RSA	XLD	RSA				XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA				
0.0	123	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	151	ng	ng	ng	ng				Neg
	128	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	154	ng	ng	ng	ng				Neg
	132	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	165	ng	ng	ng	ng				Neg
	137	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	168	ng	ng	ng	ng				Neg
	143	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	173	ng	ng	ng	ng				Neg
1.8	121	-	-	-	-	Neg	at	ng	ng	ng				ng	ng	at	ng				Neg	152	t	t	t	t	+	+	*Salmonella* spp.	Pos
	122	23.48	14.13	23.15	13.51	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	153	ng	ng	ng	ng				Neg
	124	26.90	13.38	25.22	13.77	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	156	ng	ng	ng	ng				Neg
	125	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	157	t	t	t	t	+	+	*Salmonella* spp.	Pos
	127	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	158	t	t	t	t	+	+	*Salmonella* spp.	Pos
	129	29.01	13.53	28.60	11.31	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	160	t	t	t	t	+	+	*Salmonella* spp.	Pos
	131	27.51	13.50	25.03	13.36	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	162	t	t	t	t	+	+	*Salmonella* spp.	Pos
	133	26.69	13.51	25.15	10.23	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	163	ng	ng	ng	ng				Neg
	135	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	164	t	t	t	t	+	+	*Salmonella* spp.	Pos
	136	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	167	ng	ng	ng	ng				Neg
	139	27.29	14.22	31.06	13.17	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	169	ng	ng	ng	ng				Neg
	140	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	170	t	t	t	t	+	+	*Salmonella* spp.	Pos
	141	29.05	14.08	24.98	13.57	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	171	ng	ng	ng	ng				Neg
	142	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	174	t	t	t	t	+	+	*Salmonella* spp.	Pos
	144	26.70	15.08	25.17	13.95	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	175	t	t	t	t	+	+	*Salmonella* spp.	Pos
	145	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	176	ng	ng	ng	ng				Neg
	147	29.48	14.31	23.45	12.27	Pos	t	t	m	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	177	t	t	t	t	+	+	*Salmonella* spp.	Pos
	148	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	178	t	t	t	t	+	+	*Salmonella* spp.	Pos
	149	32.00	14.07	28.18	13.50	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	179	ng	ng	ng	ng				Neg
	150	-	-	-	-	Neg	ng	ng	ng	ng				ng	ng	ng	ng				Neg	180	ng	ng	ng	ng				Neg
2.8	126	33.16	13.40	25.36	13.74	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	155	t	t	t	t	+	+	*Salmonella* spp.	Pos
	130	27.12	13.91	25.89	12.08	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	159	t	t	t	t	+	+	*Salmonella* spp.	Pos
	134	25.64	13.20	20.78	11.64	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	161	t	t	t	t	+	+	*Salmonella* spp.	Pos
	138	25.31	14.93	25.05	12.90	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	166	t	t	t	t	+	+	*Salmonella* spp.	Pos
	146	23.64	14.22	26.20	13.38	Pos	t	t	t	t	+	+	*Salmonella* spp.	t	t	t	t	+	+	*Salmonella* spp.	Pos	172	t	t	t	t	+	+	*Salmonella* spp.	Pos

Inoculation Level	Liquid Whole Egg (25 g)												Liquid Whole Egg (25 g)											
	Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation										
					MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result			
		CFX	QS5	Result																				
		16 Hour	16 Hour		XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA							
0.0	244	-	-	Neg	ng	ng	ng	ng				Neg	271	ng	ng	ng	ng				Neg			
	248	-	-	Neg	ng	ng	ng	ng				Neg	277	ng	ng	ng	ng				Neg			
	253	-	-	Neg	ng	ng	ng	ng				Neg	281	ng	ng	ng	ng				Neg			
	259	-	-	Neg	ng	ng	ng	ng				Neg	291	ng	ng	ng	ng				Neg			
	263	-	-	Neg	ng	ng	ng	ng				Neg	296	ng	ng	ng	ng				Neg			
1.2	241	-	-	Neg	ng	ng	ng	ng				Neg	272	ng	ng	ng	ng				Neg			
	242	17.66	16.20	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	273	t	ng	ng	ng	+	+	*Salmonella* spp.	Pos			
	243	-	-	Neg	ng	ng	ng	ng				Neg	274	ng	ng	ng	ng				Neg			
	245	-	-	Neg	ng	ng	ng	ng				Neg	275	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	246	-	-	Neg	ng	ng	ng	ng				Neg	276	ng	ng	ng	ng				Neg			
	249	-	-	Neg	ng	ng	ng	ng				Neg	278	ng	ng	ng	ng				Neg			
	250	-	-	Neg	ng	ng	ng	ng				Neg	280	ng	ng	ng	ng				Neg			
	252	-	-	Neg	ng	ng	ng	ng				Neg	282	ng	ng	ng	ng				Neg			
	254	-	-	Neg	ng	ng	ng	ng				Neg	283	ng	ng	ng	ng				Neg			
	255	-	-	Neg	ng	ng	ng	ng				Neg	285	ng	ng	ng	ng				Neg			
	256	-	-	Neg	ng	ng	ng	ng				Neg	287	ng	ng	ng	ng				Neg			
	258	17.62	14.88	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	288	ng	ng	ng	ng				Neg			
	260	-	-	Neg	ng	ng	ng	ng				Neg	290	ng	ng	ng	ng				Neg			
	262	17.43	15.48	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	292	t	ng	ng	ng	+	+	*Salmonella* spp.	Pos			
	264	-	-	Neg	ng	ng	ng	ng				Neg	293	ng	ng	ng	ng				Neg			
	266	-	-	Neg	ng	ng	ng	ng				Neg	294	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	267	18.56	18.55	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	295	ng	ng	ng	ng				Neg			
	268	-	-	Neg	ng	ng	ng	ng				Neg	197	ng	ng	ng	ng				Neg			
	269	24.06	18.26	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	298	ng	ng	ng	ng				Neg			
	270	-	-	Neg	ng	ng	ng	ng				Neg	299	ng	ng	ng	ng				Neg			
4.2	247	20.13	17.86	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	279	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	251	17.06	16.10	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	284	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	257	16.34	14.56	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	286	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	261	17.41	16.28	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	289	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			
	265	17.45	16.51	Pos	t	ng	t	ng	+	+	*Salmonella* spp.	Pos	300	t	ng	t	ng	+	+	*Salmonella* spp.	Pos			

Inoculation Level	Cut Cantaloupe (25)g												Cut Cantaloupe (25 g)									
	Sample No	Candidate Rapid Method			ISO 6579-1:2017 (16 Hour)								Sample No	ISO 6579-1:2017 Confirmation								
		CFX	QS5	Result	MKTTn		RVS		Poly O	Poly H	Identification	Final Result		MKTTn		RVS		Poly O	Poly H	Identification	Final Result	
		16 Hour	16 Hour		XLD	RSA	XLD	RSA						XLD	RSA	XLD	RSA					
0.0	182	-	-	Neg	ng	ng	at	ng				Neg	216	at	at	ng	ng					Neg
	188	-	-	Neg	at	at	at	at				Neg	219	at	at	at	ng					Neg
	194	-	-	Neg	at	at	ng	ng				Neg	225	at	at	at	at					Neg
	198	-	-	Neg	at	at	ng	ng				Neg	232	at	at	at	at					Neg
	206	-	-	Neg	at	at	ng	ng				Neg	240	at	at	at	at					Neg
0.8	181	-	-	Neg	at	at	ng	ng				Neg	211	t	t	t	t	+	+	*Salmonella* spp.		Pos
	183	17.42	13.23	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	212	at	at	at	at					Neg
	184	20.52	17.55	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	213	at	at	ng	ng					Neg
	185	-	-	Neg	at	at	at	at				Neg	215	m	m	m	m	+	+	*Salmonella* spp.		Pos
	187	-	-	Neg	at	at	at	at				Neg	217	m	m	m	m	+	+	*Salmonella* spp.		Pos
	189	-	-	Neg	at	at	at	at				Neg	218	m	m	m	m	+	+	*Salmonella* spp.		Pos
	190	-	-	Neg	at	at	at	at				Neg	220	at	at	at	at					Neg
	192	24.83	24.74	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	221	at	at	at	at					Neg
	193	-	-	Neg	at	at	ng	ng				Neg	223	m	m	m	m	+	+	*Salmonella* spp.		Pos
	195	-	-	Neg	at	at	at	at				Neg	224	at	at	ng	ng					Neg
	196	22.92	23.43	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	226	at	at	ng	at					Neg
	197	-	-	Neg	at	at	at	at				Neg	228	at	at	at	at					Neg
	199	-	-	Neg	at	at	ng	ng				Neg	229	m	m	m	t	+	+	*Salmonella* spp.		Pos
	200	-	-	Neg	ng	ng	ng	ng				Neg	230	at	at	ng	ng					Neg
	201	23.71	23.81	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	231	at	at	at	at					Neg
	204	23.25	22.42	Pos	m	m	m	t	+	+	*Salmonella* spp.	Pos	233	m	m	m	m	+	+	*Salmonella* spp.		Pos
	205	-	-	Neg	at	at	ng	ng				Neg	234	m	m	t	t	+	+	*Salmonella* spp.		Pos
	207	-	-	Neg	at	at	ng	ng				Neg	237	at	at	at	at					Neg
	209	20.51	17.92	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	238	m	m	m	m	+	+	*Salmonella* spp.		Pos
	210	-	-	Neg	at	at	ng	ng				Neg	239	at	at	at	at					Neg
5.6	186	20.52	19.88	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	214	m	m	t	t	+	+	*Salmonella* spp.		Pos
	191	23.15	22.74	Pos	m	m	m	t	+	+	*Salmonella* spp.	Pos	222	m	m	m	m	+	+	*Salmonella* spp.		Pos
	202	28.81	20.21	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	227	m	m	m	m	+	+	*Salmonella* spp.		Pos
	203	22.76	22.07	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	235	m	m	t	t	+	+	*Salmonella* spp.		Pos
	208	21.15	19.47	Pos	m	m	m	m	+	+	*Salmonella* spp.	Pos	236	m	m	m	m	+	+	*Salmonella* spp.		Pos

ANNEX G: Raw Data Inclusivity and Exclusivity Study

Table 1. Inclusivity Raw Data

No.	Genus	Species	Subspecies	Serovar	Culture Collection	Reference Number/Strain	Level	CFX Result	Final CFX Result	QS5 Result	Final QS5 Result
1	*Salmonella*	*enterica*	*arizonae*	-	Q Labs	QL11007-4	36	19.35	+	24.37	+
2	*Salmonella*	*enterica*	*arizonae*	-	CCUG	1743	50	19.55	+	23.26	+
3	*Salmonella*	*enterica*	*diarizonae*	-	ATCC	BAA-639	52	19.82	+	21.46	+
4	*Salmonella*	*enterica*	*diarizonae*	-	Q Labs	QL011414.1	44	19.59	+	21.74	+
5	*Salmonella*	*enterica*	*enterica*	Abortusovis	NCTC	10241	78	14.59	+	16.86	+
6	*Salmonella*	*enterica*	*enterica*	Adabraka	CCUG	34650	80	15.57	+	16.14	+
7	*Salmonella*	*enterica*	*enterica*	Adelaide	UPENN	STS 2	92	14.35	+	17.47	+
8	*Salmonella*	*enterica*	*enterica*	Agoueve	UPENN	STS 5	95	14.99	+	16.68	+
9	*Salmonella*	*enterica*	*enterica*	Alachua	UPENN	STS 6	88	15.59	+	17.09	+
10	*Salmonella*	*enterica*	*enterica*	Albany	UPENN	STS 7	80	16.08	+	16.65	+
11	*Salmonella*	*enterica*	*enterica*	Anatum	ATCC	9270	64	16.91	+	17.81	+
12	*Salmonella*	*enterica*	*enterica*	Arkansas	UPENN	STS 11	72	15.10	+	16.73	+
13	*Salmonella*	*enterica*	*enterica*	Bareilly	FDA	1206H	78	16.70	+	16.43	+
14	*Salmonella*	*enterica*	*enterica*	Berta	UPENN	STS 13	66	15.11	+	17.04	+
15	*Salmonella*	*enterica*	*enterica*	Binza	UPENN	STS 14	74	16.61	+	17.92	+
16	*Salmonella*	*enterica*	*enterica*	Bispebjerg	CCUG	39298	92	16.24	+	15.12	+
17	*Salmonella*	*enterica*	*enterica*	Blockley	CCUG	21263	90	16.02	+	16.05	+
18	*Salmonella*	*enterica*	*enterica*	Bloemfontein	CCUG	12654	82	16.14	+	16.62	+
19	*Salmonella*	*enterica*	*enterica*	Bovismorbificans	UPENN	STS 16	80	15.42	+	14.55	+
20	*Salmonella*	*enterica*	*enterica*	Cerro	UPENN	STS 22	72	16.42	+	16.97	+
21	*Salmonella*	*enterica*	*enterica*	Chester	CCUG	21237	78	16.63	+	16.58	+
22	*Salmonella*	*enterica*	*enterica*	Choleraesuis	ATCC	10708	66	14.93	+	17.57	+
23	*Salmonella*	*enterica*	*enterica*	Choleraesuis var. Kunzendorf	ATCC	12011	64	16.04	+	17.61	+
24	*Salmonella*	*enterica*	*enterica*	Concord	CCUG	12659	68	16.23	+	17.75	+
25	*Salmonella*	*enterica*	*enterica*	Cubana	UPENN	STS 24	72	15.70	+	15.53	+
26	*Salmonella*	*enterica*	*enterica*	Daytona	CCUG	12655	78	15.64	+	16.13	+
27	*Salmonella*	*enterica*	*enterica*	Decatur	CCUG	12656	76	16.88	+	16.99	+
28	*Salmonella*	*enterica*	*enterica*	Derby	NCTC	5721	44	17.42	+	26.71	+
29	*Salmonella*	*enterica*	*enterica*	Drypool	UPENN	STS 26	98	16.55	+	17.20	+
30	*Salmonella*	*enterica*	*enterica*	Dublin	UPENN	STS 27	92	16.35	+	16.56	+
31	*Salmonella*	*enterica*	*enterica*	Eastbourne	FDA	4017H	84	16.37	+	17.56	+
32	*Salmonella*	*enterica*	*enterica*	Emek	CCUG	21286	98	16.29	+	15.86	+
33	*Salmonella*	*enterica*	*enterica*	Enteritidis	ATCC	4931	94	15.81	+	17.62	+
34	*Salmonella*	*enterica*	*enterica*	Enteritidis	CCUG	9563	90	16.23	+	17.07	+
35	*Salmonella*	*enterica*	*enterica*	Galiema	Q Labs	QL024.2	82	15.81	+	15.80	+
36	*Salmonella*	*enterica*	*enterica*	Give	UPENN	STS 42	80	15.44	+	15.74	+
37	*Salmonella*	*enterica*	*enterica*	Gnesta	CCUG	12640	98	16.19	+	15.73	+
38	*Salmonella*	*enterica*	*enterica*	Haardt	UPENN	STS 44	80	15.78	+	17.84	+
39	*Salmonella*	*enterica*	*enterica*	Hadar	ATCC	51956	88	15.80	+	16.68	+
40	*Salmonella*	*enterica*	*enterica*	Haelsingborg	CCUG	12645	82	16.42	+	17.06	+
41	*Salmonella*	*enterica*	*enterica*	Havana	UPENN	STS 47	88	15.42	+	17.15	+

Table 1. Inclusivity Raw Data Continued

No.	Genus	Species	Subspecies	Serovar	Culture Collection	Reference Number/Strain	Level	CFX Result	Final CFX Result	QS5 Result	Final QS5 Result
42	*Salmonella*	*enterica*	*enterica*	Heidelberg	NCTC	5717	94	15.90	+	16.17	+
43	*Salmonella*	*enterica*	*enterica*	Idikan	CCUG	21269	94	15.01	+	16.56	+
44	*Salmonella*	*enterica*	*enterica*	Illinois	ATCC	11646	96	15.89	+	15.97	+
45	*Salmonella*	*enterica*	*enterica*	Indiana	NCTC	11304	94	16.06	+	16.49	+
46	*Salmonella*	*enterica*	*enterica*	Infantis	ATCC	51741	90	15.15	+	16.79	+
47	*Salmonella*	*enterica*	*enterica*	Irumu	CCUG	12638	88	15.17	+	17.34	+
48	*Salmonella*	*enterica*	*enterica*	Java	CCUG	9561	84	15.78	+	15.51	+
49	*Salmonella*	*enterica*	*enterica*	Javiana	ATCC	10721	100	15.78	+	15.77	+
50	*Salmonella*	*enterica*	*enterica*	Jerusalem	Q Labs	QL024.12	98	15.04	+	15.46	+
51	*Salmonella*	*enterica*	*enterica*	Johannesburg	UPENN	STS 56	92	15.61	+	15.74	+
52	*Salmonella*	*enterica*	*enterica*	Kahla	ATCC	17980	88	15.55	+	15.60	+
53	*Salmonella*	*enterica*	*enterica*	Kaitaan	Q Labs	QL024.7	94	15.48	+	15.16	+
54	*Salmonella*	*enterica*	*enterica*	Kentucky	ATCC	9263	96	15.02	+	16.81	+
55	*Salmonella*	*enterica*	*enterica*	Kottbus	CCUG	21258	90	16.27	+	16.51	+
56	*Salmonella*	*enterica*	*enterica*	Krefeld	UPENN	STS 58	100	15.93	+	16.40	+
57	*Salmonella*	*enterica*	*enterica*	Lille	CCUG	12647	88	16.72	+	17.40	+
58	*Salmonella*	*enterica*	*enterica*	Livingstone	Q Labs	QL091313.1	76	16.61	+	16.56	+
59	*Salmonella*	*enterica*	*enterica*	Lomita	CCUG	12637	54	24.33	+	29.02	+
60	*Salmonella*	*enterica*	*enterica*	London	UPENN	STS 64	98	14.59	+	16.64	+
61	*Salmonella*	*enterica*	*enterica*	Manhattan	UPENN	STS 65	98	16.05	+	16.07	+
62	*Salmonella*	*enterica*	*enterica*	Mbandaka	Q Labs	QL11031.1	96	16.14	+	15.31	+
63	*Salmonella*	*enterica*	*enterica*	Meleagridis	Q Labs	12074-1	100	16.06	+	16.20	+
64	*Salmonella*	*enterica*	*enterica*	Menden	ATCC	15992	88	16.11	+	15.82	+
65	*Salmonella*	*enterica*	*enterica*	Menhaden	Q Labs	QL024.20	86	16.76	+	17.67	+
66	*Salmonella*	*enterica*	*enterica*	Minnesota	UPENN	STS 70	80	15.64	+	16.18	+
67	*Salmonella*	*enterica*	*enterica*	Montevideo	Q Labs	QL024.19	90	15.38	+	16.90	+
68	*Salmonella*	*enterica*	*enterica*	Muenchen	ATCC	BAA-1594	92	16.23	+	16.84	+
69	*Salmonella*	*enterica*	*salamae*	Neasden	Q Labs	QL024.4	98	15.11	+	15.94	+
70	*Salmonella*	*enterica*	*enterica*	Newington	Q Labs	QL0248	98	14.93	+	16.84	+
71	*Salmonella*	*enterica*	*enterica*	Newport	ATCC	6962	100	15.10	+	15.76	+
72	*Salmonella*	*enterica*	*enterica*	Ohio	UPENN	STS 81	78	15.04	+	15.52	+
73	*Salmonella*	*enterica*	*enterica*	Oranienburg	Q Labs	QL024.3	80	16.27	+	16.49	+
74	*Salmonella*	*enterica*	*enterica*	Othmarshen	Q Labs	QL 024.13	84	15.65	+	16.94	+
75	*Salmonella*	*enterica*	*enterica*	Panama	CCUG	21275	88	14.83	+	16.43	+
76	*Salmonella*	*enterica*	*enterica*	Paratyphi B	ATCC	10719	86	15.74	+	17.23	+
77	*Salmonella*	*enterica*	*enterica*	Paratyphi C	ATCC	13428	80	15.78	+	17.19	+
78	*Salmonella*	*enterica*	*enterica*	Pomona	ATCC	10729	78	15.23	+	15.89	+
79	*Salmonella*	*enterica*	*enterica*	Poona	NCTC	4840	92	15.46	+	15.61	+
80	*Salmonella*	*enterica*	*enterica*	Potsdam	CCUG	12650	94	16.60	+	18.52	+

Table 1. Inclusivity Raw Data Continued

No.	Genus	Species	Subspecies	Serovar	Culture Collection	Reference Number/Strain	Level	CFX Result	Final CFX Result	QS5 Result	Final QS5 Result
81	*Salmonella*	*enterica*	*enterica*	Preston	Q Labs	QL024.16	98	15.36	+	15.65	+
82	*Salmonella*	*enterica*	*enterica*	Richmond	CCUG	12657	100	15.83	+	16.39	+
83	*Salmonella*	*enterica*	*enterica*	Rubislaw	UPENN	STS 92	98	16.04	+	16.04	+
84	*Salmonella*	*enterica*	*enterica*	Saintpaul	ATCC	9712	98	16.07	+	15.50	+
85	*Salmonella*	*enterica*	*enterica*	San-Diego	UPENN	STS 94	96	15.07	+	16.08	+
86	*Salmonella*	*enterica*	*enterica*	Schalkwijk	Q Labs	QL024.10	98	15.48	+	15.70	+
87	*Salmonella*	*enterica*	*enterica*	Schwarzengrund	Q Labs	10021.1	100	15.57	+	16.05	+
88	*Salmonella*	*enterica*	*enterica*	Senftenberg	Q Labs	QL11031.2	100	15.46	+	16.05	+
89	*Salmonella*	*enterica*	*enterica*	Stanley	ATCC	7308	100	15.29	+	14.96	+
90	*Salmonella*	*enterica*	*enterica*	Sylvania	Q Labs	QL091313.4	98	15.96	+	15.64	+
91	*Salmonella*	*enterica*	*enterica*	Tallahassee	ATCC	12002	98	16.20	+	16.98	+
92	*Salmonella*	*enterica*	*enterica*	Tennessee	Q Labs	QL024.6	96	15.72	+	17.64	+
93	*Salmonella*	*enterica*	*enterica*	Thompson	FDA	2051H	92	16.76	+	17.39	+
94	*Salmonella*	*enterica*	*enterica*	Typhi	Q Labs	QL 16078-2A	94	15.02	+	15.94	+
95	*Salmonella*	*enterica*	*enterica*	Typhimurium	Q Labs	QL011414.2	94	15.00	+	15.28	+
96	*Salmonella*	*enterica*	*enterica*	Utrecht	NCTC	10077	94	15.71	+	15.54	+
97	*Salmonella*	*enterica*	*enterica*	Vellore	ATCC	15611	96	14.98	+	16.48	+
98	*Salmonella*	*enterica*	*enterica*	Virchow	ATCC	51955	98	15.45	+	17.21	+
99	*Salmonella*	*enterica*	*enterica*	Urbana	UPENN	STS 110	92	16.03	+	17.62	+
100	*Salmonella*	*enterica*	*enterica*	Westhampton	Q Labs	QL091313.2	94	15.33	+	15.83	+
101	*Salmonella*	*enterica*	*houtenae*	Halmstad	QL	QL 024.1	80	15.16	+	16.62	+
102	*Salmonella*	*enterica*	*salamae*	-	QL	QL 02415	88	15.77	+	16.85	+
103	*Salmonella*	*bongori*	-	-	CCUG	63587	48	24.26	+	27.00	+
104	*Salmonella*	*bongori*	-	-	NCTC	12419	52	22.98	+	26.74	+
105	*Salmonella*	*bongori*	-	-	ATCC	43975	60	23.47	+	26.79	+

Table 2. Exclusivity Raw Data

No.	Genus	Species	Source	Reference No.	CFX Result	Final CFX Result	QS5 Result	Final QS5 Result
1	*Acidovorax*	*temperans*	Q Labs	QL21274-1	Negative	-	Negative	-
2	*Acinetobacter*	*junii*	Q Labs	QL 0696826.1	Negative	-	Negative	-
3	*Aeromonas*	*hydrophila*	Q Labs	QL 333046.21	Negative	-	Negative	-
4	*Alcaligenes*	*faecalis*	ATCC	8750	Negative	-	Negative	-
5	*Bordetella*	*bronchiseptica*	CCUG	56928	Negative	-	Negative	-
6	*Brevundimonas*	*mediterranea*	Q Labs	QL 0692733.2	Negative	-	Negative	-
7	*Burkholderia*	*cepacia*	ATCC	25416	Negative	-	Negative	-
8	*Citrobacter*	*youngae*	ATCC	11102	Negative	-	Negative	-
9	*Citrobacter*	*koseri*	ATCC	27156	Negative	-	Negative	-
10	*Citrobacter*	*braakii*	ATCC	43162	Negative	-	Negative	-
11	*Citrobacter*	*farmeri*	ATCC	51633	Negative	-	Negative	-
12	*Citrobacter*	*freundii*	Q Labs	QL 11007-10	Negative	-	Negative	-
13	*Cronobacter*	*dublinensis*	DSM	18707	Negative	-	Negative	-
14	*Cronobacter*	*condimenti*	DSM	27966	Negative	-	Negative	-
15	*Cronobacter*	*sakazakii*	Q Labs	QL 111717-1	Negative	-	Negative	-
16	*Edwardsiella*	*tarda*	Q Labs	QL 021111D	Negative	-	Negative	-
17	*Enterobacter*	*hormaechei*	CCUG	63314	Negative	-	Negative	-
18	*Enterobacter*	*amnigenus*	Q Labs	QL 112413-2	Negative	-	Negative	-
19	*Escherichia*	*coli*	Q Labs	QL 030716-1A	Negative	-	Negative	-
20	*Escherichia*	*fergusonii*	ATCC	35469	Negative	-	Negative	-
21	*Hafnia*	*alvei*	Q Labs	QL 102313	Negative	-	Negative	-
22	*Klebsiella*	*aerogenes*	ATCC	35029	Negative	-	Negative	-
23	*Kluyvera*	*intermedia*	Q Labs	QL 081215-1	Negative	-	Negative	-
24	*Morganella*	*morganii*	Q Labs	QL 22214-11	Negative	-	Negative	-
25	*Proteus*	*mirabilis*	Q Labs	QL 33046.2	Negative	-	Negative	-
26	*Proteus*	*vulgaris*	CCUG	18984	Negative	-	Negative	-
27	*Pseudomonas*	*aeruginosa*	ATCC	15442	Negative	-	Negative	-
28	*Pseudomonas*	*fluorescens*	Q Labs	QL 17041-3	Negative	-	Negative	-
29	*Serratia*	*marcescens*	Q Labs	QL 11007-1	Negative	-	Negative	-
30	*Stenotrophomonas*	*maltophilia*	Q Labs	QL 0695267.5a	Negative	-	Negative	-