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NF VALIDATION
Validation of alternative analytical methods
Application in food microbiology

Summary report

Validation study according to the EN ISO 16140-2:2016

Solus One *Listeria*

(Certificate number: SOL 37/06 - 10/23)

for the detection of *Listeria* spp. in a broad range of foods and production environmental samples

Qualitative method

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This report consists of 98 pages, including 7 appendices.
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Quality Assurance documents related to this study can be consulted upon request from **SOLUS SCIENTIFIC SOLUTIONS Ltd**.

The technical protocol and the result interpretation were carried out according to the EN ISO 16140-2:2016 and the AFNOR technical rules (PR Revision 7).

Validation protocols	▪ ISO 16140-1 (2016): Microbiology of the food chain - Method validation — *Part 1: Vocabulary* ▪ ISO 16140-2 (2016): Microbiology of the food chain - Method validation — *Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method* ▪ AFNOR technical rules (PR Revision 7)
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	**Solus One *Listeria***
Scope	☒ **Broad range of foods** ☒ **Production environmental samples**
Certification organism	AFNOR Certification (http://nf-validation.afnor.org/)

♦ Analyses performed according to the COFRAC accreditation

1 INTRODUCTION

The Solus One *Listeria* method was validated in October 2023 for the detection of *Listeria* spp. in a broad range of foods and production environmental samples with the certificate number SOL 37/06 - 10/23.

2 METHOD PROTOCOLS

2.1 Alternative method

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

2.1.1 Principle

The Solus One *Listeria* method is based on an ELISA test and provides a negative or a presumptive positive result from a single enrichment step.

2.1.2 Protocol

The protocol is the following:

- Enrichment step:
  - Foods: 25 g + 225 ml in Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 - 30 h at 30°C ± 1°C.
  - Production environmental samples:
    - Swabs +10 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 - 30 h at 30°C ± 1°C
    - Sponges + 100 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 - 30 h at 30°C ± 1°C
    - Wipe + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 - 30 h at 30°C ± 1°C
    - Dusts, residues, cleaning, and process waters: 25 g or ml + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 - 30 h at 30°C ± 1°C
- Heat treatment of an aliquot of the enrichment broth (15 - 20 min at 85 - 100°C); Cool at ambient temperature (18-25°C)
- Filter the sample using the frit filters to prevent pipetting issues when using the Dynex DS2 instrument.

- ELISA test using an automatic ELISA equipment. The Optical density measurement is carried out at 450 nm.

- Confirmation of the positive results on the non-heat-inactivated SOLE broth:
  - Using the conventional tests described in the standardised methods by CEN or ISO including the purification step.
  - By streaking 100 µl of the non-heated SOLE Broth onto O&A or Palcam plates. The only presence of typical colonies allows to confirm the positive ELISA tests.

It is possible to store the SOLE enriched broths for 72 h at 5°C ± 3°C.

2.1.3 Interpretation of results

Negative control OD_{450}	< 0.100	Accepted
Positive control OD_{450}	> 0.500	Accepted
Sample OD_{450} - Blank	< 0.200	Negative
Sample OD_{450} - Blank	≥ 0.200	Presumptive positive

2.1.4 Restrictions

There is no restriction for use.

2.2 Reference method◆

The reference method is the 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 (See **Appendix 2**).

2.3 Study design

The study is **an unpaired study design** as the reference and the alternative methods have different enrichment procedures.

◆ Analysis performed according to the COFRAC accreditation

3 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 diversity of samples and strains representative of agri-food products. This does not constitute an exhaustive list of the different matrices included in the scope.

3.1 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 Number and nature of samples

382 samples were analysed providing 192 positive and 190 negative results.
The distribution per tested category and type is given in Table 1.

Table 1 – Distribution per tested category and type

Category		Type		Positive	Negative	Total
1	Composite foods / Ready-to-eat and ready-to-reheat	a	Ready-to-eat	10	10	20
		b	Ready-to-reheat	11	9	20
		c	Confectionaries, pastries and egg products	10	10	20
			Total	**31**	**29**	**60**
2	Meat products	a	Raw products (frozen or fresh)	13	7	20
		b	Meat based products ready to reheat	10	10	20
		c	Raw and cooked delicatessen	10	10	20
			Total	**33**	**27**	**60**
3	Milk & dairy products	a	Raw milk cheeses	7	13	20
		b	Other products based on raw milk	17	8	25
		c	Heat treated products	9	11	20
			Total	**33**	**32**	**65**
4	Vegetables	a	Raw products (fresh and frozen)	11	9	20
		b	Pre-cooked vegetables, vegetables under modified atmosphere	10	12	22
		c	RTE	10	12	22
			Total	**31**	**33**	**64**
5	Seafood and fish products	a	Raw products (fresh and frozen)	11	9	20
		b	Cured & smoked	10	10	20
		c	RTE, Ready to reheat	11	9	20
			Total	**32**	**28**	**60**
6	Environmental Samples	a	Dusts and Residues	11	9	20
		b	Cleaning and Process Waters	11	13	24
		c	Surface samples	10	19	29
			Total	**32**	**41**	**73**
All categories				**192**	**190**	**382**

The distribution per target analytes is given in Table 2.

Table 2 – Distribution per target analytes

Category	*Listeria spp* (A)		*Listeria spp* + *Listeria monocytogenes* (B)		Total (A+B)		*Listeria monocytogenes* (C)		Total positive samples
	Number of samples	%	Number of samples	%	Number of samples	%	Number of samples	%	
1	13	41,9%	5	16,1%	18	58,1%	13	41,9%	31
2	14	42,4%	6	18,2%	20	60,6%	13	39,4%	33
3	18	54,5%	0	0,0%	18	54,5%	15	45,5%	33
4	15	48,4%	6	19,4%	21	67,7%	10	32,3%	31
5	11	34,4%	4	12,5%	15	46,9%	17	53,1%	32
6	16	50,0%	4	12,5%	20	62,5%	12	37,5%	32
Total	**87**	**45,3%**	**25**	**13,0%**	**112**	**58,3%**	**80**	**41,7%**	**192**

According to the AFNOR technical rules, the number of samples contaminated with *Listeria* spp. and *Listeria monocytogenes* per category must be comprised between 15 and 25 samples; which is the case for all the categories.

3.1.2 Artificial contamination of samples

Artificial contaminations were done using the seeding protocol (storage for 48 h at 5°C ± 3°C). The same strain was not used to inoculate more than 6 samples.
The artificial contaminations are presented in **Appendix 3**.

The repartition of the positive samples per inoculation protocol and inoculation level is given in Table 3.

Table 3 - Repartition of the positive samples per inoculation protocol and inoculation level

	Naturally contaminated	Seeding protocol		Total
		≤ 3 CFU	3 < x ≤ 10 CFU	
Number of samples	100	72	20	192
%	52,1	37,5	10,4	100,0

109 samples were artificially contaminated, using 57 different strains. 92 gave a positive result. 37.5 % of samples were inoculated at level ≤ 3.0 CFU and 10.4 % were inoculated between 3.2 and 5.0 CFU.

52.1 % of the samples were naturally contaminated.

3.1.3 Protocols applied during the validation study

- ***Enrichment broth incubation time***

The SOLE broths were incubated at the minimum incubation time, for 26 h at 30°C.

- ***ELISA test protocol***

Automatic equipment ELISA was used: the Dynex DS2 with the software DS-Matrix 1.34.1.

- ***Confirmation protocols***

For all samples, positive and negative, the non-heated enriched SOLE broth (100 µl) was streaked onto O&A and Palcam plates. The presence of only typical colonies on the plates allows confirmation of the positive ELISA tests but during the validation, typical colonies were confirmed by biochemical tests on isolated colonies without a purification step (gram, catalase and biochemical gallery MICROGEN Listeria-ID).

For the samples in negative agreement (NA), as the incubation time for the alternative method is lower than the incubation time for the reference method, a subculture of the SOLE broth (0.1 ml) was performed in Full Fraser broth (10 ml) for 24h ± 3 h at 37°C ± 1°C before streaking 10µl onto O&A and Palcam plates to be in agreement with ISO 16140-2 requirements.

- ***Enrichment broth storage 72 h at 5°C ± 3°C***

The enriched SOLE broths from positive and discordant samples were stored for 72 h at 5°C ± 3°C and tested again (ELISA and confirmatory tests).

3.1.4 Test results

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

Table 4 – Interpretation of sample results between the reference and alternative method (based on the confirmed alternative method results)

Category		PA	NA*	PD	ND**	PPND	PPNA	Total
1	Composite foods / Ready-to-eat and ready-to-reheat	22	29	3	6	0	0	**60**
2	Meat products	21	27	5	7	0	0	**60**
3	Milk & dairy products	26	32	5	2	0	0	**65**
4	Vegetables	22	33	3	6	0	0	**64**
5	Seafood and fish products	25	28	4	3	0	0	**60**
6	Environmental samples	24	41	4	4	0	0	**73**
All categories		**140**	**190**	**24**	**28**	**0**	**0**	**382**

* PPNA not included
** PPND not included
PP: positive presumptive non-confirmed samples
PD = positive deviation (R-/A+)
ND = negative deviation (R+/A-)
PA = positive agreement (R+/A-)
NA = negative agreement (R-/A-)

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

The calculations are presented in Table 5.

Table 5 – Calculation of the relative trueness (RT), the sensitivity (SE) and the false positive ratio (FPR)

Category		Type		PA	NA*	PD	ND**	PPND	PPNA	SE $_{alt}$ %	SE $_{ref}$ %	RT %	FPR %
1	Composite foods / Ready-to-eat and ready-to-reheat	a	Ready-to-eat	6	10	2	2	0	0	80,0	80,0	80,0	0,0
		b	Ready-to-reheat	7	9	1	3	0	0	72,7	90,9	80,0	0,0
		c	Confectionaries, pastries and egg products	9	10	0	1	0	0	90,0	100,0	95,0	0,0
			Total	**22**	**29**	**3**	**6**	**0**	**0**	**80,6**	**90,3**	**85,0**	**0,0**
2	Meat products	a	Raw products (frozen or fresh)	10	7	1	2	0	0	84,6	92,3	85,0	0,0
		b	Meat based products ready to reheat	6	10	2	2	0	0	80,0	80,0	80,0	0,0
		c	Raw and cooked delicatessen	5	10	2	3	0	0	70,0	80,0	75,0	0,0
			Total	**21**	**27**	**5**	**7**	**0**	**0**	**78,8**	**84,8**	**80,0**	**0,0**
3	Milk & dairy products	a	Raw milk cheeses	5	13	2	0	0	0	100,0	71,4	90,0	0,0
		b	Other products based on raw milk	12	8	3	2	0	0	88,2	82,4	80,0	0,0
		c	Heat treated products	9	11	0	0	0	0	100,0	100,0	100,0	0,0
			Total	**26**	**32**	**5**	**2**	**0**	**0**	**93,9**	**84,8**	**89,2**	**0,0**
4	Vegetables	a	Raw products (fresh and frozen)	7	9	2	2	0	0	81,8	81,8	80,0	0,0
		b	Pre-cooked vegetables, vegetables under modified atmosphere	7	12	1	2	0	0	80,0	90,0	86,4	0,0
		c	RTE	8	12	0	2	0	0	80,0	100,0	90,9	0,0
			Total	**22**	**33**	**3**	**6**	**0**	**0**	**80,6**	**90,3**	**85,9**	**0,0**
5	Seafood and fish products	a	Raw products (fresh and frozen)	7	9	1	3	0	0	72,7	90,9	80,0	0,0
		b	Cured & smoked	10	10	0	0	0	0	100,0	100,0	100,0	0,0
		c	RTE, Ready to reheat	8	9	3	0	0	0	100,0	72,7	85,0	0,0
			Total	**25**	**28**	**4**	**3**	**0**	**0**	**90,6**	**87,5**	**88,3**	**0,0**
6	Environmental Samples	a	Dusts and Residues	6	9	3	2	0	0	81,8	72,7	75,0	0,0
		b	Cleaning and Process Waters	10	13	0	1	0	0	90,9	100,0	95,8	0,0
		c	Surface samples	8	19	1	1	0	0	90,0	90,0	93,1	0,0
			Total	**24**	**41**	**4**	**4**	**0**	**0**	**87,5**	**87,5**	**89,0**	**0,0**
All categories				**140**	**190**	**24**	**28**	**0**	**0**	**85,4**	**87,5**	**86,4**	**0,0**

* PPNA not included ** PPND not included

A summary of the results is given in Table 6.

Table 6 - Summary of results

Sensitivity for the alternative method	$SE_{alt} = \frac{(PA+PD)}{(PA+ND+PD)} \times 100\%$	**85.4 %**
Sensitivity for the reference method	$SE_{ref} = \frac{(PA+ND)}{(PA+ND+PD)} x\ 100\ \%$	**87.5 %**
Relative trueness	$RT = \frac{(PA+NA)}{N} \times 100\%$	**86.4 %**
False positive ratio for the alternative method* FP = PPNA + PPND	$FPR = \frac{(FP)}{NA} \times 100\%$	**0.0 %**

With ND = ND + PPND NA = NA + PPNA

3.1.6 Analysis of discordant results

The negative deviations are given in Table 7 and the positive deviations in Table 8.

> **Negative deviations**

- 28 negative deviations were observed for the overall categories, 20 on naturally contaminated samples and 8 on artificially contaminated samples.

- The presence of *Listeria* spp. strains was not confirmed for 21 samples. These discordant results were probably due to the unpaired study design and the related sampling heterogeneity.

- For 3 samples (#2631, 2634 and 3283) the confirmatory tests (streaking 100 µl onto O&A and Palcam plates) confirmed the presence of *Listeria* spp. in enriched SOLE broth; the heat treatment was tested twice and only one positive ELISA test was obtained for sample #2634 (O.D. 0,212).
  For these samples, the detection limit of the alternative method was probably not reached.

- For samples #2161, 2546, 2355 and 3265, a subculture of the enriched SOLE broth in Full Fraser broth prior streaking onto selective agar plates allowed to confirm the presence of *Listeria spp.* in the sample.

For 4 samples in **negative agreement** (See Table 9), the presence of *Listeria* spp. was confirmed:

- By the confirmatory tests of the alternative method (streaking 100µl onto O&A and Palcam plates) for 3 samples (#2163, 2476 and 3129)

- By the additional confirmatory tests (subculture in Full Fraser) for 1 sample (#2027).

Positive deviations

24 positive deviations were observed; 18 concerned naturally contaminated samples and 6 artificially contaminated samples.

12 samples were contaminated with *Listeria monocytogenes* and 12 with *Listeria* spp. different from *Listeria monocytogenes*.

Table 7 - Negative deviations

N° Sample	Product	Inoculated strain	Inoculation level	ISO 11290-1♦ result	Optical Density (O.D.)	Solus ELISA result	Confirmation	Final result	Agreement	Subculture in Full Fraser	Category	Type
2634	RTE (Sandwich tuna vegetables)	/	/	*L. monocytogenes*	0,187 /0,212/ 0,198	-/+/-	*L. monocytogenes*	-	ND	+	1	a
2739	**RTE (Salad with pasta and fish)**	*L. seeligeri* Ad1754	2,6	*L. seeligeri*	0,009	-	-	-	ND	-	1	a
1942	RTRH chicken meat (Buffalo wings cooked)	/	/	*L. monocytogenes*	0,011	-	-	-	ND	-	1	b
2161	RTRH (Paella)	/	/	*L. welshimeri*	0,005	-	-	-	ND	*L. seeligeri*	1	b
2538	RTRT (Paella)	/	/	*L. monocytogenes*	0,015	-	-	-	ND	-	1	b
2463	**Custard**	*L. monocytogenes* Ad195	2,0	*L. seeligeri*	0,042	-	-	-	ND	-	1	c
2158	Turkey meat	/	/	*L. monocytogenes*	0,012	-	-	-	ND	-	2	a
3130	Fresh turkey meat	/	/	*L. monocytogenes*	0,014	-	-	-	ND	-	2	a
1936	RTRH (cooked chicken sausages)	/	/	*L. welshimeri*	0,006	-	-	-	ND	-	2	b
2595	RTRH (turkey meat)	/	/	*L. welshimeri*	0,010	-	-	-	ND	-	2	b
2288	Sausage	/	/	*L. innocua*	0,006	-	-	-	ND	-	2	c
2290	Dry sausage	/	/	*L. monocytogenes*	0,013	-	-	-	ND	-	2	c
2631	Merguez	/	/	*L. monocytogenes*	0,049/ 0,047/ 0,034	-/-/-	*L. welshimeri*	-	ND	+	2	c
2990	**Raw cow milk**	*L. innocua* Ad1789	0,6	*L. monocytogenes*	0,010	-	-	-	ND	-	3	b
3283	**Raw goat milk**	*L. ivanovii* Ad1748	3,8	*L. monocytogenes*	0,197/ 0,140/ 0,120	-/-/-	*L. ivanovii*	-	ND	+	3	b
2546	Chive	/	/	*L. monocytogenes*	0,007/ 0,026/ 0,017	-/-/-	-	-	ND	*L. monocytogenes*/ *L. seeligeri*	4	a

♦ Analyses performed according to the COFRAC accreditation

N° Sample	Product	Inoculated strain	Inoculation level	ISO 11290-1♦ result	Optical Density (O.D.)	Solus ELISA result	Confirmation	Final result	Agreement	Subculture in Full Fraser	Category	Type
2547	Parsley	/	/	*L. welshimeri*	0,002	-	-	-	**ND**	-	4	a
2032	Pan-fried vegetables mix	/	/	*L. ivanovii*	0,008	-	-	-	**ND**	-	4	b
2600	Cooked spinach	/	/	*L. monocytogenes*	0,019	-	-	-	**ND**	-	4	b
2261	RTRH (Mezze)	/	/	*L. monocytogenes*	0,008	-	-	-	**ND**	-	4	c
2376	RTE (cooked vegetables)	/	/	*L. monocytogenes*	0,013	-	-	-	**ND**	-	4	c
2258	Raw fish	/	/	*L. monocytogenes*	0,006	-	-	-	**ND**	-	5	a
2273	Shrimps	/	/	*L. welshimeri*	0,001	-	-	-	**ND**	-	5	a
2355	Salmon	/	/	*L. welshimeri*	0,073/ 0,058/ 0,053	-/-/-	-	-	**ND**	*L. monocytogenes/ L. innocua*	5	a
3265	**Wastes (Knack)**	*L. welshimeri* Ad1252	4,4	*L. innocua*	0,016/ 0,007/ 0,008	-/-/-	-	-	**ND**	*L. welshimeri*	6	a
3266	**Wastes (Knack)**	*L. innocua* Ad1256	3,0	*L. innocua*	0,003	-	-	-	**ND**	-	6	a
3495	**Process water (algae)**	*L. monocytogenes* Ad2503 + *L. welshimeri* Ad1668	0,4 +1,8	*L. innocua*	0,003	-	-	-	**ND**	-	6	b
2829	**Sponge before cleaning (vegetables)**	*L. innocua* Ad3269	0,6	*L. innocua*	0,019	-	-	-	**ND**	-	6	c

Table 8 - Positive deviations

N° Sample	Product	Inoculated strain	Inoculation level	Optical density (O.D.)	Solus ELISA result	Confirmation	Final result	Agreement	Category	Type
2374	RTE (Sandwich cheese and ham)	/	/	3,000	+	*L. welshimeri*	+	PD	1	a
2740	**RTE (Sandwich tuna, egg, salad)**	*L. welshimeri* Ad3251	2,4	3,000	+	*L. welshimeri*	+	PD	1	a
2153	RTRH (Soy, spinach, cheese)	/	/	3,000	+	*L. monocytogenes*	+	PD	1	b
2171	Frozen turkey meat	/	/	0,716	+	*L. welshimeri*	+	PD	2	a
2468	**RTRH (pork)**	*L. innocua* Ad671	0,8	3,000	+	*L. innocua*	+	PD	2	b
2529	RTRH (chicken meat)	/	/	3,000	+	*L. monocytogenes*	+	PD	2	b
2175	Smoked poultry meat	/	/	3,000	+	*L. monocytogenes*	+	PD	2	c
2284	Cooked sliced pork	/	/	3,000	+	*L. monocytogenes*	+	PD	2	c
2296	Raw cow milk cheese	/	/	3,000	+	*L. monocytogenes*	+	PD	3	a
2987	**Raw cow milk cheese**	*L. welshimeri* Ad1667	3,2	1,109	+	*L. welshimeri*	+	PD	3	a
2303	Raw ewe milk	/	/	0,745	+	*L. monocytogenes*	+	PD	3	b
2619	Raw cow milk	/	/	3,000	+	*L. innocua*	+	PD	3	b
3502	Raw cow milk cheese	/	/	3,000	+	*L. innocua*	+	PD	3	b
2043	Organic beans	/	/	3,000	+	*L. innocua*	+	PD	4	a
2544	Parsley	/	/	3,000	+	*L. innocua*	+	PD	4	a
2611	Cooked potatoes	/	/	3,000	+	*L. monocytogenes*	+	PD	4	b
2992	**Raw fish fillet**	*L. seeligeri* Ad3289	1,8	3,000	+	*L. seeligeri*	+	PD	5	a
1934	RTRH fish meal	/	/	3,000	+	*L. monocytogenes*	+	PD	5	c
1944	RTRH fish meal (Cooked scallops)	/	/	1,346	+	*L. monocytogenes*	+	PD	5	c
2542	Frozen cooked mussels	/	/	3,000	+	*L. monocytogenes*	+	PD	5	c
2609	Wastes (vegetable raw material)	/	/	2,661	+	*L. monocytogenes*	+	PD	6	a
2835	**Wastes (mackerel)**	*L. seeligeri* Ad1267	0,4	3,000	+	*L. seeligeri*	+	PD	6	a
2850	Wastes (Salmon)	/	/	3,000	+	*L. monocytogenes*	+	PD	6	a
3279	**Wipe before cleaning (Fish rillettes production)**	*L. grayi* Ad1198	2,0	0,955	+	*L. grayi*	+	PD	6	c

Table 9 – Samples in negative agreement confirmed positive

N° Sample	Product	Inoculated strain	Inoculation level	Optical density (O.D.)	Solus ELISA result	Confirmation	Final result	Agreement	Subculture in Full Fraser	Category	Type
3129	Fresh lamb meat	/	/	0,022/ 0,090/ 1,119	-/-/+	*L. ivanovii*	-	**NA**	+	2	a
2163	Raw cured pork meat	/	/	0,048	-	*L. monocytogenes*	-	**NA**	+	2	c
2476	**Pasteurised cow milk cheese**	*L. ivanovii* Ad2451	2,2	0,008/ 0,012/ 0,009	-/-/-	*L. ivanovii*	-	**NA**	+	3	c
2027	Chive	/	/	0,015	-		-	**NA**	*L. monocytogenes*	4	a

The analyses of discordant results according to the EN ISO 16140-2:2016 is the following (See Table 10):

Table 10 - Analyses of discordant results

Category		Type	N+	ND*	PPND	PD	Unpaired (ND+PPND)-PD	AL
1	Composite foods / Ready-to-eat and ready-to-reheat	a	10	2	0	2		
		b	11	3	0	1		
		c	10	1	0	0		
		Total	**31**	**6**	**0**	**3**	**3**	**3**
2	Meat products	a	13	2	0	1		
		b	10	2	0	2		
		c	10	3	0	2		
		Total	**33**	**7**	**0**	**5**	**2**	**3**
3	Milk & dairy products	a	7	0	0	2		
		b	17	2	0	3		
		c	9	0	0	0		
		Total	**33**	**2**	**0**	**5**	**-3**	**3**
4	Vegetables	a	11	2	0	2		
		b	10	2	0	1		
		c	10	2	0	0		
		Total	**31**	**6**	**0**	**3**	**3**	**3**
5	Seafood and fish products	a	11	3	0	1		
		b	10	0	0	0		
		c	11	0	0	3		
		Total	**32**	**3**	**0**	**4**	**-1**	**3**
6	Environmental Samples	a	11	2	0	3		
		b	11	1	0	0		
		c	10	1	0	1		
		Total	**32**	**4**	**0**	**4**	**0**	**3**
All categories			**192**	**28**	**0**	**24**	**4**	**6**

* PPND not included

The observed values for ND - PD meet the acceptability limit for each individual category and for all the combined categories (calculated values ≤ AL).

3.1.7 Enrichment broth storage at 5 ± 3 °C for 72 h

The enrichment broths from 209 samples were stored for 72h at 5 ± 3°C and tested again. Three changes were observed (See Table 11).

Table 11 - Enrichment broth storage

N° Sample	Product	Result BEFORE storage	Result AFTER storage	Category	Type
2163	Raw cured pork meat	NA	PD	2	c
3283	**Raw goat milk**	ND	PA	3	b
2355	Salmon	ND	PA	5	a

The analyses of discordant results become (See Table 12).

Table 12 - Analysis of discordant results after storage 72 h at 5 ± 3°C

							Unpaired	
Category		Type	N+	ND*	PPND	PD	(ND+PPND)-PD	AL
1	Composite foods / Ready-to-eat and ready-to-reheat	a	10	2	2	0		
		b	11	1	3	0		
		c	10	0	1	0		
		Total	**31**	**3**	**6**	**0**	3	3
2	Meat products	a	13	1	2	0		
		b	10	2	2	0		
		c	11	3	3	0		
		Total	**34**	**6**	**7**	**0**	1	3
3	Milk & dairy products	a	7	2	0	0		
		b	17	3	1	0		
		c	9	0	0	0		
		Total	**33**	**5**	**1**	**0**	-4	3
4	Vegetables	a	11	2	2	0		
		b	10	1	2	0		
		c	10	0	2	0		
		Total	**31**	**3**	**6**	**0**	3	3
5	Seafood and fishproducts	a	11	1	2	0		
		b	10	0	0	0		
		c	11	3	0	0		
		Total	**32**	**4**	**2**	**0**	-2	3
6	Environmental Samples	a	11	3	2	0		
		b	11	0	1	0		
		c	10	1	1	0		
		Total	**32**	**4**	**4**	**0**	0	3
All categories			**193**	**25**	**26**	**0**	1	6

* PPND not included

The observed values for ((ND + PPND) - PD) meet the acceptability limit for each individual category and for all the combined categories (calculated values ≤ AL) after enrichment storage.

3.1.8 Confirmation

All the positive ELISA tests were confirmed after streaking 100µl of the enriched SOLE broth (incubated 26h at 30°C) onto O&A and Palcam.
For two samples (#2173 and 2369) the presence of *Listeria* spp. was confirmed after storage of the enriched SOLE broth.

In several cases, typical colonies were observed on O&A plates while no typical colonies were observed on PALCAM plates.

3.2 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.

3.2.1 Experimental design

Six (matrix/strain) pairs were analysed by the reference method and by the alternative method (See Table 13).

The following protocol was applied:

- A negative control: 5 samples,
- A low contamination level providing fractional recovery data, from 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 13 - Defined (matrix/strain) pairs for the RLOD determination

Category		Matrix	Inoculated strain	Origin	Storage conditions before analysis
1	Composite foods	Deli salad: piémontaise	*Listeria monocytogenes* Ad494	Piémontaise	Seeding 3°C ± 2°C for 48 h to 72 h
2	Meat products	Rillettes	*Listeria monocytogenes* Ad669	Rillettes	
3	Milk and dairy products	Raw milk	*Listeria ivanovii* Ad991	Raw milk cheese	
4	Seafood and fish products	Smoked salmon	*Listeria innocua* Ad1674	Smoked salmon	
5	Vegetables	Ready-to-cook vegetables	*Listeria welshimeri* Ad3251	Guacamole	
6	Production environmental samples	Process water	*Listeria monocytogenes* Ad551	Environment	

3.2.2 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 (clause 5-1-4-2 Calculation and interpretation of RLOD) version 15.08.2015. The RLOD are given Table 14.

Table 14 – Presentation of RLOD before and after confirmation of the alternative method results

Cate-gory	Name	RLOD	RLODL	RLODU	b=ln(RLOD)	sd(b)	z-Test statistic	p-value	AL
1	Piemontaise *L. monocytogenes* Ad494	1,661	0,741	3,724	0,507	0,404	1,257	0,209	2,5
2	Rillettes *L. monocytogenes* Ad669	0,748	0,338	1,655	-0,290	0,397	0,731	1,535	
3	Raw milk *L. ivanovii Ad991*	1,388	0,501	3,844	0,328	0,509	0,643	0,520	
4	Smoked salmon *L. innocua* Ad1674	1,498	0,720	3,121	0,404	0,367	1,103	0,270	
5	Ready to cook vegetables *L. welshimeri Ad3251*	0,975	0,399	2,386	-0,025	0,447	0,056	1,045	
6	Process water *L. monocytogenes* Ad551	1,476	0,6	3,632	0,389	0,45	0,864	0,388	
Combined		**1,161**	**0,847**	**1,59**	**0,149**	**0,157**	**0,947**	**0,344**	

The $LOD_{50\,\%}$ calculations according to Wilrich & Wilrich POD-LOD calculation program - version 11, 2022-10-12 test are given in Table 15.

Table 15 - LOD_{50} results

Category	(Strain / matrix) pair	Level of detection at 50% (CFU / test portion) according to Wilrich & Wilrich[1]	
		Reference method	Alternative method
1	Piemontaise / *L. monocytogenes* Ad494	0,3[0,2;0,5]	0,4[0,3;0,8]
2	Rillettes / *L. monocytogenes* Ad669	0,6[0,4;1,0]	0,5[0,3;0,8]
3	Raw milk / *L. ivanovii Ad991*	1,3[0,7;2,3]	1,7[0,9;3,0]
4	Smoked salmon / *L. innocua* Ad1674	0,3[0,2;0,6]	0,5[0,3;0,9]
5	Ready to cook vegetables / *L. welshimeri* Ad3251	1,6[0,8;3,2]	1,4[0,7;2,7]
6	Process water / *L. monocytogenes* Ad551	0,7[0,4;1,3]	1,0[0,5;1,9]
	Combined results	**0,7[0,6;0,9]**	**0,8[0,6;1,0]**

3.2.3 Conclusion

The RLOD values (using the confirmed alternative method results) meet the acceptability limit of 2.5 for unpaired studies, for all matrix/strain pairs tested.

The LOD_{50} varies from 0.3 to 0.6 CFU/test portion for the reference method and from 0.4 to 1.7 CFU/test portion for the alternative method.

[1] Wilrich, C., and P.-Th. Wilrich: Estimation of the POD function and the LOD of a qualitative microbiological measurement method. AOAC International **92** (2009) 1763 - 1772.

3.3 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.

3.3.1 Test protocols

> **Inclusivity**

Listeria species strain cultures were performed in BHI medium at 37°C. Dilutions were carried out to inoculate 10 - 100 cells/225 ml of SOLE Broth. The broths were incubated for 26 h at 30°C before performing the alternative method protocol (ELISA test and confirmation).

> **Exclusivity**

Negative strains cultures were performed according to their optimal growth conditions. Dilutions were done in order to inoculate 10^5 cells/ml of broth. The broth was, then, incubated in appropriate conditions to allow the growth of the strain before performing the ELISA test.

3.3.2 Results

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

> **Inclusivity**

50 strains were tested; 49 gave a positive ELISA result without any additional test.

One strain (*Listeria seeligeri* CIP100100) didn't give positive results either by adding milk to the enrichment broth or by increasing the inoculation level. However, a positive ELISA result was observed when cultured in Brain Heart Infusion broth. This strain has been tested using the protocol of the reference method and typical colonies were obtained only from full Fraser broth.
Note that 6 other *Listeria seeligeri* strains were detected when inoculated between 10 to 100 CFU / 225 mL SOLE Broth and it seems that this CIP strain had a particular unusual behaviour.

> **Exclusivity**

30 strains were tested; all gave a negative ELISA result.

3.4 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 storage temperature is 2-8°C. The shelf-life is given on the package. All the reagents shall be stored at the temperature mentioned on the package.		
Time to result	**Steps**	**Reference method**	**Alternative method**
	Negative samples		
	Sample enrichment	Day 0	Day 0
	ELISA test	/	Day 1
	Direct streaking onto plates	Day 1	/
	Subculture in Full Fraser	Day 1	/
	Second streaking from Full Fraser	Day 2	/
	Reading direct streaking plates	Day 2 – Day 3	/
	Reading second streaking	Day 3 – Day 4	/
	Result	Day 4	Day 1
	Presumptive positive or positive results		
	Subculture of typical colonies	Day 3 – Day 4	/
	Direct streaking onto plates	/	Day 1
	Reading plates	/	Day 2 – Day 3
	Confirmatory tests	Day 3 – Day 5	Day 2 – Day 3
	Result	Day 3 – Day 5	Day 2 – Day 3
Common step with the reference method	No common step		

The Solus One *Listeria* method allows screening of negative samples within one day, while four days are required with the reference method.

The positive results are available in two or three days.

4 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.

An interlaboratory study was performed in March 2023; the results were presented to the AFNOR Technical Committee in June 2023. The conclusions issued by AFNOR were the following:
According to the requirements of the ISO 16140-2 (2016) standard and the AFNOR Certification's Technical Board requirements, 10 data sets with at least 10 collaborators have to be obtained and samples have to be analysed from D1 to D2. Only 7 collaborators labs have taken part of the interlaboratory study in these conditions because samples have been analysed at D4 for 2 collaborators labs and at D7 for 3 collaborators labs. Consequently, in order to be in accordance with the rules, the Technical Board has requested to the Expert Laboratory to carry out additional assays with at least 5 collaborators labs.

Only the data from the seven collaborators which performed the analyses at Day 1 or Day 2 were kept (A2, E, F, G, H, I and J). The data were completed by involving 8 collaborators in order to have a minimum of 5 data sets available for the additional testing and 10 data sets for the combined interpretation.

This part of the report describes the results kept from the first inter-laboratory study performed in March 2023 combined with results from the second inter-laboratory study performed in July 2023.

4.1 Study organisation

- *Collaborators number*

For the first ILS performed in March 2023, samples were sent to 9 laboratories and involved 12 collaborators but only data from 7 collaborators were kept being combined to this second ILS.
For the second ILS performed in July 2023, samples were sent to 5 laboratories and involved 8 collaborators.

- *Matrix and strain used*

For both studies, a fresh pasteurised goat milk cheese was contaminated by *Listeria monocytogenes* 153 isolated from a raw milk cheese.

Samples

Samples were prepared and inoculated on Monday 6 March 2023 and Monday 17 July 2023, as described below for each collaborator:

- 24 blind coded samples (25 g) for detection of *Listeria* spp. by the **ISO 11290-1 reference method**,
- 24 blind coded samples (25 g) for detection of *Listeria* spp. by the **Solus One *Listeria* method**,
- 1 sample for aerobic mesophilic flora enumeration by ISO 4833-1 method,
- 1 water flask labelled “Temperature Control” with a temperature probe.

Inoculation

The targeted inoculation levels were the following:

- Level: 0 CFU/25 g,
- Level 1: 1 CFU/25 g, inoculation level providing fractional positive recovery data;
- Level 2: 4 CFU/25 g.

Labelling and shipping

Blind coded samples were placed in isothermal UN3373 boxes, which contained cooling blocks, and express-shipped to the different laboratories.

A temperature sensor was added to the package to register the temperature profiles for samples during the transport, the package delivery and storage until analyses.

Samples were shipped in 24 to 48 h to the involved laboratories. The temperature conditions had to stay lower or equal to 8°C during transport, and between 0°C – 8°C in the labs.

Analyses

Collaborative study laboratories and the expert laboratory carried out the analyses with the alternative and reference methods the same day. Only analyses performed at Day 2 at the latest are considered for the study.

4.2 Experimental parameters controls

4.2.1 *Strain stability and background microflora stability*

Strain stability was checked by inoculating the matrix at 1 CFU/g for detection and 1000 CFU/g for enumeration. Enumerations were performed for the high contamination level and detection analyses were performed for the low contamination level after 24 h and up to 72 or 96 h storage at 3 ± 2°C. *Triplicate* samples were analysed. The aerobic mesophilic flora was also enumerated; the results are given in Table 16.

Table 16 - Sample stability

ILS	Day	Reference method (detection)			CFU/g (enumeration)				Aerobic mesophilic flora (CFU/g)
		Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	Mean	
ILS 1	Day 0	+	+	+	2100	1500	1900	1800	$1,3.10^8$
	Day 1	+	+	+	/	/	/	/	$1,7.10^7$
	Day 2	+	+	-	1180	820	1200	1100	$3,6.10^9$
	Day 3	-	-	-	/	/	/	/	$2,7.10^8$
	Day 4	+	+	-	1300	920	820	1000	$1,8.10^8$
ILS 2	Day 0	-	-	-	1500	300	1100	970	$2,2.10^8$
	Day 1	-	-	-	1600	1300	1800	1600	$2,0.10^8$
	Day 2	+	+	+	1200	1400	1300	1300	$2,5.10^8$
	Day 3	-	-	-	1000	910	910	940	$3,2.10^8$

For **ILS 1**, a decrease of the number of positive results was observed after 2 days storage at 3°C ± 2°C, this is consistent with enumeration results of the *Listeria* spp. for which a decrease is observed at Day2 and Day 4 compared to Day 0. The pH of the matrix was relatively low (pH=4.5) and could have impacted the viability of the strain.

For **ILS 2**, no positive result was observed with the ISO 11290-1 method at Day 0 and Day 1 and Day 3 while the three inoculated samples were positive after 2 days storage. For the *Listeria* spp. enumeration, no evolution was observed between analyses performed at Day 0 and Day 3; it was also the case for the mesophilic aerobic flora.

4.2.2 *Contamination levels*

The contamination levels and the sample codification were the following (see Table 17).

Table 17 - Contamination levels

ILS	Level	Samples	Theoretical target level (CFU/test portion)	True level (CFU/test portion)	Low limit (CFU/test portion)	High limit (CFU/test portion)
ILS 1	Level 0	***Collaborator 1*:** 2-7-8-12-16-20-23-24 ***Collaborator 2*:** 25-29-32-33-37-40-41-46	/	/	/	/
	Level 1	***Collaborator 1*:** 3-6-9-11-15-17-21-22 ***Collaborator 2*:** 27-28-31-34-38-43-45-47	1,0	1,0	0,7	1,3
	Level 2	***Collaborator 1*:** 1-4-5-10-13-14-18-19 ***Collaborator 2*:** 26-30-35-36-39-42-44-48	4,0	5,3	4,0	7,0
ILS 2	Level 0	**Collaborator 1**: 1-6-8-12-16-17-22-23 **Collaborator 2:** 25-27-30-32-37-39-44-48 **Collaborator 3:** 49-51-55-58-60-64-68-72	/	/	/	/
	Level 1	**Collaborator 1**: 2-5-7-10-13-15-19-24 **Collaborator 2:** 26-29-31-33-36-40-41-47 **Collaborator 3:** 50-53-54-57-59-63-66-71	1,0	1,1	0,8	1,4
	Level 2	**Collaborator 1**: 3-4-9-11-14-18-20-21 **Collaborator 2:** 28-34-35-38-42-43-45-46 **Collaborator 3:** 52-56-61-62-65-67-69-70	4,0	3,4	2,4	4,7

4.2.3 Logistic conditions

Temperature conditions are given in Table 18.

Table 18 - Sample temperatures at receipt

Collaborators	Temperature measured		Receipt date and time		Analysis date
	by the probe (°C)	at receipt (°C)			
A2	3,2	4,9	07/03/2023 (Day 1)	11:20 AM	07/03/2023 (Day 1)
E	1,8	2,6	08/03/2023 (Day 2)	02:00 PM	08/03/2023 (Day 2)
F	0,7	5,3	07/03/2023 (Day 1)	04:00 PM	08/03/2023 (Day 2)
G	0,7	3,9	08/03/2023 (Day 2)	10:10 AM	08/03/2023 (Day 2)
H1	0,5	5,7	07/03/2023 (Day 1)	03:00 PM	08/03/2023 (Day 2)
H2	4,3	5,6	18/07/2023 (Day 1)	03:30 PM	19/07/2023 (Day 2)
I1	0,3	2,5	08/03/2023 (Day 2)	11:57 AM	08/03/2023 (Day 2)
I2	6,6	12,0	19/07/2023 (Day 2)	12:00	19/07/2023 (Day 2)
I3	6,5	12,0	19/07/2023 (Day 2)	12:00	19/07/2023 (Day 2)
J	4,1	6,6	07/03/2023 (Day 1)	12:05 PM	08/03/2023 (Day 2)
L1	3,5	4,0	18/07/2023 (Day 1)	11:00 AM	18/07/2023 (Day 1)
L2	3,3	4,0	18/07/2023 (Day 1)	11:00 AM	18/07/2023 (Day 1)
M1	0,5	3,6	18/07/2023 (Day 1)	09:00 AM	18/07/2023 (Day 1)
M2	0,8	3,6	18/07/2023 (Day 1)	09:00 AM	18/07/2023 (Day 1)
N	5,0	3,0	18/07/2023 (Day 1)	11:15 AM	19/07/2023 (Day 2)
K (ADRIA)	3,1	4,1	07/03/2023 (Day 1)	08:00 AM	08/03/2023 (Day 2)
O (ADRIA)	2,3	3,7	18/07/2023 (Day 1)	10:00 AM	19/07/2023 (Day 2)

ILS 1	ILS 2

No problem was encountered during the transport or receipt of samples for all the collaborators during the second study (receipt at Day 1 or Day 2).
All temperatures maintained during shipment and receipt were correct.

4.3 Results analysis

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

4.3.1 Expert laboratory results

The results obtained by the expert laboratory are given in Table 19. Note that the analyses were performed by a technician which was not involved in the validation study.

Table 19 – Results obtained by the expert Lab.

ILS	Level	Reference method	Alternative method
ILS 1	L0	0/8	0/8
	L1	6/8	6/8
	L2	7/8	8/8
ILS 2	L0	0/8	0/8
	L1	7/8	4/8
	L2	8/8	8/8

ILS 1: At level 1, for 2 samples (sample K13= NA, sample K19= ND) with negative ELISA tests results, the presence of the inoculated *Listeria monocytogenes* strain was confirmed in the enriched Solus broths. Three inoculated samples gave a negative result with the ISO 11290-1 method (2 for Level 1 and 1 for Level 2).

ILS 2: At level 1, for 1 sample (O2) registering a negative deviation (ND) with negative ELISA tests results; the presence of the inoculated *Listeria monocytogenes* strain was confirmed in the enriched Solus One broths. One inoculated sample (level 1) gave a negative result with the ISO 11290-1 method.

4.3.2 Results observed by the collaborative laboratories

> ***Aerobic mesophilic flora enumeration***

Depending on the Lab results, the enumeration levels varied from $1{,}3.10^3$ to $3{,}6.10^9$ CFU/g (see Table 20).

Table 20 – Aerobic flora enumeration

Collaborator	Aerobic mesophilic flora UFC/g	Analysis date
A2	$3{,}4.10^{7}$	07/03/2023 (Day 1)
E	$2{,}2.10^{8}$	08/03/2023 (Day 2)
F	$5{,}1.10^{3}$	08/03/2023 (Day 2)
G	$2{,}5.10^{8}$	08/03/2023 (Day 2)
H1	$3{,}4.10^{8}$	08/03/2023 (Day 2)
H2	$1{,}3.10^{9}$	19/07/2023 (Day 2)
I1	$1{,}4.10^{3}$	08/03/2023 (Day 2)
I2	$1{,}0.10^{3}$	19/07/2023 (Day 2)
I3	$1{,}3.10^{3}$	19/07/2023 (Day 2)
J	$3{,}2.10^{8}$	08/03/2023 (Day 2)
L1	$1{,}8.10^{8}$	18/07/2023 (Day 1)
L2	$2{,}8.10^{8}$	18/07/2023 (Day 1)
M1	$5{,}8.10^{3}$	18/07/2023 (Day 1)
M2	$5{,}7.10^{3}$	18/07/2023 (Day 1)
N	$4{,}0.10^{8}$	19/07/2023 (Day 2)
K (ADRIA)	$3{,}6.10^{9}$	08/03/2023 (Day 2)
O (ADRIA)	$3{,}0.10^{8}$	19/07/2023 (Day 2)

ILS 1	ILS 2

> *Listeria spp. detection*

15 collaborators participated to the study. The results obtained by all the collaborators (7 from ILS1 and 8 from ILS 2 are provided in Table 21 (reference method) and Table 22 (alternative method).

Table 21 - Positive results by the reference method (ALL the collaborators)

Collaborator	Contamination level		
	L0	L1	L2
A2	0	5	8
E	0	7	8
F	0	5	8
G	0	4	8
H1	0	5	8
H2	0	6	8
I1	0	2	8
I2	0	3	7
I3	0	6	7
J	0	5	8
L1	0	5	8
L2	0	7	8
M1	0	6	8
M2	0	3	8
N	0	3	8
TOTAL	$P_0 = 0$	$P_1 = 72$	$P_2 = 118$

ILS 1	ILS 2

Table 22 - Positive results (before and after confirmation) by the alternative method (ALL the collaborators)

Collaborator	Contamination level								
	L0			L1			L2		
	ELISA result	Confirmation result	Final result	ELISA result	Confirmation result	Final result	ELISA result	Confirmation result	Final result
A2	0	0	0	4	4	4	8	8	8
E	0	0	0	4	5	4	8	8	8
F	0	0	0	6	6	6	8	8	8
G	0	0	0	6	6	6	8	8	8
H1	0	0	0	4	5	4	8	8	8
H2	0	0	0	5	5	5	8	8	8
I1	0	0	0	2	4	2	5	8	5
I2	0	0	0	7	7	7	8	8	8
I3	0	0	0	4	6	4	8	8	8
J	0	0	0	6	6	6	8	8	8
L1	0	0	0	6	6	6	8	8	8
L2	0	0	0	4	4	4	8	8	8
M1	0	0	0	5	5	5	8	8	8
M2	0	0	0	7	7	7	8	8	8
N	0	0	0	8	8	8	8	8	8
Total	$P_0=0$	$C_0=0$	$CP_0=0$	$P_1=78$	$C_1=84$	$CP_1=78$	$P_2=117$	$C_2=120$	$CP_2=117$

4.3.3 Results of the collaborators retained for interpretation

The data from all the collaborators have been kept for interpretation.

4.4 Calculation and interpretation

4.4.1 Calculation of the specificity percentage (SP)

The Specificity percentage (SP) of the reference method and of the alternative method, using the data after confirmation, based on the results of level L0 are presented in Table 23.

Table 23 - Specificity percentage

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

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

Fractional positive results were obtained for the low and the high inoculation levels (L1 + L2), 60% of positive samples for ISO 11290-1 and 65% for Solus One *Listeria* for Level 1. The two inoculation levels were retained for calculation.

A summary of the results of the collaborators retained for interpretation, obtained with the reference and the alternative methods for Level 1 and Level 2 is provided in Table 24.

Table 24 - Summary of the obtained results with the reference method and the alternative method for Level 1 and Level 2

Level	Response	Reference method positive (R+)	Reference method negative (R-)
1	Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 45**	Positive deviation (R-/A+) **PD = 33**
	Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 27 (PPND=0)**	Negative agreement (A-/R-) **NA = 15 (PPNA=0)**
2	Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 115**	Positive deviation (R-/A+) **PD = 2**
	Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 3 (PPND=0)**	Negative agreement (A-/R-) **NA = 0 PPNA=0)**

Based on the data summarised in Table 24, the calculated values of the sensitivity of the alternative and reference methods, as well as the relative trueness and false positive ratio for the alternative method (taking account the confirmations) are presented in Table 25.

Table 25 - Sensitivity, relative trueness and false positive ratio percentages

		Level 1	Level 2
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA+PD)}{(PA+PD+ND)} x\ 100\% =$	74,3%	98,3%
Sensitivity for the reference method	$SE_{ref} = \frac{(PA+ND)}{(PA+PD+ND)} x\ 100\% =$	68,6%	97,5%
Relative trueness	$RT = \frac{(PA+NA)}{N} x\ 100\% =$	50,0%	95,8%
False positive ratio for the alternative method	$FPR = \frac{FP}{NA} x\ 100\% =$	0%	/

4.4.3 Interpretation of data

The negative deviations are listed in Table 26 for Level 1 and in Table 27 for Level 2. Twenty-seven and three negative deviations were respectively obtained for inoculation level 1 and level 2.

For Level 1, for 4 of the samples presenting as negative deviations, the presence of *Listeria monocytogenes* was confirmed in the enrichment broth. This concerns samples E11, H1-6, I3-63, and I3-66. The ELISA tests were repeated for all the enriched heat-treated aliquots and they were still negative for samples E11 and H1-6. For collaborator I3, the ELISA tests were positive with a low O.D. value (sample 63 = 0.222, sample 66 = 0.246). The contamination level for these two samples was probably just at the limit of detection of the Solus One *Listeria* method. Note that for sample H6, another aliquot of the enriched sample was heat treated after several days

storage at 5°C and in this case a positive result with a high O.D. value was obtained (O.D.=3.000), probably due to the strain continuing to grow in the enrichment broth whilst stored at 5°C.

For level 2, for the three samples presenting as negative deviations, the presence of *Listeria* strain was confirmed. Note that these samples concern collaborator I. This Lab was asked to repeat the ELISA test on the aliquot initially heat treated but unfortunately, the sample was thrown away despite the fact that it was asked of the labs to keep the heat-treated aliquots until the end of the study. The repeat tests could therefore be done only from a new heat-treated sample after several days' storage at 5°C. The results were in this case all positive (O.D. = 1.812, 1.678 and 1.920). It was thus not possible to know if a technical problem occurred when applying the first ELISA test.

Due to difficulty in recruiting collaborative labs, some labs who haven't used the Solus system and with a minimal training participated in this study, with this situation applying for labs E and I. This could perhaps explain the surprising results obtained by Lab I (2 false negative results at level 1 (NA) and 3 false negative results at level 2 (ND).

Collaborator M2 observed typical colonies for *Listeria* species but not characteristic for *Listeria monocytogenes* genus on O&A plate after subculture in Fraser broth for the ISO 11290-1 method. The isolated strain was identified as *Listeria innocua* and tested positive by PCR. Despite the fact that only a *Listeria monocytogenes* strain was spiked in the matrix for the ILS, this sample has been considered positive as the scope of the Solus One *Listeria* method concern *Listeria* genus.

Positive deviations are listed in Table 28 for Level 1 and Table 29 for Level 2. Thirty-three positive deviations were observed for inoculation Level 1 and two for level 2.

Table 26 - Negative deviations for Level 1

Lab	Sample N°	ELISA O.D.	ELISA Result	Confirmation
A2	45	0,005	-	-
E	3	0,006	-	-
	9	0,004	-	-
	11	0,056 0,157	- -	+
	15	0,007	-	-
F	9	0,002	-	-
H1	6	0,195 0,147 3,000*	- - +	+
	17	0,007	-	-
H2	31	0,002	-	-
	36	0,002	-	-
I1	9	0,000	-	-
	21	0,002	-	-
I2	40	0,000	-	-
I3	54	0,000	-	-
	59	0,000	-	-
	63	0,040 0,222	- +	+
	66	0,000 0,246	- +	+
J	6	0,000	-	-
L1	19	0,010	-	-
	24	0,011	-	-
L2	29	0,009	-	-
	36	0,011	-	-
	40	0,000	-	-
	47	0,006	-	-
M1	5	0,020	-	-
	19	0,010	-	-
M2	47	0,010	-	-

*: second Heat treated aliquot

Table 27 - Negative deviations for Level 2

Lab	Sample N°	ELISA O.D.	ELISA Result	Confirmation
I1	5	0,126 1,812*	- +	+
	10	0,156 1,678*	- +	+
	13	0,157 1,920*	- +	+

*: second Heat treated aliquot

Table 28 - Positive deviations for Level 1

Lab	Sample N°
E	22
F	21
	22
G	3
	22
H1	21
H2	26
I1	3
	17
I2	26
	29
	31
	36
	41
I3	53
	71
J	11
	17
L1	5
	10
	15
L2	26
M1	13
M2	26
	29
	31
	33
	36
N	2
	5
	7
	13
	24

Table 29 - Positive deviations for Level 2

Lab	Sample N°
I2	43
I3	70

For an **unpaired study design**, the difference between (ND – PD) is calculated for the level(s) where fractional recovery is obtained (so L_1 and possibly L_2). The observed value found for (ND – PD) shall not be higher than the Acceptability Limit, AL. The AL is defined as [$(\text{ND} - \text{PD})_{max}$] and calculated per level where fractional recovery is obtained as described below using the following three parameters:

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

where

P_x = number of samples with a positive result obtained with the reference method at level x (L_1 or L_2) for all the collaborators

N_x = number of samples tested at level x (L_1 or L_2) with the reference method by all the collaborators

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

where

CP_x = number of samples with a confirmed positive result obtained with the alternative method at level x (L_1 or L_2) for all the collaborators.

N_x = number of samples tested at level x (L_1 or L_2) with the alternative method by all the collaborators.

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

where

N_x = number of samples tested for level x (L_1 or L_2) with the reference method by all the collaborators.

The AL is not met when the observed value (ND - PD) is higher than the AL. When the AL is not met, investigations should be made (e.g., root cause analysis) in order to provide an explanation of the observed results. Based on the AL and the additional information, it is decided whether the alternative method is regarded as “not fit for purpose”. The reason(s) for acceptance of the alternative method when the AL is not met shall be stated in the study report.

In this study, fractional recovery was observed at Level 1 and Level 2. The calculations are the following, according to the EN ISO 16140-2:2016 (See Table 30).

Table 30 - Calculations

	Level 1	Level 2
N_X	120	120
$(p+)_{ref}$	0.60	0.98
$(p+)_{alt}$	0.65	0.98
AL = (ND - PD) max	13,01	3,83
ND - PD	-6	-1
Conclusion	ND-PD < AL	NDPD < AL

The ISO 16140-2 (2016) requirements are fulfilled as (ND - PD) meet the AL for both inoculation levels.

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

The RLOD was calculated using the EN ISO 16140-2:2016 Excel spreadsheet available at https://standards.iso.org/iso/16140/-5/ed-1/en/RLOD_inter-lab-study_16140-2_AnnexF_ver1_28-06-2017.xls. The results are used only for information (See Table 31).

Table 31 - LOD $_{50\%}$, LOD $_{95\%}$ and RLOD

Method	LOD 50%	LOD 95%	RLOD
Reference	0,76 [0,63-0,92]	3,28 [2,70-3,97]	0,97[0,78 - 1,22]
Alternative	0,74 [0,61-0,90]	3,19 [2,63-3,87]	

5 CONCLUSION

The **method comparison study** scheme corresponds to an UNPAIRED STUDY design as the alternative and reference methods have different enrichment.

In the sensitivity study, 6 categories were tested: 5 food categories and the environmental samples. The protocol of the alternative method shows 24 positive deviations (PD) and 28 negative deviations (ND) for all combined categories. The ND - PD meet the acceptability limits (AL) whatever the categories, and as well for the 6 tested categories.

The Relative Levels of Detection (RLOD) meet the AL fixed at 2.5 for the unpaired data study whatever the matrix/strain pairs.

The inclusivity and exclusivity testing gave the expected results for 49 target strains and the 30 non-target strains.

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

The alternative method allows a one-day screening of the negative samples.

The alternative method fulfils all the EN ISO 16140-2:2016 and AFNOR technical rules (PR revision 7).

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

A lot of difficulties were encountered for this inter-laboratory study:

- ✓ Difficulties in recruiting collaborative labs and necessity to use labs that haven't used the Solus system associated with minimal training.

- ✓ Issues occurred in the import of samples to the UK from France when organizing the first ILS in March 2023 and several packages were retained by customs due to inaccurate supporting paperwork. Delivery was over delay (Day 4 to Day 7). Following the presentation of the data to the AFNOR Technical Committee, a second ILS was organized in July 2023.

The interpretation has been done considering all data sets from collaborators from the first ILS who analysed their samples at Day 1 or Day 2 as well as all the collaborators who participated to the second ILS.
The combined data and interpretations comply with the EN ISO 16140-2:2016 requirements, **the Solus One *Listeria* method is considered equivalent to the ISO standard method.**

Quimper, 06 November 2023

Muriel BERNARD
Technical Study Manager
Validation of Alternative methods

I hereby attest to the validation of the results of the analyses carried out under the COFRAC accreditation.

Maryse RANNOU
Project Manager
Validation of Alternative methods

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:
Solus *One Listeria*

Food: 25 g + 225 ml SOLE broth (room temperature)
Production environmental samples:
Swab (premoisten with neutralizing agent) + 10 ml SOLE broth (room temperature)
Sponge (premoisten with neutralizing agent) + 100 ml SOLE broth (room temperature)
Wipe (premoisten with neutralizing agent) + 225 ml SOLE broth (room temperature)
Dusts, residues, process, and cleaning waters: 25 g/ml + 225 ml SOLE broth (room temperature)

↓

26 - 30 h at 30°C ± 1°C for food, and environmental samples
Possibility to store the SOLE enriched samples for 72 h at 5°C ± 3°C

↓

Transfer 1 - 2 ml aliquot to a boiling tube

↓

Heat to 85 - 100°C for 15 - 20 min
Filter using frit filters for using the Dynex DS2 instrument

↓

Allow to cool at ambient temperature (18 - 25°C)

↓

ELISA test (using automatic equipment)

↓

O.D. measurement:
$O.D_{450} < 0.200$ = negative
$O.D_{450} \geq 0.200$ = positive

↓

Confirmation:

- Using the conventional tests described in the standardised methods by CEN or ISO including the purification step starting from the non-heated enriched SOLE broth
- By streaking 100 µl of non-heated enriched SOLE broth onto *Listeria* selective agar plate (O&A) or Palcam plate

The only presence of typical colonies allows to confirm the positive ELISA test[2]

[2] During the validation study, biochemical galleries were used to identify the strains.

Appendix 2 – Flow diagram of the reference method: 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

25 g + 225 ml Half Fraser broth at room temperature
1 swab + 10 ml Half Fraser broth[3]
1 sponge + 100 ml Half Fraser broth
1 wipe + 225 ml Half Fraser broth
↓
Incubation at 30°C ± for 25 h ± 1 h

0.1 ml of culture
in 10 ml of secondary
enrichment medium (Fraser broth)
↓
Incubation at 37°C ± 1°C
for 24 h ± 2 h

Streaking 10 µl onto
Ottaviani and Agosti (O&A) and Palcam plates
↓
Incubation for 24 h ± 2 h and
an additional 24 h ± 3 h at 37°C ± 1°C
↓
Confirmation:
Gram, catalase[4]

[3] 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)

[4] During the validation study, biochemical galleries were used to identify the strains

Appendix 3 – Artificial contamination of samples

Year of analysis	N° Sample	Product (French name)	Product	Artificial contaminations					Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/ sample				
							Numeration	Mean			
2022	**1830**	**Sandwich jambon beurre**	**RTE (Sandwich butter and ham)**	*L. welshimeri* Ad3207	RTE	Seeding 48h at 5± 3°C	0-2-2-3-1	1,6	**+**	1	a
2022	**2735**	**Taboulé au poulet rôti**	**RTE (Salad tabouleh chicken)**	*L. innocua* Ad3270	Vegetables	Seeding 48h at 5± 3°C	1-3-2-4-5	3,0	**+**	1	a
2022	**2736**	**Riz à l'indienne**	**RTE (Salad with rice)**	*L. innocua* Ad3270	Vegetables	Seeding 48h at 5± 3°C	1-3-2-4-5	3,0	**+**	1	a
2022	**2737**	**Piémontaise**	**RTE (Salad with potatoes, ham…)**	*L. welshimeri* Ad3251	Guacamole	Seeding 48h at 5± 3°C	2-4-3-0-3	2,4	**+**	1	a
2022	**2738**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	*L. welshimeri* Ad3251	Guacamole	Seeding 48h at 5± 3°C	2-4-3-0-3	2,4	**+**	1	a
2022	**2739**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	*L. seeligeri* Ad1754	Cubed courgettes	Seeding 48h at 5± 3°C	2-2-1-4-4	2,6	**+**	1	a
2022	**2740**	**Sandwich (thon, œuf, salade)**	**RTE (Sandwich tuna, egg, salad)**	*L. welshimeri* Ad3251	Guacamole	Seeding 48h at 5± 3°C	2-4-3-0-3	2,4	**+**	1	a
2022	**1831**	**Pizza au chorizo**	**RTRH (Pizza chorizo)**	*L. monocytogenes* Ad1197	Pizza	Seeding 48h at 5± 3°C	0-1-0-3-3	1,4	**+**	1	b
2022	**1832**	**Pâtisserie (religieuse chocolat/café)**	**Pastry**	*L. innocua* Ad644	Raw baguette	Seeding 48h at 5± 3°C	1-0-1-2-2	1,2	**-**	1	c
2022	**2463**	**Crème anglaise**	**Custard**	*L. monocytogenes* Ad195	Omelette	Seeding 48h at 5± 3°C	3-3-2-1-1	2,0	**+**	1	c
2022	**2464**	**Ile flottante**	**Custard based dessert**	*L. monocytogenes* Ad195	Omelette	Seeding 48h at 5± 3°C	3-3-2-1-1	2,0	**+**	1	c
2022	**2465**	**Crème anglaise**	**Custard**	*L. welshimeri* Ad1193	Unknown	Seeding 48h at 5± 3°C	4-2-0-2-4	2,4	**+**	1	c
2022	**2466**	**Tortilla aux oignons**	**Omelette with onions**	*L. welshimeri* Ad1193	Unknown	Seeding 48h at 5± 3°C	4-2-0-2-4	2,4	**+**	1	c
2022	**2467**	**Tortilla aux oignons**	**Omelette with onions**	*L. monocytogenes* Ad1757	Egg products	Seeding 48h at 5± 3°C	2-4-0-0-1	1,4	**+**	1	c
2022	**2741**	**Entremet (chocolat blanc, framboise)**	**Confectionary (chocolate, raspberry)**	*L. welshimeri* Ad1193	Sauce	Seeding 48h at 5± 3°C	1-4-4-4-0	2,6	**+**	1	c
2022	**2742**	**Entremet (mousse chocolat noir)**	**Confectionary (Chocolate)**	*L. welshimeri* Ad1193	Sauce	Seeding 48h at 5± 3°C	1-4-4-4-0	2,6	**+**	1	c
2022	**1833**	**Tranches de filets de porcs**	**Fresh pork meat**	*L. monocytogenes* Ad645	Pork meat	Seeding 48h at 5± 3°C	3-6-1-1-1	2,4	**+**	2	a
2022	**1834**	**Escalope de dinde**	**Fresh turkey meat**	*L. welshimeri* Ad3211	Turkey meat	Seeding 48h at 5± 3°C	1-3-1-1-2	1,6	**+**	2	a
2022	**2468**	**Petit salé aux lentilles**	**RTRH (pork)**	*L. innocua* Ad671	Bacon	Seeding 48h at 5± 3°C	1-2-0-1-0	0,8	**+**	2	b
2022	**2469**	**Bœuf charolais au Médoc**	**RTRH (beef meat)**	*L. innocua* Ad671	Bacon	Seeding 48h at 5± 3°C	1-2-0-1-0	0,8	**+**	2	b
2022	**2470**	**Poulet tikka**	**RTRH (Tikka chicken)**	*L. welshimeri* Ad3204	Meat	Seeding 48h at 5± 3°C	3-3-1-2-2	2,2	**+**	2	b
2022	**2471**	**Daube provençale au bœuf**	**RTRH (beef meat)**	*L. welshimeri* Ad3204	Meat	Seeding 48h at 5± 3°C	3-3-1-2-2	2,2	**+**	2	b
2022	**2472**	**Poulet tikka**	**RTRH (Tikka chicken)**	*L. welshimeri* Ad3249	Chicken	Seeding 48h at 5± 3°C	1-2-0-1-1	1,0	**+**	2	b
2022	**2473**	**Petit salé aux lentilles**	**RTRH (pork)**	*L. welshimeri* Ad3249	Chicken	Seeding 48h at 5± 3°C	1-2-0-1-1	1,0	**+**	2	b
2022	**1835**	**Lardons natures**	**Raw bacon**	*L. seeligeri* Ad1297	Pork meat	Seeding 48h at 5± 3°C	1-1-4-1-1	1,6	**+**	2	c
2022	**1837**	**Fromage au lait cru de vache (Pont l'évêque)**	**Raw cow milk cheese**	*L. ivanovii* Ad1737	Raw milk cheese	Seeding 48h at 5± 3°C	1-3-1-2-1	1,6	**-**	3	a
2022	**1838**	**Fromage au lait cru de brebis (Ossau Iraty)**	**Raw ewe milk cheese**	*L. monocytogenes* Ad1236	Raw milk cheese	Seeding 48h at 5± 3°C	4-6-3-0-2	3,0	**+**	3	a
2022	**2743**	**Fromage au lait cru de vache (Camembert)**	**Raw cow milk cheese**	*L. innocua* Ad1789	Raw milk	Seeding 48h at 5± 3°C	3-2-2-1-4	2,4	**+**	3	a
2022	**2745**	**Fromage au lait cru de chèvre (Chabichou)**	**Raw goat milk cheese**	*L. ivanovii* Ad1769	Raw ewe milk	Seeding 48h at 5± 3°C	1-0-1-1-2	1,0	**-**	3	a
2022	**2746**	**Fromage au lait cru de chèvre (Picodon)**	**Raw goat milk cheese**	*L. seeligeri* Ad1237	Raw milk	Seeding 48h at 5± 3°C	0-2-1-3-2	1,6	**+**	3	a
2022	**2987**	**Petit camembert au lait cru de vache**	**Raw cow milk cheese**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 48h at 5± 3°C	3-4-2-5-2	3,2	**+**	3	a
2022	**2988**	**Moelleux de Savoie au lait cru de vache**	**Raw cow milk cheese**	*L. innocua* Ad656	Raw cow milk cheese	Seeding 48h at 5± 3°C	1-5-4-0-2	2,4	**+**	3	a
2022	**1836**	**Lait cru de vache**	**Raw cow milk**	*L. monocytogenes* Ad665	Raw milk	Seeding 48h at 5± 3°C	2-1-4-8-2	3,4	**+**	3	b
2022	**2989**	**Lait cru de vache**	**Raw cow milk**	*L. seeligeri* Ad1237	Raw milk	Seeding 48h at 5± 3°C	2-2-1-1-3	1,8	**+**	3	b
2022	**2990**	**Lait cru de vache**	**Raw cow milk**	*L. innocua* Ad1789	Raw cow milk cheese	Seeding 48h at 5± 3°C	1-1-0-1-0	0,6	**+**	3	b
2022	**2991**	**Lait cru de vache**	**Raw cow milk**	*L. welshimeri* Ad1667	Raw milk cheese	Seeding 48h at 5± 3°C	3-4-2-5-2	3,2	**+**	3	b
2022	**3283**	**Lait cru de chèvre**	**Raw goat milk**	*L. ivanovii* Ad1748	Goat milk	Seeding 48h at 5± 3°C	5-5-4-1-4	3,8	**+**	3	b
2022	**3284**	**Lait cru de chèvre**	**Raw goat milk**	*L. ivanovii* Ad1289	Raw milk cheese	Seeding 48h at 5± 3°C	1-4-3-3-3	2,8	**+**	3	b
2022	**2474**	**Fromage de brebis pasteurisé (Baskeru)**	**Pasteurised ewe milk cheese**	*L. seeligeri* Ad3275	Dairy products dusts	Seeding 48h at 5± 3°C	0-0-1-3-3	1,4	**+**	3	c
2022	**2475**	**Fromage de chèvre pasteurisé (Cabécou)**	**Pasteurised goat milk cheese**	*L. seeligeri* Ad3275	Dairy products dusts	Seeding 48h at 5± 3°C	0-0-1-3-3	1,4	**-**	3	c
2022	**2476**	**Fromage de vache pasteurisé (Camembert)**	**Pasteurised cow milk cheese**	*L. ivanovii* Ad2451	Dairy product	Seeding 48h at 5± 3°C	1-3-0-4-3	2,2	**-**	3	c
2022	**2477**	**Milkshake frais vanille**	**Pasteurised flavoured milk**	*L. ivanovii* Ad2451	Dairy product	Seeding 48h at 5± 3°C	1-3-0-4-3	2,2	**+**	3	c

Year of analysis	N° Sample	Product (French name)	Product	Artificial contaminations					Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/ sample				
							Numeration	Mean			
2022	**2478**	**Riz au lait traiteur**	**Dairy dessert (rice)**	*L. ivanovii* Ad1748	Dairy product	Seeding 48h at 5± 3°C	2-0-4-2-0	1,6	+	3	c
2022	**2747**	**Riz au lait traiteur**	**Dairy dessert (rice)**	*L. ivanovii* Ad1769	Raw ewe milk	Seeding 48h at 5± 3°C	1-0-1-1-2	1,0	+	3	c
2022	**2748**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	*L. ivanovii* Ad1769	Raw ewe milk	Seeding 48h at 5± 3°C	1-0-1-1-2	1,0	+	3	c
2022	**2749**	**Riz au lait traiteur**	**Dairy dessert (rice)**	*L. innocua* Ad1789	Raw milk	Seeding 48h at 5± 3°C	3-2-2-1-4	2,4	+	3	c
2022	**2750**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	*L. seeligeri* Ad2641	Trout	Seeding 48h at 5± 3°C	0-2-2-2-3	1,8	+	3	c
2022	**1839**	**Graines germées (Alfalfa bio)**	**Sprouted seeds (Alfalfa)**	*L. monocytogenes* Ad2643	Salad	Seeding 48h at 5± 3°C	3-2-2-4-1	2,4	+	4	a
2022	**2480**	**Jeunes pousses épinards**	**Baby leaves (spinach)**	*L. innocua* Ad1177	Mushrooms	Seeding 48h at 5± 3°C	1-2-1-1-2	1,4	+	4	a
2022	**2481**	**Jeunes pousses**	**Baby leaves**	*L. seeligeri* Ad1293	Vegetables	Seeding 48h at 5± 3°C	0-1-5-1-1	1,6	+	4	a
2022	**2482**	**Alfalfa bio**	**Sprouts (Alfalfa)**	*L. innocua* Ad1177	Mushrooms	Seeding 48h at 5± 3°C	2-3-2-2-3	2,4	+	4	a
2022	**2483**	**Alfalfa poireau lentille bio**	**Sprouts (leeks and lentils)**	*L. seeligeri* Ad1293	Vegetables	Seeding 48h at 5± 3°C	0-2-8-2-2	2,8	+	4	a
2022	**1586**	**Epinards surgelés**	**Frozen spinach**	*L. monocytogenes* Ad3263	Vegetables	Seeding 2 weeks at -20°C	5-4-2-3-1	3,0	+	4	b
2022	**1840**	**Mélange de crudités**	**Cut mixed vegetables**	*L. grayi* Ad1295	Spinach	Seeding 48h at 5± 3°C	3-2-3-2-0	2,0	-	4	b
2022	**2484**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	*L. innocua* Ad1177	Mushrooms	Seeding 48h at 5± 3°C	1-2-1-1-2	1,4	+	4	b
2022	**2485**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	*L. seeligeri* Ad1293	Vegetables	Seeding 48h at 5± 3°C	0-1-5-1-1	1,6	-	4	b
2022	**2486**	**Wok fondant frais**	**Fresh mix vegetables**	*L. welshimeri* Ad1668	Cooked vegetables	Seeding 48h at 5± 3°C	3-4-5-5-3	4,0	+	4	b
2022	**2751**	**Assiette croquante**	**Fresh mix vegetables**	*L. innocua* Ad3270	Vegetables	Seeding 48h at 5± 3°C	1-3-2-4-5	3,0	+	4	b
2022	**2752**	**Assiette croquante**	**Fresh mix vegetables**	*L. seeligeri* Ad1754	Cubed courgettes	Seeding 48h at 5± 3°C	2-2-1-4-4	2,6	+	4	b
2022	**2753**	**Purée de brocolis**	**RTRH (Broccoli purée)**	*L. welshimeri* Ad3251	Guacamole	Seeding 48h at 5± 3°C	2-4-3-0-3	2,4	+	4	c
2022	**2754**	**Purée de brocolis**	**RTRH (Broccoli purée)**	*L. seeligeri* Ad1754	Cubed courgettes	Seeding 48h at 5± 3°C	2-2-1-4-4	2,6	+	4	c
2022	**1841**	**Filet d'Eglefin**	**Raw fish**	*L. seeligeri* Ad3289	Fish	Seeding 48h at 5± 3°C	0-3-1-1-1	1,2	+	5	a
2022	**2992**	**Filet de julienne**	**Raw fish fillet**	*L. seeligeri* Ad3289	Hake	Seeding 48h at 5± 3°C	2-1-1-4-1	1,8	+	5	a
2022	**2993**	**Dos de cabillaud**	**Raw fish fillet**	*L. welshimeri* Ad1669	Saithe fillet	Seeding 48h at 5± 3°C	2-4-2-5-4	3,4	+	5	a
2022	**2994**	**Filet d'églefin**	**Raw fish fillet**	*L. innocua* Ad1200	Pollack fillet	Seeding 48h at 5± 3°C	2-4-4-5-3	3,6	+	5	a
2022	**1842**	**Truite fumée**	**Smoked trout**	*L. monocytogenes* Ad1412	Smoked salmon	Seeding 48h at 5± 3°C	2-3-3-4-4	3,2	+	5	b
2022	**1843**	**Saumon fumé**	**Smoked salmon**	*L. monocytogenes* Ad1279	Smoked fish	Seeding 48h at 5± 3°C	4-4-4-6-2	4,0	+	5	b
2022	**2755**	**Truite fumée**	**Smoked trout**	*L. seeligeri* Ad2641	Trout	Seeding 48h at 5± 3°C	0-2-2-2-3	1,8	+	5	b
2022	**2756**	**Saumon fumé**	**Smoked Salmon**	*L. seeligeri* Ad2641	Trout	Seeding 48h at 5± 3°C	0-2-2-2-3	1,8	+	5	b
2022	**2757**	**Filets de harengs fumés**	**Smoked herring fillets**	*L. innocua* Ad1675	Fish	Seeding 48h at 5± 3°C	2-4-2-5-4	3,4	+	5	b
2022	**2758**	**Truite fumée**	**Smoked trout**	*L. innocua* Ad1675	Fish	Seeding 48h at 5± 3°C	2-4-2-5-4	3,4	+	5	b
2022	**2759**	**Saumon fumé**	**Smoked Salmon**	*L. welshimeri* Ad3209	Sandwich with tuna	Seeding 48h at 5± 3°C	3-1-2-2-3	2,2	+	5	b
2022	**2760**	**Filets de harengs fumés**	**Smoked herring fillets**	*L. welshimeri* Ad3209	Sandwich with tuna	Seeding 48h at 5± 3°C	3-1-2-2-3	2,2	+	5	b
2022	**2835**	**Déchets maquereaux (Fabrication rillettes de maquereaux)**	**Wastes (mackerel)**	*L. seeligeri* Ad1267	Environmental sample	Seeding 48h at 5± 3°C	2-0-0-0-0	0,4	+	6	a
2022	**2836**	**Déchets maquereaux (Fabrication rillettes de maquereaux)**	**Wastes (mackerel)**	*L. welshimeri* Ad1268	Environmental sample	Seeding 48h at 5± 3°C	0-0-1-2-0	0,6	-	6	a
2022	**3263**	**Déchets saumon P3 trancheur**	**Wastes (Salmon)**	*L. ivanovii* Ad677	Shrimps	Seeding 48h at 5± 3°C	1-1-2-2-2	1,6	+	6	a
2022	**3264**	**Déchets saumon P3 trancheur**	**Wastes (Salmon)**	*L. grayi* Ad1198	Smoked salmon	Seeding 48h at 5± 3°C	1-2-3-2-2	2,0	+	6	a
2022	**3265**	**Déchets Knack**	**Wastes (Knack)**	*L. welshimeri* Ad1252	Environmental sample	Seeding 48h at 5± 3°C	4-5-3-6-4	4,4	+	6	a
2022	**3266**	**Déchets Knack**	**Wastes (Knack)**	*L. innocua* Ad1256	Environmental sample	Seeding 48h at 5± 3°C	5-4-0-2-4	3,0	+	6	a
2022	**3267**	**Déchets crème glacée 310821**	**Wastes (Ice cream)**	*L. ivanovii* Ad1748	Goat milk	Seeding 48h at 5± 3°C	5-5-4-1-4	3,8	+	6	a
2022	**3268**	**Déchets crème glacée 230921**	**Wastes (Ice cream)**	*L. ivanovii* Ad1289	Raw milk cheese	Seeding 48h at 5± 3°C	1-4-3-3-3	2,8	+	6	a
2022	**2825**	**Eau de rinçage robot coupe (framboise)**	**Rinsing water (cut raspberries)**	*L. seeligeri* Ad651	Environmental sample	Seeding 48h at 5± 3°C	0-3-0-1-0	0,8	-	6	b
2022	**2826**	**Eau de nettoyage bol (courgette)**	**Cleaning water (cut zucchini)**	*L. innocua* Ad3269	Vegetables	Seeding 48h at 5± 3°C	2-0-0-1-0	0,6	+	6	b
2022	**2827**	**Eau de rinçage mélangeur (courgette)**	**Rinsing water (cut zucchini)**	*L. innocua* Ad3120	Broccolis	Seeding 48h at 5± 3°C	0-1-0-0-0	0,2	-	6	b
2022	**3269**	**Eau de process laveuse après parage**	**Process water (Salmon)**	*L. ivanovii* Ad677	Shrimps	Seeding 48h at 5± 3°C	1-1-2-2-2	1,6	+	6	b

Year of analysis	N° Sample	Product (French name)	Product	Artificial contaminations					Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/ sample				
							Numeration	Mean			
2022	**3270**	**Eau de rinçage filets**	**Rinsing water (Salmon)**	*L. grayi* Ad1198	Smoked salmon	Seeding 48h at 5± 3°C	1-2-3-2-2	2,0	-	6	b
2022	**3271**	**Eau de rinçage laveuse laverie P1**	**Rinsing water (Salmon)**	*L. welshimeri* Ad3250	Trout	Seeding 48h at 5± 3°C	7-6-5-4-3	5,0	-	6	b
2022	**3272**	**Eau de rinçage laverie P2**	**Rinsing water (Salmon)**	*L. monocytogenes* Ad1189	Fish	Seeding 48h at 5± 3°C	2-3-2-2-2	2,2	+	6	b
2022	**3273**	**Eau de rinçage fabrication rillettes maquereaux cru**	**Rinsed water (Fish rillettes production)**	*L. welshimeri* Ad3250	Trout	Seeding 48h at 5± 3°C	7-6-5-4-3	5,0	+	6	b
2022	**3274**	**Eau de rinçage fabrication rillettes de maquereaux cuit**	**Rinsed water (Fish rillettes production)**	*L. monocytogenes* Ad1189	Fish	Seeding 48h at 5± 3°C	2-3-2-2-2	2,2	+	6	b
2022	**3494**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	*L. monocytogenes* Ad2503 + *L. innocua* Ad1673	Environmental sample +zucchini	Seeding 48h at 5± 3°C	0-0-1-1-0 +1-3-1-1-1	0,4+1,4	+	6	b
2022	**3495**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	*L. monocytogenes* Ad2503 + *L. welshimeri* Ad1668	Environmental sample +mix vegetables	Seeding 48h at 5± 3°C	0-0-1-1-0 +3-0-1-3-2	0,4+1,8	+	6	b
2022	**3496**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	*L. monocytogenes* Ad3265 + *L. innocua* Ad1673	Vegetables +zucchini	Seeding 48h at 5± 3°C	0-1-0-4-3 +1-3-1-1-1	1,6+1,4	+	6	b
2022	**3497**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	*L. monocytogenes* Ad3265 + *L. welshimeri* Ad1668	Vegetables +mix vegetables	Seeding 48h at 5± 3°C	0-1-0-4-3 +3-0-1-3-2	1,6+1,8	+	6	b
2022	**2828**	**Eponge plan de travail pâte**	**Sponge before cleaning (dough)**	*L. seeligeri* Ad651	Environmental sample	Seeding 48h at 5± 3°C	0-3-0-1-0	0,8	-	6	c
2022	**2829**	**Eponge pesée légumes**	**Sponge before cleaning (vegetables)**	*L. innocua* Ad3269	Vegetables	Seeding 48h at 5± 3°C	2-0-0-1-0	0,6	+	6	c
2022	**2830**	**Eponge plan de travail épinards**	**Sponge before cleaning (spinach)**	*L. innocua* Ad3120	Broccolis	Seeding 48h at 5± 3°C	0-1-0-0-0	0,2	-	6	c
2022	**2831**	**Eponge ustensiles mousse au chocolat, haricots rouges**	**Sponge before cleaning (Chocolate mousse production)**	*L. seeligeri* Ad651	Environmental sample	Seeding 48h at 5± 3°C	0-3-0-1-0	0,8	+	6	c
2022	**2832**	**Eponge plan de travail mousse au chocolat, haricots rouges**	**Sponge before cleaning (Chocolate mousse production)**	*L. innocua* Ad3269	Vegetables	Seeding 48h at 5± 3°C	2-0-0-1-0	0,6	-	6	c
2022	**2833**	**Eponge cuisson rillettes de maquereaux**	**Sponge before cleaning (Fish rillettes production)**	*L. seeligeri* Ad1267	Environmental sample	Seeding 48h at 5± 3°C	2-0-0-0-0	0,4	-	6	c
2022	**2834**	**Eponge pesée rillettes de maquereaux**	**Sponge before cleaning (Fish rillettes production)**	*L. welshimeri* Ad1268	Environmental sample	Seeding 48h at 5± 3°C	0-0-1-2-0	0,6	-	6	c
2022	**3275**	**Chiffonnette avant nettoyage plan de travail (pâtes)**	**Wipe before cleaning (Dough)**	*L. monocytogenes* Ad2930	Raw material	Seeding 48h at 5± 3°C	5-4-4-4-2	3,8	+	6	c
2022	**3276**	**Chiffonnette avant nettoyage plan de travail robot coupe**	**Wipe before cleaning (Cutting robot)**	*L. monocytogenes* Ad2600	Environmental sample	Seeding 48h at 5± 3°C	2-4-6-5-4	4,2	+	6	c
2022	**3277**	**Chiffonnette après nettoyage robot coupe**	**Wipe after cleaning (Cutting robot**	*L. monocytogenes* Ad2600	Environmental sample	Seeding 48h at 5± 3°C	2-4-6-5-4	4,2	+	6	c
2022	**3278**	**Eponge avant nettoyage pesée**	**Sponge before cleaning**	*L. ivanovii* Ad677	Shrimps	Seeding 48h at 5± 3°C	1-1-2-2-2	1,6	+	6	c
2022	**3279**	**Chiffonnette avant nettoyage plan de travail mise en poche (rillettes de maquereaux)**	**Wipe before cleaning (Fish rillettes production)**	*L. grayi* Ad1198	Smoked salmon	Seeding 48h at 5± 3°C	1-2-3-2-2	2,0	+	6	c
2022	**3280**	**Chiffonnette avant nettoyage bol recette pimentée (rillettes de maquereaux)**	**Wipe before cleaning (Fish rillettes production)**	*L. welshimeri* Ad3250	Trout	Seeding 48h at 5± 3°C	7-6-5-4-3	5,0	+	6	c
2022	**3281**	**Chiffonnette avant nettoyage batteur (fabrication mousse au chocolat)**	**Wipe before cleaning (Chocolate mousse production)**	*L. ivanovii* Ad1289	Raw milk cheese	Seeding 48h at 5± 3°C	1-4-3-3-3	2,8	+	6	c
2022	**3282**	**Chiffonnette avant nettoyage balance (fabrication mousse au chocolat)**	**Wipe before cleaning (Chocolate mousse production)**	*L. monocytogenes* Ad2930	Raw material	Seeding 48h at 5± 3°C	5-4-4-4-2	3,8	+	6	c

Appendix 4 – Sensitivity study: raw data

Bold typing : artificially inoculated samples

Listeria detection results:

H+:	characteristic *Listeria* colonies with halo
H-:	characteristic *Listeria* spp. without halo
-:	no typical colonies but presence of background microflora
st:	plate without any colony
PA:	positive agreement
NA:	negative agreement
ND:	negative deviation
PD:	positive deviation
PPNA:	positive presumptive negative agreement
PPND:	positive presumptive negative deviation
NC:	non-characteristic colony on TSYEA
d:	doubtful colony
NI:	no identification
ni:	not isolated colony
L. mono	*Listeria monocytogenes*

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																								
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**1830**	**Sandwich jambon beurre**	**RTE (Sandwich butter and ham)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					1	a
2022	1937	Club sandwich jambon emmental	RTE (Sandwich cheese and ham)	H+/H-d	+d	H+	+	*L. mono* *L. seeligeri*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					1	a
2022	1940	Club sandwich jambon supérieur emmental	RTE (Sandwich cheese and ham)	-	-	-	-		-	0,008	-	-	-		-	-	**NA**	st	-		-	1	a
2022	2270	Chausson aux pommes	RTE (Apple puff pastry)	-	-	-	-		-	0,017	-	-	-		-	-	**NA**	-	-		-	1	a
2022	2362	Club sandwich (jambon, emmental)	RTE (Sandwich cheese and ham)	st	-	st	st		-	0,007	-	-	-		-	-	**NA**	st	st		-	1	a
2022	2365	Club sandwich (jambon, emmental)	RTE (Sandwich cheese and ham)	-	-	st	st		-	0,004	-	-	-		-	-	**NA**	-	-		-	1	a
2022	2373	Salade (pâtes, jambon, légumes)	RTE (Salad pasta, ham, vegetables)	st	st	st	st		-	0,013	-	st	-		-	-	**NA**	-	-		-	1	a
2022	2374	Sandwich (jambon, emmenthal)	RTE (Sandwich cheese and ham)	st	-	st	st		-	3,000	+	H-	-	*L. welshimeri*	+	+	**PD**					1	a
2022	2634	Sandwich viennois thon crudités	RTE (Sandwich tuna vegetables)	H+	-	H+	+	*L. mono*	+	0,187/ 0,212/ 0,198	-/ +/ -	H+	+	*L. mono*	+	-	**ND**	H+	+		+	1	a
2022	**2735**	**Taboulé au poulet rôti**	**RTE (Salad tabouleh chicken)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					1	a
2022	**2736**	**Riz à l'indienne**	**RTE (Salad with rice)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					1	a
2022	**2737**	**Piémontaise**	**RTE (Salad with potatoes, ham…)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					1	a
2022	**2738**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					1	a
2022	**2739**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	H-	+	H-	+	*L. seeligeri*	+	0,009	-	-	-		-	-	**ND**	-	-		-	1	a
2022	**2740**	**Sandwich (thon, œuf, salade)**	**RTE (Sandwich tuna, egg, salad)**	st	st	st	st		-	3,000	+	H-	+	*L. welshimeri*	+	+	**PD**					1	a
2022	2971	Cake au chorizo et poivrons	Chorizo and pepper cake	st	-	st	st		-	0,006	-	-	-		-	-	**NA**	st	st		-	1	a
2022	2972	Cake saumon et laitue de mer	Salmon and sea lettuce cake	st	st	st	st		-	0,012	-	-	-		-	-	**NA**	-	st		-	1	a
2022	2973	Salade de quinoa aux légumes	Quinoa salad with vegetables	-	-	-	-		-	0,008	-	-	-		-	-	**NA**	-	-		-	1	a
2022	2974	Poivrons farcis au fromage frais	Peppers stuffed with cream cheese	-	-	st	st		-	0,002	-	-	-		-	-	**NA**	st	st		-	1	a
2022	2975	Demi-involtini à la ricotta	Half-involtini with ricotta cheese	st	st	st	st		-	0,004	-	-	st		-	-	**NA**	st	st		-	1	a
2022	**1831**	**Pizza au chorizo**	**RTRH (Pizza chorizo)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					1	b
2022	1935	Escalope de poulet panée pour burger cuit	RTRH meal (breaded chicken)	H+	-	H+	-	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					1	b
2022	1942	Buffalo wings cuits	RTRH chicken meat (Buffalo wings cooked)	H+	-	H+	+	*L. mono*	+	0,011	-	-	-		-	-	**ND**	st	-		-	1	b
2022	2152	Beignets râpés de pommes de terre et cheddar	RTRH meal (potatoes and cheddar)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					1	b

♦ Analyses performed according to the COFRAC accreditation

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																									
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2153	Steak de soja, épinards, emmental	RTRH (Soy, spinach, cheese)	-	-	-	-		-	3,000	+	H+	+	*L. mono*	+	+	PD					1	b
2022	2157	Gratin dauphinois	RTRH (potatoes, cream)	st	-	-	-		-	0,006	-	-	-		-	-	NA	-	-		-	1	b
2022	2160	Ktipiti sauce poivron tomate	RTRH (Greek composite meal)	-	-	st	-		-	0,000	-	-	-		-	-	NA	st	st		-	1	b
2022	2161	Paella	RTRH (Paella)	H+(3)	-	H+	-	*L. mono*	+	0,005	-	-	-		-	-	ND	H-	+(2)	*L. seeligeri*	+	1	b
2022	2162	Tomate farcie riz	RTRH (tomatoes, meat, rice)	-	-	st	st		-	0,008	-	-	-		-	-	NA	-	-		-	1	b
2022	2281	Pépites de fromage ail et fine herbes pané	RTRH (Nuggets herbs and cheese)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					1	b
2022	2360	Nuggets de blé	RTRH (Nuggets, wheat)	-	-	-	-		-	0,009	-	-	-		-	-	NA	-	-		-	1	b
2022	2368	Palets épinards chèvre	RTRH (spinach, cheese)	H+/H-	+	H+/H-	+	*L. mono* *L. innocua*	+	3,000	+	H+/ H-	+	*L. mono* *L. innocua*	+	+	PA					1	b
2022	2369	Poëlée campagnarde surgelée	Frozen RTRH (vegetables and meat)	H-	-	H+/H-	-	*L. seeligeri* *L. mono*	+	1,753/ 1,673/ 1,607	+/ +/ +	-	-		+ (confirmed at 72 h)	+	PA	H+/H-	+		+	1	b
2022	2538	Paëlla	RTRT (Paella)	H+	+	H+	+	*L. mono*	+	0,015	-	-	-		-	-	ND	-	st		-	1	b
2022	2632	Feuilletée chèvre épinards	RTH (Puff spinach cheese)	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					1	b
2022	2635	Calamar à la romaine	RTH (Breaded squid)	st	-	st	st		-	0,009	-	st	-		-	-	NA	st	st		-	1	b
2022	2976	Poêlée lyonnaise (légumes, lardons, pommes de terre)	Poêlée lyonnaise (vegetables, bacon, potatoes)	st	st	st	st		-	0,004	-	-	st		-	-	NA	st	st		-	1	b
2022	2977	Couscous poulet merguez	Couscous, chicken, merguez	st	st	st	st		-	0,008	-	-	-		-	-	NA	-	-		-	1	b
2022	2978	Samoussa	Samoussa	st	st	st	st		-	0,018	-	-	-		-	-	NA	-	-		-	1	b
2022	2979	Nems crevettes	Shrimp nems	-	-	-	-		-	0,007	-	-	-		-	-	NA	-	-		-	1	b
2022	**1832**	**Patisserie (religieuse chocolat/café)**	**Pastry**	-	-	-	st		-	0,009	-	-	-		-	-	NA	st	-		-	1	c
2022	1931	Pâte à tarte crue	Raw dough	H+/H-	-	H+/H-	+	*L. mon/* *L. innocua*	+	2,477	+	H+/ H-	+	*L. mon/* *L. innocua*	+	+	PA					1	c
2022	2263	Omelette cubes	Omelette	-	-	st	st		-	0,013	-	-	-		-	-	NA	st	-		-	1	c
2022	2356	Omelette brouillée	Omelette	-	-	st	st		-	0,012	-	-	-		-	-	NA	st	st		-	1	c
2022	2357	Pâte crue (Croissant pur beurre)	Raw dough	H+	-	H+	-	*L. mono*	+	1,106	+	H+(1)	-	*L. mono*	+	+	PA					1	c
2022	2358	Pâte crue (Quiche)	Raw dough	H+/H-	+	H+/H-	+	*L. mono* *L. innocua*	+	3,000	+	H+/ H-	+	*L. mono* *L. innocua*	+	+	PA					1	c
2022	2366	Pâte crue (brisée pur beurre)	Raw dough	-	-	-	-		-	0,025	-	-	-		-	-	NA	-	-		-	1	c
2022	**2463**	**Crème anglaise**	**Custard**	H+	+	H+	+	*L. mono*	+	0,042	-	st	st		-	-	ND	st	st		-	1	c
2022	**2464**	**Ile flottante**	**Custard based dessert**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					1	c
2022	**2465**	**Crème anglaise**	**Custard**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					1	c
2022	**2466**	**Tortilla aux oignons**	**Omelette with onions**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					1	c
2022	**2467**	**Tortilla aux oignons**	**Omelette with onions**	H+	+	H+	+	*L. mono*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					1	c

COMPOSITE FOODS / READY-TO-EAT AND READY-TO-REHEAT																									
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				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**2741**	**Entremet (chocolat blanc, framboise)**	**Confectionary (chocolate, raspberry)**	H-	+	H-	+d	*L. welshimeri*	**+**	3,000	+	H-	+	*L. welshimeri*	+	**+**	**PA**					1	c
2022	**2742**	**Entremet (mousse chocolat noir)**	**Confectionary (Chocolate)**	H-	+	H-	+d	*L. welshimeri*	**+**	3,000	+	H-	+	*L. welshimeri*	+	**+**	**PA**					1	c
2022	2980	Mousse passion, fruits rouges	Passion fruits and red fruits mousse	st	st	st	st		**-**	0,003	-	-	-		-	**-**	**NA**	-	-		**-**	1	c
2022	2981	Mousse fraise avec coulis	Strawberries mousse with coulis	-	-	st	st		**-**	0,006	-	-	st		-	**-**	**NA**	-	-		**-**	1	c
2022	2982	Gâteau crème choco poire belle hélène	Chocolate cream cake with pear Belle Hélène	-	-	-	-		**-**	0,008	-	-	-		-	**-**	**NA**	-	-		**-**	1	c
2022	2983	Coupe Bavaroise fraise et crème	Strawberry and Cream Bavarian Cup	st	-	st	st		**-**	0,002	-	-	-		-	**-**	**NA**	-	-		**-**	1	c
2022	2984	Tartelette abricots	Apricot tartlet	st	st	st	st		**-**	0,010	-	-	-		-	**-**	**NA**	st	st		**-**	1	c
2022	2985	Tartelette pomme	Apple tartlet	st	st	st	st		**-**	0,012	-	st	-		-	**-**	**NA**	st	st		**-**	1	c

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				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**1833**	**Tranches de filets de porcs**	**Fresh pork meat**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					2	a
2022	**1834**	**Escalope de dinde**	**Fresh turkey meat**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	-	*L. welshimeri*	+	+	**PA**					2	a
2022	1932	Viande de cuisse calibrée	Frozen raw poultry meat	H+/H-	+	H+/H-	+	*L. mono* *L. innocua*	+	3,000	+	H+/ H-	-	*L. mono* *L. innocua*	+	+	**PA**					2	a
2022	1933	Viande rouge avec peau	Frozen raw poultry meat	H+	-	H+	+	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					2	a
2022	1941	Cuisse de coq crue	Frozen raw poultry meat	H+	+	H+	+	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					2	a
2022	1943	VSM de dinde	Frozen raw turkey meat	H-	-	H-	+d	*L. welshimeri*	+	3,000	+	H-d	-	*L. welshimeri*	+	+	**PA**					2	a
2022	2156	Jambon de coche	Raw pork meat	-	-	-	-		-	0,019	-	-	-		-	-	**NA**	-	-		-	2	a
2022	2158	Escalope de dinde	Turkey meat	H+	+	H+	+	*L. mono*	+	0,012	-	-	-		-	-	**ND**	st	-		-	2	a
2022	2159	Steak haché surgelé (15% MG)	Frozen ground beef (15% fat)	-	-	st	-		-	0,034	-	-	-		-	-	**NA**	-	-		-	2	a
2022	2167	Viande hachée de veau (5% MG)	Ground veal meat (5% fat)	st	-	-	-		-	0,086	-				-	-	**NA**	-	-		-	2	a
2022	2169	Viande de jambonneau	Pork meat	-	-	-	st		-	0,004	-				-	-	**NA**	-	-		-	2	a
2022	2170	Minerai de bœuf	Beef meat	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					2	a
2022	2171	Blanquette de dinde congelée	Frozen turkey meat	-	-	st	st		-	0,716	+	H-	-	*L. welshimeri*	+	+	**PD**					2	a
2022	2173	Maigre de porc	Pork meat	H+	-	H+	+	*L. mono*	+	3,000/ 3,000/ 3,000	+/ +/ +	-	-		+ (confirmed at 72 h)	+	**PA**					2	a
2022	2174	Viande rouge calibrée	Red meat	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H+/ H-	+	*L. mono* *L. welshimeri*	+/+	+	**PA**					2	a
2022	3126	Côte de veau à griller	Fresh veal meat	-	-	-	-		-	0,010	-	-	-		-	-	**NA**	-	-		-	2	a
2022	3127	Escalope de veau	Fresh veal meat	-	-	-	-		-	0,007	-	-	-		-	-	**NA**	-	-		-	2	a
2022	3128	Tranches de gigot d'agneau	Fresh lamb meat	H+	-	H+/H-	+	*L. ivanovi* *L. welshimeri*	+	2,287	+	H+/ H-	+	*L. ivanovii* *L. seeligeri*	+	+	**PA**					2	a
2022	3129	Côtes d'agneau	Fresh lamb meat	st	st	-	-		-	0,022/ 0,090/ 1,119	-/ -/ +	H+	-	*L. ivanovii*	+	-	**NA**	H+	+	+	+	2	a
2022	3130	Escalope de dinde	Fresh turkey meat	H-	+	H-	+	*L. welshimeri*	+	0,014	-	-	-		-	-	**ND**	-	-		-	2	a
2022	1936	Saucisses de poulet cuites	RTRH (cooked chicken sausages)	H+	-	H+	-	*L. mono*	+	0,006	-	-	-		-	-	**ND**	st	-		-	2	b
2022	2267	Francks de poulet	RTRH (Chicken sausage)	-	-	st	-		-	0,004	-	-	-		-	-	**NA**	-	-		-	2	b
2022	2285	Boulettes à la Bolognaise	RTRH (Cooked beef meat with sauce)	-	-	-	-		-	0,041	-	-	-		-	-	**NA**	-	-		-	2	b
2022	2289	Francks de poulet	RTRH (Chicken sausage)	st	st	st	st		-	0,006	-	st	-		-	-	**NA**	st	st		-	2	b
2022	2293	Francks de poulet	RTRH (Chicken sausage)	-	-	-	-		-	0,007	-	-	-		-	-	**NA**	-	-		-	2	b
2022	2361	Francks de poulet	RTRH (Chicken sausage)	st	-	st	st		-	0,009	-	-	-		-	-	**NA**	st	st		-	2	b
2022	**2468**	**Petit salé aux lentilles**	**RTRH (pork)**	st	st	st	st		-	3,000	+	H-	+	*L. innocua*	+	+	**PD**					2	b
2022	**2469**	**Bœuf charolais au Médoc**	**RTRH (beef meat)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					2	b
2022	**2470**	**Poulet tikka**	**RTRH (Tikka chicken)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					2	b
2022	**2471**	**Daube provençale au bœuf**	**RTRH (beef meat)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					2	b
2022	**2472**	**Poulet tikka**	**RTRH (Tikka chicken)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					2	b

♦ Analyses performed according to the COFRAC accreditation

MEAT PRODUCTS																									
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												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**2473**	**Petit salé aux lentilles**	**RTRH (pork)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					2	b
2022	2528	Emincés de cuisses de poulet rôti au curry	RTRH (chicken meat)	H+	+	H+	-	*L. mono*	+	3,000	+	H+d/ H-	+	*L. mono*	+	+	**PA**					2	b
2022	2529	Emincés de cuisses de poulet rôti au curry	RTRH (chicken meat)	H-d (Gram-)	-	-	-		-	3,000	+	H+	+	*L. mono*	+	+	**PD**					2	b
2022	2595	Bouchées de blanquette de dinde roties	RTRH (turkey meat)	H+	+	H+	+	*L. mono*	+	0,010	-	-	-		-	-	**ND**	st	st		-	2	b
2022	2596	Saucisses coktail de volaille	RTRH (poultry sausage)	st	st	st	st		-	0,011	-	-	-		-	-	**NA**	st	-		-	2	b
2022	3131	Filet de poulet cuit et pommes de terre Salardaise	RTRH (chicken, potatoes)	st	st	st	st		-	0,008	-	-	-		-	-	**NA**	-	-		-	2	b
2022	3132	Escalope à la Milanaise et spaguettis à la tomate	RTRH (turkey spaghettis)	st	st	st	st		-	0,002	-	-	-		-	-	**NA**	st	st		-	2	b
2022	3133	Porc au caramel et riz	RTRH (pork rice)	st	st	st	st		-	0,001	-	st	st		-	-	**NA**	st	st		-	2	b
2022	3134	Blanquette de veau riz aux champignons	RTRH (veal rice)	st	st	st	st		-	0,000	-	st	st		-	-	**NA**	st	st		-	2	b
2022	**1835**	**Lardons natures**	**Raw bacon**	H-	-	H-	+	*L. seeligeri*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					2	c
2022	1939	Allumettes de poulet fumées	Smoked chicken	H+	+d	H+	+d	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					2	c
2022	2155	Rôti de chorizo	Roast Chorizo	-	-	st	-		-	0,021	-	-	-		-	-	**NA**	-	-		-	2	c
2022	2163	Plat de côte de port 1/2 sel	Raw cured pork meat	st	-	st	st		-	0,048	-	H+	-	*L. mono*	+	-	**NA**	H+ (O.D.= 3,000)	+	*L. mono*	+	2	c
2022	2172	Saucisson sec	Dry sausage	-	-	st	-		-	0,010	-	-	-		-	-	**NA**	st	-		-	2	c
2022	2175	Filet de poulet fumé	Smoked poultry meat	st	-	st	st		-	3,000	+	H+	+	*L. mono*	+	+	**PD**					2	c
2022	2283	Allumettes de poulet fumées	Cured chicken	st	-	st	st		-	0,009	-	st	-		-	-	**NA**	st	-		-	2	c
2022	2284	Epaule de porc cuite en dés	Cooked sliced pork	st	st	st	st		-	3,000	+	H+	+d	*L. mono*	+	+	**PD**					2	c
2022	2286	Lardons fumés cuits surgelés	Frozen smoked pork	st	-	st	st		-	0,009	-	-	-		-	-	**NA**	st	st		-	2	c
2022	2288	Chipolatas	Sausage	-	-	H-	+(1)	*L. welshimeri*	+	0,006	-	-	-		-	-	**ND**	-	-		-	2	c
2022	2290	Saucisson sec	Dry sausage	H-	+d	H-	+	*L. welshimeri*	+	0,013	-	-	-		-	-	**ND**	-	-		-	2	c
2022	2291	Rillettes de porc	Pork rillettes	-	-	-	-		-	0,007	-	-	-		-	-	**NA**	-	-		-	2	c
2022	2292	Saucisson sec au poivre vert	Seasoned dry sausage	st	-	st	st		-	0,013	-	-	-		-	-	**NA**	st	-		-	2	c
2022	2353	Mortadelle aux olives Halal	RTE (Mortadelle, olives)	st	st	-	st		-	0,007	-	st	-		-	-	**NA**	st	st		-	2	c
2022	2537	Miettes de jambon	Cooked ham	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					2	c
2022	2540	Chorizo fumé pur porc	Smoked delicatessen	H+/H-(1)	+	H+	+	*L. mono/ L. welshimeri*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					2	c
2022	2594	Jambon de porc	Cooked ham	H-	+	H-	+	*L. innocua*	+	0,768	+	H+	-	*L. mono*	+	+	**PA**					2	c
2022	2631	Merguez	Merguez	st	-	H-	+	*L. innocua*	+	0,049/ 0,047/ 0,034	-/ -/ -	H-ni	+	*L. welshimeri*	+	-	**ND**	H-	+		+	2	c
2022	2636	Jambon	Ham	st	-	st	st		-	0,014	-	st	-		-	-	**NA**	st	st		-	2	c
2022	3135	Terrine de campagne à l'ancienne	Meat terrine	-	st	-	-		-	0,003	-	-	st		-	-	**NA**	st	st		-	2	c

MILK AND DAIRY PRODUCTS																								
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												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**1837**	**Fromage au lait cru de vache (Pont l'évêque)**	**Raw cow milk cheese**	-	-	st	-		**-**	0,003	-	-	-		-	**-**	**NA**	st	-		**-**	3	a
2022	**1838**	**Fromage au lait cru de brebis (Ossau Iraty)**	**Raw ewe milk cheese**	H+	+	H+	+	*L. mono*	**+**	3,000	+	H+	+(1)	*L. mono*	+	**+**	**PA**					3	a
2022	2294	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	H+	+d	H+	+	*L. mono*	**+**	1,130	+	H+	+	*L. mono*	+	**+**	**PA**					3	a
2022	2295	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	st	-	st	st		**-**	0,007	-				-	**-**	**NA**					3	a
2022	2296	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	st	-	st	st		**-**	3,000	+	H+	+	*L. mono*	+	**+**	**PD**					3	a
2022	2297	Fromage à pâte persillée au lait cru de brebis	Raw ewe milk cheese	-	-	st	st		**-**	0,004	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	2298	Fromage à pâte persillée au lait cru de brebis	Raw ewe milk cheese	st	st	st	st		**-**	0,006	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	2299	Fromage à pâte persillée au lait cru de brebis	Raw ewe milk cheese	-	-	st	st		**-**	0,001	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	**2743**	**Fromage au lait cru de vache (Camembert)**	**Raw cow milk cheese**	H-	+	H-	+	*L. innocua*	**+**	3,000	+	H-	+	*L. innocua*	+	**+**	**PA**					3	a
2022	**2745**	**Fromage au lait cru de chèvre (Chabichou)**	**Raw goat milk cheese**	st	st	st	st		**-**	0,008	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	**2746**	**Fromage au lait cru de chèvre (Picodon)**	**Raw goat milk cheese**	st	st	H-	+	*L. seeligeri*	**+**	3,000	+	H-	+	*L. seeligeri*	+	**+**	**PA**					3	a
2022	2761	Fromage au lait cru de brebis (Roquefort)	Raw ewe milk cheese	-	-	-	st		**-**	0,005	-	-	-		-	**-**	**NA**	st	-		**-**	3	a
2022	2762	Fromage au lait cru de chèvre (Chabichou)	Raw goat milk cheese	st	st	st	st		**-**	0,008	-	st	-		-	**-**	**NA**	st	st		**-**	3	a
2022	2763	Fromage au lait cru de chèvre (Picodon)	Raw goat milk cheese	-	-	st	st		**-**	0,011	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	**2987**	**Petit camembert au lait cru de vache**	**Raw cow milk cheese**	st	st	st	st		**-**	1,109	+	H-	+	*L. welshimeri*	+	**+**	**PD**					3	a
2022	**2988**	**Moelleux de Savoie au lait cru de vache**	**Raw cow milk cheese**	H-	-	H-	+	*L. innocua*	**+**	1,267	+	H-	+	*L. innocua*	+	**+**	**PA**					3	a
2022	3144	Munster au lait cru	Raw milk cheese	-	st	-	st		**-**	0,011	-	-	-		-	**-**	**NA**	st	st		**-**	3	a
2022	3145	Reblochon au lait cru	Raw milk cheese	-	-	-	st		**-**	0,006	-	-	-		-	**-**	**NA**	-	st		**-**	3	a
2022	3499	Fromage au lait cru de chèvre	Raw goat milk cheese	-	st	st	st		**-**	0,000	-	st	st		-	**-**	**NA**	st	st		**-**	3	a
2022	3500	Fromage au lait cru de vache	Raw cow milk cheese)	st	st	st	st		**-**	0,000	-	-	-		-	**-**	**NA**	-	st		**-**	3	a
2022	**1836**	**Lait cru de vache**	**Raw cow milk**	H+	+	H+	+	*L. mono*	**+**	3,000	+	H+	+(3)	*L. mono*	+	**+**	**PA**					3	b
2022	2302	Lait cru de brebis (Tank)	Raw ewe milk	st	st	st	st		**-**	0,004	-	st	-		-	**-**	**NA**	-	-		**-**	3	b
2022	2303	Lait cru de brebis (Tank)	Raw ewe milk	st	st	st	st		**-**	0,745	+	H+	+d(2)	*L. mono*	+	**+**	**PD**					3	b
2022	2304	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	**+**	3,000	+	H+	+	*L. mono*	+	**+**	**PA**					3	b
2022	2305	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	**+**	3,000	+	H+	+	*L. mono*	+	**+**	**PA**					3	b
2022	2306	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	**+**	3,000	+	H+	+	*L. mono*	+	**+**	**PA**					3	b
2022	2588	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	**+**	0,601	+	H+	+	*L. mono*	+	**+**	**PA**					3	b
2022	2589	Lait cru de brebis	Raw ewe milk	H+(2)	+	H+	+	*L. mono*	**+**	0,301	+	H+	+	*L. mono*	+	**+**	**PA**					3	b

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MILK AND DAIRY PRODUCTS																									
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2590	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					3	b
2022	2591	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					3	b
2022	2592	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					3	b
2022	2617	Lait cru de vache	Raw cow milk	st	-	st	st		-	0,005	-	-	-		-	-	NA	-	st		-	3	b
2022	2618	Lait cru de vache	Raw cow milk	st	-	st	st		-	0,009	-	-	-		-	-	NA	st	-		-	3	b
2022	2619	Lait cru de vache	Raw cow milk	st	-	st	st		-	3,000	+	H-	+	*L. innocua*	+	+	PD					3	b
2022	2620	Lait cru de vache	Raw cow milk	-	-	-	-		-	0,011	-	-	-		-	-	NA	st	-		-	3	b
2022	2621	Lait cru de vache	Raw cow milk	-	-	st	st		-	0,014	-	-	-		-	-	NA	-	-		-	3	b
2022	2622	Lait cru de vache	Raw cow milk	-	-	st	st		-	0,008	-	-	-		-	-	NA	st	-		-	3	b
2022	**2989**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	PA					3	b
2022	**2990**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. welshimeri*	+	0,010	-	-	-		-	-	ND	-	-		-	3	b
2022	**2991**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					3	b
2022	**3283**	**Lait cru de chèvre**	**Raw goat milk**	H+	+	H+(1)	st	*L. ivanovii*	+	0,197/ 0,140/ 0,120	-/ -/ -	H+	-	*L. ivanovii*	+	-	ND	H+	+		+	3	b
2022	**3284**	**Lait cru de chèvre**	**Raw goat milk**	H+	+	H+	+	*L. ivanovii*	+	1,514	+	H+	+	*L. ivanovii*	+	+	PA					3	b
2022	3285	Lait cru de chèvre	Raw goat milk	st	st	st	st		-	0,000	-	-	-		-	-	NA	st	st		-	3	b
2022	3286	Lait cru de chèvre	Raw goat milk	st	st	st	st		-	0,016	-	st	st		-	-	NA	st	st		-	3	b
2022	3502	Lait cru de vache	Raw cow milk cheese	-	-	-	-		-	3,000	+	H-	+	*L. innocua*	+	+	PD					3	b
2022	2300	Gorgonzola	Cheese	H+	+d	H+	+	*L. mono*	+	3,000	+	H+	+d	*L. mono*	+	+	PA					3	c
2022	2301	Fromage fondu	Melted cheese	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+d	*L. mono*	+	+	PA					3	c
2022	**2474**	**Fromage de brebis pasteurisé (Baskeru)**	**Pasteurised ewe milk cheese**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	PA					3	c
2022	**2475**	**Fromage de chèvre pasteurisé (Cabécou)**	**Pasteurised goat milk cheese**	-	st	st	st		-	0,023	-	-			-	-	NA	st	st		-	3	c
2022	**2476**	**Fromage de vache pasteurisé (Camembert)**	**Pasteurised cow milk cheese**	-	-	-	-		-	0,008/ 0,012/ 0,009	-/ -/ -	H+	-	*L. ivanovii*	+	-	NA	H+	-	*L.ivanovii*	+	**3**	c
2022	**2477**	**Milkshake frais vanille**	**Pasteurised flavoured milk**	H+/H+	+/+	st/st	st/st	*L. ivanovii*	+	1,760	+	H+	+	*L. ivanovii*	+	+	PA					3	c
2022	**2478**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H+	+	H+	+	*L. ivanovii*	+	0,679	+	H+	+	*L. ivanovii*	+	+	PA					3	c
2022	**2747**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					3	c
2022	**2748**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					3	c
2022	**2749**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					3	c
2022	**2750**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	PA					3	c
2022	3146	Fromage de brebis au lait pasteurisé	Pasteurised ewe milk cheese	st	st	st	st		-	0,005	-	-	-		-	-	NA	st	st		-	3	c
2022	3147	Fromage de chèvre au lait pasteurisé	Pasteurised goat milk cheese	st	-	-	-		-	0,000	-	st	-		-	-	NA	-	-		-	3	c

MILK AND DAIRY PRODUCTS																									
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										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	3148	Yahourt au lait pasteurisé de chèvre	Pasteurised goat yoghurt	st	st	st	st		-	0,002	-	-	-		-	-	NA	st	st		-	3	c
2022	3149	Crème épaisse entière au lait pasteurisé	Pasteurised full cream	-	-	-	-		-	0,000	-	-	-		-	-	NA	st	st		-	3	c
2022	3150	Crème fleurette légère au lait pasteurisé	Pasteurised cream	st	st	st	st		-	0,000	-	st	st		-	-	NA	st	st		-	3	c
2022	3151	Lait frais pasteurisé	Fresh pasteurised milk	st	st	st	st		-	0,010	-	st	st		-	-	NA	st	st		-	3	c
2022	3152	Lait frais entier pasteurisé	Fresh pasteurised whole milk	st	st	st	st		-	0,009	-	st	st		-	-	NA	st	st		-	3	c
2022	3287	Beurre pasteurisé	Pasteurised butter	st	st	st	st		-	0,003	-	st	st		-	-	NA	st	st		-	3	c
2022	3498	Fromage pasteurisé au lait de vache	Pasteurised cow milk cheese	-	-	-	-		-	0,000	-	-	-		-	-	NA	-	-		-	3	c

VEGETABLES																								
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										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**1839**	**Graines germées (Alfalfa bio)**	**Sprouted seeds (Alfalfa)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					4	a
2022	2027	Ciboulette	Chive	-	-	st	-		-	0,015	-	-	-		-	-	**NA**	H+ (O.D Full Fraser=3,000)	+	*L.mono*	+	4	a
2022	2033	Persil plat	Parsley	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					4	a
2022	2040	Persil frisé	Parsley	st	-	-	-		-	0,008	-	-	-		-	-	**NA**	-	st		-	4	a
2022	2043	Haricots verts bio	Organic beans	st	-	st	st		-	3,000	+	H-	+	*L. innocua*	+	+	**PD**					4	a
2022	2049	Chou fleur	Cauliflower	st	-	st	-		-	0,006	-	st	-		-	-	**NA**	st	-		-	4	a
2022	2354	Ciboulette	Chive	-	-	st	-		-	0,018	-	-	-		-	-	**NA**	st	-		-	4	a
2022	2363	Ciboulette	Chive	-	-	st	st		-	0,010	-	-	-		-	-	**NA**	st	st		-	4	a
2022	2367	Farine bio nature	Flour	H+(1)	-	H+/H-	+	*L. mono* *L. innocua*	+	3,000	+	H-	-	*L. innocua*	+	+	**PA**					4	a
2022	2372	Ciboulette	Chive	-	-	st	-		-	0,007	-	-	-		-	-	**NA**	st	st		-	4	a
2022	**2480**	**Jeunes pousses épinards**	**Baby leaves (spinach)**	H-	+	H-	+	*L. innocua*	+	3,000	+	-dni	+	*L. innocua*	+	+	**PA**					4	a
2022	**2481**	**Jeunes pousses**	**Baby leaves**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	**PA**					4	a
2022	**2482**	**Alfalfa bio**	**Sprouts (Alfalfa)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					4	a
2022	**2483**	**Alfalfa poireau lentille bio**	**Sprouts (leeks and lentils)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	**PA**					4	a
2022	2533	Ciboulette	Chive	-	-	st	st		-	0,004	-	-	-		-	-	**NA**	-	-		-	4	a
2022	2534	Ciboulette	Chive	-	-	-	st		-	0,007	-	-	-		-	-	**NA**	-	-		-	4	a
2022	2536	Ciboulette	Chive	-	-	st	-		-	0,005	-	H-d	-		-	-	**NA**	-	-		-	4	a
2022	2544	Persil plat	Parsley	-	st	st	st		-	3,000	+	H-	+d	*L.innocua*	+	+	**PD**					4	a
2022	2546	Ciboulette	Chive	-	-	H+	-	*L. mono*	+	0,007/ 0,026/ 0,017	-/ -/ -	-	-		-	-	**ND**	H+/H-	+	*L.mono* */L.seeligeri*	+	4	a
2022	2547	Persil plat	Parsley	H-	-	H-	+	*L. seeligeri*	+	0,002	-	-	-		-	-	**ND**	-	-		-	4	a
2022	**1586**	**Epinards surgelés**	**Frozen spinach**	H+d	+	H+	+	*L. mono*	+	3,000	+	H+d/ H-d	+	*L. mono* *L. innocua*	+	+	**PA**					4	b
2022	**1840**	**Mélange de crudités**	**Cut mixed vegetables**	st	st	st	st		-	0,009	-	-	-		-	-	**NA**	st	st		-	4	b
2022	2031	Poêlée à la Bretonne	Pan-fried vegetables mix	-	-	st	st		-	0,012	-	-	-		-	-	**NA**	-	-		-	4	b
2022	2032	Poêlée Parisienne	Pan-fried vegetables mix	H+	+d	H+	+	*L. mono*	+	0,008	-	-	-		-	-	**ND**	st	st		-	4	b
2022	2034	Brunoise méridionale	Vegetable mix	-	-	-	-		-	0,007	-	-	-		-	-	**NA**	st	st		-	4	b
2022	2038	Galette de pomme de terre crues	RTC meal (raw potatoes)	st	-	st	-		-	0,028	-	-	-		-	-	**NA**	-	-		-	4	b
2022	2042	Petits pois bio blanchis	Cooked peas	-	-	-	-		-	0,006	-	-	-		-	-	**NA**	-	-		-	4	b
2022	2046	Poêlée asiatique	Pan-fried vegetables mix	-	-	-	-		-	0,007	-	-	-		-	-	**NA**	st	-		-	4	b
2022	2047	Poêlée Parisienne	Pan-fried vegetables mix	st	st	st	st		-	0,009	-	-	-		-	-	**NA**	st	st		-	4	b
2022	2048	Macédoine	Vegetable mix	st	st	st	st		-	0,011	-	-	-		-	-	**NA**	st	-		-	4	b
2022	2050	Oignons préfrits	Pre-fried onions	st	-	st	st		-	0,004	-	-	-		-	-	**NA**	st	st		-	4	b
2022	**2484**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L.innocua*	+	+	**PA**					4	b

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VEGETABLES																								
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**2485**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	-	st	st	st		-	0,008	-	-	-		-	-	**NA**	st	st		-	4	b
2022	**2486**	**Wok fondant frais**	**Fresh mix vegetables**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					4	b
2022	2532	Pommes de terre blanchies	Cooked potatoes	st	-	st	st		-	0,037	-	-	-		-	-	**NA**	-	-		-	4	b
2022	2539	Poêlée Parisienne Bio	Pan-fried vegetables mix	H+	+	H+	+	*L. mono*	+	2,443	+	H+	+	*L. mono*	+	+	**PA**					4	b
2022	2549	Poêlée campagnarde	Pan-fried vegetables mix	H+/H-	+	H+	+	*L. mono/ L. seeligeri*	+	2,943	+	H+	+	*L. mono*	+	+	**PA**					4	b
2022	2600	Epinards feuilles enroulées	Cooked spinach	H+	+	H+	+	*L. mono*	+	0,019	-	-	-		-	-	**ND**	st	st		-	4	b
2022	2611	Patate douce en julienne	Cooked potatoes	-	-	st	-		-	3,000	+	H+	+	*L. mono*	+	+	**PD**					4	b
2022	2633	Mélange légumes grillés	Grilled vegetables mix	-	-	-	-		-	0,006	-	-	-		-	-	**NA**	-	-		-	4	b
2022	**2751**	**Assiette croquante**	**Fresh mix vegetables**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					4	b
2022	**2752**	**Assiette croquante**	**Fresh mix vegetables**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	**PA**					4	b
2022	2028	Bol vapeur courge butternut, carottes, brocolis	RTE vegetable mix	st	-	st	st		-	0,010	-	-	-		-	-	**NA**	-	-			4	c
2022	2029	Chou milan émincé cuit	Cooked sliced kale	H+/H-+ni	-	H+/H-	+	*L. mono L. innocua*	+	3,000	+	H-/ H+d	+	*L. mono L. innocua*	+	+	**PA**					4	c
2022	2030	Palets chou, brocolis	Cabbage and broccoli puffs	H+	+	H+/H-	+	*L. mono L. innocua*	+	3,000	+	H-/ H+d	+	*L. mono L. seeligeri*	+	+	**PA**					4	c
2022	2035	Paillasson de légumes	RTRH vegetables	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					4	c
2022	2036	Pané de patate douce, millet	RTRH vegetables	-	-	-	-		-	0,008	-	-	-		-	-	**NA**	-	-		-	4	c
2022	2037	Palets de légumes, courgettes	RTRH vegetables	H+	+	H+	-	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					4	c
2022	2039	Houmous	Hummus	-	-	-	st		-	0,004	-	-	-		-	-	**NA**	-	-		-	4	c
2022	2041	Epinards hachés à la crème	Chopped spinach with cream	H+	-	H+	-	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					4	c
2022	2044	Houmous	Hummus	-	-	-	-		-	0,005	-	-	-		-	-	**NA**	st	-		-	4	c
2022	2045	Pois chiches après cuisson	Chickpeas after cooking	st	st	st	st		-	0,010	-	-	-		-	-	**NA**	-	st		-	4	c
2022	2154	Galettes de soja, tomates, basilic	Soy, tomato and basil patties	-	-	st	-		-	0,008	-	-	-		-	-	**NA**	-	-		-	4	c
2022	2261	Plat préparé Mezze	RTRH (Mezze)	H+d/H-	+d(2)	H+d/H-	+d(4)	*L. innocua*	+	0,008	-	-	-		-	-	**ND**	st	st		-	4	c
2022	2359	Palets de légumes surgelés	Frozen cooked vegetables	-	-	-	-		-	0,012	-	-	-		-	-	**NA**	-	-		-	4	c
2022	2376	Verrines gourmets aux légumes	RTE (cooked vegetables)	H-	+	H-	+	*L. innocua*	+	0,013	-	-	-		-	-	**ND**	st	st		-	4	c
2022	2548	Houmous bio	Hummus	-	-	-	-		-	0,006	-	-	-		-	-	**NA**	st	st		-	4	c
2022	2598	Galette végétale tomate basilic	RTRH (tomatoes, basilic, pancake)	-	-	st	-		-	0,005	-	-	-		-	-	**NA**	-	-		-	4	c
2022	2604	Guacamole	Guacamole	-	-	st	-		-	0,007	-	-	-		-	-	**NA**	st	-		-	4	c
2022	2605	Guacamole	Guacamole	-	-	st	st		-	0,008	-	-	-		-	-	**NA**	st	-		-	4	c
2022	2606	Soupe de légumes haricots blancs, vermicelles	RTRH (vegetable soup)	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H+/ H-	+	*L. mono L. innocua*	+	+	**PA**					4	c
2022	2610	Houmous bio	Hummus	-	-	st	-		-	0,012	-	-	-		-	-	**NA**	st	-		-	4	c
2022	**2753**	**Purée de brocolis**	**RTRH (Broccoli purée)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					4	c
2022	**2754**	**Purée de brocolis**	**RTRH (Broccoli purée)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	**PA**					4	c

SEAFOOD AND FISHERY PRODUCTS																									
				Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*															
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C															
												Confirmations							Confirmation on negative samples						
										Solus One *Listeria* ELISA result		O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony				
Year of analysis	N° Sample	Product (French name)	Product	Half Fraser		Fraser 1		Identification	Final result							Final result	Agreement Ref/Alt				Final result	Category	Type
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	**1841**	**Filet d'Eglefin**	**Raw fish**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					5	a
2022	1938	Paupiette de saumon crue	Raw salmon-based preparation	H+/H-	-	H+/H-	+	*L. mono/ L. welshimeri*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					5	a
2022	1945	Pavé de poisson à la Napolitaine cru	Seasoned raw fish steak	-	-	st	st		-	0,009	-	-	-		-	-	**NA**	st	-		-	5	a
2022	2258	Lieu noir	Raw fish	H+(1)	st	H+	+	*L. mono*	+	0,006	-	-	-		-	-	**ND**	-	-		-	5	a
2022	2264	Saumon	Raw salmon	st	-	st	st		-	0,007	-	-	-		-	-	**NA**	-	-		-	5	a
2022	2272	Paupiette de saumon crue	Raw salmon roll	H+/H-	-	H+	+	*L. mono L. welshimeri*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					5	a
2022	2273	Crevettes blanches	Shrimps	H+	-	H+	+	*L. mono*	+	0,001	-	-	-		-	-	**ND**	-	-		-	5	a
2022	2274	Saumon	Raw salmon	st	st	st	st		-	0,024	-	st	-		-	-	**NA**	st	-		-	5	a
2022	2280	Fillet de cabillaud	Raw fish	-	-	-	-		-	0,011	-	-	-		-	-	**NA**	-	-		-	5	a
2022	2355	Chair de saumon	Salmon	-	-	H-	+	*L. welshimeri*	+	0,073/ 0,058/ 0,053	-/ -/ -	-	-		-	-	**ND**	H+/H-	+	*L.mono/ L.innocua*	+	5	a
2022	2593	Pavés de saumon	Salmon	st	st	st	-		-	0,019	-	-	-		-	-	**NA**	st	-		-	5	a
2022	2601	Saumon	Salmon	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					5	a
2022	2602	Mélée de haché de saumon	Salmon	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					5	a
2022	**2992**	**Filet de julienne**	**Raw fish fillet**	st	st	st	st		-	3,000	+	H-	+	*L. seeligeri*	+	+	**PD**					5	a
2022	**2993**	**Dos de cabillaud**	**Raw fish fillet**	H-	+	H-	+	*L. welshimeri*	+	1,099	+	H-	+	*L. welshimeri*	+	+	**PA**					5	a
2022	**2994**	**Filet d'églefin**	**Raw fish fillet**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					5	a
2022	2995	Filet de julienne	Raw fish fillet	st	st	st	st		-	0,018	-	-	st		-	-	**NA**	st	st		-	5	a
2022	2996	Dos de cabillaud	Raw fish fillet	st	st	st	st		-	0,003	-	st	st		-	-	**NA**	-	st		-	5	a
2022	2997	Filet d'églefin	Raw fish fillet	-	st	-	st		-	0,001	-	-	st		-	-	**NA**	-	st		-	5	a
2022	2998	Cocktail de fruits de mer	Seafood cocktail	-	st	-	-		-	0,012	-	-	-		-	-	**NA**	-	-		-	5	a
2022	**1842**	**Truite fumée**	**Smoked trout**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	**PA**					5	b
2022	**1843**	**Saumon fumé**	**Smoked salmon**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					5	b
2022	2259	Truite fumée	Smoked trout	H+/H-	+d	H+d/H-	+	*L. mono L. welshimeri*	+	2,218	+	H+/ H-	-	*L. mono L. welshimeri*	+	+	**PA**					5	b
2022	2265	Saumon fumée	Smoked Salmon	-	-	H+	+	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	**PA**					5	b
2022	2278	Saumon fumé	Smoked Salmon	-	-	st	st		-	0,010	-	-	-		-	-	**NA**	st	-		-	5	b
2022	2364	Saumon salmar fumé	Smoked Salmon	st	-	st	st		-	0,042	-	st	-		-	-	**NA**	st	-		-	5	b
2022	2370	Scraps de saumon fumé	Smoked Salmon	st	st	st	st		-	0,015	-	-	-		-	-	**NA**	-	-		-	5	b
2022	2597	Saumon fumé en cube	Smoked Salmon	st	st	st	st		-	0,011	-	st	-		-	-	**NA**	st	st		-	5	b
2022	**2755**	**Truite fumée**	**Smoked trout**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					5	b
2022	**2756**	**Saumon fumé**	**Smoked Salmon**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	*L. seeligeri*	+	+	**PA**					5	b
2022	**2757**	**Filets de harengs fumés**	**Smoked herring fillets**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-ni	+	*L. innocua*	+	+	**PA**					5	b
2022	**2758**	**Truite fumée**	**Smoked trout**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	**PA**					5	b
2022	**2759**	**Saumon fumé**	**Smoked Salmon**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	**PA**					5	b
2022	**2760**	**Filets de harengs fumés**	**Smoked herring fillets**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-ni	+	*L. welshimeri*	+	+	**PA**					5	b

♦ Analyses performed according to the COFRAC accreditation

SEAFOOD AND FISHERY PRODUCTS																								
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	3138	Rollmops au vinaigre	Rollmops	st	st	st	st		-	0,002	-	st	st		-	-	NA	st	st		-	5	b
2022	3139	Anchois à la provençale	Marinated anchovies	st	st	st	st		-	0,001	-	st	st		-	-	NA	st	st		-	5	b
2022	3140	Maquereaux fumés	Smoked mackerel	st	st	st	st		-	0,000	-	st	-		-	-	NA	st	st		-	5	b
2022	3141	Thon fumé émincé	Smoked tuna	st	st	st	st		-	0,006	-	-	st		-	-	NA	-	st		-	5	b
2022	3142	Truite de mer fumée	Smoked trout	st	st	st	st		-	0,003	-	-	-		-	-	NA	-	-		-	5	b
2022	3143	Haddock fumé	Smoked haddock	st	st	st	st		-	0,003	-	-	st		-	-	NA	st	st		-	5	b
2022	1934	Poëlée de saumon, dos de lieu noir, marinade thym citron et légumes	RTRH fish meal	-	-	-	-		-	3,000	+	H+	-	*L. mono*	+	+	PD					5	c
2022	1944	Coquille Saint Jacques à réchauffer	RTRH fish meal (Cooked scallops)	-	-	st	-		-	1,346	+	H+	-	*L. mono*	+	+	PD					5	c
2022	2260	Nuggets de saumon	RTRH (Salmon nuggets)	H+	-	H+	-	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	PA					5	c
2022	2262	Tarama de saumon	RTE (Salmon tarama)	-	-	st	-		-	0,008	-	-	-		-	-	NA	-	-		-	5	c
2022	2266	Assiette noix de Saint Jacques sauce bretonne et riz	RTRH fish meal	-	-	st	st		-	0,001	-	-	-		-	-	NA	st	-		-	5	c
2022	2268	Pavé de poisson à la napolitaine	RTRH fish meal	-	-	-	-		-	0,011	-	-	-		-	-	NA	-	-		-	5	c
2022	2269	Dos de colin Alaska nature cuit	RTRH (Cooked fish)	H+	+d	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2271	Aiguillette de colin pané	RTRH (Fried chicken)	-	-	-	-		-	0,018	-	-	-		-	-	NA	-	-		-	5	c
2022	2275	Pavé de poison à la bordelaise	RTRH fish meal	-	st	-	-		-	0,124	-	-	-		-	-	NA	-	-		-	5	c
2022	2276	Dos de colin d'Alaska nature cuit	Cooked fish	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2277	Nuggets de saumon	RTRH (Salmon nuggets)	H+	-	H+	st	*L. mono*	+	3,000	+	H+	+d	*L. mono*	+	+	PA					5	c
2022	2279	Colin d'Alaska cuit	RTRH (Cooked fish)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2375	Tarama de saumon frais	RTE (Salmon tarama)	-	-	st	st		-	0,010	-	-	-		-	-	NA	-	-		-	5	c
2022	2530	Paupiette de saumon moulée	RTRH (salmon)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2531	Nuggets de saumon	RTRH (salmon)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2541	Moules panées surgelées	Frozen cooked mussels	H+	-	H+	-	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					5	c
2022	2542	Moules panées surgelées	Frozen cooked mussels	-	-	-	-		-	3,000	+	H+	-	*L. mono*	+	+	PD					5	c
2022	2599	Coquille Saint Jacques à la bretonne	RTRH (scallops)	st	-	st	-		-	0,008	-	-	-		-	-	NA	st	-		-	5	c
2022	3136	Pavé de cabillaud cuit et riz au légumes	RTRH (fish vegetables)	st	st	st	st		-	0,019	-	st	-		-	-	NA	st	st		-	5	c
2022	3137	Petites gambas, tagliatelles pesto et compotée de tomate	RTRH (prawns tagliatelle)	st	st	st	st		-	0,010	-	st	-		-	-	NA	st	st		-	5	c
2022	2165	Miettes de mélange sortie peseuse (viande)	Meat waste	st	st	st	st		-	0,001	-	-	-		-	-	NA	st	-		-	6	a

ENVIRONMENTAL SAMPLES																								
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										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2168	Matières bac déchet	Wastes	st	-	st	-		-	0,002	-				-	-	NA	-	-		-	6	a
2022	2582	Dechets farine de haricots rouges (fabrication mousse chocolat)	Red bean flour dusts (Chocolate mousse production)	st	-	st	-		-	0,011	-	st	-		-	-	NA	st	st		-	6	a
2022	2583	Dechets farine de haricots rouges (fabrication mousse chocolat)	Red bean flour dusts (Chocolate mousse production)	-	-	st	st		-	0,019	-	-	-		-	-	NA	st	st		-	6	a
2022	2607	Matière première végétaux (benne 1 camion 132)	Dusts (vegetable raw material)	-	-	-	-		-	0,007	-	-	-		-	-	NA	st	-		-	6	a
2022	2608	Matière première végétaux (benne 8 camion 129)	Wastes (vegetable raw material)	-	-	H+	+	*L. mono*	+	0,588	+	H-	-	*L. seeligeri*	+	+	PA					6	a
2022	2609	Matière première végétaux (benne 3 camion 134)	Wastes (vegetable raw material)	-	-	-	-		-	2,661	+	H+	+	*L. mono*	+	+	PD					6	a
2022	2627	Déchets maquereaux (Fabrication rillettes de maquereaux)	Dusts (fish rillettes production)	-	-	st	st		-	0,011	-	-	-		-	-	NA	st	-		-	6	a
2022	2628	Déchets maquereaux (Fabrication rillettes de maquereaux)	Dusts (fish rillettes production)	st	st	st	st		-	0,016	-	st	-		-	-	NA	st	st		-	6	a
2022	**2835**	**Déchets maquereaux (Fabrication rillettes de maquereaux)**	**Wastes (mackerel)**	st	st	st	st		-	3,000	+	H-	+	*L. seeligeri*	+	+	PD					6	a
2022	**2836**	**Déchets maquereaux (Fabrication rillettes de maquereaux)**	**Wastes (mackerel)**	st	st	st	st		-	0,008	-	st	-		-	-	NA	st	st		-	6	a
2022	2850	Déchets P1	Wastes (salmon)	st	st	st	st		-	3,000	+	H+	+	*L. mono*	+	+	PD					6	a
2022	2851	Déchets CP3 trancheur	Wastes (salmon)	-	st	-	st		-	0,006	-	-	-		-	-	NA	-	-		-	6	a
2022	2852	Déchets scan 4 trancheur	Wastes (salmon)	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	a
2022	**3263**	**Déchets saumon P3 trancheur**	**Wastes (salmon)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					6	a
2022	**3264**	**Déchets saumon P3 trancheur**	**Wastes (salmon)**	H-d	-	-	-	*L. grayi*	+	0,535	+	H-	-	*L. grayi*	+	+	PA					6	a
2022	**3265**	**Déchets Knack**	**Wastes (Knack)**	H-	+	H-	+	*L. welshimeri*	+	0,016/ 0,007/ 0,008	-/ -/ -	-	-		-	-	ND	H-	+	*L.welshimeri*	+	6	a
2022	**3266**	**Déchets Knack**	**Wastes (Knack)**	H-	+	H-	+	*L. innocua*	+	0,003	-	-	-		-	-	ND	st	st		-	6	a
2022	**3267**	**Déchets crème glacée 310821**	**Wastes (ice cream)**	H+	-	H+	+	*L. ivanovii*	+	3,000	+	H+	-	*L. ivanovii*	+	+	PA					6	a
2022	**3268**	**Déchets crème glacée 230921**	**Wastes (ice cream)**	H+	-	H+	+	*L. ivanovii*	+	0,899	+	H+	-	*L. ivanovii*	+	+	PA					6	a
2022	2164	Eau laveur extérieur	Process water	st	st	st	st		-	0,001	-	-	-		-	-	NA	st	st		-	6	b
2022	2166	Eau de process	Process water	H+	+	H+	+	*L. mono*	+	3,000	+	H+	-	*L. mono*	+	+	PA					6	b

♦ Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES																								
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*												Category	Type
										25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C													
				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2629	Eau de rinçage bol avant cuisson (Fabrication rillettes de maquereaux)	Rinsed water before cooked (Fish rillettes production)	st	st	st	st		-	0,010	-	st	st		-	-	NA	st	st		-	6	b
2022	2630	Eau de rinçage bol après cuisson (Fabrication rillettes de maquereaux)	Rinsed water after cooked (Fish rillettes production)	st	st	st	st		-	0,005	-	st	-		-	-	NA	st	st		-	6	b
2022	**2825**	**Eau de rinçage robot coupe (framboise)**	**Rinsing water (cut raspberries)**	st	st	st	st		-	0,015	-	st	st		-	-	NA	st	st		-	6	b
2022	**2826**	**Eau de nettoyage bol (courgette)**	**Cleaning water (cut zucchini)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					6	b
2022	**2827**	**Eau de rinçage mélangeur (courgette)**	**Rinsing water (cut zucchini)**	st	st	st	st		-	0,018	-	-	-		-	-	NA	st	st		-	6	b
2022	2837	Eau de process pareuse après nettoyage	Process water (salmon)	st	st	st	st		-	0,013	-	st	st		-	-	NA	st	st		-	6	b
2022	2838	Eau de nettotage plateau central	Cleaning water (salmon)	st	st	st	st		-	0,006	-	st	st		-	-	NA	st	st		-	6	b
2022	2839	Eau de process pareuse automatique	Process water (salmon)	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					6	b
2022	2840	Eau de process laveuse sortie bader	Process water (salmon)	st	st	st	st		-	0,004	-	st	st		-	-	NA	st	st		-	6	b
2022	2841	Eau de nettoyage bol pâte (courgette)	Cleaning water (salmon)	st	st	st	st		-	0,003	-	st	st		-	-	NA	st	st		-	6	b
2022	2842	Eau de rinçage laveuse	Rinsing water (salmon)	st	st	st	st		-	0,005	-	st	st		-	-	NA	st	st		-	6	b
2022	2843	Eau de rinçage filets	Rinsing water (salmon)	st	st	st	st		-	0,002	-	st	st		-	-	NA	st	st		-	6	b
2022	**3269**	**Eau de process laveuse après parage**	**Process water (salmon)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					6	b
2022	**3270**	**Eau de rinçage filets**	**Rinsing water (salmon)**	st	st	st	st		-	0,017	-	st	st		-	-	NA	st	st		-	6	b
2022	**3271**	**Eau de rinçage laveuse laverie P1**	**Rinsing water (salmon)**	st	st	st	st		-	0,000	-	st	st		-	-	NA	st	st		-	6	b
2022	**3272**	**Eau de rinçage laverie P2**	**Rinsing water (salmon)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	b
2022	**3273**	**Eau de rinçage fabrication rillettes maquereaux cru**	**Rinsed water (fish rillettes production)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					6	b
2022	**3274**	**Eau de rinçage fabrication rillettes de maquereaux cuit**	**Rinsed water (fish rillettes production)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	b
2022	**3494**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H-/H+d	+	H+/H-	+	*L. mono/ L. innocua*	+	3,000	+	H+/ H-	+	*L. mono/ L. innocua*	+	+	PA					6	b
2022	**3495**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+	+	H+	+	*L. mono*	+	0,003	-	st	st		-	-	ND	st	st		-	6	b
2022	**3496**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+/H-	+	H+	+	*L. mono L. innocua*	+	3,000	+	H-	+	*L. innocua*	+	+	PA					6	b
2022	**3497**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+	+	H+	+	*L. mono*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					6	b
2022	2584	Chiffonnette avant nettoyage ustensiles (fabrication mousse au chocolat)	Wipe before cleaning (Chocolate mousse production)	st	st	st	-		-	0,006	-	-	-		-	-	NA	-	-		-	6	c

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				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2585	Chiffonnette avant nettoyage plan de travail (fabrication mousse au chocolat)	Wipe before cleaning (chocolate mousse production)	st	-	st	st		-	0,011	-	-	-		-	-	NA	st	-		-	6	c
2022	2586	Eponge avant nettoyage mélangeur (fabrication mousse au chocolat)	Sponge before cleaning (chocolate mousse production)	st	-	st	-		-	0,012	-	-	-		-	-	NA	st	-		-	6	c
2022	2587	Eponge avant nettoyage batteur (fabrication mousse au chocolat)	Sponge before cleaning (chocolate mousse production)	st	-	st	-		-	0,012	-	-	-		-	-	NA	st	-		-	6	c
2022	2623	Eponge plaque de découpe avant nettoyage (Fabrication rillettes de maquereaux)	Sponge before cleaning (fish rillettes production)	st	-	st	-		-	0,008	-	-	-		-	-	NA	-	-		-	6	c
2022	2624	Eponge desarrêtage avant nettoyage (Fabrication rillettes de maquereaux)	Sponge before cleaning (fish rillettes production)	st	st	st	st		-	0,010	-	-	-		-	-	NA	st	st		-	6	c
2022	2625	Chiffonnette découpe planche avant nettoyage (Fabrication rillettes de maquereaux)	Wipe before cleaning (fish rillettes production)	-	-	st	st		-	0,005	-	-	-		-	-	NA	st	-		-	6	c
2022	2626	Chiffonnette sac persil avant nettoyage (Fabrication rillettes de maquereaux)	Wipe before cleaning (fish rillettes production)	st	-	st	-		-	0,008	-	-	-		-	-	NA	-	-		-	6	c
2022	**2828**	**Eponge plan de travail pâte**	**Sponge before cleaning (dough)**	-	-	-	-		-	0,016	-	-	-		-	-	NA	-	st		-	6	c
2022	**2829**	**Eponge pesée légumes**	**Sponge before cleaning (vegetables)**	H-	+	H-	+	*L. innocua*	+	0,019	-	-	-		-	-	ND	-	-		-	6	c
2022	**2830**	**Eponge plan de travail épinards**	**Sponge before cleaning (spinach)**	-	-	-	st		-	0,010	-	-	-		-	-	NA	st	st		-	6	c
2022	**2831**	**Eponge ustensiles mousse au chocolat, haricots rouges**	**Sponge before cleaning (chocolate mousse production)**	H+	+	H+	+	*L. seeligeri*	+	3,000	+	H+ (low)	+	*L. seeligeri*	+	+	PA					6	c
2022	**2832**	**Eponge plan de travail mousse au chocolat, haricots rouges**	**Sponge before cleaning (chocolate mousse production)**	st	-	-	-		-	0,010	-	-	st		-	-	NA	-	st		-	6	c
2022	**2833**	**Eponge cuisson rillettes de maquereaux**	**Sponge before cleaning (fish rillettes production)**	st	st	-	-		-	0,004	-	-	-		-	-	NA	-	-		-	6	c
2022	**2834**	**Eponge pesée rillettes de maquereaux**	**Sponge before cleaning (fish rillettes production)**	st	st	st	st		-	0,007	-	st	st		-	-	NA	-	-		-	6	c
2022	2844	Eponge surface avant nettoyage peleuse	Sponge before cleaning (salmon)	st	st	-	st		-	0,004	-	-	-		-	-	NA	-	st		-	6	c
2022	2845	Eponge surface trancheur avant nettoyage	Sponge before cleaning (salmon)	st	-	-	st		-	0,007	-	-	st		-	-	NA	-	-		-	6	c
2022	2846	Eponge surface trancheur avant nettoyage	Sponge before cleaning (salmon)	-	-	-	-		-	0,008	-	-	st		-	-	NA	-	st		-	6	c
2022	2847	Surface après nettoyage peleuse	Wipe after cleaning (salmon)	st	st	st	st		-	0,007	-	st	st		-	-	NA	-	st		-	6	c
2022	2848	Surface après nettoyage trancheur	Wipe after cleaning (salmon)	st	st	st	st		-	0,005	-	st	st		-	-	NA	st	st		-	6	c

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				Half Fraser		Fraser 1		Identification	Final result	Solus One *Listeria* ELISA result		Confirmations				Final result	Agreement Ref/Alt	Confirmation on negative samples					
												O&A (100µl)	Palcam (100µl)	Without purification step	All confirmatory tests			Subculture in Full Fraser		Confirmation on typical colony	Final result		
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies	Biochemical gallery				O&A (10 µl)	Palcam (10 µl)				
2022	2849	Surface après nettoyage scan trancheur	Wipe after cleaning (salmon)	st	st	st	st		-	0,005	-	st	st		-	-	NA	st	st		-	6	c
2022	**3275**	**Chiffonnette avant nettoyage plan de travail (pâtes)**	**Wipe before cleaning (dough)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	c
2022	**3276**	**Chiffonnette avant nettoyage plan de travail robot coupe**	**Wipe before cleaning (cutting robot)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	c
2022	**3277**	**Chiffonnette après nettoyage robot coupe**	**Wipe after cleaning (cutting robot)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	c
2022	**3278**	**Eponge avant nettoyage pesée**	**Sponge before cleaning**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					6	c
2022	**3279**	**Chiffonnette avant nettoyage plan de travail mise en poche (rillettes de maquereaux)**	**Wipe before cleaning (fish rillettes production)**	st	st	st	st		-	0,955	+	H-	-	*L. grayi*	+	+	PD					6	c
2022	**3280**	**Chiffonnette avant nettoyage bol recette pimentée (rillettes de maquereaux)**	**Wipe before cleaning (fish rillettes production)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	*L. welshimeri*	+	+	PA					6	c
2022	**3281**	**Chiffonnette avant nettoyage batteur (fabrication mousse au chocolat)**	**Wipe before cleaning (chocolate mousse production)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	*L. ivanovii*	+	+	PA					6	c
2022	**3282**	**Chiffonnette avant nettoyage balance (fabrication mousse au chocolat)**	**Wipe before cleaning (chocolate mousse production)**	H+	+	H+	+	*L. mono*	+	3,000	+	H+	+	*L. mono*	+	+	PA					6	c

COMPOSITE FOODS / -READY-TO-EAT AND READY-TO-REHEAT																			
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**1830**	**Sandwich jambon beurre**	**RTE (Sandwich butter and ham)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	a
2022	1937	Club sandwich jambon emmental	RTE (Sandwich cheese and ham)	H+/H-d	+d	H+	+	*L. monocytogenes/ L. seeligeri*	+	3,000	+	H+	+	+	PA	1	a
2022	2374	Sandwich (jambon, emmenthal)	RTE (Sandwich cheese and ham)	st	-	st	st		-	3,000	+	H-	+	+	PD	1	a
2022	2634	Sandwich viennois thon crudités	RTE (Sandwich tuna vegetables)	H+	-	H+	+	*L. monocytogenes*	+	0,178/0,194/0,193	-/-/-	H+	+	-	ND	1	a
2022	**2735**	**Taboulé au poulet roti**	**RTE (Salad tabouleh chicken)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	1	a
2022	**2736**	**Riz à l'indienne**	**RTE (Salad with rice)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	1	a
2022	**2737**	**Piémontaise**	**RTE (Salad with potatoes, ham…)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	a
2022	**2738**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	a
2022	**2739**	**Salade de pâtes et surimi**	**RTE (Salad with pasta and fish)**	H-	+	H-	+	*L. seeligeri*	+	0,010	-	-	-	-	ND	1	a
2022	**2740**	**Sandwich (thon, œuf, salade)**	**RTE (Sandwich tuna, egg, salad)**	st	st	st	st		-	3,000	+	H-	+	+	PD	1	a
2022	**1831**	**Pizza au chorizo**	**RTRH (Pizza chorizo)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+ni	+	PA	1	b
2022	1935	Escalope de poulet panée pour burger cuit	RTRH meal (breaded chicken)	H+	-	H+	-	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	1	b
2022	1942	Buffalo wings cuits	RTRH chicken meat (Buffalo wings cooked)	H+	-	H+	+	*L. monocytogenes*	+	0,007	-	-	-	-	ND	1	b
2022	2152	Beignets râpé de pommes de terre et cheddar	RTRH meal (potatoes and cheddar)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	1	b
2022	2153	Steak de soja, épinards, emmental	RTRH (Soy, spinach, cheese)	-	-	-	-		-	3,000	+	H+	+	+	PD	1	b
2022	2161	Paëlla	RTRH (Paella)	H+(3)	-	H+	-	*L. monocytogenes*	+	0,124	-	-	-	-	ND	1	b
2022	2281	Pépites de fromage ail et fine herbes pané	RTRH (Nuggets herbs and cheese)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	1	b
2022	2368	Palets épinards chèvre	RTRH (spinach, cheese)	H+/H-	+	H+/H-	+	*L. moocytogenes L. innocua*	+	3,000	+	H+/H-	+	+	PA	1	b
2022	2369	Poëlée campagnarde surgelée	Frozen RTRH (vegetables and meat)	H-	-	H+/H-	-	*L. seeligeri/ L. monocytogenes*	+	2,880	+	H+ (*L. monocytogenes*)	+	+	PA	1	b
2022	2538	Paëlla	RTRT (Paella)	H+	+	H+	+	*L. monocytogenes*	+	0,011	-	-	-	-	ND	1	b
2022	2632	Feuilletée chèvre épinards	RTH (Puff spinach cheese)	H-	+	H-	+	*L. innocua*	+	3,000	+	+	+	+	PA	1	b
2022	1931	Pâte à tarte crue	Raw dough	H+/H-	-	H+/H-	+	*L.monocytogenes L. innocua*	+	3,000	+	H+/H-	+	+	PA	1	c
2022	2357	Pâte crue (Croissant pur beurre)	Raw dough	H+	-	H+	-	*L. monocytogenes*	+	1,074	+	H+	-	+	PA	1	c
2022	2358	Pâte crue (Quiche)	Raw dough	H+/H-	+	H+/H-	+	*L. monocytogenes L. innocua*	+	3,000	+	H+/H-	+	+	PA	1	c
2022	**2463**	**Crème anglaise**	**Custard**	H+	+	H+	+	*L. monocytogenes*	+	0,029	-	st	st	-	ND	1	c
2022	**2464**	**Ile flottante**	**Custard based dessert**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	1	c
2022	**2465**	**Crème anglaise**	**Custard**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	c
2022	**2466**	**Tortilla aux oignons**	**Omelette with onions**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	c
2022	**2467**	**Tortilla aux oignons**	**Omelette with onions**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	1	c
2022	**2741**	**Entremet (chocolat blanc, framboise)**	**Confectionary (chocolate, raspberry)**	H-	+	H-	+d	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	c
2022	**2742**	**Entremet (mousse chocolat noir)**	**Confectionary (Chocolate)**	H-	+	H-	+d	*L. welshimeri*	+	3,000	+	H-	+	+	PA	1	c

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MEAT PRODUCTS																		
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
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										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100 µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**1833**	**Tranches de filets de porcs**	**Fresh pork meat**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	2	a
2022	**1834**	**Escalope de dinde**	**Fresh turkey meat**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	-	+	PA	2	a
2022	1932	Viande de cuisse calibrée	Frozen raw poultry meat	H+/H-	+	H+/H-	+	*L. monocytogenes* *L. innocua*	+	3,000	+	H+/H-	-	+	PA	2	a
2022	1933	Viande rouge avec peau	Frozen raw poultry meat	H+	-	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	2	a
2022	1941	Cuisse de coq crue	Frozen raw poultry meat	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	2	a
2022	1943	VSM de dinde	Frozen raw turkey meat	H-	-	H-	+d	*L. welshimeri*	+	3,000	+	H-	-	+	PA	2	a
2022	2158	Escalope de dinde	Turkey meat	H+	+	H+	+	*L. monocytogenes*	+	0,011	-	-	-	-	ND	2	a
2022	2170	Minerai de bœuf	Beef meat	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	-	+	PA	2	a
2022	2171	Blanquette de dinde congelée	Frozen turkey meat	-	-	st	st		-	1,337	+	H-	-	+	PD	2	a
2022	2173	Maigre de porc	Pork meat	H+	-	H+	+	*L. monocytogenes*	+	3,000/3,000/3,000	+/+/+	H+(2)	-	+	PA	2	a
2022	2174	Viande rouge calibrée	Red meat	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H+/H-	+	+	PA	2	a
2022	3128	Tranches de gigot d'agneau	Fresh lamb meat	H+	-	H+/H-	+	*L. ivanovii* *L. welshimeri*	+	2,257	+	H+	+	+	PA	2	a
2022	3129	Côtes d'agneau	Fresh lamb meat	st	st	-	-		-	0,016/0,021/0,024	-/-/-	H+	+	-	NA	2	a
2022	3130	Escalope de dinde	Fresh turkey meat	H-	+	H-	+	*L. welshimeri*	+	0,004	-	-	st	-	ND	2	a
2022	1936	Saucisses de poulet cuites	RTRH (cooked chicken sausages)	H+	-	H+	-	*L. monocytogenes*	+	0,003	-	-	-	-	ND	2	b
2022	**2468**	**Petit salé aux lentilles**	**RTRH (pork)**	st	st	st	st		-	3,000	+	H-	+	+	PD	2	b
2022	**2469**	**Bœuf charolais au Médoc**	**RTRH (beef meat)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	2	b
2022	**2470**	**Poulet tikka**	**RTRH (Tikka chicken)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	2	b
2022	**2471**	**Daube provençale au bœuf**	**RTRH (beef meat)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	2	b
2022	**2472**	**Poulet tikka**	**RTRH (Tikka chicken)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	2	b
2022	**2473**	**Petit salé aux lentilles**	**RTRH (pork)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	2	b
2022	2528	Emincés de cuisses de poulet rôti au curry	RTRH (chicken meat)	H+	+	H+	-	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	2	b
2022	2529	Emincés de cuisses de poulet rôti au curry	RTRH (chicken meat)	H- d(Gram-)	-	-	-		-	3,000	+	H+	+	+	PD	2	b
2022	2595	Bouchées de blanquette de dinde roties	RTRH (turkey meat)	H+	+	H+	+	*L. monocytogenes*	+	0,013	-	-	-	-	ND	2	b
2022	**1835**	**Lardons natures**	**Raw bacon**	H-	-	H-	+	*L. seeligeri*	+	3,000	+	H+	-	+	PA	2	c
2022	1939	Allumettes de poulet fumées	Smoked chicken	H+	+d	H+	+d	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	2	c
2022	2163	Plat de côte de port 1/2 sel	Raw cured pork meat	st	-	st	st		-	0,267	+	H+	-	+	PD	2	c
2022	2172	Saucisson sec	Dry sausage	-	-	st	-		-							2	c
2022	2175	Filet de poulet fumé	Smoked poultry meat	st	-	st	st		-	3,000	+	H+	+	+	PD	2	c
2022	2283	Allumettes de poulet fumées	Cured chicken	st	-	st	st		-							2	c
2022	2284	Epaule de porc cuite en dés	Cooked sliced pork	st	st	st	st		-	3,000	+	H+	+	+	PD	2	c
2022	2286	Lardons fumés cuits surgelés	Frozen smoked pork	st	-	st	st		-							2	c
2022	2288	Chipolatas	Sausage	-	-	H-	+(1)	*L. welshimeri*	+	0,017	-	-	-	-	ND	2	c
2022	2290	Saucisson sec	Dry sausage	H-	+d	H-	+	*L. welshimeri*	+	0,008	-	-	-	-	ND	2	c
2022	2291	Rillettes de porc	Pork rillettes	-	-	-	-		-							2	c
2022	2292	Saucisson sec au poivre vert	Seasoned dry sausage	st	-	st	st		-							2	c
2022	2353	Mortadelle aux olives Halal	RTE (Mortadelle, olives)	st	st	-	st		-							2	c

♦ Analyses performed according to the COFRAC accreditation

MEAT PRODUCTS																		
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100 µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	2537	Miettes de jambon	Cooked ham	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	2	c
2022	2540	Chorizo fumé pur porc	Smoked delicatessen	H+/H- (1)	+	H+	+	*L. monocytogenes* *L. welshimeri*	+	2,336	+	H+	-	+	PA	2	c
2022	2594	Jambon de porc	Cooked ham	H-	+	H-	+	*L. innocua*	+	1,558	+	H+	-	+	PA	2	c
2022	2631	Merguez	Merguez	st	-	H-	+	*L. innocua*	+	0,059/0,009/0,012	-/-/-	H-	-	-	ND	2	c
2022	2636	Jambon	Ham	st	-	st	st		-							2	c
2022	3135	Terrine de campagne à l'ancienne	Meat terrine	-	st	-	-		-							2	c

MILK AND DAIRY PRODUCTS																			
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100 µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**1837**	**Fromage au lait cru de vache (Pont l'évêque)**	**Raw cow milk cheese**	-	-	st	-		-							3	a
2022	**1838**	**Fromage au lait cru de brebis (Ossau Iraty)**	**Raw ewe milk cheese**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	3	a
2022	2294	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	H+	+d	H+	+	*L. monocytogenes*	+	2,072	+	H+	-	+	PA	3	a
2022	2295	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	st	-	st	st		-							3	a
2022	2296	Fromage au lait cru de vache à pâte cuite	Raw cow milk cheese	st	-	st	st		-	3,000	+	H+	-	+	PD	3	a
2022	2297	Fromage à pâte persillée au lait cru de brebis	Raw ewe milk cheese	-	-	st	st		-							3	a
2022	**2743**	**Fromage au lait cru de vache (Camembert)**	**Raw cow milk cheese**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	3	a
2022	**2746**	**Fromage au lait cru de chèvre (Picodon)**	**Raw goat milk cheese**	st	st	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	PA	3	a
2022	**2987**	**Petit camembert au lait cru de vache**	**Raw cow milk cheese**	st	st	st	st		-	0,923	+	H-	+	+	PD	3	a
2022	**2988**	**Moelleux de Savoie au lait cru de vache**	**Raw cow milk cheese**	H-	-	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	3	a
2022	**1836**	**Lait cru de vache**	**Raw cow milk**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2303	Lait cru de brebis (Tank)	Raw ewe milk	st	st	st	st		-	3,000	+	H+	-	+	PD	3	b
2022	2304	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2305	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2306	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2588	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2589	Lait cru de brebis	Raw ewe milk	H+(2)	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2590	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2591	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2592	Lait cru de brebis	Raw ewe milk	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	b
2022	2619	Lait cru de vache	Raw cow milk	st	-	st	st		-	3,000	+	H-	+	+	PD	3	b
2022	**2989**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	PA	3	b
2022	**2990**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. welshimeri*	+	0,010	-	-	-	-	ND	3	b
2022	**2991**	**Lait cru de vache**	**Raw cow milk**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	3	b
2022	**3283**	**Lait cru de chèvre**	**Raw goat milk**	H+	+	H+(1)	st	*L. ivanovii*	+	1,862/1,732/1,730	+/+/+	H+	+	+	PA	3	b
2022	**3284**	**Lait cru de chèvre**	**Raw goat milk**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	3	b
2022	3502	Lait cru de vache	Raw cow milk cheese	-	-	-	-		-	3,000	+	H-	+	+	PD	3	b
2022	2300	Gorgonzola	Cheese	H+	+d	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	PA	3	c
2022	2301	Fromage fondu	Melted cheese	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	3	c
2022	**2474**	**Fromage de brebis pasteurisé (Baskeru)**	**Pasteurised ewe milk cheese**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	PA	3	c
2022	**2475**	**Fromage de chèvre pasteurisé (Cabécou)**	**Pasteurised goat milk cheese**	-	st	st	st		-	0,008	-	-	-	-	NA	3	c
2022	**2476**	**Fromage de vache pasteurisé (Camembert)**	**Pasteurised cow milk cheese**	-	-	-	-		-	0,017/0,005/0,005	-/-/-	H+*(L. ivanovii)*	+	-	NA	3	c
2022	**2477**	**Milkshake frais vanille**	**Pasteurised flavoured milk**	H+/H+	+/+	st/st	st/st	*L. ivanovii*	+	3,000	+	H+	+	+	PA	3	c
2022	**2478**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H+	+	H+	+	*L. ivanovii*	+	1,677	+	H+	+	+	PA	3	c
2022	**2747**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	3	c
2022	**2748**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	3	c
2022	**2749**	**Riz au lait traiteur**	**Dairy dessert (rice)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	3	c
2022	**2750**	**Panna cotta traiteur**	**Dairy dessert (Panna cotta)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	PA	3	c

♦ Analyses performed according to the COFRAC accreditation

VEGETABLES																		
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**1839**	**Graines germées (Alfalfa bio)**	**Sprouted seeds (Alfalfa)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	4	a
2022	2027	Ciboulette	Chive	-	-	st	-		-	0,006	-	-	-	-	**NA**	4	a
2022	2033	Persil plat	Parsley	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	4	a
2022	2043	Haricots verts bio	Organic beans	st	-	st	st		-	3,000	+	H-	+	+	**PD**	4	a
2022	2367	Farine bio nature	Flour	H+(1)	-	H+/H-	+	*L. monocytogenes* *L. innocua*	+	3,000	+	H-	-	+	**PA**	4	a
2022	**2480**	**Jeunes pousses épinards**	**Baby leaves (spinach)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	4	a
2022	**2481**	**Jeunes pousses**	**Baby leaves**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	4	a
2022	**2482**	**Alfalfa bio**	**Sprouts (Alfalfa)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	4	a
2022	**2483**	**Alfalfa poireau lentille bio**	**Sprouts (leeks and lentils)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	4	a
2022	2536	Ciboulette	Chive	-	-	st	-		-	0,008	-	-	-	-	**NA**	4	a
2022	2544	Persil plat	Parsley	-	st	st	st		-	3,000	+	H-	+	+	**PD**	4	a
2022	2546	Ciboulette	Chive	-	-	H+	-	*L. monocytogenes*	+	0,031/0,033/0,011	-/-/-	-	-	-	**ND**	4	a
2022	2547	Persil plat	Parsley	H-	-	H-	+	*L. seeligeri*	+	0,000	-	-	-	-	**ND**	4	a
2022	**1586**	**Epinards surgelés**	**Frozen spinach**	H+d	+	H+	+	*L. monocytogenes*	+	3,000	+	H+dni/H+	+dni/+	+	**PA**	4	b
2022	2032	Poêlée Parisienne	Pan-fried vegetables mix	H+	+d	H+	+	*L. monocytogenes*	+	0,008	-	-	-	-	**ND**	4	b
2022	2034	Brunoise méridionale	Vegetable mix	-	-	-	-		-							4	b
2022	**2484**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	4	b
2022	**2485**	**Mélange crudités frais coupés**	**Fresh mix vegetables**	-	st	st	st		-	0,009	-	-	-	-	**NA**	4	b
2022	**2486**	**Wok fondant frais**	**Fresh mix vegetables**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	4	b
2022	2539	Poêlée Parisienne Bio	Pan-fried vegetables mix	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	4	b
2022	2549	Poêlée campagnarde	Pan-fried vegetables mix	H+/H-	+	H+	+	*L. monocytogenes* *L. seeligeri*	+	3,000	+	H+	+	+	**PA**	4	b
2022	2600	Epinards feuilles enroulées	Cooked spinach	H+	+	H+	+	*L. monocytogenes*	+	0,009	-	-	-	-	**ND**	4	b
2022	2611	Patate douce en julienne	Cooked potatoes	-	-	st	-		-	3,000		H+	+	+	**PD**	4	b
2022	**2751**	**Assiette croquante**	**Fresh mix vegetables**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	4	b
2022	**2752**	**Assiette croquante**	**Fresh mix vegetables**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	4	b
2022	2029	Chou milan émincé cuit	Cooked sliced kale	H+/H- +ni	-	H+/H-	+	*L. monocytogenes* /*L. innocua*	+	3,000	+	H+/H-	+	+	**PA**	4	c
2022	2030	Palets chou, brocolis	Cabbage and broccoli puffs	H+	+	H+/H-	+	*L. monocytogenes* *L. innocua*	+	3,000	+	H+/H-	+	+	**PA**	4	c
2022	2035	Paillasson de légumes	RTRH vegetables	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	4	c
2022	2037	Palets de légumes, courgettes	RTRH vegetables	H+	+	H+	-	*L. monocytogenes*	+	3,000	+	H+	-	+	**PA**	4	c
2022	2041	Epinards hachés à la crème	Chopped spinach with cream	H+	-	H+	-	*L. monocytogenes*	+	3,000	+	H+	-	+	**PA**	4	c
2022	2261	Plat préparé Mezze	RTRH (Mezze)	H+d/H-	+d(2)	H+d/H-	+d(4)	*L. innocua*	+	0,025	-	-	-	-	**ND**	4	c
2022	2376	Verrines gourmets aux légumes	RTE (cooked vegetables)	H-	+	H-	+	*L. innocua*	+	0,010	-	-	-	-	**ND**	4	c
2022	2606	Soupe de légumes haricots blancs, vermicelles	RTRH (vegetable soup)	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H+/H-	+	+	**PA**	4	c
2022	**2753**	**Purée de brocolis**	**RTRH (Broccoli purée)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	4	c
2022	**2754**	**Purée de brocolis**	**RTRH (Broccoli purée)**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	4	c

♦ Analyses performed according to the COFRAC accreditation

SEAFOOD AND FISHERY PRODUCTS																		
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100 µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**1841**	**Filet d'Eglefin**	**Raw fish**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	-	+	**PA**	5	a
2022	1938	Paupiette de saumon crue	Raw salmon-based preparation	H+/H-	-	H+/H-	+	*L. monocytogenes* *L. welshimeri*	+	3,000	+	H+	-	+	**PA**	5	a
2022	2258	Lieu noir	Raw fish	H+(1)	st	H+	+	*L. monocytogenes*	+	0,006	-	-	-	-	**ND**	5	a
2022	2264	Saumon	Raw salmon	st	-	st	st		-	0,004	-	st	-	-	**NA**	5	a
2022	2272	Paupiette de saumon crue	Raw salmon roll	H+/H-	-	H+	+	*L. monocytogenes* *L. welshimeri*	+	3,000	+	H+/H- (*L. innocua*)	+(1)	+	**PA**	5	a
2022	2273	Crevettes blanches	Shrimps	H+	-	H+	+	*L. monocytogenes*	+	0,011	-	-	-	-	**ND**	5	a
2022	2355	Chair de saumon	Salmon	-	-	H-	+	*L. welshimeri*	+	0,239/0,224/0,196	+/+/-	-/H-(x5)	-/+(x5)	+	**PA**	5	a
2022	2601	Saumon	Salmon	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	5	a
2022	2602	Mélée de haché de saumon	Salmon	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	a
2022	**2992**	**Filet de julienne**	**Raw fish fillet**	st	st	st	st		-	3,000	+	H-	+	+	**PD**	5	a
2022	**2993**	**Dos de cabillaud**	**Raw fish fillet**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	5	a
2022	**2994**	**Filet d'églefin**	**Raw fish fillet**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	5	a
2022	**1842**	**Truite fumée**	**Smoked trout**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	b
2022	**1843**	**Saumon fumé**	**Smoked salmon**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	-	+	**PA**	5	b
2022	2259	Truite fumée	Smoked trout	H+/H-	+d	H+d/H-	+	*L. monocytogenes* *L. welshimeri*	+	3,000	+	H+/H-	-	+	**PA**	5	b
2022	2265	Saumon fumée	Smoked Salmon	-	-	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	b
2022	**2755**	**Truite fumée**	**Smoked trout**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	5	b
2022	**2756**	**Saumon fumé**	**Smoked Salmon**	H-	+	H-	+	*L. seeligeri*	+	3,000	+	H-	+	+	**PA**	5	b
2022	**2757**	**Filets de harengs fumés**	**Smoked herring fillets**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	5	b
2022	**2758**	**Truite fumée**	**Smoked trout**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	5	b
2022	**2759**	**Saumon fumé**	**Smoked Salmon**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	**PA**	5	b
2022	**2760**	**Filets de harengs fumés**	**Smoked herring fillets**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	**PA**	5	b
2022	1934	Poëlée de saumon, dos de lieu noir, marinade thym citron et légumes	RTRH fish meal	-	-	-	-		-	3,000	+	H+	-	+	**PD**	5	c
2022	1944	Coquille Saint Jacques à réchauffer	RTRH fish meal (Cooked scallops)	-	-	st	-		-	2,781	+	H+	-	+	**PD**	5	c
2022	2260	Nuggets de saumon	RTRH (Salmon nuggets)	H+	-	H+	-	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2269	Dos de colin Alaska nature cuit	RTRH (Cooked fish)	H+	+d	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2276	Dos de colin d'Alaska nature cuit	Cooked fish	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2277	Nuggets de saumon	RTRH (Salmon nuggets)	H+	-	H+	st	*L. monocytogenes*	+	3,000	+	H+	-	+	**PA**	5	c
2022	2279	Colin d'Alaska cuit	RTRH (Cooked fish)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2530	Paupiette de saumon moulée	RTRH (salmon)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2531	Nuggets de saumon	RTRH (salmon)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2541	Moules panées surgelées	Frozen cooked mussels	H+	-	H+	-	*L. monocytogenes*	+	3,000	+	H+	+	+	**PA**	5	c
2022	2542	Moules panées surgelées	Frozen cooked mussels	-	-	-	-		-	3,000	+	H+	+	+	**PD**	5	c

♦ Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES																	
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	2608	Matière première végétaux (benne 8 camion 129)	Wastes (vegetable raw material)	-	-	H+	+	*L. monocytogenes*	+	2,556	+	H-d/H+ (*L. monocytogenes*)	-	+	PA	6	a
2022	2609	Matière première végétaux (benne 3 camion 134)	Wastes (vegetable raw material)	-	-	-	-		-	3,000	+	H+/H- (*L. monocytogenes/ L. grayi*)	-	+	PD	6	a
2022	**2835**	**Déchets maquereaux (Fabrication rillettes de maquereaux)**	**Wastes (mackerel)**	st	st	st	st		-	2,288	+	H-	+	+	PD	6	a
2022	2850	Déchets P1	Wastes (Salmon)	st	st	st	st		-	3,000	+	H+	+	+	PD	6	a
2022	2852	Déchets scan 4 trancheur	Wastes (Salmon)	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	a
2022	**3263**	**Déchets saumon P3 trancheur**	**Wastes (Salmon)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	6	a
2022	**3264**	**Déchets saumon P3 trancheur**	**Wastes (Salmon)**	H-d	-	-	-	*L. grayi*	+	0,870	+	H-	-	+	PA	6	a
2022	**3265**	**Déchets Knack**	**Wastes (Knack)**	H-	+	H-	+	*L. welshimeri*	+	0,005	-	-	-	-	ND	6	a
2022	**3266**	**Déchets Knack**	**Wastes (Knack)**	H-	+	H-	+	*L. innocua*	+	0,021	-	-	-	-	ND	6	a
2022	**3267**	**Déchets crème glacée 310821**	**Wastes (Ice cream)**	H+	-	+	+	*L. ivanovii*	+	3,000	+	H+	-	+	PA	6	a
2022	**3268**	**Déchets crème glacée 230921**	**Wastes (Ice cream)**	H+	-	+	+	*L. ivanovii*	+	3,000	+	H+	-	+	PA	6	a
2022	2166	Eau de process	Process water	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	b
2022	**2825**	**Eau de rinçage robot coupe (framboise)**	**Rinsing water (cut raspberries)**	st	st	st	st		-						0	6	b
2022	**2826**	**Eau de nettoyage bol (courgette)**	**Cleaning water (cut zucchini)**	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	6	b
2022	2839	Eau de process pareuse automatique	Process water (Salmon)	H-	+	H-	+	*L. innocua*	+	3,000	+	H-	+	+	PA	6	b
2022	**3269**	**Eau de process laveuse après parage**	**Process water (Salmon)**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	6	b
2022	**3272**	**Eau de rinçage laverie P2**	**Rinsing water (Salmon)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	b
2022	**3273**	**Eau de rinçage fabrication rillettes maquereaux cru**	**Rinsed water (Fish rillettes production)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	6	b
2022	**3274**	**Eau de rinçage fabrication rillettes de maquereaux cuit**	**Rinsed water (Fish rillettes production)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	b
2022	**3494**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H-/H+d	+	H+/H-	+	*L. monocytogenes/ L. innocua*	+	3,000	+	H+/H-	+	+	PA	6	b
2022	**3495**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+	+	H+	+	*L. monocytogenes*	+	0,024	-	-	st	-	ND	6	b
2022	**3496**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+/H-	+	H+	+	*L. monocytogenes/ L. innocua*	+	3,000	+	H-	+	+	PA	6	b
2022	**3497**	**Eau de process (fabrication steak à base d'algues)**	**Process water (algae)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H-	+	+	PA	6	b
2022	**2829**	**Eponge pesée légumes**	**Sponge before cleaning (vegetables)**	H-	+	H-	+	*L. innocua*	+	0,016	+	-	-	-	ND	6	c
2022	**2831**	**Eponge ustensiles mousse au chocolat, haricots rouges**	**Sponge before cleaning (Chocolate mousse production)**	H+	+	H+	+	*L. seeligeri*	+	3,000	+	H+	+	+	PA	6	c
2022	**3275**	**Chiffonnette avant nettoyage plan de travail (pâtes)**	**Wipe before cleaning (Dough)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	c
2022	**3276**	**Chiffonnette avant nettoyage plan de travail robot coupe**	**Wipe before cleaning (Cutting robot)**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	c
2022	**3277**	**Chiffonnette après nettoyage robot coupe**	**Wipe after cleaning (Cutting robot**	H+	+	H+	+	*L. monocytogenes*	+	3,000	+	H+	+	+	PA	6	c
2022	**3278**	**Eponge avant nettoyage pesée**	**Sponge before cleaning**	H+	+	H+	+	*L. ivanovii*	+	3,000	+	H+	+	+	PA	6	c
2022	**3279**	**Chiffonnette avant nettoyage plan de travail mise en poche (rillettes de maquereaux)**	**Wipe before cleaning (Fish rillettes production)**	st	st	st	st		-	3,000	+	H-	-	+	PD	6	c
2022	**3280**	**Chiffonnette avant nettoyage bol recette pimentée (rillettes de maquereaux)**	**Wipe before cleaning (Fish rillettes production)**	H-	+	H-	+	*L. welshimeri*	+	3,000	+	H-	+	+	PA	6	c

♦ Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES																		
Year of analysis	N° Sample	Product (French name)	Product	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria*						Category	Type
				Half Fraser		Fraser 1		Identification	Final result	25g + 225ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26h at 30°C ± 1°C + 72h at 5°C ± 3°C							
										Solus One *Listeria* result		Confirmations		Final result	Agreement		
												O&A (100µl)	Palcam (100 µl)				
				O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies				
2022	**3281**	**Chiffonnette avant nettoyage batteur (fabrication mousse au chocolat)**	**Wipe before cleaning (Chocolate mousse production)**	H+	+	H+	+	*L. ivanovii*	**+**	3,000	+	H+	+	**+**	**PA**	6	c
2022	**3282**	**Chiffonnette avant nettoyage balance (fabrication mousse au chocolat)**	**Wipe before cleaning (Chocolate mousse production)**	H+	+	H+	+	*L. monocytogenes*	**+**	3,000	+	H+	+	**+**	**PA**	6	c

Appendix 5 – Relative level of detection study: raw data

Matrix : Deli-salad: piemontaise
Strain : *Listeria monocytogenes* Ad494 Seeding 72h at 3±2°C Aerobic mesophilic flora: 5,5 10^3 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One *Listeria*		Confirmations			Final result	Number positive samples/Total
			O&A	Palcam	O&A	Palcam			O.D.	Result	O&A (100µl) Typical colonies	Palcam (100µL) Typical colonies	All confirmatory tests		
3095	0	0	-	-	-	-	-	0/5	0,003	-	-	-	-	-	0/5
3096			-	-	-	st	-		0,011	-	-	-	-	-	
3097			-	-	-	-	-		0,006	-	-	-	-	-	
3098			-	-	-	st	-		0,010	-	-	-	-	-	
3099			-	-	st	st	-		0,011	-	-	-	-	-	
3100	Low	0,9	H+	+	H+	+	+	18/20	3,000	+	H+	+	+	+	15/20
3101			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3102			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3103			H+	+	H+	+	+		0,002	-	-	-	-	-	
3104			H+	+	H+	+	+		0,006	-	-	-	-	-	
3105			-	-	st	st	-		0,007	-	-	-	-	-	
3106			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3107			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3108			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3109			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3110			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3111			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3112			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3113			-	-	st	st	-		3,000	+	H+	+	+	+	
3114			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3115			H+	+	H+	+	+		0,004	-	-	-	-	-	
3116			H+	+	H+	+	+		2,313	+	H+	+	+	+	
3117			H+	+	H+	+	+		0,001	-	-	-	-	-	
3118			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3119			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3120	High	4,4	H+	+	H+	+	+	5/5	3,000	+	H+	+	+	+	5/5
3121			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3122			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3123			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3124			H+	+	H+	+	+		3,000	+	H+	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Rillettes
Strain : *Listeria monocytogenes* Ad669 Seeding 48h at 3±2°C Aerobic mesophilic flora: 20 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One *Listeria*		Confirmations			Final result	Number positive samples/Total
											O&A (100µl)	Palcam (100µL)	All confirmatory tests		
			O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies			
3181	0	0	st	st	st	st	-	0/5	0,000	-	st	st		-	0/5
3182			st	st	st	st	-		0,003	-	-	-		-	
3183			st	st	st	st	-		0,005	-	st	st		-	
3184			st	st	st	st	-		0,000	-	st	st		-	
3185			st	st	st	st	-		0,002	-	st	st		-	
3366	Low	1,2	st	st	st	st	-	14/20	0,004	-	st	st		-	16/20
3367			st	st	st	st	-		3,000	+	H+	+	+	+	
3368			st	st	st	st	-		0,016	-	st	st		-	
3369			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3370			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3371			H+	+	H+	+	+		0,009	-	st	st		-	
3372			st	st	st	st	-		0,002	-	st	st		-	
3373			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3374			st	st	st	st	-		3,000	+	H+	+	+	+	
3375			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3376			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3377			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3378			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3379			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3380			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3381			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3382			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3383			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3384			st	st	st	st	-		3,000	+	H+	+	+	+	
3385			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3203	High	1,9	H+	+	H+	+	+	5/5	3,000	+	H+	+	+	+	5/5
3204			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3205			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3206			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3207			H+	+	H+	+	+		3,000	+	H+	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Raw milk
Strain : *Listeria ivanovii* Ad991 Seeding 48h at 3±2°C Aerobic mesophilic flora: 3,3.10^{7} CFU/mL

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One *Listeria*		Confirmations			Final result	Number positive samples/Total
											O&A (100µl)	Palcam (100µL)	All confirmatory tests		
			O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies			
3660	0	0	st	st	st	st	-	0/5	0,000	-	st	st		-	0/5
3661			st	st	st	st	-		0,003	-	-	st		-	
3662			st	st	st	st	-		0,015	-	st	st		-	
3663			st	st	-	-	-		0,000	-	-	-		-	
3664			st	st	-	-	-		0,006	-	-	-		-	
3767	Low	1,3	st	st	st	-	-	9/20	0,019	-	st	st		-	7/20
3768			H+	+	H+	+	+		0,386	+	H+	+	+	+	
3769			st	st	st	st	-		0,001	-	st	-		-	
3770			st	st	st	st	-		0,201	+	H+	+	+	+	
3771			st	st	st	st	-		0,003	-	st	-		-	
3772			H+	+	H+	+	+		0,036/0,035/0,039	-/-/-	H+	-	+	-	
3773			st	st	st	-	-		1,119	+	H+	+	+	+	
3774			st	st	st	st	-		0,664	+	H+	+	+	+	
3775			H+	+	H+	+	+		0,000	-	st	-		-	
3776			st	st	st	st	-		0,001	-	st	st		-	
3777			H+	+	H+	+	+		0,000	-	st	-		-	
3778			H+	+	H+	+	+		0,036/0,043/0,043	-/-/-	H+	+	+	-	
3779			st	st	st	st	-		0,000	-	st	-		-	
3780			H+	+	H+	+	+		0,000/0,000/0,066	-/-/-	H+	+	+	-	
3781			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3782			st	st	st	st	-		0,132/0,140/0,143	-/-/-	H+	+	+	-	
3783			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3784			st	st	st	-	-		0,295	+	H+	+	+	+	
3785			H+	+	H+	+	+		0,004	-	st	st		-	
3786			st	st	st	-	-		0,000	-	st	st		-	
3787	High	4,4	H+	+	H+	+	+	5/5	3,000	+	H+	+	+	+	5/5
3788			H+	+	H+	+	+		2,934	+	H+	+	+	+	
3789			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3790			H+	+	H+	+	+		0,476	+	H+	+	+	+	
3791			H+	+	H+	+	+		2,583	+	H+	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Smoked salmon
Strain : *Listeria innocua* Ad1674 Seeding 48h at 3±2°C Aerobic mesophilic flora: 1,4.10^2 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One Listeria		Confirmations			Final result	Number positive samples/Total
											O&A (100µl)	Palcam (100µL)	All confirmatory tests		
			O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies			
1	0	0	st	st	st	st	-	0/5	0,010	-	-	-		-	0/5
2			st	st	st	st	-		0,024	-	st	st		-	
3			st	st	st	st	-		0,012	-	-	-		-	
4			st	st	st	st	-		0,016	-	st	st		-	
5			st	st	st	st	-		0,018	-	st	st		-	
23	Low	0,7	st	-	H-	+	+	15/20	3,000	+	H-	+	+	+	13/20
24			st	st	st	st	-		3,000	+	H-	+	+	+	
25			H-	+	H-	+	+		3,000	+	H-	+	+	+	
26			H-	+	H-	+	+		0,013	-	st	st		-	
27			H-	+	H-	+	+		3,000	+	H-	+	+	+	
28			st	st	st	st	-		0,003	-	st	st		-	
29			H-	+	H-	+	+		3,000	+	H-	+	+	+	
30			H-	+	H-	+	+		3,000	+	H-	+	+	+	
31			H-	+	H-	+	+		3,000	+	H-	+	+	+	
32			H-	+	H-	+	+		3,000	+	H-	+	+	+	
33			H-	+	H-	+	+		3,000	+	H-	+	+	+	
34			H-	+	H-	+	+		3,000	+	H-	+	+	+	
35			H-	+	H-	+	+		0,012	-	st	st		-	
36			-	st	H-	+	+		0,030	-	st	st		-	
37			H-	+	H-	+	+		0,010	-	st	-		-	
38			st	st	st	st	-		3,000	+	H-	+	+	+	
39			st	st	st	st	-		0,006	-	st	st		-	
40			H-	+	H-	+	+		0,016	-	-	-		-	
41			st	st	st	st	-		3,000	+	H-	+	+	+	
42			st	st	H-	+	+		3,000	+	H-	+	+	+	
43	High	1,9	H-	+	H-	+	+	5/5	3,000	+	H-	+	+	+	4/5
44			H-	+	H-	+	+		3,000	+	H-	+	+	+	
45			H-	+	H-	+	+		3,000	+	H-	+	+	+	
46			H-	+	H-	+	+		0,023	-	st	st		-	
47			H-	+	H-	+	+		3,000	+	H-	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Ready to cook vegetables (broccoli, carrots, cauliflower)
Strain : *Listeria welshimeri* Ad3251 Seeding 48h at 3±2°C Aerobic mesophilic flora: 1,1 10^7 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One *Listeria*		Confirmations			Final result	Number positive samples/Total
											O&A (100µl)	Palcam (100µL)	All confirmatory tests		
			O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies			
3322	0	0	st	st	-	st	-	0/5	0,000	-	-	st		-	0/5
3323			-	-	st	st	-		0,000	-	-	-		-	
3324			-	st	st	st	-		0,005	-	-	-		-	
3325			st	st	st	st	-		0,004	-	-	-		-	
3326			st	st	st	st	-		0,002	-	-	-		-	
3327	Low	0,8	st	st	st	st	-	9/20	0,009	-	-	-		-	5/20
3328			-	-	st	st	-		0,009	-	-	-		-	
3329			H-	+	H-	+	+		0,011	-	-	-		-	
3330			-	-	st	st	-		0,009	-	-	-		-	
3331			H-	+	H-	+	+		0,013	-	-	-		-	
3332			-	st	st	st	-		3,000	+	H-	+	+	+	
3333			st	-	st	st	-		0,009	-					
3334			-	st	st	st	-		1,572	+	H-	+	+	+	
3335			H-	+	H-	+	+		3,000	+	H-	+	+	+	
3336			-	-	st	st	-		3,000	+	H-	+	+	+	
3337			H-	+	H-	+	+		3,000	+	H-	+	+	+	
3338			-	-	st	st	-		0,008	-	-	-		-	
3339			H-	+	H-	+	+		0,017	-	-	-		-	
3340			H-	+	H-	+	+		0,002	-	-	-		-	
3341			-	st	st	st	-		0,005	-	-	-		-	
3342			-	st	st	st	-		0,002	-	-	-		-	
3343			H-	+	H-	+	+		0,000	-	-	-		-	
3344			H-	+	H-	+	+		0,010	-	-	-		-	
3345			H-	+	H-	+	+		0,002	-	-	-		-	
3346			-	-	st	st	-		0,010	-	-	-		-	
3347	High	3,6	-/-	-/-	st/st	st/-	-	2/5	3,000	+	H-	+	+	+	5/5
3348			-/-	-/st	st/-	st/st	-		3,000	+	H-	+	+	+	
3349			st/-	st/st	st/st	st/st	-		3,000	+	H-	+	+	+	
3350			H-	+	H-	+	+		3,000	+		+	+	+	
3351			H-	+	H-	+	+		3,000	+	H-	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Matrix : Process water (tomato based sauce)
Strain : *Listeria monocytogenes* Ad551 Seeding 48h at 3±2°C Aerobic mesophilic flora: 1,9.10^2 CFU/g

N° sample	Level	Inoculation level (cfu/sample)	Reference method: ISO 11290-1 ♦						Alternative method: Solus One *Listeria* 25 g + 225 ml Solus One *Listeria* enrichment (SOLE) broth (room temperature) for 26 h at 30°C ± 1°C						
			Half Fraser		Fraser		Final result	Number positive samples/Total	Solus One *Listeria*		Confirmations			Final result	Number positive samples/Total
											O&A (100µl)	Palcam (100µL)	All confirmatory tests		
			O&A	Palcam	O&A	Palcam			O.D.	Result	Typical colonies	Typical colonies			
3601	0	0	st	st	-	-	-	0/5	0,002	-	-	-		-	0/5
3602			st	st	-	-	-		0,001	-	-	-		-	
3603			st	st	-	-	-		0,002	-	-	-		-	
3604			st	st	-	-	-		0,000	-	-	-		-	
3605			st	st	-	-	-		0,000	-	-	-		-	
3606	Low	0,6	st	st	st	st	-	8/20	3,000	+	H+	+	+	+	7/20
3607			H+	+	H+	+	+		0,006	-	-	-		-	
3608			st	st	st	st	-		3,000	+	H+	+	+	+	
3609			st	st	-	-	-		0,007	-	-	-		-	
3610			st	-	st	st	-		0,006	-	-	-		-	
3611			H+	+	H+	+	+		0,004	-	-	-		-	
3612			st	st	st	st	-		0,001	-	-	-		-	
3613			H+	+	H+	+	+		0,008	-	-	-		-	
3614			st	st	st	st	-		0,001	-	-	-		-	
3615			H+	+	H+	+	+		0,005	-	-	-		-	
3616			st	st	-	-	-		0,006	-	-	-		-	
3617			st	st	st	-	-		0,004	-	-	-		-	
3618			st	st	st	-	-		3,000	+	H+	+	+	+	
3619			st	st	st	st	-		0,010	-	-	-		-	
3620			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3621			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3622			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3623			st	st	st	st	-		0,002	-	-	-		-	
3624			st	-	-	-	-		3,000	+	H+	+	+	+	
3625			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3626	High	2,4	H+	+	H+	+	+	5/5	0,008	-	-	-		-	4/5
3627			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3628			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3629			H+	+	H+	+	+		3,000	+	H+	+	+	+	
3630			H+	+	H+	+	+		3,000	+	H+	+	+	+	

♦ Analyses performed according to the COFRAC accreditation

Appendix 6 – Inclusivity and exclusivity study: raw data

INCLUSIVITY									
Listeria monocytogenes strains					**Inoculation level CFU/225 ml SOLE broth**	**SOLUS One *Listeria* SOLE Broth 26 h at 30°C**			
						ELISA		**Confirmation**	
No	**Strain**	**Species**	**Reference**	**Origin**		**O.D.**	**Result**	**O&A (100 µL)**	**Palcam (100 µL)**
1	*Listeria*	*monocytogenes*	1011/1410	Frozen broccoli	38	3,000	+	H+	+
2	*Listeria*	*monocytogenes*	153	Soft cheese (Munster)	43	3,000	+	H+	+
3	*Listeria*	*monocytogenes*	1973/2400	Egg and ham pastry (Quiche Lorraine)	22	3,000	+	H+	+
4	*Listeria*	*monocytogenes*	38/181	Toulouse sausages	29	3,000	+	H+	+
5	*Listeria*	*monocytogenes*	7111/7516	Pâté (Rillettes)	23	3,000	+	H+	+
6	*Listeria*	*monocytogenes*	913/1048	Black pudding	15	3,000	+	H+	+
7	*Listeria*	*monocytogenes*	A00C036	Poultry (guinea)	60	3,000	+	H+	+
8	*Listeria*	*monocytogenes*	A00C041	Sausage	38	3,000	+	H+	+
9	*Listeria*	*monocytogenes*	A00C044	Poultry (Duck)	30	3,000	+	H+	+
10	*Listeria*	*monocytogenes*	A00L097	Milk	81	3,000	+	H+	+
11	*Listeria*	*monocytogenes*	A00M009	Smoked salmon	22	3,000	+	H+	+
12	*Listeria*	*monocytogenes*	Ad 253	Semi-hard cheese	27	3,000	+	H+	+
13	*Listeria*	*monocytogenes*	Ad 266	Poultry	39	3,000	+	H+	+
14	*Listeria*	*monocytogenes*	Ad 270	Fermented sausage	57	3,000	+	H+	+
15	*Listeria*	*monocytogenes*	Ad 273	Cured delicatessen	44	3,000	+	H+	+
16	*Listeria*	*monocytogenes*	Ad 274	Ready-to-eat food (Asiatic meal)	58	3,000	+	H+	+
17	*Listeria*	*monocytogenes*	Ad 534	Fruits	69	3,000	+	H+	+
18	*Listeria*	*monocytogenes*	Ad 548	Environment (Seafood)	83	3,000	+	H+	+
19	*Listeria*	*monocytogenes*	Ad 623	Breadcrumbs	72	3,000	+	H+	+
20	*Listeria*	*monocytogenes*	Ad 665	Raw milk	82	3,000	+	H+	+

INCLUSIVITY									
***Listeria* spp strains (different from *Listeria monocytogenes* species)**					**Inoculation level CFU/225 ml SOLE broth**	**SOLUS One *Listeria* SOLE Broth 26 h at 30°C**			
						ELISA		**Confirmation**	
N°	**Strain**	**Species**	**Reference**	**Origin**		**O.D.**	**Result**	**O&A (100 µL)**	**Palcam (100 µL)**
1	*Listeria*	*grayi*	Ad 1198	Smoked salmon	29	3,000	+	H-	-
2	*Listeria*	*grayi*	Ad 1443	Pork meat sausages	44	3,000	+	H-	-
3	*Listeria*	*innocua*	Adria1	Smoked salmon	41	3,000	+	H-	+
4	*Listeria*	*innocua*	Ad 658	Gorgonzola	39	3,000	+	H-	+
5	*Listeria*	*innocua*	Ad 655	Brine	11	3,000	+	H-	+
6	*Listeria*	*innocua*	Ad 660	Breadcrumbs	70	3,000	+	H-	+
7	*Listeria*	*innocua*	Ad 663	Environment (dairy industry)	77	3,000	+	H-	+
8	*Listeria*	*innocua*	Ad 671	Smoked bacon	15	3,000	+	H-	+
9	*Listeria*	*innocua*	Ad 661	Soft cheese (Pont L'Evêque)	53	3,000	+	H-	+
10	*Listeria*	*innocua*	Ad 659	Environment (dairy industry)	33	3,000	+	H-	+
11	*Listeria*	*ivanovii*	Ad 466	Raw veal meat	23	3,000	+	H+	+
12	*Listeria*	*ivanovii*	Ad 662	Environment (dairy industry)	45	3,000	+	H+	+
13	*Listeria*	*ivanovii*	BR11	Environment (fish)	17	3,000	+	H+	+
15	*Listeria*	*ivanovii*	Ad 1289	Raw milk cheese	25	3,000	+	H+	+
16	*Listeria*	*ivanovii*	Ad 1290	Milk powder	58	2,116	+	H+	+
17	*Listeria*	*ivanovii*	Ad 1291	Poultry	73	3,000	+	H+	+
18	*Listeria*	*ivanovii*	Ad 1288	Sheep milk	30	3,000	+	H+	+
14	*Listeria*	*ivanovii londoniensis*	CIP103466	/	26	3,000	+	H+	+
19	*Listeria*	*seeligeri*	Ad 649	Cheese	74	3,000	+	H-	+
20	*Listeria*	*seeligeri*	Ad 651	Environment	78	3,000	+	H-	+
21	*Listeria*	*seeligeri*	Ad 652	Environment (dairy industry)	89	3,000	+	H-	+
22	*Listeria*	*seeligeri*	Ad 674	Soft cheese (Munster)	49	3,000	+	H-	+
23	*Listeria*	*seeligeri*	BR1	Trout	74	3,000	+	H-	+
24	*Listeria*	*seeligeri*	BR18	Environment (fish)	78	3,000	+	H-	+
25	*Listeria*	*seeligeri*	CIP100100	/	60	0,034	-	H-d	+d
					354 (+ milk)	0,019	-	H-d	+d
					BHI (overnight)	3,000	+	H-d	+d

INCLUSIVITY									
***Listeria* spp strains (different from *Listeria monocytogenes* species)**					**Inoculation level CFU/225 ml SOLE broth**	**SOLUS One *Listeria* SOLE Broth 26 h at 30°C**			
						ELISA		**Confirmation**	
N°	**Strain**	**Species**	**Reference**	**Origin**		**O.D.**	**Result**	**O&A (100 µL)**	**Palcam (100 µL)**
26	*Listeria*	*welshimeri*	Ad1276	Environment (Slaughterhouse)	65	3,000	+	+	+
27	*Listeria*	*welshimeri*	Ad1235	Beef meat	39	3,000	+	+	+
28	*Listeria*	*welshimeri*	191424	Poultry	59	3,000	+	+	+
29	*Listeria*	*welshimeri*	Ad 1175	Ready-to-eat-food	79	3,000	+	+	+
30	*Listeria*	*welshimeri*	Ad 650	Poultry	35	3,000	+	+	+

EXCLUSIVITY								
Strains not belonging to *Listeria* genus					Inoculation level		SOLUS One *Listeria* BPW 24 h at 30°C	
							ELISA	
No	Strain	Species	Reference	Origin	Enrichment	CFU/225 ml	O.D.	Result
1	*Bacillus*	*cereus*	Ad 465	Salmon Terrine	BPW (37°C)	$1,4.10^4$	0,009	-
2	*Bacillus*	*circulans*	Ad 760	Vegetables	BHI (30°C)	$2,8.10^6$	0,003	-
3	*Bacillus*	*coagulans*	Ad 731	Dairy product	BHI (37°C)	$9,0.10^4$	0,001	-
4	*Bacillus*	*licheniformis*	Ad 978	Dairy product	BHI (30°C)	$2,5.10^5$	0,004	-
5	*Bacillus*	*mycoïdes*	Ad 762	Milk	BPW (37°C)	$1,8.10^4$	0,007	-
6	*Bacillus*	*pseudomycoides*	Ad 765	Vegetables	BHI (37°C)	$6,0.10^5$	0,000	-
7	*Bacillus*	*pumilus*	Ad 284	Ready-to-eat	BHI (30°C)	$4,0.10^7$	0,010	-
8	*Bacillus*	*weihenstephanensis*	Ad 726	Egg product	BHI (30°C)	$2,1.10^6$	0,000	-
9	*Brochothrix*	*thermosphacta*	EN 15129	Trout	BPW (37°C)	$2,0.10^2$	0,006	-
10	*Brochrotrix*	*compessis*	CIP 102920T	Environment	BPW (37°C)	$2,0.10^2$	0,001	-
11	*Carnobacterium*	*divergens*	CIP 101029^T	/	MRS (30°C)	$1,1.10^5$	0,001	-
12	*Carnobacterium*	*piscicola*	Ad 369	Raw milk	MRS (30°C)	$8,2.10^4$	0,000	-
13	*Enterococcus*	*durans*	Ad 149	Ham	BPW (37°C)	$4,2.10^4$	0,006	-
14	*Enterococcus*	*faecalis*	89L326	Soft cheese (Vacherin)	BPW (37°C)	$7,0.10^4$	0,005	-
15	*Lactobacillus*	*brevis*	86L126	Ham	BPW (37°C)	$2,5.10^5$	0,004	-
16	*Lactobacillus*	*curvatus*	Ad 380	Delicatessen	MRS (30°C)	$8,0.10^5$	0,000	-
17	*Lactobacillus*	*fermentum*	Ad 482	Tomatoes juice	MRS (30°C)	$1,1.10^8$	0,000	-
18	*Lactobacillus*	*sakei*	Ad 473	Ham	MRS (30°C)	$1,3.10^8$	0,000	-
19	*Lactococcus*	*lactis subsp cremoris*	Ad 137	Dairy product	MRS (30°C)	$1,6.10^5$	0,000	-
20	*Leuconostoc*	*carnosum*	Ad 411	Ham	MRS (25°C)	$9,6.10^7$	0,003	-
21	*Leuconostoc*	*citreum*	Ad 396	Ham	BPW (37°C)	$1,8.10^5$	0,001	-
22	*Micrococcus*	*luteus*	Ad 432	Cocktail	BPW (37°C)	$1,0.10^5$	0,003	-
23	*Pediococcus*	*pentosaceus*	ATCC 33316	/	MRS (30°C)	$9,6.10^5$	0,006	-
24	*Propionibacterium*	*freundenreichii*	CNRZ 725	Dairy product	BPW (37°C)	$1,0.10^5$	0,003	-
25	*Staphylococcus*	*aureus*	Ad 165	Smoked delicatessen	BPW (37°C)	$1,3.10^5$	0,005	-
26	*Staphylococcus*	*aureus*	Ad 902	Nems	BPW (37°C)	1,6E+05	0,014	-
27	*Staphylococcus*	*epidermidis*	Ad 931	Fruits	BHI (37°C)	$5,2.10^5$	0,000	-
28	*Staphylococcus*	*haemoliticus*	Ad 989	Dairy product	BPW (37°C)	1,8E+04	0,006	-
29	*Streptococcus*	*bovis*	92L622	Dairy product	MRS (37°C)	$3,4.10^4$	0,010	-
30	*Streptococcus*	*salivarius sps thermophilus*	Ad 441	Dairy product	BHI (44°C)	$1,9.10^7$	0,000	-

Appendix 7 - Results obtained by the collaborative laboratories and the expert laboratory

Laboratory **A2** **ILS1**

Aerobic mesophilic flora 3,4 10^7 CFU/g

Day 1

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
25	H- (catalase-)	No growth	-	No growth	-	0,001	-	H- (catalase-)	-	-	**NA**
29	No growth	-	No growth	No growth	-	0,001	-	H- (catalase-)	-	-	**NA**
32	H- (catalase-)	No growth	No growth	No growth	-	0,003	-	H- (catalase-)	-	-	**NA**
33	H- (catalase-)	-	No growth	No growth	-	0,003	-	H- (catalase-)	-	-	**NA**
37	H- (catalase-)	No growth	No growth	No growth	-	0,004	-	H- (catalase-)	-	-	**NA**
40	H- (catalase-)	No growth	No growth	No growth	-	0,001	-	H- (catalase-)	-	-	**NA**
41	H- (catalase-)	No growth	No growth	No growth	-	0,000	-	H- (catalase-)	-	-	**NA**
46	H- (catalase-)	No growth	No growth	No growth	-	0,000	-	H- (catalase-)	-	-	**NA**
27	H-	No growth	No growth	No growth	-	0,004	-	-	-	-	**NA**
28	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
31	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
34	H- (catalase-)	-	No growth	No growth	-	0,002	-	H- (catalase-)	-	-	**NA**
38	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
43	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
45	H+	+	H+	+	+	0,005	-	H- (catalase-)	-	-	**ND**
47	No growth	-	No growth	No growth	-	0,002	-	H- (catalase-)	-	-	**NA**
26	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
30	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
35	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
36	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
39	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
42	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
44	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
48	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory **E** **ILS1**

Aerobic mesophilic flora: 2,2 10^8 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,006	-	H-(atypical)	-	-	**NA**
7	H-(atypical)	-	-	-	-	0,005	-	H-(atypical)	-	-	**NA**
8	-	-	-	-	-	0,001	-	H-(atypical)	-	-	**NA**
12	-	-	-	-	-	0,004	-	H-(*B. circulans*)	-	-	**NA**
16	-	-	-	-	-	0,004	-	H-(atypical)	-	-	**NA**
20	-	-	-	-	-	0,004	-	H-(atypical)	-	-	**NA**
23	-	-	-	-	-	0,006	-	H-(B. circulans)	-	-	**NA**
24	-	-	-	-	-	0,005	-	H-(B. circulans)	-	-	**NA**
3	H+/H-	+	H+	+	+	0,006	-	H-(*B. circulans*)	-	-	**ND**
6	H+/H-	-	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+/H-	+	H+	+	+	0,004	-	H-(atypical)	-	-	**ND**
11	H+	+	H+	+	+	0,056 0,157	- -	H+/H-/H+	+/+	-	**ND**
15	H-	+	H+	+	+	0,007	-	H-(atypical)	-	-	**ND**
17	H+	+	H+	+	+	0,876	+	H+	+	+	**PA**
21	-	+	H+	+	+	1,736	+	H+	+	+	**PA**
22	-	-	-	-	-	1,491	+	H+	+	+	**PD**
1	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
5	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+/H-	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	-	-	H+	+	+	1,497	+	H+	+	+	**PA**
19	H+/H-	+	H+	+	+	2,696	+	H+	+	+	**PA**

Laboratory **F** **ILS1**

Aerobic mesophilic flora: 5,1 10^3 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,000	-	-	-	-	**NA**
7	-	-	-	-	-	0,000	-	-	-	-	**NA**
8	-	-	-	-	-	0,000	-	-	-	-	**NA**
12	-	-	-	-	-	0,007	-	-	-	-	**NA**
16	-	-	-	-	-	0,000	-	-	-	-	**NA**
20	-	-	-	-	-	0,013	-	-	-	-	**NA**
23	-	-	-	-	-	0,000	-	-	-	-	**NA**
24	-	-	-	-	-	0,019	-	-	-	-	**NA**
3	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
6	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+	+	H+	+	+	0,002	-	-	-	-	**ND**
11	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
15	-	-	-	-	-	0,000	-	-	-	-	**NA**
17	H+	+	H+	+	+	2,959	+	H+	+	+	**PA**
21	-	-	-	-	-	3,000	+	H+	+	+	**PD**
22	-	-	-	-	-	3,000	+	H+	+	+	**PD**
1	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
5	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
19	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory **G** **ILS1**

Aerobic mesophilic flora: 2,5 10^8 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,008	-	-	-	-	**NA**
7	H- (PCR-)	-	-	-	-	0,005	-	H- (PCR-)	-	-	**NA**
8	H- (PCR-)	-	-	-	-	0,003	-	H- (PCR-)	-	-	**NA**
12	H- (PCR-)	-	-	-	-	0,003	-	H- (PCR-)	-	-	**NA**
16	H-	-	-	-	-	0,007	-	H- (PCR-)	-	-	**NA**
20	H- (PCR-)	-	-	-	-	0,008	-	H- (PCR-)	-	-	**NA**
23	H- (PCR-)	-	-	-	-	0,006	-	H- (PCR-)	-	-	**NA**
24	H- (PCR-)	-	-	-	-	0,005	-	H- (PCR-)	-	-	**NA**
3	-	-	-	-	-	3,000	+	H+	+	+	**PD**
6	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
11	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
15	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
17	H- (PCR-)	-	-	-	-	0,006	-	H- (PCR-)	-	-	**NA**
21	H- (PCR-)	-	-	-	-	0,012	-	H- (PCR-)	-	-	**NA**
22	-	-	-	-	-	3,000	+	H+	+	+	**PD**
1	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	2,459	+	H+	+	+	**PA**
5	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
19	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

PCR: PCR test used to confirm the colonies

Laboratory **H1** **ILS1**

Aerobic mesophilic flora :3,4 10^8 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,000	-	-	-	-	**NA**
7	-	-	-	-	-	0,000	-	-	-	-	**NA**
8	-	-	-	-	-	0,000	-	-	-	-	**NA**
12	-	-	-	-	-	0,000	-	-	-	-	**NA**
16	-	-	-	-	-	0,002	-	-	-	-	**NA**
20	-	-	-	-	-	0.002	-	-	-	-	**NA**
23	-	-	-	-	-	0,001	-	-	-	-	**NA**
24	-	-	-	-	-	0,006	-	-	-	-	**NA**
3	-	+	H+	+	+	0,253	+	H+	+	+	**PA**
6	H+	+	H+	+	+	0,195 0,147 3,000*	- - +*	H+/H+	+/+	-	**ND**
9	-	-	-	-	-	0,000	-	-	-	-	**NA**
11	H+	+	H+	+	+	0,863	+	H+	+	+	**PA**
15	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
17	H+	+	H+	+	+	0,007	-	-	-	-	**ND**
21	-	-	-	-	-	0.806	+	H+	+	+	**PD**
22	-	-	-	-	-	0,003	-	-	-	-	**NA**
1	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	1,793	+	H+	+	+	**PA**
5	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
19	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory H2 ILS N°2

Aerobic mesophilic flora: 1,3. 10^9 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
25	-	-	-	-	-	0,002	-	-	-	-	**NA**
27	-	-	-	-	-	0,002	-	-	-	-	**NA**
30	-	-	-	-	-	0,002	-	-	-	-	**NA**
32	-	-	-	-	-	0,002	-	-	-	-	**NA**
37	-	-	-	-	-	0,003	-	-	-	-	**NA**
39	-	-	-	-	-	0,011	-	-	-	-	**NA**
44	-	-	-	-	-	0,005	-	-	-	-	**NA**
48	H- (PCR -)	-	-	-	-	0,004	-	-	-	-	**NA**
26	H+ (PCR -)	-	-	-	-	0,625	+	H+	+	+	**PD**
29	H-	-	H+	+	+	3,000	+	H+	+	+	**PA**
31	H+	-	H+	+	+	0,002	-	-	-	-	**ND**
33	-	-	-	-	-	0,002	-	-	-	-	**NA**
36	H-	-	H+	+	+	0,002	-	-	-	-	**ND**
40	-	-	H+	+	+	2,005	+	H+	+	+	**PA**
41	H-	-	H+	+	+	3,000	+	H+	+	+	**PA**
47	-	-	H+	+	+	2,531	+	H+	+	+	**PA**
28	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
34	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
35	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
38	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
42	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
43	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
45	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
46	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory **I1** **ILS 1**

Aerobic mesophilic flora 1,4 10^3 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,016	-	H- (catalase-)	-	-	**NA**
7	-	-	-	-	-	0,000	-	-	-	-	**NA**
8	-	-	-	-	-	0,000	-	-	-	-	**NA**
12	-	-	-	-	-	0,000	-	-	-	-	**NA**
16	H-(catalase-)	-	-	-	-	0,000	-	-	-	-	**NA**
20	-	-	-	-	-	0,000	-	-	-	-	**NA**
23	-	-	-	-	-	0,000	-	-	-	-	**NA**
24	-	-	-	-	-	0,000	-	-	-	-	**NA**
3	-	-	-	-	-	0,289	+	H- (catalase -) / H+(catalase+ / Gpb+)	-	+	**PD**
6	-	-	-	-	-	0,108 1,872*	- +*	H+/H+	+/+	-	**NA**
9	H-	-	H+	+	+	0,000	-	-	-	-	**ND**
11	-	-	-	-	-	0,017	-	-	-	-	**NA**
15	-	-	-	-	-	0,014	-	-	-	-	**NA**
17	H-	-	-	-	-	0,869	+	H+	+	+	**PD**
21	-	-	H+	+	+	0,002	-	-	-	-	**ND**
22	-	-	-	-	-	0,136 1,796*	- +*	H+	+	-	**NA**
1	H+	+	H+	+	+	1,111	+	H+	+	+	**PA**
4	-	-	H+	+	+	0,432	+	H+	+	+	**PA**
5	H+	+	H+	+	+	0,126 1,812*	- +*	H+/H+	+/+	-	**ND**
10	-	-	H+	+	+	0,156 1,678*	- +*	H+/H+	+/+	-	**ND**
13	H+	+	H+	+	+	0,157 1,920*	- +*	H+/H+	+/+	-	**ND**
14	H-	-	H+	+	+	0,636	+	H+	+	+	**PA**
18	H+	+	H+	+	+	1,756	+	H+	+	+	**PA**
19	H+	+	H+	+	+	1,830	+	H+	+	+	**PA**

*: second Heat treated aliquot

Laboratory I2 ILS N°2

Aerobic mesophilic flora: 10000 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
25	-	-	-	-	-	0,004	-	-	-	-	**NA**
27	-	-	-	-	-	0,007	-	-	-	-	**NA**
30	-	-	-	-	-	0,001	-	-	-	-	**NA**
32	-	-	-	-	-	0,000	-	-	-	-	**NA**
37	-	-	-	-	-	0,000	-	-	-	-	**NA**
39	-	-	-	-	-	0,000	-	-	-	-	**NA**
44	-	-	-	-	-	0,000	-	-	-	-	**NA**
48	-	-	-	-	-	0,000	-	-	-	-	**NA**
26	-	-	-	-	-	0,223	+	H+	+	+	**PD**
29	-	-	-	-	-	3,000	+	H+	+	+	**PD**
31	-	-	-	-	-	0,726	+	H+	+	+	**PD**
33	H+	-	H+	+	+	0,545	+	H+	+	+	**PA**
36	-	-	-	-	-	3,000	+	H+	+	+	**PD**
40	-	-	H+	+	+	0,000	-	-	-	-	**ND**
41	-	-	-	-	-	3,000	+	H+	+	+	**PD**
47	H+	+	H+	+	+	0,417	+	H+	+	+	**PA**
28	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
34	H+	+	H+	+	+	0,211	+	H+	+	+	**PA**
35	H+	+	H+	+	+	1,218	+	H+	+	+	**PA**
38	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
42	-	-	H+	+	+	0,369	+	H+	+	+	**PA**
43	-	-	-	-	-	3,000	+	H+	+	+	**PD**
45	H+	+	H+	+	+	0,789	+	H+	+	+	**PA**
46	H+	+	H+	+	+	0,724	+	H+	+	+	**PA**

Laboratory I3 ILS N°2

Aerobic mesophilic flora: 13000 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
49	-	-	-	-	-	0,000	-	-	-	-	**NA**
51	-	-	-	-	-	0,002	-	-	-	-	**NA**
55	-	-	-	-	-	0,000	-	-	-	-	**NA**
58	-	-	-	-	-	0,000	-	-	-	-	**NA**
60	-	-	-	-	-	0,000	-	-	-	-	**NA**
64	-	-	-	-	-	0,000	-	-	-	-	**NA**
68	-	-	-	-	-	0,000	-	-	-	-	**NA**
72	-	-	-	-	-	0,000	-	-	-	-	**NA**
50	H+	+	H+	+	+	0,513	+	H+	+	+	**PA**
53	-	-	-	-	-	0,250	+	H+	+	+	**PD**
54	-	-	H+	+	+	0,000	-	-	-	-	**ND**
57	H+	+	H+	+	+	0,481	+	H+	+	+	**PA**
59	H+	+	H+	+	+	0,000	-	-	-	-	**ND**
63	H+	-	H+	+	+	0,040 0,222	- +	H+	+	-	**ND**
66	H+	-	H+	+	+	0,000 0,246	- +	H+	+	-	**ND**
71	-	-	-	-	-	0,385	+	H+	+	+	**PD**
52	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
56	H+	+	H+	+	+	1,465	+	H+	+	+	**PA**
61	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
62	H+	+	H+	+	+	0,793	+	H+	+	+	**PA**
65	-	-	H+	+	+	0,222	+	H+	+	+	**PA**
67	H+	+	H+	+	+	2,671	+	H+	+	+	**PA**
69	H+	+	H+	+	+	1,820	+	H+	+	+	**PA**
70	-	-	-	-	-	3,000	+	H+	+	+	**PD**

Laboratory **J** **ILS 1**

Aerobic mesophilic flora 3,2 10^8 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	H-(catalase-)	-	-	-	-	0,002	-	H- (catalase -) -	-	-	**NA**
7	H-(catalase-)	-	-	-	-	0,000	-	H- (catalase -)	-	-	**NA**
8	H- (catalase-)	-	H- (catalase-)	-	-	0,000	-	H- (catalase -)	-	-	**NA**
12	H-(catalase-)	-	-	-	-	0,001	-	H-(catalase -)	-	-	**NA**
16	H-(catalase-)	-	-	-	-	0,000	-	H-(catalase -)	-	-	**NA**
20	H- (gram -)	-	-	-	-	0,000	-	H-(catalase -)	-	-	**NA**
23	H-	-	-	-	-	0,000	-	H-(catalase -)	-	-	**NA**
24	H-	-	-	-	-	0,000	-	H- (catalase -) -	-	-	**NA**
3	H+,H-	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
6	H+	Positive	H+	Positive	+	0,000	-	H- (gram -)	Negative	-	**ND**
9	H+	Positive	H+	Positive	+	1,576	+	H+	Positive	+	**PA**
11	H- (catalase-)	Negative	Negative	Negative	-	5,000	+	H+	Positive	+	**PD**
15	H+	Positive	H+	Positive	+	2,666	+	H+	Positive	+	**PA**
17	H- (gram -)	Negative	Negative	Negative	-	2,884	+	H+	Positive	+	**PD**
21	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
22	H-	-	-	-	-	0,000	-	H- (catalse -) -	-	-	**NA**
1	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
4	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
5	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
10	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
13	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
14	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
18	H+	Positive	H+	Positive	+	5,000	+	H+	Positive	+	**PA**
19	H+/H+, H-	Negative	Negative	Negative	+	5,000	+	H+	Positive	+	**PA**

Laboratory L1 ILS N°2

Aerobic mesophilic flora: 180 000 000 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
1	-	-	-	-	-	0,011	-	-	-	-	**NA**
6	-	-	-	-	-	0,040	-	-	-	-	**NA**
8	-	-	-	-	-	0,014	-	-	-	-	**NA**
12	-	-	-	-	-	0,009	-	-	-	-	**NA**
16	-	-	-	-	-	0,000	-	-	-	-	**NA**
17	-	-	-	-	-	0,005	-	-	-	-	**NA**
22	-	-	-	-	-	0,009	-	-	-	-	**NA**
23	-	-	-	-	-	0,002	-	-	-	-	**NA**
2	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
5	-	-	-	-	-	3,000	+	H+	+	+	**PD**
7	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
10	-	-	-	-	-	3,000	+	H+	+	+	**PD**
13	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
15	-	-	-	-	-	3,000	+	H+	+	+	**PD**
19	H+	+	H+	+	+	0,010	-	-	-	-	**ND**
24	H+	-	H+	+	+	0,011	-	-	-	-	**ND**
3	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
11	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
20	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
21	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory L2 ILS N°2

Aerobic mesophilic flora: 280 000 000CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
25	-	-	-	-	-	0,007	-	-	-	-	**NA**
27	-	-	-	-	-	0,016	-	-	-	-	**NA**
30	-	-	-	-	-	0,011	-	-	-	-	**NA**
32	-	-	-	-	-	0,015	-	-	-	-	**NA**
37	-	-	-	-	-	0,010	-	-	-	-	**NA**
39	-	-	-	-	-	0,003	-	-	-	-	**NA**
44	-	-	-	-	-	0,002	-	-	-	-	**NA**
48	-	-	-	-	-	0,012	-	-	-	-	**NA**
26	-	-	-	-	-	3,000	+	H+	+	+	**PD**
29	-	-	H+	+	+	0,009	-	-	-	-	**ND**
31	H+	+	H+	+	+	0,867	+	H+	+	+	**PA**
33	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
36	-	-	H+	+	+	0,011	-	-	-	-	**ND**
40	H+	+	H+	+	+	0,000	-	-	-	-	**ND**
41	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
47	H+	+	H+	+	+	0,006	-	-	-	-	**ND**
28	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
34	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
35	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
38	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
42	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
43	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
45	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
46	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory M1 ILS N°2

Aerobic mesophilic flora: 5700 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
1	-	-	-	-	-	0,020	-	-	-	-	**NA**
6	-	-	-	-	-	0,020	-	-	-	-	**NA**
8	-	-	-	-	-	0,010	-	-	-	-	**NA**
12	-	-	-	-	-	0,000	-	-	-	-	**NA**
16	-	-	-	-	-	0,010	-	-	-	-	**NA**
17	-	-	-	-	-	0,010	-	-	-	-	**NA**
22	-	-	-	-	-	0,010	-	-	-	-	**NA**
23	-	-	-	-	-	0..02	-	-	-	-	**NA**
2	-	-	-	-	-	0,010	-	-	-	-	**NA**
5	H+	+	H+	+	+	0,020	-	-	-	-	**ND**
7	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	-	-	-	-	-	3,000	+	H+	+	+	**PD**
15	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
19	-	-	H+	+	+	0,010	-	-	-	-	**ND**
24	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
3	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
11	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
14	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
20	H+	-	H+	+	+	3,000	+	H+	+	+	**PA**
21	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory M2 ILS N°2

Aerobic mesophilic flora: 5800 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
25	-	-	-	-	-	0,010	-	-	-	-	**NA**
27	-	-	-	-	-	0,010	-	-	-	-	**NA**
30	-	-	-	-	-	0,010	-	-	-	-	**NA**
32	-	-	-	-	-	0,020	-	-	-	-	**NA**
37	-	-	-	-	-	0,020	-	-	-	-	**NA**
39	-	-	-	-	-	0,020	-	-	-	-	**NA**
44	-	-	-	-	-	0,010	-	-	-	-	**NA**
48	-	-	-	-	-	0,010	-	-	-	-	**NA**
26	-	-	-	-	-	3,000	+	H+	+	+	**PD**
29	-	-	-	-	-	3,000	+	H+	+	+	**PD**
31	-	-	-	-	-	3,000	+	H+	+	+	**PD**
33	-	-	-	-	-	3,000	+	H+	+	+	**PD**
36	-	-	-	-	-	3,000	+	H+	+	+	**PD**
40	H+	+	-	-	+	3,000	+	H+	+	+	**PA**
41	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
47	H+ (1 colony) (*L. monocytogenes, PCR+*)	-	-	-	+	0,010	-	-	-	-	**ND**
28	-	+	H+	+	+	3,000	+	H+	+	+	**PA**
34	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
35	-	-	-	+ (*L.innocua, PCR+*)	+	3,000	+	H+	+	+	**PA**
38	-	+	H+	+	+	3,000	+	H+	+	+	**PA**
42	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
43	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
45	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
46	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory N ILS N°2

Aerobic mesophilic flora: 4,0.10^8 CFU/g

N°Sample	Reference method: ISO 11290-1					SOLUS One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
1	-	-	-	-	-	0,009	-	-	-	-	**NA**
6	-	-	-	-	-	0,001	-	-	-	-	**NA**
8	-	-	-	-	-	0,003	-	-	-	-	**NA**
12	-	-	-	-	-	0,004	-	-	-	-	**NA**
16	-	-	-	-	-	0,000	-	-	-	-	**NA**
17	-	-	-	-	-	0,003	-	-	-	-	**NA**
22	-	-	-	-	-	0,002	-	-	-	-	**NA**
23	-	-	-	-	-	0,003	-	-	-	-	**NA**
2	-	-	-	-	-	3,000	+	H+	+	+	**PD**
5	-	-	-	-	-	3,000	+	H+	+	+	**PD**
7	-	-	-	-	-	3,000	+	H+	+	+	**PD**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	-	-	-	-	-	3,000	+	H+	+	+	**PD**
15	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
19	H-	-	H+	+	+	2,944	+	H+	+	+	**PA**
24	-	-	-	-	-	0,976	+	H+	+	+	**PD**
3	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
4	H-	+	H+	+	+	3,000	+	H+	+	+	**PA**
9	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
11	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
18	H-	+	H+	+	+	3,000	+	H+	+	+	**PA**
20	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
21	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

Laboratory **ADRIA** **ILS 1**

Aerobic mesophilic flora : 3,6 10^9 CFU/g

Day 2

N°Sample	Reference method: ISO 11290-1♦					Alternative method: Solus One *Listeria*					Agreement
	Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
	O&A	Palcam	O&A	Palcam				O&A	Palcam		
2	-	-	-	-	-	0,008	-	-	-	-	**NA**
7	-	-	-	-	-	0,008	-	-	-	-	**NA**
8	-	-	-	-	-	0,003	-	-	-	-	**NA**
12	-	-	-	-	-	0,003	-	-	-	-	**NA**
16	-	-	-	-	-	0,001	-	-	-	-	**NA**
20	-	-	-	-	-	0,008	-	-	-	-	**NA**
23	-	-	-	-	-	0,004	-	-	-	-	**NA**
24	-	-	-	-	-	0,003	-	-	-	-	**NA**
3	-	+(3)	H+	+	+	3,000	+	H+	+	+	**PA**
6	H+	+	H+	+	+	0,270	+	H+	+	+	**PA**
9	-	-	st	st	-	3,000	+	H+	+	+	**PD**
11	H+	+	H+	+	+	1,002	+	H+	+	+	**PA**
15	-	-	-	-	-	0,185 /0,198 / 0,187 / 0,696*	- / - - / +*	H+	+	-	**NA**
17	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
21	H+	+	H+	+	+	0,125 / 0,117 0,110 / 0,454*	- / - - / +*	H+	+	-	**ND**
22	H+(3)	+	H+	+	+	1,628	+	H+	+	+	**PA**
1	H+(4)	+	H+	+	+	3,000	+	H+	+	+	**PA**
4	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
5	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
10	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
13	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
14	-	st	st	st	-	3,000	+	H+	+	+	**PD**
18	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**
19	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

*: second Heat treated aliquot

♦ Analyses performed according to the COFRAC accreditation

Laboratory O (ADRIA) ILS N°2

Aerobic mesophilic flora: 3,0.108 CFU/g

N°Sample	N°Sample	Reference method: ISO 11290-1♦					SOLUS One *Listeria*					Agreement
		Half Fraser		Fraser		Final result	ELISA test (Optical Density)	Result	Confirmations (100µl)		Final result	
		O&A	Palcam	O&A	Palcam				O&A	Palcam		
1	**1**	-	-	st	st	-	0,008	-	-	-	-	**NA**
2	**6**	-	st	st	st	-	0,007	-	-	-	-	**NA**
3	**8**	-	-	st	st	-	0,012	-	-	-	-	**NA**
4	**12**	-	-	st	st	-	0,012	-	-	-	-	**NA**
5	**16**	-	st	st	st	-	0,013	-	-	-	-	**NA**
6	**17**	-	st	st	st	-	0,000	-	-	-	-	**NA**
7	**22**	-	-	st	-	-	0,006	-	-	-	-	**NA**
8	**23**	-	-	st	st	-	0,008	-	-	-	-	**NA**
9	**2**	H+(7)	+	H+	+	+	0,016/0,060*/0,038*	-/-/-	H+	-	-	**ND**
10	**5**	H+(1)	+	H+	+	+	2,980	+	H+	+	+	**PA**
11	**7**	H+(1)	st	H+	+	+	0,741	+	H+	+	+	**PA**
12	**10**	-	-	st	st	-	2,163	+	H+	+	+	**PD**
13	**13**	H+	-	H+	+	+	0,004	-	-	-	-	**ND**
14	**15**	-	st	H+	+	+	0,008	-	-	-	-	**ND**
15	**19**	H+(2)	+	H+	+	+	1,730	+	H+	+	+	**PA**
16	**24**	H+(5)	+	H+	+	+	0,006	-	-	-	-	**ND**
17	**3**	H+(6)	+	H+	+	+	3,000	+	H+	+	+	**PA**
18	**4**	H+(2)	+	H+	+	+	3,000	+	H+	+	+	**PA**
19	**9**	-	-	H+	+	+	3,000	+	H+	+	+	**PA**
20	**11**	H+(4)	st	H+	+	+	3,000	+	H+	+	+	**PA**
21	**14**	H+	+	H+	+	+	2,286	+	H+	+	+	**PA**
22	**18**	-	st	H+	+	+	2,484	+	H+	+	+	**PA**
23	**20**	-	st	H+	+	+	2,525	+	H+	+	+	**PA**
24	**21**	H+	+	H+	+	+	3,000	+	H+	+	+	**PA**

* new heat treatment

♦ Analyses performed according to the COFRAC accreditation