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NF VALIDATION
Validation of alternative analytical methods
Application in food microbiology

Summary report

EN ISO 16140 validation study of the Solus *E. coli* O157 ELISA Screening Assay for the detection of *E. coli* O157 (including *E. coli* O157:H7) in raw beef meat products (seasoned or not), raw milks and dairy products, vegetables and environmental samples

Qualitative method

This report includes 88 pages, with 12 appendixes.
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Before comment

Quality Assurance documents related to this study can be consulted upon request by Solus Scientific Solutions Ltd.

The technical protocol and the result interpretation will be realised according to the EN ISO 16140 and the AFNOR technical rules.

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✓ **Expert Laboratory**:	ADRIA Développement ZA Creac'h Gwen 29196 QUIMPER Cedex (France)
✓ **Studied method:**	**Solus *E. coli* O157 ELISA Screening Assay for the detection of *Escherichia coli* O157 (including *E. coli* O157:H7)**
✓ **Validation standard**:	ISO 16140 (October 2003) : Food microbiology – Protocol for the validation of alternative methods
✓ **Reference method**♦ :	EN ISO 16654: Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Escherichia coli* O157
✓ **Scope:**	**Raw beef meat products (seasoned or not), raw milks and dairy products, vegetables and environmental samples**
✓ **Certification body**:	AFNOR Certification

♦ Analyses performed according to the COFRAC accreditation

1 INTRODUCTION

The validation study of the **Solus *E. coli* O157 ELISA Screening Assay for the detection of *Escherichia coli* O157 (including *E. coli* O157:H7)** in raw beef meat products (seasoned or not), raw milks and dairy products, vegetables, and environmental samples was performed in 2015 according to the EN ISO 16140 protocol (Certificate No SOL 37/03 - 10/15).

The following criteria were evaluated during the validation study:

☒ The method comparison study:
- The relative accuracy, the relative sensitivity and the relative specificity.
- The relative detection limit,
- The inclusivity and the exclusivity,
- The practicability.

☒ The inter-laboratory study.

This study design fulfils the current ISO 16140 standard (2003), but as well the upcoming one using the published ISO 16140 FDIS (2015).

2 METHOD PROTOCOLS

2.1 Reference method♦

The reference method corresponds to the ISO NF EN ISO 16654 standard: Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Escherichia coli* O157 (See **Appendix 1**).

2.2 Alternative method

The alternative method is based on an enzyme-linked immune-sorbent assay. The detailed protocol is presented in **Appendix 2**.

♦ Analyses performed according to the COFRAC accreditation

The different steps are:

- Enrichment step in mTSB (non-pre-warmed) + novobiocin (20 mg/l) during 16 – 20 hours at 41.5°C ± 1°C,

- ELISA test,

- Confirmation step by streaking the enrichment broth (10 µl) onto CT-SMAC and a chromogenic agar plate and by performing latex tests on characteristic colonies with or without a purification step for the O157 latex test (Microgen *E. coli* O157 M44 OR Wellcolex *E. coli* O157:H7 R30959601), and after a purification step for the H7 latex test (Wellcolex *E. coli* O157: H7 R30959601).
  If a discordant result is observed between the ELISA test and the confirmatory test, an IMS is used on 1 ml of enrichment broth prior to streaking onto selective plates.

As the mTSB + Novobiocin is not pre-warmed for the alternative method in comparison to the reference method, this is an <u>UNPAIRED DATA STUDY.</u>

In order to offer more practicability, it is possible to store the enrichment broths for 72 h at 2 – 8°C prior to analysis with the Solus *E. coli* O157 test.

3 VALIDATION STUDY (2015)

3.1 Method comparison study

3.1.1 Relative accuracy, relative specificity and relative sensitivity

ISO 16140 (2003)

- *The relative accuracy is defined as the degree of correspondence between the response obtained by the reference method and the response obtained by the alternative method on identical samples.*
- *The relative specificity is the ability of the alternative method to not detect the analyte when it is not detected by the reference method.*
- *The relative sensitivity is the ability of the alternative method to detect the analyse when it is detected by the reference method.*

3.1.1.1 Number and nature of samples

240 samples were analysed. The distribution per tested category, type and pre-enrichment protocol is given in Table 1.

Table 1 – Distribution per tested category and type

Categories	Types	Positive samples	Negative samples	Total
Raw beef meat products	Fresh and frozen ground beefs	10	11	21
	Minced meat preparations	10	9	19
	Fresh and frozen beef trim	10	10	20
	Total	30	30	60
Raw milks and dairy products	Raw milks	9	10	19
	Raw fermented or acidified milks	13	10	23
	Raw milk cheeses	8	10	18
	Total	30	30	60
Vegetables	Produces and leafy greens	10	6	16
	RTE foods (delisalads)	10	11	21
	Sprouts	10	13	23
	Total	30	30	60
Environmental samples	Swabs, sponges	9	20	29
	Process and cleaning water	10	7	17
	Dusts	11	3	14
	Total	30	30	60
TOTAL		**120**	**120**	**240**

3.1.1.2 Artificial contamination of samples

Artificial contaminations were done by spiking (50 samples) or seeding (145 samples) protocols. For the spiking protocol, the strains were stressed using various injury protocols. The injury efficiency was evaluated by comparing enumeration results onto selective and non-selective agars (respectively CT-SMAC and TSYEA). The artificial contaminations are presented in **Appendix 3**.

195 samples were artificially contaminated, using 43 different strains and 5 various protocols. 120 gave a positive result. No more than 6 positive results were obtained with a same strain.

The repartition of inoculation per protocol and inoculation level is showed in Figures 1 and 2.

Figure 1 - Ratio of positive samples after inoculation, depending on the inoculation protocol

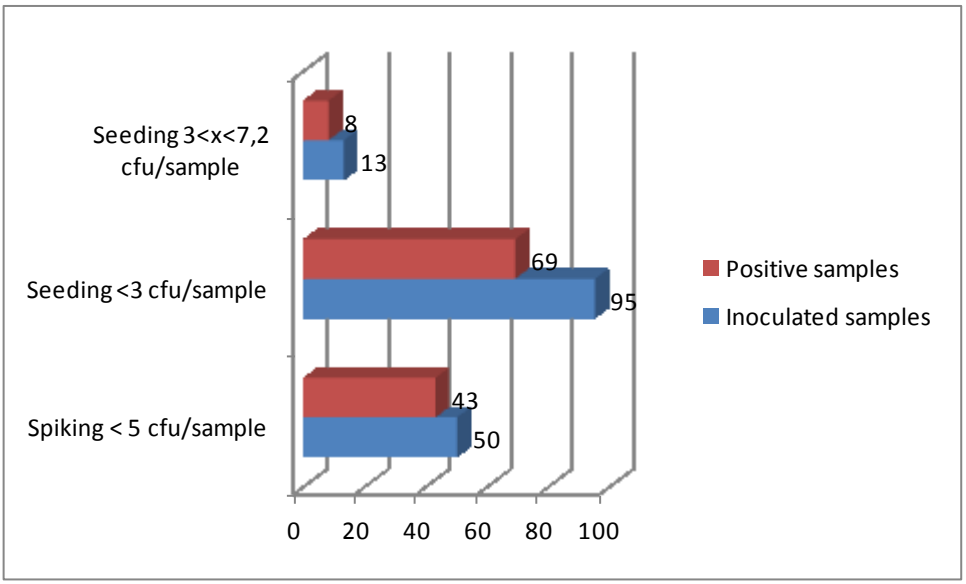
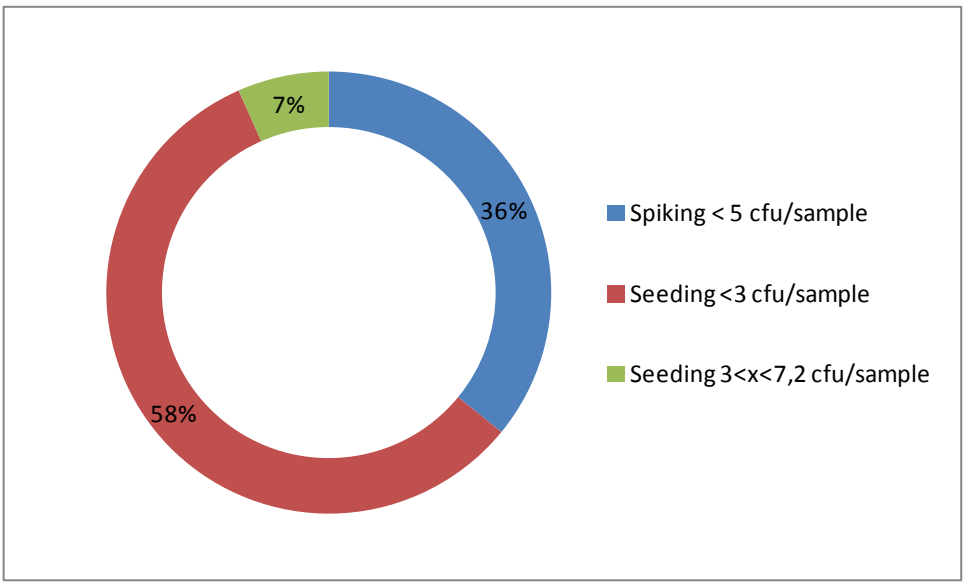


Figure 2 - Breakdown of artificially inoculated samples, depending of the inoculation protocol



100% of the samples were artificially contaminated.

3.1.1.3 Confirmation protocols

A confirmation step is performed by streaking the enrichment broth (10 µl) onto CT-SMAC and a chromogenic agar plate and by performing latex tests on characteristic colonies with or without a purification step for the O157 latex test (Microgen *E. coli* O157 M44 or Wellcolex *E. coli* O157:H7 R30959601), and after a purification step the H7 latex test (Wellcolex *E. coli* O157: H7 R30959601). Note that both O157 latex tests were simultaneously tested during the study, i.e. Microgen and Wellcolex.

When a discordant result was observed between the ELISA test and the confirmatory test, an IMS was used on 1 ml of enrichment broth prior to streaking onto selective plates.

3.1.1.4 Test results

Raw data per category are given in **Appendix 4**. The paired results per category are given in the following tables

Table 2 – Summary of results of the reference method and alternative method: Overall results

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 59**	Positive deviation (R-/A+) **PD = 35**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 26**	Negative agreement (A-/R-) **NA = 120 (PPNA = 2)**

PP: positive presumptive non confirmed samples

PD: positive deviation (R-/A+)

ND: negative deviation (A-/R+)

PA: positive agreement (R+/A+)

NA: negative agreement (R-/A-)

Results per category of samples

Table 3 – Summary of results of the reference method and alternative method: Raw beef meat products

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 18**	Positive deviation (R-/A+) **PD = 8**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 4**	Negative agreement (A-/R-) **NA = 30**

Table 4 – Summary of results of the reference method and alternative method: Raw milks and dairy products

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 13**	Positive deviation (R-/A+) **PD = 11**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 6**	Negative agreement (A-/R-) **NA = 30**

Table 5 – Summary of results of the reference method and alternative method: Vegetables

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 11**	Positive deviation (R-/A+) **PD = 9**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 10**	Negative agreement (A-/R-) **NA = 30 (PPNA = 2)**

Table 6 – Summary of results of the reference method and alternative method: Environmental samples

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 17**	Positive deviation (R-/A+) **PD = 7**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 6**	Negative agreement (A-/R-) **NA = 30**

3.1.1.5 Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)

The calculations of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP) are summarized in Table 7.

Table 7 – Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)

Category	PA	NA	ND	PD	N	Relative accuracy AC (%) [100x(PA+NA])/N]	N+ PA + ND	Relative sensitivity SE (%) [100xPA]/N+]	N- NA + PD	Relative specificity SP (%) [100xNA]/N-]
Raw beef meat products	18	30	4	8	60	80.0	22	81.8	38	78.9
Raw milks and dairy products	13	30	6	11	60	71.7	19	68.4	41	73.2
Vegetables	11	30	10	9	60	68.3	21	52.4	39	76.9
Environmental samples	17	30	6	7	60	78.3	23	73.9	37	81.1
All samples	**59**	**120**	**26**	**35**	**240**	**74.6**	**85**	**69.4**	**155**	**77.4**

The alternative method percentage values are:

Relative accuracy : AC	74.6 %
Relative specificity : SP	77.4 %
Relative sensitivity : SE	69.4 %

The sensitivities of both methods, when the positive deviations of the alternative method are considered, are presented below:

Alternative method	78.3 %
Reference method	70.8 %

3.1.1.6 Analysis of discordants

- *Negative deviations*

Among the 26 negative deviations (See Table 8), *Escherichia coli* O157:H7 was detected in the Solus mTSBn enrichment broth for 2 samples (4297 and 8). For these 2 samples, the detection level of the alternative method was probably not reached; the analysis was repeated three times, and for the sample 4297, 2 positive results (0.265 & 0.261) were then observed confirming that, after enrichment, the *E. coli* O157:H7 counts were closed to the LOD of the assay.

For the 24 other samples, the negative results were probably due to sampling heterogeneity in this unpaired data study since levels of contamination were low.

Table 8 – Negative deviations

Sample N°	Product	Inoculated strain	Inoculation level	O.D.	Result	Confirmation
4164	Ground beef 5% fat	E. coli O157:H7 Ad489	1.2	0.068	-	-
4168	Beef trim	E. coli O157:H7 Ad560	1.8	0.110	-	-
115	Beef trim	E. coli O157:H7 Ad585	1	0.075	-	-
297	Ground beef	E. coli O157:H7 Ad487	1	0.080	-	-
3999	Fermented milk	E. coli O157:H7 Ad557	1.6	0.064	-	-
4000	Fermented milk	E. coli O157:H7 Ad577	2.6	0.061	-	-
4188	Raw milk cheese	E. coli O157:H7 Ad579	2.4	0.063	-	-
4297	Fermented cream	E. coli O157:H7 Ad574	0.8	0.102 0.261 0.265	- + +	+
4304	Fermented yoghurt	E. coli O157:H7 Ad580	2.2	0.065	-	-
136	Raw milk cheese	E. coli O157:H7 Ad1745	1.4	0.063	-	-
3993	Frozen peas	E. coli O157:H7 Ad558	0.8	0.068	-	-
3995	Flat frozen beans	E. coli O157:H7 Ad575	1.8	0.061	-	-
4176	Baby leaves	E. coli O157:H7 Ad578	1	0.073	-	-
4180	Sprouts	E. coli O157:H7 Ad577	2	0.058	-	-
4183	Frozen spinach	E. coli O157:H7 EF190	1.4	0.061	-	-
4290	Sprouts	E. coli O157:H7 Ad582	1.2	0.076	-	-
5	Sprouts	E. coli O157:H7 Ad573	3.4	0.060	-	-
6	Sprouts	E. coli O157:H7 Ad571	4.8	0.063	-	-
8	Sprouts	E. coli O157:H7 Ad576	3.6	0.123 0.135 0.135	- - -	+
15	Vegetables deli salad	E. coli O157:H7 Ad576	3.6	0.054	-	-
354	Dusts (sprout industry)	E. coli O157:H7 Ad576	1	0.056	-	-
361	Swab (sprout industry)	E. coli O157:H7 Ad573	2.2	0.069	-	-
364	Process water (sprout industry)	E. coli O157:H7 Ad579	1.8	0.074	-	-
1252	Process water	E. coli O157:H7 Ad552	2.2	0.068	-	-
1263	Process water	E. coli O157:H7 Ad553	3.4	0.057	-	-
1335	Dusts (dairy industry)	E. coli O157:H7 Ad555	1.8	0.060 0.062 0.075	- - -	-

Positive deviations

As already mentioned for the negative deviations, 35 positive deviations were obtained with the Solus *E coli* O157 assay (See Table 9); they were, in most of the cases, probably due to a different sampling between both methods.

Table 9 – Positive deviations

Sample N°	Product	Inoculated strain	Inoculation level	O.D.	Confirmed result
4165	Ground beef	E. coli O157:H7 Ad489	1-0-2-2-1 (1.2)	2.750	+
4167	Beef trim	E. coli O157:H7 Ad559	0-0-1-2-2 (1.0)	2.730	+
4170	Beef meat	E. coli O157:H7 Ad683	0-1-0-2-1 (0.8)	2.757	+
4173	Carpaccio	E. coli O157:H7 Ad924	0-2-1-0-1 (0.8)	2.688	+
4276	Ground beef 10% fat	E. coli O157:H7 Ad485	0-2-4-0-0 (1.2)	2.678	+
4284	Beef trim	E. coli O157:H7 Ad1248	2-1-1-0-1 (1.0)	2.682	+
117	Beef trim	E. coli O157:H7 Ad1174	0-0-0-0-3 (0.6)	2.590	+
121	Ground beef 15% fat	E. coli O157:H7 Ad585	2-0-1-0-2 (1.0)	2.699	+
4001	Fermented milk	E. coli O157:H7 Ad578	0-3-2-4-3 (2.4)	2.842	+
4184	Raw milk cheese	E. coli O157:H7 Ad571	5-0-3-0-1 (1.8)	0.695	+
4299	Fermented yoghurt	E. coli O157:H7 Ad581	1-1-1-4-0 (1.4)	2.785	+
4300	Fermented milk	E. coli O157:H7 Ad582	0-4-1-1-0 (1.2)	2.810	+
4301	Fermented milk	E. coli O157:H7 Ad582	0-4-1-1-0 (1.2)	2.801	+
4305	Fermented milk	E. coli O157:H7 Ad581	1-1-1-4-0 (1.4)	2.750	+
127	Raw Milk	E. coli O157:H7 Ad576	3-3-2-0-0 (1.6)	1.295	+
130	Raw Milk	E. coli O157:H7 Ad578	0-0-1-3-2 (1.0)	1.161	+
132	Raw Milk	E. coli O157:H7 Ad576	3-3-2-0-0 (1.6)	2.670	+
134	Raw Milk	E. coli O157:H7 Ad578	0-0-1-3-2 (1.0)	1.916	+
302	Raw milk	E. coli O157:H7 Ad1745	2-2-2-2-2 (2.0)	2.507	+
3987	Produce	E. coli O157:H7 Ad556	2-4-3-1-1 (2.2)	2.451	+
3991	Caesar salad	E. coli O157:H7 Ad577	1-2-3-3-4 (2.6)	2.854	+
3992	Deli salad (ham, egg, cheese)	E. coli O157:H7 Ad578	0-3-2-4-3 (2.4)	2.780	+
4175	Baby leaves	E. coli O157:H7 EF190	0-2-1-4-0 (1.4)	2.648	+
4295	Produce	E. coli O157:H7 Ad582	0-4-1-1-0 (1.2)	0.309	+
3	Sprouts	E. coli O157:H7 Ad572	5-5-5-3-3 (4.2)	0.367	+
10	Coleslaw	E. coli O157:H7 Ad571	5-9-5-2-3 (4.8)	2.759	+
11	Ready to eat celery	E. coli O157:H7 Ad571	5-9-5-2-3 (4.8)	2.440	+
290	Parsley	E. coli O157:H7 Ad581	0-2-1-2-4 (1.8)	2.623	+
353	Dusts (dairy industry)	E. coli O157:H7 Ad1745	2-2-1-4-4 (2.6)	2.693	+
355	Dusts (sprout industry)	E. coli O157:H7 Ad577	1-3-0-0-2 (1.2)	2.674	+
362	Swab (sprout industry)	E. coli O157:H7 Ad574	0-1-0-1-2 (0.6)	2.358	+
1256	Swab (meat industry)	E. coli O157:H7 Ad552	2-1-1-6-1 (2.2)	2.597	+
1258	Swab (meat industry)	E. coli O157:H7 Ad553	2-4-3-4-4 (3.4)	2.526	+
1326	Swab (meat industry)	E. coli O157:H7 Ad685	3-0-2-2-2 (1.8)	2.827	+
1327	Swab (meat industry)	E. coli O157:H7 Ad554	4-6-5-2-1 (3.6)	2.379	+

According to the Annex F of the ISO 16140 (2003) standard, the analysis of discordant is:

Y = ND + PD = 26 + 35 = 61

Y > 22, the MacNemar test is applied:

$$\chi^2 = \frac{d^2}{y} = \frac{|PD-ND|^2}{y} = \frac{|35-26|^2}{61} = \frac{81}{61} = 1.328$$

$\chi^2 < 3.841$; **the two methods are not different.**

3.1.1.7 Confirmations

96 positive ELISA tests were observed; for 2 of them (samples 4177 and 4182), it was impossible to isolate the *Escherichia coli* strains even by using an IMS step and a re-growth step in BHI broth. These samples were considered as PPNA (Positive Presumptive Negative Agreement). Note that for these samples, the observed ODs for the first test were very low (0.240 and 0.211). ELISA replicates for the same 2 samples gave negative results (OD = 0.185 and 0.176 for the sample 4177 and OD = 0.185 and 0.183 for the sample 4182).

A summary of the results obtained with the different confirmation protocols is given in Table 10.

Table 10

	Number of samples depending on the selective agar	
Confirmation protocols	**CT-SMAC**	**Chromagar O157**
Direct streaking	78	67
IMS step	14	11
Confirmation tests on characteristic colonies	1	1
Total confirmed	**93**	**79**
No typical colony	*1*	*15*
Total positive samples	**94**	

Based on these data, the better results were observed when using CT-SMAC as selective agar plate.

3.1.1.8 mTSB novobiocin storage for 72 h at 2 – 8°C prior to ELISA tests

The enrichment broths were stored for 72 h at 2 – 8°C and analysed a second time. The following change was observed:

Sample n°	Product	Before storage	After storage
4297	Fermented cream	- ND	+ PA

The analysis of discordant became:

Y = ND + PD = 25 + 35 = 60
Y > 22, the MacNemar test is applied:

$$\chi^2 = \frac{d^2}{y} = \frac{|PD-ND|^2}{y} = \frac{|35-25|^2}{60} = \frac{100}{60} = 1.667$$

$\chi^2 < 3.841$; **the two methods are not different.**

3.1.2 Relative detection level

ISO 16140 (2003)

- *For the purpose of this Standard, the relative detection level is the smallest number of culturable microorganisms than can be detected with 50 % of chances in the sample by the alternative and reference methods.*

3.1.2.1 Matrices

The objective of this study is (i) to determine the minimal quantity of the target analyse that can be detected in food matrices, (ii) to compare both method results.

The detection limits were defined by analysing four matrix/strain pairs. The tested matrices are given in Table 11.

Table 11

Matrix	Inoculated strain	Storage conditions prior to analysis
Ground beef	*Escherichia coli* O157:H7 Ad 486, isolated from ground beef	48 h at 2 – 8°C
Raw milk	*Escherichia coli* O157:H7 Ad 1745, isolated from dairy product	48 h at 2 – 8°C
Fresh produces	*Escherichia coli* O157:H7 Ad 556, isolated from environmental sample	48 h at 2 – 8°C
Process water	*Escherichia coli* O157:H7 Ad 552, isolated from environmental sample	48 h at 2 – 8°C

3.1.2.2 Contamination protocol

Three contamination levels were tested:

- 5 non-inoculated samples,
- 20 samples inoculated at a low contamination level, providing fractional recovery,
- 5 samples inoculated at a high contamination level.

Three batches were prepared for each matrix:

- One non-inoculated (300 g for an unpaired study),
- One inoculated between 0.5 and 1 CFU/25 g (1500 g for an unpaired study),
- One inoculated at 2 CFU/25 g (300 g for an unpaired study).

After inoculation, the different matrices were stored in the conditions described in table 12 before analyses by both methods. The background microflora was also enumerated.

3.1.2.3 Results

The raw data are given in **Appendix 5**. The relative detection levels are presented in the table 12.

Table 12 – Relative detection level results

Strain / matrix pairs	Relative detection level (CFU / sample) according to Spearman-Kärber test[1]	
	Reference method	Alternative method
Ground beef / *Escherichia coli* O157:H7 Ad 486	0.493 [0.372; 0.655]	0.563 [0.424; 0.747]
Raw milk / *Escherichia coli* O157:H7 Ad 1745	0.806 [0.527; 1.232]	1.061 [0.694; 1.622]
Fresh produces / *Escherichia coli* O157:H7 Ad 556	0.602 [0.413; 0.878]	0.707 [0.485; 1.031]
Process water / *Escherichia coli* O157:H7 Ad 552	0.94 [0.675; 1.307]	1.014 [0.764; 1.346]

The relative detection levels of the two methods are similar for the four matrix/strain pairs; they are comprised between 0.4 and 1.3 CFU/sample for the reference method and between 0.4 and 1.6 CFU/sample for the alternative method.

[1] *"Hitchins A. Proposed Use of a 50 % Limit of Detection Value in Defining Uncertainty Limits in the Validation of Presence-Absence Microbial Detection Methods, Draft 10th December, 2003".*

3.1.3 Inclusivity / exclusivity

ISO 16140 (2003)

- *Inclusivity is the ability of the alternative method to detect the target analyte from a wide range of strains.*
- *Exclusivity is the lack of interference from a relevant range of non-target strains of the alternative method.*

3.1.3.1 Test protocols

❒ **Inclusivity**

E. coli O157 strains cultures were performed in BHI medium at 37°C. Dilutions were done in order to inoculate 10 cells/225 ml of mTSB + novobiocin. The alternative protocol was then performed after an enrichment time of 16 hours at 41.5°C.

❒ **Exclusivity**

Negative strains cultures were performed in BHI at 37°C. Dilutions were realised in order to inoculate 10^5 cells/ml of BPW. The alternative protocol was then performed after an enrichment time of 20 hours at 37°C.

3.1.3.2 Results

Raw data are given in **Appendix 6**.

❒ **Inclusivity**

The 50 tested strains gave positive Solus ELISA tests and were confirmed by the latex tests after recovery on both CT-SMAC and Chromagar O157.

❒ **Exclusivity**

Among the 30 tested strains, 2 gave a positive Solus ELISA test as expected for *Salmonella* strains from the N group: *Salmonella* Landau Ad 499 and *Salmonella* Urbana Ad 501.
Salmonella Landau grown on CT-SMAC giving atypical colonies (sorbitol +) and showing negative latex tests.

Salmonella Urbana did not grow on the 2 tested selective agar plates (CT-SMAC and Chromagar O157).

These two strains were tested using the inclusivity protocol, corresponding to the alternative method one with a selective enrichment step; *Salmonella* Landau gave a positive ELISA result while *Salmonella* Urbana did not grow in the mTSB broth. Of course, the *Salmonella* Landau strain was once again not confirmed as *Escherichia coli* O157:H7 by the confirmation procedure.

Indeed, despite some positive ELISA tests could be observed as expected with some *Salmonella* strains from the N group, the final results are negative after running the confirmation procedure.

3.1.3.3 Conclusion

The alternative method is specific and selective.

3.1.4 Practicability

The alternative method practicability was evaluated according to the AFNOR criteria relative to method comparison study.

Packaging and reagents	The components are the following: - 1 negative control flask - 1 positive control flask - 1 conjugate flask - 1 substrate flask - 1 stop solution flask - Concentrated wash buffer.
Storage conditions and shelf-life	The storage temperature is: 2-8°C. The shelf-life is given on the package. All the reagents must be stored at the temperature mentioned on the package.
Specific equipment	- An incubator - A water bath - A microplate reader - Microplate washer
Reagents	All the reagents are ready to use, except the wash buffer.
Training	One day is required for technicians with microbiology knowledge.

Workflow (in minutes) for 24 samples	Steps	**Reference method**	**Alternative method**
	Negative samples		
	Sampling	60	60
	E. coli O157 ELISA test	/	60
	IMS 6 h	72	/
	IMS 24 if necessary	72	/
	Selective plate reading	30	/
	Total for negative sample analysis	**234**	**120**
	Total/negative sample	**9.75**	**5.00**
	Steps	**Reference method**	**Alternative method**
	Presumptive samples or positive samples		
	Direct streaking onto CT SMAC / chromogenic medium	/	20
	Selective plate reading	/	15
	Confirmatory test	84	28
	Total for positive samples	**318**	**163**
	Total/positive sample	**13.25**	**6.79**
Time to result (in min)	Steps	**Reference method**	**Alternative method**
	Negative samples		
	Sampling	Day 0	Day 0
	E. coli O157 ELISA test	/	Day 1
	IMS 6	Day 0	/
	IMS 24 h	Day 1	/
	Selective plate reading	Day 2	/
	Final negative result	Day 2	Day 1
	Steps	**Reference method**	**Alternative method**
	Presumptive positive or positive results		
	Direct streaking onto CT SMAC / chromogenic medium	/	Day 1
	Selective plate reading	/	Day 2
	Confirmatory test	Day 1 to Day 4	Day 2 (O157 latex test) Day 3 (H7 latex test)
	Final positive result	Day 4	Day 2 to Day 3
Technician background	Technician qualified in microbiology and molecular biology		
Common step with the reference method	Enrichment in Half Fraser broth		
Traceability of the results	All the data are traced in the computer of the Microplate reader		
Maintenance	/		

The workflow and the time to results are divided by 2 using the alternative method in comparison to the reference method.

3.2 Inter-laboratory study

3.2.1 Study organisation

Samples were sent to 12 laboratories. Ground beef sample (15 % fat content) was inoculated with the non-pathogenic *Escherichia coli* O157:H7 ATCC 43888

Samples were inoculated on Monday 6th July 2015; as described below:

- 24 blind coded samples for *Escherichia coli* O157 analysis by Solus *E. coli* O157 ELISA Screening Assay method (blue stick),
- 24 blind coded samples for *Escherichia coli* O157 analysis by the EN ISO 16654 reference method (red stick),
- 1 sample for aerobic mesophilic flora enumeration by ISO 4833-1 method,
- 1 water bottle labelled “Temperature Control” with a temperature probe.

The targeted inoculation levels were the following:

- Level 0: 0 CFU/ 25 g,
- Level 1: 3 CFU/25 g,
- Level 2: 10 CFU/25 g.

As this is an unpaired data study, each laboratory received 48 samples of 25 g, i.e. 8 samples per inoculation level and method. Furthermore, one non-inoculated sample was added to the package for total viable count microflora enumeration by the ISO 4833-1 method.

Blind coded samples were placed in isothermal boxes, which contained cooling blocks, and express-shipped to the different laboratories.

A temperature control flask containing a sensor was added to the package in order to register the temperature profile during the transport, the package delivery and storage until analyses.

Samples were shipped in 24 h to 48 h to the collaborative laboratories. The temperature conditions had to stay lower or equal to 8.4°C during transport, and between 0°C – 8.4°C in the labs.

Collaborators and ADRIA Développement carried out the analyses with the alternative and reference methods.

3.2.2 Experimental parameters control

3.2.2.1 *Contamination level before inoculation, levels obtained after the artificial contaminations of the samples*

- *Before inoculation*

In order to detect *Escherichia coli* O157:H7, the reference method was performed on five portions (25 g) before the inoculation. All the results were negative.

- *Sample stability*

Sample stability was checked by inoculating the matrix at 100 CFU/g and 5 CFU/g. Enumerations were performed for the high contamination level and detection analyses were performed for the low contamination level. *Triplicata* were analysed, and the results were the following:

Table 13

Day	Reference method (detection)			CFU/g			Aerobic mesophilic flora (CFU/g)
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	
Day 0	+	+	-	190	70	140	$6.0\ 10^2$
Day 1	+	-	-	90	60	130	$6.0\ 10^2$
Day 2	+	+	+	90	60	20	$9.0\ 10^3$

No evolution was observed during storage at 2 - 8°C.

- *Contamination levels*

The contamination levels and the confidence intervals were:

Table 14

Level	Samples	Theoretical target level (b/25 g)	True level (b/25 g sample)	Low limit / 25 g sample	High limit / 25 g sample
Level 0	5 - 9 - 10 - 14 - 18 - 20 - 23 - 24	/	/	/	/
Low level	1 - 4 - 7 - 11 - 12 - 16 - 19 - 21	2	2.9	2.4	3.4
High level	2 - 3 - 6 - 8 - 13 - 15 - 17 - 22	10	12.1	10.1	14.4

3.2.2.2 Logistic conditions

The temperatures measured at reception by the Labs, the temperature registered by the thermo-probe, and the receipt dates are given in Table 15.

Table 15 - Sample temperatures at receipt

Laboratories	Temperature measured by the probe (°C)	Temperature measured at receipt (°C)	Receipt date and time	
A	3.8	7.1	07/07/2015	12h00
B	3.5	6.9	07/07/2015	16h10
C	2.5	5.1	07/07/2015	11h30
D	*Not received*	3.8	07/07/2015	16h30
E	*Not received*	**9.6**	07/07/2015	17h30
F	3.0	6.2	07/07/2015	11h00
G	3.0	**8.7**	07/07/2015	16h00
H	3.5	7.5	07/07/2015	16h00
J	*Not received*	6.7	07/07/2015	11h20
K	4.0	7.0	07/07/2015	10h45
L	5.5	7.3	07/07/2015	10h05
M	5.0	4.4	07/07/2015	17h00

3.2.2.3 Conclusion

No major problem was encountered during shipment.

For 3 Labs (D, E and J), we have not yet received the probes. For Lab E, the temperature measured at receipt was 9.6°C; it can reasonably be considered that this Lab received the samples at a temperature below 8.4°C, as it is the case for all the other Labs and based on the temperature in Northern Europe during the week of the ring trial.

The Lab G measured a temperature above 8.4°C at receipt, but the packaging probe indicated a temperature of 3.0°C.

3.2.3 Analysis results

3.2.3.1 Aerobic mesophilic flora enumeration

Depending on the Lab results, the enumeration levels varied from 1.9 10^2 to 2.3 10^5 CFU/g. One Lab did not provide the result (Lab D).

3.2.3.2 Expert lab results

The raw data are given in **Appendix 7**. The results are summarised in table 16.

Table 16 – Results obtained by the expert Lab.

Level	Reference method	Alternative method
L0	0/8	0/8
L1	7/8	6/8
L2	8/8	8/8

3.2.3.3 Collaborator lab results

12 Labs participated to the study; they all started the analysis at Day 2 (08/07/2015).

All the raw data are given in **Appendix 8**. A summary of the results is given in table 17 for all the Labs, and table 18 without the results of 2 Labs (Labs J and L).

Table 17 – Results obtained by the all collaborator Labs.

Reference method			
Laboratory	L0 (+)	L1 (+)	L2 (+)
A	2/8	7/8	8/8
B	0/8	6/8	8/8
C	3/8	8/8	8/8
D	0/8	7/8	8/8
E	0/8	7/8	8/8
F	0/8	7/8	8/8
G	1/8	7/8	8/8
H	0/8	7/8	8/8
J	8/8	8/8	8/8
K	0/8	7/8	8/8
L	4/8	6/8	8/8
M	0/8	6/8	8/8
Total	18	83	96

Alternative method						
Laboratory	L0 (+)		L1(+)		L2(+)	
	P0	CP0	P1	CP1	P2	CP2
A	0/8	0/8	7/8	7/8	8/8	8/8
B	0/8	0/8	8/8	8/8	8/8	8/8
C	1/8	0/8	6/8	6/8	8/8	8/8
D	0/8	0/8	8/8	8/8	8/8	8/8
E	0/8	0/8	8/8	8/8	8/8	8/8
F	1/8	0/8	7/8	7/8	8/8	8/8
G	0/8	0/8	6/8	6/8	8/8	8/8
H	1/8	0/8	6/8	6/8	8/8	8/8
J	2/8	0/8	7/8	7/8	8/8	8/8
K	0/8	0/8	8/8	8/8	8/8	8/8
L	1/8	0/8	4/8	4/8	8/8	8/8
M	0/8	0/8	7/8	7/8	8/8	8/8
Total	6	0	82	82	96	96

P: presumptive CP: confirmed

Table 18 – Results obtained by 10 collaborator Labs (Labs J and L cancelled)

Reference method			
Laboratory	L0 (+)	L1(+)	L2(+)
A	2/8	7/8	8/8
B	0/8	6/8	8/8
C	3/8	8/8	8/8
D	0/8	7/8	8/8
E	0/8	7/8	8/8
F	0/8	7/8	8/8
G	1/8	7/8	8/8
H	0/8	7/8	8/8
K	0/8	7/8	8/8
M	0/8	6/8	8/8
Total	6	69	80

Alternative method						
Laboratory	L0 (+)		L1(+)		L2(+)	
	P0	CP0	P1	CP1	P2	CP2
A	0/8	0/8	7/8	7/8	8/8	8/8
B	0/8	0/8	8/8	8/8	8/8	8/8
C	1/8	0/8	6/8	6/8	8/8	8/8
D	0/8	0/8	8/8	8/8	8/8	8/8
E	0/8	0/8	8/8	8/8	8/8	8/8
F	1/8	0/8	7/8	7/8	8/8	8/8
G	0/8	0/8	6/8	6/8	8/8	8/8
H	1/8	0/8	6/8	6/8	8/8	8/8
K	0/8	0/8	8/8	8/8	8/8	8/8
M	0/8	0/8	7/8	7/8	8/8	8/8
Total	3	0	71	71	80	80

5 Labs found positive results (18) for control samples with the reference method (A, C, G, J and K).

4 Labs found positive ELISA results (5) for control samples, and all the results were confirmed negative.

The results of 2 Labs (J and L), which had the highest number of cross contamination, were not taken into account for statistical interpretation.

3.2.4 Results interpretation

3.2.4.1 *Specificity and sensitivity for each method*

For the L0 level and for each method, specificity percentages are calculated according to:

$$SP = \left[1 - \left(\frac{FP}{N-}\right) x\, 100\%\right]$$

with: N- = total number of all L0 assays
FP = number of false positive results

For each contamination level and each method, the sensitivity percentages are calculated according to:

$$SE = \frac{TP}{N+} x\, 100\%$$

with :N+ = total number of all L1 or L2 assays
TP = number of true positive results

Results (See **Appendix 9**) are reported in Table 19.

Table 19 – Interpretation

Level	Reference method		Alternative method	
	SP/SE %	LCL%	SP/SE %	LCL%
L0 (SP)	92.5	88.3	100.0	98.0
L1 (SE)	86.3	80.8	88.8	83.8
L2 (SE)	100.0	98.0	100.0	98.0
L1+L2 (SE)	93.1	89.1	94.4	90.7

LCL: confidence interval

3.2.4.2 Relative accuracy (AC)

Results for all levels (See **Appendix 10**) are given below:

Table 20 - Paired results of the alternative and reference methods

Alternative method	Reference method		Total
	+	-	
+	PA = 142	PD = 9	**151**
-	ND = 13	NA = 76	**89**
Total	**N+ = 155**	**N- = 85 (PPNA = 3)**	**N =240**

Relative accuracy (AC) (in %) is calculated according to: $AC = \frac{(PA + NA)}{N} x\, 100\%$

with : N = number of samples analysed
PA = number of positive agreement
NA = number of negative agreement

The alternative method accuracy values with regard to the reference method are:

Table 21 – Interpretation

Level	AC %	LCL %
L0	92.5	86.6
L1	80.0	71.1
L2	100.0	98.0
L1 + L2	90.0	85.3
Total	**90.8**	**87.1**

3.2.4.3 Discordant results

13 negative deviations and 9 positive deviations were observed. Note that 6 negative deviations were linked to cross contamination in the reference method at Level L0.

The analysis of discordant is:

Y = ND + PD + 13 + 9 = 22 Y = 22
m = 9 M = 5
m > M, the two methods are not different at α < 0.05.

3.2.5 Interpretation

3.2.5.1 Comparison of the relative accuracy, specificity and sensitivity values

The values obtained for the two parts of the validation study (comparative and inter-laboratory studies) are reported in Table 22.

Table 22 - Alternative method values calculated during the comparative and inter-laboratory studies

	Inter-laboratory study	Method comparison study
Relative accuracy (AC)	90.8 %	74.6 %
Sensitivity (SE)	94.4 %	69.4 %
Specificity (SP)	100.0 %	77.4 %

The relative accuracy, specificity and sensitivity values observed for the inter-laboratory study are higher than those observed during the method comparison study.

3.2.5.2 Accordance (DA)

Accordance values for both methods are (**Appendix 11**):

Table 23 – Interpretation

Level	Reference method (DA)	Alternative method (DA)
L0	89.4 %	100.0 %
L1	77.2 %	82.2 %
L2	100.0 %	100.0 %

The results observed with the alternative method are better than those observed with the reference method.

3.2.5.3 Concordance

Both methods concordance values are (See **Appendix 12**):

Table 24 – Interpretation

Level	Reference method	Alternative method
L0	85.8 %	100.0 %
L1	76.2 %	79.8 %
L2	100.0 %	100.0 %

The results observed with the alternative method are better than those observed with the reference method.

3.2.5.4 Odds Ratio (COR)

The odds ratio value is determined according to:

$$COR = \frac{Accordance\ x\ (100 - condorcance)}{Concordance\ x\ (100 - accordance)}$$

Both method odds ratio values are:

Table 25 – Interpretation

Level	Reference method (COR)	Alternative method (COR)
L0	1.40	1.00
L1	1.06	1.17
L2	1.00	1.00

4 CONCLUSION

The **method comparison study conclusions** are:

- ☒ The Solus *E. coli* O157 ELISA method shows satisfying relative accuracy, specificity and sensitivity.

- ☒ The relative detection limits of the alternative method and the ISO standard are similar.

- ☒ The alternative method shows satisfying inclusivity and exclusivity results.

The **inter-laboratory study conclusions** are:

- ☒ Cross contaminations were observed on blank samples (18 with the ISO method, and 6 with the alternative method); the results were not confirmed using the proposed confirmatory tests of the alternative method.

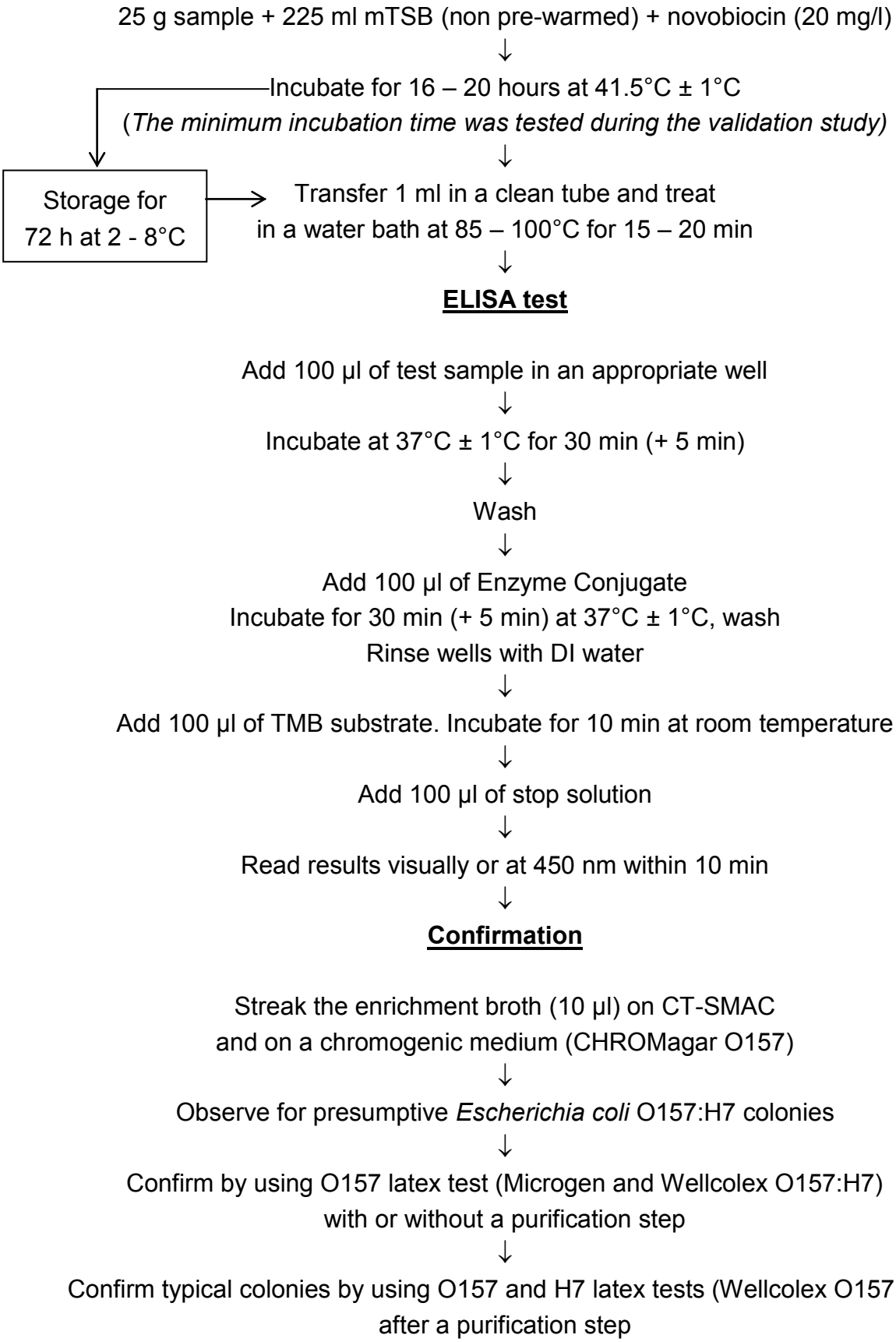
- ☒ As we have observed in previous studies and also based on the numerous cross contaminations seen with the ISO method in this study, the reference method is not so easy to perform.

- ☒ Despite numerous cross contaminations, it is clear that based on the observed data and interpretation, **the alternative method is performing AT LEAST as well as the reference method**. If we interpret data from Labs which showed a few cross contaminations that confirmed positive with the ISO method, it is still possible to complete the study and so avoid using data coming from labs which had few cross contaminations.

Appendix 1 - ISO 16654: Horizontal method for the detection of *Escherichia coli* O157

25 g sample
1/10 dilution in mTSB + novobiocin preheated at 41.5°C
↓
6 h and 24 h at 41.5°C ± 1°C
↓
Transfer 1 ml in an Eppendorf tube
↓
Immunomagnetic separation (IMS)
↓
Streak:
50 µl onto CT SMAC
50 µl onto O157:H7 second media (CHROMagar O157)
↓
Incubate 24 h at 37°C
↓
Subculture characteristic colonies on TSA
↓
24 h at 37°C
↓
Confirmation tests:
Indole test and latex tests
(O157 and H7)

Appendix 2 – Flow diagram of the Solus *E. coli* O157 ELISA Screening Assay



Appendix 3 – Artificial contamination of the samples

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
3976	Egréné de bœuf congelé	Frozen ground beef	E. coli O157:H7 Ad563	Ground beef	-20°C / 6 days	1.14	2-1-3-3-5 (2.8)	+
3977	Steak haché 15% MG congelé	Frozen ground beef 15% fat	E. coli O157:H7 Ad563	Ground beef	-20°C / 6 days	1.14	2-1-3-3-5 (2.8)	+
3978	Steak haché 10% MG congelé	Frozen ground beef 10% fat	E. coli O157:H7 Ad563	Ground beef	-20°C / 6 days	1.14	2-1-3-3-5 (2.8)	+
3979	Steak haché aux oignons 15% MG congelé	Frozen ground beef with onions 15% fat	E. coli O157:H7 Ad564	Ground beef	-20°C / 6 days	1.13	1-2-4-8-3 (3.6)	+
3980	Boulettes aux oignons 15% MG congelé	Frozen beef balls with onions 15% fat	E. coli O157:H7 Ad564	Ground beef	-20°C / 6 days	1.13	1-2-4-8-3 (3.6)	+
3981	Boulettes à l'orientale 15% MG congelé	Frozen seasoned beef balls 15% fat	E. coli O157:H7 Ad564	Ground beef	-20°C / 6 days	1.13	1-2-4-8-3 (3.6)	+
3982	Boulettes natures 15% MG	Beef balls 15% fat	E. coli O157:H7 Ad487	Ground beef	4°C / 6 days	1.31	4-2-1-1-4 (2.4)	+
3983	Tournedos de boeuf	Beef trim	E. coli O157:H7 Ad487	Ground beef	4°C / 6 days	1.31	4-2-1-1-4 (2.4)	+
3984	Bavette d'aloyau	Beef trim	E. coli O157:H7 Ad488	Ground beef	4°C / 6 days	1.05	3-4-7-3-1 (3.6)	+
3985	Biftek	Beef trim	E. coli O157:H7 Ad488	Ground beef	4°C / 6 days	1.05	3-4-7-3-1 (3.6)	+
3986	Jeunes pousses d'épinards	Baby leaves (spinach)	E. coli O157:H7 Ad556	Environmental sample	4°C / 7 days	0.67	2-4-3-1-1 (2.2)	+
3987	Roquette	Produce	E. coli O157:H7 Ad556	Environmental sample	4°C / 7 days	0.67	2-4-3-1-1 (2.2)	+
3988	Mâche	Produce	E. coli O157:H7 Ad557	Environmental sample	4°C / 7 days	1.18	2-1-2-2-2 (1.6)	+
3989	Pousses de soja	Soya sprouts	E. coli O157:H7 Ad557	Environmental sample	4°C / 7 days	1.18	2-1-2-2-2 (1.6)	+
3990	Salade poulet emmental	Deli salad (cheese, chicken)	E. coli O157:H7 Ad577	Bovine faeces	4°C / 6 days	0.70	1-2-3-3-4 (2.6)	+
3991	Salade caesar	Caesar salad	E. coli O157:H7 Ad577	Bovine faeces	4°C / 6 days	0.70	1-2-3-3-4 (2.6)	+
3992	Salade jambon œuf emmental	Deli salad (ham, egg, cheese)	E. coli O157:H7 Ad578	Bovine faeces	4°C / 6 days	0.53	0-3-2-4-3 (2.4)	+
3993	Petits pois surgelés	Frozen peas	E. coli O157:H7 Ad558	Environmental sample	-20°C / 6 days	0.88	0-1-1-1-1 (0.8)	+
3994	Carottes rondelles surgelées	Sliced frozen carrots	E. coli O157:H7 Ad558	Environmental sample	-20°C / 6 days	0.88	0-1-1-1-1 (0.8)	-
3995	Duo de haricots plats surgelés	Flat frozen beans	E. coli O157:H7 Ad575	Bovine faeces	-20°C / 6 days	1.45	1-4-2-2-0 (1.8)	+
3996	Lait cru	Raw milk	E. coli O157:H7 Ad556	Environmental sample	4°C / 7 days	0.67	2-4-3-1-1 (2.2)	+

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
3997	Lait cru	Raw milk	E. coli O157:H7 Ad557	Environmental sample	4°C / 7 days	1.18	2-1-2-2-2 (1.6)	+
3998	Lait ribot	Fermented milk	E. coli O157:H7 Ad556	Environmental sample	4°C / 7 days	0.67	2-4-3-1-1 (2.2)	+
3999	Lait ribot	Fermented milk	E. coli O157:H7 Ad557	Environmental sample	4°C / 7 days	1.18	2-1-2-2-2 (1.6)	+
4000	Lait fermenté	Fermented milk	E. coli O157:H7 Ad577	Bovine faeces	4°C / 6 days	0.70	1-2-3-3-4 (2.6)	+
4001	Gros lait fermenté	Fermented milk	E. coli O157:H7 Ad578	Bovine faeces	4°C / 6 days	0.53	0-3-2-4-3 (2.4)	+
4002	Crème crue	Raw cream	E. coli O157:H7 Ad577	Bovine faeces	4°C / 6 days	0.70	1-2-3-3-4 (2.6)	+
4003	Morbier au lait cru	Raw milk cheese	E. coli O157:H7 Ad578	Bovine faeces	4°C / 6 days	0.53	0-3-2-4-3 (2.4)	+
4004	Bethmale au lait cru	Raw milk cheese	E. coli O157:H7 Ad556	Environmental sample	4°C / 7 days	0.67	2-4-3-1-1 (2.2)	+
4005	Reblochon au lait cru	Raw milk cheese	E. coli O157:H7 Ad557	Environmental sample	4°C / 7 days	1.18	2-1-2-2-2 (1.6)	-
4164	Viande hachée pur bœuf 5% MG congelé	Frozen ground beef 5% fat	E. coli O157:H7 Ad489	Ground beef	Seeding -20°C 1 week	/	1-0-2-2-1 (1.2)	+
4165	Tartare de bœuf congelé	Frozen ground beef	E. coli O157:H7 Ad489	Ground beef	Seeding -20°C 1 week	/	1-0-2-2-1 (1.2)	+
4166	Viande hachée pur bœuf 15% MG congelé	Frozen ground beef 15% fat	E. coli O157:H7 Ad559	Ground beef	Seeding -20°C 1 week	/	0-0-1-2-2 (1.0)	+
4167	Entrecôte bœuf	Beef trim	E. coli O157:H7 Ad559	Ground beef	Seeding 4°C 48h	/	0-0-1-2-2 (1.0)	+
4168	Tournedos de boeuf	Beef trim	E. coli O157:H7 Ad560	Ground beef	Seeding 4°C 48h	/	2-3-1-0-3 (1.8)	+
4169	Biftek de bavette d'aloyau	Beef trim	E. coli O157:H7 Ad560	Ground beef	Seeding 4°C 48h	/	2-3-1-0-3 (1.8)	-
4170	Effeuillé de charolais	Beef meat	E. coli O157:H7 Ad683	Beef balls	Seeding 4°C 48h	/	0-1-0-2-1 (0.8)	+
4171	Pavé de bœuf mariné à l'échalote	Seasoned beef meat	E. coli O157:H7 Ad683	Beef balls	Seeding 4°C 48h	/	0-1-0-2-1 (0.8)	+
4172	Pavé de bœuf mariné aux 3 poivres	Seasoned beef meat	E. coli O157:H7 Ad924	Ground beef	Seeding 4°C 48h	/	0-2-1-0-1 (0.8)	+
4173	Carpaccio de bœuf	Carpaccio	E. coli O157:H7 Ad924	Ground beef	Seeding 4°C 48h	/	0-2-1-0-1 (0.8)	+
4174	Mâche fraiche	Produce	E. coli O157:H7 EF190	Bovine faeces	Seeding 4°C 48h	/	0-2-1-4-0 (1.4)	-
4175	Pousses d'épinards fraiches	Baby leaves	E. coli O157:H7 EF190	Bovine faeces	Seeding 4°C 48h	/	0-2-1-4-0 (1.4)	+
4176	Pousses de roquette fraiches	Baby leaves	E. coli O157:H7 Ad578	Bovine faeces	Seeding 4°C 48h	/	1-1-0-3-0 (1.0)	+
4177	Jeunes pousses de mesclum fraiches	Baby leaves	E. coli O157:H7 Ad577	Bovine faeces	Seeding 4°C 48h	/	3-2-2-1-2 (2.0)	-
4178	Pousse de soja	Soya sprouts	E. coli O157:H7 Ad578	Bovine faeces	Seeding 4°C 48h	/	1-1-0-3-0 (1.0)	-
4179	Graines germées poireau	Sprouts	E. coli O157:H7 Ad578	Bovine faeces	Seeding 4°C 48h	/	1-1-0-3-0 (1.0)	-

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
4180	**Graines germées chou violet**	**Sprouts**	E. coli O157:H7 Ad577	Bovine faeces	Seeding 4°C 48h	/	3-2-2-1-2 (2.0)	**+**
4181	**Pousses d'épinards fraiches**	**Baby leaves**	E. coli O157:H7 EF190	Bovine faeces	Seeding 4°C 48h	/	0-2-1-4-0 (1.4)	**+**
4182	**Mesclum frais**	**Produce**	E. coli O157:H7 EF190	Bovine faeces	Seeding -20°C 1 week	/	0-2-1-4-0 (1.4)	**-**
4183	**Epinards hachés congelés**	**Frozen spinach**	E. coli O157:H7 EF190	Bovine faeces	Seeding 4°C 48h	/	0-2-1-4-0 (1.4)	**+**
4184	**Camembert au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad571	Faeces	Seeding 4°C 48h	/	5-0-3-0-1 (1.8)	**+**
4185	**Chèvre au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad571	Faeces	Seeding 4°C 48h	/	5-0-3-0-1 (1.8)	**-**
4186	**Chèvre au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad572	Faeces	Seeding 4°C 48h	/	1-0-1-1-0 (0.6)	**+**
4187	**Tricorn au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad572	Faeces	Seeding 4°C 48h	/	1-0-1-1-0 (0.6)	**+**
4188	**Fromage vache au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	1-2-3-1-5 (2.4)	**+**
4189	**Maroilles**	**Raw milk cheese**	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	1-2-3-1-5 (2.4)	**-**
4190	**Selles sur Cher**	**Raw milk cheese**	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	1-0-2-0-3 (1.2)	**-**
4191	**Reblochon au lait cru**	**Raw milk cheese**	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	0-0-0-0-1 (0.2)	**-**
4192	**Fromage blanc au bifidus**	**Soft white cheese**	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	0-0-0-0-1 (0.2)	**-**
4193	**Beurre cru**	**Raw butter**	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	1-0-2-0-3 (1.2)	**-**
4276	**Steak haché 10% MG congelé**	**Frozen ground beef 10% fat**	E. coli O157:H7 Ad485	Ground beef	Seeding -20°C 1 week	/	0-2-4-0-0 (1.2)	**+**
4277	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	E. coli O157:H7 Ad485	Ground beef	Seeding -20°C 1 week	/	0-2-4-0-0 (1.2)	**-**
4278	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	E. coli O157:H7 Ad486	Ground beef	Seeding -20°C 1 week	/	0-2-1-3-0 (1.2)	**-**
4279	**Steak haché oignon congelé**	**Frozen ground beef with onions 15% fat**	E. coli O157:H7 Ad486	Ground beef	Seeding -20°C 1 week	/	0-2-1-3-0 (1.2)	**-**
4280	**Effeuillé de charolais congelé**	**Frozen beef meat**	E. coli O157:H7 Ad561	Ground beef	Seeding -20°C 1 week	/	2-1-2-2-1 (1.6)	**+**
4281	**Boulettes boeuf oignon congelées**	**Frozen beef balls with onions**	E. coli O157:H7 Ad561	Ground beef	Seeding -20°C 1 week	/	2-1-2-2-1 (1.6)	**-**
4282	**Boulettes orientales congelées**	**Frozen seasoned beef balls**	E. coli O157:H7 Ad562	Ground beef	Seeding -20°C 1 week	/	0-1-0-1-2 (0.8)	**-**
4283	**Entrecôte bœuf congelé**	**Frozen beef trim**	E. coli O157:H7 Ad562	Ground beef	Seeding -20°C 1 week	/	0-1-0-1-2 (0.8)	**-**

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
4284	Bavette d'aloyau congelée	Frozen beef trim	E. coli O157:H7 Ad1248	Ground beef	Seeding -20°C 1 week	/	2-1-1-0-1 (1.0)	+
4285	Tournedos de boeuf congelé	Frozen beef trim	E. coli O157:H7 Ad1248	Ground beef	Seeding -20°C 1 week	/	2-1-1-0-1 (1.0)	-
4286	Graines germées roquette	Sprouts	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	1-0-3-0-1 (1.0)	-
4287	Graines germées alfa radis	Sprouts	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	3-0-0-1-0 (0.8)	-
4288	Graines germées alfalfa	Sprouts	E. coli O157:H7 Ad580	Faeces	Seeding 4°C 48h	/	2-6-1-0-2 (2.2)	-
4289	Graines germées fenufrec mesclum	Sprouts	E. coli O157:H7 Ad581	Faeces	Seeding 4°C 48h	/	1-1-1-4-0 (1.4)	-
4290	Graines germées roquette et alfalfa	Sprouts	E. coli O157:H7 Ad582	Faeces	Seeding 4°C 48h	/	0-4-1-1-0 (1.2)	+
4291	Graines germées radis fenouil	Sprouts	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	1-0-3-0-1 (1.0)	-
4292	Graines germées roquette	Sprouts	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	3-0-0-1-0 (0.8)	-
4293	Graines germées betterave rouge	Sprouts	E. coli O157:H7 Ad580	Faeces	Seeding 4°C 48h	/	2-6-1-0-2 (2.2)	-
4294	Graines germées pousse soja	Soya sprouts	E. coli O157:H7 Ad581	Faeces	Seeding 4°C 48h	/	1-1-1-4-0 (1.4)	-
4295	Cresson	Produce	E. coli O157:H7 Ad582	Faeces	Seeding 4°C 48h	/	0-4-1-1-0 (1.2)	+
4296	Lait fermenté	Fermented milk	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	1-0-3-0-1 (1.0)	-
4297	Crème fermentée probiotique	Fermented cream	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	3-0-0-1-0 (0.8)	+
4298	Fromage blanc lait cru entier	Soft white cheese	E. coli O157:H7 Ad580	Faeces	Seeding 4°C 48h	/	2-6-1-0-2 (2.2)	+
4299	Yaourts fermentés	Fermented yoghurt	E. coli O157:H7 Ad581	Faeces	Seeding 4°C 48h	/	1-1-1-4-0 (1.4)	+
4300	Gros lait fermier	Fermented milk	E. coli O157:H7 Ad582	Faeces	Seeding 4°C 48h	/	0-4-1-1-0 (1.2)	+
4301	Gros lait	Fermented milk	E. coli O157:H7 Ad582	Faeces	Seeding 4°C 48h	/	0-4-1-1-0 (1.2)	+
4302	Crème fraiche brebis	Milk ewe cream	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	1-0-3-0-1 (1.0)	-
4303	Faisselle au lait entier	Fermented milk	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	3-0-0-1-0 (0.8)	+
4304	Yaourts lait entier ferments	Fermented yoghurt	E. coli O157:H7 Ad580	Faeces	Seeding 4°C 48h	/	2-6-1-0-2 (2.2)	+
4305	Faisselle	Fermented milk	E. coli O157:H7 Ad581	Faeces	Seeding 4°C 48h	/	1-1-1-4-0 (1.4)	+
2	Germes haricots mungo	Sprouts	E. coli O157:H7 Ad571	Faeces	4°C / 7 days	0.57	5-9-5-2-3 (4.8)	-

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
3	Fines pousses Alfa radis fenouil	Sprouts	E. coli O157:H7 Ad572	Faeces	4°C / 7 days	0.53	5-5-5-3-3 (4.2)	+
4	Fines pousses roquette et alfalfa	Sprouts	E. coli O157:H7 Ad576	Bovine faeces	4°C / 7 days	0.74	5-4-6-3-0 (3.6)	-
5	Fines pousses	Sprouts	E. coli O157:H7 Ad573	Faeces	4°C / 7 days	0.58	2-4-1-5-5 (3.4)	+
6	Fines pousses Alfalfa	Sprouts	E. coli O157:H7 Ad571	Faeces	4°C / 7 days	0.57	5-9-5-2-3 (4.8)	+
7	Fines pousses roquette et alfalfa	Sprouts	E. coli O157:H7 Ad572	Faeces	4°C / 7 days	0.53	5-5-5-3-3 (4.2)	-
8	Fines pousses alfalfa	Sprouts	E. coli O157:H7 Ad576	Bovine faeces	4°C / 7 days	0.74	5-4-6-3-0 (3.6)	+
9	Betteraves vinaigrette	Beets deli salad	E. coli O157:H7 Ad573	Faeces	4°C / 7 days	0.58	2-4-1-5-5 (3.4)	+
10	Coleslaw moutarde	Coleslaw	E. coli O157:H7 Ad571	Faeces	4°C / 7 days	0.57	5-9-5-2-3 (4.8)	+
11	Céleri remoulade au fromage blanc	Ready to eat celery	E. coli O157:H7 Ad571	Faeces	4°C / 7 days	0.57	5-9-5-2-3 (4.8)	+
12	Carottes râpées assaisonnées	Sliced carrots	E. coli O157:H7 Ad572	Faeces	4°C / 7 days	0.53	5-5-5-3-3 (4.2)	+
13	Champignon assaisonnés oignons/purée tomate	Mushroom salad	E. coli O157:H7 Ad572	Faeces	4°C / 7 days	0.53	5-5-5-3-3 (4.2)	+
14	Salade concombre au fromage blanc	Cucumber deli salad	E. coli O157:H7 Ad576	Bovine faeces	4°C / 7 days	0.74	5-4-6-3-0 (3.6)	-
15	Macédoine de légumes	Vegetables deli salad	E. coli O157:H7 Ad576	Bovine faeces	4°C / 7 days	0.74	5-4-6-3-0 (3.6)	+
113	Faux-filet congelé	Frozen beef trim	E. coli O157:H7 Ad975	Beef meat	Seeding – 20°C 1 week	/	2-3-0-2-0 (1.4)	-
114	Entrecôte bœuf congelée	Frozen beef trim	E. coli O157:H7 Ad1071	Ground beef	Seeding – 20°C 1 week	/	1-2-0-3-1 (1.4)	+
115	Faux-filet congelé	Frozen beef trim	E. coli O157:H7 Ad585	Ground beef	Seeding – 20°C 1 week	/	2-0-1-0-2 (1.0)	+
117	Bavette congelée	Frozen beef trim	E. coli O157:H7 Ad1174	Ground beef	Seeding – 20°C 1 week	/	0-0-0-0-3 (0.6)	+
119	Steak haché 20% MG congelé	Frozen ground beef 20% fat	E. coli O157:H7 Ad975	Beef meat	Seeding – 20°C 1 week	/	2-3-0-2-0 (1.4)	-
120	Egréné de bœuf congelé	Frozen ground beef	E. coli O157:H7 Ad1071	Ground beef	Seeding – 20°C 1 week	/	1-2-0-3-1 (1.4)	+

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
121	Steak haché façon bouchère 15% MG congelé	Frozen ground beef 15% fat	E. coli O157:H7 Ad585	Ground beef	Seeding – 20°C 1 week	/	2-0-1-0-2 (1.0)	+
127	Lait cru	Raw Milk	E. coli O157:H7 Ad576	Bovine faeces	Seeding 4°C 48h	/	3-3-2-0-0 (1.6)	+
128	Lait cru	Raw Milk	E. coli O157:H7 Ad576	Bovine faeces	Seeding 4°C 48h	/	3-3-2-0-0 (1.6)	-
129	Lait cru	Raw Milk	E. coli O157:H7 Ad575	Bovine faeces	Seeding 4°C 48h	/	0-2-0-1-1 (0.8)	-
130	Lait cru	Raw Milk	E. coli O157:H7 Ad578	Bovine faeces	Seeding 4°C 48h	/	0-0-1-3-2 (1.0)	+
131	Lait cru	Raw Milk	E. coli O157:H7 Ad575	Bovine faeces	Seeding 4°C 48h	/	0-2-0-1-1 (0.8)	-
132	Lait cru	Raw Milk	E. coli O157:H7 Ad576	Bovine faeces	Seeding 4°C 48h	/	3-3-2-0-0 (1.6)	+
133	Lait cru	Raw Milk	E. coli O157:H7 Ad575	Bovine faeces	Seeding 4°C 48h	/	0-2-0-1-1 (0.8)	+
134	Lait cru	Raw Milk	E. coli O157:H7 Ad578	Bovine faeces	Seeding 4°C 48h	/	0-0-1-3-2 (1.0)	+
135	Selles sur Cher au lait cru	Raw milk cheese	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	1-3-2-0-1 (1.4)	+
136	Reblochon au lait cru	Raw milk cheese	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	1-3-2-0-1 (1.4)	+
137	Saint Félicien au lait cru	Raw milk cheese	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	1-3-2-0-1 (1.4)	-
146	Graines germées roquette et alfalfa	Sprouts	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	1-4-0-1-2 (1.6)	+
149	Coleslaw	Coleslaw	E. coli O157:H7 Ad575	Bovine faeces	Seeding 4°C 48h	/	1-3-3-1-2 (2.0)	+
288	Ciboulette	Chives	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	1-2-2-1-3 (1.8)	+
290	Persil plat	Parsley	E. coli O157:H7 Ad581	Faeces	Seeding 4°C 48h	/	0-2-1-2-4 (1.8)	+
296	Entrecôte bœuf congelé	Frozen beef trim	E. coli O157:H7 Ad487	Ground beef	Seeding -20°C 1 week	/	1-1-1-1-1 (1.0)	+
297	Steak haché congelé	Frozen ground beef	E. coli O157:H7 Ad487	Ground beef	Seeding -20°C 1 week	/	1-1-1-1-1 (1.0)	+
298	Pavé de bœuf mariné à l'échalote congelé	Frozen seasoned beef meat	E. coli O157:H7 Ad487	Ground beef	Seeding -20°C 1 week	/	1-1-1-1-1 (1.0)	+
300	Lait cru	Raw milk	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	2-2-2-2-2 (2.0)	-
301	Lait cru	Raw milk	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	2-2-2-2-2 (2.0)	+
302	Lait cru	Raw milk	E. coli O157:H7 Ad1745	Cheese	Seeding 4°C 48h	/	2-2-2-2-2 (2.0)	+
305	Lait cru	Raw milk	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	1-2-2-1-3 (1.8)	-
306	Lait cru	Raw milk	E. coli O157:H7 Ad580	Faeces	Seeding 4°C 48h	/	0-1-4-2-1 (1.6)	-
308	Lait cru	Raw milk	E. coli O157:H7 Ad582	Faeces	Seeding 4°C 48h	/	0-1-4-4-4 (2.6)	-
350	Déchet poudre de lait	Dusts (dairy industry)	E. coli O157:H7 Ad686	Environmental sample	4°C / 8 days	0.74	3-2-3-2-2 (2.4)	+
351	Poussière	Dusts (dairy industry)	E. coli O157:H7 Ad686	Environmental sample	4°C / 8 days	0.74	3-2-3-2-2 (2.4)	+
352	Poussière	Dusts (dairy industry)	E. coli O157:H7 Ad688	Environmental sample	4°C / 8 days	0.76	5-2-2-7-3 (3.8)	-

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353	Poussière	Dusts (dairy industry)	E. coli O157:H7 Ad1745	Cheese	4°C / 8 days	0.72	2-2-1-4-4 (2.6)	+
354	Poussière	Dusts (sprout industry)	E. coli O157:H7 Ad576	Bovine faeces	Seeding 4°C 48h	/	3-0-0-1-1 (1.0)	+
355	Poussière	Dusts (sprout industry)	E. coli O157:H7 Ad577	Bovine faeces	Seeding 4°C 48h	/	1-3-0-0-2 (1.2)	+
357	Eau de forage	Process water (sprout industry)	E. coli O157:H7 Ad571	Faeces	Seeding 4°C 48h	/	3-4-0-4-0 (2.2)	+
358	Eau de lavage	Process water (sprout industry)	E. coli O157:H7 Ad571	Faeces	Seeding 4°C 48h	/	3-4-0-4-0 (2.2)	+
359	Eau de rinçage	Process water (sprout industry)	E. coli O157:H7 Ad572	Faeces	Seeding 4°C 48h	/	1-1-1-0-2 (1.0)	-
360	Eau d'irrigation	Process water (sprout industry)	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	3-4-1-1-2 (2.2)	-
361	Lingette table blanche	Wipe (sprout industry)	E. coli O157:H7 Ad573	Faeces	Seeding 4°C 48h	/	3-4-1-1-2 (2.2)	+
362	Lingette tapis transfert ligne soja	Wipe (sprout industry)	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	0-1-0-1-2 (0.6)	+
363	Eau d'irrigation	Process water (sprout industry)	E. coli O157:H7 Ad574	Faeces	Seeding 4°C 48h	/	0-1-0-1-2 (0.6)	-
364	Eau de forage	Process water (sprout industry)	E. coli O157:H7 Ad579	Faeces	Seeding 4°C 48h	/	0-0-1-7-1 (1.8)	+
372	Déchets végétaux préparation	Wastes (sprout industry)	E. coli O157:H7 Ad556	Environmental sample	Seeding 4°C 48h	/	0-4-2-1-3 (1.8)	-
373	Eau de process pousses de soja	Process water (sprout industry)	E. coli O157:H7 Ad558	Environmental sample	Seeding 4°C 48h	/	1-2-2-2-3 (2.0)	-
374	Déchets végétaux conditionnement	Wastes (sprout industry)	E. coli O157:H7 Ad558	Environmental sample	Seeding 4°C 48h	/	1-2-2-2-3 (2.0)	-
485	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	0-0-0-3-1-0 (0.8)	-
487	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	0-0-0-3-1-0 (0.8)	-
488	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	1-0-0-2-0 (0.6)	-
489	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	1-0-0-2-0 (0.6)	-
490	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-2-1-1-1 (1.4)	-
491	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-2-1-1-1 (1.4)	-
492	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-2-1-1-1 (1.4)	-
493	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-1-0-1-3 (1.4)	-
494	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-1-0-1-3 (1.4)	-

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495	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-1-0-1-3 (1.4)	-
497	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad554	Environmental sample	Seeding 4°C 48h	/	1-0-4-0-2 (1.4)	-
498	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad554	Environmental sample	Seeding 4°C 48h	/	1-0-4-0-2 (1.4)	-
499	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad555	Environmental sample	Seeding 4°C 48h	/	2-2-1-3-1 (1.8)	-
500	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad555	Environmental sample	Seeding 4°C 48h	/	2-2-1-3-1 (1.8)	-
502	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad567	Environmental sample	Seeding 4°C 48h	/	0-0-1-3-3 (1.0)	-
503	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad567	Environmental sample	Seeding 4°C 48h	/	0-0-1-3-3 (1.0)	-
504	Lingette atelier boucherie	Wipe (meat industry)	E. coli O157:H7 Ad567	Environmental sample	Seeding 4°C 48h	/	0-0-1-3-3 (1.0)	-
592	Eau process	Process water (dealy salad industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	6-5-5-3-5 (4.8)	-
597	Lingette tapis gras	Wipe (meat industry)	E. coli O157:H7 Ad685	Environmental sample	Seeding 4°C 48h	/	9-7-6-8-6 (7.2)	-
1251	Eau de rinçage mélangeur	Process water	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	6-3-2-5-1 (3.4)	+
1252	Eau de rinçage cutter	Process water	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-1-1-6-1 (2.2)	+
1253	Lingette table poussoir après nettoyage	Wipe (meat industry)	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	6-3-2-5-1 (3.4)	-
1254	Lingette poussoir après nettoyage	Wipe (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-1-1-6-1 (2.2)	-
1256	Lingette table poussoir (process)	Wipe (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-1-1-6-1 (2.2)	+
1257	Lingette cuve cutter (process)	Wipe (meat industry)	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-4-3-4-4 (3.4)	+
1258	Lingette tremie poussoir (process)	Wipe (meat industry)	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-4-3-4-4 (3.4)	+
1259	Chute de viande bovine	Wastes (meat industry)	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	6-3-2-5-1 (3.4)	+
1260	Chute de viande bovine	Wastes (meat industry)	E. coli O157:H7 Ad552	Environmental sample	Seeding 4°C 48h	/	2-1-1-6-1 (2.2)	+
1261	Chute de viande bovine	Wastes (meat industry)	E. coli O157:H7 Ad688	Environmental sample	Seeding 4°C 48h	/	6-3-2-5-1 (3.4)	+
1262	Eau process carné	Process water	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-4-3-4-4 (3.4)	+
1263	Eau process carné	Process water	E. coli O157:H7 Ad553	Environmental sample	Seeding 4°C 48h	/	2-4-3-4-4 (3.4)	+
1264	Eau process végétaux	Process water (vegetable industry)	E. coli O157:H7 Ad558	Environmental sample	Seeding 4°C 48h	/	4-3-4-3-2 (3.2)	-
1265	Eau process végétaux	Process water (vegetable industry)	E. coli O157:H7 Ad558	Environmental sample	Seeding 4°C 48h	/	4-3-4-3-2 (3.2)	-
1326	Lingettes process carné	Wipe (meat industry)	E. coli O157:H7 Ad685	Environmental sample	Seeding 4°C 48h	/	3-0-2-2-2 (1.8)	+
1327	Lingettes process carné	Wipe (meat industry)	E. coli O157:H7 Ad554	Environmental sample	Seeding 4°C 48h	/	4-6-5-2-1 (3.6)	+

Sample N°	Product (French name)	Product	Artificial contaminations (spiking protocol)					Global result
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level/25g	
1329	**Lingettes process carné**	**Wipe (meat industry)**	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	3-2-3-6-1 (3.0)	**+**
1330	**Lingettes process carné**	**Wipe (meat industry)**	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	3-2-3-6-1 (3.0)	**+**
1332	**Eau process végétaux**	**Process water (sprout industry)**	E. coli O157:H7 Ad686	Environmental sample	Seeding 4°C 48h	/	3-2-3-6-1 (3.0)	**+**
1333	**Déchets pousse de soja**	**Wastes (sprout industry)**	E. coli O157:H7 Ad685	Environmental sample	Seeding 4°C 48h	/	3-0-2-2-2 (1.8)	**+**
1334	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	E. coli O157:H7 Ad556	Environmental sample	HT 56°C 8mn	0.76	1-3-3-0-4 (2.2)	**+**
1335	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	E. coli O157:H7 Ad555	Environmental sample	HT 56°C 8mn	1.02	2-2-3-1-1 (1.8)	**+**
1525	**Eau de process carné**	**Process water (meat industry)**	E. coli O157:H7 Ad567	Environmental sample	Seeding 4°C 48h	/	1-2-2-1-2 (1.6)	**+**
1526	**Eau de process carné**	**Process water (meat industry)**	E. coli O157:H7 Ad685	Environmental sample	Seeding 4°C 48h	/	2-1-3-1-4 (2.2)	**+**

Appendix 4 – Relative accuracy, relative specificity and relative sensitivity: raw data

Bold typing : artificially inoculated samples

***E. coli* O157 detection results:**

m: minoritary level of target analyte
M : majoritary level of target analyte
p: pure culture level of target analyte
1/2 : 50% level of target analyte
(x): number of colonies in the plate
-: no typical colonies but presence of background microflora
St: plate without any colony
d: doubtful result
NC: non characteristic colony onto nutritive agar
A+: auto-agglutinable strain
PA: positive agreement
NA: negative agreement
ND: negative deviation
PD: positive deviation
PPNA: positive presumptive negative agreement
PPND : positive presumptive negative deviation

*: Negative Microgen Latex O157 test with one colony (small size), in this case several colonies are needed to obtain a positive latex test

RAW BEEF MEAT PRODUCTS																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
3976	**Egréné de bœuf congelé**	**Frozen ground beef**	+ p	+ p	/	/	+	2.799	+	+ m	+ 1/2	+/+	+	+	**PA**	/
3977	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	+ p	+ p	/	/	+	2.788	+	+ M	+ 1/2	+/+	+	+	**PA**	/
3978	**Steak haché 10% MG congelé**	**Frozen ground beef 10% fat**	+ p	+ M	/	/	+	2.842	+	+ 1/2	+ m	+/+	+	+	**PA**	/
3979	**Steak haché aux oignons 15% MG congelé**	**Frozen ground beef with onions 15% fat**	+ p	+ p	/	/	+	2.752	+	+ p	+ M	+/+	+	+	**PA**	/
3980	**Boulettes aux oignons 15% MG congelé**	**Frozen beef balls with onions 15% fat**	+ p	+ p	/	/	+	2.703	+	+ 1/2	-	+/+	+	+	**PA**	/
3981	**Boulettes à l'orientale 15% MG congelé**	**Frozen seasoned beef balls 15% fat**	+ p	+ p	/	/	+	2.780	+	+ m	+ M	+/+	+	+	**PA**	/
3982	**Boulettes natures 15% MG**	**Beef balls 15% fat**	+ p	+ p	/	/	+	2.752	+	+ p	+ p	+/+	+	+	**PA**	/
3983	**Tournedos de boeuf**	**Beef trim**	+ p	+ 1/2	/	/	+	2.742	+	+ p	-	+/+	+	+	**PA**	/
3984	**Bavette d'aloyau**	**Beef trim**	St	+ 1/2	+ p	+ m	+	2.710	+	+ m	+ md	+/+	+	+	**PA**	/
3985	**Biftek**	**Beef trim**	+ p	+ M	/	/	+	2.719	+	+ Md	+ m	+*/+	+	+	**PA**	/
4164	**Viande hachée pur bœuf 5% MG congelé**	**Frozen ground beef 5% fat**	St	St	+ md	-	+	0.068	-	-	+ 1/2	- (x5)	- (x5)	-	**ND**	-
4165	**Tartare de bœuf congelé**	**Frozen ground beef**	St	-	-	-	-	2.750	+	+ 1/2	-	+/+	+	+	**PD**	/
4166	**Viande hachée pur bœuf 15% MG congelée**	**Frozen ground beef 15% fat**	+ p	+ p	/	/	+	2.770	+	+ p	+ M	+/+	+	+	**PA**	/
4167	**Entrecôte bœuf**	**Beef trim**	St	St	St	-	-	2.730	+	+ p	+ p	+/+	+	+	**PD**	/
4168	**Tournedos de boeuf**	**Beef trim**	+ p	+ p	/	/	+	0.110	-	+ p	+ p	- (x10)	- (x10)	-	**ND**	-
4169	**Biftek de bavette d'aloyau**	**Beef trim**	St	-	-	-	-	0.084	-	-	-	/	/	-	**NA**	-
4170	**Effeuillé de charolais**	**Beef meat**	St	-	St	-	-	2.757	+	+ p	+ 1/2	+/+	+	+	**PD**	/
4171	**Pavé de bœuf mariné à l'échalote**	**Seasoned beef meat**	+ p	+ 1/2	/	/	+	2.714	+	+ p	+ m	+/+	+	+	**PA**	/
4172	**Pavé de bœuf mariné aux 3 poivres**	**Seasoned beef meat**	+ p	+ 1/2	/	/	+	1.746	+	+ M IMS: +M	+ md (1) IMS: +md	- IMS:+/+	+	+	**PA**	/
4173	**Carpaccio de bœuf**	**Carpaccio**	St	St	-	-	-	2.688	+	+ p	+ p	+/+	+	+	**PD**	/
4276	**Steak haché 10% MG congelé**	**Frozen ground beef 10% fat**	St	St	St	-	-	2.678	+	+ p	+ 1/2	+/+	+	+	**PD**	/
4277	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	St	-	St	-	-	0.074	-	-	-	/	/	-	**NA**	-
4278	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	St	St	St	-	-	0.083	-	-	-	/	/	-	**NA**	-

♦ Analyses performed according to the COFRAC accreditation

RAW BEEF MEAT PRODUCTS																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit (O157 without purification step, H7 after purification)	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	Reference method confirmatory test (IMS)
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
4279	**Steak haché oignon congelé**	**Frozen ground beef with onions 15% fat**	St	St	St	-	-	0.072	-	-	-	/	/	-	**NA**	-
4280	**Effeuillé de charolais congelé**	**Frozen beef meat**	+ p	+ p	/	/	+	2.714	+	+ p	+ p	+/+	+	+	**PA**	/
4281	**Boulettes bœuf oignon congelées**	**Frozen beef balls with onions**	St	-	-	-	-	0.069	-	+	-	/	/	-	**NA**	-
4282	**Boulettes orientales congelées**	**Frozen seasoned beef balls**	St	St	St	-	-	0.069	-	+ Md	+ Md	- (x10)	- (x10)	-	**NA**	-
4283	**Entrecôte bœuf congelée**	**Frozen beef trim**	St	-	St	-	-	0.072	-	-	-	/	/	-	**NA**	-
4284	**Bavette d'aloyau congelée**	**Frozen beef trim**	St	St	-	-	-	2.682	+	+ p	+ p	+/+	+	+	**PD**	/
4285	**Tournedos de bœuf congelé**	**Frozen beef trim**	St	St	St	-	-	0.070	-	-	-	/	/	-	**NA**	-
113	**Faux-filet**	**Frozen beef trim**	St	-	St	-	-	0.076	-	-	-	/	/	-	**NA**	-
114	**Entrecôte bœuf congelé**	**Frozen beef trim**	+p	-	+p	+m (4)	+	0.223	+	+ M	-	+/+	+	+	**PA**	/
115	**Faux-filet congelé**	**Frozen beef trim**	+p	+p	/	/	+	0.075	-	St	-	/	/	-	**ND**	-
116	Entrecôte bœuf congelée	Frozen Beef trim	St	-	St	-	-	0.073	-	St	-	/	/	-	**NA**	-
117	**Bavette congelée**	**Frozen beef trim**	St	-	-	-	-	2.590	+	+ p	+M	+*/+	+	+	**PD**	/
118	Boulettes de viande congelées	Frozen beef balls	St	St	St	-	-	0.072	-	St	-	/	/	-	**NA**	-
119	**Steak haché 20% MG congelé**	**Frozen ground beef 20% fat**	St	-	St	-	-	0.079	-	St	-	/	/	-	**NA**	-
120	**Egréné de bœuf congelé**	**Frozen ground beef**	+p	+p	/	/	+	2.650	+	+ p	+ p	+/+	+	+	**PA**	/
121	**Steak haché façon bouchère 15% MG congelé**	**Frozen ground beef 15% fat**	St	-	St	-	-	2.699	+	+ M	+ md	+/+	+	+	**PD**	/
122	Steak haché 15% MG congelé	Frozen Ground beef 15% fat	St	-	St	-	-	0.078	-	-	-	/	/	-	**NA**	-
123	Steak haché 5% MG	Ground beef 5% fat	St	-	St	-	-	0.072	-	-	-	/	/	-	**NA**	-
124	Pavé de bœuf	Beef trim	St	St	St	-	-	0.068	-	St	-	/	/	-	**NA**	-
125	Bifteck	Beef trim	St	St	St	St	-	0.072	-	St	-	/	/	-	**NA**	-
126	Viande hachée 15% MG	Ground beef 15% fat	St	-	-	-	-	0.082	-	-	-	/	/	-	**NA**	-
296	**Entrecôte bœuf congelé**	**Frozen beef trim**	+ pd	+ md	+ p	+ p	+	2.487	+	+ p	+ md	+/+	+	+	**PA**	/
297	**Steak haché congelé**	**Frozen ground beef**	+ pd	+ pd	+ p	+ 1/2	+	0.080	-	-	-	/	/	-	**ND**	-
298	**Pavé de bœuf mariné à l'échalote congelé**	**Frozen seasoned beef meat**	+ m	+ m	/	/	+	2.572	+	+ md IMS: + m	+ md IMS: + m	A+ IMS: +/+	A+ IMS: +	+	**PA**	/
661	Viande bovine bourguignon à mijoter	Beef trim	-	-	-	-	-	0.065	-	-	-	/	/	-	**NA**	-
662	Viande bovine pavé en tournedos	Beef trim	-	-	-	-	-	0.125	-	-	-	/	/	-	**NA**	-

RAW BEEF MEAT PRODUCTS																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
663	Viande bovine steak à griller	Beef trim	-	-	-	-	-	0.067	-	-	-	/	/	-	**NA**	-
664	Carpaccio parmesan	Carpaccio with cheese	St	St	St	St	-	0.075	-	St	St	/	/	-	**NA**	-
665	Carpaccio olives	Carpaccio with olive	St	St	St	St	-	0.074	-	St	-	/	/	-	**NA**	-
666	Pavé de rumsteck au poivre	Seasoned beef meat	-	-	-	-	-	0.074	-	-	-	/	/	-	**NA**	-
667	Pavé de rumsteck à l'échalote	Seasoned beef meat	-	-	-	-	-	0.067	-	-	-	/	/	-	**NA**	-
668	Carpaccio de bœuf huile et éclats de noisettes	Carpaccio with oil and hazelnuts	St	St	St	-	-	0.071	-	St	St	/	/	-	**NA**	-
669	Boulettes de bœuf	Beef balls	St	-	-	-	-	0.065	-	St	-	/	/	-	**NA**	-
670	La Tartare façon brasserie	Ground beef	St	-	-	-	-	0.079	-	St	-	/	/	-	**NA**	-
671	Viande hachée fraiche pur bœuf 15%MG	Ground beef 15% fat	-	-	-	-	-	0.065	-	-	+ md	- (x5)	- (x5)	-	**NA**	-
672	Viande hachée fraiche pur bœuf 5%MG	Ground beef 5% fat	St	-	-	-	-	0.062	-	St	-	/	/	-	**NA**	-
673	Le haché moelleux à cuisiner congelé	Frozen ground beef	St	-	St	-	-	0.105	-	St	St	/	/	-	**NA**	-

RAW MILKS AND DAIRY PRODUCTS																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
3996	**Lait cru**	**Raw milk**	+ M	+ md	+ md	-	+	1.432	+	- IMS: +m	+ md IMS: -	- IMS: +/+	+	+	**PA**	/
3997	**Lait cru**	**Raw milk**	+ md	+ md	+ md	+ md	+	0.753	+	- IMS: +m	+ md IMS: +m	- IMS: +/+	+	+	**PA**	/
3998	**Lait ribot**	**Fermented milk**	+ p	+ p	/	/	+	2.821	+	+ pd	+ p	+*/+	+	+	**PA**	/
3999	**Lait ribot**	**Fermented milk**	+ p	+ p	/	/	+	0.064	-	St IMS: -	- IMS: -	/	/	-	**ND**	-
4000	**Lait fermenté**	**Fermented milk**	+ p	+ p	/	/	+	0.061	-	St IMS: St	St IMS: St	/	/	-	**ND**	-
4001	**Gros lait fermenté**	**Fermented milk**	St	St	-	-	-	2.842	+	+ pd	+ md	+/+	+	+	**PD**	/
4002	**Crème crue**	**Raw cream**	+ p	+ p	/	/	+	2.876	+	+ M	+ p	+/+	+	+	**PA**	/
4003	**Morbier au lait cru**	**Raw milk cheese**	+ md	-	+ md	+ md	+	0.218	+	- IMS: +M	+ md (1) IMS: +md	- IMS: +/+	+	+	**PA**	/
4004	**Bethmale au lait cru**	**Raw milk cheese**	+ M	+ md	+ 1/2	-	+	1.347	+	+ md	-	+*/+	+	+	**PA**	/
4005	**Reblochon au lait cru**	**Raw milk cheese**	-	+ md	-	-	-	0.085	-	-	-	/	/	-	**NA**	-
4184	**Camembert au lait cru**	**Raw milk cheese**	+ p	-	+ md	-	-	0.695	+	+ M IMS: +M Regrowth step after IMS: +m(10)	- IMS:+ md(2) Regrowth step after IMS:-	- (x7) IMS: -(x5) Regrowth: -d	+ (H7d)	+	**PD**	/
4185	**Chèvre au lait cru**	**Raw milk cheese**	+ md	-	-	-	-	0.064	-	+ md	+ md	- (x5)	/	-	**NA**	-
4186	**Chèvre au lait cru**	**Raw milk cheese**	+ p	+ p	/	/	+	2.801	+	+ p	+ M	+/+	+	+	**PA**	/
4187	**Tricorn au lait cru**	**Raw milk cheese**	+ p	+ M	/	/	+	1.705	+	+ p	+ md	+/+	+	+	**PA**	/
4188	**Fromage vache au lait cru**	**Raw milk cheese**	+ p	-	+ md	+ md	+	0.063	-	+ p	+ md (2)	- (x5)	- (x5)	-	**ND**	-
4189	**Maroilles**	**Raw milk cheese**	St	-	-	-	-	0.060	-	-	-	/	/	-	**NA**	-
4190	**Selles sur Cher**	**Raw milk cheese**	St	-	-	-	-	0.062	-	-	-	/	/	-	**NA**	-
4191	**Reblochon au lait cru**	**Raw milk cheese**	+ m (5)	-	-	-	-	0.062	-	-	+ md (1)	-	/	-	**NA**	-
4192	**Fromage blanc au bifidus**	**Soft white cheese**	St	St	St	St	-	0.060	-	St	St	/	/	-	**NA**	-
4193	**Beurre cru**	**Raw butter**	-	-	-	-	-	0.063	-	-	-	/	/	-	**NA**	-
4296	**Lait fermenté**	**Fermented milk**	St	St	St	St	-	0.064	-	St	St	/	/	-	**NA**	-

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RAW MILKS AND DAIRY PRODUCTS																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
4297	**Crème fermentée probiotique**	**Fermented cream**	+ p (15)	+ p (5)	/	/	+	0.102 0.261 0.265	- + +	+ M IMS: +p	+ Md IMS: + pd	+/+	+	-	**ND**	**+**
4298	**Fromage blanc lait cru entier**	**Soft white cheese**	+ p	+ M	/	/	+	2.801	+	+ M	+ m	+/+	+	+	**PA**	/
4299	**Yaourts fermentés**	**Fermented yoghurt**	St	St	St	St	-	2.785	+	+ p	+ p	+/+	+	+	**PD**	/
4300	**Gros lait fermier**	**Fermented milk**	St	St	St	St	-	2.810	+	+ p	+ p	+/+	+	+	**PD**	/
4301	**Gros lait**	**Fermented milk**	St	St	St	St	-	2.801	+	+ p	+ p	+/+	+	+	**PD**	/
4302	**Crème fraiche brebis**	**Milk ewe cream**	St	St	St	St	-	0.063	-	St	St	/	/	-	**NA**	-
4303	**Faisselle au lait entier**	**Fermented milk**	+ p (9)	+ p (4)	/	/	+	2.633	+	+ m	+ m	+/+	+	+	**PA**	/
4304	**Yaourts lait entier ferments**	**Fermented yoghurt**	+ p (15)	+ p (15)	/	/	+	0.065	-	St	St	/	/	-	**ND**	-
4305	**Faisselle**	**Fermented milk**	St	St	St	St	-	2.750	+	+ p	+ p	+*/+	+	+	**PD**	/
127	**Lait cru**	**Raw Milk**	-	+md (3)	St	+ m(1)	-	1.295	+	- IMS: + m	- IMS: + m	IMS:+/+	+	+	**PD**	+
128	**Lait cru**	**Raw Milk**	-	+ md	-	+ md	-	0.088 0.087 0.088	- - -	- IMS: + m	- IMS: + md	+/+	+	-	**NA**	**+**
129	**Lait cru**	**Raw Milk**	St	+Md	-	+Md	-	0.064	-	-	+m	- (x5)	- (x5)	-	**NA**	-
130	**Lait cru**	**Raw Milk**	-	+md	-	+md	-	1.161	+	+m (2)	+ md	+/+	+	+	**PD**	/
131	**Lait cru**	**Raw Milk**	St	St	-	-	-	0.063	-	-	-	/	/	-	**NA**	-
132	**Lait cru**	**Raw Milk**	St	-	-	-	-	2.670	+	+ 1/2	-	+/+	+	+	**PD**	/
133	**Lait cru**	**Raw Milk**	+m	+md	+m	-	+	2.699	+	- IMS: +m	+ m(1) IMS: +m	IMS: +/+	+	+	**PA**	+
134	**Lait cru**	**Raw Milk**	-	-	-	-	-	1.916	+	+ M	+ m	+/+	+	+	**PD**	/
135	**Selles sur Cher au lait cru**	**Raw milk cheese**	+p	+p	/	/	+	2.790	+	+ M	+ m	+/+	+	+	**PA**	/
136	**Reblochon au lait cru**	**Raw milk cheese**	+p	-	+1/2	+md	+	0.063	-	-	-	/	/	-	**ND**	-
137	**Saint Félicien au lait cru**	**Raw milk cheese**	St	-	St	-	-	0.063	-	-	-	/	/	-	**NA**	-
300	**Lait cru**	**Raw milk**	St	-	-	-	-	0.056	-	-	+ md	- (x3)	- (x3)	-	**NA**	-
301	**Lait cru**	**Raw milk**	+ p	+ M	/	/	+	1.623	+	+ md	-	+/+	+	+	**PA**	/
302	**Lait cru**	**Raw milk**	+ md (1)	+ pd (4)	-	-	-	2.507	+	+ m	+ M	+/+	+	+	**PD**	/
305	**Lait cru**	**Raw milk**	St	-	-	-	-	0.056	-	-	-	/	/	-	**NA**	-
306	**Lait cru**	**Raw milk**	St	-	-	-	-	0.057	-	-	-	/	/	-	**NA**	-
308	**Lait cru**	**Raw milk**	-	-	-	-	-	0.057	-	-	+ m	- (x3)	- (x3)	-	**NA**	-
674	Lait fermenté	Fermented milk	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
675	Lait ribot	Fermented milk	St	-	St	-	-	0.054	-	St	St	/	/	-	**NA**	-

RAW MILKS AND DAIRY PRODUCTS																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
676	Lait ribot	Fermented milk	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
677	Crème fraiche de Normandie	Fermented cream	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
678	Crème fraiche	Fermented cream	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
679	Gros lait fermier	Fermented milk	St	-	-	-	-	0.055	-	St	-	/	/	-	**NA**	-
680	Roquefort	Raw milk cheese	St	St	St	-	-	0.051	-	St	-	/	/	-	**NA**	-
681	Sainte Maure de Tourraine	Raw milk cheese	-	-	-	-	-	0.052	-	-	-	/	/	-	**NA**	-
682	Rocamadour	Raw milk cheese	-	-	-	-	-	0.054	-	-	-	/	/	-	**NA**	-
683	Coulommiers	Raw milk cheese	-	+ md	-	+ md	-	0.054	-	-	-	/	/	-	**NA**	-
684	Lait cru de vache	Raw milk	-	-	-	-	-	0.054	-	-	-	/	/	-	**NA**	-
685	Lait cru de vache	Raw milk	-	+ md	-	+ md	-	0.055	-	-	+ m	- (x5)	- (x5)	-	**NA**	-
686	Lait cru de vache	Raw milk	-	-	-	-	-	0.053	-	-	-	/	/	-	**NA**	-

VEGETABLES																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
3986	**Jeunes pousses d'épinards**	**Baby leaves (spinach)**	+ m	+ md (1)	+ 1/2	+ m	+	0.642	+	+ md (2) IMS: +m	- IMS: -	- IMS: +/+	+	+	**PA**	/
3987	**Roquette**	**Produce**	+ m	-	+ m	-	-	2.451	+	+ md IMS: +m	- IMS: -	- IMS: +/+	+	+	**PD**	/
3988	**Mâche**	**Produce**	+ p	+ M	/	/	+	2.658	+	+ M	+ M	+/+	+	+	**PA**	/
3989	**Pousses de soja**	**Soya sprouts**	+ 1/2d	-	+ m	-	+	0.740	+	+ m	-	+/+	+	+	**PA**	/
3990	**Salade poulet emmental**	**Deli salad (cheese, chicken)**	+ p	+ M	/	/	+	2.764	+	+ 1/2	+ m	+/+	+	+	**PA**	/
3991	**Salade caesar**	**Caesar salad**	St	-	-	-	-	2.854	+	+ M	+ m	+/+	+	+	**PD**	/
3992	**Salade jambon œuf emmental**	**Deli salad (ham, egg, cheese)**	St	-	-	-	-	2.780	+	+ 1/2	+ m	+/+	+	+	**PD**	/
3993	**Petits pois sugelés**	**Frozen peas**	+ m(2)	+ m(2)	+ m	+ md	+	0.068	-	- IMS: -	+ md (1) IMS: -	-	-	-	**ND**	-
3994	**Carottes rondelles surgelées**	**Sliced frozen carrots**	-	-	-	-	-	0.066	-	- IMS: -	- IMS: -	/	/	-	**NA**	-
3995	**Duo de haricots plats surgelés**	**Flat frozen beans**	+ p (3)	+ m (3)	+ p	+ 1/2	+	0.061	-	- IMS: -	+ md (1) IMS: -	-	-	-	**ND**	-
4174	**Mâche fraiche**	**Produce**	St	-	-	-	-	0.066	-	-	-	/	/	-	**NA**	-
4175	**Pousses d'épinards fraiches**	**Baby leaves**	+ md (1)	-	-	-	-	2.648	+	+ M	+ m	+/+	+	+	**PD**	/
4176	**Pousses de roquette fraiches**	**Baby leaves**	+ p	-	+ md	-	+	0.073	-	+ m	-	- (x5)	- (x5)	-	**ND**	-
4177	**Jeunes pousses de mesclum fraiches**	**Baby leaves**	-	-	-	-	-	0.240 0.185 0.176	+ - -	- IMS:- Regrowth step after IMS:-	- IMS:- Regrowth step after IMS:-	/	/	-	**PPNA**	-
4178	**Pousse de soja**	**Soya sprouts**	+ M	-	-	-	-	0.063	-	-	-	/	/	-	**NA**	-
4179	**Graines germées poireau**	**Sprouts**	-	-	-	-	-	0.065	-	-	-	/	/	-	**NA**	-
4180	**Graines germées chou violet**	**Sprouts**	+ md	-	+ Md	+ md (1)	+	0.058	-	-	-	/	/	-	**ND**	-
4181	**Pousses d'épinards fraiches**	**Baby leaves**	+ M	+ m	+ p	+ m	+	0.807	+	+ md	+ md (2)	+/+	+	+	**PA**	/
4182	**Mesclum frais**	**Produce**	-	-	-	-	-	0.211 0.185 0.183	+ - -	+ m(1) IMS: - Regrowth step after IMS:-	- IMS:- Regrowth step after IMS:-	-	-	-	**PPNA**	-
4183	**Epinards hachés congelés**	**Frozen spinach**	+ M	+ 1/2	/	/	+	0.061	-	-	-	/	/	-	**ND**	-
4286	**Graines germées roquette**	**Sprouts**	+ md	-	-	-	-	0.069	-	-	-	/	/	-	**NA**	-
4287	**Graines germées alfa radis**	**Sprouts**	-	-	-	-	-	0.071	-	-	-	/	/	-	**NA**	-

♦ Analyses performed according to the COFRAC accreditation

VEGETABLES																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
4288	**Graines germées alfalfa**	**Sprouts**	+ md	-	-	-	-	0.061	-	-	-	/	/	-	**NA**	-
4289	**Graines germées fenufrec mesclum**	**Sprouts**	-	-	-	-	-	0.066	-	-	-	/	/	-	**NA**	-
4290	**Graines germées roquette et alfalfa**	**Sprouts**	+ md	-	+m	+ m	+	0.076	-	-	-	/	/	-	**ND**	-
4291	**Graines germées radis fenouil**	**Sprouts**	-	-	-	-	-	0.067	-	-	-	/	/	-	**NA**	-
4292	**Graines germées roquette**	**Sprouts**	+ md (2)	-	-	-	-	0.067	-	-	-	/	/	-	**NA**	-
4293	**Graines germées betterave rouge**	**Sprouts**	+ md (2)	-	-	-	-	0.117	-	-	-	/	/	-	**NA**	-
4294	**Graines germées pousse soja**	**Soya sprouts**	+ m (5)	-	-	-	-	0.067	-	-	-	/	/	-	**NA**	-
4295	**Cresson**	**Produce**	-	+ m	-	-	-	0.309	+	- IMS: + M	+ 1/2 IMS: + m	IMS: +/+	+	+	**PD**	+
2	**Germes haricots mungo**	**Sprouts**	-	-	-	-	-	0.068 0.100 0.099	- - -	+ md	-	+/+	+	-	**NA**	+
3	**Fines pousses Alfa radis fenouil**	**Sprouts**	+ m ni	-	+ m	-	-	0.367	+	+ md IMS: + m	- IMS: + m	IMS: +/+	+	+	**PD**	+
4	**Fines pousses roquette et alfalfa**	**Sprouts**	+m ni	-	-	-	-	0.060	-	-	-	/	/	-	**NA**	-
5	**Fines pousses**	**Sprouts**	+ m (3)	-	+ 1/2	+ M	+	0.060	-	-	-	/	/	-	**ND**	-
6	**Fines pousses Alfalfa**	**Sprouts**	+ m	-	+ M	+ 1/2	+	0.063	-	+ md	-	- (x5)	- (x5)	-	**ND**	-
7	**Fines pousses roquette et alfalfa**	**Sprouts**	+ md	-	-	-	-	0.061	-	+ md	-	- (x5)	- (x5)	-	**NA**	-
8	**Fines pousses alfalfa**	**Sprouts**	+ md	-	-	+ m	+	0.123 0.135 0.135	- - -	- IMS: + m	- IMS: + m	+/+	+	-	**ND**	+
9	**Betteraves vinaigrette**	**Beets deli salad**	+ p	+p	/	/	+	2.870	+	+ p	+ p	+/+	+	+	**PA**	/
10	**Coleslaw moutarde**	**Coleslaw**	St	St	-	-	-	2.759	+	+ p	+ p	+/+	+	+	**PD**	/
11	**Celeri remoulade au fromage blanc**	**Ready to eat celery**	-	-	-	-	-	2.440	+	+ 1/2	+ m	+/+	+	+	**PD**	/
12	**Carottes rapées assaisonnées**	**Sliced carrots**	+ p (4)	+ p (5)	/	/	+	2.693	+	+ p	+ p	+/+	+	+	**PA**	/
13	**Champignon assaisonnés oignons/purée tomate**	**Mushroom salad**	+ p	+ p	/	/	+	2.810	+	+ p	+ p	+/+	+	+	**PA**	/
14	**Salade concombre au fromage blanc**	**Cucumber deli salad**	St	St	St	St	-	0.055	-	St	St	/	/	-	**NA**	-
15	**Macédoine de légumes**	**Vegetables deli salad**	+ p	+ p	/	/	+	0.054	-	-	-	/	/	-	**ND**	-
16	Trio de crudités (carotte-celeri-maïs)	Deli salad	St	St	-	-	-	0.057	-	st	-	/	/	-	**NA**	-

VEGETABLES																
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			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
17	Coleslaw	Coleslaw	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
18	Salade de carotte zeste orange	Deli salad	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
19	Betteraves vinaigrette	Beets deli salad	St	St	St	St	-	0.054	-	St	St	/	/	-	**NA**	-
20	Macédoine de légumes	Vegetables deli salad	St	St	-	-	-	0.055	-	St	St	/	/	-	**NA**	-
21	Champignon à la grecque	Mushroom salad	St	St	St	St	-	0.102	-	St	St	/	/	-	**NA**	-
22	Carottes rapées assaisonnées	Slied carrots	St	St	St	St	-	0.054	-	St	St	/	/	-	**NA**	-
23	Salade de concombre au fromage blanc	Cucumber deli salad	St	St	St	St	-	0.054	-	St	St	/	/	-	**NA**	-
24	Salade choux carottes/ raisin sec	Deli salad	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
25	Celeri remoulade au fromage blanc	Ready to eat celery	St	-	-	-	-	0.053	-	-	-	/	/	-	**NA**	-
26	Cœur de sucrine	Produce	St	St	-	-	-	0.053	-	St	St	/	/	-	**NA**	-
27	Mesclum frais	Produce	St	-	-	-	-	0.063	-	-	-	/	/	-	**NA**	-
146	**Graines germées roquette et alfalfa**	**Sprouts**	+md	-	+M	+ md	+	0.325	+	- IMS: +md	- IMS: +m(2)	IMS: +/+	+	+	**PA**	+
149	**Coleslaw**	**Coleslaw**	+p	+p	/	/	+	2.836	+	+ p	+ p	+/+	+	+	**PA**	/
288	**Ciboulette**	**Chives**	+ p	+ p	+ p	+ p	+	2.483	+	+ m	+ m	+/+	+	+	**PA**	/
290	**Persil plat**	**Parsley**	St	St	St	St	-	2.623	+	+ p	+ p	+*/+	+	+	**PD**	/

ENVIRONMENTAL SAMPLES																	
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			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
350	**Déchet poudre de lait**	**Dusts (dairy industry)**	St	St	+ p	+ p	+	2.609	+	+ p	+ p	+/+	+	+	**PA**	/
351	**Poussière**	**Dusts (dairy industry)**	+ p	+ p	/	/	+	2.738	+	+ M	-	+/+	+	+	**PA**	/
352	**Poussière**	**Dusts (dairy industry)**	St	St	-	-	-	0.069	-	+ 1/2	-	- (x5)	- (x5)	-	**NA**	-
353	**Poussière**	**Dusts (dairy industry)**	St	St	+ m	-	-	2.693	+	-	+ m	+/+	+	+	**PD**	/
354	**Poussière**	**Dusts (sprout industry)**	+ p	+ p	/	/	+	0.056	-	St	St	/	/	-	**ND**	-
355	**Poussière**	**Dusts (sprout industry)**	St	St	St	St	-	2.674	+	+ p	+ p	+/+	+	+	**PD**	/
357	**Eau de forage**	**Process water (sprout industry)**	+ p	+ p	/	/	+	2.405	+	+ p	+ p	+/+	+	+	**PA**	/
358	**Eau de lavage**	**Process water (sprout industry)**	+ p	+ M	/	/	+	2.240	+	+ M	+ 1/2	+/+	+	+	**PA**	/
359	**Eau de rinçage**	**Process water (sprout industry)**	St	St	-	-	-	0.060	-	-	-	/	/	-	**NA**	-
360	**Eau d'irrigation**	**Process water (sprout industry)**	St	St	St	St	-	0.054	-	St	St	/	/	-	**NA**	-
361	**Lingette table blanche**	**Wipe (sprout industry)**	+ m	-	+ m	+ m	+	0.069	-	-	-	/	/	-	**ND**	-
362	**Lingette tapis transfert ligne soja**	**Wipe (sprout industry)**	St	-	+ M	+ 1/2d	-	2.358	+	+ 1/2	+ 1/2	+/+	+	+	**PD**	/
363	**Eau d'irrigation**	**Process water (sprout industry)**	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
364	**Eau de forage**	**Process water (sprout industry)**	+ p	+ p	/	/	+	0.074	-	-	-	/	/	-	**ND**	-
372	**Déchets végétaux préparation**	**Wastes (sprout industry)**	-	-	-	-	-	0.059	-	-	-	/	/	-	**NA**	-
373	**Eau de process pousses de soja**	**Process water (sprout industry)**	St	St	St	-	-	0.056	-	St	St	/	/	-	**NA**	-
374	**Déchets végétaux conditionnement**	**Wastes (sprout industry)**	-	-	-	-	-	0.059	-	-	-	/	/	-	**NA**	-
485	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	+ pd	-	-	0.056	-	+ Md	+ Md	- (x10)	- (x10)	-	**NA**	-
487	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.052	-	St	St	/	/	-	**NA**	-
488	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-	0.055	-	St	St	/	/	-	**NA**	-
489	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-	0.053	-	St	St	/	/	-	**NA**	-
490	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
491	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
492	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	+ md	-	-	0.051	-	St	St	/	/	-	**NA**	-
493	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.051	-	St	St	/	/	-	**NA**	-
494	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.510	-	St	St	/	/	-	**NA**	-
495	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.052	-	St	St	/	/	-	**NA**	-
497	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.052	-	St	St	/	/	-	**NA**	-
498	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.052	-	St	St	/	/	-	**NA**	-
499	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	-	-	-	-	0.052	-	St	St	/	/	-	**NA**	-
500	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.051	-	St	St	/	/	-	**NA**	-
502	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-

♦ Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES																	
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C								
			IMS 6h		IMS 24h		Final Result	O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex / Indole)	Final result	Agreement Ref/Alt	**Reference method confirmatory test (IMS)**
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157										
503	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-	0.053	-	St	St	/	/	-	**NA**	-
504	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-	0.053	-	St	St	/	/	-	**NA**	-
592	**Eau process**	**Process water (dealy salad industry)**	St	St	St	-	-	0.052	-	St	-	/	/	-	**NA**	-
597	**Lingette tapis gras**	**Wipe (meat industry)**	-	-	-	-	-	0.091	-	-	-	/	/	-	**NA**	-
1251	**Eau de rinçage mélangeur**	**Process water**	St	St	+p	+ p	+	2.772	+	+ p	+ p	+ /+	+	+	**PA**	/
1252	**Eau de rinçage cutter**	**Process water**	+ 1/2	+ m	/	/	+	0.068	-	-	-	/	/	-	**ND**	-
1253	**Lingette table poussoir après nettoyage**	**Wipe (meat industry)**	St	St	St	St	-	0.054	-	St	St	/	/	-	**NA**	-
1254	**Lingette poussoir après nettoyage**	**Wipe (meat industry)**	St	St	St	St	-	0.051	-	St	St	/	/	-	**NA**	-
1256	**Lingette table poussoir (process)**	**Wipe (meat industry)**	St	-	St	-	-	2.597	+	+ p	+ m	+ /+	+	+	**PD**	/
1257	**Lingette cuve cutter (process)**	**Wipe (meat industry)**	-	-	+ p	+ 1/2	+	2.510	+	+ p	-	+ /+	+	+	**PA**	/
1258	**Lingette tremie poussoir (process)**	**Wipe (meat industry)**	-	-	St	-	-	2.526	+	+ p	+ m	+ /+	+	+	**PD**	/
1259	**Chute de viande bovine**	**Wastes (meat industry)**	St	-	+ p	+ M	+	2.395	+	+ p	+ M	+ /+	+	+	**PA**	/
1260	**Chute de viande bovine**	**Wastes (meat industry)**	+ M	+ M	/	/	+	2.493	+	+ p	+ M	+ /+	+	+	**PA**	/
1261	**Chute de viande bovine**	**Wastes (meat industry)**	-	-	+ p	+ M	+	0.379	+	+ M	+ m	+ /+	+	+	**PA**	/
1262	**Eau process carné**	**Process water**	St	-	+ p	+ p	+	2.020	+	+ M	-	+ /+	+	+	**PA**	/
1263	**Eau process carné**	**Process water**	St	St	+ p	+ p	+	0.057	-	St	-	/	/	-	**ND**	-
1264	**Eau process végétaux**	**Process water (vegetable industry)**	St	St	St	St	-	0.052	-	St	St	/	/	-	**NA**	-
1265	**Eau process végétaux**	**Process water (vegetable industry)**	St	St	St	St	-	0.050	-	St	St	/	/	-	**NA**	-
1326	**Lingettes process carné**	**Wipe (meat industry)**	St	St	St	St	-	2.827	+	+ p	+ p	+ /+	+	+	**PD**	/
1327	**Lingettes process carné**	**Wipe (meat industry)**	St	St	St	St	-	2.379	+	+ p	+ p	+ /+	+	+	**PD**	/
1329	**Lingettes process carné**	**Wipe (meat industry)**	+ p	+ p	/	/	+	2.827	+	+ p	+ M	+ /+	+	+	**PA**	/
1330	**Lingettes process carné**	**Wipe (meat industry)**	+ p	+ p	/	/	+	2.780	+	+ p	+ p	+ /+	+	+	**PA**	/
1332	**Eau process végétaux**	**Process water (sprout industry)**	-	-	+ m	+ m	+	0.671	+	+ md (1) IMS: +m(2)	- IMS: +m	- (x1) IMS: +/+	- (x1) IMS: +	+	**PA**	+
1333	**Déchets pousse de soja**	**Wastes (sprout industry)**	+ M	+ M	/	/	+	0.835	+	+ m	-	+ /+	+	+	**PA**	/
1334	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	+ M	-	+ M	+ M	+	2.547	+	+ p	+ m	+ /+	+	+	**PA**	/
1335	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	+ M	-	+ M	+ m	+	0.060 0.062 0.075	- - -	+ m IMS: +M	- IMS: -	- (x5) IMS: +/+	- (x5) IMS: +	-	**ND**	+
1525	**Eau de process carné**	**Process water (meat industry)**	+ p	+ 1/2	/	/	+	2.361	+	+ md IMS: +m(1)	+ md IMS: +m	- (x7) IMS: +/+	- (x7) IMS: +	+	**PA**	/
1526	**Eau de process carné**	**Process water (meat industry)**	+ p	+ M	/	/	+	2.386	+	+ p	+ M	+ /+	+	+	**PA**	/

RAW BEEF MEAT PRODUCTS																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157									
3976	**Egréné de bœuf congelé**	**Frozen ground beef**	+ p	+ p	/	/	+	2.932	+	+ p	+ 1/2	+/+	+	+	**PA**
3977	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	+ p	+ p	/	/	+	2.903	+	+ p	+ 1/2	+/+	+	+	**PA**
3978	**Steak haché 10% MG congelé**	**Frozen ground beef 10% fat**	+ p	+ M	/	/	+	2.900	+	+ 1/2	+ m	+/+	+	+	**PA**
3979	**Steak haché aux oignons 15% MG congelé**	**Frozen ground beef with onions 15% fat**	+ p	+ p	/	/	+	2.793	+	+ p	+ M	+/+	+	+	**PA**
3980	**Boulettes aux oignons 15% MG congelées**	**Frozen beef balls with onions 15% fat**	+ p	+ p	/	/	+	2.824	+	+ M	+ m(1)	+/+	+	+	**PA**
3981	**Boulettes à l'orientale 15% MG congelées**	**Frozen seasoned beef balls 15% fat**	+ p	+ p	/	/	+	2.801	+	+ p	+ 1/2	+/+	+	+	**PA**
3982	**Boulettes natures 15% MG**	**Beef balls 15% fat**	+ p	+ p	/	/	+	2.757	+	+ p	+ p	+/+	+	+	**PA**
3983	**Tournedos de boeuf**	**Beef trim**	+ p	+ 1/2	/	/	+	2.790	+	+ p	-	+/+	+	+	**PA**
3984	**Bavette d'aloyau**	**Beef trim**	St	+ 1/2	+ p	+ m	+	2.845	+	+ 1/2	+ md	+/+	+	+	**PA**
3985	**Biftek**	**Beef trim**	+ p	+ M	/	/	+	2.754	+	+ Md	+ md	+/+	+	+	**PA**
4164	**Viande hachée pur bœuf 5% MG congelée**	**Frozen ground beef 5% fat**	St	St	+ md	-	+	0.064	-	-	+ 1/2	- (X5)	- (X5)	-	**ND**
4165	**Tartare de bœuf congelé**	**Frozen ground beef**	St	-	-	-	-	2.767	+	+ M	-	+/+	+	+	**PD**
4166	**Viande hachée pur bœuf 15% MG congelé**	**Frozen ground beef 15% fat**	+ p	+ p	/	/	+	2.708	+	+ p	+ M	+/+	+	+	**PA**
4167	**Entrecôte bœuf**	**Beef trim**	St	St	St	-	-	2.740	+	+ p	+ p	+*/+	+	+	**PD**
4168	**Tournedos de boeuf**	**Beef trim**	+ p	+ p	/	/	+	0.098	-	+ p	+ p	- (X10)	- (X10)	-	**ND**
4169	**Biftek de bavette d'aloyau**	**Beef trim**	St	-	-	-	-								
4170	**Effeuillé de charolais**	**Beef meat**	St	-	St	-	-	2.807	+	+ p	+ M	+*/+	+	+	**PD**
4171	**Pavé de bœuf mariné à l'échalote**	**Seasoned beef meat**	+ p	+ 1/2	/	/	+	2.770	+	+ m	+ md	+/+	+	+	**PA**
4172	**Pavé de bœuf mariné aux 3 poivres**	**Seasoned beef meat**	+ p	+ 1/2	/	/	+	2.137	+	+ 1/2	-	+/+	+	+	**PA**
4173	**Carpaccio de bœuf**	**Carpaccio**	St	St	-	-	-	2.780	+	+ p	+ p	+*/+	+	+	**PD**
4276	**Steak haché 10% MG congelé**	**Frozen ground beef 10% fat**	St	St	St	-	-	2.886	+	+ p	+ 1/2	+/+	+	+	**PD**
4277	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	St	-	St	-	-								
4278	**Steak haché 15% MG congelé**	**Frozen ground beef 15% fat**	St	St	St	-	-								
4279	**Steak haché oignon congelé**	**Frozen ground beef with onions 15% fat**	St	St	St	-	-								
4280	**Effeuillé de charolais congelé**	**Frozen beef meat**	+ p	+ p	/	/	+	2.818	+	+ p	+ p	+/+	+	+	**PA**
4281	**Boulettes boeuf oignon congelées**	**Frozen beef balls with onions**	St	-	-	-	-								
4282	**Boulettes orientales congelées**	**Frozen seasoned beef balls**	St	St	St	-	-								
4283	**Entrecôte bœuf congelée**	**Frozen beef trim**	St	-	St	-	-								
4284	**Bavette d'aloyau congelée**	**Frozen beef trim**	St	St	-	-	-	2.818	+	+ p	+ p	+/+	+	+	**PD**
4285	**Tournedos de bœuf congelé**	**Frozen beef trim**	St	St	St	-	-								
113	**Faux-filet congelé**	**Frozen beef trim**	St	-	St	-	-								
114	**Entrecôte bœuf congelée**	**Frozen beef trim**	+p	-	+p	+m (4)	+	0.241	+	+ 1/2	-	+/+	+	+	**PA**
115	**Faux-filet congelé**	**Frozen beef trim**	+p	+p	/	/	+	0.128	-	St	-	/	/	-	**ND**
116	Entrecôte bœuf congelée	Frozen beef trim	St	-	St	-	-								
117	**Bavette congelée**	**Frozen beef trim**	St	-	-	-	-	2.824	+	+ p	+ M	+*/+	+	+	**PD**
118	Boulettes de viande congelée	Frozen beef balls	St	St	St	-	-								
119	**Steak haché 20% MG congelé**	**Frozen Ground beef 20% fat**	St	-	St	-	-								

♦ Analyses performed according to the COFRAC accreditation

RAW BEEF MEAT PRODUCTS																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157									
120	**Egréné de bœuf congelé**	**Frozen ground beef**	+p	+p	/	/	+	2.842	+	+ p	+ M	+/+	+	+	**PA**
121	**Steak haché façon bouchère 15% MG congelé**	**Frozen ground beef 15% fat**	St	-	St	-	-	2.710	+	+ md	+ md	+/+	+	+	**PD**
122	Steak haché 15% MG congelé	Frozen ground beef 15% fat	St	-	St	-	-								
123	Steak haché 5% MG	Ground beef 5% fat	St	-	St	-	-								
124	Pavé de bœuf	Beef trim	St	St	St	-	-								
125	Bifteck	Beef trim	St	St	St	St	-								
126	Viande hachée 15% MG	Ground beef 15% fat	St	-	-	-	-								
296	**Entrecôte bœuf congelée**	**Frozen beef trim**	+ pd	+ md	+ p	+ p	+	2.629	+	+ p	+ M	+/+	+	+	**PA**
297	**Steak haché congelé**	**Frozen ground beef**	+ pd	+ pd	+ p	+ 1/2	+	0.098	-	-	-	/	/	-	**ND**
298	**Pavé de bœuf mariné à l'échalote congelé**	**Frozen seasoned beef meat**	+ m	+ m	/	/	+	2.740	+	+ m IMS: + m	+ m IMS: + m	A+ IMS: +/+	A+ IMS: +	+	**PA**
661	Viande bovine bourguignon à mijoter	Beef trim	-	-	-	-	-								
662	Viande bovine pavé en tournedos	Beef trim	-	-	-	-	-								
663	Viande bovine steak à griller	Beef trim	-	-	-	-	-								
664	Carpaccio parmesan	Carpaccio with cheese	St	St	St	St	-								
665	Carpaccio olives	Carpaccio with olive	St	St	St	St	-								
666	Pavé de rumsteck au poivre	Seasoned beef meat	-	-	-	-	-								
667	Pavé de rumsteck à l'échalote	Seasoned beef meat	-	-	-	-	-								
668	Carpaccio de bœuf huile et éclats de noisettes	Carpaccio with oil and hazelnuts	St	St	St	-	-								
669	Boulettes de bœuf	Beef balls	St	-	-	-	-								
670	La Tartare façon brasserie	Ground beef	St	-	-	-	-								
671	Viande hachée fraiche pur bœuf 15%MG	Ground beef 15% fat	-	-	-	-	-								
672	Viande hachée fraiche pur bœuf 5%MG	Ground beef 5% fat	St	-	-	-	-								
673	Le haché moelleux à cuisiner congelé	Frozen ground beef	St	-	St	-	-								

RAW MILKS AND DAIRY PRODUCTS															
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
3996	**Lait cru**	**Raw milk**	+ M	+ md	+ md	-	+	1.405	+	+ 1/2	+ md	+/+	+	+	**PA**
3997	**Lait cru**	**Raw milk**	+ md	+ md	+ md	+ md	+	0.818	+	- IMS: +md	+ 1/2 IMS: +md	-(X5) IMS: +/+	+	+	**PA**
3998	**Lait ribot**	**Fermented milk**	+ p	+ p	/	/	+	2.785	+	+ p	+ p	+/+	+	+	**PA**
3999	**Lait ribot**	**Fermented milk**	+ p	+ p	/	/	+	0.062	-	St	-	/	/	-	**ND**
4000	**Lait fermenté**	**Fermented milk**	+ p	+ p	/	/	+	0.063	-	St	St	/	/	-	**ND**
4001	**Gros lait fermenté**	**Fermented milk**	St	St	-	-	-	2.836	+	+ p	+ md	+*/+	+	+	**PD**
4002	**Crème crue**	**Raw cream**	+ p	+ p	/	/	+	2.824	+	+ p	+ P	+/+	+	+	**PA**
4003	**Morbier au lait cru**	**Raw milk cheese**	+ md	-	+ md	+ md	+	0.209	+	+ md	-	+/+	+	+	**PA**
4004	**Bethmale au lait cru**	**Raw milk cheese**	+ M	+ md	+ 1/2	-	+	1.284	+	- IMS: +M	- IMS: +md(1)	/ IMS: +/+	+	+	**PA**
4005	**Reblochon au lait cru**	**Raw milk cheese**	-	+ md	-	-	-								
4184	**Camembert au lait cru**	**Raw milk cheese**	+ p	-	+ md	-	-	0.601 Regrowth: 2.666	+ Regrowth:+	+ 1/2 IMS: +M Regrowth step after IMS: +m	- IMS:- Regrowth step after IMS:-	- (x5) IMS: -(x5) Regrowth: -d	+ (H7d)	+	**PD**
4185	**Chèvre au lait cru**	**Raw milk cheese**	+ md	-	-	-	-								
4186	**Chèvre au lait cru**	**Raw milk cheese**	+ p	+ p	/	/	+	2.752	+	+ M	+ M	+/+	+	+	**PA**
4187	**Tricorn au lait cru**	**Raw milk cheese**	+ p	+ M	/	/	+	1.553	+	+ M	+ m	+/+	+	+	**PA**
4188	**Fromage vache au lait cru**	**Raw milk cheese**	+ p	-	+ md	+ md	+	0.058	-	+ M	-	-(x5)	-(x5)	-	**ND**
4189	**Maroilles**	**Raw milk cheese**	St	-	-	-	-								
4190	**Selles sur Cher**	**Raw milk cheese**	St	-	-	-	-								
4191	**Reblochon au lait cru**	**Raw milk cheese**	+ m (5)	-	-	-	-								
4192	**Fromage blanc au bifidus**	**Soft white cheese**	St	St	St	St	-								
4193	**Beurre cru**	**Raw butter**	-	-	-	-	-								
4296	**Lait fermenté**	**Fermented milk**	St	St	St	St	-								
4297	**Crème fermentée probiotique**	**Fermented cream**	+ p (15)	+ p (5)	/	/	+	0.310	+	+ p	+ p	+/+	+	+	**PA**
4298	**Fromage blanc lait cru entier**	**Soft white cheese**	+ p	+ M	/	/	+	2.757	+	+ M	+ m	+/+	+	+	**PA**
4299	**Yaourts fermentés**	**Fermented yoghurt**	St	St	St	St	-	2.742	+	+ p	+ p	+/+	+	+	**PD**
4300	**Gros lait fermier**	**Fermented milk**	St	St	St	St	-	2.759	+	+ p	+ p	+/+	+	+	**PD**
4301	**Gros lait**	**Fermented milk**	St	St	St	St	-	2.783	+	+ p	+ p	+/+	+	+	**PD**
4302	**Crème fraiche brebis**	**Milk ewe cream**	St	St	St	St	-								
4303	**Faisselle au lait entier**	**Fermented milk**	+ p (9)	+ p (4)	/	/	+	1.972	+	+ p	+ p d	+/+	+	+	**PA**
4304	**Yaourts lait entier ferments**	**Fermented yoghurt**	+ p (15)	+ p (15)	/	/	+	0.061	-	St	St	/	/	-	**ND**
4305	**Faisselle**	**Fermented milk**	St	St	St	St	-	2.631	+	+ p	+ p	+/+	+	+	**PD**
127	**Lait cru**	**Raw Milk**	-	+md (3)	St	+ m(1)	-	1.374	+	- IMS: +m	- IMS: +m	+/+	+	+	**PD**
128	**Lait cru**	**Raw Milk**	-	+ md	-	+ md	-	0.086 0.087 0.088	- - -	- IMS: +m	- IMS: +m	+/+	+	-	**NA**
129	**Lait cru**	**Raw Milk**	St	+Md	-	+Md	-								

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RAW MILKS AND DAIRY PRODUCTS																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method								
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C								
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
130	**Lait cru**	**Raw Milk**	-	+md	-	+md	-	1.005	+	- IMS: +m	- IMS: +m	+/+	+	+	**PD**
131	**Lait cru**	**Raw Milk**	St	St	-	-	-								
132	**Lait cru**	**Raw Milk**	St	-	-	-	-	2.642	+	+ m	-	+/+	+	+	**PD**
133	**Lait cru**	**Raw Milk**	+m	+md	+m	-	+	2.660	+	+ md (1)	+ md	+/+	+	+	**PA**
134	**Lait cru**	**Raw Milk**	-	-	-	-	-	1.942	+	+ m	+ m	+/+	+	+	**PD**
135	**Selles sur Cher au lait cru**	**Raw milk cheese**	+p	+p	/	/	+	2.893	+	+ m	+ m	+/+	+	+	**PA**
136	**Reblochon au lait cru**	**Raw milk cheese**	+p	-	+1/2	+md	+	0.067	-	-	-	/	/	-	**ND**
137	**Saint Félicien au lait cru**	**Raw milk cheese**	St	-	St	-	-								
300	**Lait cru**	**Raw milk**	St	-	-	-	-								
301	**Lait cru**	**Raw milk**	+ p	+ M	/	/	+	1.963	+	+ md	-	+/+	+	+	**PA**
302	**Lait cru**	**Raw milk**	+ md (1)	+ pd (4)	-	-	-	2.733	+	+ m	+ M	+/+	+	+	**PD**
305	**Lait cru**	**Raw milk**	St	-	-	-	-								
306	**Lait cru**	**Raw milk**	St	-	-	-	-								
308	**Lait cru**	**Raw milk**	-	-	-	-	-								
674	Lait fermenté	Fermented milk	St	St	St	St	-								
675	Lait ribot	Fermented milk	St	-	St	-	-								
676	Lait ribot	Fermented milk	St	St	St	St	-								
677	Crème fraiche de Normandie	Fermented cream	St	St	St	St	-								
678	Crème fraiche	Fermented cream	St	St	St	St	-								
679	Gros lait fermier	Fermented milk	St	-	-	-	-								
680	Roquefort	Raw milk cheese	St	St	St	-	-								
681	Sainte Maure de Tourraine	Raw milk cheese	-	-	-	-	-								
682	Rocamadour	Raw milk cheese	-	-	-	-	-								
683	Coulommiers	Raw milk cheese	-	+ md	-	+ md	-								
684	Lait cru de vache	Raw milk	-	-	-	-	-								
685	Lait cru de vache	Raw milk	-	+ md	-	+ md	-								
686	Lait cru de vache	Raw milk	-	-	-	-	-								

VEGETABLES																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method								
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C								
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
3986	**Jeunes pousses d'épinards**	**Baby leaves (spinach)**	+ m	+ md (1)	+ 1/2	+ m	+	0.737	+	+ m (3)	-	+/+	+	+	**PA**
3987	**Roquette**	**Produce**	+ m	-	+ m	-	-	2.341	+	+ md (1) IMS: +m	- IMS: +md(1)	- (X1) IMS: +/+	+	+	**PD**
3988	**Mâche**	**Produce**	+ p	+ M	/	/	+	2.917	+	+ p	+ M	+/+	+	+	**PA**
3989	**Pousses de soja**	**Soya sprouts**	+ 1/2d	-	+ m	-	+	0.767	+	+ m	-	+/+	+	+	**PA**
3990	**Salade poulet emmental**	**Deli salad (cheese, chicken)**	+ p	+ M	/	/	+	2.764	+	+ m	+ m	+/+	+	+	**PA**
3991	**Salade caesar**	**Caesar salad**	St	-	-	-	-	2.724	+	+ 1/2	+ m	+/+	+	+	**PD**
3992	**Salade jambon œuf emmental**	**Deli salad (ham, egg, cheese)**	St	-	-	-	-	2.752	+	+ M	+ m	+/+	+	+	**PD**
3993	**Petits pois sugelés**	**Frozen peas**	+ m(2)	+ m(2)	+ m	+ md	+	0.072	-	-	-	/	/	-	**ND**
3994	**Carottes rondelles surgelées**	**Sliced frozen carrots**	-	-	-	-	-								
3995	**Duo de haricots plats surgelés**	**Flat frozen beans**	+ p (3)	+ m (3)	+ p	+ 1/2	+	0.067	-	-	-	/	/	-	**ND**
4174	**Mâche fraiche**	**Produce**	St	-	-	-	-								
4175	**Pousses d'épinards fraiches**	**Baby leaves**	+ md (1)	-	-	-	-	2.611	+	+ M	+ m	+/+	+	+	**PD**
4176	**Pousses de roquette fraiches**	**Baby leaves**	+ p	-	+ md	-	+	0.070	-	-	-	/	/	-	**ND**
4177	**Jeunes pousses de mesclum fraiches**	**Baby leaves**	-	-	-	-	-	0.210	+	- IMS:- Regrowth step after IMS:-	- IMS:- Regrowth step after IMS:-	/	/	-	**PPNA**
4178	**Pousse de soja**	**Soya sprouts**	+ M	-	-	-	-								
4179	**Graines germées poireau**	**Sprouts**	-	-	-	-	-								
4180	**Graines germées chou violet**	**Sprouts**	+ md	-	+ Md	+ md (1)	+	0.057	-	-	-	/	/	-	**ND**
4181	**Pousses d'épinards fraiches**	**Baby leaves**	+ M	+ m	+ p	+ m	+	0.799	+	+ 1/2	-	+/+	+	+	**PA**
4182	**Mesclum frais**	**Produce**	-	-	-	-	-	0.221	+	+ md(1) IMS: - Regrowth step after IMS:-	- IMS:- Regrowth step after IMS:-	-	-	-	**PPNA**
4183	**Epinards hachés congelés**	**Frozen spinash**	+ M	+ 1/2	/	/	+	0.059	-	-	-	/	/	-	**ND**
4286	**Graines germées roquette**	**Sprouts**	+ md	-	-	-	-								
4287	**Graines germées alfa radis**	**Sprouts**	-	-	-	-	-								
4288	**Graines germées alfalfa**	**Sprouts**	+ md	-	-	-	-								
4289	**Graines germées fenufrec mesclum**	**Sprouts**	-	-	-	-	-								
4290	**Graines germées roquette et alfalfa**	**Sprouts**	+ md	-	+m	+ m	+	0.067	-	-	-	/	/	-	**ND**
4291	**Graines germées radis fenouil**	**Sprouts**	-	-	-	-	-								
4292	**Graines germées roquette**	**Sprouts**	+ md (2)	-	-	-	-								
4293	**Graines germées betterave rouge**	**Sprouts**	+ md (2)	-	-	-	-								
4294	**Graines germées pousse soja**	**Soya sprouts**	+ m (5)	-	-	-	-								
4295	**Cresson**	**Produce**	-	+ m	-	-	-	0.319	+	md (1) IMS: +M	+ 1/2 IMS: +m	+/+	+	+	**PD**

♦ Analyses performed according to the COFRAC accreditation

VEGETABLES																
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
2	**Germes haricots mungo**	**Sprouts**	-	-	-	-	-	0.079 0.090 0.096	- - -	+ md	-	+/+	+	-	**NA**
3	**Fines pousses Alfa radis fenouil**	**Sprouts**	+ m ni	-	+ m	-	-	0.527	+	+ m (2) IMS: + md	- IMS: + m	- (X2) IMS: +/+	+	+	**PD**
4	**Fines pousses roquette et alfalfa**	**Sprouts**	+m ni	-	-	-	-								
5	**Fines pousses**	**Sprouts**	+ m (3)	-	+ 1/2	+ M	+	0.054	-	-	-	/	/	-	**ND**
6	**Fines pousses Alfalfa**	**Sprouts**	+ m	-	+ M	+ 1/2	+	0.057	-	+ m	-	/	/	-	**ND**
7	**Fines pousses roquette et alfalfa**	**Sprouts**	+ md	-	-	-	-								
8	**Fines pousses alfalfa**	**Sprouts**	+ md	-	-	+ m	+	0.109 0.120 0.119	- - -	- IMS: + md	- IMS: + m	+/+	+	-	**ND**
9	**Betteraves vinaigrette**	**Beets deli salad**	+ p	+p	/	/	+	2.893	+	+ p	+ p	+/+	+	+	**PA**
10	**Coleslaw moutarde**	**Coleslaw**	St	St	-	-	-	2.780	+	+ p	+ p	+/+	+	+	**PD**
11	**Celeri remoulade au fromage blanc**	**Ready to eat celery**	-	-	-	-	-	2.644	+	+ 1/2	+ 1/2	+/+	+	+	**PD**
12	**Carottes rapées assaisonnées**	**Sliced carrots**	+ p (4)	+ p (5)	/	/	+	2.845	+	+ p	+ p	+/+	+	+	**PA**
13	**Champignon assaisonnés oignons/purée tomate**	**Mushroom salad**	+ p	+ p	/	/	+	2.602	+	+ p	+ p	+/+	+	+	**PA**
14	**Salade concombre au fromage blanc**	**Cucumber deli salad**	St	St	St	St	-								
15	**Macédoine de légumes**	**Vegetables deli salad**	+ p	+ p	/	/	+	0.052	-	-	-	/	/	-	**ND**
16	Trio de crudités (carotte-celeri-maïs)	Deli salad	St	St	-	-	-								
17	Coleslaw	Coleslaw	St	St	St	St	-								
18	Salade de carotte zeste orange	Deli salad	St	St	St	St	-								
19	Betteraves vinaigrette	Beets deli salad	St	St	St	St	-								
20	Macédoine de légumes	Vegetables deli salad	St	St	-	-	-								
21	Champignon à la grecque	Mushroom salad	St	St	St	St	-								
22	Carottes rapées assaisonnées	Sliced carrots	St	St	St	St	-								
23	Salade de concombre au fromage blanc	Cucumber deli salad	St	St	St	St	-								
24	Salade choux carottes/ raisin sec	Deli salad	St	St	St	St	-								
25	Celeri remoulade au fromage blanc	Ready to eat celery	St	-	-	-	-								
26	Cœur de sucrine	Produce	St	St	-	-	-								
27	Mesclum frais	Produce	St	-	-	-	-								
146	**Graines germées roquette et alfalfa**	**Sprouts**	+md	-	+M	+ md	+	0.298	+	+ md IMS: +m ni	- IMS: + m	+/+	+	+	**PA**
149	**Coleslaw**	**Coleslaw**	+p	+p	/	/	+	2.928	+	+ p	+ p	+/+	+	+	**PA**
288	**Ciboulette**	**Chives**	+ p	+ p	+ p	+ p	+	2.542	+	+ m	+ m	+/+	+	+	**PA**
290	**Persil plat**	**Parsley**	St	St	St	St	-	2.752	+	+ p	+ p	+/+	+	+	**PD**

ENVIRONMENTAL SAMPLES															
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
350	**Déchet poudre de lait**	**Dusts (dairy industry)**	St	St	+ p	+ p	+	2.680	+	+ p	+ p	+/+	+	+	**PA**
351	**Poussière**	**Dusts (dairy industry)**	+ p	+ p	/	/	+	2.592	+	+ p	+ m	+/+	+	+	**PA**
352	**Poussière**	**Dusts (dairy industry)**	St	St	-	-	-								
353	**Poussière**	**Dusts (dairy industry)**	St	St	+ m	-	-	2.536	+	+ m	+ m	+/+	+	+	**PD**
354	**Poussière**	**Dusts (sprout industry)**	+ p	+ p	/	/	+	0.053	-	St	St	/	/	-	**ND**
355	**Poussière**	**Dusts (sprout industry)**	St	St	St	St	-	2.561	+	+ p	+ p	+/+	+	+	**PD**
357	**Eau de forage**	**Process water (sprout industry)**	+ p	+ p	/	/	+	2.423	+	+ p	+ p	+/+	+	+	**PA**
358	**Eau de lavage**	**Process water (sprout industry)**	+ p	+ M	/	/	+	2.352	+	+ 1/2	+ 1/2	+/+	+	+	**PA**
359	**Eau de rinçage**	**Process water (sprout industry)**	St	St	-	-	-								
360	**Eau d'irrigation**	**Process water (sprout industry)**	St	St	St	St	-								
361	**Lingette table blanche**	**Wipe (sprout industry)**	+ m	-	+ m	+ m	+	0.065	-	-	-	/	/	-	**ND**
362	**Lingette tapis transfert ligne soja**	**Wipe (sprout industry)**	St	-	+ M	+ 1/2d	-	2.267	+	+ md	+ 1/2	+/+	+	+	**PD**
363	**Eau d'irrigation**	**Process water (sprout industry)**	St	St	St	St	-								
364	**Eau de forage**	**Process water (sprout industry)**	+ p	+ p	/	/	+	0.078	-	-	-	/	/	-	**ND**
372	**Déchets végétaux préparation**	**Wastes (sprout industry)**	-	-	-	-	-								
373	**Eau de process pousses de soja**	**Process water (sprout industry)**	St	St	St	-	-								
374	**Déchets végétaux conditionnement**	**Wastes (sprout industry)**	-	-	-	-	-								
485	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	+ pd	-	-								
487	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
488	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-								
489	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-								
490	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
491	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
492	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	+ md	-	-								
493	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
494	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
495	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
497	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
498	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
499	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	-	-	-	-								
500	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
502	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
503	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	St	-								
504	**Lingette atelier boucherie**	**Wipe (meat industry)**	St	St	St	-	-								
592	**Eau process**	**Process water (dealy salad industry)**	St	St	St	-	-								
597	**Lingette tapis gras**	**Wipe (meat industry)**	-	-	-	-	-								
1251	**Eau de rinçage mélangeur**	**Process water**	St	St	+p	+ p	+	2.447	+	+ p	+ p	+/+	+	+	**PA**
1252	**Eau de rinçage cutter**	**Process water**	+ 1/2	+ m	/	/	+	0.076	-	-	-	/	/	-	**ND**
1253	**Lingette table poussoir après nettoyage**	**Wipe (meat industry)**	St	St	St	St	-								

♦ Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES															
Sample N°	Product (French name)	Product	ISO 16654 method♦					Solus E.coli O157 (including E. coli O157:H7) method							
								mTSB Novobiocin (20mg/L) 72 h at 2-8°C							
			IMS 6h		IMS 24h		Final Result	D.O.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without purification step, H7 after purification)**	Tests of the reference method (Latex)	Final result	Agreement Ref/Alt
1254	**Lingette poussoir après nettoyage**	**Wipe (meat industry)**	St	St	St	St	-								
1256	**Lingette table poussoir (process)**	**Wipe (meat industry)**	St	-	St	-	-	2.487	+	+ p	+ m	+/+	+	+	**PD**
1257	**Lingette cuve cutter (process)**	**Wipe (meat industry)**	-	-	+ p	+ 1/2	+	2.401	+	+ M	-	+/+	+	+	**PA**
1258	**Lingette tremie poussoir (process)**	**Wipe (meat industry)**	-	-	St	-	-	2.397	+	+ p	+ m	+/+	+	+	**PD**
1259	**Chute de viande bovine**	**Wastes (meat industry)**	St	-	+ p	+ M	+	2.526	+	+ p	+ M	+/+	+	+	**PA**
1260	**Chute de viande bovine**	**Wastes (meat industry)**	+ M	+ M	/	/	+	2.420	+	+ p	+ M	+/+	+	+	**PA**
1261	**Chute de viande bovine**	**Wastes (meat industry)**	-	-	+ p	+ M	+	0.345	+	+ M	+ m	+/+	+	+	**PA**
1262	**Eau process carné**	**Process water**	St	-	+ p	+ p	+	1.780	+	+ p	-	+/+	+	+	**PA**
1263	**Eau process carné**	**Process water**	St	St	+ p	+ p	+	0.072	-	St	-	/	/	-	**ND**
1264	**Eau process végétaux**	**Process water (vegetable industry)**	St	St	St	St	-								
1265	**Eau process végétaux**	**Process water (vegetable industry)**	St	St	St	St	-								
1326	**Lingettes process carné**	**Wipe (meat industry)**	St	St	St	St	-	2.586	+	+ p	+ p	+/+	+	+	**PD**
1327	**Lingettes process carné**	**Wipe (meat industry)**	St	St	St	St	-	2.166	+	+ p	+ p	+/+	+	+	**PD**
1329	**Lingettes process carné**	**Wipe (meat industry)**	+ p	+ p	/	/	+	2.496	+	+ p	+ p	+/+	+	+	**PA**
1330	**Lingettes process carné**	**Wipe (meat industry)**	+ p	+ p	/	/	+	2.275	+	+ p	+ p	+/+	+	+	**PA**
1332	**Eau process végétaux**	**Process water (sprout industry)**	-	-	+ m	+ m	+	0.627	+	- IMS: +m (5)	- IMS: +m (1)	+/+	+	+	**PA**
1333	**Déchets pousse de soja**	**Wastes (sprout industry)**	+ M	+ M	/	/	+	1.260	+	+ m	-	+/+	+	+	**PA**
1334	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	+ M	-	+ M	+ M	+	2.510	+	+ M	+ m(1)	+/+	+	+	**PA**
1335	**Poussière aspirateur laiterie**	**Dusts (dairy industry)**	+ M	-	+ M	+ m	+	0.069 0.061 0.060	- - -	+ m (1) IMS: +m	- IMS: -	+/+	+	-	**ND**
1525	**Eau de process carné**	**Process water (meat industry)**	+ p	+ 1/2	/	/	+	2.580	+	- IMS: +md(1)	+ md IMS: +m(2)	- (X5) IMS: +/+	- (X5) IMS: +	+	**PA**
1526	**Eau de process carné**	**Process water (meat industry)**	+ p	+ M	/	/	+	2.757	+	+ p	+ M	+/+	+	+	**PA**

Appendix 5 – Relative detection level: raw data

Matrix : Ground beef
Strain : Escherichia coli O157:H7 Ad486

Aerobic mesophilic flora: 6,0.10^2 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	ISO 16654 method♦						Solus O157 method				
			IMS 6h		IMS 24h		Final Result	Number positive samples/ Total	O.D.	Result	Confirmation	Final result	Number positive samples/Total
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157							
47	0	0	St	St	St	St	-	0/5	0.061	-	-	-	0/5
48			St	St	St	St	-		0.067	-	-	-	
49			St	St	St	St	-		0.070	-	-	-	
50			St	St	St	St	-		0.073	-	-	-	
51			St	St	St	St	-		0.071	-	-	-	
52	Low	0,5	St	St	St	St	-	8/20	2.573	+	+	+	6/20
53			+p	+p	/	/	+		2.384	+	+	+	
54			St	St	St	St	-		2.231	+	+	+	
55			St	St	St	-	-		2.164	+	+	+	
56			+p	+p	/	/	+		0.068	-	-	-	
57			St	St	St	-	-		2.434	+	+	+	
58			St	St	St	-	-		0.076	-	-	-	
59			+p	+p	/	/	+		0.068	-	-	-	
60			St	St	St	St	-		0.071	-	-	-	
61			+p	+p	/	/	+		0.066	-	-	-	
62			St	St	St	-	-		0.067	-	-	-	
63			St	St	St	St	-		0.069	-	-	-	
64			St	St	St	-	-		0.068	-	-	-	
65			St	St	St	-	-		2.465	+	+	+	
66			St	St	St	-	-		0.066	-	-	-	
67			+p	+p	/	/	+		0.070	-	-	-	
68			St	St	St	-	-		0.073	-	-	-	
69			+p	+p	/	/	+		0.073	-	-	-	
70			+p	+p	/	/	+		0.071	-	-	-	
71			+p	+p	/	/	+		0.074	-	-	-	
72	High	1,4	+p	+p	/	/	+	4/5	0.074	-	-	-	3/5
73			+p	+p	/	/	+		0.071	-	-	-	
74			+p	+p	/	/	+		2.527	+	+	+	
75			St	St	St	-	-		2.564	+	+	+	
76			+p	+p	/	/	+		2.334	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Raw milk
Strain: Escherichia coli O157:H7 Ad1745

Aerobic mesophilic flora: 7,6.10^5 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	ISO 16654 method♦						Solus O157 method				
			IMS 6h		IMS 24h		Final Result	Number positive samples/Total	O.D.	Result	Confirmation	Final result	Number positive samples/Total
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157							
184	0	0	-	-	+md	-	-	0/5	0.060	-	-	-	0/5
185			-	-	+md	-	-		0.055	-	-	-	
186			-	-	+md	-	-		0.056	-	-	-	
187			-	-	+md	+md	-		0.057	-	-	-	
188			-	-	+md	-	-		0.055	-	-	-	
189	Low	1.5	+M	+M	/	/	+	12/20	2.554	+	+	+	9/20
190			-	-	+md	-	-		0.071	-	-	-	
191			-	-	+m	-	-		0.057	-	-	-	
192			-	-	+md	+md	-		2.614	+	+	+	
193			+M	+1/2	/	/	+		0.056	-	-	-	
194			+Md	+	+md	-	-		2.503	+	+	+	
195			+M	+1/2	/	/	+		0.053	-	-	-	
196			+Md	+m (2)	+md	-	-		0.055	-	-	-	
197			-	-	+md	-	-		2.577	+	+	+	
198			+M	+1/2	/	/	+		2.693	+	+	+	
199			+md	-	+md	-	-		0.057	-	-	-	
200			+M	+1/2	/	/	+		0.058	-	-	-	
201			+M	+1/2	/	/	+		0.056	-	-	-	
202			+M	+1/2	/	/	+		0.056	-	-	-	
203			+M	+1/2	/	/	+		2.678	+	+	+	
204			+M	+1/2	/	/	+		2.670	+	+	+	
205			+M	+1/2	/	/	+		0.056	-	-	-	
206			+M	+1/2	/	/	+		0.057	-	-	-	
207			+md	-	+md	-	-		2.712	+	+	+	
208			+M	+1/2	/	/	+		2.680	+	+	+	
209	High	3.9	+md	+m	+md	+m	+	5/5	0.055	-	-	-	4/5
210			+M	+1/2	/	/	+		2.623	+	+	+	
211			+M	+1/2	/	/	+		2.684	+	+	+	
212			+M	+1/2	/	/	+		2.703	+	+	+	
213			+M	+1/2	/	/	+		2.670	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Spinach
Strain : Escherichia coli O157:H7 Ad556

Aerobic mesophilic flora: $2,0.10^7$ CFU/g

N° sample	Level	Inoculation level (cfu/sample)	ISO 16654 method♦						Solus O157 method				
			IMS 6h		IMS 24h		Final Result	Number positive samples/Total	O.D.	Result	Confirmation	Final result	Number positive samples/Total
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157							
1705	0	0	St	St	-	-	-	0/5	0.064	-	-	-	0/5
1706			St	-	St	-	-		0.066	-	-	-	
1707			St	-	-	-	-		0.065	-	-	-	
1708			St	-	-	-	-		0.068	-	-	-	
1709			St	-	St	-	-		0.068	-	-	-	
1710	Low	1,0	St	-	St	-	-	12/20	2.754	+	+	+	10/20
1711			St	-	St	-	-		0.067	-	-	-	
1712			+ p	+ M	/	/	+		2.759	+	+	+	
1713			St	-	St	-	-		2.747	+	+	+	
1714			St	-	St	-	-		0.065	-	-	-	
1715			+ p	+ M	/	/	+		0.067	-	-	-	
1716			St	-	St	-	-		2.714	+	+	+	
1717			St	St	St	-	-		2.664	+	+	+	
1718			+ p	+ M	/	/	+		0.070	-	-	-	
1719			+ p	+ M	/	/	+		2.863	+	+	+	
1720			+ p	+ p	/	/	+		0.061	-	-	-	
1721			+ p	+ M	/	/	+		0.067	-	-	-	
1722			+ p	+ p	/	/	+		2.836	+	+	+	
1723			St	-	St	-	-		2.807	+	+	+	
1724			+ p	+ M	/	/	+		0.068	-	-	-	
1725			St	St	St	-	-		0.066	-	-	-	
1726			+ p	+ p	/	/	+		0.064	-	-	-	
1727			+ p	+ M	/	/	+		2.951	+	+	+	
1728			+ p	+ M	/	/	+		2.917	+	+	+	
1729			+ p	+ M	/	/	+		0.059	-	-	-	
1730	High	2,5	+ p	+ M	/	/	+	5/5	2.955	+	+	+	4/5
1731			+ p	+ M	/	/	+		2.910	+	+	+	
1732			+ p	+ p	/	/	+		0.063	-	-	-	
1733			+ p	+ p	/	/	+		2.863	+	+	+	
1734			+ p	+ M	/	/	+		2.876	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Process water (meat industry)
Strain : Escherichia coli O157:H7 Ad552

Aerobic mesophilic flora: 8,4.10^5 CFU/ml

N° sample	Level	Inoculation level (cfu/sample)	ISO 16654 method♦						Solus O157 method				
			IMS 6h		IMS 24h		Final Result	Number positive samples/Total	O.D.	Result	Confirmation	Final result	Number positive samples/Total
			CT-SMAC	Chromagar O157	CT-SMAC	Chromagar O157							
1631	0	0	St	St	St	-	-	0/5	0.070	-	-	-	0/5
1632			St	St	St	-	-		0.061	-	-	-	
1633			St	St	St	-	-		0.064	-	-	-	
1634			St	St	St	-	-		0.065	-	-	-	
1635			St	St	St	-	-		0.058	-	-	-	
1636	Low	0,9	St	St	St	-	-	5/20	0.060	-	-	-	4/20
1637			St	St	St	-	-		0.063	-	-	-	
1638			+ p	+ p	/	/	+		2.606	+	+	+	
1639			St	St	St	-	-		2.535	+	+	+	
1640			St	St	St	-	-		0.064	-	-	-	
1641			St	St	St	-	-		0.065	-	-	-	
1642			St	St	St	-	-		0.066	-	-	-	
1643			+ p	+ p	/	/	+		0.065	-	-	-	
1644			St	St	St	-	-		2.495	+	+	+	
1645			+ p	+ p	/	/	+		0.060	-	-	-	
1646			St	St	St	-	-		0.063	-	-	-	
1647			St	St	St	-	-		0.066	-	-	-	
1648			St	St	St	-	-		0.065	-	-	-	
1649			St	St	St	-	-		0.064	-	-	-	
1650			St	St	St	-	-		0.063	-	-	-	
1651			St	St	St	-	-		0.061	-	-	-	
1652			St	St	St	-	-		0.060	-	-	-	
1653			+ p	+ p	/	/	+		2.770	+	+	+	
1654			+ p	+ p	/	/	+		0.066	-	-	-	
1655			St	St	St	-	-		0.063	-	-	-	
1656	High	2,1	St	St	St	-	-	3/5	2.854	+	+	+	4/5
1657			+ p	+ p	/	/	+		2.719	+	+	+	
1658			+ p	+ p	/	/	+		0.064	-	-	-	
1659			St	St	St	-	-		2.595	+	+	+	
1660			+ p	+ p	/	/	+		2.592	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Ground beef
Strain : E.coli O157:H7 Ad486

Level	Inoculation level (MPN determination)	Method	Negative	Positive	Total
0	/	Reference	5	0	5
		Alternative	5	0	5
		Total	10	0	10
1	0,5	Reference	12	8	20
		Alternative	14	6	20
		Total	28	14	40
2	1,4	Reference	1	4	5
		Alternative	2	3	5
		Total	3	7	10

Matrix : Raw milk
Strain : E.coli O157:H7 Ad1745

Level	Inoculation level (MPN determination)	Method	Negative	Positive	Total
0	/	Reference	5	0	5
		Alternative	5	0	5
		Total	10	0	10
1	1,5	Reference	8	12	20
		Alternative	11	9	20
		Total	19	21	40
2	3,9	Reference	0	5	5
		Alternative	1	4	5
		Total	1	9	10

Matrix : Spinach
Strain : E.coli O157:H7 Ad556

Level	Inoculation level (MPN determination)	Method	Negative	Positive	Total
0	/	Reference	5	0	5
		Alternative	5	0	5
		Total	10	0	10
1	1,5	Reference	8	12	20
		Alternative	10	10	20
		Total	18	22	40
2	3,9	Reference	0	5	5
		Alternative	1	4	5
		Total	1	9	10

Matrix : Process water (Meat industry)
Strain : E.coli O157:H7 Ad552

Level	Inoculation level (MPN determination)	Method	Negative	Positive	Total
0	/	Reference	5	0	5
		Alternative	5	0	5
		Total	10	0	10
1	0,9	Reference	15	5	20
		Alternative	16	4	20
		Total	31	9	40
2	2,1	Reference	2	3	5
		Alternative	1	4	5
		Total	3	7	10

Appendix 6 – Inclusivity / exclusivity: raw data

INCLUSIVITY										
Strain			Reference	Origin	Inoculation level CFU/225ml	Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C				
						O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit (Microgen O157 without a purification step / Wellcolex H7 after purification)
1	*Escherichia coli*	O157:H7	Ad 485	Ground beef	5	2.772	+	+	+	+/+
2	*Escherichia coli*	O157:H7	Ad486	Ground beef	3	2.735	+	+	+	+/+
3	*Escherichia coli*	O157:H7	Ad487	Ground beef	9	2.757	+	+	+	+/+
4	*Escherichia coli*	O157:H7	Ad488	Ground beef	7	2.762	+	+	+	+/+
5	*Escherichia coli*	O157:H7	Ad489	Ground beef	3	2.674	+	+	+	+/+
6	*Escherichia coli*	O157:H7	Ad 552	Slaughterhouse	8	2.735	+	+	+	+/+
7	*Escherichia coli*	O157:H7	Ad 553	Slaughterhouse	11	2.799	+	+	+	+/+
8	*Escherichia coli*	O157:H7	Ad 554	Slaughterhouse	7	2.369	+	+	+	+/+
9	*Escherichia coli*	O157:H7	Ad 555	Slaughterhouse	11	2.759	+	+	+	+/+
10	*Escherichia coli*	O157:H7	Ad 556	Water purification	13	2.703	+	+	+	+/+
11	*Escherichia coli*	O157:H7	Ad 557	Water purification	10	2.686	+	+	+	+/+
12	*Escherichia coli*	O157:H7	Ad 558	Water purification	6	2.697	+	+	+	+/+
13	*Escherichia coli*	O157:H7	Ad 559	Ground beef	13	2.654	+	+	+	+/+
14	*Escherichia coli*	O157:H7	Ad 560	Ground beef	3	2.863	+	+	+	+/+
15	*Escherichia coli*	O157:H7	Ad 561	Ground beef	11	2.793	+	+	+	+/+
16	*Escherichia coli*	O157:H7	Ad 562	Ground beef	4	2.742	+	+	+	+/+
17	*Escherichia coli*	O157:H7	Ad 563	Ground beef	14	2.699	+	+	+	+/+
18	*Escherichia coli*	O157:H7	Ad 564	Ground beef	12	2.648	+	+	+	+/+
19	*Escherichia coli*	O157:H7	Ad 565	Ground beef	5	2.447	+	+	+	+/+
20	*Escherichia coli*	O157:H7	Ad 566	Ground beef	6	2.754	+	+	+	+/+
21	*Escherichia coli*	O157:H7	Ad 567	Slaughterhouse	5	2.733	+	+	+	+/+
22	*Escherichia coli*	O157:H7	Ad 568	Slaughterhouse	9	2.870	+	+	+	+/+
23	*Escherichia coli*	O157:H7	Ad 569	Slaughterhouse	8	2.839	+	+	+	+/+
24	*Escherichia coli*	O157:H7	Ad 570	Slaughterhouse	7	2.783	+	+	+	+/+
25	*Escherichia coli*	O157:H7	Ad 571	Faeces	10	2.625	+	+	+	+/+

INCLUSIVITY										
Strain			**Reference**	Origin	**Inoculation level CFU/225ml**	**Solus E.coli O157 (including E. coli O157:H7) method mTSB Novobiocin (20mg/L) - 16h at 41.5°C**				
						O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(Microgen O157 without a purification step / Wellcolex H7 after purification)**
26	*Escherichia coli*	O157:H7	Ad 572	Faeces	7	2.721	+	+	+	+/+
27	*Escherichia coli*	O157:H7	Ad 573	Faeces	18	2.652	+	+	+	+/+
28	*Escherichia coli*	O157:H7	Ad 574	Faeces	13	2.526	+	+	+	+/+
29	*Escherichia coli*	O157:H7	Ad 575	Faeces	5	2.759	+	+	+	+/+
30	*Escherichia coli*	O157:H7	Ad 576	Faeces	5	2.767	+	+	+	+/+
31	*Escherichia coli*	O157:H7	Ad 577	Faeces	10	2.708	+	+	+	+/+
32	*Escherichia coli*	O157:H7	Ad 578	Faeces	9	2.754	+	+	+	+/+
33	*Escherichia coli*	O157:H7	Ad 579	Faeces	14	2.703	+	+	+	+/+
34	*Escherichia coli*	O157:H7	Ad 580	Faeces	29	2.708	+	+	+	+/+
35	*Escherichia coli*	O157:H7	Ad 581	Faeces	2	2.708	+	+	+	+/+
36	*Escherichia coli*	O157:H7	Ad 582	Faeces	6	2.754	+	+	+	+/+
37	*Escherichia coli*	O157:H7	Ad 583	Ground beef	8	2.620	+	+	+	+/+
38	*Escherichia coli*	O157:H7	Ad 584	Ground beef	6	2.770	+	+	+	+/+
39	*Escherichia coli*	O157:H7	Ad 585	Ground beef	7	2.724	+	+	+	+/+
40	*Escherichia coli*	O157:H7	Ad 586	Ground beef	4	2.726	+	+	+	+/+
41	*Escherichia coli*	O157:H7	Ad 587	Ground beef	7	2.740	+	+	+	+/+
42	*Escherichia coli*	O157:H7	Ad 588	Ground beef	5	2.759	+	+	+	+/+
43	*Escherichia coli*	O157:H7	Ad 589	Ground beef	1	2.730	+	+	+	+/+
44	*Escherichia coli*	O157:H7	Ad 590	Ground beef	6	2.747	+	+	+	+/+
45	*Escherichia coli*	O157:H7	Ad 591	Ground beef	5	2.682	+	+	+	+/+
46	*Escherichia coli*	O157:H7	Ad 922	Ground beef with onions	6	2.764	+	+	+	+/+
47	*Escherichia coli*	O157	Ad525	Faeces	8	1.110	+	+	+	+/+
48	*Escherichia coli*	O157	Ad527	Clinical	5	2.767	+	+	+	+/+
49	*Escherichia coli*	O157:H-	Ad 535	/	12	2.750	+	+	+	+/+
50	*Escherichia coli*	O157:H43	Ad 517	/	9	2.754	+	+	+	+/+

EXCLUSIVITY										
Strain			Reference	Origin	Inoculation level CFU/ml	Solus E.coli O157 (including E. coli O157:H7) method BPW - 20h at 37°C				
						O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without a purification step / H7 after purification)**
1	*Citrobacter freundii*		25	Frozen raw spinach	4.4 10^5	0.059	-			
2	*Escherichia coli*	O103:H2	Ad 1773	Cheese	6.7 10^5	0.062	-			
3	*Escherichia coli*	O104:H21	Ad 516	Clinical origin (USA)	5.3 10^5	0.061	-			
4	*Escherichia coli*	O111:H2	Ad 513	Clinical origin (UK)	5.1 10^5	0.063	-			
5	*Escherichia coli*	O111:H21	Ad 508	Clinical origin (USA)	3.0 10^5	0.062	-			
6	*Escherichia coli*	O111:H8	Ad 511	Clinical origin (USA)	5.3 10^5	0.064	-			
7	*Escherichia coli*	O121	Ad 1779	/	4.7 10^5	0.061	-			
8	*Escherichia coli*	O127:H6	Ad 520	Clinical origin (UK)	4.7 10^5	0.060	-			
9	*Escherichia coli*	O128:H2	Ad 512	Clinical origin (USA)	5.6 10^5	0.065	-			
10	*Escherichia coli*	O128:H7	Ad 514	Clinical origin (USA)	5.6 10^5	0.059	-			
11	*Escherichia coli*	O18:K1:H7	Ad 522	Clinical origin	4.6 10^5	0.062	-			
12	*Escherichia coli*	O26	Ad 1739	Cheese	6.0 10^5	0.061	-			
13	*Escherichia coli*	O26:H11	Ad 510	Clinical origin (USA)	5.1 10^5	0.063	-			
14	*Escherichia coli*	O3:H2	Ad 504	Clinical origin (Chile)	4.2 10^5	0.062	-			
15	*Escherichia coli*	O44:H18	Ad 519	Clinical origin (Peru)	5.1 10^5	0.059	-			
16	*Escherichia coli*	O45:H2	Ad 1778	/	3.8 10^5	0.059	-			
17	*Escherichia coli*	O55:H6	Ad 521	Clinical origin (USA)	5.6 10^5	0.061	-			
18	*Escherichia coli*	O55:H7	Ad 518	Clinical origin (Sri Lanka)	5.1 10^5	0.060	-			
19	*Escherichia coli*	O6:H10	Ad 507	Clinical origin (Sweden)	5.6 10^5	0.059	-			
20	*Escherichia coli*	O6:H6	Ad 506	Human	3.9 10^5	0.062	-			
21	*Escherichia coli*	O78:H11	ATCC 35401		3.7 10^5	0.060	-			
22	*Escherichia coli*	O78:K80:H12	ATCC 43896	Human	5.6 10^5	0.063	-			
23	*Escherichia coli*	O86:H43	Ad 509	Animal origin (elephant USA)	4.9 10^5	0.061	-			

EXCLUSIVITY										
Strain			**Reference**	**Origin**	**Inoculation level CFU/ml**	**Solus E.coli O157 (including E. coli O157:H7) method BPW - 20h at 37°C**				
						O.D.	Result	CT-SMAC	Chromagar O157	Confirmation latex kit **(O157 without a purification step / H7 after purification)**
24	*Escherichia coli*	O92:H33	Ad 503	Clinical origin (Mexico)	5.3 10^5	0.063	-			
25	*Escherichia vulneris*		127	Raw milk	6.4 10^5	0.057	-			
26	*Hafnia alvei*		88	Bakery	6.2 10^5	0.061	-			
27	*Salmonella*	Landau	Ad499	Food product	2.0 10^5	2.967	+	- (sorbitol +)	-	/
					4*	2.735	+	St	-	/
28	*Salmonella*	Typhimurium	Ad 2226	Pork meat	3.7 10^5	0.059	-			
29	*Salmonella*	Urbana	Ad501	Food product	4.1 10^5	2.947	+	-	-	/
					4*	No growth				
30	*Salmonella*	Enteritidis	Ad 638	Egg product	3.2 10^5	0.060	-			

*: strain tested using the inclusivity study protocol (incubation mTSB Novobiocin (20mg/L) 16h at 41.5°C)

Appendix 7 – Results obtained by the Expert Laboratory

Laboratory N (ADRIA)

Aerobic mesophilic flora: 9.0 10^3/g

N° Sample	Reference method: ISO 16654♦					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
N5	-	-	/	/	-	0.073	-	-	-	/	-	**NA**
N9	-	-	/	/	-	0.055	-	-	-	/	-	**NA**
N10	-	-	/	/	-	0.057	-	-	-	/	-	**NA**
N14	-	-	/	/	-	0.054	-	-	-	/	-	**NA**
N18	-	-	/	/	-	0.069	-	-	-	/	-	**NA**
N20	+	-	-	-	-	0.058	-	-	-	/	-	**NA**
N23	-	-	/	/	-	0.056	-	-	-	/	-	**NA**
N24	-	-	/	/	-	0.059	-	-	-	/	-	**NA**
N1	+	+	+	+	+	2.421	+	+	+	+	+	**PA**
N4	+	+	+	+	+	2.492	+	+	+	+	+	**PA**
N7	+	+	+	+	+	0.056	-	-	-	/	-	**ND**
N11	+	+	+	+	+	0.069	-	-	-	/	-	**ND**
N12	+	+	+	+	+	2.371	+	+	+	+	+	**PA**
N16	-	-	-	/	-	2.386	+	+	+	+	+	**PD**
N19	+	+	+	+	+	2.420	+	+	+	+	+	**PA**
N21	+	+	+	+	+	2.366	+	+	+	+	+	**PA**
N2	+	+	+	+	+	2.597	+	+	+	+	+	**PA**
N3	+	+	+	+	+	2.538	+	+	+	+	+	**PA**
N6	+	+	+	+	+	2.327	+	+	+	+	+	**PA**
N8	+	+	+	+	+	2.214	+	+	+	+	+	**PA**
N13	+	+	+	+	+	2.449	+	+	+	+	+	**PA**
N15	+	+	+	+	+	2.198	+	+	+	+	+	**PA**
N17	+	+	+	+	+	2.223	+	+	+	+	+	**PA**
N22	+	+	+	+	+	2.326	+	+	+	+	+	**PA**

♦ Analyses performed according to the COFRAC accreditation

Appendix 8 – Results obtained by each Collaborator

Laboratory A

Aerobic mesophilic flora: 1.2 10^5/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
A5	-	-	/	/	-	0.124	-	-	-	/	-	**NA**
A9	+	+	+	+	+	0.008	-	-	-	/	-	**ND**
A10	-	-	/	/	-	0.007	-	+	+	-	-	**NA**
A14	-	-	/	/	-	0.015	-	-	-	/	-	**NA**
A18	+	+	+	+	+	0.009	-	-	-	/	-	**ND**
A20	-	-	/	/	-	0.016	-	-	-	/	-	**NA**
A23	-	-	/	/	-	0.016	-	-	-	/	-	**NA**
A24	-	-	/	/	-	0.013	-	-	-	/	-	**NA**
A1	+	+	+	+	+	2.959	+	+	+	+	+	**PA**
A4	+	+	+	+	+	2.959	+	+	+	+	+	**PA**
A7	+	+	+	+	+	2.956	+	+	+	+	+	**PA**
A11	-	-	/	/	-	2.917	+	+	+	+	+	**PD**
A12	+	+	+	+	+	2.754	+	+	+	+	+	**PA**
A16	+	+	+	+	+	2.668	+	+	+	+	+	**PA**
A19	+	+	+	+	+	2.307	+	+	+	+	+	**PA**
A21	+	+	+	+	+	0.017	-	-	-	/	-	**ND**
A2	+	+	+	+	+	2.959	+	+	+	+	+	**PA**
A3	+	+	+	+	+	2.959	+	+	+	+	+	**PA**
A6	+	+	+	+	+	2.887	+	+	+	+	+	**PA**
A8	+	+	+	+	+	2.959	+	+	+	+	+	**PA**
A13	+	+	+	+	+	2.829	+	+	+	+	+	**PA**
A15	+	+	+	+	+	2.906	+	+	+	+	+	**PA**
A17	+	+	+	+	+	2.682	+	+	+	+	+	**PA**
A22	+	+	+	+	+	2.859	+	+	+	+	+	**PA**

Laboratory B

Aerobic mesophilic flora: 3.1 10^3/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
B5	-	-	/	/	-	0.082	-	-	-	/	-	**NA**
B9	-	-	/	/	-	-0.000	-	-	-	/	-	**NA**
B10	-	-	/	/	-	0.005	-	-	-	/	-	**NA**
B14	-	-	/	/	-	0.006	-	-	-	/	-	**NA**
B18	-	-	/	/	-	0.001	-	-	-	/	-	**NA**
B20	-	-	/	/	-	0.016	-	-	-	/	-	**NA**
B23	-	-	/	/	-	0.033	-	-	-	/	-	**NA**
B24	-	-	/	/	-	0.089	-	-	-	/	-	**NA**
B1	+	+	+	+	+	1.435	+	+	+	+	+	**PA**
B4	+	+	+	+	+	2.038	+	+	+	+	+	**PA**
B7	-	-	/	/	-	1.639	+	+	+	+	+	**PD**
B11	+	+	+	+	+	1.978	+	+	+	+	+	**PA**
B12	+	+	+	+	+	1.751	+	+	+	+	+	**PA**
B16	+	+	+	+	+	1.877	+	+	+	+	+	**PA**
B19	+	+	+	+	+	1.878	+	+	+	+	+	**PA**
B21	-	-	/	/	-	1.511	+	+	+	+	+	**PD**
B2	+	+	+	+	+	1.923	+	+	+	+	+	**PA**
B3	+	+	+	+	+	2.169	+	+	+	+	+	**PA**
B6	+	+	+	+	+	1.663	+	+	+	+	+	**PA**
B8	+	+	+	+	+	1.532	+	+	+	+	+	**PA**
B13	+	+	+	+	+	1.929	+	+	+	+	+	**PA**
B15	+	+	+	+	+	1.640	+	+	+	+	+	**PA**
B17	+	+	+	+	+	1.805	+	+	+	+	+	**PA**
B22	+	+	+	+	+	1.765	+	+	+	+	+	**PA**

Laboratory C

Aerobic mesophilic flora: 1.5 10^4/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
C5	-	-	/	/	-	0.010	-	-	-	/	-	**NA**
C9	-	-	/	/	-	0.395	+	-	-	/	-	**PPNA**
C10	+	-	+	+	+	0.013	-	-	-	/	-	**ND**
C14	-	-	/	/	-	0.020	-	-	-	/	-	**NA**
C18	-	-	/	/	-	0.019	-	-	-	/	-	**NA**
C20	+	-	+	+	+	0.029	-	-	-	/	-	**ND**
C23	-	-	/	/	-	0.012	-	-	-	/	-	**NA**
C24	+	-	+	+	+	0.012	-	-	-	/	-	**ND**
C1	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C4	+	+	+	+	+	0.004	-	-	-	/	-	**ND**
C7	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C11	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C12	+	+	+	+	+	0.012	-	-	-	/	-	**ND**
C16	+	+	+	+	+	2.720	+	+	+	+	+	**PA**
C19	+	+	+	+	+	2.721	+	+	-	+	+	**PA**
C21	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C2	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C3	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C6	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C8	+	+	+	+	+	2.846	+	+	+	+	+	**PA**
C13	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C15	+	+	+	+	+	2.910	+	+	+	+	+	**PA**
C17	+	+	+	+	+	2.958	+	+	+	+	+	**PA**
C22	+	+	+	+	+	2.904	+	+	+	+	+	**PA**

Laboratory D

Aerobic mesophilic flora: *not provided*

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
D5	-	-	/	/	-	0.002	-	-	-	/	-	**NA**
D9	-	-	/	/	-	0.008	-	-	-	/	-	**NA**
D10	-	-	/	/	-	0.019	-	-	-	/	-	**NA**
D14	-	-	/	/	-	0.014	-	+	-	-	-	**NA**
D18	-	-	/	/	-	0.005	-	-	-	/	-	**NA**
D20	-	-	/	/	-	0.011	-	-	-	/	-	**NA**
D23	-	-	/	/	-	0.003	-	-	-	/	-	**NA**
D24	-	-	/	/	-	0.008	-	-	-	/	-	**NA**
D1	+	+	+	+	+	2.939	+	+	-	+	+	**PA**
D4	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D7	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D11	+	+	+	+	+	2.720	+	+	+	+	+	**PA**
D12	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D16	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D19	+	+	+	+	+	2.853	+	+	+	+	+	**PA**
D21	-	-	/	/	-	2.741	+	+	+	+	+	**PD**
D2	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D3	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D6	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D8	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D13	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D15	+	+	+	+	+	2.930	+	+	+	+	+	**PA**
D17	+	+	+	+	+	2.952	+	+	+	+	+	**PA**
D22	+	+	+	+	+	2.952	+	+	+	+	+	**PA**

Laboratory E

Aerobic mesophilic flora: 4.4 10^3/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
E5	-	-	/	/	-	0.016	-	-	-	/	-	**NA**
E9	-	-	/	/	-	0.018	-	-	-	/	-	**NA**
E10	-	-	/	/	-	0.011	-	-	-	/	-	**NA**
E14	-	-	/	/	-	0.015	-	+	-	-	-	**NA**
E18	-	-	/	/	-	0.014	-	-	-	/	-	**NA**
E20	-	-	/	/	-	0.008	-	-	-	/	-	**NA**
E23	-	-	/	/	-	0.013	-	-	-	/	-	**NA**
E24	-	-	/	/	-	0.011	-	-	-	/	-	**NA**
E1	+	+	+	+	+	2.843	+	+	-	+	+	**PA**
E4	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E7	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E11	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E12	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E16	+	+	+	+	+	2.994	+	+	+	+	+	**PA**
E19	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E21	-	-	-	-	-	2.788	+	+	+	+	+	**PD**
E2	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E3	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E6	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E8	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E13	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E15	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E17	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
E22	+	+	+	+	+	3.000	+	+	+	+	+	**PA**

Laboratory F

Aerobic mesophilic flora: 9.4 10^3/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
F5	-	-	/	/	-	0.066	-	-	-	/	-	**NA**
F9	-	-	/	/	-	0.070	-	-	-	/	-	**NA**
F10	-	-	/	/	-	0.018	-	-	-	/	-	**NA**
F14	-	-	/	/	-	0.080	-	-	-	/	-	**NA**
F18	-	-	/	/	-	0.029	-	-	-	/	-	**NA**
F20	-	-	/	/	-	0.295	+	-	-	/	-	**PPNA**
F23	-	-	/	/	-	0.051	-	-	-	/	-	**NA**
F24	-	-	/	/	-	0.091	-	-	-	/	-	**NA**
F1	+	+	+	+	+	2.954	+	+	+	+	+	**PA**
F4	+	+	+	+	+	1.928	+	+	+	+	+	**PA**
F7	+	+	+	+	+	2.601	+	+	+	+	+	**PA**
F11	+	+	+	+	+	0.215	+	+	+	+	+	**PA**
F12	+	+	+	+	+	2.211	+	+	+	+	+	**PA**
F16	+	+	+	+	+	1.663	+	+	+	+	+	**PA**
F19	+	+	+	+	+	0.489	+	+	+	+	+	**PA**
F21	-	-	/	/	-	0.074	-	-	-	/	-	**NA**
F2	+	+	+	+	+	2.535	+	+	+	+	+	**PA**
F3	+	+	+	+	+	1.383	+	+	+	+	+	**PA**
F6	+	+	+	+	+	2.385	+	+	+	+	+	**PA**
F8	+	+	+	+	+	2.382	+	+	+	+	+	**PA**
F13	+	+	+	+	+	2.109	+	+	+	+	+	**PA**
F15	+	+	+	+	+	2.244	+	+	+	+	+	**PA**
F17	+	+	+	+	+	2.050	+	+	+	+	+	**PA**
F22	+	+	+	+	+	2.107	+	+	+	+	+	**PA**

Laboratory G

Aerobic mesophilic flora: 1.9 10^2/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
G5	-	-	/	/	-	0.022	-	-	-	/	-	**NA**
G9	-	-	/	/	-	0.024	-	-	-	/	-	**NA**
G10	-	-	/	/	-	0.013	-	-	-	/	-	**NA**
G14	-	-	/	/	-	0.020	-	-	-	/	-	**NA**
G18	-	-	/	/	-	0.049	-	-	-	/	-	**NA**
G20	+	+	+	+	+	0.032	-	-	-	/	-	**ND**
G23	-	-	/	/	-	0.009	-	-	-	/	-	**NA**
G24	-	-	/	/	-	0.018	-	-	-	/	-	**NA**
G1	+	+	+	+	+	2.893	+	+	+	+	+	**PA**
G4	+	+	+	+	+	0.013	-	-	-	/	-	**ND**
G7	+	+	+	+	+	2.581	+	+	+	+	+	**PA**
G11	+	-	+	-	-	2.536	+	+	+	+	+	**PD**
G12	+	+	+	+	+	2.383	+	+	+	+	+	**PA**
G16	+	+	+	+	+	0.019	-	-	-	/	-	**ND**
G19	+	+	+	+	+	2.875	+	+	+	+	+	**PA**
G21	+	+	+	+	+	2.862	+	+	+	+	+	**PA**
G2	+	+	+	+	+	2.737	+	+	+	+	+	**PA**
G3	+	+	+	+	+	2.929	+	+	+	+	+	**PA**
G6	+	+	+	+	+	2.929	+	+	+	+	+	**PA**
G8	+	+	+	+	+	1.889	+	+	+	+	+	**PA**
G13	+	+	+	+	+	2.929	+	+	+	+	+	**PA**
G15	+	+	+	+	+	2.891	+	+	+	+	+	**PA**
G17	+	+	+	+	+	2.154	+	+	+	+	+	**PA**
G22	+	+	+	+	+	2.918	+	+	+	+	+	**PA**

Laboratory H

Aerobic mesophilic flora: 2.6 10^3/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
H5	-	-	/	/	-	0.006	-	-	-	/	-	**NA**
H9	-	-	/	/	-	0.229	+	-	-	/	-	**PPNA**
H10	-	-	/	/	-	0.002	-	-	-	/	-	**NA**
H14	-	-	/	/	-	-0.012	-	-	-	/	-	**NA**
H18	-	-	/	/	-	0.002	-	-	-	/	-	**NA**
H20	-	-	/	/	-	0.001	-	-	-	/	-	**NA**
H23	-	-	/	/	-	0.029	-	-	-	/	-	**NA**
H24	-	-	/	/	-	0.016	-	-	-	/	-	**NA**
H1	-	-	/	/	-	-0.025	-	-	-	/	-	**NA**
H4	+	+	+	+	+	2.789	+	+	+	+	+	**PA**
H7	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H11	+	+	+	+	+	-0.008	-	-	-	/	-	**ND**
H12	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H16	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H19	+	+	+	+	+	2.756	+	+	+	+	+	**PA**
H21	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H2	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H3	+	+	+	+	+	2.893	+	+	+	+	+	**PA**
H6	+	+	+	+	+	2.729	+	+	+	+	+	**PA**
H8	+	+	+	+	+	2.849	+	+	+	+	+	**PA**
H13	+	+	+	+	+	2.908	+	+	+	+	+	**PA**
H15	+	+	+	+	+	2.915	+	+	+	+	+	**PA**
H17	+	+	+	+	+	2.731	+	+	+	+	+	**PA**
H22	+	+	+	+	+	2.915	+	+	+	+	+	**PA**

Laboratory J

Aerobic mesophilic flora: 5.2 10^4/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
J5	+	-	+	+	+	0.024	-	-	-	/	-	**ND**
J9	+	-	+	+	+	0.017	-	-	-	/	-	**ND**
J10	+	-	+	+	+	0.153	-	-	-	/	-	**ND**
J14	+	-	+	+	+	2.945 / 0.007	+ / -	-	-	/	-	**PPND**
J18	+	-	+	+	+	0.031	-	-	-	/	-	**ND**
J20	+	-	+	+	+	0.046	-	-	-	/	-	**ND**
J23	+	-	+	+	+	0.218 / 0.008	+ / -	-	-	/	-	**PPND**
J24	+	-	+	+	+	0.038	-	-	-	/	-	**ND**
J1	+	+	+	+	+	1.921	+	+	+	+	+	**PA**
J4	+	+	+	+	+	1.701	+	+	+	+	+	**PA**
J7	+	+	+	+	+	2.201	+	+	+	+	+	**PA**
J11	+	+	+	+	+	1.814	+	+	+	+	+	**PA**
J12	+	-	+	+	+	0.030	-	-	-	/	-	**ND**
J16	+	+	+	+	+	1.955	+	+	+	+	+	**PA**
J19	+	+	+	+	+	1.860	+	+	+	+	+	**PA**
J21	+	+	+	+	+	1.508	+	+	+	+	+	**PA**
J2	+	+	+	+	+	1.741	+	+	+	+	+	**PA**
J3	+	+	+	+	+	1.610	+	+	+	+	+	**PA**
J6	+	+	+	+	+	2.945	+	+	+	+	+	**PA**
J8	+	+	+	+	+	2.146	+	+	+	+	+	**PA**
J13	+	+	+	+	+	1.523	+	+	+	+	+	**PA**
J15	+	+	+	+	+	2.078	+	+	+	+	+	**PA**
J17	+	+	+	+	+	1.886	+	+	+	+	+	**PA**
J22	+	+	+	+	+	2.945	+	+	+	+	+	**PA**

Laboratory K

Aerobic mesophilic flora: 2.5 10^4/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
K5	-	-	/	/	-	0.041	-	-	-	/	-	**NA**
K9	-	-	/	/	-	0.022	-	-	-	/	-	**NA**
K10	-	-	/	/	-	0.092	-	-	-	/	-	**NA**
K14	-	-	/	/	-	0.121	-	-	-	/	-	**NA**
K18	-	-	/	/	-	0.055	-	-	-	/	-	**NA**
K20	-	-	/	/	-	0.044	-	-	-	/	-	**NA**
K23	-	-	/	/	-	0.033	-	-	-	/	-	**NA**
K24	-	-	/	/	-	0.041	-	-	-	/	-	**NA**
K1	+	+	+	+	+	3.099	+	+	+	+	+	**PA**
K4	+	+	+	+	+	2.310	+	+	+	+	+	**PA**
K7	+	+	+	+	+	3.006	+	+	+	+	+	**PA**
K11	+	+	+	+	+	3.219	+	+	+	+	+	**PA**
K12	+	+	+	+	+	2.807	+	+	+	+	+	**PA**
K16	+	+	+	+	+	3.064	+	+	+	+	+	**PA**
K19	-	-	/	/	-	0.783	+	- IMS:+	- IMS:+	+	+	**PD**
K21	+	+	+	+	+	3.247	+	+	+	+	+	**PA**
K2	+	+	+	+	+	3.083	+	+	+	+	+	**PA**
K3	+	+	+	+	+	3.521	+	+	+	+	+	**PA**
K6	+	+	+	+	+	3.123	+	+	+	+	+	**PA**
K8	+	+	+	+	+	3.935	+	+	+	+	+	**PA**
K13	+	+	+	+	+	3.495	+	+	+	+	+	**PA**
K15	+	+	+	+	+	2.665	+	+	+	+	+	**PA**
K17	+	+	+	+	+	3.438	+	+	+	+	+	**PA**
K22	+	+	+	+	+	2.827	+	+	+	+	+	**PA**

Laboratory L

Aerobic mesophilic flora: 2.3 10^5/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
L5	+	-	+	+	+	0.092	-	-	-	/	-	**ND**
L9	-	-	/	/	-	0.149	-	-	-	/	-	**NA**
L10	-	-	/	/	-	0.097	-	+	-	-	-	**NA**
L14	+	-	+	+	+	0.201	+	-	-	/	-	**PPND**
L18	+	-	+	+	+	0.074	-	-	-	/	-	**ND**
L20	-	-	/	/	-	0.157	-	-	-	/	-	**NA**
L23	+	-	+	-	-	0.084	-	-	+	-	-	**NA**
L24	+	-	+	+	+	0.257	+	-	-	/	-	**ND**
L1	-	-	/	/	-	2.957	+	+	+	+	+	**PD**
L4	+	+	+	+	+	2.832	+	+	+	+	+	**PA**
L7	+	+	+	+	+	0.104	-	+	-	-	-	**ND**
L11	-	-	/	/	-	0.052	-	-	-	/	-	**NA**
L12	+	+	+	+	+	2.328	+	+	+	+	+	**PA**
L16	+	+	+	+	+	0.070	-	-	-	/	-	**ND**
L19	+	-	+	+	+	1.516	+	+	+	+	+	**PA**
L21	+	+	+	+	+	0.152	-	-	-	/	-	**ND**
L2	+	+	+	+	+	2.773	+	+	+	+	+	**PA**
L3	+	+	+	+	+	2.894	+	+	+	+	+	**PA**
L6	+	+	+	+	+	2.939	+	+	+	+	+	**PA**
L8	+	+	+	+	+	2.910	+	+	+	+	+	**PA**
L13	+	+	+	+	+	2.434	+	+	+	+	+	**PA**
L15	+	+	+	+	+	2.602	+	+	+	+	+	**PA**
L17	+	+	+	+	+	2.607	+	+	+	+	+	**PA**
L22	+	+	+	+	+	2.781	+	+	+	+	+	**PA**

Laboratory M

Aerobic mesophilic flora: 2.2 10^4/g

N° Sample	Reference method: ISO 16654					Alternative method: Solus *E.coli* O157 ELISA						Agreement
	CT-SMAC	Colorex O157	Indol	Latex test (O157/H7)	Final result	O.D.	Test result	CT-SMAC	Colorex O157	Latex test (O157)	Final result	
M5	-	-	/	/	-	0.013	-	-	-	/	-	**NA**
M9	-	-	/	/	-	0.012	-	-	-	/	-	**NA**
M10	-	-	/	/	-	0.014	-	-	-	/	-	**NA**
M14	-	-	/	/	-	0.026	-	-	-	/	-	**NA**
M18	-	-	/	/	-	0.011	-	-	-	/	-	**NA**
M20	-	-	/	/	-	0.012	-	-	-	/	-	**NA**
M23	-	-	/	/	-	0.018	-	-	-	/	-	**NA**
M24	-	-	/	/	-	0.010	-	-	-	/	-	**NA**
M1	-	-	/	/	-	3.000	+	+	+	+	+	**PD**
M4	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M7	+	+	+	+	+	2.918	+	+	+	+	+	**PA**
M11	+	+	+	+	+	0.013	-	-	-	+	-	**ND**
M12	-	-	/	/	-	3.000	+	+	+	+	+	**PD**
M16	+	+	+	+	+	1.866	+	+	+	+	+	**PA**
M19	+	+	+	+	+	2.858	+	+	+	+	+	**PA**
M21	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M2	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M3	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M6	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M8	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M13	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M15	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M17	+	+	+	+	+	3.000	+	+	+	+	+	**PA**
M22	+	+	+	+	+	3.000	+	+	+	+	+	**PA**

Appendix 9 – Specificity and sensitivity

Reference method positive results						
Laboratory	**Contamination level**					
	L0		L1		L2	
	Obtained	Samples number	Obtained	Samples number	Obtained	Samples number
A	2	8	7	8	8	8
B	0	8	6	8	8	8
C	3	8	8	8	8	8
D	0	8	7	8	8	8
E	0	8	7	8	8	8
F	0	8	7	8	8	8
G	1	8	7	8	8	8
H	0	8	7	8	8	8
K	0	8	7	8	8	8
M	0	8	6	8	8	8
Total	**6**	80	**69**	80	**80**	80

Alternative method positive results						
Laboratory	**Contamination level**					
	L0		L1		L2	
	Obtained	Samples number	Obtained	Samples number	Obtained	Samples number
A	0	8	7	8	8	8
B	0	8	8	8	8	8
C	0	8	6	8	8	8
D	0	8	8	8	8	8
E	0	8	8	8	8	8
F	0	8	7	8	8	8
G	0	8	6	8	8	8
H	0	8	6	8	8	8
K	0	8	8	8	8	8
M	0	8	7	8	8	8
Total	**0**	80	**71**	80	**80**	80

Appendix 10 – Paired results of the alternative and reference methods for each level

L0	Reference method		Total	
Alternative method	+	-		
+	0	0	0	
-	6	74	80	PPNA=3
Total	6	74	80	
AC=	92.5			LCL 86.6

L1	Reference method		Total	
Alternative method	+	-		
+	62	9	71	
-	7	2	9	
Total	69	11	80	
AC=	80.0			LCL 71.1

L2	Reference method		Total	
Alternative method	+	-		
+	80	0	80	
-	0	0	0	
Total	80	0	80	
AC=	100.0			LCL 98.0

L1+L2	Reference method		Total	
Alternative method	+	-		
+	142	9	151	
-	7	2	9	
Total	149	11	160	
AC=	90.0			LCL 85.3

L0+L1+L2	Reference method		Total	
Alternative method	+	-		
+	142	9	151	
-	13	76	89	
Total	155	85	240	PPNA=3
AC=	90.8			LCL 87.1

Appendix 11 – Accordance

Reference method

Level L0							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	2	0.25	0.0625	6	0.75	0.5625	0.625
B	0	0	0	8	1	1	1
C	3	0.375	0.140625	5	0.625	0.390625	0.53125
D	0	0	0	8	1	1	1
E	0	0	0	8	1	1	1
F	0	0	0	8	1	1	1
G	1	0.125	0.015625	7	0.875	0.765625	0.78125
H	0	0	0	8	1	1	1
K	0	0	0	8	1	1	1
M	0	0	0	8	1	1	1
						Average	0.89375
						Accordance	89.4%

Level L1							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	7	0.875	0.765625	1	0.125	0.015625	0.78125
B	6	0.75	0.5625	2	0.25	0.0625	0.625
C	8	1	1	0	0	0	1
D	7	0.875	0.765625	1	0.125	0.015625	0.78125
E	7	0.875	0.765625	1	0.125	0.015625	0.78125
F	7	0.875	0.765625	1	0.125	0.015625	0.78125
G	7	0.875	0.765625	1	0.125	0.015625	0.78125
H	7	0.875	0.765625	1	0.125	0.015625	0.78125
K	7	0.875	0.765625	1	0.125	0.015625	0.78125
M	6	0.75	0.5625	2	0.25	0.0625	0.625
Px	69					Average	0.77
Nx	80					Accordance	77.2%

Level L2							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Average	1
						Accordance	100%

Alternative method

Level L0							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	0	0	0	8	1	1	1
B	0	0	0	8	1	1	1
C	0	0	0	8	1	1	1
D	0	0	0	8	1	1	1
E	0	0	0	8	1	1	1
F	0	0	0	8	1	1	1
G	0	0	0	8	1	1	1
H	0	0	0	8	1	1	1
K	0	0	0	8	1	1	1
M	0	0	0	8	1	1	1
						Average	1
						Accordance	100.0%

Level L1							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	7	0.875	0.765625	1	0.125	0.015625	0.78125
B	8	1	1	0	0	0	1
C	6	0.75	0.5625	2	0.25	0.0625	0.625
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	7	0.875	0.765625	1	0.125	0.015625	0.78125
G	6	0.75	0.5625	2	0.25	0.0625	0.625
H	6	0.75	0.5625	2	0.25	0.0625	0.625
K	8	1	1	0	0	0	1
M	7	0.875	0.765625	1	0.125	0.015625	0.78125
CPx	71					Average	0.82
Nx	80					Accordance	82.2%

Level L2							
Labs	Positive results number obtained	Positive results probability	Positive pairs probability	Negative results number obtained	Negative results probability	Negative pairs probability	Identical results pairs probability
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Average	1
						Accordance	100%

Appendix 12 – Concordance

Reference method

Level LO

Laboratories number 10

Number of negative results per laboratory: 8

Laboratory	Number of negative results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	6	416	576
B	8	528	576
C	5	354	576
D	8	528	576
E	8	528	576
F	8	528	576
G	7	474	576
H	8	528	576
K	8	528	576
M	8	528	576
Total		4 940	5 760
Concordance		85.8%	

Total + **6**

Total - **74**

Level L1

Laboratories number 10

Number of positive results per laboratory: 8

Laboratory	Number of positive results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	7	444	576
B	6	396	576
C	8	488	576
D	7	444	576
E	7	444	576
F	7	444	576
G	7	444	576
H	7	444	576
K	7	444	576
M	6	396	576
Total		4 388	5 760
Concordance		76.2%	

Total + **69**

Total - **11**

Level L2

Laboratories number 10

Number of positive results per laboratory: 8

Laboratory	Number of positive results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	8	576	576
B	8	576	576
C	8	576	576
D	8	576	576
E	8	576	576
F	8	576	576
G	8	576	576
H	8	576	576
K	8	576	576
M	8	576	576
Total		5 760	5 760
Concordance		100.0%	

Total + **80**

Total - **0**

Alternative method

Level LO
Laboratories number 10
Number of negative results per laboratory: 8

Laboratory	Number of negative results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	8	576	576
B	8	576	576
C	8	576	576
D	8	576	576
E	8	576	576
F	8	576	576
G	8	576	576
H	8	576	576
K	8	576	576
M	8	576	576
Total		5 760	5 760
Concordance		100.0%	

Total + **0**
Total - **80**

Level L1
Laboratories number 10
Number of positive results per laboratory: 8

Laboratory	Number of positive results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	7	456	576
B	8	504	576
C	6	404	576
D	8	504	576
E	8	504	576
F	7	456	576
G	6	404	576
H	6	404	576
K	8	504	576
M	7	456	576
Total		4 596	5 760
Concordance		79.8%	

Total + **71**
Total - **9**

Level L2
Laboratories number 10
Number of positive results per laboratory: 8

Laboratory	Number of positive results	Inter-laboratories pairs with the same result	Total inter-laboratories pairs number
A	8	576	576
B	8	576	576
C	8	576	576
D	8	576	576
E	8	576	576
F	8	576	576
G	8	576	576
H	8	576	576
K	8	576	576
M	8	576	576
Total		5 760	5 760
Concordance		100.0%	

Total + **80**
Total - **0**