CERTIFICATION

AOAC® *Performance Tested*SM

Certificate No.

111802

The AOAC Research Institute hereby certifies the test kit known as:

Clear Safety

manufactured by

Clear Labs, Inc.
3565 Haven Ave, Suite 2
Menlo Park, CA 94025
USA

This method has been evaluated in the AOAC® *Performance Tested Methods*SM Program and found to perform as stated by the manufacturer contingent to the comments contained in the manuscript. This certificate means that an AOAC® Certification Mark License Agreement has been executed which authorizes the manufacturer to display the AOAC *Performance Tested*SM certification mark along with the statement - "THIS METHOD'S PERFORMANCE WAS REVIEWED BY AOAC RESEARCH INSTITUTE AND WAS FOUND TO PERFORM TO THE MANUFACTURER'S SPECIFICATIONS" - on the above mentioned method for a period of one calendar year from the date of this certificate (December 02, 2019 – December 31, 2020). Renewal may be granted at the end of one year under the rules stated in the licensing agreement.

Scott Coates

Scott Coates, Senior Director
Signature for AOAC Research Institute

December 2, 2019
Date

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SUBMITTING COMPANY
Clear Labs, Inc.
3565 Haven Ave, Suite 2
Menlo Park, CA 94025

KIT NAME(S)
Clear Safety

CATALOG NUMBERS
CL-00100 (Reagent kit I); CL-00200 (Reagent kit II)

INDEPENDENT LABORATORY
Q Laboratories, Inc.
1930 Radcliff Dr.
Cincinnati, OH 45204

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APPLICABILITY OF METHOD
Analyte – *Salmonella enterica*

Matrices – MLG 4.09: Raw ground chicken (375 g), ready-to-eat deli turkey breast (375 g), chicken carcass rinse (30 mL)
BAM Ch 5: dry pet food (375 g), stainless steel (sponge)

Performance claims - The Clear Safety method (both manual and automated) performed as well or better than the US Food and Drug Administration (FDA) Bacterial Analytical Manual (BAM) Chapter 5 *Salmonella* (2) and the US Department of Agriculture Food Safety and Inspection Service (FSIS) Microbiology Laboratory Guidebook (MLG) Chapter 4.09 *Isolation and Identification of Salmonella from Meat, Poultry, Pasteurized Egg, and Siluriformes (Fish) Products and Carcass and Environmental Sponges* (3) for all claimed food matrices and stainless steel surface. Additionally, the Clear Safety method accurately detected all 106 inclusivity organisms and accurately excluded all 34 exclusivity organisms.

REFERENCE METHODS
Food and Drug Administration Bacteriological Analytical Manual Chapter 5: *Salmonella*. Revised: August 2016. (Accessed September 2018)
https://www.fda.gov/food/foodscienceresearch/laboratorymethods/ucm070149.htm (2)
United States Department of Agriculture Microbiological Laboratory Guidelines 4.09: *Isolation and Identification of Salmonella from Meat, Poultry, Pasteurized Egg, and Siluriformes (Fish) Products and Carcass and Environmental Sponges*. Updated: January 2017. (Accessed September 2018). (3)

ORIGINAL CERTIFICATION DATE
November 20, 2018

CERTIFICATION RENEWAL RECORD
Renewed annually through December 2020

METHOD MODIFICATION RECORD
NONE

SUMMARY OF MODIFICATION
NONE

Under this AOAC® *Performance Tested*SM License Number, 111802 this method is distributed by:
NONE

Under this AOAC® *Performance Tested*SM License Number, 111802 this method is distributed as:
NONE

PRINCIPLE OF THE METHOD (1)
The Clear Safety method is a next-generation sequencing (NGS) method that combines nucleic acid amplification and sequencing on an automated platform. Clear Safety is designed to be used for the detection of *Salmonella enterica* in select foods and environmental surfaces. The Clear Safety method utilizes polymerase chain reaction (PCR) amplification and targeted NGS sequencing technology to selectively detect *Salmonella enterica.* Advanced NGS technology enables deep molecular characterization of pathogens that is not possible with other methods. NGS is the most modern, high throughput DNA sequencing technology on the market, enabling the generation of millions of sequences simultaneously (4).

DISCUSSION OF THE VALIDATION STUDY (1)
The Clear Safety Method provides qualitative detection of *Salmonella enterica* following a 14 hour enrichment for stainless steel environmental sponges, after 16 hours of enrichment for chicken carcass rinse, raw ground chicken and RTE deli turkey, and after 20 hours of enrichment for dry pet food. The matrix studies showed the Clear Safety method was equivalent to the USDA FSIS MLG 4.09 and FDA BAM Chapter 5 reference methods for the target food matrixes and surface. The Clear Safety Method demonstrated no statistically significant differences between candidate and reference method results ($dPOD_C$), or between presumptive and confirmed results ($dPOD_{CP}$) for all target pathogens.
The inclusivity and exclusivity evaluations tested the sensitivity and specificity of the Clear Safety method. All 106 inclusivity organisms were correctly included and all 34 exclusivity organisms were correctly excluded.

Table 4. Clear Safety Inclusivity Results for *Salmonella enterica* (1)

No.	Species and subspecies	Serovar	Source	Origin	Result	No.	Species and subspecies	Serovar	Source	Origin	Result
1	*S. enterica* subsp. *arizonae*		ATCC[1] 13314	Not Available	+	21	*S. enterica* subsp. *enterica*	Anatum	ATCC 9270	Pork liver	+
2	*S. enterica* subsp. *arizonae*		ATCC BAA-1577	Not Available	+	22	*S. enterica* subsp. *enterica*	Arkansas	UPenn STs 11	Not Available	+
3	*S. enterica* subsp. *arizonae*		QL[2]11007-4	Veterinary Isolate	+	23	*S. enterica* subsp. *enterica*	Bareilly	FDA 1206H	Not Available	+
4	*S. enterica* subsp. *diarizonae*		ATCC BAA-1579	Not Available	+	24	*S. enterica* subsp. *enterica*	Berta	UPenn STs 13	Not Available	+
5	*S. enterica* subsp. *diarizonae*		ATCC BAA-216	Human blood	+	25	*S. enterica* subsp. *enterica*	Binza	UPenn STs 14	Not Available	+
6	*S. enterica* subsp. *diarizonae*		ATCC BAA-639	Human feces	+	26	*S. enterica* subsp. *enterica*	Bovis-Morbificans	UPenn STs 16	Not Available	+
7	*S. enterica* subsp. *houtenae*	Halmstad	QL024.1	Clinical isolate	+	27	*S. enterica* subsp. *enterica*	Brandenburg	UPenn STs 18	Not Available	+
8	*S. enterica* subsp. *houtenae*	Harmelen	ATCC 15783	Boa constrictor	+	28	*S. enterica* subsp. *enterica*	Bredeney	NCTC 5731	Not Available	+
9	*S. enterica* subsp. *houtenae*	Ochsenzoll	ATCC 29932	Not Available	+	29	*S. enterica* subsp. *enterica*	California	NCTC 6018	Not Available	+
10	*S. enterica* subsp. *indica*	Ferlac	ATCC 43976	Not Available	+	30	*S. enterica* subsp. *enterica*	Cerro	UPenn STs 22	Not Available	+
11	*S. enterica* subsp. *indica*	Ferlac	NCTC[3] 10458	Ceylonese dessicated coconut	+	31	*S. enterica* subsp. *enterica*	Choleraesuis	ATCC 10708	Equine isolate	+
12	*S. enterica* subsp. *indica*		ATCC BAA-1578	India	+	32	*S. enterica* subsp. *enterica*	Choleraesuis var Kunzendorf	ATCC 12011	Not Available	+
13	*S. enterica* subsp. *salamae*	Artis	ATCC 700149	Not Available	+	33	*S. enterica* subsp. *enterica*	Cubana	UPenn STs 24	Not Available	+
14	*S. enterica* subsp. *salamae*	Basel	ATCC 700151	Not Available	+	34	*S. enterica* subsp. *enterica*	Derby	NCTC 5721	Not Available	+
15	*S. enterica* subsp. *salamae*		QL02415	Pet food	+	35	*S. enterica* subsp. *enterica*	Drypool	UPenn STs 26	Not Available	+
16	*S. enterica* subsp. *enterica*	Abaetetuba	ATCC 35640	Creek water	+	36	*S. enterica* subsp. *enterica*	Dublin	UPenn STs 27	Not Available	+
17	*S. enterica* subsp.	Abortuse	FDA[4] 9842	Not Available	+	37	*S.*	Eastbourn	FDA	Not	+

	enterica	qui					*enterica* subsp. *enterica*	e	4017H	Available	
18	*S. enterica* subsp. *enterica*	Abortusovis	NCTC 10241	Not Available	+	38	*S. enterica* subsp. *enterica*	Enteritidis	ATCC 13076	Not Available	+
19	*S. enterica* subsp. *enterica*	Abony	NCTC 6017	Not Available	+	39	*S. enterica* subsp. *enterica*	Galiema	QL024.2	Environmental isolate	+
20	*S. enterica* subsp. *enterica*	Adelaide	UPenn[5] STs 2	Not Available	+	40	*S. enterica* subsp. *enterica*	Give	UPenn STs 42	Not Available	+

1. ATCC – American Type Culture Collection, 2. QL – Q Laboratories Culture Collection, 3. NCTC – National Culture Type Collection 4. FDA – US Food and Drug Administration Culture Collection, 5. UPENN – University of Pennsylvania Culture Collection

Table 4. Clear Safety Inclusivity Results for *Salmonella enterica* (continued) (1)

No.	Species and subspecies	Serovar	Source	Origin	Result	No.	Species and subspecies	Serovar	Source	Origin	Result
41	*S. enterica* subsp. *enterica*	Dublin	UPenn STs 27	Not Available	+	61	*S. enterica* subsp. *enterica*	Livingstone	UPenn STs 63	Not Available	+
42	*S. enterica* subsp. *enterica*	Eastbourne	FDA 4017H	Not Available	+	62	*S. enterica* subsp. *enterica*	London	UPenn STs 64	Not Available	+
43	*S. enterica* subsp. *enterica*	Enteritidis	ATCC 13076	Not Available	+	63	*S. enterica* subsp. *enterica*	Manhattan	UPenn STs 65	Not Available	+
44	*S. enterica* subsp. *enterica*	Galiema	QL024.2	Environmental isolate	+	64	*S. enterica* subsp. *enterica*	Mbankaka	FDA 37N	Low moisture ingredient	+
45	*S. enterica* subsp. *enterica*	Give	UPenn STs 42	Not Available	+	65	*S. enterica* subsp. *enterica*	Menden	ATCC 15992	Feces	+
46	*S. enterica* subsp. *enterica*	Haardt	UPenn STs 44	Not Available	+	66	*S. enterica* subsp. *enterica*	Meleagridis	QL12074-1	Environmental isolate	+
47	*S. enterica* subsp. *enterica*	Hadar	ATCC 51956	Not Available	+	67	*S. enterica* subsp. *enterica*	Menhaden	QL024.20	Pet food	+
48	*S. enterica* subsp. *enterica*	Havana	UPenn STs 47	Not Available	+	68	*S. enterica* subsp. *enterica*	Minnesota	UPenn STs 70	Not Available	+
49	*S. enterica* subsp. *enterica*	Heidelberg	ATCC 8326	Not Available	+	69	*S. enterica* subsp. *enterica*	Montevideo	ATCC 8387	Not Available	+
50	*S. enterica* subsp. *enterica*	Illinois	ATCC 11646	Not Available	+	70	*S. enterica* subsp. *enterica*	Muenchen	ATCC BAA-1594	Human stool	+
51	*S. enterica* subsp. *enterica*	Indiana	NCTC 11304	Turkey	+	71	*S. enterica* subsp. *enterica*	Neasden	QL024.4	Raw material	+
52	*S. enterica* subsp.	Infantis	ATCC	Pasta	+	72	*S.*	Newington	QL024.8	Fish oil	+

	enterica		51741				*enterica* subsp. *enterica*				
53	*S. enterica* subsp. *enterica*	Javiana	ATCC 10721	Not Available	+	73	*S. enterica* subsp. *enterica*	Newport	ATCC 6962	Food poisoning	+
54	*S. enterica* subsp. *enterica*	Jerusalem	QL024.12	Pet food	+	74	*S. enterica* subsp. *enterica*	Ohio	UPenn STs 81	Not Available	+
55	*S. enterica* subsp. *enterica*	Johannesburg	UPenn STs 56	Not Available	+	75	*S. enterica* subsp. *enterica*	Oranienburg	ATCC 9239	Not Available	+
56	*S. enterica* subsp. *enterica*	Kahla	ATCC 17980	Not Available	+	76	*S. enterica* subsp. *enterica*	Orthmarshen	QL024.13	Pet kibble	+
57	*S. enterica* subsp. *enterica*	Kaitaan	QL024.7	Pet food	+	77	*S. enterica* subsp. *enterica*	Paratyphi A	ATCC 9150	Not Available	+
58	*S. enterica* subsp. *enterica*	Kentucky	ATCC 9263	Not Available	+	78	*S. enterica* subsp. *enterica*	Paratyphi B	ATCC 10719	Not Available	+
59	*S. enterica* subsp. *enterica*	Krefeld	UPenn STs 58	Not Available	+	79	*S. enterica* subsp. *enterica*	Paratyphi C	ATCC 13428	Not Available	+
60	*S. enterica* subsp. *enterica*	Lille	UPenn STs 59	Not Available	+	80	*S. enterica* subsp. *enterica*	Pomona	ATCC 10729	Clinical isolate	+

1. ATCC – American Type Culture Collection, 2. QL – Q Laboratories Culture Collection, 3. NCTC – National Culture Type Collection 4. FDA – US Food and Drug Administration Culture Collection, 5. UPENN – University of Pennsylvania Culture Collection

Table 4. Clear Safety Inclusivity Results for *Salmonella enterica* (continued) (1)

No.	Species and subspecies	Serovar	Source	Origin	Result	No.	Species and subspecies	Serovar	Source	Origin	Result
81	*S. enterica* subsp. *enterica*	Poona	NCTC 4840	Infant enteritis	+	94	*S. enterica* subsp. *enterica*	Tennessee	QL024.6	Clinical isolate	+
82	*S. enterica* subsp. *enterica*	Potsdam	QL15091-1A	Pet food	+	95	*S. enterica* subsp. *enterica*	Thompson	FDA 2051H	Not Available	+
83	*S. enterica* subsp. *enterica*	Preston	QL024.16	Low moisture product	+	96	*S. enterica* subsp. *enterica*	Tranoroa	NCTC 10252	Not Available	+
84	*S. enterica* subsp. *enterica*	Pullorum	ATCC 13036	Egg	+	97	*S. enterica* subsp. *enterica*	Typhi	ATCC 6539	Not Available	+
85	*S. enterica* subsp. *enterica*	Rubislaw	UPenn STs 92	Not Available	+	98	*S. enterica* subsp. *enterica*	Typhimurium	ATCC 14028	Animal tissue	+
86	*S. enterica* subsp. *enterica*	Saintpaul	ATCC 9712	Cystitis	+	99	*S. enterica* subsp. *enterica*	Utrect	NCTC 10077	Not Available	+
87	*S. enterica* subsp. *enterica*	San-Diego	UPenn STs 94	Not Available	+	100	*S. enterica* subsp.	Urbana	UPenn STs 110	Not Available	+

							enterica				
88	*S. enterica* subsp. *enterica*	Schalkwijk	QL024.10	Cat food	+	101	*S. enterica* subsp. *enterica*	Vellore	ATCC 15611	Rectal swab	+
89	*S. enterica* subsp. *enterica*	Schwarzengrund	UPenn STs 95	Not Available	+	102	*S. enterica* subsp. *enterica*	Virchow	ATCC 51955	Not Available	+
90	*S. enterica* subsp. *enterica*	Senftenberg	ATCC 43845	Not Available	+	104	*S. enterica* subsp. *enterica*	Volta	QL024.9	Raw material	+
91	*S. enterica* subsp. *enterica*	Stanley	ATCC 7308	Not Available	+	105	*S. enterica* subsp. *enterica*	Westhampton	QL024.14	Dog kibble	+
92	*S. enterica* subsp. *enterica*	Sylvania	QL091313.4	Raw dog food	+	106	*S. enterica* subsp. *enterica*	Worthington	UPenn STs 114	Not Available	+
93	*S. enterica* subsp. *enterica*	Tallahassee	ATCC 12002	Not Available	+						

1. ATCC – American Type Culture Collection, 2. QL – Q Laboratories Culture Collection, 3. NCTC – National Culture Type Collection 4. FDA – US Food and Drug Administration Culture Collection, 5. UPENN – University of Pennsylvania Culture Collection \

Table 5. Clear Safety Exclusivity Results (1)

No	Organism	Source	Origin	Result	No	Organism	Source	Origin	Result
1	*Acinetobacter baumanii*	ATCC 19606	Urine	-	18	*Klebsiella oxytoca*	ATCC 43165	Clinical isolate	-
2	*Alcaligenes faecalis* subsp. *faecalis*	ATCC 8750	Not Available	-	19	*Klebsiella pneumoniae* subsp. *pneumonia*	ATCC 4352	Cow's milk	-
3	*Aeromonoas hydrophila*	ATCC 49140	Clinical isolate	-	20	*Morganella morganii*	ATCC 25829	Human	-
4	*Citrobacter braakii*	ATCC 43162	Clinical isolate	-	21	*Mycobacterium smegmatis*	ATCC 19420	Not Available	-
5	*Citrobacter farmeri*	ATCC 51633	Human feces	-	22	*Pantoea agglomerans*	ATCC 19552	Sewage	-
6	*Citrobacter freundii*	QL11007-10	Clinical isolate	-	23	*Proteus mirabilis*	ATCC 7002	Urine	-
7	*Cronobacter sakazakii*	ATCC 29544	Infant formula	-	24	*Providencia rettgeri*	ATCC 14505	Not Available	-
8	*Edwardsiella tarda*	ATCC 15947	Human feces	-	25	*Pseudomonas aeruginosa*	ATCC 9027	Outer ear infection	-
9	*Enterobacter aerogenes*	ATCC 35029	Not Available	-	26	*Rahnella aquatilis*	ATCC 55046	Soil	-
10	*Enterobacter cloacae*	ATCC 13047	Spinal fluid	-	27	*Salmonella bongori*	ATCC 43975	Not Available	-
11	*Escherichia coli*	ATCC 8739	Feces	-	28	*Serratia marcescens*	ATCC 13880	Human	-
12	*Escherichia coli* O157	ATCC 43895	Raw hamburger	-	29	*Shigella boydii*	ATCC 9207	Feces	-
13	*Escherichia fergusonii*	ATCC 35469	Human feces	-	30	*Shimwellia blattae*	ATCC 29907	Clinical isolate	-
14	*Escherichia hermanii*	ATCC 33650	Mouse brain	-	31	*Vibrio vunificus*	QL02111-1A	Shellfish	-
15	*Escherichia vulneris*	ATCC 29943	Human wound	-	32	*Salmonella bongori*	NCTC 10946	Amphibian; Frog	-
16	*Hafnia alvei*	ATCC 51815	Milk	-	33	*Salmonella bongori*	ATCC 43975	Not Available	-
17	*Haemophilus influenzae*	ATCC 19418	Not Available	-	34	*Salmonella bongori*	NCTC 12419	Not Available	-

1. ATCC – American Type Culture Collection, 2. QL – Q Laboratories Culture Collection, 3. MSU – Michigan State University Culture Collection, 4. NCTC – National Culture Type Collection (1)

Table 6. Clear Safety detection presumptive vs. confirmed result – POD analysis (1)

Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Clear Safety presumptive				Clear Safety confirmed					
					Time, h	x[c]	POD_{CP}[d]	95% CI[e]	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.34 (0.14-0.88)	20	16	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			3.21 (1.37-8.95)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.34 (0.14-0.88)	20	24	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			3.21 (1.37-8.95)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.34 (0.14-0.88)	20	16	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			3.21 (1.37-8.95)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.34 (0.14-0.88)	20	24	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			3.21 (1.37-8.95)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			68 CFU	20	16	6	0.30	0.15, 0.52	24	6	0.30	0.15, 0.52	0.00	-0.13, 0.13
			190 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Manual	68 CFU	20	24	6	0.30	0.15, 0.52	24	6	0.30	0.15, 0.52	0.00	-0.13, 0.13
			190 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 6. Clear Safety detection presumptive vs. confirmed result – POD analysis (continued) (1)

Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Clear Safety presumptive				Clear Safety confirmed					
					Time, h	x[c]	POD_{CP}[d]	95% CI[e]	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			68 CFU	20	16	6	0.30	0.15, 0.52	24	6	0.30	0.15, 0.52	0.00	-0.13, 0.13
			190 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Automated	68 CFU	20	24	6	0.30	0.15, 0.52	24	6	0.30	0.15, 0.52	0.00	-0.13, 0.13
			190 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			74 CFU	20	16	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
			222 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Manual	74 CFU	20	24	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
			222 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Automated	74 CFU	20	16	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
			222 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
			–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Automated	74 CFU	20	24	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
			222 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 6. Clear Safety detection presumptive vs. confirmed result – POD analysis (continued) (1)

					Clear Safety presumptive				Clear Safety confirmed					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI[e]	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		52 & 800 CFU	20	14	9	0.45	0.26, 0.66	24	9	0.45	0.26, 0.66	0.00	-0.13, 0.13
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		52 & 800 CFU	20	24	9	0.45	0.26, 0.66	24	9	0.45	0.26, 0.66	0.00	-0.13, 0.13
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		52 & 800 CFU	20	14	9	0.45	0.26, 0.66	24	9	0.45	0.26, 0.66	0.00	-0.13, 0.13
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		52 & 800 CFU	20	24	9	0.45	0.26, 0.66	24	9	0.45	0.26, 0.66	0.00	-0.13, 0.13
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			66 CFU	20	14	10	0.50	0.30, 0.70	24	10	0.50	0.30, 0.70	0.00	-0.13, 0.13
			460 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			66 CFU	20	24	10	0.50	0.30, 0.70	24	10	0.50	0.30, 0.70	0.00	-0.13, 0.13
			460 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 6. Clear Safety detection presumptive result vs. confirmed result – POD analysis (continued) (1)

					Clear Safety presumptive				Clear Safety confirmed					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI[e]	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			66 CFU	20	14	10	0.50	0.30, 0.70	24	10	0.50	0.30, 0.70	0.00	-0.13, 0.13
			460 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			66 CFU	20	24	10	0.50	0.30, 0.70	24	10	0.50	0.30, 0.70	0.00	-0.13, 0.13
			460 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		65 & 950 CFU	20	14	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		65 & 950 CFU	20	24	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		65 & 950 CFU	20	14	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
	&		65 & 950 CFU	20	24	11	0.55	0.34, 0.74	24	11	0.55	0.34, 0.74	0.00	-0.13, 0.13
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 6. Clear Safety detection presumptive result vs. confirmed result – POD analysis (continued) (1)

					Clear Safety presumptive				Clear Safety confirmed					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			57 CFU	20	14	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			570 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			57 CFU	20	24	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			570 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			57 CFU	20	14	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			570 CFU	5	14	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			57 CFU	20	24	12	0.60	0.39, 0.78	24	12	0.60	0.39, 0.78	0.00	-0.13, 0.13
			570 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Manual	–	5	20	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.55 (0.28-0.88)	20	20	14	0.70	0.48, 0.85	24	14	0.70	0.48, 0.85	0.00	-0.13, 0.13
			4.13 (1.15-5.78)	5	20	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.55 (0.28-0.88)	20	24	14	0.70	0.48, 0.85	24	14	0.70	0.48, 0.85	0.00	-0.13, 0.13
			4.13 (1.15-5.78)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 6. Clear Safety detection presumptive result vs. confirmed result – POD analysis (continued) (1)

					Clear Safety presumptive				Clear Safety confirmed					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Automated	–	5	20	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.55 (0.28-0.88)	20	20	14	0.70	0.48, 0.85	24	14	0.70	0.48, 0.85	0.00	-0.13, 0.13
			4.13 (1.15-5.78)	5	20	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.55 (0.28-0.88)	20	24	14	0.70	0.48, 0.85	24	14	0.70	0.48, 0.85	0.00	-0.13, 0.13
			4.13 (1.15-5.78)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Manual	–	5	16	0	0.00	0.00, 0.43	24	5	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.45 (0.25-0.85)	20	16	5	0.25	0.11, 0.47	24	20	0.25	0.11, 0.47	0.00	-0.13, 0.13
			1.69 (0.85-3.72)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Manual	–	5	24	0	0.00	0.00, 0.43	24	5	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.45 (0.25-0.85)	20	24	5	0.25	0.11, 0.47	24	20	0.25	0.11, 0.47	0.00	-0.13, 0.13
			1.69 (0.85-3.72)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Automated	–	5	16	0	0.00	0.00, 0.43	24	5	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.45 (0.25-0.85)	20	16	5	0.25	0.11, 0.47	24	20	0.25	0.11, 0.47	0.00	-0.13, 0.13
			1.69 (0.85-3.72)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Automated	–	5	24	0	0.00	0.00, 0.43	24	5	0.00	0.00, 0.43	0.00	-0.47, 0.47
			0.45 (0.25-0.85)	20	24	5	0.25	0.11, 0.47	24	20	0.25	0.11, 0.47	0.00	-0.13, 0.13
			1.69 (0.85-3.72)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0.00	-0.47, 0.47

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (1)

					Clear Safety				Reference					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{C}[f]	95% CI	$dPOD_{C}$[g]	95% CI[h]
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			0.34 (0.14-0.88)	20	16	12	0.60	0.39, 0.78	24	10	0.50	0.30, 0.70	0.10	-0.19-0.37
			3.21 (1.37-8.95)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			0.34 (0.14-0.88)	20	24	12	0.60	0.39, 0.78	24	10	0.50	0.30, 0.70	0.10	-0.19-0.37
			3.21 (1.37-8.95)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			0.34 (0.14-0.88)	20	16	12	0.60	0.39, 0.78	24	10	0.50	0.30, 0.70	0.10	-0.19-0.37
			3.21 (1.37-8.95)	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
375 g RTE deli turkey	Salmonella Muenchen (ATCC BAA-1594)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			0.34 (0.14-0.88)	20	24	12	0.60	0.39, 0.78	24	10	0.50	0.30, 0.70	0.10	-0.19-0.37
			3.21 (1.37-8.95)	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			68 CFU	20	16	6	0.30	0.15, 0.52	24	5	0.25	0.11, 0.47	0.05	-0.22, 0.31
			190 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			68 CFU	20	24	6	0.30	0.15, 0.52	24	5	0.25	0.11, 0.47	0.05	-0.22, 0.31
			190 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_{C}$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (continued) (1)

					Clear Safety				Reference					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{C}[f]	95% CI	$dPOD_{C}$[g]	95% CI[h]
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			68 CFU	20	16	6	0.30	0.15, 0.52	24	5	0.25	0.11, 0.47	0.05	-0.22, 0.31
			190 CFU	5	16	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse[i]	Salmonella Typhimurium (ATCC 14028)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0.00	0.00, 0.43	0	-0.43, 0.43
			68 CFU	20	24	6	0.30	0.15, 0.52	24	5	0.25	0.11, 0.47	0.05	-0.22, 0.31
			190 CFU	5	24	5	1.00	0.57, 1.00	24	5	1.00	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			74 CFU	20	16	11	0.55	0.34, 0.74	24	14	0.7	0.48-0.85	-0.15	-0.41, 0.14
			222 CFU	5	16	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			74 CFU	20	24	11	0.55	0.34, 0.74	24	14	0.7	0.48-0.85	-0.15	-0.41, 0.14
			222 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			74 CFU	20	16	11	0.55	0.34, 0.74	24	14	0.7	0.48-0.85	-0.15	-0.41, 0.14
			222 CFU	5	16	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Chicken carcass rinse	Salmonella Typhimurium (ATCC 14028)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			74 CFU	20	24	11	0.55	0.34, 0.74	24	14	0.7	0.48-0.85	-0.15	-0.41, 0.14
			222 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_{C}$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (continued) (1)

Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Clear Safety				Reference					
					Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		52 & 800 CFU	20	14	9	0.45	0.26, 0.66	24	8	0.4	0.22, 0.61	0.05	-0.24-0.33
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		52 & 800 CFU	20	24	9	0.45	0.26, 0.66	24	8	0.4	0.22, 0.61	0.05	-0.24-0.33
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		52 & 800 CFU	20	14	9	0.45	0.26, 0.66	24	8	0.4	0.22, 0.61	0.05	-0.24-0.33
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		52 & 800 CFU	20	24	9	0.45	0.26, 0.66	24	8	0.4	0.22, 0.61	0.05	-0.24-0.33
	Citrobacter freundii (QL 11007.10)		380 & 5600 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			66 CFU	20	14	10	0.50	0.30, 0.70	24	7	0.35	0.18, 0.57	0.15	-0.15, 0.41
			460 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			66 CFU	20	24	10	0.50	0.30, 0.70	24	7	0.35	0.18, 0.57	0.15	-0.15, 0.41
			460 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (continued) (1)

Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Clear Safety				Reference					
					Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_{CC}[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			66 CFU	20	14	10	0.50	0.30, 0.70	24	7	0.35	0.18, 0.57	0.15	-0.15, 0.41
			460 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor [i]	*Salmonella* Derby (NCTC 5721)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			66 CFU	20	24	10	0.50	0.30, 0.70	24	7	0.35	0.18, 0.57	0.15	-0.15, 0.41
			460 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		65 & 950 CFU	20	14	11	0.55	0.34, 0.74	24	10	0.5	0.34, 0.74	0.05	-0.24, 0.33
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		65 & 950 CFU	20	24	11	0.55	0.34, 0.74	24	10	0.5	0.34, 0.74	0.05	-0.24, 0.33
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		65 & 950 CFU	20	14	11	0.55	0.34, 0.74	24	10	0.5	0.34, 0.74	0.05	-0.24, 0.33
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel with a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
	&		65 & 950 CFU	20	24	11	0.55	0.34, 0.74	24	10	0.5	0.34, 0.74	0.05	-0.24, 0.33
	Citrobacter freundii (ATCC 43864)		450 & 6000 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (continued) (1)

					Clear Safety				Reference					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_R[f]	95% CI	$dPOD_C$[g]	95% CI[h]
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			57 CFU	20	14	12	0.60	0.39, 0.78	24	9	0.45	0.26, 0.66	0.15	-0.15, 0.41
			570 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			57 CFU	20	24	12	0.60	0.39, 0.78	24	9	0.45	0.26, 0.66	0.15	-0.15, 0.41
			570 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	14	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			57 CFU	20	14	12	0.60	0.39, 0.78	24	9	0.45	0.26, 0.66	0.15	-0.15, 0.41
			570 CFU	5	14	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
Stainless steel without a competitor	*Salmonella* Derby (FSL R8-2528)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			57 CFU	20	24	12	0.60	0.39, 0.78	24	9	0.45	0.26, 0.66	0.15	-0.15, 0.41
			570 CFU	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Manual	–	5	20	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.55 (0.28-0.88)	20	20	14	0.70	0.48, 0.85	24	10	0.5	0.30, 0.70	0.20	-0.1, 0.45
			4.13 (1.15-5.78)	5	20	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.55 (0.28-0.88)	20	24	14	0.70	0.48, 0.85	24	10	0.5	0.30, 0.70	0.20	-0.1, 0.45
			4.13 (1.15-5.78)	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

Table 7. Clear Safety vs. reference – POD analysis (continued) (1)

					Clear Safety				Reference					
Matrix per test portion	Strain	Method	MPN per test portion [a]	n[b]	Time, h	x[c]	POD_{CP}[d]	95% CI	Time, h	x	POD_R[f]	95% CI	$dPOD_C$[g]	95% CI[h]
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Automated	–	5	20	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.55 (0.28-0.88)	20	20	14	0.70	0.48, 0.85	24	10	0.5	0.30, 0.70	0.20	-0.1, 0.45
			4.13 (1.15-5.78)	5	20	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375g Dry pet food	Salmonella Anatum (ATCC 9270)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.55 (0.28-0.88)	20	24	14	0.70	0.48, 0.85	24	10	0.5	0.30, 0.70	0.20	-0.1, 0.45
			4.13 (1.15-5.78)	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Manual	–	5	16	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.45 (0.25-0.85)	20	16	5	0.25	0.11, 0.47	24	6	0.3	-0.27-0.27	-0.05	-0.31, 0.22
			1.69 (0.85-3.72)	5	16	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Manual	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.45 (0.25-0.85)	20	24	5	0.25	0.11, 0.47	24	6	0.3	-0.27-0.27	-0.05	-0.31, 0.22
			1.69 (0.85-3.72)	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Automated	–	5	16	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.45 (0.25-0.85)	20	16	5	0.25	0.11, 0.47	24	6	0.3	-0.27-0.27	-0.05	-0.31, 0.22
			1.69 (0.85-3.72)	5	16	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43
375 g Raw ground chicken	Salmonella Kentucky (ATCC 9263)	Automated	–	5	24	0	0.00	0.00, 0.43	24	0	0	0.00, 0.43	0	-0.43, 0.43
			0.45 (0.25-0.85)	20	24	5	0.25	0.11, 0.47	24	6	0.3	-0.27-0.27	-0.05	-0.31, 0.22
			1.69 (0.85-3.72)	5	24	5	1.00	0.57, 1.00	24	5	1	0.57, 1.00	0	-0.43, 0.43

[a] MPN is calculated using the LCF MPN calculator version 1.6 provided by AOAC Research Institute, with 95% confidence intervals indicated in parentheses.
[b] n = Number of test portions.
[c] x = Number of positive test portions.
[d] POD_{CP} = Candidate method presumptive outcomes divided by total number of trials.
[e] CI = Confidence interval.
[f] POD_{CC} = Candidate method confirmed positive outcomes divided by the total number of trials
[g] $dPOD_C$ = Difference between the confirmed candidate method result and the reference method confirmed result POD values.
[h] If the confidence interval of a dPOD does not contain zero, then the difference is statistically significant at the 5% level.
[i] Matrix study was performed by Independent Lab
NOTE: Carcass rinses and stainless steel values are based on plate counts of the inoculum.

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