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NF VALIDATION
Validation of alternative analytical methods
Application in food microbiology

Summary report

Validation study according to the ISO 16140-2

Agar Listeria (AL)

(Certificate number: BRD 07/16 - 01/09)

for the detection of *Listeria monocytogenes*
in a broad range of food and production environmental samples

Qualitative method

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This report consists of 135 pages, including 11 appendices.
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Competencies of the laboratory are certified by COFRAC accreditation for the analyses marked with the symbol◆.

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LIST OF ABBREVIATIONS

Method & protocol	
CFU	Colony Forming Units
ILS	Interlaboratory Study
MCS	Method Comparison Study
RLM	RAPID'L. mono
RLOD	Relative Level of Detection
RT	Relative Trueness
RTC	Ready to cook
RTE	Ready to eat
RTRH	Ready to reheat
SE	Relative Sensitivity
SP	Relative Specificity
Interpretation	
AL	Acceptability Limit
alt	Alternative method
$\overline{D}$	Average difference
FN	False Negative results
FP	False Positive results
FPR	False Positive Ratio
LOD	Limit of Detection
NA	Negative agreement
$ND_{FN\ (alt)}$	Negative Deviation due to false negative alternative-method results
PA	Positive Agreement
PD	Positive deviation
$PD_{FP(alt)}$	Positive Deviation due to false positive alternative-method results
ref	Reference method
TNA	Total Negative Agreement
TND	Total Negative Deviation
Raw data	
-	No typical colonies but presence of background microflora
(x)	Number of colonies in the plate
1/2	50% level of target analyte
d	Doubtful result
H-	Characteristic *Listeria* without halo
H+	Characteristic *Listeria* colonies with halo
m	Minority level of target analyte
M	Majority level of target analyte
NC	Non-characteristic colony
NI	No identification
ni	Not isolated colony
p	Pure culture level of target analyte
st	Plate without any colony
Bold typing	**artificially inoculated samples**

The technical protocol and the result interpretation were carried out according to the EN ISO 16140-2(2016), ISO 16140-2/A1 (2024) and the AFNOR technical rules (Revision 12).

Validation protocols	▪ ISO 16140-1 (2016): Microbiology of the food chain - Method validation — *Part 1: Vocabulary* ▪ ISO 16140-2 (2016) & ISO 16140-2/A1(2024): Microbiology of the food chain - Method validation — *Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method* ▪ AFNOR technical rules (Revision 12).
Reference method[♦]	ISO 11290-1 (May 2017): Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp.- Part 1: detection method
Alternative method	**Agar *Listeria* for the detection of *Listeria monocytogenes***
Scope	> **Broad range of food** > **Production environmental samples**
Certification organism	AFNOR Certification (http://nf-validation.afnor.org/)

[♦] Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

1 INTRODUCTION

The Agar *Listeria* method for the detection of *Listeria monocytogenes* was validated in January 2009 (certificate number BRD 07/16 - 01/09) in a broad range of food and production environmental samples with Institut Pasteur de Lille as expert laboratory. Since this date, the following renewals and extensions were performed:

Date	Description	Reference method	Validation standard	Conducted by
January 2009	Initial validation	ISO 11290-1 (1996) & ISO 11290-1/A1 (2004)	ISO 16140-2 (2003)	*Eurofins IPL Nord*
November 2012	Renewal study	ISO 11290-1 (1996) & ISO 11290-1/A1 (2004)	ISO 16140-2 (2003)	*Eurofins IPL Nord*
May 2017	Renewal study	ISO 11290-1 (2017)	ISO 16140-2 (2016)	*ISHA*
December 2020	Renewal study and extension for a new confirmation protocol	ISO 11290-1 (2017)	ISO 16140-2 (2016)	ADRIA
SurFebruary 2022	Extension study for the use of a new enrichment protocol (enrichment in Half-Fraser broth for 21 h ± 3 h at 30°C) for food and production environmental samples	ISO 11290-1 (2017)	ISO 16140-2 (2016)	ADRIA
December 2024	Renewal study	ISO 11290-1 (2017)	ISO 16140-2 (2016) & ISO 16140-2/A1 (2024)	ADRIA

2 METHOD PROTOCOLS

2.1 Alternative method

The flow diagram of the alternative method is provided in **Appendix 1**.

2.1.1 Principle

The principle of AL (Agar *Listeria* according to Ottaviani and Agosti) method is based on an enrichment step in Half Fraser and the use of a chromogenic agar media which relies on detection of two enzymes activities:

- β-D-glucosidase activity, common to all *Listeria* genus bacteria is detected using a chromogenic substrate (X-glucoside). Its hydrolysis induces the formation of a blue to blue-green colour for all *Listeria* species colonies.
- PI-PLC is an enzyme only detected in pathogenic *Listeria* species: *L. monocytogenes* and *L. ivanovii*. AL medium contains phosphatidylinositol which, when it breaks down, produces an opaque halo around colonies for these two *Listeria* species.
  ***Listeria monocytogenes* appears as blue to blue-green colonies surrounded by an opaque halo.**

Selectivity of the medium is achieved by the combined action of lithium chloride, antibiotics, and an antifungal.

2.1.2 Protocol

The steps of the alternative method are the following:

- Enrichment in Half Fraser broth for 18 to 28 h at 30 ± 1°C, 1/10 dilution
- Plating out 0.1 mL on an AL plate for streaking, incubation for 24 h ± 2 h at 37 ± 1°C. The incubation can be extended to 48 h ± 2 h

The characteristic colonies of *Listeria monocytogenes* on AL plates (blue to blue-green colonies with an opaque halo) must be confirmed by:

- Using the conventional tests described in the ISO standard method (including a purification step),
- Using nucleic probes as described in the ISO 7218 (for example iQ-Check *Listeria monocytogenes* II Real-Time PCR Detection Kit) on isolated colonies (with or without purification step),

- Using the Rhamnose test, without purification if the colony is well isolated,
- Spotting at least one isolated colony onto RAPID'*L.mono* plate (up to 12 colonies can be tested on a single plate),
- Using any other NF VALIDATION -certified method based on a different principle from that of AL Agar. The validated protocol of the second method must be respected in its entirely. All steps prior detection step used as a starting point for confirmation must be common to both methods.

After the enrichment step the broth can be stored for 72 h at 5 ± 3°C before streaking onto AL plates.

The AL plates can be stored for 72 h after incubation before reading and proceeding to the confirmatory tests.

2.1.3 Restrictions

There is no restriction for use.

2.2 Reference method♦

The reference method used for the initial validation was the ISO 11290-1/A1 (2004): Microbiology of food and animal feeding stuffs. Horizontal method for the detection and enumeration of *Listeria monocytogenes*. Part 1: detection method.

For the renewal study (2017) and the extension (2022), the reference method was the EN ISO 11290-1 (2017): Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. - Part 1: detection method (see **Appendix 2)**.

2.3 Study design

The study is **a paired study design for all protocols** as the reference and the alternative methods used Half Fraser broth for the first enrichment step incubated at the same temperature.

The reference and alternative methods used in this validation study were tested using a 25 g test portion and a 1:10 dilution ratio.

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

3 INITIAL VALIDATION, EXTENSION/RENEWAL STUDIES: RESULTS (2009-2020)

3.1 Method Comparison Study

The method comparison study is a study performed by the expert laboratory to compare the alternative method with the reference method.

The study was carried out on a variety of samples and strains representative of the most frequently encountered products. This does not constitute an exhaustive list of the different matrices in the scope.
For any comment on the alternative method, please contact AFNOR Certification by logging on to the web page http://nf-validation.afnor.org/contact-2/.

3.1.1 Sensitivity study

The sensitivity (SE) is the ability of the method to detect the analyte by either the reference or alternative method.

3.1.1.1 Number and nature of samples

During the validation studies, the AL plates were tested at two incubations times, 22 h and 48 h.
Taking into account all the studies (2009, 2012 and 2017), 466 samples were tested providing 209 positive and 257 negative results. The distribution per tested category and type is given in Table 1

Table 1 – Distribution per tested category and type - After 22 h and 48 h incubation

Category		Type		Positive	Negative	Total
1	**Composite foods**	a	Ready to eat	10	11	21
		b	Ready to reheat	10	10	20
		c	Pastries, egg products…	10	10	20
			Total	30	31	61
2	**Meat products**	a	Raw products (including deep-frozen, fresh …)	14	15	29
		b	Ready to eat and processed meat products	10	18	28
		c	Fermented or dried meat products	19	33	52
			Total	43	66	109
3	**Dairy products**	a	Raw milk cheese	13	24	37
		b	Other raw milk products	9	11	20
		c	Heat processed milk and dairy products	14	24	38
			Total	36	59	95
4	**Vegetables**	a	Raw vegetables	9	11	20
		b	Ready to eat, ready to cook,	15	10	25
		c	Processed vegetables	8	12	20
			Total	32	33	65
5	**Seafood products**	a	Raw products	15	11	26
		b	Smoked, marinated products	10	12	22
		c	Processed products	13	9	22
			Total	38	32	70
6	**Production environmental samples**	a	Process water	10	13	23
		b	Dusts and residues	12	10	22
		c	Surface sample	8	13	21
			Total	30	36	66
All categories				**209**	**257**	**466**

3.1.1.2 Artificial contamination of samples

140 naturally contaminated samples were analyzed. Artificial contamination was also applied using the seeding protocol. 85 samples were inoculated; 69 samples gave a positive result, 68 were inoculated below or equal to 3 CFU and 1 was inoculated at 3.6 CFU. The artificial contaminations are presented in **Appendix 3**.

The repartition of the positive samples per inoculation protocol and inoculation level is given Table 2.

Table 2 - Repartition of the positive samples per inoculation protocol and inoculation level

	Naturally contaminated	Seeding		Total
		≤3 CFU	3 >x≥3,6 CFU	
Number of samples	140	68	1	209
%	67.0%	32.5%	0.5%	100.0%

67 % of the samples were naturally contaminated.

3.1.1.3 Protocols applied during the validation study

> **Incubation time**

- Half Fraser broth: 22 h at 30 ± 1°C
- AL plates: 22 and 48 h

> **Confirmations**

Initial validation in 2009:

- ISO tests (identification)
- iQ-Check *Listeria monocytogenes*,
- Spot on RLM,

Renewal study in 2017:

- ISO tests (identification),
- Spot on RLM,
- Spot on RLSP (results not presented in this report as this confirmation is not part of the of the confirmation procedure),
- Streak on PALCAM (results not presented in this report as this confirmation is not part of the confirmation procedure).

> **Enrichment broth storage**

The enriched samples (Half Fraser) were stored for 72 h at 5 ± 3°C for the studies performed in 2012 and 2017.

> **Plates storage**

The AL plates were stored for 72 h at 5 ± 3°C and read again for all the studies.

3.1.1.4 Test results

Raw data per category are given in **Appendix 4**. The results are given in **Table 3.**

Table 3 – Summary of results obtained with the reference and alternative methods (after confirmation) of all samples for each category

After incubation of AL plates for 22 h at 37°C						
Category		PA	PD	TND	TNA	Total
1	Composite foods	30	0	0	31	61
2	Meat products	41	0	2	66	109
3	Dairy products	35	0	1	59	95
4	Vegetable products	31	1	0	33	65
5	Seafood products	38	0	0	32	70
6	Production environmental samples	30	0	0	36	66
All categories		205	1	3	257	466

After incubation of AL plates for 48 h at 37°C						
Category		PA	PD	TND	TNA	Total
1	Composite foods	30	0	0	31	61
2	Meat products	42	0	1	66	109
3	Dairy products	35	0	1	59	95
4	Vegetable products	31	1	0	33	65
5	Seafood products	38	0	0	32	70
6	Production environmental samples	30	0	0	36	66
All categories		206	1	2	257	466

With: $TND = ND_{FN(alt)}$ $TNA = NA + PD_{FP(alt)}$

3.1.1.5 Calculation of relative trueness (RT), sensitivity (SE), false positive ratio (FPR) and false negative ratio (FNR) for the alternative method

The calculations are presented in Table 4.

Table 4 – Calculation of the relative trueness (RT), the sensitivity (SE, the false positive ratio (FPR)) and the false negative ratio (FNR) for the alternative method

After incubation of AL plates for 22 h at 37°C															
Category		Type		PA	NA	$ND_{FN(alt)}$	PD	$PD_{FP(alt)}$	TND	TNA	SE alt %	SE ref %	RT %	FPR %	FNR
1	Composite	a	Ready to eat	10	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Ready to reheat	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Pastries, egg products…	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**31**	**0**	**0**	**0**	**0**	**31**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
2	Meat	a	Raw products (including deep-frozen, fresh…)	12	15	2	0	0	2	15	85,7%	100,0%	93,1%	0,0%	0,143
		b	Ready to eat and processed meat products	10	18	0	0	0	0	18	100,0%	100,0%	100,0%	0,0%	0,000
		c	Fermented or dried meat products	19	33	0	0	0	0	33	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**41**	**66**	**2**	**0**	**0**	**2**	**66**	**95,3%**	**100,0%**	**98,2%**	**0,0%**	**0,047**
3	Dairy	a	Raw milk cheese	12	24	1	0	0	1	24	92,3%	100,0%	97,3%	0,0%	0,077
		b	Other raw milk products	9	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		c	Heat processed milk and dairy products	14	24	0	0	0	0	24	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**35**	**59**	**1**	**0**	**0**	**1**	**59**	**97,2%**	**100,0%**	**98,9%**	**0,0%**	**0,028**
4	Vegetables	a	Raw vegetables	9	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Ready to eat, ready to cook,	14	10	0	1	0	0	10	100,0%	93,3%	96,0%	0,0%	0,000
		c	Processed vegetables	8	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**31**	**33**	**0**	**1**	**0**	**0**	**33**	**100,0%**	**96,9%**	**98,5%**	**0,0%**	**0,000**
5	Seafood	a	Raw products	15	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Smoked, marinated products	10	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
		c	Processed products	13	9	0	0	0	0	9	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**38**	**32**	**0**	**0**	**0**	**0**	**32**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	0,000
6	Production environmental samples	a	Process water	10	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
		b	Dusts and residues	12	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Surface sample	8	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**36**	**0**	**0**	**0**	**0**	**36**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	0,000
All categories				**205**	**257**	**3**	**1**	**0**	**3**	**257**	**98,6%**	**99,5%**	**99,1%**	**0,0%**	**0,014**

After incubation of AL plates for 48 h at 37°C															
Category		Type		PA	NA	$ND_{FN(alt)}$	PD	$PD_{FP(alt)}$	TND	TNA	SE alt %	SE ref %	RT %	FPR %	FNR
1	Composite	a	Ready to eat	10	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Ready to reheat	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Pastries, egg products…	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**31**	**0**	**0**	**0**	**0**	**31**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
2	Meat	a	Raw products (including deep-frozen, fresh…)	13	15	1	0	0	1	15	92,9%	100,0%	96,6%	0,0%	0,071
		b	Ready to eat and processed meat products	10	18	0	0	0	0	18	100,0%	100,0%	100,0%	0,0%	0,000
		c	Fermented or dried meat products	19	33	0	0	0	0	33	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**42**	**66**	**1**	**0**	**0**	**1**	**66**	**97,7%**	**100,0%**	**99,1%**	**0,0%**	**0,023**
3	Dairy	a	Raw milk cheese	12	24	1	0	0	1	24	92,3%	100,0%	97,3%	0,0%	0,077
		b	Other raw milk products	9	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		c	Heat processed milk and dairy products	14	24	0	0	0	0	24	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**35**	**59**	**1**	**0**	**0**	**1**	**59**	**97,2%**	**100,0%**	**98,9%**	**0,0%**	**0,028**
4	Vegetables	a	Raw vegetables	9	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Ready to eat, ready to cook,	14	10	0	1	0	0	10	100,0%	93,3%	96,0%	0,0%	0,000
		c	Processed vegetables	8	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**31**	**33**	**0**	**1**	**0**	**0**	**33**	**100,0%**	**96,9%**	**98,5%**	**0,0%**	**0,000**
5	Seafood	a	Raw products	15	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
		b	Smoked, marinated products	10	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
		c	Processed products	13	9	0	0	0	0	9	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**38**	**32**	**0**	**0**	**0**	**0**	**32**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
6	Production environmental samples	a	Process water	10	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
		b	Dusts and residues	12	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Surface sample	8	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**36**	**0**	**0**	**0**	**0**	**36**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
All categories				**206**	**257**	**2**	**1**	**0**	**2**	**257**	**99,0%**	**99,5%**	**994%**	**0,0%**	**0,010**

A summary of the results is given in Table 5.

Table 5 - Summary of results

		Incubation 22 h	Incubation 48 h
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)} \, x \, 100 \, \%$	**98,6%**	**99,0%**
Sensitivity for the reference method	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)} \, x \, 100 \, \%$	**99,5%**	**99,5%**
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100 \, \%$	**99,1%**	**99,6%**
False positive ratio for the alternative method	$FPR = \frac{PD_{FP\,(alt)}}{TNA} \, x \, 100 \, \%$	**0,0%**	**0,0 %**
False negative ratio for the alternative method	$FNR = \frac{ND_{FN(alt)}}{PA + TND + PD}$	**0,014**	**0,010**

3.1.1.6 Analysis of discordant results

The negative deviations are given in Table 6 and the positive deviation in Table 7.

Table 6 - Negative deviations

Year	Sample N°	Product	Contamination (CFU/sample)	ISO 11290-1	AL 22 h	AL 48 h	Confirmation	AL Final result 22 h	AL Final result 48 h	Agreement 22 h	Agreement 48 h	Category	Type
2009	D4	Minced beef	/	*L. monocytogenes*	-LE	+LB(3)	*L.monocytogenes*	-	+	$ND_{FN(alt)}$	PA	2	a
2009	E3	Minced beef	/	*L. welshimeri* *L. monocytogenes*	-LA	-LA	*L.welshimeri*	-	-	$ND_{FN(alt)}$	$ND_{FN(alt)}$	2	a
2017	**64**	**Cheese: Cantal (raw milk)**	LIS.4.64 (1,6)	*L. welshimeri* *L. innocua*	0Ø; 500µL: (3)h+Ø	0M; 500µL: (3)h+Ø	/ *500 µl: L. monocytogenes*	**-**	**-**	$ND_{FN(alt)}$	$ND_{FN(alt)}$	3	a

Table 7 - Positive deviations

Year	Sample N°	Product	Contamination	ISO 11290-1	AL 22 h	AL 48 h	Confirmation	AL Final result 22 h	AL Final result 48 h	Agreement 22 h	Agreement 48 h	Category	Type
2017	38	Celery, carrot, chicory	/	-	1h+1h-Ø	1h+1h-Ø	*L. monocytogenes* *L. welshimeri*	+	+	**PD**	**PD**	4	b

Negative deviations

Three samples were in negative deviations (ND $_{FN(alt)}$) after 22 h incubation time of the AL plates (D4: minced beef, E3: minced meat and 64: Cantal) and only two after 48 h incubation time (Samples E3 and 64).
For sample D4 no typical colony was present on the AL plate after 22 h incubation time and only 3 colonies appeared after 48 h incubation time. For this sample only one typical colony was observed on O&A plate after Half Fraser broth streaking for the reference method.
For sample E3, typical colonies were observed on the plates for the reference method only after enrichment step in Fraser broth.
For sample 64, no typical colony was present on the AL plates, whatever the incubation time applied (22 h or 48 h). The expert lab streaked 500 µl of the half Fraser broth on AL and typical *L. monocytogenes* confirmed colonies were isolated indicating that the contamination level was below the detection level of the alternative method (100 µl streaked for the AL method). Note that for this sample, only few typical colonies were observed on the selective agar plates for the ISO method.
For these three samples, the contamination level of the matrix was probably very low and the recovery of the Listeria strains after enrichment step was not possible when streaking 100µL on the AL plates.

Positive deviations

One positive deviation (sample 38) was observed for both incubation times (22 h and 48 h). Only one typical colony was observed on AL plate for both incubation times for this sample. It was probably contaminated at a very low level and the presence of *Listeria monocytogenes* was not detected using the ISO 11290-1 method.

The analyses of discordant results according to the ISO 16140-2/A1 (2024) is the following (See Table 8).

Table 8 - Analyses of discordant results

After incubation of AL plates for 22 h at 37°C											
							Paired study				
Category		Type		N+	TND	PD	TND - PD	AL	TND + PD	AL
1	Composite	a	Ready to eat	10	0	0	0		0	
		b	Ready to reheat	10	0	0	0		0	
		c	Pastries, egg products…	10	0	0	0		0	
		Total		**30**	**0**	**0**	**0**	**3**	**0**	**6**
2	Meat	a	Raw products (including deep-frozen, fresh…)	14	2	0	2		2	
		b	Ready to eat and processed meat products	10	0	0	0		0	
		c	Fermented or dried meat products	19	0	0	0		0	
		Total		**43**	**2**	**0**	**2**	**3**	**2**	**6**
3	Dairy	a	Raw milk cheese	13	1	0	1		1	
		b	Other raw milk products	9	0	0	0		0	
		c	Heat processed milk and dairy products	14	0	0	0		0	
		Total		**36**	**1**	**0**	**1**	**3**	**1**	**6**
4	Vegetables	a	Raw vegetables	9	0	0	0		0	
		b	Ready to eat, ready to cook,	15	0	1	-1		1	
		c	Processed vegetables	8	0	0	0		0	
		Total		**32**	**0**	**1**	**-1**	**3**	**1**	**6**
5	Seafood	a	Raw products	15	0	0	0		0	
		b	Smoked, marinated products	10	0	0	0		0	
		c	Processed products	13	0	0	0		0	
		Total		**38**	**0**	**0**	**0**	**3**	**0**	**6**
6	Production environmental samples	a	Process water	10	0	0	0		0	
		b	Dusts and residues	12	0	0	0		0	
		c	Surface sample	8	0	0	0		0	
		Total		**30**	**0**	**0**	**0**	**3**	**0**	**6**
All categories				**209**	**3**	**1**	**2**	**6**	**4**	**16**

After incubation of AL plates for 48 h at 37°C											
							Paired study				
Category		Type		N+	TND	PD	TND - PD	AL	TND + PD	AL
1	Composite	a	Ready to eat	10	0	0	0		0	
		b	Ready to reheat	10	0	0	0		0	
		c	Pastries, egg products…	10	0	0	0		0	
		Total		**30**	**0**	**0**	**0**	**3**	**0**	**6**
2	Meat	a	Raw products (including deep-frozen, fresh …)	14	1	0	1		1	
		b	Ready to eat and processed meat products	10	0	0	0		0	
		c	Fermented or dried meat products	19	0	0	0		0	
		Total		**43**	**1**	**0**	**1**	**3**	**1**	**6**
3	Dairy	a	Raw milk cheese	13	1	0	1		1	
		b	Other raw milk products	9	0	0	0		0	
		c	Heat processed milk and dairy products	14	0	0	0		0	
		Total		**36**	**1**	**0**	**1**	**3**	**1**	**6**
4	Vegetables	a	Raw vegetables	9	0	0	0		0	
		b	Ready to eat, ready to cook,	15	0	1	-1		1	
		c	Processed vegetables	8	0	0	0		0	
		Total		**32**	**0**	**1**	**-1**	**3**	**1**	**6**
5	Seafood	a	Raw products	15	0	0	0		0	
		b	Smoked, marinated products	10	0	0	0		0	
		c	Processed products	13	0	0	0		0	
		Total		**38**	**0**	**0**	**0**	**3**	**0**	**6**
6	Production environmental samples	a	Process water	10	0	0	0		0	
		b	Dusts and residues	12	0	0	0		0	
		c	Surface sample	8	0	0	0		0	
		Total		**30**	**0**	**0**	**0**	**3**	**0**	**6**
All categories				**209**	**2**	**1**	**1**	**6**	**3**	**16**

The observed values for (TND – PD) and (TND + PD) meet the acceptability limit for each individual category and for all the combined categories (calculated values ≤ AL) whatever the incubation time applied for the AL plates (22 h or 48 h).

3.1.1.7 Conservation of the AL Petri dishes

The AL plates incubated for 48 h at 37°C, were stored for 72 h at 5 ± 3°C and read again. The typical colonies, if present were confirmed again using the same tests as before storage except the iQ-Check *L. monocytogenes* test which was not repeated in 2009.
No change was observed after storage of the AL plates.

This result did not modify the conclusion of the statistical analysis for the conservation of Al Petri dishes.

The analyses of discordant results become (See Table 9).

Table 9 - Analysis of discordant results after storage of the AL plates for 72 h at 5 ± 3°C

Category		Type		N+	TND	PD	Paired study: TND - PD	Paired study: AL	Paired study: TND + PD	Paired study: AL
1	Composite	a	Ready to eat	10	0	0	0		0	
		b	Ready to reheat	10	0	0	0		0	
		c	Pastries, egg products…	10	0	0	0		0	
			Total	**30**	**0**	**0**	0	3	0	6
2	Meat	a	Raw products (including deep-frozen, fresh …)	14	1	0	1		1	
		b	Ready to eat and processed meat products	10	0	0	0		0	
		c	Fermented or dried meat products	19	0	0	0		0	
			Total	**43**	**1**	**0**	1	3	1	6
3	Dairy	a	Raw milk cheese	13	1	0	1		1	
		b	Other raw milk products	9	0	0	0		0	
		c	Heat processed milk and dairy products	14	0	0	0		0	
			Total	**36**	**1**	**0**	1	3	1	6
4	Vegetables	a	Raw vegetables	9	0	0	0		0	
		b	Ready to eat, ready to cook,	15	0	1	-1		1	
		c	Processed vegetables	8	0	0	0		0	
			Total	**32**	**0**	**1**	-1	3	1	6
5	Seafood	a	Raw products	15	0	0	0		0	
		b	Smoked, marinated products	10	0	0	0		0	
		c	Processed products	13	0	0	0		0	
			Total	**38**	**0**	**0**	0	3	0	6
6	Production environmental samples	a	Process water	10	0	0	0		0	
		b	Dusts and residues	12	0	0	0		0	
		c	Surface sample	8	0	0	0		0	
			Total	**30**	**0**	**0**	0	3	0	6
All categories				**209**	**2**	**1**	1	6	3	16

The observed values for (TND - PD) and (TND + PD) meet the acceptability limit for each individual category and for all the combined after AL plates storage for 72 h at 5°C ± 3°C.

3.1.1.8 Conservation of the broths

For the studies performed in 2012 and 2017, the half Fraser broths from positive and discordant samples were stored for 72 h at 5 ± 3°C. The enrichment broths from 170 samples were streaked again, and the typical colonies observed on the plates were confirmed by spot onto RLM plates.

The following changes were observed (See Table 10).

Table 10 - Enrichment broth storage

Year of analysis	Sample N°	Product	Agreement before storage		Agreement after storage	Category	Type
			AL 22 h	AL 48 h	AL 48 h		
2017	11	Cheese Neufchatel (raw milk)	**NA**	**NA**	**PD**	3	a
2017	15	Cheese Boulette d'Avesnes (raw milk)	**NA**	**NA**	**PD**	3	a
2017	**64**	**Cheese: Cantal (raw milk)**	**$ND_{FN(alt)}$**	**$ND_{FN(alt)}$**	**PA**	3	a

The analyses of discordant results become (See Table 11).

Table 11 - Analysis of discordant results after storage 72 h at 5 ± 3°C

Category		Type		N+	TND	PD	Paired study: TND - PD	Paired study: AL	Paired study: TND + PD	Paired study: AL
1	Composite	a	Ready to eat	8	0	0	0		0	
		b	Ready to reheat	5	0	0	0		0	
		c	Pastries, egg products…	7	0	0	0		0	
			Total	**20**	**0**	**0**	**0**	**3**	**0**	**6**
2	Meat	a	Raw products (including deep-frozen, fresh …)	0	0	0	0		0	
		b	Ready to eat and processed meat products	6	0	0	0		0	
		c	Fermented or dried meat products	4	0	0	0		0	
			Total	**10**	**0**	**0**	**0**	**3**	**0**	**6**
3	Dairy	a	Raw milk cheese	13	0	2	-2		2	
		b	Other raw milk products	9	0	0	0		0	
		c	Heat processed milk and dairy products	12	0	0	0		0	
			Total	**34**	**0**	**2**	**-2**	**3**	**2**	**6**
4	Vegetables	a	Raw vegetables	8	0	0	0		0	
		b	Ready to eat, ready to cook,	3	0	1	-1		1	
		c	Processed vegetables	8	0	0	0		0	
			Total	**19**	**0**	**1**	**-1**	**3**	**1**	**6**
5	Seafood	a	Raw products	10	0	0	0		0	
		b	Smoked, marinated products	5	0	0	0		0	
		c	Processed products	11	0	0	0		0	
			Total	**26**	**0**	**0**	**0**	**3**	**0**	**6**
6	Production environmental samples	a	Process water	10	0	0	0		0	
		b	Dusts and residues	8	0	0	0		0	
		c	Surface sample	3	0	0	0		0	
			Total	**21**	**0**	**0**	**0**	**3**	**0**	**6**
All categories				**130**	**0**	**3**	**-3**	**6**	**3**	**16**

The observed values for (TND - PD) and (TND + PD) meet the acceptability limit for each individual category and for all the combined categories (calculated values ≤ AL) after enrichment broth storage after enrichment broth storage for 72 h at 5°C ± 3°C.

3.1.2 Relative level of detection

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

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

$$RLOD = \frac{LOD_{Alt.}}{LOD_{Ref.}}$$

The relative detection level is the smallest number of culturable micro-organisms that can be detected in the sample in 50% of occasions by the alternative and reference methods.

3.1.2.1 Experimental design

Six (matrix/strain) pairs were analyzed by the reference method and by the alternative method. The total viable count of each matrix was enumerated (See Table 12).

Six levels of contamination were tested including the negative control.
Six replicates for each level of contamination were inoculated and analysed by the reference method and the alternative method.

Table 12 - Defined (matrix/strain) pairs for the RLOD determination

Category	Matrix	Strain	Code	Strain origin	Total viable count (CFU/25g or 25 mL)	Study
1	Deli salad (piémontaise)	*L. monocytogenes*	LIS.4.80	Salad: potatoes, carrot	5.8 x 10^3	*2017*
2	Rillettes	*L. monocytogenes 1/2b*	L49	Poultry pâté	4.0 x 10^2	*2009*
3	Raw milk	*L. monocytogenes 4b*	L32	Munster cheese	5.5 x 10^2	
4	Raw vegetables	*L. monocytogenes 4b*	L58	Salad	3.0 x 10^8	
5	Smoked salmon	*L. monocytogenes 1/2a*	L5	Smoked salmon	5.0 x 10^3	
6	Process water	*L. monocytogenes 1/2c*	L28	Environmental surface	8.0 x 10^5	

Initial validation 2009

Five or six levels of contamination were tested including the negative control.
Six replicates for each level of contamination were inoculated and analysed by the reference method and the alternative method.

Renewal study 2017

The following protocol was used:

- A negative control: 5 samples,
- A low contamination level providing fractional recovery data, with 20 replicates,
- A high contamination level, with 5 replicates.

Food products were contaminated using the seeding protocol. Bulk contaminations were performed on the matrices for the different levels of contamination, then the matrix was stored at 5 ± 3°C for two days before analysis. Samples were then analyzed by the reference and the alternative method. For the alternative method, only the minimal incubation time of the broth of the alternative method was tested.
Simultaneously, a total viable count was performed on a portion of non-contaminated matrix to estimate the concentration of mesophilic aerobic flora. A detection of *Listeria* spp using the reference method was also performed to check the absence of the target analyte in the matrix.

3.1.2.2 Calculation and interpretation of the RLOD

The raw data are given in **Appendix 5**.

The RLOD calculations were performed using the Excel spreadsheet available at http://standards.iso.org/iso/16140 - RLOD version 4 (2024-01-10). The RLOD are given in Table 13.

Table 13 – Presentation of RLOD before and after confirmation of the alternative method results

	Matrix /strain	AL	RLOD [95% confidence limit]
1	Deli salad (piémontaise) / *L. monocytogenes*	1,5	1.000 [0.495; 2.021]
2	Rillettes *L. monocytogenes* 1/2b		1.000 [0.451; 2.219]
3	Raw milk / *L. monocytogenes* 4b		1.000 [0.446; 2.241]
4	Raw vegetables / *L. monocytogenes* 4b		1.000 [0.445; 2.241]
5	Smoked salmon / *L. monocytogenes* 1/2a		1.000 [0.403; 2.478]
6	Process water / *L. monocytogenes* 1/2c		1.000 [0.457; 2.187]
	Combined		**1.000 [0.723; 1.383]**

The LOD_{50} calculations were done using the Excel spreadsheet available at http://standards.iso.org/iso/16140 POD-LOD calculation program - version 12, 2024-03-05. The tests are given in Table 14.

Table 14 - LOD_{50} results

Category	(Strain / matrix) pair	Level of detection at 50% (CFU / test portion)	
		Reference method	Alternative method
1	Deli salad (piémontaise) / *L. monocytogenes*	0.6 [0.4; 1.1]	0.6 [0.4; 1.1]
2	Rillettes / *L. monocytogenes* 1/2b	0.7 [0.4; 1.1]	0.7 [0.4; 1.1]
3	Raw milk / *L. monocytogenes* 4b	0.7 [0.4; 1.2]	0.7 [0.4; 1.2]
4	Raw vegetables / *L. monocytogenes* 4b	0.3 [0.2; 0.5]	0.3 [0.2; 0.5]
5	Smoked salmon / *L. monocytogenes* 1/2a	0.3 [0.2; 0.6]	0.3 [0.2; 0.6]
6	Process water / *L. monocytogenes* 1/2c	0.3 [0.2; 0.6]	0.3 [0.2; 0.6]
Combined results		**0.5 [0.4; 0.6]**	**0.5 [0.4; 0.6]**

Note : the LOD_{50} have been recalculated according to the most recent spreadsheet available on the ISO website. No change was observed with the previous values.

3.1.2.3 Conclusion

The RLOD values (using the confirmed alternative method results) meet the acceptability limit of 1.5 for paired studies, for all matrix/strain pairs tested.

The LOD_{50} varies from 0.3 to 0.7 CFU/test portion for the reference method and for the alternative method.

3.1.3 Inclusivity / exclusivity

The inclusivity is the ability of the alternative method to detect the target analyte from a wide range of strains. The exclusivity is the lack of interference from a relevant range of non-target strains of the alternative method.

- Initial validation (2009):
  The inclusivity was studied on 60 strains of *Listeria monocytogenes.*
  The exclusivity was studied on 19 strains of *Listeria* spp (excluding *L. monocytogenes*) and 18 strains other than *Listeria*.

- Renewal study (2012):
  The inclusivity was studied on 26 *Listeria monocytogenes* strains.
  The exclusivity was studied on 25 *Listeria* spp. strains different from *Listeria monocytogenes* species and 24 strains different from *Listeria* genus.

3.1.3.1 Test protocols

> **Inclusivity**

For the *Listeria monocytogenes* strains, a culture in nutrient broth was prepared and streaked onto AL plates. For the extension study performed in 2012, the colonies were confirmed by streak onto PALCAM plates.

> **Exclusivity**

The non-target strains were cultured in nutrient broth before streaking onto AL plates.

3.1.3.2 Results

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

> **Inclusivity**

The 86 *Listeria monocytogenes* strains were detected with the AL detection method (blue colony with halo).

Exclusivity

Among the 19 *Listeria* spp strains tested, seven *Listeria ivanovii* strains gave typical blue colonies with halo after 22 h incubation time of the AL plates. The confirmation tests were not applied in 2009 for the inclusivity study but note that for the extension study performed in 2019 for the addition of the Rhamnose test, the 10 *Listeria ivanovii* strains tested were confirmed negative using this test.
The 42 strains not belonging to *Listeria* genus were not able to grow or gave atypical blue colonies without halo on AL plates after 22 h incubation time.

3.1.4 Practicability

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

Storage conditions, shelf-life and modalities of utilisation after first use	The plates storage temperature is +2°C - +8°C Each plate should be stored at 5°C ± 3°C, and used within 1 month		
Time to result	Steps	**Reference method**	**Alternative method**
	Completion of pre-enrichment (Fraser 1/2)	D0	D0
	Inoculation of enrichment broths (Fraser)	D1	/
	Streaking selective broths onto selective agar	D1-D2	D1
	Selective agar plates reading	D2-D4	D2
	Selective agar plates reading. Negative results (no typical colony on plates)	D2-D4	D2
	Confirmation tests on characteristic colonies (after purification step for ISO method)	D3-D5	D2 to D3*
	Negative results (after negative confirmation)	D3 to D9	D2 to D4
	Confirmation with reference method tests (Gram, catalase), including purification step	D4 to D6	D3 to D4
	Confirmation using the iQ-Check PCR test	/	D2
	Confirmation by streaking onto PALCAM plate	/	D3 -D4
	Final positive result	D6	D2-D4
Common step with the reference method	Enrichment step in Half Fraser broth and confirmations		

* When using the tests of the ISO method

The negative and positive results are available in 2 days using the iQ-Check PCR test for confirmation of the typical colonies.

3.2 Extension study (2019) for a new confirmation protocol: the rhamnose test

3.2.1 Protocol

The different steps are the following:

- Initial suspension (1/10):
  - In BPW with 1 h revivification at 20 ± 2°C
  - In BPW without revivification
  - In Half-Fraser with 1 h revivification at 20 ± 2°C

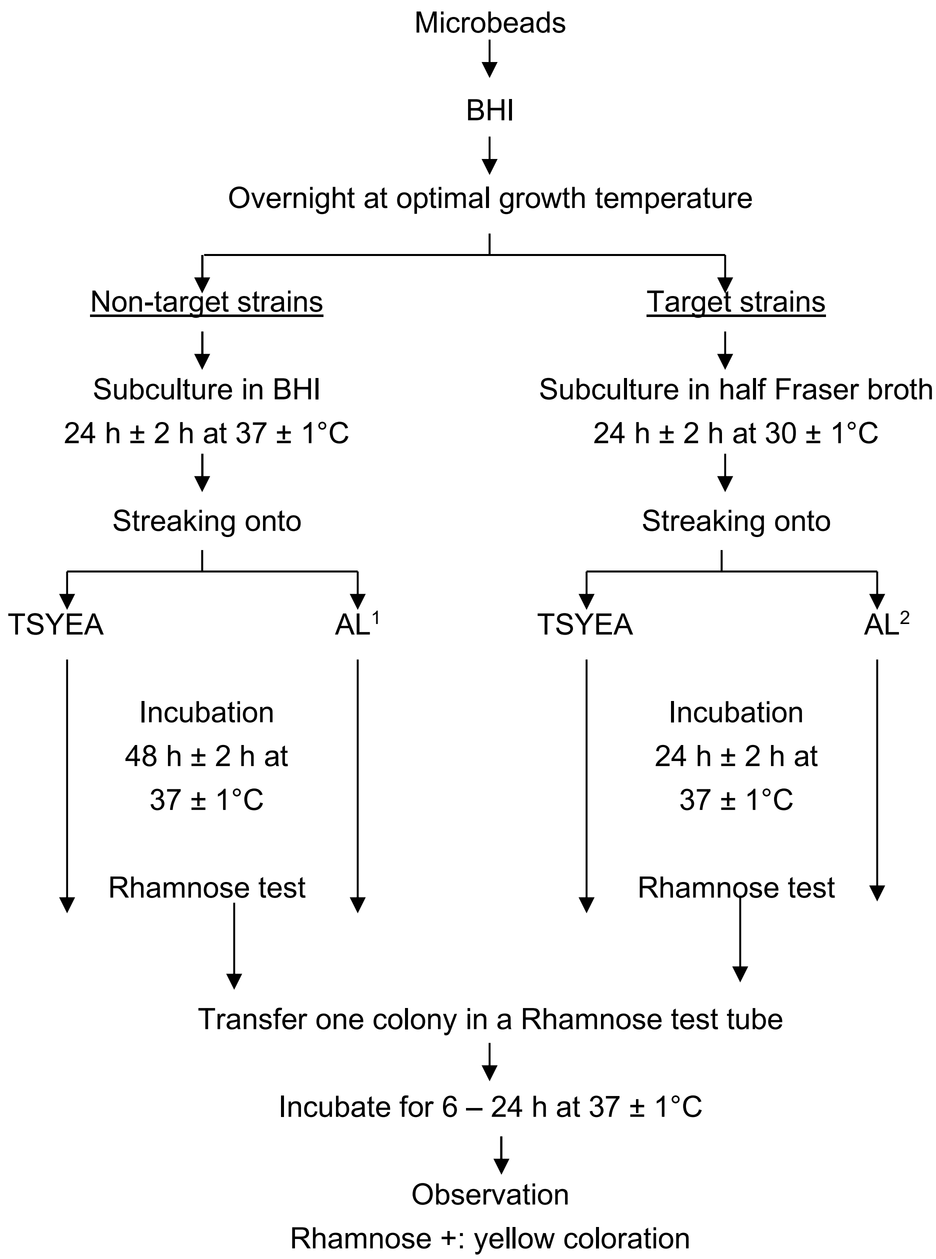
- Inoculation:
  - Spreading 0.1 mL onto 1 plate per dilution with the possibility to inoculate 1 mL onto 3 plates for low contamination estimation
  - Pour plate method: 1 mL in an AL plate

- Incubation: 24 h and 48 h at 37 ± 1°C

- Confirmation of typical colonies (blue to green with halo):
  - Using the conventional tests described in the ISO standard method (including a purification step),
  - Using nucleic probes as described in the ISO 7218 (for example iQ-Check *L.* monocytogenes II Real-Time PCR Detection Kit) on isolated colonies (with or without purification step),
  - By spotting one isolated colony onto RAPID'*L.mono* plate (up to 12 colonies can be tested on a single plate),
  - By Rhamnose test.

The protocol applied is described **Figure 1**.

Figure 1 – Protocol applied for this extension study



[1] AL: Agar *Listeria*

3.2.2 Results

The raw data are given in **Appendix 7**.

3.2.2.1 Inclusivity

150 *Listeria monocytogenes* strains were tested; all gave Rhamnose positive test from Agar *Listeria* and TSYEA except for 5 strains:

- *Listeria monocytogenes* Ad619,
- *Listeria monocytogenes* Ad645,
- *Listeria monocytogenes* Ad1212,
- *Listeria monocytogenes* 7111/7516,
- *Listeria monocytogenes* A00C054.

For 2 strains (7111/7516 and A00C054), the broth changes turned to brown after 6 h incubation time. For *Listeria monocytogenes* Ad619 and Ad645, a slight colour change was observed only after 72 h incubation time. For *Listeria monocytogenes* Ad645 the rhamnose test was negative after 6 h, 24 h and 72 h.

Complementary tests were performed to confirm the identification of the strains; all were identified as *Listeria monocytogenes* (see Table 15). Similar results were obtained when the rhamnose tests were performed with API *Listeria* galleries; the colonies were identified as *Listeria monocytogenes*.

Table 15 – Complementary tests

N°	Strain		Reference	Origin	Molecular serotype	Agar *Listeria* method							Complementary tests CAMP	API *Listeria*		iQ-Check *L.mono*
						Typical colony after 48 h	Rhamnose test from Agar *Listeria*			Rhamnose test from TSYEA						
							6h	24h	72 h	6h	24h	72 h		Xylose	Rhamnose	
12	*Listeria*	*monocytogenes*	Ad619	Cheese	/	H+	-	-	-	-	-	+/- brown	+	-	Red orange	+
16	*Listeria*	*monocytogenes*	Ad645	Pork meat	/	H+	-	-	+/- brown	-	-	-	+	-	-	+
41	*Listeria*	*monocytogenes*	Ad1212	Mushrooms	/	H+	-	-	-	-	-	-	+	-	Red orange	+
85	*Listeria*	*monocytogenes*	7111/7516	Rillettes	IV b	H+	+/- brown	+/- brown	+/- brown	+/- brown	+/- brown	+/- brown	+	-	Red orange	+
101	*Listeria*	*monocytogenes*	A00C054	Beef heart	IV b	H+	+/- brown	+/- brown	+/- brown	+/- brown	+/- brown	+/- brown	+	-	Red orange	+

3.2.2.2 Exclusivity

100 non-target strains including 50 *Listeria* spp. different from *Listeria monocytogenes* and 50 strains not belonging to *Listeria* genus were tested.

18 *Listeria* genus strains gave positive Rhamnose tests when picked directly from Agar *Listeria* after 6 h incubation time or after subculture onto TSYEA. This concerns 9 *Listeria innocua* and 9 *Listeria welshimeri.*
2 strains gave positive Rhamnose test after 24 h incubation time when picked from Agar *Listeria* and TSYEA:

- *Enterococcus mundtii* Ad1365,
- *Listeria welshimeri* Ad1217.

2 additional strains, not belonging to the *Listeria* genus, gave a positive Rhamnose test after 24 h incubation time when picked from TSYEA:

- *Enterococcus gallinarum* Ad1145,
- *Lactobacillus plantarum* Ad1147.

Note that all the non-target strains giving a positive Rhamnose test were not typical of *Listeria monocytogenes* on AL.

3.2.3 Conclusion

The Rhamnose test is an accurate test to confirm the typical colonies observed on Agar *Listeria* even if some strains did not give a typical reaction. In this case (disagreement between the aspect of the colony and the Rhamnose test), the laboratory needs to use another confirmation procedure.

3.3 Inter-laboratory study

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

3.3.1 Study organisation

The inter-laboratory study was performed in November 2008 based on the ISO 16140 (2003) ISO 11290-1 (1996) & ISO 11290-1/A1 (2004) standards.

The samples were sent to sixteen laboratories. They received 24 x 25 mL of pasteurized milk (3 contamination levels, 8 samples per contamination level) to be analyzed by both the ISO11290-1 reference method and the AL detection method.

The strain used for the contamination was a *Listeria monocytogenes* strain isolated from raw milk cheese.

3.3.2 Experimental parameters controls

3.3.2.1 Contamination levels

The contamination levels and the sample codification were the following (see Table 16).

Table 16 - Contamination levels

Level	Samples	Target inoculation level (CFU/25 mL)	Inoculation level (CFU/25 mL)
Level 0	5-6-7-8-17-18-19-20	0	0
Low level	1-2-9-10-11-12-21-22	3	3.9 [1.1; 11.6]
High level	9-4-13-14-15-16-23-24	30	42.3 [30; 58]

3.3.2.2 Logistic conditions

The temperatures measured by the temperature probes included in the samples package were between -0.5°C and 7.2°C and below 8°C at receipt for all the collaborators.
15 collaborators received their samples at Day 1 and one collaborator (O) at Day 2
The laboratory I noticed that some leakages occurred in their package which could lead to cross-contamination.

3.3.3 Results analysis

Raw data are provided in **Appendix 8**.

3.3.3.1 Expert laboratory results

The results obtained by the expert laboratory are given in Table 17.

Table 17 – Results obtained by the expert Lab.

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

All the spiked samples gave positive results with the reference and the alternative methods.

3.3.3.2 Results observed by the collaborative laboratories

- ***Aerobic mesophilic flora enumeration***

Depending on the Lab results, the enumeration levels varied from <1 to 30 CFU/mL.

- ***Listeria monocytogenes detection***

16 collaborators participated to the study. The results obtained are provided in Table 18 (reference method) and Table 19 (alternative method).

One collaborator analysed the samples at Day 2 (O), and one lab (H) obtained only 4 positive results by both reference and alternative methods for high inoculation level spiked samples (L2). A problem during the preparation of the samples by the expert laboratory was suspected.
The results from these two collaborators were not taken into account for interpretation.

Table 18 - Positive results by the reference method (ALL the collaborators)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B	0	8	8
C	0	8	8
D	0	8	8
E	0	8	8
F	0	8	8
G	0	8	8
H	0	8	4
I	0	8	8
J	0	8	8
K	0	8	8
L	0	8	8
M	0	8	8
N	0	8	8
O	0	8	8
P	0	8	8
Total	$CP_0 = 0$	$CP_1 = 128$	$CP_2 = 124$

Table 19 - Positive results (before and after confirmation) by the alternative method (ALL the collaborators)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B	0	8	8
C	0	8	8
D	0	8	8
E	0	8	8
F	0	8	8
G	0	8	8
H	0	8	4
I	0	8	8
J	0	8	8
K	0	8	8
L	0	8	8
M	0	8	8
N	0	8	8
O	0	8	8
P	0	8	8
Total	$CP_0 = 0$	$CP_1 = 128$	$CP_2 = 124$

3.3.3.3 Results of the collaborators retained for interpretation

The results obtained with the 14 labs kept for interpretation are presented in Table 20 (reference method) and Table 21 (alternative method).

Table 20 - Positive results by the reference method (Without Labs H and O)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B	0	8	8
C	0	8	8
D	0	8	8
E	0	8	8
F	0	8	8
G	0	8	8
I	0	8	8
J	0	8	8
K	0	8	8
L	0	8	8
M	0	8	8
N	0	8	8
P	0	8	8
Total	$CP_0 = 0$	$CP_1 = 112$	$CP_2 = 112$

Table 21 - Positive results (before and after confirmation) by the alternative method (Without Labs H and O)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B	0	8	8
C	0	8	8
D	0	8	8
E	0	8	8
F	0	8	8
G	0	8	8
I	0	8	8
J	0	8	8
K	0	8	8
L	0	8	8
M	0	8	8
N	0	8	8
P	0	8	8
Total	$CP_0 = 0$	$CP_1 = 112$	$CP_2 = 112$

3.3.4 Calculation and interpretation

3.3.4.1 Calculation of the specificity percentage (SP)

The percentage specificities (SP) of the reference method and of the alternative method, using the data after confirmation, based on the results of level L0 are the following (See Table 22).

Table 22 - Percentage specificity

Specificity for the reference method	$SP_{ref} = \left(1 - \left(\frac{P_0}{N\_}\right)\right) x\ 100\ \% =$	100 %
Specificity for the alternative method	$SP_{alt} = \left(1 - \left(\frac{CP_0}{N\_}\right)\right) x\ 100\ \% =$	100 %

N: number of all L0 tests
P_0 = total number of false-positive results obtained with the blank samples before confirmation
CP_0 = total number of false-positive results obtained with the blank samples

3.3.4.2 Calculation of the sensitivity (SE_{alt}), the sensitivity for the reference method (SE_{ref}), the relative trueness (RT, the false positive ratio for the alternative method (FPR) and the false negative ratio for the alternative method (FNR)

Fractional positive results were not obtained for this inter-laboratory study for the low and the high inoculation levels (L1 + L2). The two inoculation levels were thus retained for calculation.

A summary of the results of the collaborators retained for interpretation, and obtained with the reference and the alternative methods for Level 1 is provided in Table 23.

Table 23 - Summary of results for all collaborators obtained with the reference alternative methods for Level 1

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 112**	Positive deviation (R-/A+) **PD = 0**
Alternative method negative (A-)	Total Negative deviation (A-/R+) **TND = 0 (0 $ND_{FN(alt)}$)**	Total Negative agreement (A-/R-) **TNA = 0 (0 $NA_{FN(alt)}$)**

Based on the data summarized in Table 23, the values of sensitivity of the alternative and reference methods, as well as the relative trueness, false positive ratio and false negative ratio for the alternative method taking account the confirmations, are the following (See Table 24).

Table 24 - Sensitivity, relative trueness, false positive ratio and false negative ratio percentages

Sensitivity for the alternative method:	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)} x\ 100\ \%$	100 %
Sensitivity for the reference method:	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)} x\ 100\ \%$	100 %
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100\ \%$	100 %
False positive ratio for the alternative method	$FPR = \frac{PD_{FP\ (alt)}}{TNA}\ x\ 100\ \%$	/
False negative ratio for the alternative method	$FNR = \frac{ND_{FN(alt)}}{PA + TND + PD}$	0,000

For a **paired study design**, the difference between (TND – PD) and the addition (TND + PD) are calculated for the level(s) where fractional recovery is obtained (so L_1 and possibly L_2). The observed value found for (TND – PD) and T(ND + PD) shall not be higher than the AL.

For 14 Labs, the limits are the following:

Number of labs	TND-PD	AL (TND-PD)	TND+PD	AL (TND+PD)
14-16	0	4	0	6

The EN ISO 16140-2:2016 requirements are fulfilled as (TND - PD) and (TND + PD) meet the AL.

3.3.5 *Evaluation of the LOD $_{50\%}$, LOD $_{95\ \%}$ and RLOD between laboratories*

The POD/LOD was calculated using the Excel spreadsheet available at https://standards.iso.org/iso/16140/-2/ed-1/en/amd/1/PODLOD-interlab_ver2.xlsm.

The RLOD is the ratio of LODs of the alternative method and of the reference method calculated as follows: RLOD= $LOD_{p;alt}$/ $LOD_{p;\ ref}$
Conclusions regarding the difference between reference and alternative method cannot be drawn because every inoculated sample is positive.

3.4 Conclusion

The **method comparison study conclusions** are:

- ☒ The method comparison study scheme corresponds to a PAIRED STUDY design as the alternative and reference methods have a common enrichment procedure.

- ☒ In the sensitivity study, 6 categories were tested: 5 food categories and the environmental samples. The protocol of the alternative method shows one positive deviation (PD) and 3 or 2 negative deviations (ND) for the overall categories respectively for 22 h and 48 h incubation of the AL plates. The calculated values for (TND – PD) and for (TND + PD) meet the acceptability limits (AL) whatever the categories, and as well for the 6 tested categories.

- ☒ The Relative Levels of Detection (RLOD) are all below the AL fixed at 1.5 for the paired data study whatever the matrix/strain pairs.

- ☒ The inclusivity and exclusivity testing gave the expected results for the 86 target strains and the 61 non-target strains tested.

- ☒ It is possible to store the AL plates for 72 h at 5 ± 3°C

- ☒ It is possible to store the primary enrichment broth for 72 h at 5 ± 3°C.

- ☒ The alternative method allows a two-days screening of the negative samples.

- ☒ The alternative method fulfils all the ISO 16140-2:2016, the ISO 16140-2/A1:2024 requirements and AFNOR technical rules (Revision 12).

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

- ☒ The data and interpretations comply with the EN ISO 16140-2:2016 and ISO 16140-2/A1:2024 requirements. The alternative method is considered equivalent to the ISO standard.

4 EXTENSION STUDY (2022) FOR THE USE OF A NEW ENRICHMENT PROTOCOL

4.1 Method comparison study

The method comparison study is a study performed by the expert laboratory to compare the alternative method with the reference method.

The study was carried out on a variety of samples and strains representative of the most frequently encountered products. This does not constitute an exhaustive list of the different matrices in the scope.

4.1.1 Protocols applied during the validation study

> **Incubation time**

The minimum incubation time was tested for the Half Fraser broth: 18 h at 30°C.

BIO-RAD Half-Fraser (Ref. 3555797) was used during the extension study.
The AL plates were incubated for 22 h and 48 h at 37°C.

> **Confirmation protocols**

The different protocols available are listed in the table below. During the validation study, only the tests in bold typing were applied in agreement with the AFNOR Technical Committee.

Confirmation protocols
ISO tests after purification
iQ Check *Listeria monocytogenes*
Rhamnose test
Spot on RLM
Other method validated with a different principle

> **Half Fraser both storage for 72 h at 5 ± 3°C**

It was proposed to not test the storage of the enriched Half Fraser broths for this extension as the enrichment protocol is equivalent to the protocol of the ISO11290-1, storage of enrichment broth is also described in this standard, and the storage of Half Fraser was also tested during the initial validation of the alternative method.

> **AL plates storage for 72 h at 5 ± 3°C**

All the plates were read again after storage for 72 h at 5 ± 3°C. The typical colonies were confirmed using the Rhamnose test.

4.1.2 *Sensitivity study*

The sensitivity (SE) is the ability of the method to detect the analyte by either the reference or alternative method.

4.1.2.1 *Number and nature of samples*

435 samples were analyzed providing 183 positive and 252 negative results whatever the incubation time applied for the AL plates (22 h and 48 h). The distribution per tested category and type is given in Table 25.

Table 25 – Distribution per tested category and type (After 22 h and 48 h incubation)

	Category	Type		Positive	Negative	Total
1	Composite foods / Ready-to-eat and ready-to-reheat	a	Ready to eat	9	16	25
		b	Ready to reheat	10	13	23
		c	Pastries, confectionaries, egg products…	11	11	22
			Total	30	40	70
2	Meat products	a	Raw products (frozen or fresh)	11	12	23
		b	Meat based products ready to reheat	9	19	28
		c	Raw and cooked delicatessen	10	16	26
			Total	30	47	77
3	Milk and dairy products	a	Raw milk cheese	11	13	24
		b	Other products based on raw milk	10	10	20
		c	Heat treated products	9	21	30
			Total	30	44	74
4	Vegetables	a	Raw products (frozen or fresh)	7	15	22
		b	Pre-cooked vegetables, vegetables under modified atmosphere	14	8	22
		c	Ready to eat	9	14	23
			Total	30	37	67
5	Seafood and fishery products	a	Raw products (frozen or fresh)	10	12	22
		b	Cured and smoked	11	23	34
		c	Ready to eat, ready to reheat	11	16	27
			Total	32	51	83
6	Production environmental samples	a	Dusts and residues	9	13	22
		b	Cleaning and process waters	10	10	20
		c	Surface sample	12	10	22
			Total	31	33	64
All categories				**183**	**252**	**435**

4.1.2.2 Artificial contamination of samples

Artificial contaminations were done by seeding. The artificial contaminations are presented in **Appendix 9**.

145 samples were artificially contaminated with one or two strains (co-inoculation *Listeria* spp and *Listeria monocytogenes);* 112 gave a positive result. 90 samples were inoculated at level ≤ 3 CFU and 22 samples were inoculated between 3 and 10 CFU.

The repartition of the positive samples per inoculation protocol and inoculation level is given in Table 26.

Table 26 - Repartition of the positive samples per inoculation protocol and inoculation level

	Naturally contaminated	Artificially contaminated – Seeding protocol			Total
		≤ 3 CFU	3 < x ≤ 10 CFU	10<x<30 CFU	
Number of samples	76	86	21	0	183
%	41.5%	47%	11%	0%	100%

41.5 % of the samples were naturally contaminated.

4.1.2.3 Test results

Raw data per category are given in **Appendix 10**. The results are given in Table 27 for 22 h and 48 h incubation times of AL plates.

Table 27 – Summary of results obtained with the reference and alternative methods (after confirmation) of all samples for each category (After 22 h and 48 h incubation)

	Category	PA	PD	TND	TNA	Total
1	Composite foods / Ready-to-eat and ready-to-reheat	30	0	0	40	70
2	Meat products	30	0	0	47	77
3	Milk and dairy products	30	0	0	44	74
4	Vegetables	29	0	1	37	67
5	Seafood and fishery products	31	0	1	51	83
6	Production environmental samples	31	0	0	33	64
	All categories	181	0	2	252	435

4.1.2.4 Calculation of relative trueness (RT), sensitivity (SE), false positive ratio (FPR) and the false negative ratio (FNR) for the alternative method

The calculations are presented in Table 28.

Table 28 – Calculation of the relative trueness (RT), the sensitivity (SE), the false positive ratio (FPR) and the false negative ratio (FNR) for the alternative method (after 22 h and 48 h incubation)

	Category		Type	PA	NA	$ND_{FN(alt)}$	PD	$PD_{FP(alt)}$	TND	TNA	SE alt %	SE ref %	RT %	FPR %	FNR
1	Composite foods / Ready-to-eat and ready-to-reheat	a	Ready to eat	9	16	0	0	0	0	16	100,0%	100,0%	100,0%	0,0%	0,000
		b	Ready to reheat	10	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
		c	Pastries, confectionaries, egg products…	11	11	0	0	0	0	11	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**40**	**0**	**0**	**0**	**0**	**40**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
2	Meat products	a	Raw products (frozen or fresh)	11	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
		b	Meat based products ready to reheat	9	19	0	0	0	0	19	100,0%	100,0%	100,0%	0,0%	0,000
		c	Raw and cooked delicatessen	10	16	0	0	0	0	16	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**47**	**0**	**0**	**0**	**0**	**47**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
3	Milks and Dairy products	a	Raw milk cheese	11	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
		b	Other products based on raw milk	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Heat treated products	9	21	0	0	0	0	21	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**30**	**44**	**0**	**0**	**0**	**0**	**44**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
4	Vegetables	a	Raw products (frozen or fresh)	7	15	0	0	0	0	15	100,0%	100,0%	100,0%	0,0%	0,000
		b	Pre-cooked vegetables, vegetables under modified atmosphere	13	8	1	0	0	1	8	92,9%	100,0%	95,5%	0,0%	0,071
		c	RTE	9	14	0	0	0	0	14	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**29**	**37**	**1**	**0**	**0**	**1**	**37**	**96,7%**	**100,0%**	**98,5%**	**0,0%**	**0,033**
5	Seafood and fishery products	a	Raw products (frozen or fresh)	10	12	0	0	0	0	12	100,0%	100,0%	100,0%	0,0%	0,000
		b	Cured and smoked	10	23	1	0	0	1	23	90,9%	100,0%	97,1%	0,0%	0,091
		c	RTE, ready to reheat	11	16	0	0	0	0	16	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**31**	**51**	**1**	**0**	**0**	**1**	**51**	**96,9%**	**100,0%**	**98,8%**	**0,0%**	**0,031**
6	Environmental samples	a	Dusts and residues	9	13	0	0	0	0	13	100,0%	100,0%	100,0%	0,0%	0,000
		b	Cleaning and process waters	10	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
		c	Surface sample	12	10	0	0	0	0	10	100,0%	100,0%	100,0%	0,0%	0,000
			Total	**31**	**33**	**0**	**0**	**0**	**0**	**33**	**100,0%**	**100,0%**	**100,0%**	**0,0%**	**0,000**
All categories				**181**	**252**	**2**	**0**	**0**	**2**	**252**	**98,9%**	**100,0%**	**99,5%**	**0,0%**	**0,011**

A summary of the results is given in Table 29.

Table 29 - Summary of results
(After 22 h and 48 h incubation)

Sensitivity for the alternative method	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)}\ x\ 100\ \%$	98.9 %
Sensitivity for the reference method	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)}\ x\ 100\ \%$	100.0 %
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100\ \%$	99.5 %
False positive ratio for the alternative method (paired evaluation)	$FPR = \frac{PD_{FP(alt)}}{TNA}\ x\ 100\ \%$	0.0 %
False negative ratio for the alternative method (paired evaluation)	$FNR = \frac{ND_{FN(alt)}}{PA + TND + PD}$	0,011

4.1.3 *Analysis of discordant results*

The negative deviations are given in Table 30.

> ***Negative deviations***

2 negative deviations (ND $_{FN(alt)}$) were observed and concern naturally contaminated samples. For sample 5677 (smoked trout) only *Listeria welshimeri* strain was isolated on the AL plates while for the ISO method both *Listeria welshimeri* and *Listeria monocytogenes* were isolated from the enrichment broth. For both samples (5677 and 5985), *Listeria monocytogenes* strains were isolated only after streaking of the full Fraser on the selective agar plates for the ISO method indicating a low contamination level in the Half Fraser broth, level probably below the detection limit of the AL method.
No sample in negative agreement was confirmed positive after subculture in Fraser broth.

> ***Positive deviations***

No positive deviation was observed during the extension study presented in 2022.

Table 30 - Negative deviations (After 22 h and 48 h incubation)

Sample number	Product (French name)	Product	Artificial contaminations		Reference method ISO 11290-1		Alternative method: Agar L. (AL) 18h 30°C				Category	Type
			Strain	Inoculation level (CFU/sample)	Hal Fraser	Fraser	AL 22 h and 48 h	Confirmation	Result 22 h and 48 h	Agreement 22 h and 48 h		
5985	Cubes d'aubergine	Eggplant strips	/	/	-	*L. monocytogenes*	-	/	-	ND FN(alt	4	b
5677	Truite fumée	Smoked trout	/	/	*L. welshimeri*	*L. monocytogenes* / *L. welshimeri*	H- (1)	*L. welshimeri*	-	ND FN(alt	5	b

The analyses of discordant results according to the ISO 16140-2/A1 (2024) is the following (See Table 31):

Table 31 - Analyses of discordant results (After 22 h and 48 h incubation)

Category		Type		N+	TND	PD	Paired study TND - PD	Paired study AL	Paired study TND + PD	Paired study AL
1	Composite foods / Ready-to-eat and ready-to-reheat	a	Ready to eat	9	0	0	0		0	
		b	Ready to reheat	10	0	0	0		0	
		c	Pastries, confectionaries, egg products…	11	0	0	0		0	
			Total	**30**	**0**	**0**	**0**	**3**	**0**	**6**
2	Meat products	a	Raw products (frozen or fresh)	11	0	0	0		0	
		b	Meat based products ready to reheat	9	0	0	0		0	
		c	Raw and cooked delicatessen	10	0	0	0		0	
			Total	**30**	**0**	**0**	**0**	**3**	**0**	**6**
3	Milks and Dairy products	a	Raw milk cheese	11	0	0	0		0	
		b	Other products based on raw milk	10	0	0	0		0	
		c	Heat treated products	9	0	0	0		0	
			Total	**30**	**0**	**0**	**0**	**3**	**0**	**6**
4	Vegetables	a	Raw products (frozen or fresh)	7	0	0	0		0	
		b	Pre-cooked vegetables, vegetables under modified atmosphere	14	1	0	1		1	
		c	RTE	9	0	0	0		0	
			Total	**30**	**1**	**0**	**1**	**3**	**1**	**6**
5	Seafood and fishery products	a	Raw products (frozen or fresh)	10	0	0	0		0	
		b	Cured and smoked	11	1	0	1		1	
		c	RTE, ready to reheat	11	0	0	0		0	
			Total	**32**	**1**	**0**	**1**	**3**	**1**	**6**
6	Environmental samples	a	Dusts and residues	9	0	0	0		0	
		b	Cleaning and process waters	10	0	0	0		0	
		c	Surface sample	12	0	0	0		0	
			Total	**31**	**0**	**0**	**0**	**3**	**0**	**6**
All categories				**183**	**2**	**0**	**2**	**6**	**2**	**16**

The observed values for (TND – PD) and (TND + PD) meet the acceptability limit for each individual category and for all the combined categories (calculated values > AL), for both incubation times of the AL plates.

4.1.4 *AL plates storage at 5 ± 3 °C for 72 h*

The AL plates were stored for 72 h at 5 ± 3°C after an incubation time of 48 h and read again. The confirmatory tests were also applied after the storage step.

No change was observed after storage of AL plates and no modification occurred in the analysis of discordant samples.

4.1.5 Confirmation

The typical colonies isolated on AL plates were confirmed using 3 confirmatory protocols: Rhamnose, spots onto RAPID'*L.mono* plates and ISO tests. They all allowed to conclude to the presence of *Listeria monocytogenes* in the enrichment broths. Note that no sample in PPNA or PPND (positive presumptive not confirmed) was observed during this study.

4.2 Relative level of detection

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

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

$$RLOD = \frac{LOD_{Alt.}}{LOD_{Ref.}}$$

The relative detection level is the smallest number of culturable micro-organisms that can be detected in the sample in 50% of occasions by the alternative and reference methods.

4.2.1 Experimental design

Six (matrix/strain) pairs were tested. The samples were analyzed by the reference method and by the alternative method (See Table 32).

The following protocol was applied:

- A negative control: 5 samples,
- A low contamination level providing fractional recovery data, with 20 replicates,
- A high contamination level, with 5 replicates.

A total plate count determination on each matrix was performed to estimate the total microbial load on the day of analysis.

Table 32 - Defined (matrix/strain) pairs for the RLOD determination

Matrix and related category number		Inoculated strain	Origin	Inoculation protocol
1	Deli-salad (Piémontaise)	*Listeria monocytogenes* Ad494	Deli salad	Seeding protocol Storage for48 h at 3 ± 2°C
2	Rillettes	*Listeria monocytogenes* Ad669	Rillettes	
3	Raw milk	*Listeria monocytogenes* Ad618	Cheese	
4	Cantaloupe (frozen balls)	*Listeria monocytogenes* Ad532	Fruits	Seeding protocol Storage for 2 weeks at - 20°C
5	Smoked salmon	*Listeria monocytogenes* Ad670	Smoked salmon	Seeding protocol Storage for 48 h at 3 ± 2°C
6	Process water	*Listeria monocytogenes* Ad551	Environmental sample	Seeding protocol Storage 48 h at 3 ± 2°C

4.2.2 Calculation and interpretation of the RLOD

The raw data are given in **Appendix 11.**

The RLOD calculations were performed using the Excel spreadsheet available at http://standards.iso.org/iso/16140 - RLOD version 4 (2024-01-10). The RLOD are given Table 33.

Table 33 – Presentation of RLOD before and after confirmation of the alternative method results (After 22 h and 48 h incubation)

Category	Matrix/ strain pair	AL	RLOD [95% confidence limit]
1	Deli salad (Piemontaise) / *L. monocytogenes* Ad494	1,5	1.000 [0.482; 2.076]
2	Rillettes / *L. monocytogenes* Ad669		1.000 [0.429; 2.334]
3	Raw milk / *L. monocytogenes* Ad618		1.000 [0.465; 2.152]
4	Cantaloupe (frozen balls) / *L. monocytogenes* Ad532		1.000 [0.454; 2.202]
5	Smoked salmon / *L. monocytogenes* Ad670		1.000 [0.429; 2.334]
6	Process water / *L. monocytogenes* Ad551		1.000 [0.474; 2.110]
Combined			**1.000 [0.726; 1.377]**

The LOD_{50} calculations were done using the Excel spreadsheet available at http://standards.iso.org/iso/16140 POD-LOD calculation program - version 12, 2024-03-05. The results are given in Table 34.

Table 34 - LOD_{50} results
(After 22 h and 48 h incubation)

	Category	Food item	Strain	Level of detection at 50% (CFU / test portion)	
				Reference method	Alternative method
1	Composite foods / Ready-to-eat and ready-to-reheat	Deli salad (Piémontaise)	*L. monocytogenes* Ad494	0.5 [0.3-0.8]	0.5 [0.3-0.8]
2	Meat Products	Rillettes	*L. monocytogenes* Ad669	0.9 [0.5-1.5]	0.9 [0.5-1.5]
3	Milk & dairy products	Raw milk	*L. monocytogenes* Ad618	0.6 [0.4-1.1]	0.6 [0.4-1.1]
4	Vegetables	Cantaloupe (frozen balls)	*L. monocytogenes* Ad532	0.7 [0.4-1.3]	0.7 [0.4-1.3]
5	Seafood and fishery products	Smoked salmon	*L. monocytogenes* Ad670	1.0 [0.5-1.7]	1.0 [0.5-1.7]
6	Environmental Samples	Process water	*L. monocytogenes* Ad551	0.6 [0.4-1.1]	0.6 [0.4-1.1]
Combined				**0.7 [0.6-0.9]**	**0.7 [0.6-0.9]**

Note : the LOD_{50} have been recalculated according to the most recent spreadsheet available on the ISO website. No change was observed with the previous values.

4.2.3 Conclusion

The RLOD values (using the confirmed alternative method results) meet the acceptability limit of 1.5 for paired studies, for the six matrix/strain pairs tested for both incubation times of the AL plates.

The LOD_{50} varies from 0.5 to 1 CFU/test portion for the reference method and from 0.5 to 1 CFU/test portion for the alternative method for both incubation times of the AL plates.

4.3 Inclusivity / exclusivity

The inclusivity is the ability of the alternative method to detect the target analyte from a wide range of strains. The exclusivity is the lack of interference from a relevant range of non-target strains of the alternative method.

Inclusivity and exclusivity have already been tested, using Half-Fraser both incubated for 24 h ± 2h at 30°C; it was accepted by the AFNOR technical committee to not test again this part as the protocol tested for this extension study is the same except the reduction of the incubation time to 18h.

4.4 Conclusion

The **extension study conclusions** are:

☒ The method comparison study scheme corresponds to a PAIRED STUDY design as the alternative and reference methods have a common enrichment procedure.

☒ In the sensitivity study, 6 categories were tested: 5 food categories and the environmental samples. The protocol of the alternative method shows no positive deviation (PD) and 2 negative deviations (ND) for the overall categories. The calculated values for (TND - PD) and (TND +PD) meet the acceptability limits (AL) for the individual categories and for all combined categories whatever the incubation time applied for the Agar Listeria plates (22 h and 48 h).

☒ The Relative Levels of Detection (RLOD) meet the AL fixed at 1.5 for the paired data study whatever the matrix/strain pairs tested.

☒ The alternative method fulfils the ISO 16140-2:2016 and the ISO 16140-2/A1: 2024 for the sensitivity part for all combined categories.

Quimper, 14 January 2025

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Astrid CARIOU
Manager
Method performance in food microbiology

I hereby attest to the validation of the verification of the conformity of the report (opinion and interpretation).

Appendix 1 – Flow diagram of the alternative method: AL for detection of *Listeria monocytogenes*

Test sample (x g or x mL)

1 swab + 10 mL Half Fraser broth[2]

1 sponge + 100 mL Half Fraser broth

1 wipe + 225 mL Half Fraser broth

↓

1/10 dilution into Half Fraser broth

↓

Incubation for 18 – 28 h

↓

Spread and isolate 0.1 mL on AL agar

↓

Incubation for 24 h ± 2 h at 37 ± 1°C. Incubation can be extended until 48 h ± 2 h

↓

Presence of typical colonies (blue to blue-green with or without opaque halo)

↓

Confirmation

↓

***Listeria monocytogenes* detection** (blue to blue-green with opaque halo)

- By using the conventional tests described in the ISO standard method (including a purification step),
- By using nucleic probes as described in the ISO 7218 (for example iQ-Check *L. monocytogenes* II Real-Time PCR Detection Kit) on isolated colonies (with or without purification step),
- By Rhamnose test,
- By spotting one isolated colony onto RAPID'*L.mono* plate (up to 12 colonies can be tested on a single plate),
- By using any other NF VALIDATION -certified method based on a different principle from that of AL Agar. The validated protocol of the second method must be respected in its entirely.

[2] For sampling after cleaning process pre-moisten
- 1 swab + 1 mL broth universal neutralizing (+ 9 mL Half-Fraser)
- 1 sponge + 10 mL broth universal neutralizing (+ 90 mL Half-Fraser)
- 1 wipe + BPW + 10 % neutralizing agent (+ 225 mL Half-Fraser)

Appendix 2 - Flow diagram of the reference method: ISO 11290-1 (May 2017): Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and other *Listeria* spp. - Part 1: detection method

Test portion (25 g or 25 mL)
1 swab + 10 mL Half Fraser broth[3]
1 sponge + 100 mL Half Fraser broth
1 wipe + 225 mL Half Fraser broth

↓

Primary enrichment medium (Half Fraser broth) (225 g or 225 mL)

↓

Incubation at 30 ± 1°C for 24 h to 26 h

0.1 mL of culture
in 10 mL of secondary
enrichment medium (Fraser broth)

↓

Incubation at 37 ± 1°C
for 24 h ± 2 h

Plating out on Agar *Listeria* according to
Ottaviani and Agosti and second selective medium

↓

Incubation of Agar *Listeria* according to
Ottaviani and Agosti for 24 h ± 2 h and an additional 24 h ± 2 h at 37 ± 1°C
Incubation of second selective medium according to the chosen medium
as specified by the manufacturer

↓

Confirmation

Target	Gram	Catalase	Beta hemolysis	CAMP test	Carbohydrates
Listeria monocytogenes	Optional	Optional	x	Optional	X [4]

[3] For sampling after cleaning process, premoisten:
- 1 swab + 1 mL broth universal neutralizing (+ 9 mL Half Fraser)
- 1 sponge + 10 mL broth universal neutralizing (+ 90 mL Half Fraser)
- 1 wipe + BPW + 10 % neutralizing agent (+ 225 mL Half Fraser)

[4] API galleries will be used during the validation study

Appendix 3 – Artificial contamination of samples (ISHA-2017)

Category	Sample	Sample	Code strain	Strain	Origin	Protocol of seeding	Inoculation level (CFU/25g)	Global result
Composite foods	6	Salad: chicken, raw vegetables, salad	LIS.4.91	*Listeria monocytogenes*	Ground beef sandwich	48 h at 5±3°C	1.8	-
	1	Mixed salad (Piemontaise)	LIS.4.6	*Listeria monocytogenes 1/2a*	Ham and Emmental sandwich	48 h at 5±3°C	2.8	+
	2	Salad with raw vegetables: grated carrot, celery, corn	LIS.4.6	*Listeria monocytogenes 1/2a*	Ham and Emmental sandwich	48 h at 5±3°C	2.8	+
	3	Sandwich: chicken, crudités	LIS.4.46	*Listeria monocytogenes 3a*	Goat cheese sandwich	48 h at 5±3°C	2.6	+
	4	Tabbouleh	LIS.4.46	*Listeria monocytogenes 3a*	Goat cheese sandwich	48 h at 5±3°C	2.6	+
	5	Sandwich: tuna, crudités	LIS.4.91	*Listeria monocytogenes*	Ground beef sandwich	48 h at 5±3°C	1.8	+
	54	Sandwich: chicken and egg	LIS.4.6	*Listeria monocytogenes 1/2a*	Ham and Emmental sandwich	48 h at 5±3°C	1.8	+
	55	Sandwich: tuna, crudités	LIS.4.46	*Listeria monocytogenes 3a*	Goat cheese sandwich	48 h at 5±3°C	2.8	+
	56	Salad: ham, egg, cheese	LIS.4.91	*Listeria monocytogenes*	Ground beef sandwich	48 h at 5±3°C	2.0	+
	7	Quiche Lorrain	LIS.4.86	*Listeria monocytogenes*	Quiche Lorraine	48 h at 5±3°C	3.0	+
Meat products	8	Hachis parmentier	LIS.4.86	*Listeria monocytogenes*	Quiche Lorraine	48 h at 5±3°C	3.0	+
Dairy products	9	Cheese Cantal (raw milk)	LIS.4.60	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	-
	13	Cheese Camembert (raw milk)	LIS.4.58	*Listeria monocytogenes*	Cheese not ripened raw milk cow	48 h at 5±3°C	2.2	-
	14	Cheese: Camembert de Normandie (raw milk)	LIS.4.58	*Listeria monocytogenes*	Cheese not ripened raw milk cow	48 h at 5±3°C	2.2	-
	60	Cheese: Neufchatel (raw milk)	LIS.4.60	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	-
	61	Goat cheese: Le Radin (raw milk)	LIS.4.58	*Listeria monocytogenes*	Cheese not ripened raw milk cow	48 h at 5±3°C	1.8	-
	10	Cheese Briquette (raw milk)	LIS.4.56	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	11	Cheese Neufchatel (raw milk)	LIS.4.56	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	12	Goat cheese Crotin (raw milk)	LIS.4.60	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	15	Cheese Boulette d'Avesnes (raw milk)	LIS.4.64	*Listeria monocytogenes*	Cheese other raw milk buffaloes	48 h at 5±3°C	3.6	+
	16	Cheese Gruyére (raw milk)	LIS.4.64	*Listeria monocytogenes*	Cheese other raw milk buffaloes	48 h at 5±3°C	3.6	+
	57	Cheese: Cabecou (raw milk)	LIS.4.56	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	58	Cheese: Le savoyard (raw milk)	LIS.4.56	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	59	Cheese (raw milk)	LIS.4.60	*Listeria monocytogenes*	Cheese other raw milk cow	48 h at 5±3°C	1.8	+
	62	Cheese: Petit reblochon (raw milk)	LIS.4.58	*Listeria monocytogenes*	Unripened cheese from raw cow's milk	48 h at 5±3°C	1.8	+
	63	Goat cheese: Rigotte (raw milk)	LIS.4.64	*Listeria monocytogenes*	Other raw milk buffalo cheese	48 h at 5±3°C	1.6	+
	64	Cheese: Cantal (raw milk)	LIS.4.64	*Listeria monocytogenes*	Cheese other raw milk buffaloes	48 h at 5±3°C	1.6	+
	65	Cheese: Gruyère (raw milk)	LIS.4.64	*Listeria monocytogenes*	Other raw milk buffalo cheese	48 h at 5±3°C	1.6	+
	19	Raw milk	LIS.4.62	*Listeria monocytogenes*	Raw milk sheep	48 h at 5±3°C	3.0	-
	17	Raw butter	LIS.4.32	*Listeria monocytogenes 1/2b*	Raw milk	48 h at 5±3°C	1.2	+
	18	Raw cream	LIS.4.32	*Listeria monocytogenes 1/2b*	Raw milk	48 h at 5±3°C	1.2	+
	20	Fermented milk	LIS.4.62	*Listeria monocytogenes*	Raw sheep milk	48 h at 5±3°C	3.0	+
	21	Lightly salted raw butter	LIS.4.59	*Listeria monocytogenes*	Raw milk goat	48 h at 5±3°C	1.6	+
	22	Raw butter	LIS.4.59	*Listeria monocytogenes*	Raw milk goat	48 h at 5±3°C	1.6	+
	66	Raw salted butter	LIS.4.32	*Listeria monocytogenes 1/2b*	Raw milk	48 h at 5±3°C	1.2	+
	67	Raw butter	LIS.4.32	*Listeria monocytogenes 1/2b*	Raw milk	48 h at 5±3°C	1.2	+
	71	Raw butter	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	2.8	+
	23	Cheese St Morêt (pasteurised milk)	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	1.8	-
	24	Strawberry milk (pasteurised milk)	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	1.8	-
	25	Yaourt (pasteurised milk)	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	1.8	+
	26	Cheese Camembert (pasteurised milk)	LIS.4.66	*Listeria monocytogenes 1/2 c*	AFSSA cheese	48 h at 5±3°C	2.0	+
	27	Goat cheese (pasteurised milk)	LIS.4.66	*Listeria monocytogenes 1/2 c*	AFSSA cheese	48 h at 5±3°C	2.0	+
	28	Pasteurised milk	LIS.4.66	*Listeria monocytogenes 1/2 c*	AFSSA cheese	48 h at 5±3°C	2.0	+
	68	Cheese: Langres (pasteurised milk)	LIS.4.62	*Listeria monocytogenes*	Raw milk ewe	48 h at 5±3°C	2.2	+
	69	Pasteurised milk, taste strawberry	LIS.4.59	*Listeria monocytogenes*	Raw milk goat	48 h at 5±3°C	1.4	+
	70	Pasteurised milk, taste chocolate	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	2.8	+
	72	Cream (pasteurised milk)	LIS.4.23	*Listeria monocytogenes 1/2a*	Fresh cheese	48 h at 5±3°C	2.8	+

Category	Sample	Sample	Code strain	Strain	Origin	Protocol of seeding	Inoculation level (CFU/25g)	Global result
Vegetable products	30	Carrot (raw)	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	1.8	-
	29	Mango (raw)	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	1.8	+
	31	Celery (raw)	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	1.8	+
	76	Carrot (raw)	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	2.4	+
	78	Grated carrots with vinaigrette	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	2.4	-
	32	Juice Mango & passion fruit	LIS.4.81	*Listeria monocytogenes*	Mixed vegetable salad	48 h at 5±3°C	1.4	+
	33	Orange juice	LIS.4.81	*Listeria monocytogenes*	Mixed vegetable salad	48 h at 5±3°C	1.4	+
	34	Mushroom	LIS.4.81	*Listeria monocytogenes*	Mixed vegetables	48 h at 5±3°C	1.4	+
	35	Tomato confit	LIS.4.81	*Listeria monocytogenes*	Mixed vegetables	48 h at 5±3°C	1.4	+
	77	Mixed salad (macédoine)	LIS.4.10	*Listeria monocytogenes 1/2a*	Salad	48 h at 5±3°C	2.4	+
Seafood products	39	Surimi	LIS.4.31	*Listeria monocytogenes 1/2b*	Herring with spices	48 h at 5±3°C	2.4	+
	40	Marinated anchovy	LIS.4.31	*Listeria monocytogenes 1/2b*	Herring with spices	48 h at 5±3°C	2.4	+
	79	Tuna terrines	LIS.2.16	*Listeria innocua*	Fillet of pollock	48 h at 5±3°C	1.4	+
	80	Sardine terrine	LIS.2.16	*Listeria innocua*	Fillet of pollock	48 h at 5±3°C	1.4	+
	81	Salmon with cream	LIS.2.16	*Listeria innocua*	Fillet of pollock	48 h at 5±3°C	1.4	+
	82	Shrimp croquette	LIS.2.16	*Listeria innocua*	Fillet of pollack	48 h at 5±3°C	1.4	+
	83	Anchovies with vinegar	LIS.6.8	*Listeria welshimeri*	Fillet of pollack	48 h at 5±3°C	2.0	+
	84	Surimi	LIS.6.8	*Listeria welshimeri*	Fillet of pollack	48 h at 5±3°C	2.0	+
	85	Tuna terrines	LIS.6.8	*Listeria welshimeri*	Net of place	48 h at 5±3°C	2.0	+
Environmental sample	42	Water process: vegetables rinse water	LIS.4.2	*Listeria monocytogenes*	Environment	48 h at 5±3°C	1.4	-
	45	Water process: kitchen rinse water	LIS.4.16	*Listeria monocytogenes 1/2a*	Sewer surface control	48 h at 5±3°C	2.8	-
	49	Water process: rinse water	LIS.4.50	*Listeria monocytogenes 4b*	Surface control on salmon	48 h at 5±3°C	2.2	-
	41	Water process: sink	LIS.4.2	*Listeria monocytogenes*	Environment	48 h at 5±3°C	1.4	+
	43	Water process: washing station	LIS.4.2	*Listeria monocytogenes*	Environment	48 h at 5±3°C	1.4	+
	44	Water process: rinse water	LIS.4.16	*Listeria monocytogenes 1/2a*	Sewer surface control	48 h at 5±3°C	2.8	+
	46	Water process: rinse water	LIS.4.16	*Listeria monocytogenes 1/2a*	Sewer surface control	48 h at 5±3°C	2.8	+
	47	Water process: washing station	LIS.4.44	*Listeria monocytogenes 3a*	Surface control	48 h at 5±3°C	1.4	+
	48	Water process: rinse water, cold preparation	LIS.4.44	*Listeria monocytogenes 3a*	Surface control	48 h at 5±3°C	1.4	+
	50	Water process: vegetables rinse water	LIS.4.50	*Listeria monocytogenes 4b*	Surface control on salmon	48 h at 5±3°C	2.2	+
	73	Water process: rinse water, cold preparation	LIS.4.2	*Listeria monocytogenes*	Environment	48 h at 5±3°C	2.4	+
	74	Water process: rinse water	LIS.4.2	*Listeria monocytogenes*	Environment	48 h at 5±3°C	2.4	+
	75	Water process: washing station	LIS.4.16	*Listeria monocytogenes 1/2a*	surface control on sewer	48 h at 5±3°C	1.6	+
	51	Swab: sink	LIS.4.68	*Listeria monocytogenes*	Surface control	48 h at 5±3°C	3.0	+
	52	Swab: fridge	LIS.4.68	*Listeria monocytogenes*	Surface control	48 h at 5±3°C	3.0	+
	53	Swab: table	LIS.4.68	*Listeria monocytogenes*	Surface control	48 h at 5±3°C	3.0	+

Appendix 4 – Sensitivity study: raw data (2009, 2012 and 2017)

IPL - Legend (2009, 2012)

Total bacteria growth	Ø : no growth L = low M = medium H = high
Distribution of flora	A = pure culture of suspicious colonies B = mix with a majority of suspicious colonies C = mix with a minority of suspicious colonies D = mix with rare suspicious colonies E: no suspicious colony (x) x typical colonies of *Listeria monocytogenes* if x $\leq$ 5
Results	+: positive -: negative

ISHA's legend (2017)

CA :	Artificial contamination
N:	naturally contaminated
sp :	spiking
se :	seeding
cm:	contamination by mixture
+ / Pos :	positive result
- / Neg :	negative result
/ :	test not realized
Ø :	absence of colonies
PA :	positive agreement
NA :	negative agreement
PD :	positive deviation
ND :	negative deviation
PP:	presumed positive result before confirmation
A :	absence
P :	presence
0 / 1 / 2 / 3 / 4 :	level of typical flora, from absence to high
Ø / L / M / H :	level of annex flora, from absence to high
h+:	presence of halo
h-:	absence of halo
L.m :	*Listeria monocytogenes*
L.w :	*Listeria welshimeri*
L.in:	*Listeria inocua*
L.iv:	*Listeria ivanovii*
L.se:	*Listeria seeligeri*
L.g:	*Listeria grayi*
2009 (target: *L.monocytogenes*)	- : absence of *Listeria monocytogenes* typical colonies + : presence of *Listeria monocytogenes* typical colonies
2012 (target: *Listeria spp*)	- : absence of *Listeria* spp typical colonies + : presence of *Listeria* spp typical colonies
(yellow)	presence of blue colonies without halo

COMPOSITE FOODS																												
Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser				AL			*Confirmation*			Result AL			Agreement			AL		Confirmation					
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM	*Identifi-cation*	Result	22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono	*Identifi-cation*	22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM	Identifi-cation	Final result	Agree-ment 48 h		
2009	C10	Sushis	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	a
2009	C4	Ready-to-eat meal	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	a
2009	A21	Thai salad	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	a
2009	E12	Tabbouleh	-LE	-LE	-LE	-LE	/	-	-LE	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	a
2009	E19	Tuna sandwich	+LB	Ø	+MA	+MA	*L.m*	+	+LB	+MB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							1	a
2009	E2	Tabbouleh	+LA	+LA	+MA	+MB	*L.m*	+	+HA	+HA	+HA	+	+	L.m	+	+	+	**PA**	**PA**	**PA**							1	a
2012	D9	Rice mix with vegetables	Ø	Ø	-ME	-ME	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	a
2012	D16	Red cabbage vinaigrette	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	a
2012	F25	Tabbouleh with grapes	-LE	-LE	-LE	-LE	/	-	+LB	-LE	-LE		/	Bacillus pumilus	-	-	-	**NA**	**NA**	**NA**	-LE	-LE		Bacillus pumilus	-	**NA**	1	a
2012	G13	Pasta salad with vegetables and olive	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	a
2012	H8	Wheat salad with peppers	-LE	Ø	-LE	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	a
2012	H14	Tabbouleh with mint and pepper	-LE	-LE	Ø	Ø	/	-	+MB	+MB	-ME		/	Bacillus circulans	-	-	-	**NA**	**NA**	**NA**	+MB	-ME		Bacillus circulans	-	**NA**	1	a
2017	**6**	**Salad: chicken, raw vegetables, salad**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	1	a
2017	**1**	**Mixed salad (Piemontaise)**	2h+L	2L	4h+Ø	4Ø	+ (L.m)	**+**	3h+M	4h+M	4h+M	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+L	3h+L	+	+ (L.m)	**+**	**PA**	1	a
2017	**2**	**Salad with raw vegetables: grated carrot, celery, corn**	1h+L	2L	4h+Ø	4L	+ (L.m)	**+**	1h+M	2h+M	2h+M	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	1	a
2017	**3**	**Sandwich: chicken, crudités**	1h+L	2L	4h+3h-Ø	3M	+ (L.m,/L.w)	**+**	2h+L	2h+L	2h+L	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	1h+L	2h+L	+	+ (L.m)	**+**	**PA**	1	a
2017	**4**	**Tabbouleh**	0H	1H	4h+3h-Ø	4L	+ (L.m/,L.w)	**+**	1h+H	2h+H	2h+H	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+M	4h+M	+	+ (L.m)	**+**	**PA**	1	a
2017	**5**	**Sandwich: tuna, crudités**	2h+L	2L	4h+Ø	3H	+ (L.m)	**+**	2h+M	2h+M	2h+M	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+M	+	+ (L.m)	**+**	**PA**	1	a
2017	**54**	**Sandwich: chicken and egg**	2h+Ø	2Ø	4h+2h-Ø	4Ø	+ (L.m/,L.w)	**+**	2h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	1	a
2017	**55**	**Sandwich: tuna, crudités**	3h+Ø	3M	3h+Ø	3Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	1	a
2017	**56**	**Salad: ham, egg, cheese**	2h+Ø	2L	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	1	a
2009	K16	Shepherd's pie	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	b
2009	K18	Stuffed crepe	-LE	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	b
2009	K7	Fish gratin	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	b
2009	D5	Tagliatelles carbonara	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	b
2009	E13	Paella	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	b
2009	E10	Burger	+MB	+MB	+HB	+MB	*L.m / L.in*	+	+HB	+HB	+HB	+	+	*L.m / L.in*	+	+	+	**PA**	**PA**	**PA**							1	b

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			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	F1	Snails pie	+MA	+MA	+MA	+MA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							1	b
2009	F9	Shepherd's pie	+LB	+LB	+HB	+MB	*L.m / L.in*	+	+HB	+HB	+HB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							1	b
2009	F13	Shepherd's pie	+LA	+LA	+HA	+HA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							1	b
2009	H21	Pasta and chicken salad	+MB	+MB	+MC	+MB	*L.m /L.in*	+	+MB	+MB	+MB	+	+	L.m / L.in	+	+	+	**PA**	**PA**	**PA**							1	b
2012	K8	Pizza from Oran	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	b
2012	F3	Nem	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	b
2012	B14	Pizza with 4 cheeses	+LC	+LC	-LE	-LE	*Bacillus lentus*	-	+MB	+MB	+MB		/	*Bacillus lentus*	-	-	-	**NA**	**NA**	**NA**	/	/		*Bacillus lentus*	-	**NA**	1	b
2012	F22	Paninis with goat and sun-dried tomatoes	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	b
2012	I1	Scallops béchamel	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	b
2012	E14	Royal pizza	+MB*	+LB*	+MB*	+HB*	*L.m/ L.in*	+	+MB*	+MB*	+MB*		/	*L.m/ L.in*	+	+	+	**PA**	**PA**	**PA**	+MB*	+MB*		*L.m /L.in*	+	**PA**	1	b
2017	**93**	**Pizza ham**	2h+Ø	2Ø	2Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	1	b
2017	**94**	**Quiche Lorraine**	2h+Ø	2Ø	2Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	1	b
2017	**95**	**Croissant with ham**	2h+Ø	2Ø	2Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	1	b
2017	**7**	**Quiche Lorrain**	2h+Ø	2M	4h+Ø	4H	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	1	b
2009	A2	Pastry	Ø	-LE	Ø	-ME	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	c
2009	F6	Chocolate cream pastry	-HE	-LE	-ME	-ME	/	-	-HE	-HE	-HE	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	c
2009	J18	Whipped cream pastry	-LE	-LE	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	c
2009	J19	Mille-feuilles pastry	-LE	-LE	Ø	-ME	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							1	c
2009	A10	Strawberries pastry	+MA	+MA	+MB	+MA	*L.m /L.in*	+	+HB	+HB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							1	c
2009	A19	Whipped cream pastry	+MB	+MB	+MB	+MB	*L.m /L.in*	+	+MB	+MB	+MB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							1	c
2009	B8	Pastry	+MB	+MB	+HB	+HB	*L.m /L.in*	+	+HA	+HB	+HB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							1	c
2012	B15	Strawberries pie	-LE	Ø	-LE	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	c
2012	B16	Saint Honoré	Ø	Ø	-LE	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	c
2012	B20	Strawberries pie	-LE	Ø	-LE	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	c
2012	C5	Opera	-ME	-ME	-ME	-ME	/	-	+MC	-ME	-ME		/	*Bacillus pumilus*	-	-	-	**NA**	**NA**	**NA**	/	-ME		*Bacillus pumilus*	-	**NA**	1	c
2012	F16	Chantilly	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	1	c
2012	F18	Chocolate cake	-LE	-LE	-LE	-LE	/	-	+MB	+MB	+MB		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	-LE	-LE		*Bacillus circulans*	-	**NA**	1	c
2012	B17	Profiteroles	+MA	+MA	+MA	+MB	*L.m*	+	+HA	+HA	+HA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+HA		*L.m*	+	**PA**	1	c

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			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2012	B18	Raspberries dessert	+LA	+LA	+MA	+MA	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MA		*L.m*	+	**PA**	1	c
2012	B19	Tropézienne with strawberries	+MB	+MB*	+MB*	+MB*	*L.m /L.in*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+HB		*L.m*	+	**PA**	1	c
2012	C4	Profiteroles pie	+MA	+MA	+MA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+HA		*L.m*	+	**PA**	1	c
2012	F15	Versaillais	+MB	+MC	+MB	+HB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	1	c
2012	F17	Strawberries dessert	+MB	+MB	+MB	+HB	*L.m*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	1	c
2012	G1	Macarons	+MB	+MC	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	1	c

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			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	A6	Chopped beefsteak	Ø	-LE	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	a
2009	A18	Roast pork	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	a
2009	A24	Horse meat	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	a
2009	E15	Ground beef	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	a
2009	N18	Lamb cutlet	-ME	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	a
2009	A7	Hamburger	-LA	+LA	-MA	+MA	*L.w*	-	-MA	-MA	-MA	/	/	*L.w*	-	-	-	**NA**	**NA**	**NA**							2	a
2009	A26	Pork chop	-MA	+MA	-MA	+MA	*L.w*	-	-MA	-MA	-MA	/	/	*L.w*	-	-	-	**NA**	**NA**	**NA**							2	a
2009	F8	Chopped beefsteak	-LB	-LB	-HB	-MB	*L.in /L.w*	-	-MB	-MB	-MB	/	/	*L.in /L.w*	-	-	-	**NA**	**NA**	**NA**							2	a
2009	A15	Beef meat	+LA(1)	Ø	+MB	+MB	*L.m*	+	+LB(8)	+LB	+LB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	A17	Frozen ground beef	+MB	+MB	+MB	+MB	*L.m/ L.in*	+	+MD	+MB	+MB	+	+	*L.m/ L.in*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	A23	Turkey cutlet	+LA	+LA	+MA	+MB	*L.m/ L.in*	+	+MA	+MA	+MA	+	+	*L.m/ L.in*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	A25	Pork chop	+MB	+MB	+LB	+MB	*L.m/ L.w*	+	+MB	+MB	+MB	+	+	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	B16	Ground beef	+LB	+LB	+HB	+MB	*L.m/ L.w*	+	+MB	+MB	+MB	+	+	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	B18	Ground beef	+LA	+LA	+HB	+HB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	D4	Minced beef	+LA(1)	-LE	+HB	+LB	*L.m*	+	-LE	+LB(3)	+LB	+	+	*L.m*	-	+	+	**ND$_{FN(alt)}$**	**PA**	**PA**							2	a
2009	E3	Minced beef	-LA	+LA	+HB	+HA	*L.w / L.m*	+	-LA	-LA	-LA	/	/	*L.w*	-	-	-	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**							2	a
2009	E20	Pork meat	+MB	+MB	+HB	+HB	*L.m /L.in*	+	+MA	+MA	+MA	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	F3	Ground beef	+MA	+MA	+HA	+MA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	F4	Frozen ground beef	+MB	+MB	+HA	+MA	*L.m L.in*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	F10	Turkey lef	+MB	+MB	+HB	+MB	*L.m /L.in*	+	+HC	+HA	+HB	+	+	*L.m/ L.in*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	F11	Halal ground beef	+MB	+MB	+MB	+MB	*L.m/ L.w*	+	+HA	+HA	+HB	+	+	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**							2	a
2009	F14	Halal ground beef	+LB	+LB	+MB	+MB	*L.m /L.in*	+	+MB	+MB	+MB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							2	a
2012	E15	Chicken fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	G12	Chicken fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	B41	Minced beef way butcher	-LE	Ø	-ME	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	D15	Pork meat	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	H10	Chicken fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	H11	Chicken fillet	Ø	Ø	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2012	B43	Pork brawn	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	a
2009	B19	Hala beef balls	-ME	-ME	-ME	-ME	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	A20	Thai Chicken	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	B15	Chopped beef for bolognese	-LE	Ø	-LE	-LE	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	B17	Tomato burger	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	B20	Tomato burger	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	K17	Roasted Chicken	-LE	Ø	Ø	Ø	/	-	Ø	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	K19	Potjevlesch	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	K20	Chicken fillet cooked	Ø	-LE	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	b
2009	A16	Hamburger	+LA	Ø	+MA	+MB	*L.m*	+	+LB	+LB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	b
2009	E1	Hamburger	+MB	+MB	+MB	+MB	*L.m /L.w*	+	+HB	+HB	+HB	+	+	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**							2	b

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			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	E14	Hamburger	+LA	+LA	+HA	+MB	*L.m*	+	+MB	+MB	+HB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	b
2009	F15	Potjevleesch	+LB	+LA	+HC	+HA	*L.m/ L.in/ L.w*	+	+MC	+MC	+MC	+	+	*L.m/ L.in / L.w*	+	+	+	**PA**	**PA**	**PA**							2	b
2012	H29	Ox ribs to grill	+LB	Ø	-LE	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	J10	Raw turkey breast	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	A13	Cooked ox balls	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	G16	Thai chicken	Ø	-LE	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	A4	Pâté of head with pickles	-LE	-LE	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	A11	Ham dices	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	A12	Minced of smoked ham	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	A16	Dices of marinaded chicken	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	E12	Goulash with pears	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	G11	Foie gras	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	b
2012	D17	Chicken leg	+MB*	+MB*	+MB*	+MB*	*L.m /L.w*	+	+MB*	+MB*	+MB*		/	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**	+MB*	+MB*		*L.m /L.w*	+	**PA**	2	b
2012	H12	Minced beef way butcher	+LA	+LA	+MA	+MB	*L.m*	+	+LA	+LA	+LA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+LA	+LA		*L.m*	+	**PA**	2	b
2012	H27	Minced meat of horse	+LB	+LA	+LB	+LA	*L.m*	+	+LB	+LB	+LB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	2	b
2012	B8	Spiced balls	+MB	+MB	+MB	+HB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MA		*L.m*	+	**PA**	2	b
2012	D6	Marinaded chicken fillet	+LB*	+LB*	+MB*	+MB*	*L.m /L.in*	+	+MB*	+MB*	+MB*		/	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**	+LB*	+LB*		*L.m /L.in*	+	**PA**	2	b
2017	8	Hachis Parmentier	3h+Ø	2M	4h+Ø	4M	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	2	b
2009	E18	Chipolatas	Ø	-LE	-LE	-LE	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	H1	Toulouse sausage	-LA	+LB	-MA	-MB	*L.w*	-	-MA	-MA	-MA	/	/	*L.w*	-	-	-	**NA**	**NA**	**NA**							2	c
2009	H7	Merguez	-MB	+MB	-MA	+MB	*L.in*	-	-MB	-MB	/	/	/	*L.in*	-	-	-	**NA**	**NA**	**NA**							2	c
2009	H5	Chipolatas	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	M15	Chipolatas	-LE	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	A30	Ham	Ø	Ø	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	E17	Bacon	-LE	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	H4	Saucisson	-LE	-LE	Ø	-LE	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							2	c
2009	A1	Sausage	+LB	+LB	+MB	+MB	*L.m /L.in*	+	+MB	+MB	+MB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	A8	Merguez	+LB(1)	+LD	+MD	+MB	*L.w /L.in / L.m*	+	+MD(2)	+MD(2)	+MB	+	+	*L.m/ L.in*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	D1	Merguez	+LB	+LB	+MB	+HB	*L.m*	+	+HB	+HB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	F5	Chipolatas	+MB	+MA	+HC	+HA	*L.m /L.in*	+	+HD	+HD	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	H2	Toulouse sausage	+LB	+LA	+HB	+HA	*L.m/ L.w*	+	+MB	+MB	+MB	+	+	*L.m /L.w*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	H3	Chipolatas	-LE	-LE	+MA	+MA	*L.m*	+	+LA(2)	+LA(2)	+LB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	M16	Chipolatas with herbs	+MB	+MB	+MB	+MB	*L.m/ L.w*	+	+MB	+MB	+MB	+	+	*L.m /L.w*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	A4	Chorizo	+LB	+MD	+MB	+MD	*L.m L.w*	+	+MD	+MD	+MB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	A9	Saucisson	+LD	+LB	+MB	+MB	*L.m /L.in*	+	+MB	+MB	+MB	+	+	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	D3	Ham	+LA	+MB	+HA	+MA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	E4	Bacon	+MA	+MA	+MA	+MA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c

MEAT PRODUCTS																												
Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	G1	Ham	+LA(3)	+LA(2)	+MA	+MA	*L.m*	+	+LA	+LA	+LA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	G2	Ham	+MB	+LA	+MB	+MA	*L.m /L.w*	+	+MB	+MB	+MB	+	+	*L.m /L.w*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	G5	Ham	+MA	+MA	+MA	+MA	*L.m*	+	+MA	+MA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2009	H6	Frankfurter	+LA	+LB	+MA	+MB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							2	c
2012	J14	Pâté	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	A2	Sausages with onion	-LE	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	A14	Mortadella	-ME	-ME	-ME	-ME	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F5	Chorizo	+LB	-ME	-ME	-ME	*Bacillus circulans*	-	+LB	+MB	+MB		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	-LE	-LE		*Bacillus circulans*	-	**NA**	2	c
2012	F36	Spiced pâté	-LE	-LE	-LE	-ME	/	-	+MC	-ME	-ME		/	*Bacillus pumilus*	-	-	-	**NA**	**NA**	**NA**	+MC	+MC		*Bacillus pumilus*	-	**NA**	2	c
2012	B6	Ham	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	B42	Pâté	Ø	Ø	Ø	Ø	/	-	Ø	Ø	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	C20	Pâté of head with pickles	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	C31	Bacon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	D1	Pâté of head	-LE	Ø	-LE	-ME	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	D4	Pâté	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	D5	Ham	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	D13	Dry ham	Ø	-LE	Ø	-LE	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	E13	Pâté of head	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F4	Liver pâté	Ø	Ø	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F6	Smoked bacon	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F10	Ham	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F11	Bacon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F12	Black sausage	-ME	Ø	Ø	Ø	/	-	-LE	-ME	-ME		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F35	Smoked ham	-LE	-LE	-ME	-ME	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	G14	Pork rillettes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	I13	Dry smoked ham	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	2	c
2012	F7	Pork sausages	-LE	-LE	Ø	-LE	/	-	+LC(1)	-LE	-LE		/	*Bacillus pumilus*	-	-	-	**NA**	**NA**	**NA**	Ø	-LE		*Bacillus pumilus*	-	**NA**	2	c
2012	F8	Merguez	+LB	-LE	-LE	-ME	*Bacillus circulans*	-	+MB	+MB	+MB		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	+LB	-LE		*Bacillus circulans*	-	**NA**	2	c
2012	K9	Merguez	+MB	-ME	-LE	-ME	*Bacillus*	-	+MB	-ME	-ME		/	*Bacillus*	-	-	-	**NA**	**NA**	**NA**	/	-ME		*Bacillus*	-	**NA**	2	c
2012	A5	Rabbit sausages	+MB*	+MB*	+MB*	+MB*	*L.m /L.w*	+	+MB	+MB*	+MB*		/	*L.m L.w*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB*		*L.m L.w*	+	**PA**	2	c
2012	B7	Merguez beef sheep	+MB*	+MB*	+MB*	+MB*	*L.m /L.w/ L.iv*	+	+LB*	+MB*	+MB*		/	*L.m/ L.w / L.ivi*	+	+	+	**PA**	**PA**	**PA**	/	+MB*		*L.m /L.w / L.iv*	+	**PA**	2	c
2012	B40	Spiced sausages	+LB*	+LB*	+MB*	+HB	*L.m /L.w*	+	+MB*	+MB*	+MB*		/	*L.m/ L.w*	+	+	+	**PA**	**PA**	**PA**	/	+MB*		*L.m /L.w*	+	**PA**	2	c
2012	F9	Horse sausages	+LA	+LA	+HA	+HA	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+HA	+HA		*L.m*	+	**PA**	2	c

DAIRY PRODUCTS

Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	G13	Maroilles (raw milk cheese)	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	G15	Comté (cheese)	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	G16	Munster (raw milk cheese)	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	G17	Munster (raw milk cheese)	Ø	Ø	-LE	Ø	/	-	-LE	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	I10	Munster (raw milk cheese)	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	P1	Brie (raw milk cheese)	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	G19	Roquefort cheese	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	a
2009	B10	Reblochon cheese	+MB	+MB	+MB	+MB	*L.m*	+	+HB	+HB	+HB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							3	a
2009	I9	St Nectaire (raw milk cheese)	+MB	+LB	+MA	+MA	*L.m*	+	+MA	+MB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							3	a
2012	B22	Brie de Meaux cheese	-LE	Ø	-LE	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B23	Munster farmer cheese	-LE	Ø	-LE	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B26	Brie de Meaux cheese	-LE	Ø	-LE	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B30	Brie de Meaux cheese	-LE	Ø	-ME	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B34	"Vieux Samer" with raw milk	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B35	Camembert with raw milk	-LE	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B36	Raw milk cheese with algae	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	B37	Roblechon farmer cheese	-LE	-ME	-LE	-LE	/	-	-ME	-ME	-ME		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	C24	Roblechon farmer cheese	-LE	Ø	-LE	Ø	/	-	Ø	-ME	-ME		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	a
2012	F21	Roquefort	-ME	-LE	-ME	-ME	/	-	+MA	-ME	-ME		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	+MA	+MB		*Bacillus circulans*	-	**NA**	3	a
2012	B31	Raw milk cheese	+MB*	+MB*	+MB*	+MB*	*L.m /L.in*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MB		*L.m/ L.in*	+	**PA**	3	a
2017	**9**	**Cheese Cantal (raw milk)**	0M	0M	0M	0M	/	**-**	0M	0M	0M	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	1h-L	1h-L	-	/	**-**	**NA**	3	a
2017	**13**	**Cheese Camembert (raw milk)**	0L	0L	0L	0L	/	**-**	0L	0L	0L	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0L	/	/	**-**	**NA**	3	a
2017	**14**	**Cheese: Camembert de Normandie (raw milk)**	0Ø	0Ø	0Ø	0Ø	/	**-**	0L	0L	0L	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0L	0L	/	/	**-**	**NA**	3	a
2017	**60**	**Cheese: Neufchatel (raw milk)**	0Ø	0L	0Ø	0L	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	3	a
2017	**61**	**Goat cheese: Le Radin (raw milk)**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	3	a
2017	**10**	**Cheese Briquette fermiére (raw milk)**	3h+L	2M	4h+Ø	4Ø	+ (L.m)	**+**	4h+L	4h+L	4h+L	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	a
2017	**11**	**Cheese Neufchatel (raw milk)**	0L	0L	0L	0L	/	**-**	0M	0M	0M	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	1h+L	1h+L	+	+ (L.m)	**+**	**PD**	3	a
2017	**12**	**Goat cheese Crotin (raw milk)**	1h+Ø	1M	4h+Ø	4L	+ (L.m)	**+**	2h+Ø	3h+Ø	2h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	3	a
2017	**15**	**Cheese Boulette d'Avesnes (raw milk)**	0M	0H	0Ø	0Ø	/	**-**	0M	0M	0M	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	(3)h+L	(5)h+ M	+	+ (L.m)	**+**	**PD**	3	a

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			Fraser 1/2		Fraser		*Identifi-cation*	Result	AL			*Confirmation*		*Identifi-cation*	Result AL			Agreement			AL		Confirmation	Identifi-cation	Final result	Agree-ment 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2017	16	Cheese Gruyére (raw milk)	0Ø	0Ø	4h+Ø	4Ø	+ (L.m)	+	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	2h+Ø	2h+Ø	+	+ (L.m)	+	PA	3	a
2017	57	Cheese: Cabecou (raw milk)	(2)h+L	(3)L	3h+Ø	4Ø	+ (L.m)	+	(1)d M	(2)h+ M	(2)h+M	+	/	+ (L.m)	+	+	+	PA	PA	PA	1h+L	2h+Ø	+	+ (L.m)	+	PA	3	a
2017	58	Cheese: Le Savoyard (raw milk)	(1)h+L	0M	3h+Ø	1H	+ (L.m)	+	2h+Ø	2h+L	2h+L	+	/	+ (L.m)	+	+	+	PA	PA	PA	2h+L	2h+Ø	+	+ (L.m)	+	PA	3	a
2017	59	Cheese (raw milk)	0L	0L	3h+L	3L	+ (L.m)	+	(2)h+Ø	1h+Ø	1h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	(4)h+L	1h+Ø	+	+ (L.m)	+	PA	3	a
2017	62	Cheese: Petit reblochon (raw milk)	0L	0L	4h+Ø	4Ø	+ (L.m)	+	(1)h+Ø	(2)h+Ø	2h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	(2)h+L	1h+Ø	+	+ (L.m)	+	PA	3	a
2017	63	Goat cheese: Rigotte (raw milk)	1h+Ø	1Ø	3h+Ø	4Ø	+ (L.m)	+	1h+Ø	1h+Ø	1h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	1dL	1h+Ø	+	+ (L.m)	+	PA	3	a
2017	64	Cheese: Cantal (raw milk)	(1)h+M	0Ø	4h+1h-Ø	4Ø	+ (L.m,/L.in)	+	0Ø; 500µL: (3)h+Ø	0M; 500µL (3)h+Ø	500µl: (3)h+Ø	/ ; +	/	/; 500 µL:+ (L.m)	-	-	+	ND FN(alt)	ND FN(alt)	ND FN(alt)	(1)h+L	1h+Ø	+	+ (L.m)	+	PA	3	a
2017	65	Cheese: Gruyère (raw milk)	2h+Ø	2Ø	2Ø	4Ø	+ (L.m)	+	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	3h+Ø	3h+Ø	+	+ (L.m)	+	PA	3	a
2012	D12	Maroilles farmer cheese	Ø	Ø	Ø	Ø	/	-	Ø	Ø	-LE		/	/	-	-	-	NA	NA	NA	/	/		/	-	NA	3	b
2012	J4	Maroille farmer cheese	+MB	+MB	+MB	+MB	L.m	+	+MA	+MB	+MB		/	L.m	+	+	+	PA	PA	PA	+MA	+MB		L.m	+	PA	3	b
2017	19	Raw milk	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0Ø	0L	/	/	-	NA	3	b
2017	86	Raw butter	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	87	Fermented milk	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	88	Raw milk	0M	0M	0Ø	0Ø	/	-	0M	0M	0M	/	/	/	-	-	-	NA	NA	NA	0M	0M	/	/	-	NA	3	b
2017	89	Fermented milk	0Ø	0Ø	0Ø	0Ø	/	-	0Ø	0Ø	0Ø	/	/	/	-	-	-	NA	NA	NA	0Ø	0Ø	/	/	-	NA	3	b
2017	90	Lightly salted raw butter	0M	0M	0M	0M	/	-	0M	0M	0M	/	/	/	-	-	-	NA	NA	NA	0M	0M	/	/	-	NA	3	b
2017	91	Raw salted butter	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	92	Raw milk	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	97	Raw butter	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	98	Raw milk	0L	0L	0Ø	0Ø	/	-	0L	0L	0L	/	/	/	-	-	-	NA	NA	NA	0L	0L	/	/	-	NA	3	b
2017	17	Raw butter	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	+	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+L	+	+ (L.m)	+	PA	3	b
2017	18	Raw cream	1h+Ø	2Ø	4h+Ø	4Ø	+ (L.m)	+	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	3h+Ø	3h+Ø	+	+ (L.m)	+	PA	3	b
2017	20	Fermented milk	3h+L	3Ø	4h+Ø	4L	+ (L.m)	+	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2017	21	Lightly salted raw butter	2h+Ø	2L	4h+Ø	4Ø	+ (L.m)	+	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2017	22	Raw butter	2h+1h-Ø	3Ø	4h+2h-Ø	4Ø	+ (L.m/,L.in)	+	3h+L	3h+L	3h+L	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2017	66	Raw salted butter	3h+Ø	4Ø	4Ø	4Ø	+ (L.m)	+	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2017	67	Raw butter	3h+Ø	3Ø	4h+2h-Ø	4Ø	+ (L.m,L.in)	+	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2017	71	Raw butter	3h+Ø	3Ø	4h+2h-Ø	4Ø	+ (L.m,L.in)	+	3h+Ø	3h+Ø	4h+Ø	+	/	+ (L.m)	+	+	+	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	+	PA	3	b
2009	A14	Gouda cheese	-ME	-ME	-ME	-ME	/	-	-HE	-HE	-HE	/	/	/	-	-	-	NA	NA	NA							3	c
2009	B9	Tomette de Savoie cheese	-LE	-LE	-HE	-HE	/	-	Ø	-ME	-ME	/	/	/	-	-	-	NA	NA	NA							3	c
2009	G10	Maroilles cheese	-LE	Ø	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	-	-	-	NA	NA	NA							3	c

DAIRY PRODUCTS																														
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			Fraser 1/2		Fraser				AL			*Confirmation*			Result AL			Agreement			AL		Confirmation					
Year of validation	Sample N°	Product	AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM	*Identifi-cation*	Result	22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono	*Identifi-cation*	22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM	Identifi-cation	Final result	Agree-ment 48 h	Category	Type
2009	G12	Munster cheese	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	G20	Le Chartreux cheese	-LE	-LE	-ME	-LE	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	K1	Valencay cheese	Ø	Ø	-LE	Ø	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	K2	Ste Maure cheese	Ø	-LE	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	K3	Goat's milk cheese	Ø	Ø	Ø	-LE	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	J17	Light cream	Ø	Ø	-ME	-ME	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	J20	Milk powder	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							3	c
2009	G7	Tomme cheese	+LB	+LA	+MB	+MA	*L.m L.in*	+	+MB	+MB	+MB	+	+	*L.m L.in*	+	+	+	**PA**	**PA**	**PA**							3	c
2009	G6	Pyrénées goat's milk cheese	+LB	+LB	+MA	+MB	*L.m*	+	+MA	+MA	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							3	c
2012	B33	Cheese	-LE	Ø	-ME	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	C2	Le ch'ti roux cheese	-LE	-LE	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	G3	Camembert cheese	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	**F38**	**Goat cheese**	-LE	-LE	-LE	-ME	/	-	+MB	-ME	-ME		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	+MB	+MB		*Bacillus circulans*	-	**NA**	3	c
2012	**F39**	**Ewe ricotta**	Ø	Ø	Ø	Ø	/	-	Ø	Ø	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	**F40**	**Goat cheese**	-ME	-LE	-LE	-LE	/	-	+MB	+MB	+MB		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	+MB	+MB		*Bacillus circulans*	-	**NA**	3	c
2012	**F41**	**Goat cheese**	-LE	-LE	Ø	-ME	/	-	+LB?	-LE	-LE		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	+LA(2)	+LA(2)		*Bacillus circulans*	-	**NA**	3	c
2012	B24	P'tit Bergues ripe cheese	-LE	-LE	-LE	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	B29	Neufchatel farmer cheese	-LE	-LE	-ME	-ME	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	B32	Cheese "le Boulonnais"	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	C7	Le ch'ti roux cheese	-LE	-LE	Ø	Ø	/	-	Ø	Ø	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	3	c
2012	B25	Goat cheese	-LE	-LE	-LE	-ME	/	-	+MB	+MB	+MB		/	*Bacillus circulans*	-	-	-	**NA**	**NA**	**NA**	/	+MB		*Bacillus circulans*	-	**NA**	3	c
2012	C3	Bergues cheese	+MB*	+LB*	+MB*	+MB*	*L.m/ L.in*	+	+MB	+MB	+MB		/	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**	/	+MB		*L.m/ L.in*	+	**PA**	3	c
2012	F20	Le ch'ti roux cheese	+MB	+MA	+MB	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	3	c
2012	G2	Cheese	+MA	+MA	+MB	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	3	c
2012	B12	Pizza with cheese	+MB*	+MB	+MB*	+MB*	*L.m/ L.w*	+	+MA	+MB*	+MB*		/	*L.m L.w*	+	+	+	**PA**	**PA**	**PA**	/	+MB*		*L.m/ L.w*	+	**PA**	3	c
2017	**23**	**Cheese St Morêt (pasteurised milk)**	0L	0L	0H	0M	/	**-**	0M	0M	0M	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0L	0M	/	/	**-**	**NA**	3	c
2017	**24**	**Strawberry milk (pasteurised milk)**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	3	c
2017	**25**	**Yaourt (pasteurised milk)**	4h+Ø	4Ø	4h+Ø	4Ø	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**26**	**Cheese Camembert (pasteurised milk)**	0M	0H	4h+Ø	4L	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**27**	**Goat cheese (pasteurised milk)**	3h+Ø	3Ø	4h+M	4Ø	+ (L.m)	**+**	4h+L	4h+M	4h+M	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**28**	**Pasteurised milk**	2h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**68**	**Cheese: Langres (pasteurised milk)**	2h+L	2Ø	4h+Ø	4Ø	+ (L.m)	**+**	2h+Ø	2h+Ø	2h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c

DAIRY PRODUCTS																												
Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2017	**69**	**Pasteurised milk, taste strawberry**	3h+Ø	4Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**70**	**Pasteurised milk, taste chocolate**	3h+Ø	4Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c
2017	**72**	**Cream (pasteurised milk)**	3h+2h-Ø	3Ø	3h+2h-Ø	3Ø	+ (L.m/L.in)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	3	c

VEGETABLES																												
Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser				AL			*Confirmation*			Result AL			Agreement			AL		Confirmation					
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM	*Identifi-cation*	Result	22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono	*Identifi-cation*	22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM	Identifi-cation	Final result	Agree-ment 48 h		
2009	B7	Broccoli	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	D2	Green beans	Ø	-LE	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	E6	Broccoli	-ME	-LE	-ME	-LE	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	M7	Cucumber	-LE	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	M8	Salad	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	H19	Reddish	-ME	-LE	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	a
2009	L5	Cauliflower	+MB	+MA	+MA	+HA	*L.m*	+	+MA	+MB	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	a
2012	L10	Lentils	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	a
2012	E4	Chips	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	a
2012	J3	Deep-freeze aromatic herbs	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	a
2012	L13	Spinach	-LE	Ø	-LE	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	a
2012	E3	Chips	+MB	+MB	+MB	+MB	*L.m*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	4	a
2012	F24	Deep-freeze chips	+MB	+MB	+MA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MB		*L.m*	+	**PA**	4	a
2012	I9	Chips	+MB	+LB	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	4	a
2012	J1	Chips	+MB	+MB	+HB	+HB	*L.m*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MB		*L.m*	+	**PA**	4	a
2012	K7	Chips	+LA	+LB	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MB		*L.m*	+	**PA**	4	a
2017	**30**	**Carrot (raw)**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	4	a
2017	**29**	**Mango (raw)**	4h+2h-Ø	3Ø	3h+2h-Ø	2Ø	+ (L.m/,L.in)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	a
2017	**31**	**Celery (raw)**	1h+Ø	2Ø	4h+1h-Ø	4Ø	+ (L.m,/L.in)	**+**	2h+Ø	3h+Ø	2h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	4	a
2017	**76**	**Carrot (raw)**	3h+2h-Ø	3Ø	4h+1h-Ø	4Ø	+ (L.m,/L.in)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	a
2009	B1	Frozen French fries	Ø	Ø	-ME	-ME	/	-	-LE	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	b
2009	B3	Frozen potatoes	-LE	Ø	Ø	Ø	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	b
2009	D6	Frozen French fries	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	b
2009	D8	Frozen potatoes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	b
2009	D9	Frozen potatoes	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	b
2009	B4	Frozen French fries	+LB	+LA	+HB	+HB	*L.m*/*L.se*	+	+MA	+HB	+HB	+	+	*L.m*/*L.se*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	D7	Frozen French fries	+MA	+MA	+HA	+MA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	D14	Frozen French fries	+MA	+MB	+MB	+MB	*L.m*/*L.se*	+	+HA	+HA	+HA	+	+	*L.m*/*L.se*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	D17	Frozen French fries	+MA	+MB	+HA	+MB	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	E8	Frozen French fries	+MA	+LA	+MA	+MA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L1	Frozen French fries	-LE	-LE	+MA	+MA	*L.m*	+	+LA(2)	+LC(2)	+LB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L2	Frozen French fries	+MA	+MB	+MA	+MB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L3	Frozen roasted potatoes	+MA	+MA	+MA	+MB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L4	Frozen French fries	+LB	+LB	+MB	+MB	*L.m*/*L.se*	+	+LB	+MB	+MB	+	+	*L.m*/*L.se*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L6	Frozen French fries	+MB	+MA	+MB	+MB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2009	L7	Frozen French fries	+MB	+MB	+MA	+MA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b

VEGETABLES																												
Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C						Category	Type
			Fraser 1/2		Fraser		*Identification*	Result	AL			*Confirmation*		*Identification*	Result AL			Agreement			AL		Confirmation	Identification	Final result	Agreement 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	C1	Steam vegetables	+MA	+MA	+MA	+HA	*L.m*	+	+MA	+MA	+HA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							4	b
2012	B4	Lettuce mix	-LE	-LE	-LE	-LE	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	b
2012	E16	Fried vegetables	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	b
2012	H25	Mix salad	-ME	Ø	Ø	Ø	/	-	-ME	-ME	-ME		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	b
2012	M4	Minced red cabbage	-LE	-LE	-LE	-LE	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	b
2012	K5	Vegetables mix	Ø	Ø	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	4	b
2012	D8	Fried vegetables	+MA	+MA	+MB	+MB	*L.m*	+	+MA	+MA	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	4	b
2012	K6	Cucumbers and tomatoes	+LA	+LA	+MA	+HA	*L.m*	+	+LC	+LC	+LC		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MC		*L.m*	+	**PA**	4	b
2017	38	Celery, carrot, chicory	0Ø	0Ø	0Ø	0Ø	/	**-**	1h+1h-Ø	1h+1h-Ø	1h+1h-Ø	+	/	+ (L.m/L.w)	**+**	**+**	**+**	**PD**	**PD**	**PD**	1h+Ø	1h+Ø	+	+ (L.m)	**+**	**PD**	4	b
2009	**M1**	**Grated carrots**	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	**M2**	**Grated carrots**	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	M5	Grated carrots	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	M6	Grated carrots	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	A3	Tomato salad	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	B2	Fried vegetables	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	D11	Fried vegetables	Ø	-LE	-ME	-LE	/	-	Ø	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2009	E5	Fried vegetables and mushrooms	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							4	c
2012	L11	Minced carrots	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/	/	/			4	c
2012	H9	Minced spinach	+MB*	+MB*	+MB*	+MB*	*L.m /L.in*	+	+MB	+MB	+MB		/	*L.m /L.in*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m /L.in*	+	**PA**	4	c
2017	**78**	**Grated carrots with vinaigrette**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	4	c
2017	96	Celery (salad)	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	/	/	/	/			4	c
2017	99	Salad macedoine	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	/	/	/	/			4	c
2017	**32**	**Juice Mango & passion fruit**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	c
2017	**33**	**Orange juice**	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	c
2017	**34**	**Mushroom**	2h+Ø	2Ø	4h+1h-Ø	4Ø	+ (L.m/L.in)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	c
2017	**35**	**Tomato confit**	1h+Ø	1Ø	4h+1h-Ø	4Ø	+ (L.m,/L.in)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	4	c
2017	36	Tapenade	2h+Ø	2Ø	4h+2h-Ø	4Ø	+ (L.m/L.w)	**+**	3h+2h-Ø	3h+2h-Ø	3h+2h-Ø	+	/	+ (L.m/L.w)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+3h-Ø	4h+3h-Ø	+	+ (L.m/L.w)	**+**	**PA**	4	c
2017	37	Mashed eggplant	2h+1h-Ø	2Ø	4h+2h-Ø	4Ø	+ (L.m/L.w)	**+**	2h+2h-Ø	3h+2h-Ø	3h+2h-Ø	+	/	+ (L.m/L.w)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+3h-Ø	4h+3h-Ø	+	+ (L.m/L.w)	**+**	**PA**	4	c
2017	**77**	**Mixed salad (macédoine)**	3h+2h-Ø	4Ø	3h+2h-Ø	3Ø	+ (L.m/L.in)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	4	c

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			Fraser 1/2		Fraser		Identifi-cation	Result	AL			Confirmation		Identifi-cation	Result AL			Agreement			AL		Confirmation	Identifi-cation	Final result	Agree-ment 48 h		
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM			22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono		22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM					
2009	K8	Fish fillet	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	a
2009	K9	Saithe fillet	-LE	-LE	-LE	-LE	/	-	Ø	-ME	-ME	/	/	/	-	-	-	NA	NA	NA							5	a
2009	K10	Whiting fillet	Ø	Ø	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	a
2009	K11	Fish fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	a
2009	K12	Perch fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	a
2009	A22	Tartar of white fish	+MA	+MA	+MA	+MA	*L.m*	+	+MB	+MB	+MB	+	+	*L.m*	+	+	+	PA	PA	PA							5	a
2009	B14	Crayfish	+HB	+HA	+HB	+HA	*L.m*	+	+HA	+HB	+HA	+	+	*L.m*	+	+	+	PA	PA	PA							5	a
2009	F17	Shrimps	+LB	+LB	+HA	+HA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	PA	PA	PA							5	a
2009	F18	Shrimps	+MA	+MB	+HB	+HA	*L.m*	+	+HA	+HA	+HA	+	+	*L.m*	+	+	+	PA	PA	PA							5	a
2009	F19	Shrimps	+MA	+MA	+HB	+MB	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	PA	PA	PA							5	a
2012	D10	Shrimps	-LE	-LE	-LE	-LE	*Lactobacillus*	-	-ME	-ME	-ME		/	*Lactobacillus*	-	-	-	NA	NA	NA	-LE	-LE		*Lactobacillus*	-	NA	5	a
2012	D19	Fillet whiting	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	NA	NA	NA	/	/		/	-	NA	5	a
2012	F29	Shrimps	-LE	-ME	-LE	-ME	/	-	-ME	-ME	-ME		/	/	-	-	-	NA	NA	NA	/	/		/	-	NA	5	a
2012	F30	Shrimps	Ø	-LE	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	NA	NA	NA	/	/		/	-	NA	5	a
2012	F32	Scampis	+LA	-LE	-LE	Ø	*Bacillus circulans*	-	+MA	+MA	+MA		/	*Bacillus circulans*	-	-	-	NA	NA	NA	+LA	+LB		*Bacillus circulans*	-	NA	5	a
2012	J7	Cuttlefish	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	NA	NA	NA	/	/		/	-	NA	5	a
2012	B11	Shrimps	+MA	+MA	+MA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	PA	PA	PA	/	+MA		*L.m*	+	PA	5	a
2012	C9	Pangasus fillet	+MB	+MB	+MB*	+MB*	*L.m*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	PA	PA	PA	/	+MB*		*L.m*	+	PA	5	a
2012	C18	Brown shrimps	+MB	-ME	+MB	+MD	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	PA	PA	PA	/	+MB		*L.m*	+	PA	5	a
2012	D14	Pangasus fillet	+MB	+MB	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	PA	PA	PA	+MB	+MB		*L.m*	+	PA	5	a
2012	H5	Pangasus fillet	+MA	+MA	+MA	+MA	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	PA	PA	PA	+MA	+MA		*L.m*	+	PA	5	a
2012	H7	Scampis	+LB*	+MB*	+LB*	+MB*	*L.m/L.se*	+	+MB	+MB	+MB		/	*L.m/L.se*	+	+	+	PA	PA	PA	+MB	+MB		*L.m/L.se*	+	PA	5	a
2012	H26	Deep-freeze sea fruit cocktail	+LC (3)	Ø	+LA	+LB	*L.m*	+	+LC (1)	+LC(1)	+LC(1)		/	*L.m*	+	+	+	PA	PA	PA	+MC (1)	+MC (1)		*L.m*	+	PA	5	a
2012	H28	Pangasus fillet	+MB	+MB	+LB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	PA	PA	PA	+MB	+MB		*L.m*	+	PA	5	a
2012	J8	Shrimps	+LA	+LB	+LA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	PA	PA	PA	+MB	+MB		*L.m*	+	PA	5	a
2012	K10	Pangasus fillet	+MA	+MA	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	PA	PA	PA	/	+MB		*L.m*	+	PA	5	a
2009	B12	Smoked herring	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	C2	Smoked salmon Ireland	Ø	-ME	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	C8	Smoked haddock	Ø	-LE	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	C11	Smoked salmon	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	L14	Smoked salmon	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	L19	Kippers	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	NA	NA	NA							5	b
2009	F12	Smoked salmon	+HB	+HA	-HE	+MA	*L.m/ L.in*	+	+HD	+HB	+HC	+	+	*L.m /L.in*	+	+	+	PA	PA	PA							5	b
2009	H8	Smoked salmon	+MA	+MA	+MA	+MA	*L.m*	+	+MA	+MA	+HA	+	+	*L.m*	+	+	+	PA	PA	PA							5	b
2009	H14	Smoked salmon Scotland	+MA	+LA	+MA	+MA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	PA	PA	PA							5	b

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			Fraser 1/2		Fraser				AL			*Confirmation*			Result AL			Agreement			AL		Confirmation					
			AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM	*Identifi-cation*	Result	22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono	*Identifi-cation*	22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM	Identifi-cation	Final result	Agree-ment 48 h		
2009	H18	Smoked salmon	+MA	+LB	+MA	+MA	*L.m*	+	+MA	+MA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							5	b
2009	L15	Smoked salmon	+LA	+LA	+MA	+LA	*L.m*	+	+LA	+LB	+LB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							5	b
2012	C10	Piece of Atlantic salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	C21	Piece of salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	E11	Piece of salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	B10	Smoked trout	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	J13	Marinated herrings	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	K12	Smoked scallops	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	b
2012	B9	Smoked salmon from Norway	+MA	+MA	+MA	+HA	*L.m*	+	+MA	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MB		*L.m*	+	**PA**	5	b
2012	C15	Smoked halibut	+LA(5)	+LA(3)	+MB	+MB	*L.m*	+	+LA	+LA	+LA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MA		*L.m*	+	**PA**	5	b
2012	E8	Smoked eels	+LA	+LA	+MA	+HB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	5	b
2012	E2	Deep-freeze breaded fish	+MB*	+MB*	+MB*	+HB	*L.m L.in*	+	+MB	+MB*	+MB*		/	*L.m L.in*	+	+	+	**PA**	**PA**	**PA**	+MB*	+MB*		*L.m L.in*	+	**PA**	5	b
2017	**40**	**Marinated anchovy**	1h+Ø	2Ø	4h+2h-Ø	4Ø	+ (L.m/L.in)	**+**	3h+1h-Ø	3h+2h-Ø	3h+Ø	+	/	+ (L.m/L.in)	**+**	**+**	**+**	PA	PA	PA	2h+Ø	3h+Ø	+	+ (L.m)	**+**	PA	5	b
2009	H20	Salmon salad	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							5	c
2009	**J11**	**Cooked salmon**	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							5	c
2009	K5	Cooked salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							5	c
2009	K6	Cooked red mullet fillet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							5	c
2009	K13	Salmon brochette	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							5	c
2009	C12	Frozen pre-cooked squids	+MB	+MB	+MB	+MB	*L.m*	+	+MB	+MB	+HB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							5	c
2009	L17	Stuffed squids	+LB(2)	+LA(4)	+LB	+LB	*L.m/L.se*	+	+LA	+LB	+MB	+	+	*L.m/L.se*	+	+	+	**PA**	**PA**	**PA**							5	c
2012	G8	Cooked whelks	-LE	-LE	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	c
2012	H1	Dices of smoked salmon	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	c
2012	C17	Stuffed squids	-LE	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	5	c
2012	F27	Shrimps salad with sauce	+LA	-LE	-LE	-LE	*Bacillus lentus*	-	+MA	+MB	+MB		/	*Bacillus lentus*	-	-	-	**NA**	**NA**	**NA**	+LA(1)	+LB(2)		*Bacillus lentus*	-	**NA**	5	c
2012	E6	Curry shrimps	+LB	+LA(2)	+MA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	5	c
2012	I8	Fish balls	+LA	+LA	+MA	+MA	*L.m*	+	+LA	+LA	+LA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+LA	+LA		*L.m*	+	**PA**	5	c
2012	K13	Fish balls	+LA	+LA	+MB	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MA		*L.m*	+	**PA**	5	c
2017	**39**	**Surimi**	4h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.m)	**+**	PA	5	c
2017	**79**	**Tuna terrines**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.in)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.in)	**+**	**+**	**+**	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.in)	**+**	PA	5	c
2017	**80**	**Sardine terrine**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.in)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.in)	**+**	**+**	**+**	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.in)	**+**	PA	5	c
2017	**81**	**Salmon with cream**	2h+Ø	2Ø	3h+Ø	4Ø	+ (L.in)	**+**	2h+Ø	2h+L	2h+L	+	/	+ (L.in)	**+**	**+**	**+**	PA	PA	PA	2h+Ø	2h+L	+	+ (L.in)	**+**	PA	5	c
2017	**82**	**Shrimp croquette**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.in)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.in)	**+**	**+**	**+**	PA	PA	PA	3h+Ø	3h+Ø	+	+ (L.in)	**+**	PA	5	c
2017	**83**	**Anchovy with vinegar**	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.w)	**+**	2h+Ø	2h+L	2h+L	+	/	+ (L.w)	**+**	**+**	**+**	PA	PA	PA	2h+Ø	2h+L	+	+ (L.w)	**+**	PA	5	c
2017	**84**	**Surimi**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.w)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.w)	**+**	**+**	**+**	PA	PA	PA	4h+Ø	4h+Ø	+	+ (L.w)	**+**	PA	5	c
2017	**85**	**Tuna terrines**	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.w)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.w)	**+**	**+**	**+**	PA	PA	PA	3h+Ø	3h+Ø	+	+ (L.w)	**+**	PA	5	c

Year of validation	Sample N°	Product	Reference method NF EN ISO 11290-1: Fraser 1/2 AL or ALOA (2017)	Fraser 1/2 PALCAM	Fraser AL or ALOA (2017)	Fraser PALCAM	Identification	Result	Alternative method: AL *Listeria monocytogenes* detection method: AL 22 h	AL 48 h	AL 72 h at 5°C ± 3°C	*Confirmation* RLM	*Confirmation* iQ-Check Lmono	*Identification*	Result AL 22 h	Result AL 48 h	Result AL 72 h	Agreement 22 h	Agreement 48 h	Agreement 72 h	AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C: AL 22 h	AL 48 h	Confirmation RLM	Identification	Final result	Agreement 48 h	Category	Type
ENVIRONMENTAL SAMPLES																												
2009	A27	Rinsing water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	a
2009	E7	Rinsing water vegetables	-LE	Ø	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	a
2009	F20	Washing water mushrooms	-LE	-LE	-ME	-LE	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	a
2009	M19	Process water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	a
2009	N19	Process water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	a
2012	L1	Process water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	a
2012	L2	Laboratory water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	a
2012	L3	Clean water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	a
2012	L4	Freeze water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	a
2012	L5	Drinking water	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	a
2017	**42**	**Water process: vegetables rinse water**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	6	a
2017	**45**	**Water process: kitchen rinse water**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	6	a
2017	**49**	**Water process: rinse water**	0Ø	0Ø	0Ø	0Ø	/	**-**	0Ø	0Ø	0Ø	/	/	/	**-**	**-**	**-**	**NA**	**NA**	**NA**	0Ø	0Ø	/	/	**-**	**NA**	6	a
2017	**41**	**Water process: sink**	1h+Ø	1Ø	4h+Ø	4Ø	+ (L.m)	**+**	2h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	2h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**43**	**Water process: washing station**	2h+Ø	2L	3h+Ø	4Ø	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	2h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**44**	**Water process: rinse water**	2h+Ø	3Ø	4h+2h-Ø	4Ø	+ (L.m/L.w)	**+**	4h+2h-Ø	4h+2h-Ø	4h+2h-Ø	+	/	+ (L.m/L.w)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**46**	**Water process: rinse water**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**47**	**Water process: washing station**	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**48**	**Water process: rinse water, cold preparation**	3h+Ø	3Ø	3h+2h-Ø	3Ø	+ (L.m,L.iv)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**50**	**Water process: vegetables rinse water**	3h+Ø	3Ø	4h+2h-Ø	4Ø	+ (L.m,L.iv)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+M	3h+M	+	+ (L.m)	**+**	**PA**	6	a
2017	**73**	**Water process: rinse water, cold preparation**	2h+Ø	2Ø	3h+1h-L	3Ø	+ (L.m/L.w)	**+**	3dØ	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	3h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**74**	**Water process: rinse water**	3h+Ø	3Ø	2h+(1)h-L	1Ø	+ (L.m/L.w)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2017	**75**	**Water process: washing station**	3h+Ø	3Ø	3h+Ø	3Ø	+ (L.m)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	2h+Ø	3h+Ø	+	+ (L.m)	**+**	**PA**	6	a
2009	A31	Surface cutting table	Ø	-ME	-LE	-LE	/	-	Ø	-LE	-LE	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	b
2009	L11	Surface fish retail	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	b
2009	L18	Cutting board fish retail	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	b
2009	O15	Floor delicatessen retail	-ME	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	b
2009	O16	Doorknob	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	b
2009	A5	Surface butchery retail	+LB	+LB	+MB	+MB	*L.m/L.w*	+	+MB	+MB	+MB	+	+	*L.m/L.w*	+	+	+	**PA**	**PA**	**PA**							6	b
2009	L16	Surface fish retail	+LA(1)	Ø	+MA	+LA	*L.m*	+	+LA(3)	+LA(3)	+LA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	b
2009	M18	Ladle catering retail	+LB	+LB	+MB	+MB	*L.m*	+	+MA	+MB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	b
2009	P3	Knife Cheese retail	+MB	+LB	+MB	+MB	*L.m*	+	+MB	+MB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	b
2012	J22	PS dirty knife blade	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	b

ENVIRONMENTAL SAMPLES																												
			Reference method NF EN ISO 11290-1						Alternative method: AL *Listeria monocytogenes* detection method												AL *Listeria monocytogenes* – Test after Half Fraser storage 72 h at 5 ± 3°C							
			Fraser 1/2		Fraser				AL			*Confirmation*			Result AL			Agreement			AL		Confirmation					
Year of validation	Sample N°	Product	AL or ALOA (2017)	PALCAM	AL or ALOA (2017)	PALCAM	*Identification*	Result	22 h	48 h	72 h at 5°C ± 3°C	RLM	iQ-Check Lmono	*Identification*	22 h	48 h	72 h	22 h	48 h	72 h	22 h	48 h	RLM	Identification	Final result	Agreement 48 h	Category	Type
2012	K4	PS cold room handle	-LE	-LE	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	b
2012	M1	PS rack in cold room	-LE	Ø	-LE	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	b
2012	M2	PS stainless steel table workshop	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	b
2012	M3	PS weighing pan	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	b
2012	J15	PS line 2 upstream tunnel DFC	+MB	+MB	+MB	+HB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	6	b
2012	J16	PS line 2 ventilator upstream cooler	+MB	+MB	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	6	b
2012	J17	PS line 1 conveyor upstream cooler	+MB	+MB	+MB	+MB	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MB	+MB		*L.m*	+	**PA**	6	b
2012	C25	Waste from fisher stand	+LA	-ME	+MA	+MC	*L.m*	+	+MB	+MB	+MB		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	/	+MB		*L.m*	+	**PA**	6	b
2012	J21	PS threader fisher stand	+LA	+LA	+MA	+MA	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	6	b
2017	**51**	**Swab: sink**	3h+Ø	3Ø	4h+Ø	4Ø	+ (L.m)	**+**	4h+Ø	4h+Ø	4h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	b
2017	**52**	**Swab: fridge**	3h+1h-Ø	3Ø	4h+1h-Ø	3Ø	+ (L.m/L.iv)	**+**	3h+Ø	3h+Ø	3h+Ø	+	/	+ (L.m)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	b
2017	**53**	**Swab: table**	3h+Ø	4Ø	4h+1h-Ø	4Ø	+ (L.m/L.iv)	**+**	3h+2h-Ø	3h+2h-Ø	3h+2h-Ø	+	/	+ (L.m/L.iv)	**+**	**+**	**+**	**PA**	**PA**	**PA**	4h+Ø	4h+Ø	+	+ (L.m)	**+**	**PA**	6	b
2009	A28	Scraps from smoked salmon	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	A29	Scraps from ham	Ø	-LE	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	B6	Scraps from delicatessen retail outlet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	B13	Scraps from smoked salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	C9	Scraps from smoked salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	C15	Scraps from cutting fish line	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	E16	Scraps from butchery retail oultet	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	H23	Scraps from smoked salmon	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	-	-	-	**NA**	**NA**	**NA**							6	c
2009	A13	Scraps from delicatessen retail outlet	-LB	+LB	+MB	+MA	*L.w /L.in/ L.m*	+	+MD (3)	+MD	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	c
2009	C3	Scraps from smoked salmon	Ø	Ø	+MA	+MA	*L.m*	+	+LA(6)	+LA(4)	+LA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	c
2009	C5	Residues fish stand	+LA	+LA	+HA	+MA	*L.m*	+	+LA	+LA	+MA	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	c
2009	M17	Scraps from delicatessen retail outlet	+LB(3)	-LE	+MB	+MA	*L.m*	+	+LA	+MB	+MB	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	c
2009	P2	Cheese scraps	+LC(1)	-LE	+MA	+MA	*L.m*	+	+LA(6)	+LA(6)	+LB(4)	+	+	*L.m*	+	+	+	**PA**	**PA**	**PA**							6	c
2012	I19	Waste from fisher workshop	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	c
2012	I21	Waste from chicken cut	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	c
2012	I22	Residues sol workshop	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	c
2012	J11	Residues butcher workshop	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	c
2012	J19	Residues sewerage line 1 beans	Ø	Ø	Ø	Ø	/	-	-LE	-LE	-LE		/	/	-	-	-	**NA**	**NA**	**NA**	/	/		/	-	**NA**	6	c
2012	G31	Lamb waste	+LA	+LA	+MA	+MB	*L.m*	+	+MA	+MA	+MA		/	*L.m*	+	+	+	**PA**	**PA**	**PA**	+MA	+MA		*L.m*	+	**PA**	6	c
2012	G32	Pork waste	+LB*	+LB*	+MB*	+HB	*L.m /L.in*	+	+MB	+MB	+MB		/	*L.m L.in*	+	+	+	**PA**	**PA**	**PA**	+MB*	+MB*		*L.m /L.in*	+	**PA**	6	c
2012	J20	Residues slicer from butcher stand	+MB*	+MB*	+MB*	+MB*	*L.m/ L.in / L.w*	+	+MB	+MB*	+MB*		/	*L.m/L.in/ L.w*	+	+	+	**PA**	**PA**	**PA**	+MB*	+MB*		*L.m /L.in/ L.w*	+	**PA**	6	c

Appendix 5 – Relative level of detection study: raw data (2012, 2017)

IPL - Legend (2012)

Total bacteria growth	L = low M = medium H = high
Distribution of flora	A = pure culture of suspicious colonies B = mix with a majority of suspicious colonies C = mix with a minority of suspicious colonies D = mix with rare suspicious colonies E: no suspicious colony (x) : x typical colonies of *Listeria* if x ≤ 5

ISHA - Legend (2017)

/:	test not realized
Ø:	absence of colonies
FP:	false positive result
A:	absence
P:	presence
0/1/2/3/4:	level of typical flora, from absence to high
Ø/L/M/H:	level of annex flora, from absence to high
L.m:	*Listeria monocytogenes*
L.iv:	*Listeria ivanovii*
Confirmation:	streaking on selective medium + ISO 11290-1 confirmation
Conf. 1:	streaking on selective medium + visual reading
Conf. 2:	streaking on selective medium + API Listeria
Conf. 3:	streaking on selective medium + ISO 11290-1 confirmation
RM:	reference method
AM:	alternative method

Matrix: Deli salad (Piémontaise) (ISHA) **2017**
Strain: *L. monocytogenes* LIS.4.80
Total viable count: 5.8 x 10^3 CFU/g

Contamination level (UFC/25g)	Sample	RM: NF EN ISO 11290-1						AM: AL								Number of positive results per method
		Half Fraser		Fraser		Conf.	Final result	Reading AL 22 h	Conf. 1 (22 h) Spot RLM		Reading AL 48 h	Conf. 2 (48 h) Spot RLM		Conf. 3	Result	
		ALOA	PALCAM	ALOA	PALCAM				L.m	L.spp		L.m	L.spp			
0	AL01	0Ø	0Ø	0H	0H	/	-	0Ø	/	/	0Ø	/	/	/	-	RM = 0/5 AM = 0/5
	AL02	0L	0L	0H	0H	/	-	0Ø	/	/	0Ø	/	/	/	-	
	AL03	0L	0L	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
	AL04	0L	0Ø	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
	AL05	0L	0L	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
1.6	ALF1	2h+Ø	2Ø	3Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	RM = 16/20 AM = 16/20
	ALF2	2h+Ø	2Ø	3Ø	3Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALF3	2h+Ø	2Ø	3Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF4	0Ø	0Ø	0H	0H	/	-	0Ø	/	/	0Ø	/	/	/	-	
	ALF5	2h+Ø	2Ø	4h+Ø	3Ø	+ (L.m)	+	1h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALF6	1h+Ø	1Ø	3h+Ø	3Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALF7	2h+Ø	1Ø	3h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF8	0Ø	0L	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
	ALF9	2h+Ø	2Ø	3h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF10	2h+Ø	2Ø	4h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF11	0Ø	0Ø	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
	ALF12	2h+Ø	2Ø	4h+M	3M	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF13	2h+Ø	1Ø	4h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF14	1h+Ø	1Ø	3h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALF15	1h+Ø	1Ø	3h+Ø	3Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALF16	1h+Ø	1Ø	3h+Ø	3Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALF17	0M	0Ø	0M	0M	/	-	0Ø	/	/	0Ø	/	/	/	-	
	ALF18	1h+Ø	1Ø	4h+Ø	4Ø	+ (L.m)	+	2h+Ø	+	+	1h+Ø	+	+	+ (L.m)	+	
	ALF19	(3)h+Ø	0L	3h+Ø	3Ø	+ (L.m)	+	0Ø	/	/	1h+Ø	+	+	+ (L.m)	+	
	ALF20	1h+Ø	1Ø	4h+Ø	4Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
2.8	ALE1	2h+Ø	2Ø	4h+Ø	3Ø	+ (L.m)	+	1h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	RM = 5/5 AM = 5/5
	ALE2	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.m)	+	2h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALE3	1h+Ø	1Ø	4h+Ø	3Ø	+ (L.m)	+	1h+Ø	+	+	2h+Ø	+	+	+ (L.m)	+	
	ALE4	2h+Ø	2Ø	4h+Ø	4Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	
	ALE5	2h+Ø	2Ø	4h+Ø	3Ø	+ (L.m)	+	3h+Ø	+	+	3h+Ø	+	+	+ (L.m)	+	

Matrix: Rillettes (IPL)
Strain: *L. monocytogenes 1*/2b L49
Total viable count: 4.0 x 10^2 CFU/g

Niveau de contamination	Taux de contamination	Méthode de référence ISO 11290-1						Méthode alternative AL Recherche				
		Fraser		Fraser 1/2		Résultat	Conclusion	AL 24H	AL 48H	Conf. Spot sur RLM	Résultat	Conclusion
		AL	Palcam	AL	Palcam							
1	0,00	-ME	-ME	-ME	-ME	-	0/6	-LE	-ME	/	-	0/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	-LE	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
3	0,27	Ø	Ø	Ø	Ø	-	1/6	Ø	Ø	/	-	1/6
		-LE	-LE	-ME	-ME	-		-ME	-ME	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+MA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
4	0,40	Ø	Ø	Ø	Ø	-	2/6	Ø	Ø	/	-	2/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
4	0,64	Ø	Ø	Ø	Ø	-	3/6	Ø	Ø	/	-	3/6
		+MA	+MA	+MB	+MA	+		+MA	+MA	+	+	
		+LA	+LB	+MA	+MA	+		+MB	+MB	+	+	
		Ø	Ø	Ø	-LE	-		-LE	-LE	/	-	
		+LA	+LB	+MA	+MA	+		+MA	+MB	+	+	
		Ø	Ø	-LE	Ø	-		Ø	Ø	/	-	
5	1,08	Ø	Ø	Ø	-LE	-	3/6	Ø	Ø	/	-	3/6
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	-LE	-		Ø	Ø	/	-	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	-LE	-		Ø	Ø	/	-	
6	1,58	+LA	+LA	+MA	+MA	+	6/6	+MA	+MA	+	+	6/6
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	

Matrix: Raw milk (IPL) **2009**
Strain: *L. monocytogenes* 4b L32
Total viable count: 5.5 x 10^2 CFU/mL

Niveau de contamination	Taux de contamination	Méthode de référence ISO 11290-1						Méthode alternative A L Recherche				
		Fraser		Fraser 1/2		Résultat	Conclusion	AL 24H	AL 48H	Conf. Spot sur RLM	Résultat	Conclusion
		AL	Palcam	AL	Palcam							
1	0,00	Ø	Ø	Ø	Ø	-	0/6	Ø	Ø	/	-	0/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
2	0,50	Ø	Ø	Ø	Ø	-	2/6	Ø	Ø	/	-	2/6
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
3	0,85	Ø	Ø	Ø	Ø	-	3/6	Ø	Ø	/	-	3/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
4	1,28	+MA	+LA	+MA	+MA	+	4/6	+MA	+MA	+	+	4/6
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
5	1,78	+MA	+MA	+MA	+MA	+	6/6	+MA	+MA	+	+	6/6
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+MA	+MA	+MA	+MA	+		+MA	+MA	+	+	

Matrix: Raw vegetables (IPL) **2009**
Strain: *L. monocytogenes* 4b L58
Total viable count: 3.0 x 10^8 CFU/g

Niveau de contamination	Taux de contamination	Méthode de référence ISO 11290-1						Méthode alternative AL Recherche				
		Fraser		Fraser 1/2		Résultat	Conclusion	AL 24H	AL 48H	Conf. Spot sur RLM	Résultat	Conclusion
		AL	Palcam	AL	Palcam							
1	0,00	Ø	Ø	Ø	Ø	-	0/6	Ø	Ø	/	-	0/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
2	0,22	Ø	Ø	Ø	Ø	-	2/6	Ø	Ø	/	-	2/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+3LB	+LA	+MA	+MA	+		+MA	+MB	+	+	
		+5LA	+2LA	+MA	+MA	+		+LA	+LB	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
3	0,34	Ø	Ø	Ø	Ø	-	3/6	Ø	Ø	/	-	3/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+1LA	Ø	+MA	+MA	+		+MA	+MB	+	+	
		+4LA	+6LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+1LA	+1LA	+MA	+MA	+		+LA	+LA	+	+	
4	0,55	+LB	+LB	+MB	+LA	+	4/6	+MB	+MB	+	+	4/6
		+MB	+MB	+MB	+MB	+		+MB	+MB	+	+	
		-LE	-LE	-ME	-ME	-		-LE	-LE	/	-	
		+LB	+LB	+MB	+MB	+		+LB	+LB	+	+	
		+LB	+LB	+LB	+MB	+		+MB	+MB	+	+	
		-LE	-LE	-ME	-LE	-		-LE	-LE	/	-	
5	0,80	+LB	+LB	+MB	+MB	+	6/6	+MB	+MB	+	+	6/6
		+LB	+LB	+MB	+MB	+		+MB	+MB	+	+	
		+LB	+MB	+MB	+LB	+		+MB	+MB	+	+	
		+LB	+MB	+MB	+MB	+		+MB	+MB	+	+	
		+LA	+LA	+MB	+MB	+		+MB	+MB	+	+	
		+LA	+LB	+MB	+MB	+		+MB	+MB	+	+	

Matrix: Smoked salmon (IPL)
Strain: *L. monocytogenes* 1/2a L5
Total viable count: 5.0 x 10^3 CFU/g

Niveau de contamination	Taux de contamination	Méthode de référence ISO 11290-1						Méthode alternative AL Recherche				
		Fraser		Fraser 1/2		Résultat	Conclusion	AL 24H	AL 48H	Conf. Spot sur RLM	Résultat	Conclusion
		AL	Palcam	AL	Palcam							
1	0	Ø	Ø	Ø	Ø	-	0/6	Ø	Ø	/	-	0/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		-LE	-ME	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
2	0,12	+LA	+LA	+MA	+MA	+	1/6	+MA	+MA	+	+	1/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
3	0,17	+LA	+LA	+MA	+MA	+	1/6	+MA	+MA	+	+	1/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
4*	0,56	+LA	+LB	+MB	+MB	+	4/6	+MB	+MB	+	+	4/6
		+LA	+MB	+LB	+LB	+		+MB	+MB	+	+	
		Ø	Ø	-LE	Ø	-		-LE	-LE	/	-	
		+LB	+LB	+MB	+MB	+		+LB	+LB	+	+	
		Ø	-LE	Ø	Ø	-		-LE	-LE	/	-	
		+MB	+MB	+MB	+MB	+		+MB	+MB	+	+	
5*	0,99	+LB	+MB	+MB	+MB	+	6/6	+LB	+LB	+	+	6/6
		+MA	+MA	+LB	+MB	+		+MB	+MB	+	+	
		+LB	+LB	+MB	+MB	+		+LB	+LB	+	+	
		+MB	+MB	+MB	+MB	+		+MB	+MB	+	+	
		+MB	+MB	+MB	+MB	+		+MB	+MB	+	+	
		+LA	+LB	+LB	+MB	+		+MB	+MB	+	+	

Matrix: Process water (IPL) **2009**
Strain: *L. monocytogenes* 1/2c L28
Total viable count: 8.0 x 10^5 CFU/mL

Niveau de contamination	Taux de contamination	Méthode de référence ISO 11290-1						Méthode alternative AL Recherche				
		Fraser		Fraser 1/2		Résultat	Conclusion	AL 24H	AL 48H	Conf. Spot sur IRLM	Résultat	Conclusion
		AL	Palcam	AL	Palcam							
1	0,00	Ø	Ø	Ø	Ø	-	0/6	Ø	Ø	/	-	0/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
2	0,21	Ø	Ø	Ø	Ø	-	1/6	Ø	Ø	/	-	1/6
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
3	0,34	+LA	+LA	+MA	+MA	+	4/6	+MA	+MA	+	+	4/6
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
5	1,05	+LA	+LA	+MA	+MA	+	5/6	+MA	+MA	+	+	5/6
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+MA	+LA	+MA	+MA	+		+MA	+MA	+	+	
		+LA	+LA	+MA	+MA	+		+MB	+MB	+	+	
		Ø	Ø	Ø	Ø	-		Ø	Ø	/	-	
		+LA	+LA	+MA	+MA	+		+MA	+MA	+	+	
6*	1,97	+MA	Ø	+MA	+MA	+	6/6	+MA	+MA	+	+	6/6
		+MA	Ø	+MA	+MA	+		+MA	+MA	+	+	
		+MA	Ø	+MA	+MA	+		+MA	+MA	+	+	
		+MA	Ø	+MA	+MA	+		+MA	+MA	+	+	
		+MA	Ø	+MA	+MA	+		+MA	+MA	+	+	
		+MA	Ø	+MA	+MA	+		+MA	+MA	+	+	

Appendix 6 – Inclusivity and exclusivity study: raw data (2009, 2012)

INCLUSIVITY (initial validation study-2009, IPL)							
No	Strain		Origin	Inoculation level in 225 mL Half Fraser	Colonies on AL medium after incubation for 22 h at 37°C		Result
					Color	with halo	
1.	L 4	*Listeria monocytogenes* 1/2a	ATCC 35152	7,0E+00	Blue	Yes	+MA
2.	L5	*Listeria monocytogenes* 1/2a	Pieces of smoked salmon	9,5E+03	Blue	Yes	+MA
3.	L6	*Listeria monocytogenes* 1/2a	Pizza	1,0E+06	Blue	Yes	+MA
4.	L7	*Listeria monocytogenes* 1/2a	Munster cheese (rind)	7,0E+00	Blue	Yes	+MA
5.	L9	*Listeria monocytogenes* 1/2a	Munster cheese (rind)	8,0E+00	Blue	Yes	+MA
6.	L10	*Listeria monocytogenes* 1/2a	Rillettes	1,0E+01	Blue	Yes	+MA
7.	L11	*Listeria monocytogenes* 1/2a	Munster cheese (rind)	5,7E+05	Blue	Yes	+MA
8.	L12	*Listeria monocytogenes* 1/2a	Smoked salmon	1,2E+01	Blue	Yes	+MA
9.	L13	*Listeria monocytogenes* 1/2b	Pork ear	9,0E+00	Blue	Yes	+MA
10.	L14	*Listeria monocytogenes* 1/2c	Ground meat	8,0E+00	Blue	Yes	+MA
11.	L15	*Listeria monocytogenes* 1/2c	Beef meat	1,1E+04	Blue	Yes	+MA
12.	L16	*Listeria monocytogenes* 1/2c	Ground meat	8,0E+00	Blue	Yes	+MA
13.	L17	*Listeria monocytogenes* 1/2c	Bacon	1,5E+04	Blue	Yes	+MA
14.	L18	*Listeria monocytogenes* 1/2c	Munster cheese (rind)	7,0E+00	Blue	Yes	+MA
15.	L20	*Listeria monocytogenes* 1/2	Smoked salmon	1,5E+01	Blue	Yes	+MA
16.	L25	*Listeria monocytogenes* 1/2	Chicken	4,0E+00	Blue	Yes	+MA
17.	L28	*Listeria monocytogenes* 1/2c	Environment sample	1,2E+01	Blue	Yes	+MA
18.	L32	*Listeria monocytogenes* 4b	Munster cheese (rind)	6,0E+03	Blue	Yes	+MA
19.	L33	*Listeria monocytogenes* 4b	ATCC 19115	1,0E+04	Blue	Yes	+MA
20.	L37	*Listeria monocytogenes* 1/2b	Maroille cheese	3,2E+05	Blue	Yes	+MA
21.	L39	*Listeria monocytogenes*	Sausage	1,0E+01	Blue	Yes	+MA
22.	L40	*Listeria monocytogenes* 1/2a	Munster cheese (rind)	4,2E+05	Blue	Yes	+MA
23.	L42	*Listeria monocytogenes* 1/2a	Chicken meat	6,0E+00	Blue	Yes	+MA
24.	L43	*Listeria monocytogenes* 1/2a	Ground meat	8,0E+00	Blue	Yes	+MA
25.	L44	*Listeria monocytogenes* 1/2a	Sausage	7,0E+00	Blue	Yes	+MA
26.	L45	*Listeria monocytogenes* 1/2a	Wind terrine	4,0E+00	Blue	Yes	+MA

INCLUSIVITY (initial validation study-2009, IPL)							
No	Strain		Origin	Inoculation level in 225 mL Half Fraser	Colonies on AL medium after incubation for 22 h at 37°C		Result
					Color	with halo	
27.	L47	*Listeria monocytogenes* 1/2a	Browed potatoes	1,5E+01	Blue	Yes	+MA
28.	L48	*Listeria monocytogenes* 1/2b	Pork tongue	3,0E+00	Blue	Yes	+MA
29.	L49	*Listeria monocytogenes* 1/2b	Poultry pâté	9,0E+00	Blue	Yes	+MA
30.	L51	*Listeria monocytogenes* 1/2b	Germain cheese	1,5E+01	Blue	Yes	+MA
31.	L52	*Listeria monocytogenes* 1/2b	SLCC 2755	5,0E+00	Blue	Yes	+MA
32.	L53	*Listeria monocytogenes* 1/2c	Ground meat	8,0E+00	Blue	Yes	+MA
33.	L54	*Listeria monocytogenes* 1/2c	Meat product	8,0E+00	Blue	Yes	+MA
34.	L55	*Listeria monocytogenes* 3b	SLCC 2540	8,0E+00	Blue	Yes	+MA
35.	L56	*Listeria monocytogenes* 3c	SLCC 2479	5,0E+00	Blue	Yes	+MA
36.	L57	*Listeria monocytogenes* 4a	ATCC 19114	3,0E+00	Blue	Yes	+MA
37.	L58	*Listeria monocytogenes* 4b	Salad	1,0E+01	Blue	Yes	+MA
38.	L60	*Listeria monocytogenes* 4d	ATCC 19117	7,0E+00	Blue	Yes	+MA
39.	L61	*Listeria monocytogenes* 4e	ATCC 19118	4,0E+00	Blue	Yes	+MA
40.	L62	*Listeria monocytogenes* 4e	Reblochon cheese	3,0E+00	Blue	Yes	+MA
41.	L63	*Listeria monocytogenes* 4e	Munster cheese (rind)	7,0E+00	Blue	Yes	+MA
42.	L67	*Listeria monocytogenes* 7	SLCC 2482	7,0E+00	Blue	Yes	+MA
43.	L69	*Listeria monocytogenes*	Sausage	1,0E+01	Blue	Yes	+MA
44.	L70	*Listeria monocytogenes*	Salmon from Ireland	8,0E+00	Blue	Yes	+MA
45.	L116	*Listeria monocytogenes* 1/2a	Fish meal	1,0E+01	Blue	Yes	+MA
46.	L117	*Listeria monocytogenes* 1/2c	Montbeliard sausage	8,0E+00	Blue	Yes	+MA
47.	L119	*Listeria monocytogenes*	Spinaches	1,0E+01	Blue	Yes	+MA
48.	L121	*Listeria monocytogenes*	Neufchatel cheese	9,0E+03	Blue	Yes	+MA
49.	L123	*Listeria monocytogenes*	Mozzarella cheese	1,2E+01	Blue	Yes	+MA
50.	L124	*Listeria monocytogenes*	Perch fillet	7,0E+00	Blue	Yes	+MA
51.	L125	*Listeria monocytogenes*	Vegetables pan fry	6,0E+00	Blue	Yes	+MA
52.	L128	*Listeria monocytogenes* 1/2a	Soya cattle cake	9,0E+03	Blue	Yes	+MA
53.	L129	*Listeria monocytogenes* 1/2a	Browed potatoes	7,0E+00	Blue	Yes	+MA
54.	L130	*Listeria monocytogenes*	Ground meat	5,0E+00	Blue	Yes	+MA

INCLUSIVITY (initial validation study-2009, IPL)							
No	**Strain**		**Origin**	**Inoculation level in 225 mL Half Fraser**	**Colonies on AL medium after incubation for 22 h at 37°C**		**Result**
					Color	with halo	
55.	L137	*Listeria monocytogenes*	Ground meat	1,0E+01	Blue	Yes	+MA
56.	L141	*Listeria monocytogenes*	Environmental sample	8,0E+00	Blue	Yes	+MA
57.	L149	*Listeria monocytogenes*	Environmental sample	5,0E+00	Blue	Yes	+MA
58.	L152	*Listeria monocytogenes*	Environmental sample	1,0E+04	Blue	Yes	+MA
59.	L156	*Listeria monocytogenes*	French pies	2,7E+04	Blue	Yes	+MA
60.	L176	*Listeria monocytogenes*	Beef meat	1,0E+04	Blue	Yes	+MA

INCLUSIVITY (renewal study-2012, IPL)									
No	Reference	Strain	Origin	Inoculation level (CFU/225 mL)	Colonies on AL agar following 22 h incubation at 37°C		Confirmations		Result
					Color	Presence of halo	Streak on PALCAM	Streak on RLSP	
61.	L12	*Listeria monocytogenes* 1/2a	Smoked salmon	150	Blue	Yes	+	+	+
62.	L43	*Listeria monocytogenes* 1/2a	Minced meat	128	Blue	Yes	+	+	+
63.	L44	*Listeria monocytogenes* 1/2a	Sausage	138	Blue	Yes	+	+	+
64.	L47	*Listeria monocytogenes* 1/2a	Fried potatoes	94	Blue	Yes	+	+	+
65.	L116	*Listeria monocytogenes* 1/2a	Shellfish	114	Blue	Yes	+	+	+
66.	L119	*Listeria monocytogenes* 1/2a	Spinach	162	Blue	Yes	+	+	+
67.	L152	*Listeria monocytogenes* 1/2a	Environment sample	182	Blue	Yes	+	+	+
68.	L37	*Listeria monocytogenes* 1/2b	Maroilles with raw milk	136	Blue	Yes	+	+	+
69.	L49	*Listeria monocytogenes* 1/2b	Chicken livers cream	154	Blue	Yes	+	+	+
70.	L51	*Listeria monocytogenes* 1/2b	Ripened cheese	144	Blue	Yes	+	+	+
71.	L14	*Listeria monocytogenes* 1/2c	Minced meat	182	Blue	Yes	+	+	+
72.	L17	*Listeria monocytogenes* 1/2c	Bacon	98	Blue	Yes	+	+	+
73.	L18	*Listeria monocytogenes* 1/2c	Munster cheese	146	Blue	Yes	+	+	+
74.	L117	*Listeria monocytogenes* 1/2c	Sausages from Montbéliard	142	Blue	Yes	+	+	+
75.	L223	*Listeria monocytogenes* 1/2c	Environment sample	340	Blue	Yes	+	+	+
76.	L124	*Listeria monocytogenes* 1/2	Perch fillet	182	Blue	Yes	+	+	+
77.	L125	*Listeria monocytogenes*	Fried vegetables	198	Blue	Yes	+	+	+
78.	L226	*Listeria monocytogenes* 3a	Terrine of herring fillet	196	Blue	Yes	+	+	+
79.	L55	*Listeria monocytogenes* 3b	Collection SLCC 2540	132	Blue	Yes	+	+	+
80.	L56	*Listeria monocytogenes* 3c	Collection SLCC 2479	95	Blue	Yes	+	+	+
81.	L57	*Listeria monocytogenes* 4a	Collection ATCC 19114	96	Blue	Yes	+	+	+
82.	L58	*Listeria monocytogenes* 4b	Salad	125	Blue	Yes	+	+	+
83.	L217	*Listeria monocytogenes* 4b	Environment sample	276	Blue	Yes	+	+	+
84.	L60	*Listeria monocytogenes* 4d	Collection ATCC 19117	110	Blue	Yes	+	+	+
85.	L61	*Listeria monocytogenes* 4e	Collection ATCC 19118	138	Blue	Yes	+	+	+
86.	L62	*Listeria monocytogenes* 4e	Reblochon cheese	138	Blue	Yes	+	+	+

EXCLUSIVITY (initial validation study-2009, IPL)							
No	Strain		Origin	Inoculation level in 225 mL non-selective nutrient broth	Colonies on AL medium after incubation for 22 h at 37°C		Result
					Color	Presence of halo	
1.	L143	*Listeria grayi*	Frozen French fries	9,5E+03	blue	no	-
2.	L146	*Listeria grayi*	CIP 103 213	1,0E+06	blue	no	-
3.	L64	*Listeria innocua*	Epoisses cheese	5,7E+05	Blue	no	-
4.	L72	*Listeria innocua*	Boulettes d'Avesnes cheese	1,1E+04	Blue	no	-
5.	L108	*Listeria innocua*	Gorgonzola cheese	1,5E+04	Blue	no	-
6.	L76	*Listeria innocua* 6b	Ground meat	6,0E+03	Blue	no	-
7.	L80	*Listeria ivanovii*	Collection	1,0E+04	Blue	yes	+
8.	L133	*Listeria ivanovii*	Roquefort cheese	3,2E+05	Blue	yes	+
9.	L150	*Listeria ivanovii*	Dairy product	1,7E+05	Blue	yes	+
10.	L151	*Listeria ivanovii*	Ground meat	4,2E+05	Blue	yes	+
11.	L154	*Listeria ivanovii*	Sausage with herbs	2,4E+05	Blue	yes	+
12.	L161	*Listeria ivanovii spp. ivanovii*	Meat product	1,9E+05	Blue	yes	+
13.	L166	*Listeria ivanovii spp. londoniensis*	Collection	2,8E+08	Blue	yes	+
14.	L84	*Listeria seeligeri*	Beef ground meat	9,0E+03	Blue	no	-
15.	L142	*Listeria seeligeri*	Raw milk cheese	9,0E+03	Blue	no	-
16.	L83	*Listeria seeligeri* 1/2b	Beef tongue	1,4E+04	Blue	no	-
17.	L101	*Listeria welshimeri*	Ham	1,0E+04	Blue	no	-
18.	L91	*Listeria welshimeri*	Saucisson	2,7E+04	Blue	no	-
19.	L99	*Listeria welshimeri*	Sausages	1,0E+04	Blue	no	-
20.	BA1	*Bacillus cereus*	Egg product	9,0E+04	Ø	Ø	-
21.	BA2	*Bacillus cereus*	Sausage	7,0E+05	Ø	Ø	-
22.	BA14	*Bacillus cereus*	Egg	6,0E+04	Ø	Ø	-
23.	BA5	*Bacillus megaterium*	Collection	5,4E+05	Ø	Ø	-
24.	BA6	*Bacillus mycoïdes*	Collection	4,3E+03	Ø	Ø	-
25.	BA22	*Bacillus pumilus*	Sausage	1,3E+04	Blue	no	-
26.	BA4	*Bacillus stearothermophilus*	Collection	9,2E+06	Ø	Ø	-
27.	BA29	*Bacillus thuringiensis*	Collection	1,2E+04	Ø	Ø	-
28.	E10	*Enterococcus durans*	Collection	1,1E+05	Ø	Ø	-

EXCLUSIVITY (initial validation study-2009, IPL)							
No	**Strain**		**Origin**	**Inoculation level in 225 mL non-selective nutrient broth**	**Colonies on AL medium after incubation for 22 h at 37°C**		**Result**
					Color	Presence of halo	
29.	E1	*Enterococcus faecalis*	Egg product	9,0E+05	Ø	Ø	-
30.	E2	*Enterococcus faecium*	ATCC 3286	8,0E+05	Ø	Ø	-
31.	E9	*Enterococcus faecium*	Tarama	8,0E+05	Ø	Ø	-
32.	L139	*Jonesia denitrificans*	ATCC 55134	1,0E+04	Blue	no	-
33.	LAC5	*Lactobacillus reuteri*	Dairy product	3,0E+04	Ø	Ø	-
34.	LAC22	*Lactobacillus plantarum*	Collection	5,4E+04	Ø	Ø	-
35.	39	*Oekskovia xanthineolytica*	Reblochon cheese	1,8E+05	Blue	no	-
36.	32	*Rhodococcus equi*	Meat product	1,2E+05	Blue	no	-
37.	STA3	*Staphylococcus epidermidis*	Yoghurt	2,5E+05	Blue	no	-

EXCLUSIVITY (renewal study-2012, IPL)

Reference	Strain	Origin	Inoculation level (CFU/225 mL)	Colonies on AL agar following 22 h incubation at 37°C	Confirmations		Comments
					Streak on Palcam	Streak on RLSP	
BA15	*Bacillus cereus*	Custard	7,6. 10E+5	-	/	/	
BA19	*Bacillus cereus*	Environment	6,2.10E+5	-	/	/	white colonies
BA18	*Bacillus circulans*	Custard	9,4.10E+5	blue	-	-	typical colonies after 24h incubation
BA26	*Bacillus circulans*	Environment	3,2.10E+5	blue	-	-	typical colonies after 24h incubation
BA7	*Bacillus coagulans*	Collection	5,9.10E+4	-	/	/	small and noncoloured colonies with halo
BA16	*Bacillus licheniformis*	Custard	3,8.10E+5	-	/	/	
BA24	*Bacillus mycoïdes*	Soil	4,5.10E+5	-	/	/	
BA12	*Bacillus pumilus*	Milk	4,4.10E+5	blue	-	+	typical colonies
BA22	*Bacillus pumilus*	Poultry tabbouleh	1,3.10E+4	blue			colonies without halo
			3,7.10E+5	blue	-	+	typical colonies
BA23	*Bacillus sphaericus*	/	6,4.10E+5	-	/	/	
BA43	*Bacillus subtilis*	ATCC 23059	6,6.10E+5	-	/	/	
15	*Brochotrix thermosphacta*	Minced meat	2,4.10E+4	-	/	/	
37	*Corynebacterium flavescens*	ATCC10340	1,5.10E+4	-	/	/	
E6	*Enterococcus faecalis*	Collection ATCC 19433	4,8.10E+5	-	/	/	
E7	*Enterococcus faecium*	Collection CIP 5433	4,1.10E+5	-	-	-	little colonies dark blue coloured and non typical
L139	*Jonesia denitrificans*	ATCC 55134	1,0.10E+4	blue			colonies without halo
			4,5.10E+5	-	-	-	little colonies dark blue coloured and non typical
33	*Lactobacillus casei*	Dairy product	7,4.10E+4	-	/	/	
Lb1	*Lactobacillus plantarum*	Collection	1,3.10E+4	-	/	/	
M1	*Micrococcus* spp.	Environment	2,0.10E+5	-	/	/	
39	*Oerskovia xanthineolytica*	Reblochon cheese	1,8.10E+5	blue			colonies without halo
			8,0.10E+5	blue	-	-	colonies blue if well isolated, but green reflect inside agar
32	*Rhodococcus equi*	Meat product	1,2.10E+5	blue			colonies without halo
			6,4.10E+4	-	/	/	colonies blanchâtres
ST17	*Staphylococcus aureus*	Yoghurt	6,5.10E+4	-	/	/	
STA3	*Staphylococcus epidermidis*	Strawberries yoghurt	2,5.10E+5	blue			colonies without halo
			7,0.10E+5	-	/	/	colonies de couleur bleue très pale
E13	*Streptococcus bovis*	Collection CIP 5623	9,0.10E+4	-	/	/	

in grey : results obtained during initial validation study

Appendix 7 – Inclusivity/Exclusivity: raw data Extension study for the use of Rhamnose test (ADRIA Développement, 2019)

H+: typical *Listeria* colonies with opaque halo H-: typical *Listeria* colonies without opaque halo st: plates without any colony

-: presence of non-typical colonies

INCLUSIVITY												
N°	Strain		Reference	Origin	Molecular serotype	Agar *Listeria* (AL)						
						Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA		
							6h	24h	72 h	6h	24h	72 h
1	*Listeria*	*monocytogenes*	Ad523	Cheese	/	H+	+	+	/	+	+	/
2	*Listeria*	*monocytogenes*	Ad532	Fruits	/	H+	+	+	/	+	+	/
3	*Listeria*	*monocytogenes*	Ad543	Peppers	/	H+	+	+	/	+	+	/
4	*Listeria*	*monocytogenes*	Ad545	Deli salad (cubage, carrots)	/	H+	+	+	/	+	+	/
5	*Listeria*	*monocytogenes*	Ad549	Environmental sample	/	H+	+	+	/	+	+	/
6	*Listeria*	*monocytogenes*	Ad550	Environmental sample	/	H+	+	+	/	+	+	/
7	*Listeria*	*monocytogenes*	Ad1719	Deli salad	/	H+	+	+	/	+	+	/
8	*Listeria*	*monocytogenes*	Ad610	Milk	/	H+	+	+	/	+	+	/
9	*Listeria*	*monocytogenes*	Ad612	Cheese	/	H+	+	+	/	+	+	/
10	*Listeria*	*monocytogenes*	Ad613	Cheese	/	H+	+	+	/	+	+	/
11	*Listeria*	*monocytogenes*	Ad614	Environmental sample (dairy)	/	H+	+	+	/	+	+	/
12	*Listeria*	*monocytogenes*	Ad619	Cheese	/	H+	-	-	-	-	-	+/- brown
13	*Listeria*	*monocytogenes*	Ad627	Dairy environment	/	H+	+	+	/	+	+	/
14	*Listeria*	*monocytogenes*	Ad629	Cheese	/	H+	+	+	/	+	+	/
15	*Listeria*	*monocytogenes*	Ad632	Milk	/	H+	+	+	/	+	+	/
16	*Listeria*	*monocytogenes*	Ad645	Pork meat	/	H+	-	-	+/- brown	-	-	-
17	*Listeria*	*monocytogenes*	Ad666	Poultry meat	/	H+	+	+	/	+	+	/
18	*Listeria*	*monocytogenes*	Ad667	Chicken meat	/	H+	+	+	/	+	+	/
19	*Listeria*	*monocytogenes*	Ad669	Rillettes	/	H+	+	+	/	+	+	/
20	*Listeria*	*monocytogenes*	Ad670	Smoked salmon	/	H+	+	+	/	+	+	/
21	*Listeria*	*monocytogenes*	Ad888	Surimi	/	H+	+	+	/	+	+	/
22	*Listeria*	*monocytogenes*	Ad993	Trout	/	H+	+	+	/	+	+	/
23	*Listeria*	*monocytogenes*	Ad995	Smoked trout	/	H+	+	+	/	+	+	/
24	*Listeria*	*monocytogenes*	Ad1179	Scallops and prawns	/	H+	+	+	/	+	+	/

INCLUSIVITY											
N°	Strain	Reference	Origin	Molecular serotype	Agar *Listeria* (AL)						
					Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA		
						6h	24h	72 h	6h	24h	72 h
25	*Listeria monocytogenes*	Ad1180	Frozen French fries	/	H+	+	+	/	+	+	/
26	*Listeria monocytogenes*	Ad1181	Ready to reheat fish	/	H+	+	+	/	+	+	/
27	*Listeria monocytogenes*	Ad1182	Tuna	/	H+	+	+	/	+	+	/
28	*Listeria monocytogenes*	Ad1184	Mussels	/	H+	+	+	/	+	+	/
29	*Listeria monocytogenes*	Ad1185	filet de panga	/	H+	+	+	/	+	+	/
30	*Listeria monocytogenes*	Ad1186	Fish fillet	/	H+	+	+	/	+	+	/
31	*Listeria monocytogenes*	Ad1187	Ready to reheat squid	/	H+	+	+	/	+	+	/
32	*Listeria monocytogenes*	Ad1191	Ready to reheat fish	/	H+	+	+	/	+	+	/
33	*Listeria monocytogenes*	Ad1192	Ready to reheat fish	/	H+	+	+	/	+	+	/
34	*Listeria monocytogenes*	Ad1195	Omelette	/	H+	+	+	/	+	+	/
35	*Listeria monocytogenes*	Ad1196	Pancake batter	/	H+	+	+	/	+	+	/
36	*Listeria monocytogenes*	Ad1197	Pizza	/	H+	+	+	/	+	+	/
37	*Listeria monocytogenes*	Ad1201	Raw milk cheese	/	H+	+	+	/	+	+	/
38	*Listeria monocytogenes*	Ad1205	Cheese	/	H+	+	+	/	+	+	/
39	*Listeria monocytogenes*	Ad1206	Frozen ground beef	/	H+	+	+	/	+	+	/
40	*Listeria monocytogenes*	V8/127	Beef	/	H+	+	+	/	+	+	/
41	*Listeria monocytogenes*	Ad1212	Mushrooms	/	H+	-	-	-	-	-	-
42	*Listeria monocytogenes*	Ad1213	Ready to reheat rice	/	H+	+	+	/	+	+	/
43	*Listeria monocytogenes*	Ad1214	Dough	/	H+	+	+	/	+	+	/
44	*Listeria monocytogenes*	Ad1216	Merguez	/	H+	+	+	/	+	+	/
45	*Listeria monocytogenes*	Ad1218	Ground beef	/	H+	+	+	/	+	+	/
46	*Listeria monocytogenes*	Ad1232	Mussels	/	H+	+	+	/	+	+	/
47	*Listeria monocytogenes*	Ad1236	Raw milk cheese	/	H+	+	+	/	+	+	/
48	*Listeria monocytogenes*	Ad1238	Vegetables	/	H+	+	+	/	+	+	/
49	*Listeria monocytogenes*	Ad1255	Environmental sample (Meta industry)	/	H+	+	+	/	+	+	/
50	*Listeria monocytogenes*	Ad1279	Smoked fish	/	H+	+	+	/	+	+	/
51	*Listeria monocytogenes*	Ad1303	Red peppers	/	H+	+	+	/	+	+	/
52	*Listeria monocytogenes*	Ad1412	Smoked salmon	/	H+	+	+	/	+	+	/
53	*Listeria monocytogenes*	Ad1492	Deli salad	/	H+	+	+	/	+	+	/
54	*Listeria monocytogenes*	Ad1493	Red peppers	/	H+	+	+	/	+	+	/

INCLUSIVITY												
N°	**Strain**		**Reference**	**Origin**	**Molecular serotype**	**Agar *Listeria* (AL)**						
						Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA		
							6h	24h	72 h	6h	24h	72 h
55	*Listeria*	*monocytogenes*	Ad1494	Sausage	/	H+	+	+	/	+	+	/
56	*Listeria*	*monocytogenes*	Ad1495	Deli salad	/	H+	+	+	/	+	+	/
57	*Listeria*	*monocytogenes*	Ad1496	Ready to reheat seafood	/	H+	+	+	/	+	+	/
58	*Listeria*	*monocytogenes*	Ad1497	Pasta	/	H+	+	+	/	+	+	/
59	*Listeria*	*monocytogenes*	Ad1498	Vegetables	/	H+	+	+	/	+	+	/
60	*Listeria*	*monocytogenes*	Ad1499	Trout eggs	/	H+	+	+	/	+	+	/
61	*Listeria*	*monocytogenes*	Ad1672	Zucchini	/	H+	+	+	/	+	+	/
62	*Listeria*	*monocytogenes*	Ad1678	Composite food (spinach and cheese)	/	H+	+	+	/	+	+	/
63	*Listeria*	*monocytogenes*	Ad1679	Environmental sample (Fish industry)	/	H+	+	+	/	+	+	/
64	*Listeria*	*monocytogenes*	Ad1680	Frozen celery	/	H+	+	+	/	+	+	/
65	*Listeria*	*monocytogenes*	Ad1757	Sliced eggs	/	H+	+	+	/	+	+	/
66	*Listeria*	*monocytogenes*	Ad1781	Raw milk	/	H+	+	+	/	+	+	/
67	*Listeria*	*monocytogenes*	Ad1784	Raw ewe milk	/	H+	+	+	/	+	+	/
68	*Listeria*	*monocytogenes*	Ad2154	Pâté	/	H+	+	+	/	+	+	/
69	*Listeria*	*monocytogenes*	Ad2453	Poultry meat	/	H+	+	+	/	+	+	/
70	*Listeria*	*monocytogenes*	Ad2503	Environmental sample	/	H+	+	+	/	+	+	/
71	*Listeria*	*monocytogenes*	Ad2598	Salad	/	H+	+	+	/	+	+	/
72	*Listeria*	*monocytogenes*	Ad2599	Salmon	/	H+	+	+	/	+	+	/
73	*Listeria*	*monocytogenes*	Ad2643	Salad	/	H+	+	+	/	+	+	/
74	*Listeria*	*monocytogenes*	Ad2856	Rabbit meat	/	H+	+	+	/	+	+	/
75	*Listeria*	*monocytogenes*	Ad2858	Milk	/	H+	+	+	/	+	+	/
76	*Listeria*	*monocytogenes*	153	Raw milk cheese	VI b	H+	+	+	/	+	+	/
77	*Listeria*	*monocytogenes*	1011/1410	Frozen broccolis	II a	H+	+	+	/	+	+	/
78	*Listeria*	*monocytogenes*	1972/2399	Pie with mushrooms	VI b	H+	+	+	/	+	+	/
79	*Listeria*	*monocytogenes*	1973/2400	Quiche Lorraine	VI b	H+	+	+	/	+	+	/
80	*Listeria*	*monocytogenes*	2407/3139	Tripes with tomato	IV b	H+	+	+	/	+	+	/
81	*Listeria*	*monocytogenes*	2760/3145	Pork meat	II a	H+	+	+	/	+	+	/
82	*Listeria*	*monocytogenes*	32.183	Croque-monsieur	II b	H+	+	+	/	+	+	/
83	*Listeria*	*monocytogenes*	38/181	Sausage	II a	H+	+	+	/	+	+	/
84	*Listeria*	*monocytogenes*	5721/6179	Sliced bacon	IV b	H+	+	+	/	+	+	/

INCLUSIVITY													
N°	Strain		Reference	Origin	Molecular serotype	Agar *Listeria* (AL)							
						Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA			
							6h	24h	72 h	6h	24h	72 h	
85	*Listeria*	*monocytogenes*	7111/7516	Rillettes	IV b	H+	- (brown)	- (brown)	- (brown)	- (brown)	- (brown)	- (brown)	
86	*Listeria*	*monocytogenes*	850/109	Smoked fish	II a	H+	+	+	/	+	+	/	
87	*Listeria*	*monocytogenes*	877/113	Environmental sample	II a	H+	+	+	/	+	+	/	
88	*Listeria*	*monocytogenes*	913/1 048	Black pudding	IV b	H+	+	+	/	+	+	/	
89	*Listeria*	*monocytogenes*	A00C014	Sausages	II a	H+	+	+	/	+	+	/	
90	*Listeria*	*monocytogenes*	A00C022	Merguez	II a	H+	+	+	/	+	+	/	
91	*Listeria*	*monocytogenes*	A00C024	Sausages with aromatic herbs	II a	H+	+	+	/	+	+	/	
92	*Listeria*	*monocytogenes*	A00C036	Guinea fowl	II a	H+	+	+	/	+	+	/	
93	*Listeria*	*monocytogenes*	A00C039	Sausages	II a	H+	+	+	/	+	+	/	
94	*Listeria*	*monocytogenes*	A00C040	Pâté	IV b	H+	+	+	/	+	+	/	
95	*Listeria*	*monocytogenes*	A00C041	Sausage meat	La	H+	+	+	/	+	+	/	
96	*Listeria*	*monocytogenes*	A00C042	Sausage	IV b	H+	+	+	/	+	+	/	
97	*Listeria*	*monocytogenes*	A00C043	Smoked bacon	II a	H+	+	+	/	+	+	/	
98	*Listeria*	*monocytogenes*	A00C044	Duck meat	II b	H+	+	+	/	+	+	/	
99	*Listeria*	*monocytogenes*	A00C052	Turkey meat	II b	H+	+	+	/	+	+	/	
100	*Listeria*	*monocytogenes*	A00C053	Gizzards	II a	H+	+	+	/	+	+	/	
101	*Listeria*	*monocytogenes*	A00C054	Beef heart	IV b	H+	- (brown)	- (brown)	- (brown)	- (brown)	- (brown)	- (brown)	
102	*Listeria*	*monocytogenes*	A00C055	Sausage	II a	H+	+	+	/	+	+	/	
103	*Listeria*	*monocytogenes*	A00E008	Environmental sample	II a	H+	+	+	/	+	+	/	
104	*Listeria*	*monocytogenes*	A00E049	Environmental sample	II a	H+	+	+	/	+	+	/	
105	*Listeria*	*monocytogenes*	A00E082	Environmental sample (smoked salmon)	II a	H+	+	+	/	+	+	/	
106	*Listeria*	*monocytogenes*	A00L097	Milk	II a	H+	+	+	/	+	+	/	
107	*Listeria*	*monocytogenes*	A00M009	Smoked salmon	II a	H+	+	+	/	+	+	/	
108	*Listeria*	*monocytogenes*	A00M032	Smoked salmon	IV b	H+	+	+	/	+	+	/	
109	*Listeria*	*monocytogenes*	A00M045	Smoked salmon	II a	H+	+	+	/	+	+	/	
110	*Listeria*	*monocytogenes*	A00M088	Smoked salmon	II a	H+	+	+	/	+	+	/	
111	*Listeria*	*monocytogenes*	Ad235	Poultry meat	II b	H+	+	+	/	+	+	/	
112	*Listeria*	*monocytogenes*	Ad249	Environmental sample (meat)	II b	H+	+	+	/	+	+	/	
113	*Listeria*	*monocytogenes*	Ad253	Cheese	II b	H+	+	+	/	+	+	/	
114	*Listeria*	*monocytogenes*	Ad260	Cheese	II a	H+	+	+	/	+	+	/	

INCLUSIVITY												
N°	Strain		Reference	Origin	Molecular serotype	Agar *Listeria* (AL)						
						Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA		
							6h	24h	72 h	6h	24h	72 h
115	*Listeria*	*monocytogenes*	Ad265	Tongue	II b	H+	+	+	/	+	+	/
116	*Listeria*	*monocytogenes*	Ad266	Chicken meat	II a	H+	+	+	/	+	+	/
117	*Listeria*	*monocytogenes*	Ad267	Low moisture sausage	II b	H+	+	+	/	+	+	/
118	*Listeria*	*monocytogenes*	Ad268	Low moisture ham	IV b	H+	+	+	/	+	+	/
119	*Listeria*	*monocytogenes*	Ad270	Sausage	IV b	H+	+	+	/	+	+	/
120	*Listeria*	*monocytogenes*	Ad617	Low moisture sausage	/	H+	+	+	/	+	+	/
121	*Listeria*	*monocytogenes*	Ad272	Low moisture sausage	IV b	H+	+	+	/	+	+	/
122	*Listeria*	*monocytogenes*	Ad273	Low moisture ham	II b	H+	+	+	/	+	+	/
123	*Listeria*	*monocytogenes*	Ad274	Asian food	II a	H+	+	+	/	+	+	/
124	*Listeria*	*monocytogenes*	Ad285	Green peppers	La	H+	+	+	/	+	+	/
125	*Listeria*	*monocytogenes*	Ad494	Deli salad	II a	H+	+	+	/	+	+	/
126	*Listeria*	*monocytogenes*	Ad534	Fruits	II b	H+	+	+	/	+	+	/
127	*Listeria*	*monocytogenes*	Ad544	Precooked onions	II a	H+	+	+	/	+	+	/
128	*Listeria*	*monocytogenes*	Ad546	Black wheat flour	II a	H+	+	+	/	+	+	/
129	*Listeria*	*monocytogenes*	Ad548	Environmental sample (fish)	II a	H+	+	+	/	+	+	/
130	*Listeria*	*monocytogenes*	Ad551	Environmental sample	II a	H+	+	+	/	+	+	/
131	*Listeria*	*monocytogenes*	Ad611	Milk	/	H+	+	+	/	+	+	/
132	*Listeria*	*monocytogenes*	Ad618	Raw milk cheese	IV b	H+	+	+	/	+	+	/
133	*Listeria*	*monocytogenes*	Ad664	Raw milk cheese		H+	+	+	/	+	+	/
134	*Listeria*	*monocytogenes*	Ad620	Environmental sample (dairy)	/	H+	+	+	/	+	+	/
135	*Listeria*	*monocytogenes*	Ad621	Environmental sample (floor)	/	H+	+	+	/	+	+	/
136	*Listeria*	*monocytogenes*	Ad622	Cheese	/	H+	+	+	/	+	+	/
137	*Listeria*	*monocytogenes*	Ad623	Breadcrumbs	II b	H+	+	+	/	+	+	/
138	*Listeria*	*monocytogenes*	Ad624	Environmental sample (dairy)	/	H+	+	+	/	+	+	/
139	*Listeria*	*monocytogenes*	Ad625	Environmental sample (dairy)	IV b	H+	+	+	/	+	+	/
140	*Listeria*	*monocytogenes*	Ad626	Cheese	II a	H+	+	+	/	+	+	/
141	*Listeria*	*monocytogenes*	Ad630	Cheese	II a	H+	+	+	/	+	+	/
142	*Listeria*	*monocytogenes*	Ad631	Environmental sample (dairy)	/	H+	+	+	/	+	+	/
143	*Listeria*	*monocytogenes*	Ad665	Milk	II a	H+	+	+	/	+	+	/
144	*Listeria*	*monocytogenes*	V2/124	Pork	/	H+	+	+	/	+	+	/

INCLUSIVITY													
N°	Strain		Reference	Origin	Molecular serotype	Agar *Listeria* (AL)							
						Typical colony after 22 h	Rhamnose test from AL			Rhamnose test from TSYEA			
							6h	24h	72 h	6h	24h	72 h	
145	*Listeria*	*monocytogenes*	V5/126	Beef	/	H+	+	+	/	+	+	/	
146	*Listeria*	*monocytogenes*	V8/127	Beef	/	H+	+	+	/	+	+	/	
147	*Listeria*	*monocytogenes*	AER100	Chicken	/	H+	+	+	/	+	+	/	
148	*Listeria*	*monocytogenes*	AER101	Milk	/	H+	+	+	/	+	+	/	
149	*Listeria*	*monocytogenes*	AER102	Brine	/	H+	+	+	/	+	+	/	
150	*Listeria*	*monocytogenes*	AER103	Poultry	/	H+	+	+	/	+	+	/	

EXCLUSIVITY										
N°	Genus	species	Reference	Origin	Group	Agar *Listeria* (AL)				
						Typical colony after 48 h	Rhamnose test from AL		Rhamnose test from TSYEA	
							6h	24h	6h	24h
1	*Bacillus*	*cereus*	Ad1681	Dairy product	IV	st	/	/	-	-
2	*Bacillus*	*cereus*	Ad495	Rice flour	III	White with halo (atypical)	-	-	-	-
3	*Bacillus*	*cereus*	Ad607	Environment	III	st	/	/	-	-
4	*Bacillus*	*cereus*	Ad608	Bread dough	III	Rough blue with halo (atypical)	-	-	-	-
5	*Bacillus*	*cereus*	Ad609	Environment (dairy)	/	H- mast (atypical)	-	-	-	-
6	*Bacillus*	*circulans*	Ad734	Dairy product	/	H- mast	-	-	-	-
7	*Bacillus*	*circulans*	Ad760	Vegetables purée	/	H- rough	-	-	-	-
8	*Bacillus*	*coagulans*	Ad732	Dairy product	/	st	/	/	-	-
9	*Bacillus*	*coagulans*	Ad744	Dairy product	VI	st	/	/	-	-
10	*Bacillus*	*licheniformis*	Ad741	Dairy product	/	Green pale rough	-	-	-	-
11	*Bacillus*	*mycoïdes*	Ad762	Milk	VI	st	/	/	-	-
12	*Bacillus*	*pseudomycoides*	Ad767	/	/	st	/	/	-	-
13	*Bacillus*	*pumilus*	Ad733	Dairy product	/	H-	-	-	-	-
14	*Bacillus*	*subtilis*	Ad736	Dairy product	/	st	/	/	-	-
15	*Bacillus*	*thuringiensis*	Ad773	Vegetables	III	st	/	/	-	-
16	*Bacillus*	*weihenstephanensis*	Ad781	Pasteurized vegetables	VI	st	/	/	-	-
17	*Enterococcus*	*faecium*	Ad 183	Raw liquid egg product	/	H-	-	-	-	-
18	*Enterococcus*	*casseliflavus*	Ad 1346	Water	/	st	/	/	-	-
19	*Enterococcus*	*durans*	Ad 149	Ham	/	st	/	/	-	-
20	*Enterococcus*	*durans*	Ad 181	Pasteurized liquid egg product	/	st	/	/	-	-
21	*Enterococcus*	*faecalis*	Ad 602	Raw milk	/	st	/	/	-	-
22	*Enterococcus*	*faecalis*	Ad547	Pancake dough	/	st	/	/	-	-
23	*Enterococcus*	*faecalis*	Ad1332	Liquid egg product	/	st	/	/	-	-
24	*Enterococcus*	*faecium*	Ad874	Cheese	/	H-	-	-	-	-
25	*Enterococcus*	*faecium*	Ad1361	Water	/	st	/	/	-	-

EXCLUSIVITY										
N°	Genus	species	Reference	Origin	Group	Agar *Listeria* (AL)				
						Typical colony after 48 h	Rhamnose test from AL		Rhamnose test from TSYEA	
							6h	24h	6h	24h
26	*Enterococcus*	*faecium*	Ad1883	Turkey skin	/	µcolonies green pale	-	-	-	-
27	*Enterococcus*	*gallinarum*	Ad1145	Guacamole	/	st	/	/	-	+
28	*Enterococcus*	*gallinarum*	Ad1885	Environmental sample (poultry)	/	st	/	/	-	-
29	*Enterococcus*	*hirae*	Ad1362	Sea water	/	st	/	/	-	-
30	*Enterococcus*	*mundtii*	Ad1365	River water	/	H-	-	+	-	+
31	*Lactabacillus*	*casei*	Ad469	Liquid egg product	/	st	/	/	-	-
32	*Lactabacillus*	*plantarum*	Ad1147	Guacamole	/	st	/	/	-	+
33	*Lactabacillus*	*sakei*	Ad1150	Low moisture sausage	/	st	/	/	-	-
34	*Lactabacillus*	*sakei*	Ad419	Ham	/	st	/	/	-	-
35	*Lactococcus*	*lactis*	Ad 425	Ferment	/	st	/	/	-	-
36	*Leuconostoc*	*carnosus*	Ad416	Ham	/	st	/	/	-	-
37	*Leuconostoc*	*citreum*	Ad604	Raw milk	/	st	/	/	-	-
38	*Leuconostoc*	*mesenteroïdes*	Ad418	Ham	/	st	/	/	-	-
39	*Leuconostoc*	*pseudomesenteroïdes*	Ad835	Chocolate cream	/	st	/	/	-	-
40	*Lysinibacillus*	*sphaericus*	Ad872	Dairy product	/	st	/	/	-	-
41	*Staphylococcus*	*aureus*	Ad905	Cheese	/	st	/	/	-	-
42	*Staphylococcus*	*aureus*	Ad911	Chicken leg	/	st	/	/	-	-
43	*Staphylococcus*	*epidermidis*	Ad931	Fruits	/	st	/	/	-	-
44	*Staphylococcus*	*equorum*	Ad1099	Cheese	/	st	/	/	-	-
45	*Staphylococcus*	*haemolyticus*	Ad989	Dairy product	/	st	/	/	-	-
46	*Staphylococcus*	*hominis*	Ad849	/	/	st	/	/	-	-
47	*Staphylococcus*	*hyicus*	CIP81.58	Pork meat	/	st	/	/	-	-
48	*Staphylococcus*	*intermedius*	CIP81.60	Pigeon	/	st	/	/	-	-
49	*Staphylococcus*	*pasteurii*	Ad1717	Liquid egg product	/	st	/	/	-	-
50	*Staphylococcus*	*saprophyticus*	Ad866	Milk	/	st	/	/	-	-
51	*Listeria*	*grayi*	Ad 1229	Chitterling	/	H-	-	-	-	-
52	*Listeria*	*grayi*	Ad 1294	Pork meat	/	H-	-	-	-	-

EXCLUSIVITY										
N°	Genus	species	Reference	Origin	Group	Agar *Listeria* (AL)				
						Typical colony after 48 h	Rhamnose test from AL		Rhamnose test from TSYEA	
							6h	24h	6h	24h
53	*Listeria*	*grayi*	Ad 1295	Spinach	/	H-	-	-	-	-
54	*Listeria*	*grayi*	Ad 1296	Vegetables stuff	/	H-	-	-	-	-
55	*Listeria*	*grayi*	Ad 1307	Boughour	/	H-	-	-	-	-
56	*Listeria*	*grayi*	Ad 1443	Fat	/	H-	-	-	-	-
57	*Listeria*	*grayi*	Ad 1444	Ham	/	H-	-	-	-	-
58	*Listeria*	*grayi*	Ad 1490	Fish and vegetables pie	/	H-	-	-	-	-
59	*Listeria*	*grayi*	Ad 1504	Salmon terrine	/	H-	-	-	-	-
60	*Listeria*	*grayi*	Ad 2064	Sausage meat	/	H-	-	-	-	-
61	*Listeria*	*innocua*	Ad 1176	Spinach	/	H-	+	+	+	+
62	*Listeria*	*innocua*	Ad 1177	Mushrooms	/	H-	+	+	+	+
63	*Listeria*	*innocua*	Ad 1188	Roman calamari	/	H-	+	+	+	+
64	*Listeria*	*innocua*	Ad 1230	Scallops and prawns	/	H-	+	+	+	+
65	*Listeria*	*innocua*	Ad 1675	Fish	/	H-	+	+	+	+
66	*Listeria*	*innocua*	Ad 1676	Composite food (spinach and cheese)	/	H-	+	+	+	+
67	*Listeria*	*innocua*	Ad 1677	Environmental sample (fish)	/	H-	+	+	+	+
68	*Listeria*	*innocua*	Ad 1771	Raw ewe milk	/	H-	+	+	+	+
69	*Listeria*	*innocua*	Ad 1786	Raw milk	/	H-	-	-	-	-
70	*Listeria*	*innocua*	Ad 643	Ready to cook veal meat	/	H-	+	+	+	+
71	*Listeria*	*ivanovii*	Ad 1288	Raw ewe milk	/	H+	-	-	-	-
72	*Listeria*	*ivanovii*	Ad 1289	Raw milk cheese	/	H+	-	-	-	-
73	*Listeria*	*ivanovii*	Ad 1290	Milk powder	/	H+	-	-	-	-
74	*Listeria*	*ivanovii*	Ad 1291	Poultry meat	/	H+	-	-	-	-
75	*Listeria*	*ivanovii*	Ad 1292	Merguez	/	H+	-	-	-	-
76	*Listeria*	*ivanovii*	Ad 1308	Sheep meat	/	H+	-	-	-	-
77	*Listeria*	*ivanovii*	Ad 1748	Goat milk	/	H+	-	-	-	-
78	*Listeria*	*ivanovii*	Ad 1752	Merguez	/	H+	-	-	-	-
79	*Listeria*	*ivanovii*	Ad 1768	Raw ewe milk	/	H+	-	-	-	-

EXCLUSIVITY										
N°	Genus	species	Reference	Origin	Group	Agar *Listeria* (AL)				
						Typical colony after 48 h	Rhamnose test from AL		Rhamnose test from TSYEA	
							6h	24h	6h	24h
80	*Listeria*	*ivanovii*	Ad 466	Veal kidneys	/	H+	-	-	-	-
81	*Listeria*	*seeligeri*	Ad 1237	Raw cow milk	/	H-	-	-	-	-
82	*Listeria*	*seeligeri*	Ad 1293	Parsley	/	H-	-	-	-	-
83	*Listeria*	*seeligeri*	Ad 1297	Merguez	/	H-	-	-	-	-
84	*Listeria*	*seeligeri*	Ad 1267	Fish environment	/	H-	-	-	-	-
85	*Listeria*	*seeligeri*	Ad 1754	Zucchini	/	H-	-	-	-	-
86	*Listeria*	*seeligeri*	Ad 1780	Raw milk	/	H-	-	-	-	-
87	*Listeria*	*seeligeri*	Ad 649	Cheese	/	H-	-	-	-	-
88	*Listeria*	*seeligeri*	Ad 651	Environment	/	H-	-	-	-	-
89	*Listeria*	*seeligeri*	Ad 652	Environment	/	H-	-	-	-	-
90	*Listeria*	*seeligeri*	Ad 674	Cheese	/	H-	-	-	-	-
91	*Listeria*	*welshimeri*	Ad 1175	Ready to reheat rice	/	H-	+	+	+	+
92	*Listeria*	*welshimeri*	Ad 1194	Sausages with herbs	/	H-	+	+	+	+
93	*Listeria*	*welshimeri*	Ad 1217	Merguez	/	H-	-	+	-	+
94	*Listeria*	*welshimeri*	Ad 1226	Leg	/	H-	+	+	+	+
95	*Listeria*	*welshimeri*	Ad 1221	Sausages with herbs	/	H-	+	+	+	+
96	*Listeria*	*welshimeri*	Ad 1231	Saint Jacques and gambas	/	H-	+	+	+	+
97	*Listeria*	*welshimeri*	Ad 1235	Beef balls	/	H-	+	+	+	+
98	*Listeria*	*welshimeri*	Ad 1276	Pork environment	/	H-	+	+	+	+
99	*Listeria*	*welshimeri*	Ad 1667	Raw milk cheese	/	H-	+	+	+	+
100	*Listeria*	*welshimeri*	Ad 1668	Ground vegetables	/	H-	+	+	+	+

Appendix 8 – Inter-laboratory study: results obtained by the collaborative laboratories (IPL-2008)

Laboratory A

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml):	<1

Laboratory B

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml):	<1

Laboratory C

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
VTC numeration (CFU/ml):			<1								

Laboratory D

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
VTC numeration (CFU/ml):			30								

Laboratory E

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml):	1

Laboratory F

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml):	NC

Laboratory G

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
VTC numeration (CFU/ml):			<1								

Laboratory H

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	-	-	-	-	-	#	-	-	/	-	#
16	-	-	-	-	-	#	-	-	/	-	#
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	-	-	-	-	-	#	-	-	/	-	#
24	-	-	-	-	-	#	-	-	/	-	#
VTC numeration (CFU/ml):			<1								

Laboratory I

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml): <1

Laboratory J

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=

VTC numeration (CFU/ml): 20

Laboratory K

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		Result		blue colonies with halo		Confirmation on RLM	Result	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
2	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
3	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
4	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
10	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
11	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
12	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
13	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
14	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
15	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
16	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
22	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
23	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
24	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=

VTC numeration (CFU/ml):	1

Laboratory L

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		Result		blue colonies with halo		Confirmation on RLM	Result	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
2	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
3	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
4	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
10	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
11	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
12	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
13	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
14	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
15	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
16	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
22	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
23	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
24	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=

VTC numeration (CFU/ml):	NC

Laboratory M

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		Result		blue colonies with halo		Confirmation on RLM	Result	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
2	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
3	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
4	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
10	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
11	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
12	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
13	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
14	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
15	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
16	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
22	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
23	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
24	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=

VTC numeration (CFU/ml):	<1

Laboratory N

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		Result		blue colonies with halo		Confirmation on RLM	Result	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
2	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
3	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
4	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
10	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
11	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
12	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
13	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
14	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
15	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
16	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
22	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
23	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=
24	+	+	+	+	L.monocytogenes	=	+	/	+	L.monocytogenes	=

VTC numeration (CFU/ml):	2

Laboratory O

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	-	-	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	-	-	+	+	*L.monocytogenes*	=	- (blue)	+	+	*L.monocytogenes*	=
10	-	+	+	+	*L.monocytogenes*	=	- (blue)	+	+	*L.monocytogenes*	=
11	-	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
12	-	-	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	-	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
22	-	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	+	+	*L.monocytogenes*	=
VTC numeration (CFU/ml):			1								

Laboratory P

Reference	Reference method					Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser		*Result*		blue colonies with halo		Confirmation on RLM	*Result*	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
2	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
3	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
4	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
10	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
11	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
12	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
13	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
14	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
15	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
16	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
22	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
23	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
24	+	+	+	+	*L.monocytogenes*	=	+	/	+	*L.monocytogenes*	=
VTC numeration (CFU/ml):			<10								

Appendix 9 - Artificial contamination of samples (Extension study, 2022 - ADRIA)

Date of analysis	Sample number	Product (French name)	Product	Artificial contaminations: Strain	Origin	Injury protocol	Inoculation level (CFU/sample): Enumeration	Mean	Global result *L. monocytogenes* 22 h and 48 h	Category	Type
2021	**6531**	**Sandwich jambon-beurre**	**Ham butter sandwich**	*L. monocytogenes* Ad494	Piedmontese salad	Seeding 72 h 3°C±2°C	1-3-1-1-1	1,4	-	1	a
2021	**6532**	**Sandwich thon crudités**	**Tuna and crudités sandwich**	*L. monocytogenes* Ad494	Piedmontese salad	Seeding 72 h 3°C±2°C	1-3-1-1-1	1,4	-	1	a
2021	**6533**	**Sandwich poulet rôti crudités**	**Chicken and crudités sandwich**	*L. monocytogenes* Ad494	Piedmontese salad	Seeding 72 h 3°C±2°C	1-3-1-1-1	1,4	-	1	a
2021	**6534**	**Taboulé au poulet**	**Roasted chicken tabbouleh**	*L. monocytogenes* Ad494	Piedmontese salad	Seeding 72 h 3°C±2°C	1-3-1-1-1	1,4	+	1	a
2021	**6535**	**Piémontaise au jambon**	**Piedmontese salad**	*L. monocytogenes* Ad494	Piedmontese salad	Seeding 72 h 3°C±2°C	1-3-1-1-1	1,4	+	1	a
2021	**6553**	**Sandwich jambon-beurre**	**Ham butter sandwich**	*L. welshimeri* Ad3207	Tomato goat cheese wrap	Seeding 72 h 3°C±2°C	1-3-4-5-2	3	-	1	a
2021	**7378**	**Bagel concombre saumon fumé**	**Smoked salmon and cucumber sandwich**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	+	1	a
2021	**7380**	**Wrap jambon fromage de brebis**	**Ham and sheep's cheese sandwich**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	+	1	a
2021	**7382**	**Sandwich thon tomate œuf**	**Tomato egg tuna sandwich**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	+	1	a
2021	**7384**	**Sandwich poulet rôti mayo légère**	**Mayonnaise and roast chicken sandwich**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	+	1	a
2021	**7386**	**Salade chou jambon comté**	**Cheese and cabbage salad**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	+	1	a
2021	**7387**	**Salade pâtes crudités mozzarella jambon speck**	**Ham, cheese and crudités salad**	*L. monocytogenes* Ad1492	Potato and tuna salad	Seeding 72 h 3°C±2°C	5-2-1-3-2	2,6	-	1	a
2021	**6536**	**Choux chantilly**	**Pastry**	*L. monocytogenes* Ad1195	Omelet	Seeding 72 h 3°C±2°C	3-2-3-4-1	2,6	+	1	c
2021	**6537**	**Flan**	**Pastry**	*L. monocytogenes* Ad1195	Omelet	Seeding 72 h 3°C±2°C	3-2-3-4-1	2,6	+	1	c
2021	**6538**	**Eclair au café**	**Pastry**	*L. monocytogenes* Ad1195	Omelet	Seeding 72 h 3°C±2°C	3-2-3-4-1	2,6	+	1	c
2021	**6539**	**Tortilla aux oignons**	**Onion tortilla**	*L. monocytogenes* Ad1195	Omelet	Seeding 72 h 3°C±2°C	3-2-3-4-1	2,6	+	1	c
2021	**6540**	**Tortilla nature**	**Tortilla**	*L. monocytogenes* Ad1195	Omelet	Seeding 72 h 3°C±2°C	3-2-3-4-1	2,6	+	1	c
2021	**7560**	**Paris-Brest**	**Pastry**	*L. monocytogenes* Ad1678	Composite food	Seeding 72 h 3°C±2°C	5-5-3-4-6	4,6	+	1	c
2021	**7561**	**Flan aux œufs**	**Pastry**	*L. monocytogenes* Ad1678	Composite food	Seeding 72 h 3°C±2°C	5-5-3-4-6	4,6	+	1	c
2021	**7183**	**Steak haché 15%MG**	**Minced beef (15% fat)**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	+	2	a
2021	**7184**	**Steak haché 15%MG**	**Minced beef (15% fat)**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	+	2	a
2021	**7185**	**Aiguillettes de poulet**	**Chicken aiguillettes**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	+	2	a
2021	**7186**	**Aiguillettes de poulet**	**Chicken aiguillettes**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	+	2	a
2021	**7564**	**Steak haché 5%MG**	**Minced beef**	*L. monocytogenes* Ad1218	Minced beef	Seeding 72 h 3°C±2°C	5-2-3-1-2	2,6	+	2	a
2021	**7187**	**Emincés de porc sauce pruneaux**	**Cooked pork**	*L. ivanovii* Ad2465	Poultry	Seeding 72 h 3°C±2°C	1-1-1-4-2	1,8	-	2	b
2021	**7188**	**Emincés de porc sauce pruneaux**	**Cooked pork**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	+	2	b
2021	**7189**	**Emincés de veau sauce champignons**	**Cooked veal**	*L. ivanovii* Ad2465	Poultry	Seeding 72 h 3°C±2°C	1-1-1-4-2	1,8	-	2	b
2021	**7190**	**Emincés de veau sauce champignons**	**Cooked veal**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	+	2	b
2021	**7565**	**Bœuf cuisiné**	**Cooked beef**	*L. monocytogenes* Ad1218	Minced beef	Seeding 72 h 3°C±2°C	5-2-3-1-2	2,6	+	2	b
2021	**7566**	**Bœuf cuisiné**	**Cooked beef**	*L. monocytogenes* Ad1218	Minced beef	Seeding 72 h 3°C±2°C	5-2-3-1-2	2,6	+	2	b
2021	**7567**	**Escalope milanaise**	**Cooked chicken**	*L. monocytogenes* Ad1218	Minced beef	Seeding 72 h 3°C±2°C	5-2-3-1-2	2,6	-	2	b
2021	**7191**	**Jambon cuit supérieur**	**Delicatessen**	*L. ivanovii* Ad2465	Poultry	Seeding 72 h 3°C±2°C	1-1-1-4-2	1,8	-	2	c
2021	**7192**	**Jambon cuit supérieur**	**Delicatessen**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	+	2	c
2021	**7193**	**Salami danois**	**Delicatessen**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	-	2	c
2021	**7194**	**Salami danois**	**Delicatessen**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	-	2	c
2021	**7195**	**Saucisson à l'ail**	**Delicatessen**	*L. monocytogenes* Ad2453	Poultry	Seeding 72 h 3°C±2°C	2-2-1-6-4	3	+	2	c
2021	**7196**	**Saucisson à l'ail**	**Delicatessen**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	+	2	c

Date of analysis	Sample number	Product (French name)	Product	Artificial contaminations					Global result *L. monocytogenes* 22 h and 48 h	Category	Type
				Strain	Origin	Injury protocol	Inoculation level (CFU/sample)				
							Enumeration	Mean			
2021	**7197**	**Saucisson aux noisettes**	**Delicatessen**	*L. monocytogenes* Ad280	Lardon	Seeding 72 h 3°C±2°C	8-2-3-3-1	3,4	+	2	c
2021	**5266**	**Cœur de Bray au lait cru**	**Raw cow's milk cheese**	*L. monocytogenes* Ad664 + *L. welshimeri* Ad1667	Raw milk cheese + raw milk cheese	Seeding 72 h 3°C±2°C	8-4-4-4-5 + 5-2-0-6-5	5 + 3,6	-	3	a
2021	**5267**	**Camembert de Normandie au lait cru**	**Raw cow's milk cheese**	*L. monocytogenes* Ad1785	Raw sheep's milk	Seeding 72 h 3°C±2°C	3-0-1-3-2	1,8	+	3	a
2021	**5268**	**Petit pont l'évêque au lait cru**	**Raw cow's milk cheese**	*L. monocytogenes* Ad664 + *L. welshimeri* Ad1667	Raw milk cheese + raw milk cheese	Seeding 72 h 3°C±2°C	8-4-4-4-5 + 5-2-0-6-5	5 + 3,6	-	3	a
2021	**5269**	**Reblochon de Savoie au lait cru**	**Raw cow's milk cheese**	*L. monocytogenes* Ad1785	Raw sheep's milk	Seeding 72 h 3°C±2°C	3-0-1-3-2	1,8	+	3	a
2021	**5270**	**Fromage de chèvre Banon au lait cru**	**Raw goat's milk cheese**	*L. monocytogenes* Ad1785	Raw sheep's milk	Seeding 72 h 3°C±2°C	3-0-1-3-2	1,8	+	3	a
2021	**5271**	**Rocamadour au lait cru**	**Raw goat's milk cheese**	*L. monocytogenes* Ad664 + *L. welshimeri* Ad1667	Raw milk cheese + raw milk cheese	Seeding 72 h 3°C±2°C	8-4-4-4-5 + 5-2-0-6-5	5 + 3,6	+	3	a
2021	**5272**	**Gaperon au lait cru de vache**	**Raw cow's milk cheese**	*L. monocytogenes* Ad1785	Raw sheep's milk	Seeding 72 h 3°C±2°C	3-0-1-3-2	1,8	+	3	a
2021	**5273**	**Camembert de Normandie au lait cru**	**Raw cow's milk cheese**	*L. monocytogenes* Ad1236	Raw milk cheese	Seeding 72 h 3°C±2°C	2-1-8-6-4	4,2	+	3	a
2021	**5274**	**Fromage de chèvre Banon au lait cru**	**Raw goat's milk cheese**	*L. monocytogenes* Ad1785	Raw sheep's milk	Seeding 72 h 3°C±2°C	3-0-1-3-2	1,8	+	3	a
2021	**5472**	**Reblochon de Savoie au lait cru**	**Raw cow's milk cheese**	*L. innocua* Ad661	Raw milk cheese	Seeding 48 h 3°C±2°C	3-2-3-2-5	3	-	3	a
2021	**5473**	**Cœur de Bray au lait cru**	**Raw cow's milk cheese**	*L. innocua* Ad661	Raw milk cheese	Seeding 48 h 3°C±2°C	3-2-3-2-5	3	-	3	a
2021	**5474**	**Gaperon au lait cru de vache**	**Raw cow's milk cheese**	*L. innocua* Ad661	Raw milk cheese	Seeding 48 h 3°C±2°C	3-2-3-2-5	3	-	3	a
2021	**7666**	**Chabichou du Poitou au lait cru de chèvre**	**Raw goat's milk cheese**	*L. monocytogenes* Ad612	Cheese	Seeding 48 h 3°C±2°C	3-4-4-5-4	4	+	3	a
2021	**5275**	**Beurre au lait cru**	**Raw milk butter**	*L. monocytogenes* Ad664 + *L. welshimeri* Ad1667	Raw milk cheese + raw milk cheese	Seeding 72 h 3°C±2°C	8-4-4-4-5 + 5-2-0-6-5	5 + 3,6	+	3	b
2021	**5276**	**Lait cru de vache**	**Raw cow's milk cheese**	*L. monocytogenes* Ad664 + *L. welshimeri* Ad1667	Raw milk cheese + raw milk cheese	Seeding 72 h 3°C±2°C	8-4-4-4-5 + 5-2-0-6-5	5 + 3,6	+	3	b
2021	**5277**	**Lait cru de vache**	**Raw cow's milk cheese**	*L. monocytogenes* Ad1236	Raw milk cheese	Seeding 72 h 3°C±2°C	2-1-8-6-4	4,2	+	3	b
2021	**5278**	**Lait entier fermenté**	**Fermented whole milk**	*L. monocytogenes* Ad664	Raw milk cheese	Seeding 72 h 3°C±2°C	3-7-8-3-7	5,6	+	3	b
2021	**5279**	**Lait entier fermenté**	**Fermented whole milk**	*L. monocytogenes* Ad1236	Raw milk cheese	Seeding 72 h 3°C±2°C	2-1-8-6-4	4,2	+	3	b
2021	**6716**	**Crème glacée caramel beurre salé**	**Ice cream**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 2 weeks -20°C	1-1-4-2-0	1,6	-	3	c
2021	**6717**	**Crème glacée caramel beurre salé**	**Ice cream**	*L. monocytogenes* Ad523	Cheese	Seeding 2 weeks -20°C	2-0-1-2-2	1,4	+	3	c
2021	**6718**	**Lait aromatisé à la fraise**	**Strawberry pasteurized milk**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 72 h 3°C±2°C	1-1-0-1-0	0,6	-	3	c
2021	**6719**	**Lait aromatisé à la fraise**	**Strawberry pasteurized milk**	*L. monocytogenes* Ad619	Cheese	Seeding 72 h 3°C±2°C	2-4-2-1-4	2,6	+	3	c
2021	**6720**	**Lait aromatisé au chocolat**	**Chocolate pasteurized milk**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 72 h 3°C±2°C	1-1-4-2-0	1,6	-	3	c
2021	**6721**	**Lait aromatisé au chocolat**	**Chocolate pasteurized milk**	*L. monocytogenes* Ad523	Cheese	Seeding 2 weeks -20°C	2-0-1-2-2	1,4	+	3	c
2021	**6722**	**Lait pasteurisé demi-écrémé**	**Pasteurized milk**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 72 h 3°C±2°C	1-1-0-1-0	0,6	-	3	c
2021	**6723**	**Lait pasteurisé demi-écrémé**	**Pasteurized milk**	*L. monocytogenes* Ad619	Cheese	Seeding 72 h 3°C±2°C	2-4-2-1-4	2,6	+	3	c
2021	**6724**	**Fromage frais**	**Pasteurized cheese**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 72 h 3°C±2°C	1-1-4-2-0	1,6	-	3	c
2021	**6725**	**Fromage frais**	**Pasteurized cheese**	*L. monocytogenes* Ad523	Cheese	Seeding 2 weeks -20°C	2-0-1-2-2	1,4	+	3	c
2021	**6726**	**Semoule au lait**	**Pasteurized dairy dessert**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 72 h 3°C±2°C	1-1-0-1-0	0,6	-	3	c
2021	**6727**	**Semoule au lait**	**Pasteurized dairy dessert**	*L. monocytogenes* Ad619	Cheese	Seeding 72 h 3°C±2°C	2-4-2-1-4	2,6	+	3	c
2021	**6728**	**Panna cotta**	**Pasteurized dairy dessert**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 72 h 3°C±2°C	1-1-4-2-0	1,6	-	3	c
2021	**6729**	**Panna cotta**	**Pasteurized dairy dessert**	*L. monocytogenes* Ad523	Cheese	Seeding 2 weeks -20°C	2-0-1-2-2	1,4	-	3	c
2021	**6730**	**Bleu de Bresse au lait de vache pasteurisé**	**Pasteurized cheese**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 72 h 3°C±2°C	1-1-0-1-0	0,6	-	3	c

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2021	**6731**	**Bleu de Bresse au lait de vache pasteurisé**	**Pasteurized cheese**	*L. monocytogenes* Ad619	Cheese	Seeding 72 h 3°C±2°C	2-4-2-1-4	2,6	+	3	c
2021	**6732**	**Fromage de vache au lait pasteurisé**	**Pasteurized cheese**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 2 weeks -20°C	1-1-4-2-0	1,6	-	3	c
2021	**6733**	**Fromage de vache au lait pasteurisé**	**Pasteurized cheese**	*L. monocytogenes* Ad523	Cheese	Seeding 2 weeks -20°C	2-0-1-2-2	1,4	+	3	c
2021	**6734**	**Fromage de chèvre au lait pasteurisé**	**Pasteurized cheese**	*L. innocua* Ad2414	Pasteurized cheese	Seeding 72 h 3°C±2°C	1-1-4-2-0	1,6	-	3	c
2021	**6735**	**Fromage de chèvre au lait pasteurisé**	**Pasteurized cheese**	*L. monocytogenes* Ad619	Cheese	Seeding 72 h 3°C±2°C	2-4-2-1-4	2,6	-	3	c
2021	**4337**	**Alfafa bio**	**Sprouts**	*L. welshimeri Ad1668*	Vegetable stuffing	Seeding 48 h 3°C±2°C	0-3-2-4-3	2,4	-	4	a
2021	**4338**	**Salade Batavia**	**Fresh lettuce**	*L. monocytogenes* Ad3267	Vegetable mix	Seeding 48 h 3°C±2°C	2-2-6-3-1	2,8	-	4	a
2021	**4339**	**Mélange jeunes pousses (vrac)**	**Baby leaves**	*L. monocytogenes* Ad285	Pepper	Seeding 48 h 3°C±2°C	4-3-2-0-1	2	+	4	a
2021	**4340**	**Persil frisé**	**Parsley**	*L. innocua* Ad1176	Spinach	Seeding 48 h 3°C±2°C	3-2-0-2-2	1,8	-	4	a
2021	**4341**	**Petits pois**	**Frozen peas**	*L. welshimeri Ad1668*	Vegetable stuffing	Seeding 2 weeks -20°C	0-3-2-4-3	2,4	-	4	a
2021	**5291**	**Petites pousses de haricot mungo**	**Sprouts**	*L. monocytogenes* Ad1680	Celery	Seeding 72 h 3°C±2°C	1-1-3-3-4	2,4	-	4	a
2021	**5292**	**Petites pousses de haricot mungo**	**Sprouts**	*L. innocua* Ad1673	Zucchini	Seeding 72 h 3°C±2°C	6-3-7-0-4	4	-	4	a
2021	**5293**	**Alfafa bio**	**Sprouts**	*L. monocytogenes* Ad545 + *L. seeligeri* Ad1293	Cabbage carrot salad + chopped parsley	Seeding 72 h 3°C±2°C	1-3-2-3-1 + 2-3-2-4-2	2 + 2,6	+	4	a
2021	**5294**	**Poireau vrac**	**Leek**	*L. monocytogenes* Ad285	Pepper	Seeding 72 h 3°C±2°C	2-4-1-0-4	2,2	+	4	a
2021	**5295**	**Cèleri vrac**	**Celery**	*L. monocytogenes* Ad1680	Celery	Seeding 72 h 3°C±2°C	1-1-3-3-4	2,4	-	4	a
2021	**5296**	**Chou blanc vrac**	**Cabbage**	*L. monocytogenes* Ad545 + *L. innocua* Ad1673	Cabbage carrot salad + zucchini	Seeding 72 h 3°C±2°C	1-3-2-3-1 + 4-1-4-2-2	2 + 2,6	-	4	a
2021	**5297**	**Chou vert vrac**	**Cabbage**	*L. monocytogenes* Ad285	Pepper	Seeding 72 h 3°C±2°C	2-4-1-0-4	2,2	+	4	a
2021	**5298**	**Laitue vrac**	**Fresh lettuce**	*L. monocytogenes* Ad3267	Vegetable mix	Seeding 72 h 3°C±2°C	8-6-5-4-5	5,6	+	4	a
2021	**5299**	**Batavia vrac**	**Fresh lettuce**	*L. monocytogenes* Ad3267 + L. seeligeri Ad1293	Vegetable mix + chopped parsley	Seeding 72 h 3°C±2°C	5-5-5-5-4 + 2-3-2-4-2	4,8 + 2,6	+	4	a
2021	**5300**	**Persil frisé vrac**	**Parsley**	*L. monocytogenes* Ad3267	Vegetable mix	Seeding 72 h 3°C±2°C	8-6-5-4-5	5,6	+	4	a
2021	**5301**	**Persil frisé vrac**	**Parsley**	*L. innocua* Ad1673	Zucchini	Seeding 72 h 3°C±2°C	6-3-7-0-4	4	-	4	a
2021	**4334**	**Mâche sous vide**	**Lamb's lettuce (under modified atmosphere)**	*L. monocytogenes* Ad3267	Vegetable mix	Seeding 48 h 3°C±2°C	2-2-6-3-1	2,8	+	4	b
2021	**4335**	**Mélange crudités**	**Vegetable mix (under modified atmosphere)**	*L. monocytogenes* Ad285	Pepper	Seeding 48 h 3°C±2°C	4-3-2-0-1	2	+	4	b
2021	**4336**	**Mélange crudités**	**Vegetable mix (under modified atmosphere)**	*L. innocua* Ad1176	Spinach	Seeding 48 h 3°C±2°C	3-2-0-2-2	1,8	-	4	b
2021	**4342**	**Mélange ratatouille**	**Frozen ratatouille**	*L. innocua* Ad1176	Spinach	Seeding 2 weeks -20°C	3-2-0-2-2	1,8	-	4	b
2021	**4343**	**Julienne de légumes**	**Frozen vegetables mix**	*L. monocytogenes* Ad3267	Vegetable mix	Seeding 2 weeks -20°C	2-2-6-3-1	2,8	-	4	b
2021	**5288**	**Salade mélangée prête à consommer**	**Lettuce (under modified atmosphere)**	*L. monocytogenes* Ad285	Pepper	Seeding 72 h 3°C±2°C	2-4-1-0-4	2,2	+	4	b
2021	**5289**	**Salade mélangée prête à consommer**	**Lettuce (under modified atmosphere)**	*L. innocua* Ad1673	Zucchini	Seeding 72 h 3°C±2°C	6-3-7-0-4	4	-	4	b
2021	**5290**	**Crudités mélangées**	**Vegetable mix (under modified atmosphere)**	*L. monocytogenes* Ad1680	Celery	Seeding 72 h 3°C±2°C	1-1-3-3-4	2,4	+	4	b
2021	**5282**	**Cèleri rémoulade**	**Celery salad**	*L. monocytogenes* Ad545 + *L. seeligeri* Ad1293	Cabbage carrot salad + chopped parsley	Seeding 72 h 3°C±2°C	1-3-2-3-1 + 2-3-2-4-2	2 + 2,6	-	4	c
2021	**5283**	**Concombre et ciboulette**	**Cucumber salad**	*L. monocytogenes* Ad285	Pepper	Seeding 72 h 3°C±2°C	2-4-1-0-4	2,2	-	4	c
2021	**5284**	**Coleslaw**	**Coleslaw**	*L. monocytogenes* Ad3267 + L. seeligeri Ad1293	Vegetable mix + chopped parsley	Seeding 72 h 3°C±2°C	5-5-5-5-4 + 2-3-2-4-2	4,8 + 2,6	+	4	c

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2021	5285	Betteraves rouges	Red beets	*L. monocytogenes* Ad1680	Celery	Seeding 72 h 3°C±2°C	1-1-3-3-4	2,4	+	4	c
2021	5286	Carottes râpées	Grated carrots	*L. monocytogenes* Ad1680	Celery	Seeding 72 h 3°C±2°C	1-1-3-3-4	2,4	+	4	c
2021	5287	Chou rouge	Red cabbage salad	*L. monocytogenes* Ad545 + *L. seeligeri* Ad1293	Cabbage carrot salad + chopped parsley	Seeding 72 h 3°C±2°C	1-3-2-3-1 + 2-3-2-4-2	2 + 2,6	+	4	c
2021	6328	Carottes râpées	Grated carrots	*L. monocytogenes* Ad1719	Vegetable mix	Seeding 72 h 3°C±2°C	3-3-2-4-3	3	+	4	c
2021	6329	Macédoine de légumes	Diced mixed vegetables	*L. monocytogenes* Ad1719	Vegetable mix	Seeding 72 h 3°C±2°C	3-3-2-4-3	3	+	4	c
2021	6330	Concombres au fromage blanc	Cucumber salad	*L. monocytogenes* Ad1719	Vegetable mix	Seeding 72 h 3°C±2°C	3-3-2-4-3	3	+	4	c
2021	7181	Dos de cabillaud	Cod	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	+	5	a
2021	7182	Dos de cabillaud	Cod	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	a
2021	7392	Dos d'églefin	Haddock	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	a
2021	7393	Filet de lieu noir	Pollock	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	a
2021	7577	Pavé de truite d'élevage	Trout	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	-	5	a
2021	7578	Filet de queue de cabillaud	Cod	*L. monocytogenes* Ad1191	Breaded fish	Seeding 72 h 3°C±2°C	1-1-2-2-0	1,2	+	5	a
2021	7171	Filets de harengs fumés	Somked herring	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	+	5	b
2021	7172	Filets de harengs fumés	Somked herring	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	b
2021	7173	Truite fumée	Smoked trout	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	+	5	b
2021	7174	Truite fumée	Smoked trout	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	b
2021	7175	Saumon fumé	Smoked salmon	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	-	5	b
2021	7176	Saumon fumé	Smoked salmon	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	b
2021	7388	Truite fumée	Smoked trout	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	b
2021	7389	Saumon fumé bio	Organic smoked salmon	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	b
2021	7390	Maquereaux fumés au poivre	Pepper smoked mackerel	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	b
2021	7391	Maquereaux fumés	Smoked mackerel	*L. innocua* 1	Smoked salmon	Seeding 72 h 3°C±2°C	0-1-2-1-1	1,0	-	5	b
2021	7430	Saumon fumé bio	Organic smoked salmon	*L. seeligeri* Ad2639	Trout	Seeding 72 h 3°C±2°C	2-2-0-1-1	1,2	-	5	b
2021	7431	Maquereaux fumés	Smoked mackerel	*L. seeligeri* Ad2639	Trout	Seeding 72 h 3°C±2°C	2-2-0-1-1	1,2	-	5	b
2021	7432	Maquereaux fumés au poivre	Pepper smoked mackerel	*L. seeligeri* Ad2639	Trout	Seeding 72 h 3°C±2°C	2-2-0-1-1	1,2	-	5	b
2021	7573	Maquereaux au poivre fumés au bois de hêtre	Pepper smoked mackerel	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	+	5	b
2021	7574	Harengs fumés au bois de hêtre	Smoked herring	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	+	5	b
2021	7575	Saumon fumé à cuisiner	Smoked salmon	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	+	5	b
2021	7576	Truite fumée au bois de hêtre	Smoked trout	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	+	5	b
2021	7661	Saumon fumé	Smoked salmon	*L. monocytogenes* Ad1191	Breaded fish	Seeding 72 h 3°C±2°C	1-1-2-2-0	1,2	+	5	b
2021	7662	Truite fumée	Smoked trout	*L. monocytogenes* Ad1191	Breaded fish	Seeding 72 h 3°C±2°C	1-1-2-2-0	1,2	+	5	b
2021	7663	Pavé de truite d'élevage	Trout	*L. monocytogenes* Ad1191	Breaded fish	Seeding 72 h 3°C±2°C	1-1-2-2-0	1,2	+	5	b
2021	7664	Maquereaux au poivre fumés au bois de hêtre	Pepper smoked mackerel	*L. welshimeri* Ad3250	Trout	Seeding 72 h 3°C±2°C	1-2-1-0-4	1,6	-	5	b
2021	7665	Harengs fumés au bois de hêtre	Smoked herring	*L. welshimeri* Ad3250	Trout	Seeding 72 h 3°C±2°C	1-2-1-0-4	1,6	-	5	b
2021	7177	Filet de limande du nord pané	Breaded dab	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	+	5	c
2021	7178	Filet de limande du nord pané	Breaded dab	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	c
2021	7179	Crevettes décortiquées prêtes à consommer	Ready to eat shrimps	*L. monocytogenes* Ad1185	Fish	Seeding 72 h 3°C±2°C	2-1-0-4-1	1,6	+	5	c
2021	7180	Crevettes décortiquées prêtes à consommer	Ready to eat shrimps	*L. ivanovii* Ad677	Shrimp	Seeding 72 h 3°C±2°C	2-2-2-3-2	2,2	-	5	c
2021	7571	Miettes de surimi	Surimi	*L. monocytogenes* Ad1191	Breaded fish	Seeding 72 h 3°C±2°C	1-1-2-2-0	1,2	+	5	c
2021	7572	Poisson pané	Breaded fish	*L. monocytogenes* Ad1192	Fish	Seeding 72 h 3°C±2°C	3-2-1-1-3	2	+	5	c

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2021	**4982**	**Déchets poulet poussoir**	**Chicken residues**	*L. monocytogenes* Ad1261 + *L. seeligeri* Ad651	Pork/beef environment / environment	Seeding 72 h 3°C±2°C	3-2-1-3-2 + 4-3-1-1-3	2,2 + 2,4	+	6	a
2021	**4983**	**Déchets poulet mélangeur**	**Chicken residues**	*L. monocytogenes* Ad1265 + *L. welshimeri* Ad1275	slaughterhouse pig environment / Pork/beef environment	Seeding 72 h 3°C±2°C	2-3-1-1-3 + 0-1-0-2-4	2 + 1,4	-	6	a
2021	**6541**	**Résidus crème glacée homogénéisateur**	**Ice cream residues**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	a
2021	**6542**	**Déchets sol crème glacée**	**Ice cream residues**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	a
2021	**6543**	**Résidus crème glacée mélangeur**	**Ice cream residues**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	a
2021	**6544**	**Résidus queues topping**	**Salmon residues**	*L. monocytogenes* Ad548	Fish environment	Seeding 72 h 3°C±2°C	3-1-4-3-4	3	+	6	a
2021	**6545**	**Résidus matière parrage**	**Salmon residues**	*L. monocytogenes* Ad548	Fish environment	Seeding 72 h 3°C±2°C	3-1-4-3-4	3	+	6	a
2021	**6739**	**Résidus crème glacée homogénéisateur**	**Ice cream residues**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	a
2021	**6740**	**Résidus crème glacée pasteurisateur**	**Ice cream residues**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	a
2021	**6741**	**Déchets sol crème glacée**	**Ice cream residues**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	a
2021	**7428**	**Déchets darne de saumon avant fumage**	**Salmon residues**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	1-2-1-2-2	1,6	+	6	a
2021	**7429**	**Déchets queues topping avant fumage**	**Salmon residues**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	1-2-1-2-2	1,6	+	6	a
2021	**4976**	**Eau de process**	**Process water (pork/beef environment)**	*L. ivanovii BR23*	Fish farming environment	Seeding 72 h 3°C±2°C	2-2-1-2-2	1,8	-	6	b
2021	**4977**	**Eau de process**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad1265 + *L. seeligeri* Ad651	slaughterhouse pig environment / environment	Seeding 72 h 3°C±2°C	2-3-1-1-3 + 4-3-1-1-3	2 + 2,4	+	6	b
2021	**4978**	**Eau bac échaudage abattoir porc**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad243 + *L. welshimeri* Ad1275	Pork environment / Pork/beef environment	Seeding 72 h 3°C±2°C	3-1-2-0-5 + 0-1-0-2-4	2,2 + 1,4	+	6	b
2021	**4979**	**Eau du tunnel de lavage abattoir porc**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad1261	Pork/beef environment	Seeding 72 h 3°C±2°C	4-6-6-4-3	4,6	-	6	b
2021	**4980**	**Eau du tunnel de lavage abattoir bœuf**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad1265 + *L. seeligeri* Ad651	slaughterhouse pig environment / environment	Seeding 72 h 3°C±2°C	2-3-1-1-3 + 4-3-1-1-3	2 + 2,4	+	6	b
2021	**4981**	**Eau dégrossissage bonde découpe bœuf**	**Cleaning water (pork/beef environment)**	*L. monocytogenes* Ad243 + *L. welshimeri* Ad1275	Pork environment / Pork/beef environment	Seeding 72 h 3°C±2°C	3-1-2-0-5 + 0-1-0-2-4	2,2 + 1,4	-	6	b
2021	**4988**	**Eau dégrossissage poussoir**	**Cleaning water (chicken environment)**	*L. monocytogenes* Ad243	Pork environment	Seeding 72 h 3°C±2°C	5-1-4-4-6	4	+	6	b
2021	**4989**	**Eau dégrossissage mélangeur**	**Cleaning water (chicken environment)**	*L. monocytogenes* Ad1261	Pork/beef environment	Seeding 72 h 3°C±2°C	4-6-6-4-3	4,6	+	6	b
2021	**5280**	**Eau de nettoyage**	**Cleaning water (seafood environment)**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	0-6-2-1-4	2,6	+	6	b
2021	**5281**	**Eau de rinçage**	**Cleaning water (seafood environment)**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	0-6-2-1-4	2,6	-	6	b
2021	**6550**	**Eau de rinçage homogénéisateur**	**Cleaning water (dairy environment)**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	b
2021	**6551**	**Eau de process**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad548	Fish environment	Seeding 72 h 3°C±2°C	3-1-4-3-4	3	+	6	b
2021	**6552**	**Eau épileuse**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad548	Fish environment	Seeding 72 h 3°C±2°C	3-1-4-3-4	3	+	6	b
2021	**7584**	**Eau du tunnel de lavage abattoir porc**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad1263	Pork/beef environment	Seeding 72 h 3°C±2°C	1-6-1-0-2	2	-	6	b
2021	**7585**	**Eau bac échaudage abattoir porc**	**Process water (pork/beef environment)**	*L. monocytogenes* Ad1263	Pork/beef environment	Seeding 72 h 3°C±2°C	1-6-1-0-2	2	+	6	b

Date of analysis	Sample number	Product (French name)	Product	Artificial contaminations					Global result *L. monocytogenes* 22 h and 48 h	Category	Type
				Strain	Origin	Injury protocol	Inoculation level (CFU/sample)				
							Enumeration	Mean			
2021	**4967**	**Chiffonnette couteau découpe poulet**	**Wipe (chicken environment)**	*L. ivanovii BR23*	Fish farming environment	Seeding 72 h 3°C±2°C	2-2-1-2-2	1,8	-	6	c
2021	**4968**	**Chiffonnette table découpe poulet**	**Wipe (chicken environment)**	*L. monocytogenes* Ad1261 + *L. seeligeri* Ad651	Pork/beef environment / environment	Seeding 72 h 3°C±2°C	3-2-1-3-2 + 4-3-1-1-3	2,2 + 2,4	+	6	c
2021	**4969**	**Chiffonnette mélangeur**	**Wipe (chicken environment)**	*L. monocytogenes* Ad1265	slaughterhouse pig environment	Seeding 72 h 3°C±2°C	4-3-2-2-1	2,4	+	6	c
2021	**4970**	**Chiffonnette sol atelier**	**Wipe (chicken environment)**	*L. monocytogenes* Ad243 + *L. welshimeri* Ad1275	Pork environment / Pork/beef environment	Seeding 72 h 3°C±2°C	3-1-2-0-5 + 0-1-0-2-4	2,2 + 1,4	+	6	c
2021	**4971**	**Chiffonnette broyeur poulet**	**Wipe (chicken environment)**	*L. monocytogenes* Ad1261	Pork/beef environment	Seeding 72 h 3°C±2°C	4-6-6-4-3	4,6	+	6	c
2021	**4972**	**Chiffonnette table parage des joues (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	*L. monocytogenes* Ad1265	slaughterhouse pig environment	Seeding 72 h 3°C±2°C	4-3-2-2-1	2,4	+	6	c
2021	**4973**	**Chiffonnette découpe porc ligne longe (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	*L. monocytogenes* Ad243 + *L. seeligeri* Ad651	Pork environment / environment	Seeding 72 h 3°C±2°C	3-1-2-0-5 + 4-3-1-1-3	2,2 + 2,4	+	6	c
2021	**4974**	**Chiffonnette découpe porc ligne poitrine (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	*L. monocytogenes* Ad1261	Pork/beef environment	Seeding 72 h 3°C±2°C	4-6-6-4-3	4,6	+	6	c
2021	**4975**	**Chiffonnette table transfert (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	*L. ivanovii BR23*	Fish farming environment	Seeding 72 h 3°C±2°C	2-2-1-2-2	1,8	-	6	c
2021	**6546**	**Chiffonnette trancheur DF1 après désinfection**	**Wipe after cleaning process (seafood environment)**	*L. welshimeri* Ad1268	Smoked fish environment	Seeding 72 h 3°C±2°C	1-3-1-1-2	1,6	-	6	c
2021	**6547**	**Chiffonnette tapis trancheur après désinfection**	**Wipe after cleaning process (seafood environment)**	*L. monocytogenes* Ad548	Fish environment	Seeding 72 h 3°C±2°C	3-1-4-3-4	3	+	6	c
2021	**6548**	**Chiffonnette mélangeur avant nettoyage**	**Wipe (dairy environment)**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	c
2021	**6549**	**Chiffonnette freezer avant nettoyage**	**Wipe (dairy environment)**	*L. monocytogenes* Ad637	Milk	Seeding 72 h 3°C±2°C	3-2-2-0-0	1,4	-	6	c
2021	**6736**	**Chiffonnette mélangeur avant nettoyage**	**Wipe (dairy environment)**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	c
2021	**6737**	**Chiffonnette balance avant nettoyage**	**Wipe (dairy environment)**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	c
2021	**6738**	**Chiffonnette homogénéisateur avant nettoyage**	**Wipe (dairy environment)**	*L. monocytogenes* Ad621	Dairy product environment	Seeding 72 h 3°C±2°C	1-2-1-2-1	1,4	-	6	c
2021	**7425**	**Chiffonnette trancheur CP4 après désinfection**	**Wipe (ready prepared dish environment)**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	1-2-1-2-2	1,6	-	6	c
2021	**7426**	**Chiffonnette trancheur n°19 après désinfection**	**Wipe (ready prepared dish environment)**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	1-2-1-2-2	1,6	+	6	c
2021	**7427**	**Eponge tapis vers multivac**	**Sponge (ready prepared dish environment)**	*L. monocytogenes* Ad1679	Fish environment	Seeding 72 h 3°C±2°C	1-2-1-2-2	1,6	+	6	c
2021	**7586**	**Chiffonnette découpe porc ligne longe (avant désinfection)**	**Wipe before cleaning process (pork/beef environment)**	*L. monocytogenes* Ad1263	Pork/beef environment	Seeding 72 h 3°C±2°C	1-6-1-0-2	2	+	6	c
2021	**7587**	**Chiffonnette découpe primaire ligne porc**	**Wipe (pork/beef environment)**	*L. monocytogenes* Ad1263	Pork/beef environment	Seeding 72 h 3°C±2°C	1-6-1-0-2	2	+	6	c

Appendix 10 - Sensitivity study: raw data (Extension study, 2022 - ADRIA)

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5658	Wrap poulet bacon	Roasted chicken wrap	st	st	st	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	a
2021	5746	Sandwich viennois poulet rôti	Roast chicken sandwich	H-d	-	-	-		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	5749	Wrap poulet rôti sauce fromage blanc	Roasted chicken wrap with white cheese	st	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	5825	Crêpe fajitas	Tortilla	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	a
2021	5833	Sandwich thon œuf tomate	Tomato egg tuna sandwich	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	6058	Verrine tajine	Mix of vegetables and meat	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	6059	Verrine mangue saint Jacques	Mix of vegetables and seafood	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	PA	PA	H+/H-		+	PA		1	a
2021	6060	Verrine saumon asperge	Mix of vegetables and fish	H+d/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	PA	PA	H+/H-		+	PA		1	a
2021	6061	Verrine chèvre tomate	Mix of vegetables and cheese	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	1	a
2021	**6531**	**Sandwich jambon-beurre**	**Ham butter sandwich**	st	st	-	-		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	**6532**	**Sandwich thon crudités**	**Tuna and crudités sandwich**	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	a
2021	**6533**	**Sandwich poulet rôti crudités**	**Chicken and crudités sandwich**	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	**6534**	**Taboulé au poulet**	**Roasted chicken tabbouleh**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	**6535**	**Piémontaise au jambon**	**Piedmontese salad**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	**6553**	**Sandwich jambon-beurre**	**Ham butter sandwich**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	1	a
2021	**7378**	**Bagel concombre saumon fumé**	**Smoked salmon and cucumber sandwich**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	7379	Bagel concombre saumon fumé	Smoked salmon and cucumber sandwich	-	-	-	-		-	st	-				-	-	NA	NA	-		-	NA	-	1	a
2021	**7380**	**Wrap jambon fromage de brebis**	**Ham and sheep's cheese sandwich**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	7381	Wrap jambon fromage de brebis	Ham and sheep's cheese sandwich	-	-	-	-		-	st	st				-	-	NA	NA	st		-	NA	-	1	a
2021	**7382**	**Sandwich thon tomate œuf**	**Tomato egg tuna sandwich**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	7383	Sandwich thon tomate œuf	Tomato egg tuna sandwich	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	a
2021	**7384**	**Sandwich poulet rôti mayo légère**	**Mayonnaise and roast chicken sandwich**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	a
2021	7385	Sandwich poulet rôti mayo légère	Mayonnaise and roast chicken sandwich	st	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	a

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1*						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	**7386**	**Salade chou jambon comté**	**Cheese and cabbage salad**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		1	a
2021	**7387**	**Salade pâtes crudités mozzarella jambon speck**	**Ham, cheese and crudités salad**	-	-	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	1	a
2021	5178	Paillasson de légumes	Composite food with vegetable and dairy products	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		1	b
2021	5179	Gratin quatre légumes	Composite food with vegetable and dairy products	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		1	b
2021	5650	Paella	Paella	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	1	b
2021	5732	Tourte au cèpes	Mix of vegetable, cream and puffpastry	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		1	b
2021	5744	Ballotine de volaille et légumes	Mix of poultry and vegetables	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	1	b
2021	5745	Feuilleté aux saint jacques	Mix of seafood and puff pastry	H+/H-	+	H+ni/H -	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		1	b
2021	5753	Roulé jambon fromage	Mix of cheese ham and pastry	h-d	-	-	-		-	st	st				-	-	**NA**	**NA**			-	**NA**	-	1	b
2021	5754	Feuilleté au chèvre	Mix of cheese and puff pastry	H+	+	H+	+	*L. monocytogenes*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		1	b
2021	5822	Tomate farcie	Mix of vegetables and beef	-	st	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	1	b
2021	5827	Gratin dauphinois	Mix of potatoes, cream and cheese	st	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	1	b
2021	5830	Croque saumon	Mix of salmon, cheese and vegetables	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	1	b
2021	5831	Paella	Paella	-	-	H-	+	*L .seeligeri*	-	-	-				-	-	**NA**	**NA**	st		-	**NA**	-	1	b
2021	5843	Coquille saint jacques à la bretonne	Mix of scallop, cream and vegetables	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		1	b
2021	5982	Gratin de chou-fleur	Mix of cream, cheese and vegetables	st	st	st	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	1	b
2021	5988	Steak soja épinard emmental	Mix of cheese and vegetables	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	1	b
2021	6246	Tarte oignons confit et chèvre	Mix of vegetables and cheese	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	1	b
2021	6247	Croque monsieur	Mix of cheese and ham	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		1	b
2021	6253	Feuilleté chèvre pesto	Mix of puff pastry, cheese and vegetables	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	1	b
2021	6254	Feuilleté jambon-emmental	Mix of puff pastry, cheese and ham	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	1	b
2021	6258	Feuilleté saumon épinard	Mix of puff pastry, fish and ham	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		1	b
2021	6408	Cordon bleu de dinde	Mix of cheese and meat	H+	+	H+/H-	+	*L. monocytogenes / L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-		+	**PA**		1	b
2021	6411	Burger barbecue	Mix of bread, beef and vegetables	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	1	b
2021	6416	Cordon bleu de dinde	Mix of cheese and meat	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		1	b

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5648	Brownie	Pastry	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	c
2021	5663	Croissant	Pastry	H-	+	H-	+	*L. innocua*	-	H- (1)	H- (1)			*L. innocua*	-	-	NA	NA	H- (1)		-	NA	-	1	c
2021	5750	Pâte à quiche	Puff pastry	H+/H-	+	H+ni/H-	+	*L. monocytogenes / L. innocua*	+	H+ni/H-	H+ni/H-	+	+	*L. monocytogenes / L. innocua*	+	+	PA	PA	H+ni/H-		+	PA		1	c
2021	5751	Gaufre	Waffle	-	-	-	-		-	-	-				-	-	NA	NA			-	NA	-	1	c
2021	5823	Pâte brisée	Pie crust	st	-	st	-		-	st	st				-	-	NA	NA	st		-	NA	-	1	c
2021	5824	Sauce yaourt	Yogurt sauce	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	c
2021	5826	Chausson aux pommes	Apple turnover	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	c
2021	5986	Gaufre	Waffle	st	st	st	st		-	-	-				-	-	NA	NA	-		-	NA	-	1	c
2021	6066	Croissant pur beurre	Pastry	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		1	c
2021	6256	Omelette brouillée nature	Omelette	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		1	c
2021	6257	Omelette cubes nature	Omelette	st	-	st	-		-	st	st				-	-	NA	NA	st		-	NA	-	1	c
2021	**6536**	**Choux chantilly**	**Pastry**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**6537**	**Flan**	**Pastry**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**6538**	**Eclair au café**	**Pastry**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**6539**	**Tortilla aux oignons**	**Onion tortilla**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**6540**	**Tortilla nature**	**Tortilla**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	6902	Eclair au chocolat	Pastry	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	1	c
2021	6903	Mille feuille	Pastry	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	c
2021	6904	Religieuse au café	Pastry	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	1	c
2021	6905	Tortilla au chorizo	Chorizo tortilla	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**7560**	**Paris-Brest**	**Pastry**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c
2021	**7561**	**Flan aux œufs**	**Pastry**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		1	c

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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5649	Steak haché de volaille	Minced chicken	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	2	a
2021	5655	Steak haché	Minced beef	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	2	a
2021	5734	Jambon de porc (cru)	Ham (before cooking)	H+/H-d	+	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-		+	PA		2	a
2021	5739	Steak haché	Minced beef	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	2	a
2021	5741	Steak haché	Minced beef	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	2	a
2021	5742	Aiguillettes de porc	Sliced pork	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	a
2021	5747	Minerai de bœuf	Beef	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	2	a
2021	5832	Jambon de porc (cru)	Ham (before cooking)	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	a
2021	5973	Emincés épaule de porc (cru)	Pork	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	a
2021	5989	Steak haché de volaille	Minced chicken	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	2	a
2021	6248	Epaule de porc (cru)	Pork	-	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	a
2021	6249	Filet de porc (cru)	Pork	H-(1)	+ (2)	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	2	a
2021	6252	Epaule de porc (cru)	Pork	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. innocua*	+	+	PA	PA	H+/H-		+	PA		2	a
2021	6406	Roulé de dinde saumuré (cru)	Turkey	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-		+	PA		2	a
2021	6417	Aiguillettes de porc (cru)	Pork	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	a
2021	**7183**	**Steak haché 15%MG**	**Minced beef (15% fat)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	a
2021	**7184**	**Steak haché 15%MG**	**Minced beef (15% fat)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	a
2021	**7185**	**Aiguillettes de poulet**	**Chicken aiguillettes**	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-	+	+	PA		2	a
2021	**7186**	**Aiguillettes de poulet**	**Chicken aiguillettes**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	a
2021	7259	Côte de porc demi-sel	Pork	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	a
2021	7260	Viande rouge calibrée	Beef	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-	+	+	PA		2	a
2021	7261	Minerai de bœuf	Beef	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	2	a
2021	**7564**	**Steak haché 5%MG**	**Minced beef**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	a
2021	5652	Aile de poulet pimentée	Cooked chicken	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	2	b
2021	5654	Paupiette de dinde	Turkey paupiette	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	b
2021	5659	Cubes poulet rôti	Roasted chicken	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5662	Donuts de poulet	Breaded chicken	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5675	Emincés de Kebab rôti	Kebab slices	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5733	Sauté de dinde	Cooked turkey	st	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5736	Blanquette de dinde	Cooked turkey	-	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5738	Emincés de filet de poulet rôti	Sliced roast chicken	-	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5740	Wings roti	Cooked chicken	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	2	b

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5743	Nuggets	Chicken nuggets	-	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5752	Filet de poulet pané	Breaded chicken	st	st	st	st		-	st	st				-	-	NA	NA			-	NA	-	2	b
2021	5837	Bouchées aiguillettes de poulet	Chicken aiguillettes	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5841	Dés de dinde rôti	Roasted turkey	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5974	Poulet rôti épicé	Spicy roast chicken	st	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5987	Cubes de filet de poulet	Cooked chicken	H+	+	H+	+	*L. monocytogenes*	+	H+	H+		+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	b
2021	6057	Boeuf mariné	Marinated beef	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	b
2021	6064	Viande de canard effilochée	Prepared duck meat	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	6065	Viande de canard effilochée	Prepared duck meat	H+/H-	+	H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-		+	PA		2	b
2021	6251	Wings de poulet barbecue	Cooked chicken	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	6409	Lamelles de volaille kebab rôties	Kebab slices	-	-	-	-		-	-	-				-	-	NA	NA	-		-	NA	-	2	b
2021	6413	Emincés de filet de poulet rôti	Sliced roast chicken	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	b
2021	**7187**	**Emincés de porc sauce pruneaux**	**Cooked pork**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ jaune	*L. ivanovii*	-	-	NA	NA	H+	-	-	NA	-	2	b
2021	**7188**	**Emincés de porc sauce pruneaux**	**Cooked pork**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	b
2021	**7189**	**Emincés de veau sauce champignons**	**Cooked veal**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ jaune	*L. ivanovii*	-	-	NA	NA	H+	-	-	NA	-	2	b
2021	**7190**	**Emincés de veau sauce champignons**	**Cooked veal**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	b
2021	**7565**	**Bœuf cuisiné**	**Cooked beef**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	b
2021	**7566**	**Bœuf cuisiné**	**Cooked beef**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		2	b
2021	**7567**	**Escalope milanaise**	**Cooked chicken**	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	b
2021	5644	Miettes de bacon	Bacon	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	c
2021	5645	Pâté à l'ail	Pâté	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5646	Saucisson p'tit sec	Saucisson	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	c
2021	5647	Merguez	Merguez	H+ (4)	+	H+	+	*L. monocytogenes*	+	H+ (2)	H+ (2)	+	+	*L. monocytogenes*	+	+	PA	PA	H+ (2)		+	PA		2	c
2021	5651	Saucisse au Muscadet	Sausage	-	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5653	Rillettes du Mans pur porc	Rillette	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5656	Lardons natures	Bacon strips	st	st	st	st		-	-	-				-	-	NA	NA	-		-	NA	-	2	c
2021	5657	Saucisse de Strasbourg	Sausage	-	st	-	-		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5660	Saucisse bio	Sausage	H- (3)	+ (1)	H-	+	*L. welshimeri*	-	-	-				-	-	NA	NA	-		-	NA	-	2	c
2021	5661	Boudin noir	Blood sausage	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5735	Saucisson au cèpes	Saucisson	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	c
2021	5737	Saucisson duc de Coise	Saucisson	-	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	2	c
2021	5975	Saucisse de Francfort	Sausage	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		2	c

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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			**Result L.mono**		**Agreement**		AL 48 h + 72 h at 5 ± 3°C		**Result L mono** AL 72 h 5°C	**Agreement L mono AL 72 h**	**Subculture in Fraser broth and streaking on PALCAM/AL for negative samples**		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5976	Lardons fumés	Bacon strips	H+/H-	+	H+/H-	+	*L. monocytogenes / L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-		+	**PA**		2	c
2021	5981	Chorizo fumé	Smoked chorizo	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	6062	Poitrine de porc fumé	Delicatessen	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	6260	Jambon de Vendée à l'ancienne	Delicatessen	-	-	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	6405	Saucisse de Francfort	Delicatessen	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	6414	Saucisse fumée	Delicatessen	st	-	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	**7191**	**Jambon cuit supérieur**	**Delicatessen**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	**7192**	**Jambon cuit supérieur**	**Delicatessen**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		2	c
2021	**7193**	**Salami danois**	**Delicatessen**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	**7194**	**Salami danois**	**Delicatessen**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	2	c
2021	**7195**	**Saucisson à l'ail**	**Delicatessen**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		2	c
2021	**7196**	**Saucisson à l'ail**	**Delicatessen**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		2	c
2021	**7197**	**Saucisson aux noisettes**	**Delicatessen**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		2	c

MILK AND DAIRY PRODUCTS																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5158	Fromage non affiné au lait cru de vache	Raw cow's milk cheese	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	5164	Fromage non affiné au lait cru de vache	Raw cow's milk cheese	-	-	-	-		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	-	3	a
2021	5165	Fromage pâte persillée au lait cru de brebis	Raw sheep's milk cheese	st	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	a
2021	5186	Fromage pâte persillée au lait cru de brebis	Raw sheep's milk cheese	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	5187	Fromage pâte pressée au lait cru de vache	Raw cow's milk cheese	-	-	-	-		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	-	3	a
2021	5188	Fromage pâte persillée au lait cru de brebis	Raw sheep's milk cheese	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5266**	**Cœur de Bray au lait cru**	**Raw cow's milk cheese**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	a
2021	**5267**	**Camembert de Normandie au lait cru**	**Raw cow's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5268**	**Petit pont l'évêque au lait cru**	**Raw cow's milk cheese**	st	-	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	a
2021	**5269**	**Reblochon de Savoie au lait cru**	**Raw cow's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5270**	**Fromage de chèvre Banon au lait cru**	**Raw goat's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5271**	**Rocamadour au lait cru**	**Raw goat's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		3	a
2021	**5272**	**Gaperon au lait cru de vache**	**Raw cow's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5273**	**Camembert de Normandie au lait cru**	**Raw cow's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5274**	**Fromage de chèvre Banon au lait cru**	**Raw goat's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+			*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	**5472**	**Reblochon de Savoie au lait cru**	**Raw cow's milk cheese**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	a
2021	**5473**	**Cœur de Bray au lait cru**	**Raw cow's milk cheese**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	a
2021	**5474**	**Gaperon au lait cru de vache**	**Raw cow's milk cheese**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	a
2021	6907	Camembert au lait cru de vache	Raw cow's milk cheese	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	a
2021	6908	Pérail au lait cru de brebis	Raw sheep's milk	st	st	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	a

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

MILK AND DAIRY PRODUCTS																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	6909	Pecorino de Toscane au lait cru de brebis	Raw sheep's milk	st	st	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	a
2021	6910	Maroilles fermier au lait cru de vache	Raw cow's milk cheese	st	st	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	a
2021	6911	Fourme de Montbrison au lait cru de vache	Raw cow's milk cheese	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	a
2021	**7666**	**Chabichou du Poitou au lait cru de chèvre**	**Raw goat's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	a
2021	5159	Lait cru de brebis (221)	Raw sheep's milk	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	5160	Lait cru de brebis (217)	Raw sheep's milk	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	5161	Lait cru de brebis (207)	Raw sheep's milk	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	5162	Lait cru de brebis (211)	Raw sheep's milk	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	5163	Lait cru de brebis (206)	Raw sheep's milk	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	**5275**	**Beurre au lait cru**	**Raw milk butter**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	**5276**	**Lait cru de vache**	**Raw cow's milk cheese**	H+/H-	+	H+	+	*L. monocytogenes / L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		3	b
2021	**5277**	**Lait cru de vache**	**Raw cow's milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	**5278**	**Lait entier fermenté**	**Fermented whole milk**	H+	+	H+	+	*L. monocytogenes*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		3	b
2021	**5279**	**Lait entier fermenté**	**Fermented whole milk**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	b
2021	6906	Lait cru de vache	Raw cow's milk	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7482	Lait cru de vache	Raw cow's milk cheese	st	-	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	b
2021	7483	Gros lait fermier	Raw cow's milk cheese	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7484	Beurre de baratte au lait cru	Raw milk butter	st	st	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	b
2021	7485	Beurre demi-sel au lait cru	Raw milk butter	st	st	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	b
2021	7486	Beurre bio demi-sel au lait cru	Raw milk butter	-	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7487	Beurre bio doux au lait cru	Raw milk butter	st	st	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7488	Faisselle bio au lait cru	Fermented raw milk yogurt	st	st	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7489	Fromage blanc bio au lait cru	Fermented raw milk yogurt	st	-	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	b
2021	7490	Kefir bio	Fermented raw milk	st	-	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	b
2021	5821	Fromage fondu	Cheese	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		3	c
2021	**6716**	**Crème glacée caramel beurre salé**	**Ice cream**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c

MILK AND DAIRY PRODUCTS

Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦ – Half Fraser – AL	Half Fraser – PALCAM	Fraser – AL	Fraser – PALCAM	Identifications	Result	Alternative method: Agar Listeria (AL) for 18h at 30°C – AL 22 h	AL 48 h	Confirmation – Rhamnose	Confirmation – RLM	Confirmation – Identification (ISO tests)	Result L.mono – 22 h	Result L.mono – 48 h	Agreement – 22 h	Agreement – 48 h	AL 48 h + 72 h at 5 ± 3°C – AL	AL 48 h + 72 h at 5 ± 3°C – Rhamnose	Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples	Category	Type
2021	**6717**	**Crème glacée caramel beurre salé**	**Ice cream**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6718**	**Lait aromatisé à la fraise**	**Strawberry pasteurized milk**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6719**	**Lait aromatisé à la fraise**	**Strawberry pasteurized milk**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6720**	**Lait aromatisé au chocolat**	**Chocolate pasteurized milk**	H-	+	H-	+	*L. innocua*	-	H-	H-			[2]	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6721**	**Lait aromatisé au chocolat**	**Chocolate pasteurized milk**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6722**	**Lait pasteurisé demi-écrémé**	**Pasteurized milk**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6723**	**Lait pasteurisé demi-écrémé**	**Pasteurized milk**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6724**	**Fromage frais**	**Pasteurized cheese**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c
2021	**6725**	**Fromage frais**	**Pasteurized cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6726**	**Semoule au lait**	**Pasteurized dairy dessert**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6727**	**Semoule au lait**	**Pasteurized dairy dessert**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6728**	**Panna cotta**	**Pasteurized dairy dessert**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6729**	**Panna cotta**	**Pasteurized dairy dessert**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c
2021	**6730**	**Bleu de Bresse au lait de vache pasteurisé**	**Pasteurized cheese**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6731**	**Bleu de Bresse au lait de vache pasteurisé**	**Pasteurized cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6732**	**Fromage de vache au lait pasteurisé**	**Pasteurized cheese**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6733**	**Fromage de vache au lait pasteurisé**	**Pasteurized cheese**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		3	c
2021	**6734**	**Fromage de chèvre au lait pasteurisé**	**Pasteurized cheese**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	3	c
2021	**6735**	**Fromage de chèvre au lait pasteurisé**	**Pasteurized cheese**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c
2021	6912	Fromage de vache au lait pasteurisé	Pasteurized cheese	st	st	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c
2021	6913	Bleu de Bresse au lait de vache pasteurisé	Pasteurized cheese	-	-	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	c
2021	6914	Camembert au lait de vache pasteurisé	Pasteurized cheese	-	-	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	c
2021	6915	Bûche de chèvre au lait pasteurisé	Pasteurized cheese	st	st	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	c
2021	6916	Lait pasteurisé demi-écrémé	Pasteurized milk	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c

MILK AND DAIRY PRODUCTS																									
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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			**Result L.mono**		**Agreement**		AL 48 h + 72 h at 5 ± 3°C		**Result L mono** AL 72 h 5°C	**Agreement L mono AL 72 h**	**Subculture in Fraser broth and streaking on PALCAM/AL for negative samples**		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	6917	Lait aromatisé à la fraise	Strawberry pasteurized milk	st	st	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	c
2021	6918	Lait aromatisé au chocolat	Chocolate pasteurized milk	st	st	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	3	c
2021	6919	Semoule au lait	Pasteurized dairy dessert	st	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c
2021	6920	Crème glacée caramel beurre salé	Ice cream	st	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	3	c

VEGETABLES																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1[♦]						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	**4337**	**Alfafa bio**	**Sprouts**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	a
2021	**4338**	**Salade Batavia**	**Fresh lettuce**	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**4339**	**Mélange jeunes pousses (vrac)**	**Baby leaves**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**4340**	**Persil frisé**	**Parsley**	-	-	st	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**4341**	**Petits pois**	**Frozen peas**	-	-	-	-		-	H-d	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	5174	Persil plat	Parsley	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	a
2021	5175	Persil plat	Parsley	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**5291**	**Petites pousses de haricot mungo**	**Sprouts**	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**5292**	**Petites pousses de haricot mungo**	**Sprouts**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	a
2021	**5293**	**Alfafa bio**	**Sprouts**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**5294**	**Poireau vrac**	**Leek**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**5295**	**Cèleri vrac**	**Celery**	st	-	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**5296**	**Chou blanc vrac**	**Cabbage**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	a
2021	**5297**	**Chou vert vrac**	**Cabbage**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**5298**	**Laitue vrac**	**Fresh lettuce**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**5299**	**Batavia vrac**	**Fresh lettuce**	H+ (2 aspects)	+	H+	+	*L. monocytogenes* / *L. ivanovii*	+	H+ (2 aspects)	H+ (2 aspects)	+/-	+/+ yelllow	*L. monocytogenes* / *L. ivanovii*	+	+	**PA**	**PA**	H+	+/+	+	**PA**		4	a
2021	**5300**	**Persil frisé vrac**	**Parsley**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	a
2021	**5301**	**Persil frisé vrac**	**Parsley**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	a
2021	7569	Persil frisé vrac	Parsley	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	7570	Graines germées Alfafa	Sprouts	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	7845	Navet	Turnip	-	-	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	7846	Fenouil	Fennel	-	-	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	a
2021	**4334**	**Mâche sous vide**	**Lamb's lettuce (under modified atmosphere)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	**4335**	**Mélange crudités**	**Vegetable mix (under modified atmosphere)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	**4336**	**Mélange crudités**	**Vegetable mix (under modified atmosphere)**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	b
2021	**4342**	**Mélange ratatouille**	**Frozen ratatouille**	-	-	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	b
2021	**4343**	**Julienne de légumes**	**Frozen vegetables mix**	-	-	-	-		-	H-d	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	b
2021	5166	Petits pois bio blanchis	Blanched peas	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	b

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VEGETABLES																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5167	Chou milan émincé	Sliced cabbage	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		4	b
2021	5168	Champignons émincés	Sliced mushrooms	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	b
2021	5169	Courgettes en rondelles	Sliced zucchini	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	5170	Mélange vapeur courge carotte brocolis butternut	Vegetable mix	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	b
2021	5171	Oignons préfrits	Pre-fried onions	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	5172	Poêlée champêtre	Vegetable mix	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	5173	Brocoli	Blanched broccoli	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	**5288**	**Salade mélangée prête à consommer**	**Lettuce (under modified atmosphere)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	**5289**	**Salade mélangée prête à consommer**	**Lettuce (under modified atmosphere)**	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	b
2021	**5290**	**Crudités mélangées**	**Vegetable mix (under modified atmosphere)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	b
2021	5984	Pois chiche après cuisson	Blanched chickpeas	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	b
2021	5985	Cubes d'aubergine	Eggplant strips	-	-	H+	+	*L. monocytogenes*	+	-	-				-	-	**ND**FN(alt)	**ND**FN(alt)	-		-	**ND**FN(alt)	*L. moncytogenes*	4	b
2021	5990	Petits pois blanchis	Frozen peas	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		4	b
2021	6063	Poêlée parisienne	Vegetable mix	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		4	b
2021	6067	Courgettes cuisinée	Cooked zucchini	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		4	b
2021	6068	Courgettes cuisinée	Cooked zucchini	H+/H-	+	H+/H-	+	*L. monocytogenes / L. seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-		+	**PA**		4	b
2021	5176	Palet chou brocolis	Cooked vegetable mix	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	4	c
2021	5177	Pomme de terre salardaises	Salardaise potatoes	-	-	st	st		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	-	4	c
2021	5180	Mezze chou-fleur	Cooked cauliflower	-	-	-	-		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	**-**	4	c
2021	5181	Houmous citron confit	Hummus	-	-	st	st		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	5182	Houmous bio	Hummus	-	-	-	-		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	**-**	4	c
2021	5183	Epinards branche à la crème	Minced spinach with cream	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	c
2021	5184	Epinards hachés à la crème	Minced spinach with cream	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	c
2021	5185	Barquette mélange de	Cooked vegetable mix	st	st	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	c

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				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
		légumes à la campagnarde																							
2021	**5282**	**Cèleri rémoulade**	**Celery salad**	st	st	st	st		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	**5283**	**Concombre et ciboulette**	**Cucumber salad**	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	**5284**	**Coleslaw**	**Coleslaw**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	c
2021	**5285**	**Betteraves rouges**	**Red beets**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	c
2021	**5286**	**Carottes rapées**	**Grated carrots**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		4	c
2021	**5287**	**Chou rouge**	**Red cabbage salad**	H+/H-d	+	H+/H-d	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		4	c
2021	5983	Patate douce panée	Breaded sweet potato	-	-	st	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	5992	Guacamole	Guacamole	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	**6328**	**Carottes rapées**	**Grated carrots**	H-	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		4	c
2021	**6329**	**Macédoine de légumes**	**Diced mixed vegetables**	H-	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		4	c
2021	**6330**	**Concombres au fromage blanc**	**Cucumber salad**	H-	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		4	c
2021	6331	Carottes râpées	Grated carrots	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	c
2021	6332	Macédoine de légumes	Diced mixed vegetables	st	-	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	c
2021	6333	Concombres au fromage blanc	Cucumber salad	-	-	st	st		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	4	c
2021	7491	Macédoine de légumes	Diced mixed vegetables	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	4	c

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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5665	Lieu noir	Pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5666	Noix de Saint Jacques	Scallop	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	5668	Dos de colin d'Alaska	Pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5671	Langoustines	Langoustines	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	5673	Dos de colin d'Alaska	Pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5838	Dos de colin d'Alaska nature	Pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5840	Portion lieu noir	Pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5844	Crevettes entières	Shrimps	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	5845	Pavé de saumon	Salmon	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	5846	Noix de Saint Jacques	Scallop	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	5977	Pulpe de saumon sauvage	Salmon	st	st	st	-		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	6418	Queue de lotte	Monkfish	st	st	st	-		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	6423	Chair de saumon	Cooked salmon	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+		+	PA		5	a
2021	6424	Crevettes	Shrimps	st	-	sr	-		-	st	-				-	-	NA	NA	-		-	NA	-	5	a
2021	6923	Filet de lotte	Monkfish	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. innocua*	+	+	PA	PA	H+/H-	+	+	PA		5	a
2021	**7181**	**Dos de cabillaud**	**Cod**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	a
2021	**7182**	**Dos de cabillaud**	**Cod**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ jaune	*L. ivanovii*	-	-	NA	NA	H+	-	-	NA	-	5	a
2021	**7392**	**Dos d'églefin**	**Haddock**	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	**7393**	**Filet de lieu noir**	**Pollock**	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	**7577**	**Pavé de truite d'élevage**	**Trout**	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	**7578**	**Filet de queue de cabillaud**	**Cod**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	a
2021	7847	Filet de lieu noir	Pollock	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	a
2021	5664	Brochette de saumon	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	5677	Truite fumée	Smoked trout	H- (1)	st	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H- (1)	H- (1)			*L. welshimeri*	-	-	ND$_{FN(alt)}$	ND$_{FN(alt)}$	H- (1)		-	ND$_{FN(alt)}$	*L. moncytogenes*	5	b
2021	5829	Truite fumée bio	Smoked trout	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	5834	Saumon fumé	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	5835	Saumon fumé	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	5980	Truite fumée	Smoked trout	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	6259	Saumon fumé	Smoked salmon	st	-	H-	+	*L. welshimeri*	-	st	-				-	-	NA	NA	-		-	NA	-	5	b
2021	6410	Truite fumée	Smoked trout	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	5	b
2021	6421	Saumon fumé	Smoked salmon	st	-	sr	-		-	st	sr				-	-	NA	NA	st		-	NA	-	5	b
2021	6425	Saumon fumé	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b

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SEAFOOD AND FISHERY PRODUCTS

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				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	6922	Truite fumée	Smoked trout	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. welshimeri*	+	+	PA	PA	H+/H-	+	+	PA		5	b
2021	7171	Filets de harengs fumés	Smoked herring	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7172	Filets de harengs fumés	Smoked herring	st	st	H-	+		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7173	Truite fumée	Smoked trout	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7174	Truite fumée	Smoked trout	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7175	Saumon fumé	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7176	Saumon fumé	Smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7258	Truite fumée	Smoked trout	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7388	Truite fumée	Smoked trout	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	5	b
2021	7389	Saumon fumé bio	Organic smoked salmon	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	5	b
2021	7390	Maquereaux fumés au poivre	Pepper smoked mackerel	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	5	b
2021	7391	Maquereaux fumés	Smoked mackerel	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	NA	NA	H-		-	NA	-	5	b
2021	7430	Saumon fumé bio	Organic smoked salmon	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7431	Maquereaux fumés	Smoked mackerel	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7432	Maquereaux fumés au poivre	Pepper smoked mackerel	st	st	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	b
2021	7573	Maquereaux au poivre fumés au bois de hêtre	Pepper smoked mackerel	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7574	Harengs fumés au bois de hêtre	Smoked herring	H+/H-	+	H+/H-	+	*L. monocytogenes* / *L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes* / *L. innocua*	+	+	PA	PA	H+/H-	+	+	PA		5	b
2021	7575	Saumon fumé à cuisiner	Smoked salmon	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7576	Truite fumée au bois de hêtre	Smoked trout	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7661	Saumon fumé	Smoked salmon	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7662	Truite fumée	Smoked trout	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7663	Pavé de truite d'élevage	Trout	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	PA	PA	H+	+	+	PA		5	b
2021	7664	Maquereaux au poivre fumés au bois de hêtre	Pepper smoked mackerel	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	5	b
2021	7665	Harengs fumés au bois de hêtre	Smoked herring	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	NA	NA	H-		-	NA	-	5	b
2021	5667	Paupiette de saumon	Salmon paupiette	st	-	st	st		-	st	st				-	-	NA	NA	st		-	NA	-	5	c

SEAFOOD AND FISHERY PRODUCTS																									
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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	5669	Petit poisson pané	Breaded fish	H- (2)	+(2)	H-	+	*L. innocua*	-	H- (1)	H- (1)			*L. innocua*	-	-	**NA**	**NA**	H- (1)		-	**NA**	-	5	c
2021	5670	Pavé poisson napolitaine	Mix of fish and spices	st	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	5672	Pavé colin préparé	Breaded fish	-	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	5	c
2021	5674	Paupiette de saumon moulée	Salmon paupiette	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	5676	Queues de crevettes panées	Breaded shrimp tails	st	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	5828	Chair de tourteaux	Cooked crab	-	-	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	5836	Bâtonnets panés de cabillaud	Breaded cod	st	st	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	5	c
2021	5839	Pavé poisson napolitaine	Mix of fish and spices	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	5842	Pavé de poisson à la bordelaise	Cooked fish	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	5978	Crevettes cuites entières	Cooked shrimps	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	5979	Cubes de colin cuits	Cooked pollock	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	6250	Tartinable de thon	Mix of tuna and cream	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	5	c
2021	6255	Coquille saint jacques à la bretonne	Mix of scallop, cream and vegetables	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	6407	Portion de colin gratinée au fromage	Cooked pollock	-	-	-	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	6412	Colin pané	Cooked pollock	-	-	sr	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	5	c
2021	6415	Colin pané	Cooked pollock	-	-	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	6419	Queues de crevettes panées	Cooked shrimps	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		5	c
2021	6420	Coquille saint jacques à la bretonne	Mix of scallop, cream and vegetables	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	5	c
2021	6422	Coquille saint jacques	Mix of scallop, cream and vegetables	-	-	st	-		-	-	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	6921	Paupiette saumon moulée	Salmon paupiette	-	-	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	5	c
2021	**7177**	**Filet de limande du nord pané**	**Breaded dab**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		5	c
2021	**7178**	**Filet de limande du nord pané**	**Breaded dab**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ jaune	*L. ivanovii*	-	-	**NA**	**NA**	H+	-	-	**NA**	-	5	c

SEAFOOD AND FISHERY PRODUCTS																									
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				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	**7179**	**Crevettes décortiquées prêtes à consommer**	**Ready to eat shrimps**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		5	c
2021	**7180**	**Crevettes décortiquées prêtes à consommer**	**Ready to eat shrimps**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ jaune	*L. ivanovii*	-	-	**NA**	**NA**	H+	-	-	**NA**	-	5	c
2021	**7571**	**Miettes de surimi**	**Surimi**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		5	c
2021	**7572**	**Poisson pané**	**Breaded fish**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		5	c

ENVIRONMENTAL SAMPLES

Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦ Half Fraser AL	Half Fraser PALCAM	Fraser AL	Fraser PALCAM	Identifications	Result	Alternative method: Agar Listeria (AL) for 18h at 30°C AL 22 h	AL 48 h	Confirmation Rhamnose	Confirmation RLM	Identification (ISO tests)	Result L.mono 22 h	Result L.mono 48 h	Agreement 22 h	Agreement 48 h	AL 48 h + 72 h at 5 ± 3°C AL	AL 48 h + 72 h at 5 ± 3°C Rhamnose	Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples	Category	Type
2021	**4982**	**Déchets poulet poussoir**	**Chicken residues**	H+/H-	+	H+/H-	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	a
2021	**4983**	**Déchets poulet mélangeur**	**Chicken residues**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	6	a
2021	4984	Déchets sol découpe bœuf	Beef residues	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	a
2021	4985	Déchets sol viande hachée surgelée	Beef residues	H+	+	H+	+	*L. monocytogenes*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	a
2021	4986	Déchets sol viande piecée tranchée	Beef residues	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	a
2021	4987	Déchets sol découpe porc	Pork residues	H-	+	H-	+	*L. innocua*	-	H-	H-			*L. innocua*	-	-	**NA**	**NA**	H-		-	**NA**	-	6	a
2021	5991	Matière bac déchet	Vegetable residues	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+		+	**PA**		6	a
2021	**6541**	**Résidus crème glacée homogénéisateur**	**Ice cream residues**	st	st	st	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	6	a
2021	**6542**	**Déchets sol crème glacée**	**Ice cream residues**	st	-	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	**6543**	**Résidus crème glacée mélangeur**	**Ice cream residues**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	**6544**	**Résidus queues topping**	**Salmon residues**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	a
2021	**6545**	**Résidus matière parage**	**Salmon residues**	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	a
2021	**6739**	**Résidus crème glacée homogénéisateur**	**Ice cream residues**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	**6740**	**Résidus crème glacée pasteurisateur**	**Ice cream residues**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	**6741**	**Déchets sol crème glacée**	**Ice cream residues**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	7424	Déchets poulet bac récupération (environnement plats préparés)	Chicken residues (ready prepared dish environment)	st	st	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	**7428**	**Déchets darne de saumon avant fumage**	**Salmon residues**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	a
2021	**7429**	**Déchets queues topping avant fumage**	**Salmon residues**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	a
2021	7849	Déchets de saumon après fumage	Salmon residues	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	7850	Déchets production de glace	Ice cream residues	-	-	-	-		-	st	-				-	-	**NA**	**NA**	-		-	**NA**	-	6	a
2021	7852	Résidu mélangeur poulet	Chicken residues	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a
2021	7856	Déchets abattoir porc	Pork residues	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	a

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

ENVIRONMENTAL SAMPLES																									
				Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C															
				Half Fraser		Fraser						Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C						
Date of analysis	Sample number	Product (French name)	Product	AL	PALCAM	AL	PALCAM	Identifications	Result	AL 22 h	AL 48 h	Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose	Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples	Category	Type
2021	**4976**	**Eau de process**	**Process water (pork/beef environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**4977**	**Eau de process**	**Process water (pork/beef environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	b
2021	**4978**	**Eau bac échaudage abattoir porc**	**Process water (pork/beef environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	b
2021	**4979**	**Eau du tunnel de lavage abattoir porc**	**Process water (pork/beef environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**4980**	**Eau du tunnel de lavage abattoir bœuf**	**Process water (pork/beef environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	b
2021	**4981**	**Eau dégrossissage bonde découpe bœuf**	**Cleaning water (pork/beef environment)**	H-	+	H-	+	*L. welshimeri*	-	H-	H-			*L. welshimeri*	-	-	**NA**	**NA**	H-		-	**NA**	-	6	b
2021	**4988**	**Eau dégrossissage poussoir**	**Cleaning water (chicken environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	**4989**	**Eau dégrossissage mélangeur**	**Cleaning water (chicken environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	5189	Eau de process charcuterie	Process water (pork environment)	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	**5280**	**Eau de nettoyage**	**Cleaning water (seafood environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	**5281**	**Eau de rinçage**	**Cleaning water (seafood environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**6550**	**Eau de rinçage homogénéisateur**	**Cleaning water (dairy environment)**	st	st	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**6551**	**Eau de process**	**Process water (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	**6552**	**Eau épileuse**	**Process water (pork/beef environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L. innocua*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. innocua*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	b
2021	**7584**	**Eau du tunnel de lavage abattoir porc**	**Process water (pork/beef environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**7585**	**Eau bac échaudage abattoir porc**	**Process water (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	b
2021	7851	Eau de nettoyage poussoir poulet	Cleaning water (chicken environment)	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	7853	Eau après rinçage (29)	Cleaning water (pork/beef environment)	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b

ENVIRONMENTAL SAMPLES																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	7854	Eau après désinfection (28)	Cleaning water (pork/beef environment)	sr	sr	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	7855	Eau après détergent (27)	Cleaning water (pork/beef environment)	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	b
2021	**4967**	**Chiffonnette couteau découpe poulet**	**Wipe (chicken environment)**	H+	+	H+	+	*L. ivanovii*	-	H+	H+	-	+ (jaune)	*L. ivanovii*	-	-	**NA**	**NA**	H+	-	-	**NA**	-	6	c
2021	**4968**	**Chiffonnette table découpe poulet**	**Wipe (chicken environment)**	H+/H-	+	H+	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	c
2021	**4969**	**Chiffonnette mélangeur**	**Wipe (chicken environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**4970**	**Chiffonnette sol atelier**	**Wipe (chicken environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L. welshimeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L. welshimeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	c
2021	**4971**	**Chiffonnette broyeur poulet**	**Wipe (chicken environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**4972**	**Chiffonnette table parage des joues (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**4973**	**Chiffonnette découpe porc ligne longe (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	H+/H-	+	H+/H-	+	*L. monocytogenes / L seeligeri*	+	H+/H-	H+/H-	+	+	*L. monocytogenes / L seeligeri*	+	+	**PA**	**PA**	H+/H-	+	+	**PA**		6	c
2021	**4974**	**Chiffonnette découpe porc ligne poitrine (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**4975**	**Chiffonnette table transfert (après désinfection)**	**Wipe after cleaning process (pork/beef environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**6546**	**Chiffonnette trancheur DF1 après désinfection**	**Wipe after cleaning process (seafood environment)**	st	st	st	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**6547**	**Chiffonnette tapis trancheur après désinfection**	**Wipe after cleaning process (seafood environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**6548**	**Chiffonnette mélangeur avant nettoyage**	**Wipe (dairy environment)**	st	-	-	-		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**6549**	**Chiffonnette freezer avant nettoyage**	**Wipe (dairy environment)**	st	-	-	-		-	st	-				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**6736**	**Chiffonnette mélangeur avant nettoyage**	**Wipe (dairy environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**6737**	**Chiffonnette balance avant nettoyage**	**Wipe (dairy environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c

ENVIRONMENTAL SAMPLES																									
Date of analysis	Sample number	Product (French name)	Product	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL) for 18h at 30°C														Category	Type
				Half Fraser		Fraser		Identifications	Result	AL 22 h	AL 48 h	Confirmation			Result L.mono		Agreement		AL 48 h + 72 h at 5 ± 3°C		Result L mono AL 72 h 5°C	Agreement L mono AL 72 h	Subculture in Fraser broth and streaking on PALCAM/AL for negative samples		
				AL	PALCAM	AL	PALCAM					Rhamnose	RLM	Identification (ISO tests)	22 h	48 h	22 h	48 h	AL	Rhamnose					
2021	**6738**	**Chiffonnette homogénéisateur avant nettoyage**	**Wipe (dairy environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**7425**	**Chiffonnette trancheur CP4 après désinfection**	**Wipe (ready prepared dish environment)**	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c
2021	**7426**	**Chiffonnette trancheur n°19 après désinfection**	**Wipe (ready prepared dish environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**7427**	**Eponge tapis vers multivac**	**Sponge (ready prepared dish environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**7586**	**Chiffonnette découpe porc ligne longe (avant désinfection)**	**Wipe before cleaning process (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+ (2)	H+ (2)	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	**7587**	**Chiffonnette découpe primaire ligne porc**	**Wipe (pork/beef environment)**	H+	+	H+	+	*L. monocytogenes*	+	H+	H+	+	+	*L. monocytogenes*	+	+	**PA**	**PA**	H+	+	+	**PA**		6	c
2021	7848	Chiffonnette trancheur tapis pesée après désinfection	Wipe (seafood environment)	st	st	st	st		-	st	st				-	-	**NA**	**NA**	st		-	**NA**	-	6	c

Appendix 11 – Relative level of detection study: raw data (Extension study, 2022 - ADRIA Développement)

Deli-salad (Piemontaise)
Strain : *L. monocytogenes* Ad494 Total viable count : 1,7.10^4 CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
5755	0	0	st	st	st	st	-	0/5	st	st		-	-	0/5	0/5
5756			st	st	st	st	-		st	st		-	-		
5757			st	st	st	st	-		st	st		-	-		
5758			st	st	st	st	-		st	st		-	-		
5759			st	st	st	st	-		st	st		-	-		
5771	1	0,7	H+	+	H+	+	+	13/20	H+	H+	*L. monocytogenes*	+	+	13/20	13/20
5772			st	st	st	st	-		st	st		-	-		
5773			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5774			st	st	st	st	-		st	st		-	-		
5775			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5776			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5777			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5778			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5779			st	st	st	st	-		st	st		-	-		
5780			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5781			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5782			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5783			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5784			st	st	st	st	-		st	st		-	-		
5785			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5786			st	st	st	st	-		st	st		-	-		
5787			st	st	st	st	-		st	st		-	-		
5788			st	st	st	st	-		st	st		-	-		
5789			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5790			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5791	2	3,0	H+	+	H+	+	+	5/5	H+	H+	*L. monocytogenes*	+	+	5/5	5/5
5792			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5793			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5794			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5795			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Rillettes

Strain : *L. monocytogenes* Ad669 Total viable count : < 10 CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1 ♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
5876			st	st	st	st	-		st	st		-	-		
5877			st	st	st	st	-		st	st		-	-		
5878	0	0	st	st	st	st	-	0/5	st	st		-	-	0/5	0/5
5879			st	st	st	st	-		st	st		-	-		
5880			st	st	st	st	-		st	st		-	-		
5881			st	st	st	st	-		st	st		-	-		
5882			st	st	st	st	-		st	st		-	-		
5883			st	st	st	st	-		st	st		-	-		
5884			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5885			st	st	st	st	-		st	st		-	-		
5886			st	st	st	st	-		st	st		-	-		
5887			st	st	st	st	-		st	st		-	-		
5888			st	st	st	st	-		st	st		-	-		
5889			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5890	1	0,75	H+	+	H+	+	+	8/20	H+	H+	*L. monocytogenes*	+	+	8/20	8/20
5891			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5892			st	st	st	st	-		st	st		-	-		
5893			st	st	st	st	-		st	st		-	-		
5894			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5895			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5896			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5897			st	st	st	st	-		st	st		-	-		
5898			st	st	st	st	-		st	st		-	-		
5899			st	st	st	st	-		st	st		-	-		
5900			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5901			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5902			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5903	2	2,9	H+	+	H+	+	+	5/5	H+	H+	*L. monocytogenes*	+	+	5/5	5/5
5904			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5905			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Raw milk
Strain : *L. monocytogenes* Ad618 Total viable count : 5,7.10^4 CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1 ♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
6400	0	0	st	-	st	-	-	0/5	st	st		-	-	0/5	0/5
6401			st	-	st	-	-		st	st		-	-		
6402			st	-	st	-	-		st	st		-	-		
6403			st	-	st	-	-		st	st		-	-		
6404			st	-	st	-	-		st	st		-	-		
6431	1	0,8	st	-	st	-	-	11/20	st	st		-	-	11/20	11/20
6432			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6433			st	-	st	-	-		st	st		-	-		
6434			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6435			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6436			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6437			st	-	st	-	-		st	st		-	-		
6438			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6439			st	-	st	-	-		st	st		-	-		
6440			st	-	st	-	-		st	st		-	-		
6441			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6442			st	-	st	-	-		st	st		-	-		
6443			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6444			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6445			st	-	st	-	-		st	st		-	-		
6446			st	-	st	-	-		st	st		-	-		
6447			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6448			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6449			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6450			st	-	st	-	-		st	st		-	-		
6451	2	3,8	H+	+	H+	+	+	5/5	H+	+	*L. monocytogenes*	+	+	5/5	5/5
6452			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6453			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6454			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		
6455			H+	+	H+	+	+		H+	+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Cantaloupe (frozen balls)
Strain : *L. monocytogenes* Ad532 Total viable count : $1,4.10^{6}$ CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1 ♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
6266	0	0	st	st	st	st	-	0/5	st	st		-	-	0/5	0/5
6267			st	st	st	st	-		st	st		-	-		
6268			st	st	st	st	-		st	st		-	-		
6269			st	st	st	st	-		st	st		-	-		
6270			st	st	st	st	-		st	st		-	-		
6303	1	0,8	st	st	st	st	-	10/20	st	st		-	-	10/20	10/20
6304			H+	+	H+	+	+		H+ (1)	H+ (1)	*L. monocytogenes*	+	+		
6305			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6306			st	st	st	st	-		st	st		-	-		
6307			st	st	st	st	-		st	st		-	-		
6308			st	st	st	st	-		st	st		-	-		
6309			st	st	st	st	-		st	st		-	-		
6310			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6311			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6312			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6313			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6314			st	st	st	st	-		st	st		-	-		
6315			st	st	st	st	-		st	st		-	-		
6316			st	st	st	st	-		st	st		-	-		
6317			st	st	st	st	-		st	st		-	-		
6318			st	st	st	st	-		st	st		-	-		
6319			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6320			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6321			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6322			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6323	2	3,2	H+	+	H+	+	+	5/5	H+	H+	*L. monocytogenes*	+	+	5/5	5/5
6324			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6325			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6326			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6327			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Smoked salmon
Strain : *L. monocytogenes* Ad670 Total viable count : $1,6.10^5$ CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1 ♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
6052	0	0	st	st	st	st	-	0/5	st	st		-	-	0/5	0/5
6053			st	st	st	st	-		st	st		-	-		
6054			st	st	st	st	-		st	st		-	-		
6055			st	st	st	st	-		st	st		-	-		
6056			st	st	st	st	-		st	st		-	-		
6094	1	0,8	st	st	st	st	-	8/20	st	st		-	-	8/20	8/20
6095			st	st	st	st	-		st	st		-	-		
6096			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6097			st	st	st	st	-		st	st		-	-		
6098			st	st	st	st	-		st	st		-	-		
6099			st	st	st	st	-		st	st		-	-		
6100			st	st	st	st	-		st	st		-	-		
6101			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6102			st	st	st	st	-		st	st		-	-		
6103			st	st	st	st	-		st	st		-	-		
6104			st	st	st	st	-		st	st		-	-		
6105			st	st	st	st	-		st	st		-	-		
6106			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6107			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6108			st	st	st	st	-		st	st		-	-		
6109			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6110			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6111			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6112			st	st	st	st	-		st	st		-	-		
6113			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6114	2	3,5	H+	+	H+	+	+	5/5	H+	H+	*L. monocytogenes*	+	+	5/5	5/5
6115			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6116			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6117			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
6118			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Process water

Strain : *L. monocytogenes* Ad551 Total viable count : 300 CFU/g

Sample n°	Level	Inoculation level (CFU/sample)	Reference method ISO 11290-1 ♦						Alternative method: Agar Listeria (AL)						
			Half Fraser		Fraser		Final result	Positive Results/Total	22 h	48 h	Confirmation	Final Result		Positive Results/Total	
			AL	Palcam	AL	Palcam						22 h	48 h	22 h	48 h
4909			st	st	st	st	-		st	st		-	-		
4910			st	st	st	st	-		st	st		-	-		
4911	0	0	st	st	st	st	-	0/5	st	st		-	-	0/5	0/5
4912			st	st	st	st	-		st	st		-	-		
4913			st	st	st	st	-		st	st		-	-		
5092			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5093			st	st			-		st	st		-	-		
5094			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5095			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5096							-		st	st		-	-		
5097							-		st	st		-	-		
5098			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5099									st	st		-	-		
5100			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5101	1	0,9	H+	+	H+	+	+	12/20	H+	H+	*L. monocytogenes*	+	+	12/20	12/20
5102									st	st		-	-		
5103									st	st		-	-		
5104			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5105			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5106			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5107									st	st		-	-		
5108			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5109			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
5110									st	st		-	-		
5111			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
4962			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
4963			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
4964	2	2,5	H+	+	H+	+	+	5/5	H+	H+	*L. monocytogenes*	+	+	5/5	5/5
4965			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		
4966			H+	+	H+	+	+		H+	H+	*L. monocytogenes*	+	+		

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)