

**NF VALIDATION - Validation of alternative analysis methods  
Application to the food industry**

**Summary report  
according to the standard EN ISO 16140-2:2016**

Qualitative method

**VIDAS® *Listeria* (VIDAS LIS – Ref. 30700)  
Certificate # BIO 12/02-06/94  
for the detection of *Listeria* spp in human food products and in  
environmental samples**

**CONFIDENTIAL**

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## Preamble

- Protocols of validation:

- EN ISO 16140-1 and EN ISO 16140-2 (September 2016): Microbiology of the food chain — Method validation  
Part 1: Vocabulary.  
Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method.
- Requirements regarding comparison and interlaboratory studies for implementation of the standard EN ISO 16140-2 (version 7).

- Reference method:

- **EN ISO 11290-1 (July 2017):** Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp- Part 1: Detection method.

- Application scope:

- **All human food products** by a validation testing of a broad range of foods, including:
  - meat products,
  - dairy products,
  - seafood products,
  - vegetables,
  - composite foods,
  - dairy products (excluding raw milk) in 125g,
  - powder infant formula and cereals in 125g.
- **Environmental samples.**

- Certification body:

- **AFNOR Certification** (<https://nf-validation.afnor.org/>).

## Definitions

- **Method comparison study**

The method comparison study is the part of the validation process that is performed in the organizing laboratory. It consists of three parts namely the following:

- A comparative study of the results of the reference method to the results of the alternative method in (naturally and/or artificially) contaminated samples (so-called sensitivity study);
- A comparative study to determine the relative level of detection (RLOD) in artificially contaminated samples (so-called RLOD study);
- An inclusivity/exclusivity study of the alternative method.

- **Sensitivity study**

The sensitivity study aims to determine the difference in sensitivity between the reference and the alternative method.

The sensitivity is the ability of the reference method or alternative method to detect the analyte.

- **Relative level of detection study**

A comparative study is conducted to evaluate the level of detection (LOD) of the alternative method against the reference method. The evaluation is based on the calculation of the relative level of detection (RLOD).

The level of detection at 50% (LOD<sub>50</sub>) is the measured analyte concentration, obtained by a given measurement procedure, for which the probability of detection is 50%.

The relative level of detection level of detection at  $P = 0,50$  (LOD<sub>50</sub>) of the alternative method divided by the level of detection at  $P = 0,50$  (LOD<sub>50</sub>) of the reference method.

- **Inclusivity and exclusivity study**

The inclusivity study is a study involving pure target strains to be detected or enumerated by the alternative method.

The exclusivity study is a study involving pure non-target strains, which can be potentially cross-reactive, but are not expected to be detected or enumerated by the alternative method.

- **Interlaboratory study**

The interlaboratory 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.

The aim of the interlaboratory study is to determine the difference in sensitivity between the reference and the alternative method when tested by different collaborators using identical samples (reproducibility conditions).

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Appendix C: Artificial contaminations

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Appendix E: Relative level of detection study – Raw results

Appendix F: Inclusivity and exclusivity

Appendix G: Interlaboratory study – Raw results

## 1. Introduction

The VIDAS® *Listeria* (LIS) method is validated by AFNOR Certification under the mark NF VALIDATION with the certification number BIO 12/02-06/94 according to the standard EN ISO 16140-2:2016. The method is intended for all human food products and environmental samples since its initial validation.

Table 1 summarizes the different steps of the validation that occurred since the initial validation.

Table 1: Steps of the validation AFNOR certification

Study	Date	Standards	Expert Laboratory	Observation
Initial validation	June 1994	Experimental standard NF V 08-055:1993	SERMHA – IPL	Human food products
Renewal	June 1998	ISO 11290-1 :1997	SERMHA – IPL	/
Renewal and extension	July 2002	ISO 11290-1 :1997	SERMHA – IPL	Modification of enrichment protocol
Extension	September 2002	ISO 11290-1 :1997	SERMHA – IPL	Extension for environmental samples
Extension	April 2003	ISO 11290-1 :1997	SERMHA – IPL	Reduction of incubation times for enrichment protocol
First renewal (after extension)	May 2006	ISO 11290-1/A1 :2005 ISO 16140:2003	SERMHA – IPL	/
Second renewal	May 2010	ISO 11290-1/A1 :2005 ISO 16140:2003	SERMHA – IPL	/
Third renewal	May 2014	ISO 11290-1/A1 :2005 ISO 16140/A1:2011	SERMHA – IPL	/
Fourth renewal	May 2018	ISO 11290-1 :2017 ISO 16140-2:2016	ISHA	Supplementary assays to maintain a validation for a broad range of foods
Extension study	June 2021	ISO 11290-1 :2017 ISO 16140-2:2016	Laboratory MICROSEPT	Addition of 2 new protocols in 125 g.

The present document introduces all the validation study results for the AFNOR Certification validation of the VIDAS® *Listeria* (LIS) method according to the standard EN ISO 16140-2:2016 for a broad range of foods and environmental samples.

A part of the results set out in this report were produced during validation tests carried out by SERMHA – IPL and ISHA as part of NF Validation, in accordance with prevailing requirements.

The remaining part of the results is constituted by the analyses performed by the Laboratory Microsept as part of the requirements of the updated validation standard.

## 2. Protocols of the methods

### 2.1. Alternative method

#### 2.1.1. Principle of the method

VIDAS LIS is an enzyme-linked fluorescent immunoassay (ELFA) for use on the VIDAS family of instruments for the specific detection of *Listeria* antigens.

The Solid Phase Receptacle (SPR) serves as the solid phase as well as the pipetting device. The interior of the SPR is coated with anti-*Listeria* antibodies adsorbed on its surface. Reagents for the assay are ready-to-use and pre-dispensed in the sealed reagent strips.

All of the assay steps are performed automatically by the instrument. The reaction medium is cycled in and out of the SPR several times.

Part of the enrichment broth is dispensed into the reagent strip. The antigens present will bind to the anti-*Listeria* antibodies which are coated on the interior of the SPR. Unbound sample components are washed away. Antibodies conjugated with alkaline phosphatase are cycled in and out of the SPR and will bind to any *Listeria* antigens which are themselves bound to the antibodies on the SPR wall. Further wash steps remove unbound conjugate.

During the final detection step, the substrate (4-Methylumbelliferyl phosphate) is cycled in and out of the SPR. The conjugate enzyme catalyzes the hydrolysis of this substrate into a fluorescent product (4-Methylumbelliferone), the fluorescence of which is measured at 450 nm.

At the end of the assay, the results are analyzed automatically by the instrument which generates a test value for each sample. This value is compared to a set of stored standards (thresholds) and each result is interpreted (positive, negative), as shown in figure 1.

Figure 1: interpretation of the VIDAS *Listeria* test

$\text{Test value (TV)} = \frac{RFV_{\text{sample}}}{RFV_{\text{standard}}}$	TV < 0.1: negative test
	TV ≥ 0.1: positive test

#### 2.1.2. Protocol of the method

The protocols are as follows:

- **General protocol**

- enrichment in half-Fraser broth incubated for 20 to 26 hours at 30°C ± 1°C,
- subculture in complete Fraser broth (1 ml in 10 ml), incubated for 20 to 26 hours at 30°C ± 1°

The VIDAS LIS test is then performed using an aliquot of complete Fraser broth heated for 15 minutes ± 1 minute at 95-100°C.

Samples found to be positive using the VIDAS LIS test are confirmed by streaking on agar according to Ottaviani and Agosti, Palcam agar. The presence of typical colonies is sufficient to confirm the presence of *Listeria* spp.

If identification of colonies is wanted, test between one and five typical colonies using the conventional tests described in the methods standardized by the CEN or ISO (including the purification step).

The non-heated enrichment broth can be stored for 24 hours at +2°C to +8°C before the VIDAS® test is performed.

- **New protocols**

- Dairy products excluding raw milk: **125 g** diluted at 1/10 in pre-warmed LX broth, incubation at 30±1°C for 22 – 26 h and subculture in LX broth (0,1 ml in 6 ml) incubated at 30±1°C for 22 – 26 h.
- Powder Infant Formula and cereals: **125 g** diluted at 1/10 in pre-warmed LX broth, incubation at 30±1°C for 26 – 30 h and subculture in LX broth (0,1 ml in 6 ml) incubated at 30±1°C for 22 – 26 h.

The VIDAS LIS test is then performed using an aliquot of LX broth heated for 15 minutes ± 1 minute at 95-100°C with a Heat & Go or a water bath. For the tests which were carried out during the extension, only the Heat & Go was used.

Samples found positive using the VIDAS LIS test are confirmed by streaking on agar according to Ottaviani and Agosti or Palcam agar from unheated LX broth. The presence of typical colonies is sufficient to confirm the presence of *Listeria* spp. If identification of colonies is wanted, test between one and five typical colonies using the conventional tests described in the methods standardized by the CEN or ISO (including the purification step).

The enrichment broth can be stored for 72 hours at +2°C to +8°C before the VIDAS® test is performed.

The workflow of the method is set out in Appendix A.

### 2.1.3. Restrictions

There are no restrictions on use for the VIDAS *Listeria* (LIS) method.

## 2.2. Reference method

Assays of 1994 were performed according to the experimental standard NF V 08-055:1993 "Routine method for the detection of *Listeria monocytogenes*"

Assays of 1998, 2002 and 2003 were performed according to the standard EN ISO 11290-1 (1997) "Horizontal method for the detection and enumeration of *Listeria monocytogenes* - Part 1: detection method."

Assays of 2006 were performed according to the standard EN ISO 11290-1 / A1 (2005) "Horizontal method for the detection and enumeration of *Listeria monocytogenes* - Part 1: detection method."

Assays of the 2018 study were performed according to the standard EN ISO 11290-1:2017 "Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp- Part 1: detection method."



Assays of the extension study were performed by the method described in the EN ISO 11290-1:2017 "Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria spp* - Part 1: detection method."

The workflow of the reference method is presented in Appendix B.

### 2.3. Application scope

The scope of the method concerns a broad range of foods and environmental samples including the categories presented in table 2.

Table 2: Categories tested during the VIDAS LIS Validation study

Categories	Protocol	Study design
① Meat products (25g)	<p><b>General protocol:</b>            Half Fraser – 20-26h – 30°C            Fraser (1 ml in 10 ml) – 20-26h – 30°C</p>	Paired study
② Dairy products (25g)		
③ Seafood products (25g)		
④ Vegetal products (25g)		
⑤ Composite food (25g)		
⑥ Environmental samples		
⑦ Dairy products excluding raw milk (125g)	<p><b>Specific protocol:</b>            Pre-warmed LX broth – 22-26h – 30°C            LX broth (0,1 ml in 6 ml) – 22-26h – 30°C</p>	Unpaired study
⑧ Powder Infant Formula and cereals (125g)	<p><b>Specific protocol:</b>            Pre-warmed LX broth – 26-30h – 30°C            LX broth (0,1 ml in 6 ml) – 22-26h – 30°C</p>	Unpaired study

### 2.4. Study design

For the categories using general protocol, the enrichment broths used for the alternative and reference methods are the same, the study will therefore provide paired data and the expression "paired study" is used to describe the study design.

For the categories using the news protocols (specific protocols) added in the extension study, enrichment broths are different, it is an "unpaired study".

### 3. Methods comparison study

The study was conducted on a variety of samples and strains representative of food products. This is not an exhaustive list of the various matrices included in the application scope. For any remark on the alternative method, you can contact AFNOR Certification by connecting to the Internet page <http://nf-validation.afnor.org/contact-2/>.

#### 3.1. Sensitivity study

The purpose of this study is to compare the two methods – the reference method EN ISO 11290-1:2017 and the VIDAS *Listeria* (LIS) method – on samples contaminated or not contaminated with *Listeria*.

##### 3.1.1. Protocols applied during the studies

- **Incubation times:**

The minimum incubation times were tested, namely:

- 20 hours for the enrichment in half Fraser and Fraser broth for categories ①, ②, ③, ④, ⑤ & ⑥
- 22 hours for the enrichment in LX pre-warmed broth for dairy products excluding raw milk ⑦
- 26 hours for the enrichment in LX pre-warmed broth for Powder Infant Formula and cereals ⑧
- 22 hours for the subculture in LX broth for categories ⑦ & ⑧

- **Confirmations:**

For general protocol all positive and discordant samples were confirmed by streaking of the unheated Fraser enrichment broth onto agar according to Ottaviani and Agosti, PALCAM or Oxford agar, followed by conventional tests set out in the methods standardized by CEN, ISO or AFNOR (including the purification stage).

For specific protocols, the positive results following the VIDAS LIS test were confirmed by streaking of the unheated LX enrichment broth on two selective *Listeria* agars (selective *Listeria* agar according to Ottaviani and Agosti and Palcam agar and performing the conventional tests described in the CEN or ISO standardized methods (including the purification step).

- **Cold storage of the enriched broths:**

For general protocol positive enrichment Fraser broths were also stored for 24 hours at  $5 \pm 3$  °C then retested by the alternative method and confirmed positive.

For specific protocols the positive enrichment LX broths were also stored for 72 hours at  $5 \pm 3$  °C and then tested again using the alternative method and confirmed if positive, in order to document the impact of a cold storage.

##### 3.1.2. Number and nature of the samples

The sensitivity study concerned 631 samples. Three hundred and twenty-seven (327) samples from previous validation studies were retained.

One hundred and sixty-two (162) samples from the 2018 renewal study have been added. One hundred and forty-two (142) samples were analyzed during the extension study in 2021.

Samples analyzed by category and type are presented in table 3.

Table 3: Distribution of the samples per category and type (\*: by any method)

Category	Type		Positive results*	Negative results	Total
<b>Meat products</b> ①	a	Prepared meals with meat	12	12	24
	b	Sausages	12	9	21
	c	Delicatessen	12	11	23
	<b>Total</b>		<b>36</b>	<b>32</b>	<b>68</b>
<b>Dairy products</b> ②	a	Raw milk	10	10	20
	b	Cheese with raw milk	12	22	34
	c	Thermised dairy products	9	11	20
	<b>Total</b>		<b>31</b>	<b>43</b>	<b>74</b>
<b>Seafood products</b> ③	a	Raw fish, sellfish	12	10	22
	b	Smoked	14	10	24
	c	Dishes made from fish	14	12	26
	<b>Total</b>		<b>40</b>	<b>32</b>	<b>72</b>
<b>Vegetal products</b> ④	a	Frozen	12	10	22
	b	Fresh	11	10	21
	c	Seasoned	10	12	22
	<b>Total</b>		<b>33</b>	<b>32</b>	<b>65</b>
<b>Composite food</b> ⑤	a	Ready-to-eat products	19	27	46
	b	Ready-to-reheat products	21	28	49
	c	Pastries and derivated, egg products	21	19	40
	<b>Total</b>		<b>61</b>	<b>74</b>	<b>135</b>
<b>Environment sample</b> ⑥	a	Process water	13	16	29
	b	Surface samples	14	12	26
	c	Residues	9	11	20
	<b>Total</b>		<b>36</b>	<b>39</b>	<b>75</b>
<b>Dairy products (excl. raw milk) 125g</b> ⑦	a	Raw milk cheese	9	17	26
	b	Pasteurized cheese	10	12	22
	c	Dairy powder	11	13	24
	<b>Total</b>		<b>30</b>	<b>42</b>	<b>72</b>
<b>Powder infant formula and cereals 125g</b> ⑧	a	Infant formula w/o probiotic	9	11	20
	b	Infant formula with probiotic	9	16	25
	c	Infant cereal with & w/o probiotic	12	13	25
	<b>Total</b>		<b>30</b>	<b>40</b>	<b>70</b>
<b>All categories</b>	<b>Total</b>		<b>297</b>	<b>334</b>	<b>631</b>

### 3.1.3. Artificial contamination

Two hundred ninety-seven (297) positives samples were analyzed including 148 naturally contaminated samples.

For Spiking, strains were stressed using different treatments and the stress intensity was evaluated. For Seeding, bacterial suspensions were enumerated and inoculates in the matrices. The samples so contaminated were stored at 2 – 8°C for 48 to 72 hours. The results are presented in Appendix C. Table 4 gives the distribution of the positive samples per level of contamination for categories.

Table 4: distribution of the positive samples per level for categories

Category		Number and percentage of samples analyzed per contamination levels				
		Naturally contaminated	≤ 5 (spiking) ≤ 3 (seeding)	5-10 (spiking) 3-10 (seeding)	>10	TOTAL
General protocol	① Meat products /25g	36	0	0	0	36
	② Dairy products /25g	14	14	2	1	31
	③ Seafood products /25g	39	1	0	0	40
	④ Vegetal products /25g	17	5	8	3	33
	⑤ Composite food /25g	13	36	12	0	61
	⑥ Environmental sample	24	11	0	1	36
New protocol	⑦ Dairy products excl. raw milk /125g	5	21	4	0	30
	⑧ PIF and cereals /125g	0	24	6	0	30
TOTAL		148	112	32	5	297
%		49.8%	37.7%	10.7%	1.7%	100%

297 samples gave a positive result by at least one of the methods and 49.8% of them were naturally contaminated.

The distribution of positive samples in *Listeria monocytogenes*, in *Listeria non monocytogenes* and in mixture *L. monocytogenes* + *Listeria non monocytogenes* is presented in table 5 for categories.

Table 5: distribution of the positive samples per *Listeria* species

Category	<i>Listeria spp</i> only		<i>Listeria spp</i> + <i>L. monocytogenes</i>		TOTAL		<i>L. monocytogenes</i> only		Total positive samples
	Number	%	Number	%	Number	%	Number	%	
①	13	36.1	8	22.2	21	58.3	15	41.7	36
②	18	58.1	1	3.2	19	61.3	12	38.7	31
③	11	27.5	4	10.0	15	37.5	25	62.5	40
④	14	42.4	1	3.0	15	45.5	18	54.5	33
⑤	38	62.3	1	1.6	39	63.9	22	36.1	61
⑥	19	52.8	5	13.9	24	66.7	12	33.3	36
⑦	13	43.3	4	13.3	17	56.7	13	43.3	30
⑧	14	46.7	6	20.0	20	66.7	10	33.3	30
All	140	47.1	30	10.1	170	57.2	127	42.8	297

According to the "Requirements regarding comparison and interlaboratory studies for implementation of the standard EN ISO 16140-2", revision 7, for *Listeria* genus studies, compliance per category with a proportion of at least 15 to 25 *Listeria spp* contaminated samples (alone or combined with *Listeria monocytogenes*). This requirement is fulfilled for each category.

### 3.1.4. Results

Raw data are shown in appendix D.

Table 6 shows the results of the sensitivity study for all categories.

Table 6: results of the sensitivity study for both methods (R+/-: reference method positive or negative, A+/-: alternative method positive or negative, PA: positive agreement, NA: negative agreement, ND: negative deviation, PD: positive deviation, PP: presumptive positive before confirmation)

Category	Response	R+	R-
<b>Meat products</b> ①	A+	PA = 36	PD = 0
	A-	ND = 0 incl. 0 PPND	NA = 32 incl. 0 PPNA
<b>Dairy products</b> ②	A+	PA = 29	PD = 1
	A-	ND = 1 incl. 0 PPND	NA = 43 incl. 0 PPNA
<b>Seafood products</b> ③	A+	PA = 40	PD = 0
	A-	ND = 0 incl. 0 PPND	NA = 32 incl. 0 PPNA
<b>Vegetal products</b> ④	A+	PA = 33	PD = 0
	A-	ND = 0 incl. 0 PPND	NA = 32 incl. 0 PPNA
<b>Composite food</b> ⑤	A+	PA = 58	PD = 0
	A-	ND = 3 incl. 0 PPND	NA = 74 incl. 0 PPNA
<b>Environmental sample</b> ⑥	A+	PA = 35	PD = 0
	A-	ND = 1 incl. 0 PPND	NA = 39 incl. 0 PPNA
<b>Dairy products (excl. raw milk)</b> ⑦	A+	PA = 24	PD = 4
	A-	ND = 2 incl. 0 PPND	NA = 42 incl. 0 PPNA
<b>Powder infant formula and cereals</b> ⑧	A+	PA = 23	PD = 6
	A-	ND = 1 incl. 0 PPND	NA = 40 incl. 0 PPNA
<b>All categories</b>	A+	<b>PA = 278</b>	<b>PD = 11</b>
	A-	<b>ND = 8 incl. 0 PPND</b>	<b>NA = 334 incl. 0 PPNA</b>

### 3.1.5. Calculation of relative trueness (RT), sensitivity (SE) and false positive ratio (PFR)

The set of results obtained were used to calculate the relative trueness, the sensitivity and the false positive ratio for each of the categories and for all the categories, according to the formulas set out in the EN ISO 16140-2:2016 standard (table 7).

Table 7: values in % of sensitivity for the two methods, relative trueness and false positive ratio for the alternative method ( $SE_{alt}$ : sensitivity for the alternative method,  $SE_{ref}$ : sensitivity for the reference method, RT: relative trueness, FPR: false positive ratio for the alternative method)

Categories	Type	PA	NA	ND	PD	N	Dont PPND	Dont PPNA	SEalt	SEref	RT	FPR
<b>Meat products</b> ①	a	12	12	0	0	24	0	0	100.0%	100.0%	100.0%	0.0%
	b	12	9	0	0	21	0	0	100.0%	100.0%	100.0%	0.0%
	c	12	11	0	0	23	0	0	100.0%	100.0%	100.0%	0.0%
	Total	36	32	0	0	68	0	0	100.0%	100.0%	100.0%	0.0%
<b>Dairy products</b> ②	a	10	10	0	0	20	0	0	100.0%	100.0%	100.0%	0.0%
	b	11	22	1	0	34	0	0	91.7%	100.0%	97.1%	0.0%
	c	8	11	0	1	20	0	0	100.0%	88.9%	95.0%	0.0%
	Total	29	43	1	1	74	0	0	96.8%	96.8%	97.3%	0.0%
<b>Seafood products</b> ③	a	12	10	0	0	22	0	0	100.0%	100.0%	100.0%	0.0%
	b	14	10	0	0	24	0	0	100.0%	100.0%	100.0%	0.0%
	c	14	12	0	0	26	0	0	100.0%	100.0%	100.0%	0.0%
	Total	40	32	0	0	72	0	0	100.0%	100.0%	100.0%	0.0%
<b>Vegetal products</b> ④	a	12	10	0	0	22	0	0	100.0%	100.0%	100.0%	0.0%
	b	11	10	0	0	21	0	0	100.0%	100.0%	100.0%	0.0%
	c	10	12	0	0	22	0	0	100.0%	100.0%	100.0%	0.0%
	Total	33	32	0	0	65	0	0	100.0%	100.0%	100.0%	0.0%
<b>Composite food</b> ⑤	a	16	26	3	0	45	0	0	84.2%	100.0%	93.3%	0.0%
	b	21	29	0	0	50	0	0	100.0%	100.0%	100.0%	0.0%
	c	21	19	0	0	40	0	0	100.0%	100.0%	100.0%	0.0%
	Total	58	74	3	0	135	0	0	95.1%	100.0%	97.8%	0.0%
<b>Environmental sample</b> ⑥	a	12	16	1	0	29	0	0	92.3%	100.0%	96.6%	0.0%
	b	14	12	0	0	26	0	0	100.0%	100.0%	100.0%	0.0%
	c	9	11	0	0	20	0	0	100.0%	100.0%	100.0%	0.0%
	Total	35	39	1	0	75	0	0	97.2%	100.0%	98.7%	0.0%
<b>Dairy products (excl. raw milk) 125g</b> ⑦	a	7	17	2	0	26	0	0	77.8%	100.0%	92.3%	0.0%
	b	9	12	0	1	22	0	0	100.0%	90.0%	95.5%	0.0%
	c	8	13	0	3	24	0	0	100.0%	72.7%	87.5%	0.0%
	Total	24	42	2	4	72	0	0	93.3%	86.7%	91.7%	0.0%
<b>Powder Infant formula &amp; cereals 125g</b> ⑧	a	8	11	0	1	20	0	0	100.0%	88.9%	95.0%	0.0%
	b	6	16	1	2	25	0	0	88.9%	77.8%	88.0%	0.0%
	c	9	13	0	3	25	0	0	100.0%	75.0%	88.0%	0.0%
	Total	23	40	1	6	70	0	0	96.7%	80.0%	90.0%	0.0%
<b>All categories</b>	<b>Total</b>	<b>278</b>	<b>334</b>	<b>8</b>	<b>11</b>	<b>631</b>	<b>0</b>	<b>0</b>	<b>97.3%</b>	<b>96.3%</b>	<b>97.0%</b>	<b>0.0%</b>

The results for all categories are summarized in the table 8 below.

Table 8: summary of the results for all categories

Parameter	Formula EN ISO 16140-2 :2016	Results for all categories
Sensitivity of the alternative method (SE <sub>alt</sub> )	$SE_{alt} = \frac{(PA + PD)}{(PA + ND + PD)} \times 100 \%$	97.3 %
Sensitivity of the reference method (SE <sub>ref</sub> )	$SE_{ref} = \frac{(PA + ND)}{(PA + ND + PD)} \times 100 \%$	96.3 %
Relative trueness (RT)	$RT = \frac{(PA + NA)}{N} \times 100 \%$	97.0 %
False positive ratio (FPR)	$FPR = \frac{FP}{NA} \times 100 \%$	0 %

### 3.1.6. Analysis of discordant results

Discordant results are examined according to the standard ISO 16140-2: 2016.

The negative deviations are given in table 9 and the positive deviations in table 10.

Table 9: summary of the negative deviations

Cat.	Sample number	Name	Type	Inoculation level CFU	Direct assay			Broth storage at 2-8°C		
					VIDAS test	Conf.	Conc.	VIDAS test	Conf.	Conc.
2	2003	Raw cow milk cheese	a	nc	-	<i>L. seel.</i> <i>L. welsh.</i>	ND	/	/	/
5	26	Wrap with chicken, lettuce and parmesan	a	nc	-	-	ND	/	/	/
	27	Chicken kebab sandwich with crudeness	a	nc	-	<i>L. grayi</i>	ND	/	/	/
	15	Cooked potatoes and Strasbourg sausage salad	a	(3.8) <i>Listeria welsh.</i>	-	<i>L. welsh.</i>	ND	/	/	/
6	E4	Water outlet filter	a	(2.2) <i>Listeria mono 1/2a</i>	-	<i>L. mono</i>	ND	/	/	/
7	1977572	Raw milk cow cheese (Morbier)	a	nc	-	-	ND	-	-	ND
	1977785	Raw milk cow cheese (St Nectaire) batch 1	a	nc	-	-	ND	-	-	ND
8	1977756	Organic infant milk 6-12 months with probiotics / <i>Lactobacillus fermentum hereditum</i> 10 <sup>6</sup> UFC/g	b	(4.4) <i>Listeria ivanovii</i>	-	-	ND	-	-	ND

Eight negative deviations were observed: 5 from naturally contaminated samples and 3 from artificially contaminated samples.

- For 1 negative deviation (c1+:26), the protocol of the alternative method was applied and nontypical colonies were observed. The first enrichment in half-Fraser is identical for the two methods, however the transfer volume as well as time and temperature applied for the second enrichment in Fraser, are different between the two methods. It is probable that the enrichment of the alternative method did not allow to reach the threshold of the VIDAS LIS method.
- Four (4) negative deviations (d1+: 2003; c1+: 15 and 27; e1+: E4) are false negative highlighted by the confirmation protocol of the alternative method. It is probable that the enrichment did not allow to reach the threshold of the VIDAS LIS test.

*NB: 3 negatives deviations were obtained for the category "composite foods", but the total number of positive samples is equal to 61 instead of the minimum requirement of 30.*

- For three (3) negative deviations (1977572, 1977785, 1917756), no typical colony was able to be recovered from the enriched LX broths. These 3 negative deviations most probably come from the nature of the study design. In an unpaired study, because of the difference of sampling between both methods, and the use of naturally contaminated samples or samples contaminated at low levels, no cell of *Listeria* may have been present in the sampling of one of the two methods.



Table 10: summary of the positive deviations

Category	Sample number	Sample	Type	Inoculation level CFU	Reference method ISO 11290-1						VIDAS LIS method				
					Half fraser		Fraser		Confirmation	Result	VIDAS test	Conf. O&A and PALCAM	Conf. ISO	Result	Concordance
					O&A	PAL-CAM	O&A	PAL-CAM							
<b>2</b>	C22	Picodon	b	3.4	∅	∅	∅	∅	/	<b>A</b>	+	+MA	<i>L.innocua</i>	<b>P</b>	<b>PD</b>
<b>7</b>	1977542	Pasteurized cow cheese (Munster)	b	1.8	-EM	-EM	∅	-EM	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977581	Powdered whole milk	c	4.0	-EM	-EM	-EL	-EM	/	<b>A</b>	+	CL with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977582	Skimmed milk powder	c	4.0	-EM	-EM	-EL	-EM	/	<b>A</b>	+	BM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977584	Powdered buttermilk	c	4.4	-EM	-EM	-EL	-EL	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
<b>8</b>	1977568	Junior baby milk powder + 18 months	a	4.0	∅	-EL	∅	-EL	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977760	Infant milk 6-12 months <i>S.thermophilus</i> – 7,7 10 <sup>6</sup> UFC/g	b	2.6	-EL	-EL	∅	-EL	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977761	Infant milk 6-12 months thickened formula Bifidobactéries – 1,6 10 <sup>6</sup> UFC/g	b	2.6	∅	-EL	∅	-EL	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1977773	Infant cereals with honey	c	4.2	∅	-EL	∅	-EL	/	<b>A</b>	+	AM w/o halo	<i>L.innocua</i>	<b>P</b>	<b>PD</b>
	1977781	Infant caramel cereals	c	5.0	∅	∅	∅	∅	/	<b>A</b>	+	AM with halo	<i>L.monocytogenes</i>	<b>P</b>	<b>PD</b>
	1978401	Wheat and cocoa infant cereals	c	3.4	∅	-EL	∅	-EL	/	<b>A</b>	+	AM w/o halo	<i>L.innocua</i>	<b>P</b>	<b>PD</b>

Eleven positive deviations were observed and concern artificially contaminated samples.

For one (1) positive deviation (d2+: C22) the first enrichment in half-Fraser is identical for the two methods, however the transfer volume as well as time and temperature applied for the second enrichment in Fraser, are different between the two methods (appendix 1). It is probable that the enrichment of the reference method did not allow to reach the threshold.

For the other positive deviations, they are most likely a result of the nature of the study design. In an unpaired study, due to the difference in sampling between the two methods.

### 3.1.7. Calculation and interpretation of data

Table 11 shows the difference between negative deviations and positive deviations and the acceptability limits.

Table 11: acceptability limits

Category	Type	ND	PD	Unpaired		Paired				Combined	
				(ND-PD)	AL	(ND-PD)	AL	(ND+PD)	AL	(ND-PD)	AL
Meat products ①	a	0	0			0		0		0	
	b	0	0			0	/	0	/	0	
	c	0	0			0		0		0	
	<b>Total</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	
Dairy products ②	a	0	0			0		0		0	
	b	1	0			1	/	1	/	1	
	c	0	1			-1		1		-1	
	<b>Total</b>	<b>1</b>	<b>1</b>			<b>0</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>0</b>	
Seafood products ③	a	0	0			0		0		0	
	b	0	0			0	/	0	/	0	
	c	0	0			0		0		0	
	<b>Total</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	
Vegetal products ④	a	0	0			0		0		0	
	b	0	0			0	/	0	/	0	
	c	0	0			0		0		0	
	<b>Total</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	
Composite food ⑤	a	3	0			3		3		3	
	b	0	0			0	/	0	/	0	
	c	0	0			0		0		0	
	<b>Total</b>	<b>3</b>	<b>0</b>			<b>3</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>3</b>	
Environm. sample ⑥	a	1	0			1		1		1	
	b	0	0			0	/	0	/	0	
	c	0	0			0		0		0	
	<b>Total</b>	<b>1</b>	<b>0</b>			<b>1</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>1</b>	
DP (except raw milk) 125 g ⑦	a	2	0	2						2	
	b	0	1	-1	/					-1	
	c	0	3	-3						-3	
	<b>Total</b>	<b>2</b>	<b>4</b>	<b>-2</b>	<b>3</b>					<b>-2</b>	
PIF and cereals 125 g ⑧	a	0	1	-1						-1	
	b	1	2	-1	/					-1	
	c	0	3	-3						-3	
	<b>Total</b>	<b>1</b>	<b>6</b>	<b>-5</b>	<b>3</b>					<b>-5</b>	
<b>All categories</b>	<b>Total</b>	<b>8</b>	<b>11</b>							<b>-3</b>	<b>7</b>

The observed values (ND – PD) and (ND+PD) are below the acceptability limit for each category and for all categories. The alternative method produces results comparable to the reference method.

### 3.1.8. Enrichment broth storage at 2 – 8°C for 72 hours (extension study)

For categories 7 & 8, a stability study of enriched LX broths stored at 5 ± 3 ° C for 72 hours was performed on all positive and discordant samples. After storage, the broths were reanalyzed and confirmed.

For two samples (1977820 and 1977579), the result moved from negative agreement to a positive deviation after storage at 2-8°C for 72h.

Table 12 shows the difference between negative deviations and positive deviations and the acceptability limits.

Table 12: acceptability limits

Category	Type	ND	PD	(ND-PD)	Acceptability limit (AL)	Observation
Dairy products (except raw milk) 125g 7	a	2	1	/	/	(ND-PD) ≤ AL
	b	0	1			
	c	0	4			
	<b>Total</b>	<b>2</b>	<b>6</b>	<b>-4</b>	<b>3</b>	
Powder infant formula and cereals 125g 8	a	0	1	/	/	
	b	1	2			
	c	0	3			
	<b>Total</b>	<b>1</b>	<b>6</b>	<b>-5</b>	<b>3</b>	
<b>Categories 7 &amp; 8</b>	<b>Total</b>	<b>3</b>	<b>12</b>	<b>-9</b>	<b>4</b>	

For categories 7 & 8, the alternative method produces results comparable to the reference method after storage of the broths for 3 days at 5±3°C.

### 3.1.9. Conclusion of the sensitivity study

The statistical tests of the EN ISO 16140-2:2016 standard conclude that the alternative method produces comparable results to the reference method.

## 3.2. Relative detection level study

### 3.2.1. Matrices used

Various "food matrix-strain" pairs were studied in parallel using the reference method and the alternative method, for the studied categories (cf. table 13).

Table 13: pairs matrix-strain for each category

Category	Matrix/strain pairs	Origin of the strain	Study
① Meat products	Rillettes / <i>Listeria welshimeri</i>	/	Previous validation
② Dairy products	Raw milk / <i>Listeria innocua</i>	/	Previous validation
③ Seafood products	Smoked salmon / <i>Listeria monocytogenes 1/2a</i>	/	Previous validation
④ Vegetal products	Red cabbage / <i>Listeria monocytogenes 4b</i>	/	Previous validation
⑤ Composite food	Tabbouleh / <i>Listeria welshimeri</i> LIS.6.24	Tabbouleh	ISHA 2018
	Custard / <i>Listeria seeligeri</i> LIS.5.4	Pastry cream	ISHA 2018
⑥ Environmental sample	Process water / <i>Listeria monocytogenes 1/2c</i>	/	Previous validation
⑦ Dairy products (except raw milk) 125g	Cottage cheese with raw milk / <i>Listeria ivanovii</i> GQD028	Environment dairy industry	Microsept 2021
⑧ Powder infant formula and cereals 125g	Infant milk powder with probiotics / <i>Listeria monocytogenes 1/2b</i> JAR249	Pasteurized milk cheese	Microsept 2021

For categories ①, ②, ③, ④, ⑤, ⑥, ⑦ the total flora of the matrix was determined. For the category ⑧, an enumeration of probiotics was carried out according to ISO 15214. The results are presented in Appendix E.

### 3.2.2. Contamination protocol

- Protocol for categories ①, ②, ③, ④ and ⑥ (previous validation)

One negative control and 3 to 4 level of contaminations were tested.

Six replicates for each level of contamination were inoculated and analyzed by the reference method and the alternative method.

Artificial contamination was carried out in accordance with the requirements of the EN ISO 16140 standard and of the AFNOR Technical Board in force.

As the two methods have the same enrichment step in half-Fraser, the same test portions of 25 g was tested by the two method. Test portion were prepared for each level of contamination and individually inoculated with a calibrated bacterial suspension. Several dilutions of a calibrated and low-concentrated suspension of *Listeria spp* were used to spike the samples before analysis.

Simultaneously, a total viable count was performed on a portion of non-contaminated matrix to estimate the concentration of mesophilic aerobic flora. A detection of *Listeria spp* using the reference method was also performed to check the absence of the target analyte in the matrix.

- Protocol for the category ⑤ (assays 2018)

Three levels of contamination were prepared consisting of a negative control level, a low level, and a higher level. Only one strain of the target analyte is used to contaminate the low and the high level.

The negative control level shall not produce positive results. Five replicates are tested for this level. The low level shall be the theoretical detection level, it has been contaminated at 0.7 - 1 CFU per test portion to obtain fractional recovery results. Twenty replicates are tested for this level. The higher level shall be just above the theoretical detection level, it has been contaminated at 2 - 3 CFU per test portion. Five replicates are tested for this level.

Food products were contaminated using the seeding protocol. Bulk contaminations were performed on the matrices for the different levels of contamination, then the matrices were stored at  $5\pm 3^{\circ}\text{C}$  for two days before analysis. Samples were then analyzed by the reference and the alternative method. For the alternative method, only the minimal incubation time of the broth of the alternative method was tested.

Simultaneously, a total viable count was performed on a portion of non-contaminated matrix to estimate the concentration of mesophilic aerobic flora. A detection of *Listeria* spp using the reference method was also performed to check the absence of the target analyte in the matrix.

- Protocol for categories 7 & 8 (assays 2021)

Three levels of contamination were prepared consisting of a negative control level, a low level, and a higher level.

The negative control level shall not produce positive results. Five replicates were tested for this level. The low level shall be the theoretical detection level, it was contaminated at 1.2 CFU per test portion to obtain fractional recovery results. Twenty replicates were tested for this level.

The higher level shall be just above the theoretical detection level, it was contaminated at 3.3 CFU per test portion. Five replicates were tested for this level.

For the category 7, the cottage cheese with raw milk was contaminated using the seeding protocol. Bulk contaminations were performed on the matrix for the different levels of contamination, then the matrix was stored at  $5\pm 3^{\circ}\text{C}$  for two days before analysis. Samples were then analyzed by the reference and the alternative method.

For the category 8, the infant milk powder with probiotics was contaminated using the spiking protocol. The strain of *Listeria monocytogenes* used was stressed with heat treatment. Each initial suspension was then contaminated with this stressed and calibrated strain.

### 3.2.3. Results

The detailed results tables are set out in Appendix E.

The RLOD is defined as the ratio of the LODs of the alternative method and the reference method:  
$$\text{RLOD} = \frac{\text{LOD}_{\text{alt}}}{\text{LOD}_{\text{ref}}}$$

The RLODs calculations were performed according to the standard ISO 16140-2: 2016 using the Excel spreadsheet available for download at <http://standards.iso.org/iso/16140>, with unknown concentrations. Values of the RLODs are set out in table 14.

Table 14: RLODs values for all categories (RLOD: the estimated relative level of detection value, RLODU: the upper limit of the 95% confidence interval for RLOD, RLODL: the lower limit of the 95% confidence interval for RLOD,  $b=\ln(\text{RLOD})$ : logarithm of the RLOD value,  $sd(b)$ : standard deviation of  $b$ , z-Test statistic: absolute value of the test statistic of the z-Test with the null hypothesis  $H_0: b=0$ , p-value: p-value of the z-Test)

Matrix/strain pairs	RLOD	RLODL	RLODU	$b=\ln(\text{RLOD})$	$sd(b)$	z-Test statistic	p-value	AL
① Rillettes / <i>L. welshimeri</i>	1.000	0.437	2.286	0.000	0.413	0.000	1.000	1.5
② Raw milk / <i>L. innocua</i>	1.000	0.406	2.463	0.000	0.451	0.000	1.000	1.5
③ Smoked salmon / <i>L. monocytogenes 1/2a</i>	1.000	0.362	2.762	0.000	0.508	0.000	1.000	1.5
④ Red cabbage / <i>L. monocytogenes 4b</i>	1.000	0.366	2.733	0.000	0.503	0.000	1.000	1.5
⑤ Tabbouleh / <i>L. welshimeri</i> LIS.6.24	1.315	0.563	3.072	0.274	0.424	0.645	0.519	1.5
⑤ Custard / <i>L. seeligeri</i> LIS.5.4	1.000	0.457	2.187	0.000	0.391	0.000	1.000	1.5
⑥ Process water / <i>L. monocytogenes 1/2c</i>	1.000	0.370	2.706	0.000	0.498	0.000	1.000	1.5
⑦ Cottage cheese with raw milk / <i>L. ivanovii</i> GQD028	1.146	0.498	2.636	0.136	0.417	0.327	0.744	2.5
⑧ Infant milk powder with probiotics / <i>L. monocytogenes 1/2b</i> JAR249	1.146	0.498	2.636	0.136	0.417	0.327	0.744	2.5
Combined	1.056	0.799	1.394	0.054	0.139	0.389	0.698	/

The LOD<sub>50</sub> calculations according to Wilrich & Wilrich POD-LOD calculation program - version 9, are given in Table 15.

Table 15: LOD50% for the alternative and reference method

Matrix	Strain	LOD50% (CFU/125g) alternative method	LOD50% (CFU/125g) Reference method
Rillettes	<i>L. welshimeri</i>	0.820	0.820
Raw milk	<i>L. innocua</i>	0.994	0.994
Smoked salmon	<i>L. monocytogenes 1/2a</i>	0.927	0.927
Red cabbage	<i>L. monocytogenes 4b</i>	0.653	0.653
Tabbouleh	<i>L. welshimeri</i> LIS.6.24	0.669	0.521
Custard	<i>L. seeligeri</i> LIS.5.4	0.586	0.586
Process water	<i>L. monocytogenes 1/2c</i>	0.817	0.817
Cottage cheese with raw milk (125g)	<i>L. ivanovii</i> GQD028	0.836	0.745
Infant milk powder with probiotics (125g)	<i>L. monocytogenes 1/2b</i> JAR249	0.667	0.596
Combined results		0.769	0.728

#### 3.2.4. Interpretation and conclusion

RLOD values are below the acceptability limit set at 1.5 for paired studies and 2.5 for unpaired studies. In conclusion, alternative and reference methods show similar LODs values for the detection of *Listeria* spp in the categories tested.

### 3.3. Inclusivity and exclusivity study

The inclusivity and exclusivity of the method are defined by analyzing, respectively, 50 positive strains and 30 negative strains.

This study was realized in the initial validation study (2006) with half Fraser broth.

The strains were first grown in a non-selective broth for 24 hours at 30°C.

For inclusivity, a half Fraser broth was then inoculated with 10 to 100 *Listeria* and the full VIDAS *Listeria* enrichment protocol was then applied before VIDAS testing.

For exclusivity, a non-selective broth was then inoculated with about 105 cells/mL and then incubated for 24 hours at 30°C before VIDAS testing.

The results are set out in Appendix F.

#### 3.3.1. Results

The 50 *Listeria* strains (25 *Listeria monocytogenes* strains and 25 other *Listeria* strains) were all tested using the VIDAS LIS test.

All the *Listeria* spp strain provided a positive result and no cross-reactions were observed with non-target strains.

#### 3.3.2. Conclusion

The selectivity of the method is satisfactory.

### 3.4. Practicability

1. <i>Storage conditions of the components (see package insert) – Expiration date of unopened products (see package insert)</i>	The storage temperature of the VIDAS LIS kit is 2-8°C. The kit expiration date is shown on the box label and on the various vials.																																
2. <i>Conditions of use after first use (see package insert)</i>	The kit components should be stored at 2-8°C. If stored as recommended (pouch correctly resealed with desiccant after use, etc.), all the components will remain stable until the expiration date indicated on the label.																																
<p>3. <i>Time-to-result</i></p> <table border="1" data-bbox="145 680 1447 1227"> <thead> <tr> <th rowspan="2">Step</th> <th><u>Time required (Day)</u></th> <th><u>Time required (Day)</u></th> </tr> <tr> <th>VIDAS LIS method</th> <th>EN ISO 11290-1 standard</th> </tr> </thead> <tbody> <tr> <td>Pre-enrichment of LX or Fraser</td> <td>D0</td> <td>D0</td> </tr> <tr> <td>Inoculation of LX or Fraser</td> <td>D1</td> <td>D1</td> </tr> <tr> <td>Streaking on selective media</td> <td>/</td> <td>D1 &amp; D2</td> </tr> <tr> <td>Perform VIDAS LIS test</td> <td>D2</td> <td>/</td> </tr> <tr> <td>Plate reading</td> <td>/</td> <td>D3 &amp; D4</td> </tr> <tr> <td><b>Obtention of negative results (without confirmation)</b></td> <td><b>D2</b></td> <td><b>D4</b></td> </tr> <tr> <td>Confirmation testing</td> <td>D2</td> <td>D3 to D5</td> </tr> <tr> <td><b>Obtention of negative results (after negative confirmation testing if necessary)</b></td> <td><b>D4 to D6</b></td> <td><b>D4 to D6</b></td> </tr> <tr> <td><b>Obtention of positive results (confirmation of typical colonies)</b></td> <td><b>D3 to D6</b></td> <td><b>D4 to D6</b></td> </tr> </tbody> </table>	Step	<u>Time required (Day)</u>	<u>Time required (Day)</u>	VIDAS LIS method	EN ISO 11290-1 standard	Pre-enrichment of LX or Fraser	D0	D0	Inoculation of LX or Fraser	D1	D1	Streaking on selective media	/	D1 & D2	Perform VIDAS LIS test	D2	/	Plate reading	/	D3 & D4	<b>Obtention of negative results (without confirmation)</b>	<b>D2</b>	<b>D4</b>	Confirmation testing	D2	D3 to D5	<b>Obtention of negative results (after negative confirmation testing if necessary)</b>	<b>D4 to D6</b>	<b>D4 to D6</b>	<b>Obtention of positive results (confirmation of typical colonies)</b>	<b>D3 to D6</b>	<b>D4 to D6</b>	
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<b>Obtention of positive results (confirmation of typical colonies)</b>	<b>D3 to D6</b>	<b>D4 to D6</b>																															
4. <i>Steps common to the reference method</i>	<b><u>Extension protocol:</u></b> no common step																																

### 3.5. Conclusion

The comparative study of the methods was performed according to the EN ISO 16140-2:2016 standard.

- **Sensitivity study**

The performance of the VIDAS LIS method was compared to that of the reference method EN ISO 11290-1:2017 by analyzing 631 samples divided into 8 product categories.

The observed values (ND – PD) were below to the acceptability limit for each category and for all categories after the initial test and after three days of conservation at 5±3°C for extension study.

Statistically, the alternative method produces results comparable to that of the reference method.

- **Relative level of detection study**

The relative detection level of VIDAS LIS method and reference method was evaluated by artificially contaminating different products.

The relative level of detection of the alternative method varies from 1,000 to 1,315 cells per test sample depending on the categories and is equal to 1,056 for all categories combined. The VIDAS LIS method and the reference method showed similar LODs values for the detection of *Listeria* spp in the categories tested.



- **Inclusivity and exclusivity study**

The method is satisfactory, all strains of *Listeria* have been detected and no cross-reaction has been observed with the non-target strains.

## 4. Interlaboratory study

### 4.1. Organization of the interlaboratory study

The interlaboratory study was realized by the expert laboratory and 15 participating laboratories.

### 4.2. Experimental parameters

- Matrix: pasteurized milk (25 ml)
- Strain: *Listeria monocytogenes* (origin “dairy product”).
- Number of samples per laboratory: 24 samples per method were prepared to represent 3 levels of contamination, with 8 samples per level for each method (48 samples per parcel).

### 4.3. Control of the experimental parameters

#### 4.3.1. Samples preparation and spiking

The following table shows the contamination rates obtained and the estimated accuracies:

Table 16: contamination levels

Level	Samples	Targeted theoretical level (CFU/25 g)	Real level (CFU/25 g)
Level 0 (L0)	3-4-9-10-17-18-21-22	0	0
Low level (L1)	1-2-7-8-13-14-19-20	3	2.5
High level (L2)	5-6-11-12-15-16-23-24	30	22.8

#### 4.3.2. Temperature of the samples

The measured temperatures at reception are listed in the table 17.

Table 17: temperature measurements

Laboratory	Temperatures (°C)		Comments
	communicated by the laboratory	measured by the temperature probe	
A	4,7°C	2,7°C	
B	5,0°C	4,7°C	
C	2,8°C	3,2°C	
D	4,3°C	2,7°C	
E	4,7°C	2,7°C	
F	2,1°C	2,7°C	
G	1,8°C	2,2°C	
H	/	/	Receipt at D2
I	3,6°C	3,5°C	
J	5,0°C	2,7°C	
K	5,2°C	2,7°C	
L	3,5°C	3,7°C	
M	4,5°C	4,2°C	
N	3,0°C	4,7°C	
O	4,0°C	3,2°C	

Fourteen of the 15 laboratories received their samples the day after they were sent.

#### 4.4. Results

Fourteen laboratories out of the 15 laboratories were finally retained for the study (exclusion of laboratory H).

##### 4.4.1. Total viable counts

For the whole laboratories, the total viable counts at 30°C vary between 800 CFU/g and 9900 CFU/g.

##### 4.4.2. Expert laboratory results

The results obtained by the expert laboratory are summarized in table 18 (raw results in appendix 6).

*Table 18 : positive results obtained by expert laboratory by both methods*

<b>Contamination level</b>	<b>Alternative method</b>	<b>Reference method</b>
L0	0/8	0/8
L1	8/8	8/8
L2	8/8	8/8

The results are consistent with those expected.

##### 4.4.3. Collaborators results

The results are summarized in table 19 (Raw results in appendix 6).

Table 19 : results for all laboratories (bc: before contamination, ac: after contamination)

LAB	Alternative method									Reference method			
	L0			L1			L2			LAB	L0	L1	L2
	bc	ac	Final result	bc	ac	Final result	bc	ac	Final result				
A	0/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	A	0/8	8/8	8/8
B	0/8	0/8	0/8	6/8	6/8	6/8	8/8	8/8	8/8	B	0/8	6/8	8/8
C	1/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	C	0/8	8/8	8/8
D	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	D	0/8	7/8	8/8
E	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	E	0/8	7/8	8/8
F	0/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	F	0/8	8/8	8/8
G	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	G	0/8	7/8	8/8
I	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	I	0/8	7/8	8/8
J	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	J	0/8	7/8	8/8
K	0/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	K	0/8	8/8	8/8
L	0/8	0/8	0/8	6/8	6/8	6/8	8/8	8/8	8/8	L	0/8	6/8	8/8
M	0/8	0/8	0/8	7/8	7/8	7/8	8/8	8/8	8/8	M	0/8	7/8	8/8
N	0/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	N	0/8	8/8	8/8
O	0/8	0/8	0/8	5/8	5/8	5/8	8/8	8/8	8/8	O	0/8	5/8	8/8
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>99</b>	<b>99</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>Total</b>	<b>0</b>	<b>99</b>	<b>112</b>

#### 4.4.4. Analysis of the results and collaborators selected for the statistical analysis

The results of 14 laboratories were considered.

#### 4.5. Interpretation of the results and statistical analysis

##### 4.5.1. Interpretation of the results

The interpretation of the results is shown in the table 15.

Table 15 : tests results for both methods (PA: positive agreement, NA: negative agreement, ND: negative deviation, PD: positive deviation)

Level	Alternative method (AM)	Reference method (RM)		
		RM+	RM-	Total
L0	AM+	PA= 0	PD= 0	0
	AM-	ND= 0 including 0 PPND= 0	NA= 112 including 1 PPNA= 1	112
	Total	0	112	112
L1	AM+	PA= 99	PD= 0	99
	AM-	ND= 0 including 0 PPND= 0	NA= 13 including 0 PPNA= 0	13
	Total	99	13	112
L2	AM+	PA= 112	PD= 0	112
	AM-	ND= 0 including 0 PPND= 0	NA= 0 including 0 PPNA= 0	0
	Total	112	0	112

#### 4.5.2. Specificity of the methods

The percentage specificity of the reference method and the alternative method is calculated using the data after confirmation, based on the results of level L<sub>0</sub>.

- Specificity of the reference method:  $SP_{ref} = \left[1 - \left(\frac{P_0}{N_-}\right)\right] \times 100\% = 100.0\%$ ,

- Specificity of the alternative method:  $SP_{alt} = \left[1 - \left(\frac{CP_0}{N_-}\right)\right] \times 100\% = 100\%$ ,

where:

$N_-$  is the number of all L<sub>0</sub> tests;

$P_0$  is the total number of false-positive results obtained with the blank samples before confirmation;

$CP_0$  is the total number of false-positive results obtained with blank samples.

#### 4.5.3. Sensitivity of the two methods, relative trueness and false positive ratio of the alternative method

The sensitivity of the two methods, the relative trueness of the alternative method and the false positive ratio of the two methods are calculated. Results are presented in the table 16.

In this study, fractional positive results are observed at level L1 only.

Table 16 : summary of the sensitivity study results for all the categories of the application scope

Parameter	ISO 16140-2 formulas	Results
<b>Sensitivity of the alternative method</b>	$SE_{alt} = \frac{(PA + PD)}{(PA + ND + PD)} * 100\%$	100.0%
<b>Sensitivity of the reference method</b>	$SE_{ref} = \frac{(PA + ND)}{(PA + ND + PD)} * 100\%$	100.0%
<b>Relative trueness</b>	$RT = \frac{(PA + NA)}{N} * 100\%$	100.0%
<b>False positive ratio</b>	$FPR = \frac{FP}{NA} * 100\%$	0%

#### 4.5.4. Determination of the acceptability limit and conclusion

The difference between (ND – PD) and the addition (ND+PD) for the level where fractional recovery was obtained (L1) are calculated. The observed value found for (ND – PD) and (ND+PD) shall not be higher than the acceptability limit (AL). Results are shown in the table 17.

Table 17: acceptability limits

Level	N <sub>lab</sub>	(ND-PD)	(ND+PD)	Acceptability limit (AL)
L1	14	0	0	(ND – PD) <sub>AL</sub> =4 ; (ND + PD) <sub>AL</sub> =6

The values (ND-PD) and (ND+PD) for the level L1 are inferior to the AL, so the requirements of the standard ISO 16140-2 : 2016 are fulfilled.

The performance of the alternative method and the reference method can be considered as equivalent.

#### 4.5.5. Determination of the relative level of detection

This evaluation is performed according to Annex F of ISO/FDIS 16140-2:2016 and using the excel spreadsheet as described in this standard.

As there is limited experience with the interpretation of this approach, the results are used only for information. Results are shown in the table below :

Table 19 : values obtained for the determination of the relative level of detection

Name	RLOD	RLODL	RLODU	b=ln(RLOD)	sd(b)	z-Test statistic	p-value
Pasteurized milk	1.000	0.720	1.388	0.000	0.164	0.000	1.000
<b>Combined</b>	1.000	0.720	1.388	0.000	0.164	0.000	1.000

The following calculation is performed according to the new excel spread sheet “ RLOD\_inter-lab-study\_16140-2\_AnnexF\_ver1\_28-06-2017”.

	Reference method			Alternative method		
	Detection limit	Lower conf. limit	Upper conf. limit	Detection limit	Lower conf. limit	Upper conf. limit
LOD <sub>50%</sub> (50% limit of detection in CFU/sample size)	<b>0.80</b>	0.63	1.03	<b>0.80</b>	0.63	1.03
LOD <sub>95%</sub> (95% limit of detection in CFU/sample size)	<b>3.48</b>	2.73	4.43	<b>3.48</b>	2.73	4.43
<b>RLOD</b>	<b>1.00 (0.75 – 1.33)</b>					

Conclusion :

The methods are not significantly different at the 5% significance level (change in deviance of the model with method effects to the null model  $D_{method} = 0$  with 1 degree of freedom, p-value 1). The relative limit of detection (RLOD) of the alternative method, as compared to the reference method, is 1.00 with a 90% confidence interval of 0,75 - 1,33.

## 5. General conclusion

- Method comparison study

The performance of the VIDAS LIS test is comparable to that of the standard ISO 11290-1 : 2017. This study concerned 631 samples of eight categories of products.

Values obtained for the criteria of the sensitivity study are the following, depending on the incubation times and the protocol of confirmation:

- sensitivity of the alternative method : 97.3%
- sensitivity of the reference method : 96.3%
- relative trueness: 97.0%
- false positive ratio: from 0.0%

Some discordant results were observed. For categories ① at ⑥, the first enrichment in half-Fraser is identical for the two methods, however time and temperature applied for the second enrichment in Fraser, are different between the two methods. That could be explain the discordant results observed. For categories ⑦ and ⑧, the unpaired study design is probably the source of the discordant results observed.

The relative level of detection of the alternative method and the reference method was evaluated for all categories. The results are comparable between the two methods. It varies between 1.000 and 1.315 CFU per test portion for the alternative method for all categories.

The specificity of the method is satisfactory.

The study of the practicability of the alternative method shows a simple and easy-to-use method and significant time savings compared to the reference method.

- Interlaboratory study

Concerning the interlaboratory study, the results obtained for the selected laboratories showed that the performance of the alternative method and the reference method can be considered as equivalent.

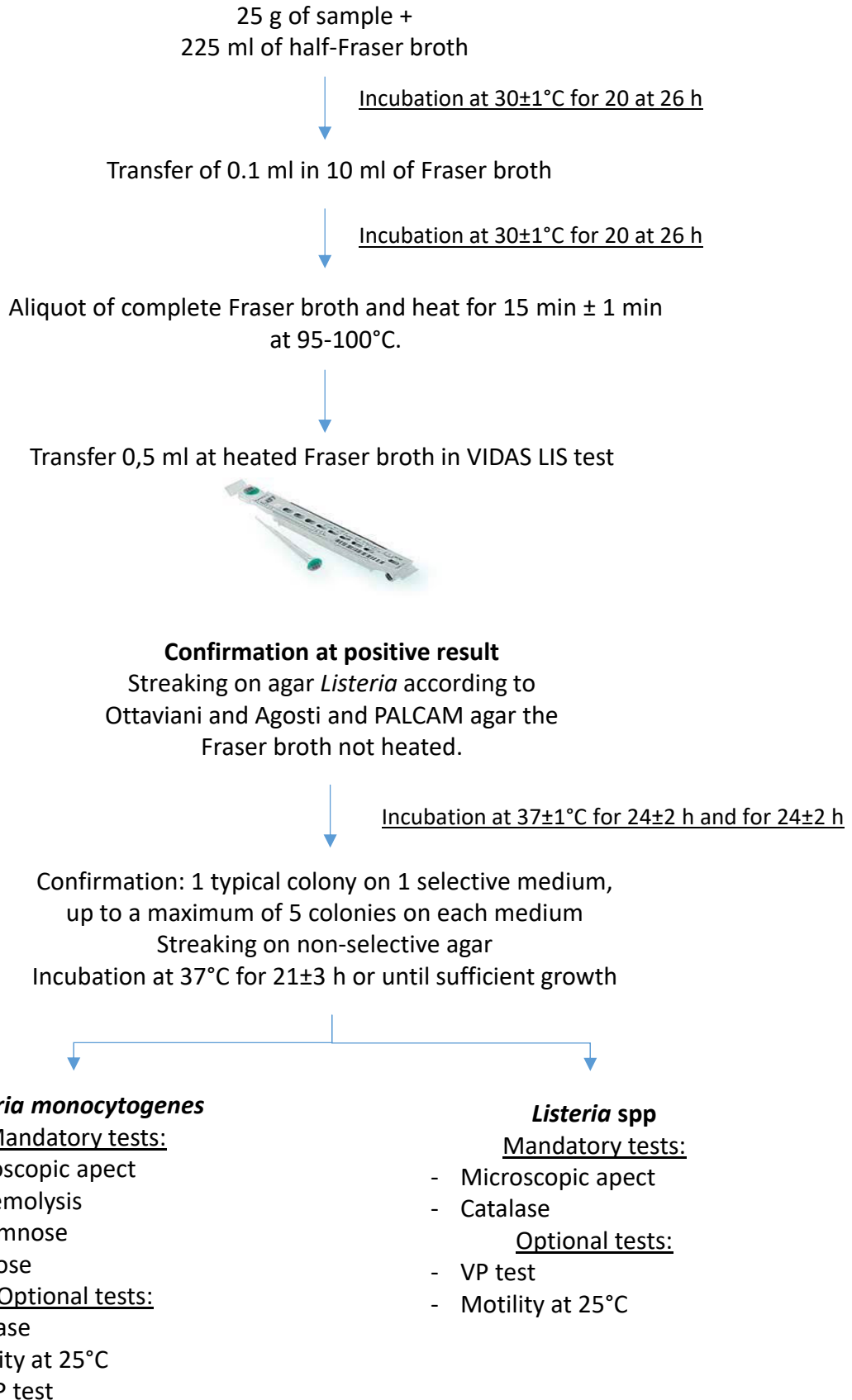
Le Lion d'Angers, September 28, 2021.  
François Le Nestour  
Head of the Microbiology Department



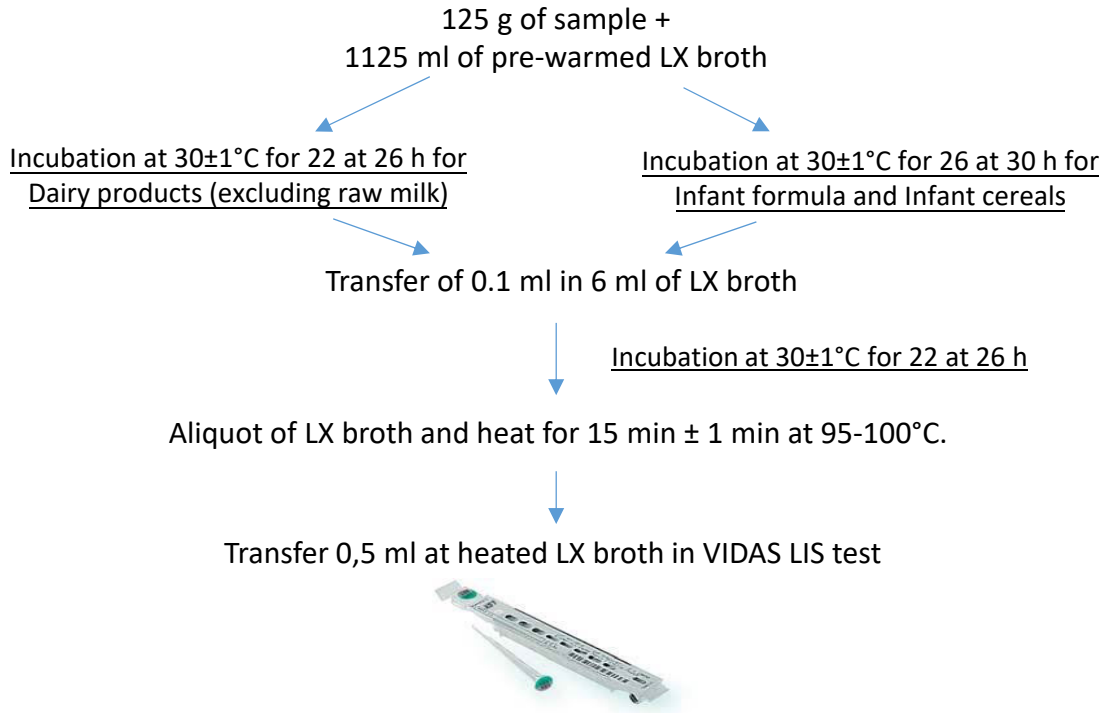
## **APPENDICES**



**APPENDIX A**  
**VIDAS LIS *Listeria spp.* method – General protocol**



**APPENDIX A**  
**VIDAS LIS *Listeria* spp. method – New protocols**



**Confirmation at positive result**

Streaking on agar *Listeria* according to Ottaviani and Agosti and PALCAM agar the LX broth not heated.

Incubation at 37±1°C for 24±2 h and for 24±2 h

Confirmation: 1 typical colony on 1 selective medium,  
up to a maximum of 5 colonies on each medium  
Streaking on non-selective agar  
Incubation at 37°C for 21±3 h or until sufficient growth

***Listeria monocytogenes***

Mandatory tests:

- Microscopic aspect
- β-haemolysis
- L-rhamnose
- D-xylose

Optional tests:

- Catalase
- Motility at 25°C
- CAMP test

***Listeria* spp**

Mandatory tests:

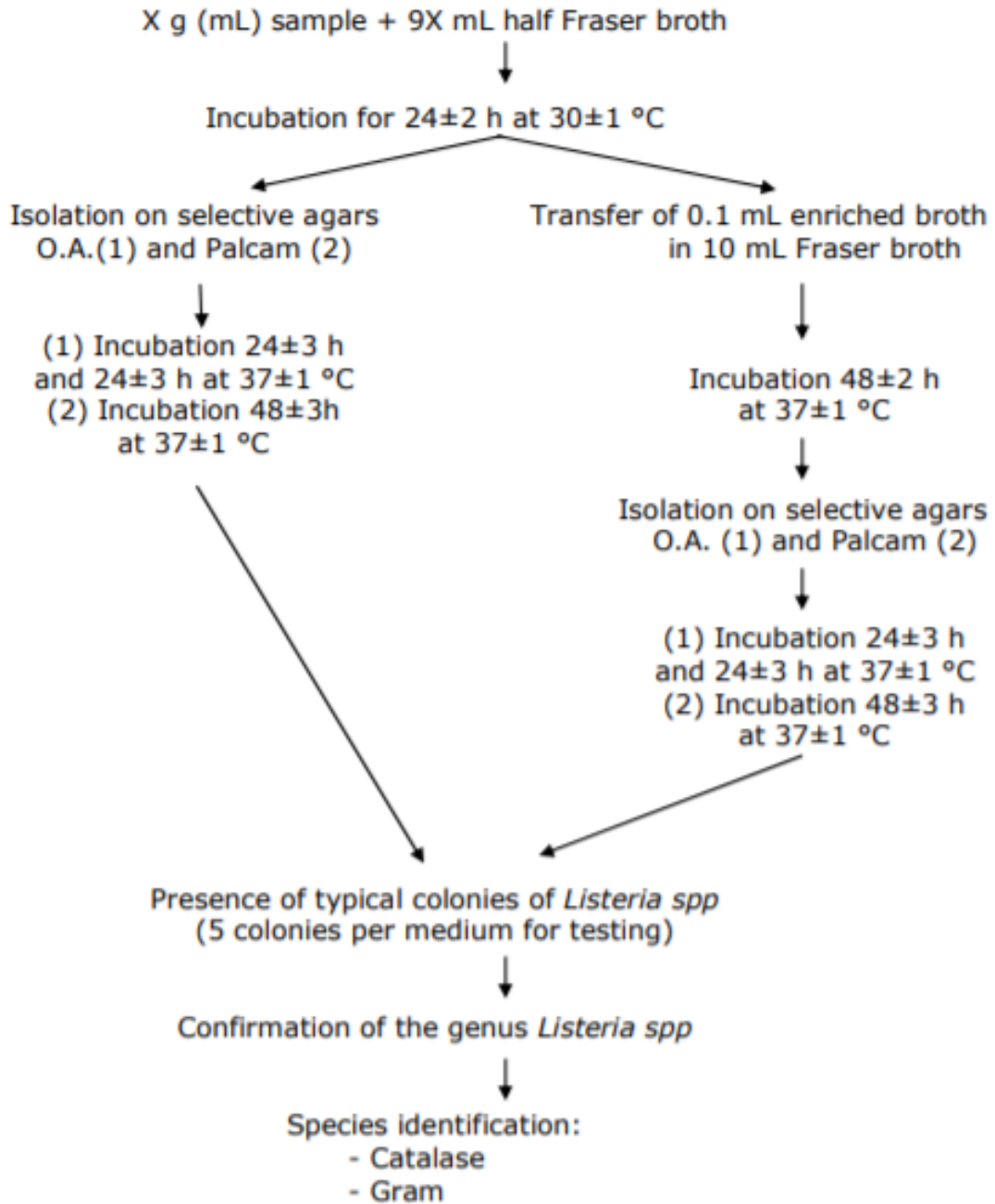
- Microscopic aspect
- Catalase

Optional tests:

- VP test
- Motility at 25°C

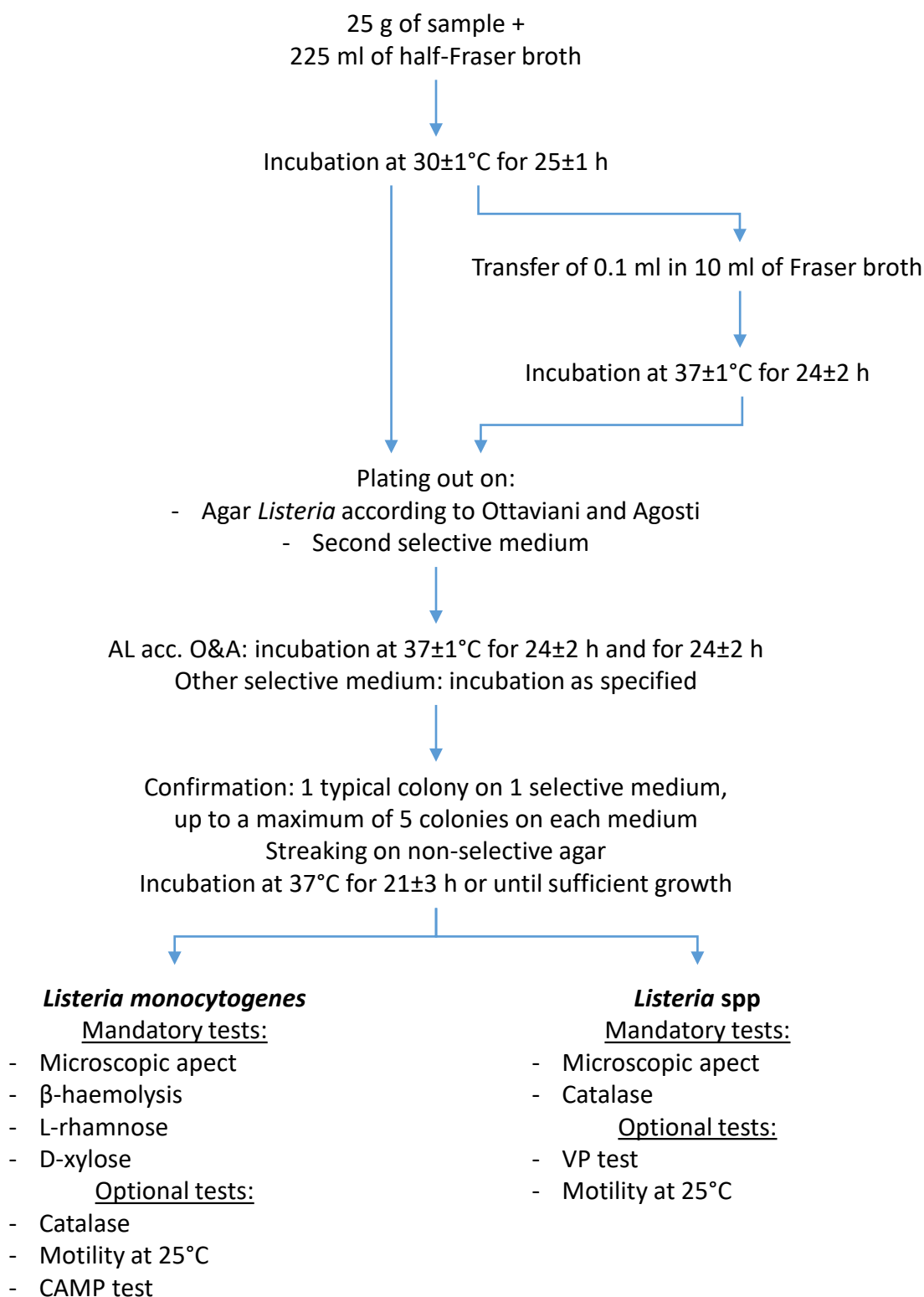
APPENDIX B : Protocol of the reference method

**EN ISO 11290-1/A1 : 2005**



**APPENDIX B**  
**EN ISO 11290-1:2017**

Diagram of the procedure as described in the standard



## Appendix C - Artificial contaminations (previous validation)

Code	Name	Category	Artificial contaminations						Results
			Strain			Type of stress	Stress level	CFU / 25 g	
			No.	Name	Origin				
C20	Powdered milk	PL3	L64	<i>Listeria innocua</i>	Époisses cheese	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.6	3.4	+
C21	Goat's cheese with raw milk	PL2	L64	<i>Listeria innocua</i>	Époisses cheese	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.6	5.1	+
C22	Picodon goat's cheese	PL2	L64	<i>Listeria innocua</i>	Époisses cheese	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.6	3.4	+
C23	Picodon goat's cheese	PL2	L37	<i>Listeria monocytogenes ½ b</i>	Maroilles cheese made with raw milk	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.2	14.6	-
C24	Goat's cheese made from raw milk	PL2	L64	<i>Listeria innocua</i>	Époisses cheese	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.6	5.1	+
C25	Goat's cheese made from raw milk	PL2	L37	<i>Listeria monocytogenes ½ b</i>	Maroilles cheese made with raw milk	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.2	14.6	+
D1	Goat's cheese log made from raw milk, salt-free	PL2	L111	<i>Listeria innocua</i>	Munster cheese made with raw milk	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	1.4	+
D2	Le Chevrot cheese	PL2	L111	<i>Listeria innocua</i>	Munster cheese made with raw milk	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	2.8	+
D3	Goat's cheese	PL2	L111	<i>Listeria innocua</i>	Munster cheese made with raw milk	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	4.2	+
D13	Frisee lettuce	PV2	L66	<i>Listeria innocua</i>	Spinach	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.3	16.0	+
D14	Grated carrots	PV2	L66	<i>Listeria innocua</i>	Spinach	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.3	16.0	+
D15	Heart of lettuce	PV2	L66	<i>Listeria innocua</i>	Spinach	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.3	12.8	+
D16	Mixed raw vegetables with carrots and white cabbage	PV2	L66	<i>Listeria innocua</i>	Spinach	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.3	12.8	+
D17	Catalan salad mix	PV3	L112	<i>Listeria innocua</i>	Potato fries	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	6.0	+
D18	Red cabbage	PV2	L112	<i>Listeria innocua</i>	Potato fries	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	4.0	+
D19	Cucumbers with vinaigrette	PV3	L66	<i>Listeria innocua</i>	Spinach	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.3	9.6	+
D21	Diced mixed vegetables	PV3	L112	<i>Listeria innocua</i>	Potato fries	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	3.8	+
D22	Mixed salad	PV2	L112	<i>Listeria innocua</i>	Potato fries	45 mins at 55°C, 30 mins at -80°C, 5 mins at 46°C	0.4	3.8	+
E1	Water from outlet at sauce station	EN1	L144	<i>Listeria innocua 6b</i>	Bin surface	50 mins at 55°C, 35 mins at -80°C	0.6	3.0	+
E2	Steriflow water	EN1	L144	<i>Listeria innocua 6b</i>	Bin surface	50 mins at 55°C, 35 mins at -80°C	0.6	3.0	-
E3	Residual water in gray container	EN1	L144	<i>Listeria innocua 6b</i>	Bin surface	50 mins at 55°C, 35 mins at -80°C	0.6	3.8	+
E4	Water from filter outlet	EN1	L28	<i>Listeria monocytogenes ½</i>	Surface sponge	50 mins at 55°C, 35 mins at -80°C	0.9	2.2	+
E5	Doser rinsing water	EN1	L28	<i>Listeria monocytogenes ½</i>	Surface sponge	50 mins at 55°C, 35 mins at -80°C	0.9	4.4	+
E15	Red cabbage	PV2	L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	50 mins at 55°C, 35 mins at -80°C	0.6	16.2	+
E16	Soya	PV2	L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	50 mins at 55°C, 35 mins at -80°C	0.6	8.1	+
E17	Celery remoulade	PV3	L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	50 mins at 55°C, 35 mins at -80°C	0.6	8.1	+
E18	Grated carrots with vinaigrette	PV3	L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	50 mins at 55°C, 35 mins at -80°C	0.6	16.2	+
E19	Red beetroot	PV2	L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	50 mins at 55°C, 35 mins at -80°C	0.6	16.2	+
F19	Crottin de Chavignol goat's cheese	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	50 mins at 55°C, 35 mins at -80°C	>1	ND	-
F20	Rocamadour goat's cheese	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	50 mins at 55°C, 35 mins at -80°C	>1	ND	-

## Appendix C - Artificial contaminations (previous validation)

Code	Name	Category	Artificial contaminations						Results
			Strain			Type of stress	Stress level	CFU / 25 g	
			No.	Name	Origin				
F21	Goat's cheese made from raw milk	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	50 mins at 55°C, 35 mins at -80°C	>1	ND	-
F25	Swab from wall-floor join	EN2	L132	<i>Listeria innocua</i>	Cheese counter chopping board	50 mins at 55°C, 35 mins at -80°C	1.3	1.0	-
F26	Cold store floor	EN2	L132	<i>Listeria innocua</i>	Cheese counter chopping board	50 mins at 55°C, 35 mins at -80°C	1.3	0.6	-
F28	Residue from cheese-cutting table	EN3	L132	<i>Listeria innocua</i>	Cheese counter chopping board	50 mins at 55°C, 35 mins at -80°C	ND	ND	-
F29	Water from final rinsing sink	EN1	L115	<i>Listeria seeligeri</i>	Pool water	50 mins at 55°C, 35 mins at -80°C	ND	ND	-
F30	Process water	EN1	L115	<i>Listeria seeligeri</i>	Pool water	50 mins at 55°C, 35 mins at -80°C	ND	ND	-
G1	Seasoned pasta salad	PV3	L47	<i>Listeria monocytogenes</i>	Fried potatoes	50 mins at 55°C, 35 mins at -80°C	0.6	7.1	+
G2	Seasoned grated carrots	PV3	L112	<i>Listeria innocua</i>	Potato fries	50 mins at 55°C, 35 mins at -80°C	1.5	19.2	+
G3	Celery remoulade	PV3	L112	<i>Listeria innocua</i>	Potato fries	50 mins at 55°C, 35 mins at -80°C	1.5	9.6	+
G4	Mushrooms	PV2	L47	<i>Listeria monocytogenes</i>	Fried potatoes	50 mins at 55°C, 35 mins at -80°C	0.6	7.1	+
G5	Red cabbage	PV2	L112	<i>Listeria innocua</i>	Potato fries	50 mins at 55°C, 35 mins at -80°C	1.5	9.6	+
G8	Goat's cheese mini-log made from raw milk	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	50 mins at 55°C, 35 mins at -80°C	0.4	0.6	-
G9	Goat's cheese made from raw milk	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	50 mins at 55°C, 35 mins at -80°C	0.4	0.4	-
G10	Water from final rinsing sink	EN1	L132	<i>Listeria innocua</i>	Cheese counter chopping board	50 mins at 55°C, 35 mins at -80°C	0.8	21.6	+
H3	Goat's cheese log	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	2.5	-
H4	Goat's cheese made from raw milk	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	5.0	-
H5	Crottin de Chavignol goat's cheese	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	8.0	-
H6	Goat's cheese log	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	0.1	-
H7	Goat's cheese made from raw milk	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	0.2	-
H8	Crottin de Chavignol goat's cheese	PL2	L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	24 hours at -80°C, 50 mins at 55°C	0.2	0.3	-
H12	Residue from cutting facility	EN3	L132	<i>Listeria innocua</i>	Cheese counter chopping board	24 hours at -80°C, 50 mins at 55°C	0.3	2.2	+
H16	Residue from facility stainless steel table	EN3	L132	<i>Listeria innocua</i>	Cheese counter chopping board	24 hours at -80°C, 50 mins at 55°C	0.3	1.1	+
I2	Goat's cheese log	PL2	L100	<i>Listeria welshimeri</i>	Spread	50 mins at 55°C, 35 mins at -80°C	0.9	33.2	+
I3	Crottin de Chavignol goat's cheese	PL2	L100	<i>Listeria welshimeri</i>	Spread	50 mins at 55°C, 35 mins at -80°C	0.9	41.5	+
J3	Etorki cheese	PL2	L62	<i>Listeria monocytogenes</i>	Reblochon cheese	50 mins at 55°C, 35 mins at -80°C	0.5	2.6	+

Appendix C - Artificial contaminations (2018)

Category	Sample number	Sample	Code strain	Strain	Origin	Protocol of seeding	Inoculation level (CFU/25g)	Global result
Dairy products	18-1	Raw milk 1	LIS.3.5	<i>Listeria ivanovii</i>	Ewe raw milk	48h at 5 ± 3 °C	2.2	Positive
	18-3	Raw milk 2	LIS.3.5	<i>Listeria ivanovii</i>	Ewe raw milk	48h at 5 ± 3 °C	2.2	Positive
	18-5	Raw milk 3	LIS.3.5	<i>Listeria ivanovii</i>	Ewe raw milk	48h at 5 ± 3 °C	2.2	Positive
	18-7	Raw milk 4	LIS.3.1	<i>Listeria ivanovii</i>	Raw milk	48h at 5 ± 3 °C	2.0	Positive
	18-9	Raw milk 5	LIS.3.1	<i>Listeria ivanovii</i>	Raw milk	48h at 5 ± 3 °C	2.0	Positive
	18-11	Raw milk 6	LIS.3.1	<i>Listeria ivanovii</i>	Raw milk	48h at 5 ± 3 °C	2.0	Positive
	18-13	Emmental	LIS.2.12	<i>Listeria innocua</i>	Raw milk	48h at 5 ± 3 °C	2.6	Positive
	18-15	Gouda	LIS.2.12	<i>Listeria innocua</i>	Raw milk	48h at 5 ± 3 °C	2.6	Positive
Seafood products	18-17	Cod fillet	LIS.5.6	<i>Listeria seeligeri</i>	Smoked halibut	48h at 5 ± 3 °C	1.8	Positive
Vegetal products	18-19	Lettuce	LIS.6.7	<i>Listeria welshimeri</i>	Spinach	48h at 5 ± 3 °C	2.8	Positive
	18-21	Tomato	LIS.6.7	<i>Listeria welshimeri</i>	Spinach	48h at 5 ± 3 °C	2.8	Positive
Composite food	6	Lorraine quiche	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	0.8	Negative
	7	Kebab with chicken	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	0.8	Negative
	8	Three cheese pizza	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	0.8	Negative
	9	Gratin of endive with ham	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	0.8	Negative
	10	Apple pie	LIS.5.12	<i>Listeria seeligeri</i>	Chicken burger	48h at 5 ± 3 °C	1.0	Negative
	11	Sandwich with tomato, lettuce and chicken	LIS.5.12	<i>Listeria seeligeri</i>	Chicken burger	48h at 5 ± 3 °C	1.0	Negative
	12	Torti with surimi	LIS.5.12	<i>Listeria seeligeri</i>	Chicken burger	48h at 5 ± 3 °C	1.0	Negative
	13	Moussaka	LIS.5.12	<i>Listeria seeligeri</i>	Chicken burger	48h at 5 ± 3 °C	1.0	Negative
	14	Fruit tart	LIS.6.24	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	3.8	Positive
	15	Cooked potatoes with strasbourg sausages	LIS.6.24	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	3.8	Positive
	16	Chicken caramelized with rice and vegetables	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	8.6	Positive
	17	Porc with caramel, rice and oignon sauce	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	8.6	Positive
	18	Tortilla with oignons, potatoes	LIS.4.6	<i>Listeria monocytogenes 1/2a</i>	Ham and emmental sandwich	48h at 5 ± 3 °C	0.8	Positive
	19	Flammkuchen with bacon and white cheese	LIS.4.6	<i>Listeria monocytogenes 1/2a</i>	Ham and emmental sandwich	48h at 5 ± 3 °C	0.8	Positive
	20	Bears' paws	LIS.4.6	<i>Listeria monocytogenes 1/2a</i>	Ham and emmental sandwich	48h at 5 ± 3 °C	0.8	Negative
	21	Pudding	LIS.2.1	<i>Listeria innocua</i>	Sandwich with vegetables	48h at 5 ± 3 °C	1.8	Positive
	22	ParisBrest	LIS.2.1	<i>Listeria innocua</i>	Sandwich with vegetables	48h at 5 ± 3 °C	1.8	Positive
	23	Pasta with poultry and, tomato and basilic sauce	LIS.2.1	<i>Listeria innocua</i>	Sandwich with vegetables	48h at 5 ± 3 °C	1.8	Positive
	24	Polenta with duck and vegetables	LIS.2.1	<i>Listeria innocua</i>	Sandwich with vegetables	48h at 5 ± 3 °C	1.8	Negative

Appendix C - Artificial contaminations (2018)

Category	Sample number	Sample	Code strain	Strain	Origin	Protocol of seeding	Inoculation level (CFU/25g)	Global result
Composite food	29	Carbonara tagliatelle	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	1.2	Positive
	30	Pizza with 4 cheeses	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	1.2	Positive
	31	Pizza with mushroom and ham	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	1.2	Positive
	32	Falafels, chickpea, and carrots	LIS.2.7	<i>Listeria innocua</i>	Sandwich with chicken and bacon	48h at 5 ± 3 °C	1.2	Negative
	33	Croissant with chicken and emmental	LIS.4.5	<i>Listeria monocytogenes 1/2a</i>	Ham and crudeness	48h at 5 ± 3 °C	1.2	Positive
	34	Alaska salad : surimi and pineapples	LIS.4.5	<i>Listeria monocytogenes 1/2a</i>	Ham and crudeness	48h at 5 ± 3 °C	1.2	Positive
	35	Bouche à la reine	LIS.4.5	<i>Listeria monocytogenes 1/2a</i>	Ham and crudeness	48h at 5 ± 3 °C	1.2	Positive
	68	Chicken crudeness salad	LIS.3.13					Negative
	69	Potatoes and sausages salad	LIS.3.13	<i>Listeria ivanovii</i>	Raw lamb meat	48h at 5 ± 3 °C	8.0	Positive
	70	Farfalles with tomatoes and parmesan	LIS.3.13	<i>Listeria ivanovii</i>	Raw lamb meat	48h at 5 ± 3 °C	8.0	Positive
	71	Salami sandwich	LIS.6.24	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	5.0	Negative
	72	Sandwich with rosette	LIS.6.24	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	5.0	Positive
	73	beets	LIS.6.24	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	5.0	Positive
	74	Baba with whipped cream	LIS.6.25	<i>Listeria welshimeri</i>	Tabbouleh	48h at 5 ± 3 °C	3.4	Positive
	75	Rolls with butter cream and vanilla	LIS.6.25	<i>Listeria welshimeri</i>	Coconut pearl	48h at 5 ± 3 °C	3.4	Positive
	76	Rolls with butter cream and coffee	LIS.6.25	<i>Listeria welshimeri</i>	Coconut pearl	48h at 5 ± 3 °C	3.4	Positive
	77	Cornet with pastry cream and vanilla sugar	LIS.6.25	<i>Listeria welshimeri</i>	Coconut pearl	48h at 5 ± 3 °C	3.4	Positive
	18-23	Sandwich with tuna and crudeness	LIS.5.8	<i>Listeria seeligeri</i>	Sea food terrine	48h at 5 ± 3 °C	2.8	Positive
	18-25	Sandwich with salmon and cream	LIS.5.8	<i>Listeria seeligeri</i>	Sea food terrine	48h at 5 ± 3 °C	2.8	Positive
	18-27	Sandwich with salmon and chives	LIS.5.8	<i>Listeria seeligeri</i>	Sea food terrine	48h at 5 ± 3 °C	2.8	Positive
	18-29	Sandwich with surimi	LIS.5.8	<i>Listeria seeligeri</i>	Sea food terrine	48h at 5 ± 3 °C	2.8	Positive
	18-31	Tabbouleh with chicken	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	2.4	Positive
	18-33	Sandwich with chicken	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	2.4	Positive
	18-35	Chicken rice salad	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	2.4	Positive
	18-37	Crudeness salad	LIS.5.11	<i>Listeria seeligeri</i>	Chicken sandwich with crudeness	48h at 5 ± 3 °C	2.4	Positive
	18-39	Grated carrot with dressing	LIS.4.81	<i>Listeria monocytogenes</i>	Mixed vegetables	48h at 5 ± 3 °C	2.0	Positive
	18-41	Cucumber with dressing	LIS.4.81	<i>Listeria monocytogenes</i>	Mixed vegetables	48h at 5 ± 3 °C	2.0	Positive
	18-43	Pizza with goat cheese and bacon	LIS.4.4	<i>Listeria monocytogenes 1/2a</i>	skewer of goat cheese and zucchini	48h at 5 ± 3 °C	2.4	Positive
	18-45	Pizza with three cheeses	LIS.4.4	<i>Listeria monocytogenes 1/2a</i>	skewer of goat cheese and zucchini	48h at 5 ± 3 °C	2.4	Positive



Appendix C - Artificial contaminations (2018)

Category	Sample number	Sample	Code strain	Strain	Origin	Protocol of seeding	Inoculation level (CFU/25g)	Global result
Composite food	18-47	Zucchini gratin with porc meat	LIS.4.4	<i>Listeria monocytogenes 1/2a</i>	skewer of goat cheese and zucchini	48h at 5 ± 3 °C	2.4	Positive
	18-49	Hamburger	LIS.6.11	<i>Listeria welshimeri</i>	Ground beef with green bean	48h at 5 ± 3 °C	1.6	Positive
	18-51	Beef bourgignon	LIS.6.11	<i>Listeria welshimeri</i>	Ground beef with green bean	48h at 5 ± 3 °C	1.6	Positive
	18-53	Blanquette of veal	LIS.6.11	<i>Listeria welshimeri</i>	Ground beef with green bean	48h at 5 ± 3 °C	1.6	Positive
	18-55	Porc with caramel	LIS.3.8	<i>Listeria ivanovii</i>	Bacon	48h at 5 ± 3 °C	2.8	Positive
	18-57	Spaghetti carbonara	LIS.3.8	<i>Listeria ivanovii</i>	Bacon	48h at 5 ± 3 °C	2.8	Positive
	18-59	Flamenkuche	LIS.3.8	<i>Listeria ivanovii</i>	Bacon	48h at 5 ± 3 °C	2.8	Positive
	18-61	Quiche lorraine	LIS.3.8	<i>Listeria ivanovii</i>	Bacon	48h at 5 ± 3 °C	2.8	Positive
	18-63	Pudding	LIS.6.5	<i>Listeria welshimeri</i>	Cream dessert	48h at 5 ± 3 °C	1.4	Positive
	18-65	Pudding with coconuts	LIS.6.5	<i>Listeria welshimeri</i>	Cream dessert	48h at 5 ± 3 °C	1.4	Positive
	18-67	Apple pie	LIS.6.5	<i>Listeria welshimeri</i>	Cream dessert	48h at 5 ± 3 °C	1.4	Positive
18-69	Lemon pie	LIS.5.4	<i>Listeria seeligeri</i>	Pastry cream	48h at 5 ± 3 °C	2.0	Positive	
18-71	Strawberry pie	LIS.5.4	<i>Listeria seeligeri</i>	Pastry cream	48h at 5 ± 3 °C	2.0	Positive	
Environmental samples	82	Rince water 3	LIS.2.11	<i>Listeria innocua</i>	Raw cow milk filter	48h at 5 ± 3 °C	1.2	Negative
	83	Rince water 1	LIS.2.11	<i>Listeria innocua</i>	Raw cow milk filter	48h at 5 ± 3 °C	1.2	Positive
	84	Rince water 2	LIS.2.11	<i>Listeria innocua</i>	Raw cow milk filter	48h at 5 ± 3 °C	1.2	Positive
	85	Water from wash station	LIS.4.16	<i>Listeria monocytogenes 1/2a</i>	Surface control sewer	48h at 5 ± 3 °C	1.2	Negative
	86	Water from washing station 2	LIS.4.16	<i>Listeria monocytogenes 1/2a</i>	Surface control sewer	48h at 5 ± 3 °C	1.2	Positive
	87	Swab 1	LIS.4.16	<i>Listeria monocytogenes 1/2a</i>	Surface control sewer	48h at 5 ± 3 °C	1.2	Positive
	88	Swab 2	LIS.5.3	<i>Listeria seeligeri</i>	Goat milk filter	48h at 5 ± 3 °C	1.4	Positive
89	Sponge 1	LIS.5.3	<i>Listeria seeligeri</i>	Goat milk filter	48h at 5 ± 3 °C	1.4	Positive	

**APPENDIX C - Artificial contaminations (extension study 2021)**

#	Sample name	Category	Type	Strain			Injury protocol				Result	
				Strain	Code	Origin	Type of stress	Applied stress	Delta log	Level (CFU/test portion)		
1977818	Raw milk cow cheese (Camembert)	Dairy products (excluding raw milk)	a	<i>L. innocua</i>	QHW317	Gorgonzola	Seeding	72h at 4°C	/	2,6	-	
1977819	Raw milk cow cheese (Comté)		a	<i>L. innocua</i>	QHW317	Gorgonzola	Seeding	72h at 4°C	/	2,6	+	
1977820	Raw milk cow cheese (Ste Maure de Touraine)		a	<i>L. innocua</i>	GLE603	Environment dairy industry	Seeding	72h at 4°C	/	0,8	-	
1977821	Raw milk cow cheese (Tomme de Savoie)		a	<i>L. innocua</i>	GLE603	Environment dairy industry	Seeding	72h at 4°C	/	0,8	+	
2034902	Raw milk cow cheese (Beaufort)		a	<i>L.ivanovii</i>	GJP629	Environment dairy industry	Seeding	72h at 4°C	/	1,2	+	
2034903	Raw milk cow cheese (Bethmale)		a	<i>L.ivanovii</i>	GJP629	Environment dairy industry	Seeding	72h at 4°C	/	1,2	+	
1977542	Pasteurized cow cheese (Munster)		b	<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Seeding	72h at 4°C	/	1,8	+	
1977543	Pasteurized goat cheese		b	<i>L.innocua</i>	QBB281	Organic raw milk cheese	Seeding	72h at 4°C	/	2,4	+	
1977544	Pasteurized goat cheese (Ossau Iraty)		b	<i>L.innocua</i>	QBB281	Organic raw milk cheese	Seeding	72h at 4°C	/	2,4	+	
1977545	Pasteurized cow cheese with pepper		b	<i>L. monocytogenes 1/2a ou 3a - L.welshimeri</i>	FKZ497 - GLX736	Tartiflette brusheta - Infant formula industry	Seeding	72h at 4°C	/	1,6/2,2	+	
1977546	Pasteurized sheep cheese		b	<i>L. monocytogenes 1/2a ou 3a - L.welshimeri</i>	FKZ497 - GLX736	Tartiflette brusheta - Infant formula industry	Seeding	72h at 4°C	/	1,6/2,2	+	
1977547	Pasteurized cow cheese (Brie)		b	<i>L. monocytogenes 1/2a ou 3a - L.welshimeri</i>	FKZ497 - GLX736	Tartiflette brusheta - Infant formula industry	Seeding	72h at 4°C	/	1,6/2,2	+	
1977548	Pasteurized sheep cheese (Bleu)		b	<i>L.monocytogenes 1/2a ou 3a</i>	FMJ325	Thermized milk cheese	Seeding	72h at 4°C	/	1,8	+	
1977550	Pasteurized sheep cheese		b	<i>L.monocytogenes 1/2a ou 3a</i>	FMJ325	Thermized milk cheese	Seeding	72h at 4°C	/	1,8	+	
1977552	Pasteurized cow cheese (Emmental)		b	<i>L.ivanovii</i>	GQD028	Environment dairy industry	Seeding	72h at 4°C	/	2,4	+	
1977553	Pasteurized cow cheese (Camembert)		b	<i>L.ivanovii</i>	GQD028	Environment dairy industry	Seeding	72h at 4°C	/	2,4	+	
1977554	Powdered whole milk		c	<i>L.innocua</i>	GPQ140	Milk powder industry	Spiking	15 min at 56°C	1,3	4,0	+	
1977555	Powdered whey		c	<i>L. monocytogenes 4b - L.innocua</i>	HBP652 - GPQ140	Raw milk cheese - Milk powder industry	Spiking	15 min at 56°C	1.63 / 1.26	4,8/4,0	+	
1977556	Semi-skimmed milk powder batch 1		c	<i>L.innocua</i>	GPQ140	Milk powder industry	Spiking	15 min at 56°C	1,26	4,0	+	
1977557	Skimmed milk powder		c	<i>L.monocytogenes 1/2b ou 3b ou 7</i>	FLD375	Feta cheese	Spiking	15 min at 56°C	1,81	4,6	+	
1977558	Goat milk powder		c	<i>L.monocytogenes 1/2b ou 3b ou 7</i>	FLD375	Feta cheese	Spiking	15 min at 56°C	1,81	4,6	+	
1977559	Powdered caseinate		c	<i>L.monocytogenes 1/2b ou 3b ou 7</i>	FLD375	Feta cheese	Spiking	15 min at 56°C	1,81	4,6	+	
1977580	Skimmed milk powder batch2		c	<i>L.welshimeri</i>	GLX736	Infant formula industry	Spiking	15 min at 56°C	1,48	3,2	+	
1977581	Powdered whole milk		c	<i>L.monocytogenes 1/2b</i>	JAR249	Pasteurized milk cheese	Spiking	15 min at 56°C	1,03	4,0	+	
1977582	Skimmed milk powder		c	<i>L.monocytogenes 1/2b</i>	JAR249	Pasteurized milk cheese	Spiking	15 min at 56°C	1,03	4,0	+	
1977584	Powdered buttermilk		c	<i>L.monocytogenes 4b</i>	LAS822	Raw milk cheese	Spiking	15 min at 56°C	0,80	4,4	+	
1977585	Semi-skimmed milk powder		c	<i>L.monocytogenes 4b</i>	LAS822	Raw milk cheese	Spiking	15 min at 56°C	0,80	4,4	+	
1977577	Whey permeate		c	<i>L.monocytogenes 1/2a ou 3a</i>	GND673	Environment dairy industry	Spiking	15 min at 56°C	0,85	4,4	-	
1977583	Whey permeate		c	<i>L.monocytogenes 1/2b</i>	JAR249	Pasteurized milk cheese	Spiking	15 min at 56°C	1,03	4,0	-	
1977579	Semi-skimmed milk powder batch 2		c	<i>L.welshimeri</i>	GLX736	Infant formula industry	Spiking	15 min at 56°C	1,48	3,2	-	
1977560	Baby milk powder 0-6 months		a	<i>L.innocua - L.monocytogenes 1/2b ou 3b ou 7</i>	GRR943 - BMU793	Environment dairy industry - Fresh cream with raw milk	Spiking	15 min at 56°C	1.40 / 1.29	2,8/3,0	+	
1977561	Baby milk powder 6-12 months batch 1		a	<i>L.innocua - L.monocytogenes 1/2b ou 3b ou 7</i>	GRR943 - BMU793	Environment dairy industry - Fresh cream with raw milk	Spiking	15 min at 56°C	1.40 / 1.29	2,8/3,0	+	
1977562	Baby milk powder 1-3 years batch 1		a	<i>L.innocua - L.monocytogenes 1/2b ou 3b ou 7</i>	GRR943 - BMU793	Environment dairy industry - Fresh cream with raw milk	Spiking	15 min at 56°C	1.40 / 1.29	2,8/3,0	+	
1977563	Baby growth milk powder 1-3 years		a	<i>L.innocua - L.monocytogenes 1/2a ou 3a</i>	GLE603 - BLV059	Environment dairy industry - Raw milk cheese	Spiking	15 min at 56°C	1.28 / 1.15	3,0/4,0	+	
1977564	Baby goat milk powder 1-3 years		a	<i>L.innocua - L.monocytogenes 1/2a ou 3a</i>	GLE603 - BLV059	Environment dairy industry - Raw milk cheese	Spiking	15 min at 56°C	1.28 / 1.15	3,0/4,0	+	
1977565	Baby milk powder 1-3 years batch 2		a	<i>L.innocua - L.monocytogenes 1/2a ou 3a</i>	GLE603 - BLV059	Environment dairy industry - Raw milk cheese	Spiking	15 min at 56°C	1.28 / 1.15	3,0/4,0	+	
1977568	Junior baby milk powder + 18 months		a	<i>L.monocytogenes 1/2a</i>	PCA920	Environment dairy industry	Spiking	15 min at 56°C	0,57	4,0	+	
1977570	Baby milk powder 1-3 years batch 1		a	<i>L.innocua</i>	QHW317	Gorgonzola	Spiking	15 min at 56°C	1,03	4,6	+	
1977571	Baby milk powder 1-3 years batch 2		a	<i>L.innocua</i>	QHW317	Gorgonzola	Spiking	15 min at 56°C	1,03	4,6	+	
1977566	Baby growth milk powder 1-3 years		a	<i>L.monocytogenes 1/2a</i>	PCA920	Environment dairy industry	Spiking	15 min at 56°C	0,57	4,0	-	
1977754	Infant milk 6-12 months thickened formula <i>Bifidobacterium infantis</i> - 4,1 10 <sup>6</sup> UFC/g		Powdered infant formula and cereals	b	<i>L.ivanovii</i>	GQD028	Environment dairy industry	Spiking	15 min at 56°C	0,95	4,4	+
1977756	Organic infant milk 6-12 months <i>Lactobacillus fermentum hereditum</i> CECT5716 - 10 <sup>6</sup> UFC/g			b	<i>L.ivanovii</i>	GQD028	Environment dairy industry	Spiking	15 min at 56°C	0,95	4,4	+
1977760	Infant milk 6-12 months <i>S.thermophilus</i> - 7,7 10 <sup>6</sup> UFC/g			b	<i>L.monocytogenes 1/2a ou 3a</i>	GND673	Environment dairy industry	Spiking	15 min at 56°C	1,96	2,6	+
1977761	Infant milk 6-12 months thickened formula Bifidobactéries - 1,6 10 <sup>6</sup> UFC/g			b	<i>L.monocytogenes 1/2a ou 3a</i>	GND673	Environment dairy industry	Spiking	15 min at 56°C	1,96	2,6	+
1977752	Infant milk 0-6 months thickened formula <i>B.Lactis</i> - 4,7 10 <sup>6</sup> UFC/g			b	<i>L.innocua</i>	QBB281	Organic raw milk cheese	Spiking	30 min at 60°C	3,20	4,4	-
1977753	Infant milk 0-6 months (breastfeeding relay) <i>Lactobacillus reuteri</i> DSM 17938 - 4 10 <sup>5</sup> UFC/g	b		<i>L.welshimeri</i>	GLX736	Infant formula industry	Spiking	30 min at 60°C	0,89	2,8	-	
1977755	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 5,5 10 <sup>5</sup> UFC/g	b		<i>L.innocua</i>	QBB281	Organic raw milk cheese	Spiking	30 min at 60°C	3,20	4,4	-	
1977757	Organic infant milk 1-3 years <i>Bifidobacterium lactis</i> - 2,1 10 <sup>7</sup> UFC/g	b		<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Spiking	15 min at 56°C	1,20	3,0	-	
1977758	Infant milk 0-6 months greedy baby <i>B.Lactis</i> - 4,4 10 <sup>6</sup> UFC/g	b		<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Spiking	15 min at 56°C	1,20	3,0	-	
1977759	Infant milk 6-12 months <i>Lactobacillus reuteri</i> DSM 17938 - 6,1 10 <sup>6</sup> UFC/g	b		<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Spiking	15 min at 56°C	1,20	3,0	-	
1978396	Infant milk 6-12 months thickened formula <i>Bifidobacterium infantis</i> - 3,4 10 <sup>6</sup> UFC/g	b		<i>L.innocua</i>	GPQ140	Milk powder industry	Spiking	30 min at 60°C	0,51	5,0	+	

**APPENDIX C - Artificial contaminations (extension study 2021)**

#	Sample name	Category	Type	Strain			Injury protocol				Result
				Strain	Code	Origin	Type of stress	Applied stress	Delta log	Level (CFU/test portion)	
1978397	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 5,4 10 <sup>6</sup> UFC/g	Powdered infant formula and cereals	b	<i>L.innocua</i>	GPQ140	Milk powder industry	Spiking	30 min at 60°C	0,51	5,0	+
1978398	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 1,1 10 <sup>7</sup> UFC/g		b	<i>L.innocua</i>	GPQ140	Milk powder industry	Spiking	30 min at 60°C	0,51	5,0	+
1978399	Organic infant milk 1-3 years <i>Lactobacillus fermentum hereditum</i> CECT5716 - 3,6 10 <sup>6</sup> UFC/g		b	<i>L.innocua</i>	GLE603	Dairy industry	Spiking	30 min at 60°C	2,11	4,8	+
1978400	Infant milk 6-12 months <i>S.thermophilus</i> - 5,5 10 <sup>9</sup> UFC/g		b	<i>L.innocua</i>	QHW317	Gorgonzola	Spiking	15 min at 56°C	0,56	4,8	+
1977742	Infant cereal quinoa banana plum <i>B. lactis</i> 1,1 10 <sup>6</sup> CFU/g		c	<i>L.monocytogenes 4b</i>	RCJ280	Buckwheat flour	Spiking	15 min at 56°C	0,61	4,0	+
1977743	Infant cereals with honey <i>B. lactis</i> 3,4 10 <sup>6</sup> CFU/g		c	<i>L.monocytogenes 4b</i>	RCJ280	Buckwheat flour	Spiking	15 min at 56°C	0,61	4,0	+
1977744	Biscuit flavored infant cereals <i>B. lactis</i> 7 10 <sup>5</sup> CFU/g		c	<i>L.monocytogenes 4b</i>	RCJ280	Buckwheat flour	Spiking	15 min at 56°C	0,61	4,0	+
1977773	Infant cereals with honey		c	<i>L.innocua</i>	QBB281	Organic raw milk cheese	Spiking	30 min at 60°C	3,13	4,2	+
1977774	Biscuit flavored infant cereals		c	<i>L.monocytogenes 1/2a</i>	PCA920	Environment dairy industry	Spiking	15 min at 56°C	1,92	5,0	+
1977775	Infant cereals with 5 cereals		c	<i>L.monocytogenes 1/2a</i>	PCA920	Environment dairy industry	Spiking	15 min at 56°C	1,92	5,0	+
1977776	Whole oat and wheat infant cereals		c	<i>L. ivanovii</i>	GQD028	Dairy industry	Spiking	15 min at 56°C	0,76	4,8	+
1977777	Infant multi-cereals with exotic fruits		c	<i>L. ivanovii</i>	GQD028	Dairy industry	Spiking	15 min at 56°C	0,76	4,8	+
1977780	Infant chocolate cereals		c	<i>L.monocytogenes 1/2a ou 3a</i>	GND673	Environment dairy industry	Spiking	30 min at 60°C	1,40	5,0	+
1977781	Infant caramel cereals		c	<i>L.monocytogenes 1/2a ou 3a</i>	GND673	Environment dairy industry	Spiking	30 min at 60°C	1,40	5,0	+
1977772	Infant cereal quinoa banana plum		c	<i>L.innocua</i>	QBB281	Organic raw milk cheese	Spiking	30 min at 60°C	3,13	4,2	-
1977778	Brioche flavored Infant cereals		c	<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Spiking	30 min at 60°C	3,54	4,0	-
1977779	Infant vanilla cereals		c	<i>L.monocytogenes 1/2b</i>	CLM641	Raw milk cheese	Spiking	30 min at 60°C	3,54	4,0	-
1978401	Wheat and cocoa infant cereals		c	<i>L.innocua</i>	GRR943	Environment dairy industry	Spiking	15 min at 56°C	0,65	3,4	+
1978402	Infant cereals brioche flavor with nuggets		c	<i>L.innocua</i>	GRR943	Environment dairy industry	Spiking	15 min at 56°C	0,65	3,4	+

## Appendix D - sensitivity raw results

### **Bacterial burden**

∅: no culture

L = low

M = moderate

H = high

### Breakdown of flora

A = pure culture of suspect colonies

B = mixture with a majority of suspect colonies

C = mixture with a minority of suspect colonies

D = mixture with rare suspect colonies

E = absence of suspect colonies

(x): x colonies characteristic of *Listeria* if  $x \leq 5$

\* : presence of two types of characteristic colony (*L.monocytogenes* + other)

## Meat products

Year	Code	Matrices (french name)	Matrices	mat.	AC	EN ISO 11290-1 method						VIDAS LIS						Final result	Comparison
						FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				
						P1	OX1(2003) OA1(2006)	P2	OX2(2003) OA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Langue de bœuf	Beef tongue	m1	No	∅	-LE	∅	∅	/	-		0.00	-	/	/	/	-	NA
2003	2003	Steak haché	Chopped steak	m1	No	∅	∅	∅	∅	/	-		0.00	-	/	/	/	-	NA
2003	2003	Viande hachée	Minced meat	m1	No	∅	∅	∅	∅	/	-		0.00	-	/	/	/	-	NA
2003	2003	Rôti de porc	Roast pork	m1	No	∅	-LE	∅	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Viande hachée	Minced meat	m1	No	∅	∅	∅	∅	/	-		0.00	-	/	/	/	-	NA
2006	C8	Escalope de poulet	Chicken breast	m1	No	∅	∅	∅	∅	/	-	18	0.00	-	/	/	/	-	NA
2006	C9	Foie de veau	Veal liver	m1	No	∅	∅	∅	∅	/	-	9	0.00	-	/	/	/	-	NA
2006	D8	Escalope de poulet	Chicken breast	m1	No	∅	∅	∅	∅	/	-	15	0.00	-	/	/	/	-	NA
2006	G21	Viande de bœuf	Beef	m1	No	∅	-LE	∅	-LE	/	-	304 7	0.1 0.00	+	∅	-LE	after réincubation of Fraser 24 h at 30°C	-	NA
2006	H17	Escalope de porc	Pork cutlet	m1	No	∅	∅	∅	-LE	/	-	6	0.00	-	/	/	/	-	NA
2006	A9	Haché bolognaise	Chopped Bolognaise	m1	No	∅	∅	∅	∅	/	-	18	0.00	-	/	/	/	-	NA
2006	C12	Pavé de biche, sauce échalotte	Pale steak, shallot sauce	m1	No	-LE	-LE	-LE	-LE	/	-	11	0.00	-	/	/	/	-	NA
2003	2003	Saucisses de Montbéliard	Sausages from Montbéliard	m2	No	∅	∅	∅	∅	/	-		0.00	-	/	/	/	-	NA
2003	2003	Chipolatas	chipolatas	m2	No	-LE	-ME	-ME	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Boudin noir	Black pudding	m2	No	∅	-ME	∅	∅	/	-		0.00	-	/	/	/	-	NA
2006	B9	Merguez	merguez	m2	No	∅	∅	∅	∅	/	-	17	0.00	-	/	/	/	-	NA
2006	C13	Boudin noir	Black pudding	m2	No	∅	∅	∅	∅	/	-	21	0.00	-	/	/	/	-	NA
2003	2003	Boudin noir	Black pudding	m2	No	∅	∅	∅	∅	/	-		0.00	-	/	/	/	-	NA
2006	B12	Saucisse de Strasbourg	Sausage from Strasbourg	m2	No	∅	∅	∅	∅	/	-	17	0.00	-	/	/	/	-	NA
2018	18-2	Sausisses de Strasbourg	Strasbourg sausages	m2	No	OL	OL	OL	OL	/	-	30	0.00	-	OL	OL	/	-	NA
2018	18-4	Sausisses de Montbéliard	Montbéliard sausages	m2	No	OL	OL	OL	OL	/	-	27	0.00	-	OL	OL	/	-	NA
2003	2003	Poitrine de porc fraîche	Fresh pork belly	m3	No	∅	-LE	∅	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Poitrine de porc fraîche	Fresh pork belly	m3	No	∅	-LE	∅	-ME	/	-		0.02	-	/	/	/	-	NA
2003	2003	Poitrine de porc fumée	Smoked pork belly	m3	No	∅	-LE	∅	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Pâté de foie	Liver pate	m3	No	∅	-ME	∅	-ME	/	-		0.00	-	/	/	/	-	NA
2006	C1	Pâté de campagne	Country pâté	m3	No	∅	∅	∅	∅	/	-	13	0.00	-	/	/	/	-	NA
2006	C2	Pâté de campagne	Country pâté	m3	No	∅	∅	∅	∅	/	-	14	0.00	-	/	/	/	-	NA
2006	C3	Pâté à l'ancienne	Old-fashioned pâté	m3	No	∅	∅	∅	∅	/	-	15	0.00	-	/	/	/	-	NA
2006	C4	Pâté de foie à la moutarde	Liver pâté with mustard	m3	No	∅	∅	∅	∅	/	-	20	0.00	-	/	/	/	-	NA
2006	C6	Fromage de tête	Head cheese	m3	No	∅	∅	∅	∅	/	-	12	0.00	-	/	/	/	-	NA
2006	C7	Salami	Salami	m3	No	-LE	∅	-ME	∅	/	-	14	0.00	-	/	/	/	-	NA
2006	D11	Mortadelle aux olives	Mortadella with olives	m3	No	∅	∅	∅	∅	/	-	18	0.00	-	/	/	/	-	NA
2003	2003	Escalope de dinde	Turkey escalope	m1	No	+LA	+LB	+HA	+HA	<i>L.welshimeri</i>	+		2.25	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2003	2003	Dindonneau	poulet	m1	No	+MA	+MB	+HA	+HA	<i>L.welshimeri</i>	+		2.24	+	+HA	+HA	<i>L.welshimeri</i>	+	PA
2003	2003	Escalope de poulet	Chicken breast	m1	No	+MA	+MB	+HB	+HB	<i>L.welshimeri</i>	+		2.75	+	+HA	+HB	<i>L.welshimeri</i>	+	PA
2003	2003	Langue de bœuf	Beef tongue	m1	No	+MA	+MA	+HB	+HA	<i>L.monocytogenes</i>	+		2.62	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Viande hachée	Minced meat	m1	No	+HB	+HB	+HC	+HB	<i>L.monocytogenes</i>	+		2.24	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Steak haché	Chopped steak	m1	No	+LA	+MC	+HA	+HB	<i>L.innocua</i>	+		0.87	+	+MA	+MB	<i>L.innocua</i>	+	PA
2003	2003	Cuisses de poulet	Chicken thighs	m1	No	+MA	+MA	+HA	+HB	<i>L.innocua</i>	+		2.06	+	+HA	+HB	<i>L.innocua</i>	+	PA
2006	B14	Magret de canard	Duck breast	m1	No	+MA	+MA	+HA	+MA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6850	2.17	+	+HA	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	B15	Burger tomate	Tomato burger	m1	No	+MA	+MA	+HA	+MA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6745	2.14	+	+MA	+MA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	B16	Hachis de veau	Veal chop	m1	No	+MA*	+MA*	+MA*	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	6648	2.11	+	+HA	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	PA
2006	C10	Chair à saucisse	Sausage	m1	No	+LA(4)	∅	+MA	+MA	<i>L.welshimeri</i>	+	10229	3.30	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2006	C14	Pavé de sanglier à la moutarde	Boar steak with mustard	m1	No	+LA	+LA(5)	+HA	+MA	<i>L.welshimeri</i>	+	8251	2.66	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2003	2003	Saucisses de Montbéliard	Sausages from Montbéliard	m2	No	∅	∅	+HA	+HA	<i>L.welshimeri</i>	+		0.93	+	∅	+LA	<i>L.welshimeri</i>	+	PA
2003	2003	Saucisses de Strasbourg	Sausages from Strasbourg	m2	No	+MB	+MB	+HB	+HB	<i>L.monocytogenes</i>	+		2.16	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Chipolatas	chipolatas	m2	No	+LA	+LD	+HA	+HB	<i>L.monocytogenes</i>	+		0.26	+	+MC	+MD	<i>L.monocytogenes</i>	+	PA

## Meat products

Year	Code	Matrices (french name)	Matrices	mat.	AC	EN ISO 11290-1 method						VIDAS LIS						Final result	Comparison
						FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				
						P1	OX1(2003) OA1(2006)	P2	OX2(2003) OA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Fricadelles	patties	m2	No	+MB	-HE	+HB	+HB	<i>L.monocytogenes</i>	+		2.58	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2006	B8	Chipolatas	chipolatas	m2	No	+LA(2)	+LA(4)	+HA	+MA*	<i>L.welshimeri</i>	+	8812	2.79	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2006	B10	Chipolatas	chipolatas	m2	No	+LA*	+LA*	+HA	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	7314	2.32	+	+HA	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	PA
2006	B11	Saucisse de Toulouse	Toulouse sausage	m2	No	+MA*	+LA*	+HA*	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	7008	2.22	+	+HA	+HA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	PA
2006	B13	Saucisse de Montbéliard	Sausage of Montbéliard	m2	No	+LA*	+LA*	+HA	+MA*	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6828	2.16	+	+HA	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	B17	Merguez	merguez	m2	No	+MA	+MB	+MA	+MB	<i>L.monocytogenes</i>	+	7155	2.27	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2006	C11	Chipolatas	chipolatas	m2	No	+MA	+MA	+MA	+MA	<i>L.welshimeri</i> <i>L.innocua</i>	+	6270	2.02	+	+HA	+HB	<i>L.welshimeri</i> <i>L.innocua</i>	+	PA
2006	D9	Chipolatas	chipolatas	m2	No	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+	7717	2.49	+	+MA	+HB	<i>L.monocytogenes</i>	+	PA
2006	D10	Saucisse aux herbes	Herb sausage	m2	No	+MB	+MB	+MB*	+MB*	<i>L.innocua</i>	+	7346	2.37	+	+MA	+MB	<i>L.innocua</i>	+	PA
2003	2003	Poitrine fraîche	Fresh chest	m3	No	+LA	+LA	+HA	+HA	<i>L.welshimeri</i>	+		2.28	+	+HA	+HA	<i>L.welshimeri</i>	+	PA
2003	2003	Lardons	bacon	m3	No	+MB	+MB	+HB	+HB	<i>L.monocytogenes</i>	+		2.28	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Lardons	bacon	m3	No	+MB	+MB	+HA	+HB	<i>L.monocytogenes</i>	+		2.29	+	+MB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Poitrine fumée	Smoked bacon	m3	No	+MA	+MB	+HA	+HB	<i>L.monocytogenes</i>	+		2.36	+	+HB	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Rillettes	rillettes	m3	No	+MA	+MA	+HA	+HB	<i>L.monocytogenes</i>	+		2.34	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Lardons	bacon	m3	No	+LA	+LB	+HB	+MB	<i>L.monocytogenes</i>	+		2.24	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Poitrine fumée	Smoked bacon	m3	No	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.19	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Lardons	bacon	m3	No	+MA	+MB	+MA	+HB	<i>L.innocua</i>	+		2.37	+	+HA	+HA	<i>L.innocua</i> <i>L.welshimeri</i>	+	PA
2003	2003	Mortadelle	mortadella	m3	No	+LA	+MB	+HB	+MB	<i>L.monocytogenes</i>	+		3.20	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Jambon de Bayonne	Bayonne ham	m3	No	+LA	+MD	+HB	+HB	<i>L.welshimeri</i>	+		2.92	+	+HB	+HC	<i>L.welshimeri</i>	+	PA
2006	A10	Lardons	bacon	m3	No	+LA	+LA	+MA	+MA	<i>L.innocua</i>	+	7530	2.39	+	+HA	+MA	<i>L.innocua</i>	+	PA
2006	C5	Jambon blanc	White Ham	m3	No	+LA(3)	∅	+HA	+MA	<i>L.monocytogenes</i>	+	368	0.11	+	+LA	+LA	<i>L.monocytogenes</i>	+	PA

Dairy products

Year	Code	Matrices (french name)	Matrices	dat.	CA	CFU / 25g	EN ISO 11290-1 method					VIDAS LIS					Comparison			
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION		Final result		
							P1	OX1(2003) OAA1(2006)	P2	OX2(2003) OAA2(2006)	Identification	Result	RFV	TV	Test result	PAL			OX(2003) OAA(2006)	Identification
2003	2003	Gouda	Gouda	d1	No	/	Ø	-ME	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Pont l'Évêque	Pont l'Éveque	d1	No	/	-ME	-ME	Ø	-LE	/	-		0.00	-	/	/	/	-	NA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	Ø	-ME	-LE	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Maroilles	Maroilles	d1	No	/	-LE	-LE	-ME	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	Ø	-LE	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Reblochon	Reblochon	d1	No	/	Ø	-ME	-LE	-HE	/	-		0.00	-	/	/	/	-	NA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	-LE	-LE	-ME	-HE	/	-		0.00	-	/	/	/	-	NA
2006	B21	Brie de Meaux	Brie de Meaux	d1	No	/	Ø	Ø	Ø	Ø	/	-	11	0.00	-	/	/	/	-	NA
2006	D12	Fromage au lait cru	Raw milk cheese	d1	No	/	Ø	-LE	Ø	Ø	/	-	14	0.00	-	/	/	/	-	NA
2006	C28	Camembert au lait cru	Camembert with raw milk	d1	No	/	-LE	Ø	-LE	Ø	/	-	9	0.00	-	/	/	/	-	NA
2003	2003	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	No	/	-ME	-ME	-LE	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	No	/	Ø	Ø	-ME	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	No	/	Ø	-LE	Ø	-HE	/	-		0.00	-	/	/	/	-	NA
2006	B22	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	No	/	Ø	Ø	Ø	Ø	/	-	15	0.00	-	/	/	/	-	NA
2006	B23	Crottin de Chavignol	Crottin de Chavignol	d2	No	/	Ø	Ø	Ø	Ø	/	-	19	0.00	-	/	/	/	-	NA
2006	B24	Crottin de Chavignol	Crottin de Chavignol	d2	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2006	C23	Picodon	picodon	d2	Yes	/	Ø	Ø	Ø	Ø	/	-	10	0.00	-	/	/	/	-	NA
2006	C26	St Maure	St Maure	d2	No	/	Ø	Ø	Ø	Ø	/	-	12	0.00	-	/	/	/	-	NA
2006	D4	Crottin de Chavignol	Crottin de Chavignol	d2	No	/	Ø	Ø	-LE	-LE	/	-	26	0.00	-	/	/	/	-	NA
2006	D5	Fromage de chèvre	Goat cheese	d2	No	/	Ø	Ø	-LE	-LE	/	-	13	0.00	-	/	/	/	-	NA
2006	D6	St Maure	St Maure	d2	No	/	Ø	Ø	Ø	Ø	/	-	14	0.00	-	/	/	/	-	NA
2006	F19	Crottin de Chavignol	Crottin de Chavignol	d2	Yes		Ø	Ø	Ø	Ø	/	-	7	0.00	-	/	/	/	-	NA
2006	F20	Fromage de chèvre	Goat cheese	d2	Yes	ND	Ø	Ø	Ø	Ø	/	-	3	0.00	-	/	/	/	-	NA
2006	F21	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	ND	Ø	-LE	Ø	Ø	/	-	8	0.00	-	/	/	/	-	NA
2006	G8	Bouchon de chèvre au lait cru	Goat cheese cap with raw milk	d2	Yes	0.6	-LE	-LE	-ME	-LE	/	-	7	0.00	-	/	/	/	-	NA
2006	G9	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	0.4	Ø	-LE	-LE	Ø	/	-	5	0.00	-	/	/	/	-	NA
2006	H3	Buche de chèvre	Goat log	d2	Yes	2.5	-LE	-ME	-LE	-LE	/	-	12	0.00	-	/	/	/	-	NA
2006	H4	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	5.0	-LE	-LE	-ME	-LE	/	-	9	0.00	-	/	/	/	-	NA
2006	H5	Crottin de Chavignol	Crottin de Chavignol	d2	Yes	8.0	Ø	Ø	Ø	Ø	/	-	7	0.00	-	/	/	/	-	NA
2006	H6	Buche de chèvre	Goat log	d2	Yes	0.1	-LE	Ø	-ME	Ø	/	-	5	0.00	-	/	/	/	-	NA
2006	H7	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	0.2	Ø	Ø	-LE	Ø	/	-	6	0.00	-	/	/	/	-	NA
2006	H8	Crottin de Chavignol	Crottin de Chavignol	d2	Yes	0.3	Ø	Ø	Ø	Ø	/	-	5	0.00	-	/	/	/	-	NA
2006	A13	Lait cru	Raw milk	d3	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2006	B30	Lait cru	Raw milk	d3	No	/	Ø	Ø	Ø	Ø	/	-	20	0.00	-	/	/	/	-	NA
2006	B32	Lait cru	Raw milk	d3	No	/	Ø	Ø	Ø	Ø	/	-	29	0.00	-	/	/	/	-	NA
2006	C19	Lait cru	Raw milk	d3	No	/	Ø	Ø	Ø	-LE	/	-	12	0.00	-	/	/	/	-	NA
2006	C27	Lait cru	Raw milk	d3	No	/	Ø	Ø	Ø	Ø	/	-	12	0.00	-	/	/	/	-	NA
2006	C29	Poudre de lait	Milk powder	d3	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2018	18-6	Lait cru 1	Raw milk 1	d3	No	/	ØM	ØM	ØL	ØL	/	-	29	0.00	-	ØL	ØL	/	-	NA
2018	18-8	Lait cru 2	Raw milk 2	d3	No	/	ØM	ØM	ØL	ØL	/	-	29	0.00	-	ØL	ØL	/	-	NA
2018	18-10	Lait cru 3	Raw milk 3	d3	No	/	ØM	ØM	ØL	ØL	/	-	32	0.01	-	ØL	ØL	/	-	NA
2018	18-12	Lait cru 4	Raw milk 4	d3	No	/	ØM	ØM	ØL	ØL	/	-	32	0.01	-	ØL	ØL	/	-	NA
2018	18-14	Lait cru 5	Raw milk 5	d3	No	/	ØM	ØM	ØL	ØL	/	-	27	0.00	-	ØL	ØL	/	-	NA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	Ø	-ME	+LA	+LC	<i>L.seeligeri</i> <i>L.welshimeri</i>	+		0.04	-	-LE	+LB	<i>L.seeligeri</i> <i>L.welshimeri</i>	-	ND
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	+LA	+LB	+MB	+MB	<i>L.monocytogenes</i>	+		2.51	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Cœur de Neufchâtel au lait cru	Heart of Neufchâtel with raw milk	d1	No	/	+HA	+HB	+MB	+MB	<i>L.monocytogenes</i>	+		2.21	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.17	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Reblochon	Reblochon	d1	No	/	+LA(1)	-ME	+HA	+HA	<i>L.monocytogenes</i>	+		2.24	+	+MA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.33	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Maroilles	Maroilles	d1	No	/	+LA(1)	-LE	+HA	+HB	<i>L.monocytogenes</i>	+		0.11	+	+MD	+HC	<i>L.monocytogenes</i>	+	PA
2006	B6	Fromage au lait cru de vache	Raw cow milk cheese	d1	No	/	+LA	+LA	+HA	+MA	<i>L.monocytogenes</i>	+	7305	2.32	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2006	B7	Epoisses	Epoisses	d1	No	/	+LA	+LA	+MA	+MA	<i>L.monocytogenes</i>	+	7404	2.35	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2006	C15	Maroilles	Maroilles	d1	No	/	+LA	+LB	+HA	+MB	<i>L.monocytogenes</i>	+	6428	2.07	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2018	18-13	Emmental	Emmental	d1	se	2.6	3h+L	2L	3h+L	3L	<i>L.in</i>	+	15865	5.02	+	3h+M	3M	<i>L.innocua</i>	+	PA
2018	18-15	Gouda	Gouda	d1	se	2.6	3h+L	3L	4h+L	3L	<i>L.in</i>	+	15817	5.00	+	3h+M	3L	<i>L.innocua</i>	+	PA
2006	D1	Buche de chèvre au lait cru, sans sel	Goat cheese with raw milk, without salt	d2	Yes	1.4	+LA	+LA	+HA	+HB	<i>L.innocua</i>	+	7316	2.36	+	+HA	+MA	<i>L.innocua</i>	+	PA

Dairy products

Year	Code	Matrices (french name)	Matrices	dat.	CA	CFU / 25g	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OA1(2006)	P2	OX2(2003) OAZ(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2006	J3	Fromage au lait de brebis	Sheep's milk cheese	d2	Yes	2.6	+LA(1)	+LB	+HA	+MB	<i>L.monocytogenes</i>	+	7332	2.37	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2006	D2	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	2.8	∅	+LA	+HB	+HA	<i>L.innocua</i>	+	10391	3.35	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	C22	Picodon	picodon	d2	Yes	3.4	∅	∅	∅	∅	/	-	2928	0.94	+	+MA	+MA	<i>L.innocua</i>	+	PD
2006	D3	Chèvre	Goat	d2	Yes	4.2	+LA(2)	+LA(2)	+HB	+MA	<i>L.innocua</i>	+	8092	2.61	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	C21	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	5.1	+LA	+LA(4)	+HA	+MA	<i>L.innocua</i>	+	7144	2.30	+	+HA	+MA	<i>L.innocua</i>	+	PA
2006	C24	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	5.1	+LA	+LA	+HA	+MA	<i>L.innocua</i>	+	6812	2.19	+	+HA	+HA	<i>L.innocua</i>	+	PA
2006	C25	Fromage de chèvre au lait cru	Goat cheese with raw milk	d2	Yes	14.6	+LA(2)	∅	+HA	+MA	<i>L.monocytogenes</i>	+	8544	2.75	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2006	A11	Lait cru	Raw milk	d3	No	/	+LA	+LA	+HA	+MA	<i>L.monocytogenes</i>	+	8368	2.65	+	+MA	+HA	<i>L.monocytogenes</i>	+	PA
2006	A12	Lait cru	Raw milk	d3	No	/	+LA	+LA	+MB	+LB	<i>L.innocua</i>	+	6923	2.19	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	A14	Lait cru	Raw milk	d3	No	/	+LA	+LA	+MA	+MA	<i>L.innocua</i>	+	6370	2.02	+	+HA	+HA	<i>L.innocua</i>	+	PA
2006	B31	Lait cru	Raw milk	d3	No	/	+MA	+MA	+MA	+MA	<i>L.innocua</i>	+	7265	2.30	+	+HA	+MA	<i>L.innocua</i>	+	PA
2018	18-1	Lait cru 1	Raw milk 1	d3	se	2.2	3h+M	2M	3h+M	3M	<i>L. ivanovii</i>	+	11252	3.56	+	3h+M	3M	<i>L. ivanovii</i>	+	PA
2018	18-3	Lait cru 2	Raw milk 2	d3	se	2.2	3h+M	3M	4h+M	3M	<i>L. ivanovii</i>	+	11620	3.67	+	3h+M	3M	<i>L. ivanovii</i>	+	PA
2018	18-5	Lait cru 3	Raw milk 3	d3	se	2.2	2h+M	3M	3h+M	3M	<i>L. ivanovii</i>	+	11791	3.73	+	4h+M	3M	<i>L. ivanovii</i>	+	PA
2018	18-7	Lait cru 4	Raw milk 4	d3	se	2	3h+M	2M	3h+M	3M	<i>L. ivanovii</i>	+	11373	3.60	+	3h+M	3M	<i>L. ivanovii</i>	+	PA
2018	18-9	Lait cru 5	Raw milk 5	d3	se	2	2h+M	3M	3h+M	3M	<i>L. ivanovii</i>	+	11336	3.58	+	3h+M	3L	<i>L. ivanovii</i>	+	PA
2018	18-11	Lait cru 6	Raw milk 6	d3	se	2	2h+M	3M	3h+M	3M	<i>L. ivanovii</i>	+	12432	3.93	+	3h+M	3M	<i>L. ivanovii</i>	+	PA
2006	C20	Poudre de lait	Milk powder	d3	Yes	3.4	+LA	+LA	+HA	+MA	<i>L.innocua</i>	+	6355	2.05	+	+HA	+HA	<i>L.innocua</i>	+	PA



Seafood products

Year	Code	Matrices (french name)	Matrices	Cat.	AC	Level	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OA1(2006)	P2	OX2(2003) OA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Saumon frais	Fresh salmon	s1	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Filets de saumon	Salmon fillets	s1	No	/	Ø	-LE	Ø	-ME	/	-		0.04	-	/	/	/	-	NA
2006	B4	Crevettes cuites	Cooked shrimps	s1	No	/	Ø	-LE	Ø	Ø	/	-	16	0.00	-	/	/	/	-	NA
2006	F11	Filet de rouget	Red mullet fillet	s1	No	/	Ø	-LE	Ø	-ME	/	-	8	0.00	-	/	/	/	-	NA
2006	F12	Crevettes grises	Grey shrimp	s1	No	/	Ø	-LE	Ø	-LE	/	-	5	0.00	-	/	/	/	-	NA
2006	F13	Filet de merlan	Net Whiting	s1	No	/	Ø	-LE	Ø	Ø	/	-	6	0.00	-	/	/	/	-	NA
2006	F14	Langoustines	scampi	s1	No	/	-LE	-LE	-ME	-ME	/	-	7	0.00	-	/	/	/	-	NA
2006	F17	Crevettes décortiquées	Shrimp shrimp	s1	No	/	Ø	Ø	Ø	Ø	/	-	6	0.00	-	/	/	/	-	NA
2006	G24	Filet de grenadier	Pomegranate fillet	s1	No	/	Ø	-LE	Ø	-LE	/	-	4	0.00	-	/	/	/	-	NA
2018		Filet de cabillaud	Cod fillet	s1	No	/	OL	OL	OL	OL	/	-	24	0.00	-	OL	OL	/	-	NA
2003	2003	Truite fumée	Smoked trout	s2	No	/	Ø	Ø	Ø	Ø	/	3		0.00	-	/	/	/	-	NA
2003	2003	Saumon fumé d'Ecosse	Smoked salmon from Scotland	s2	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Brisures de saumon fumé	Smoked salmon chips	s2	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Truite fumée d'Aquitaine	Smoked trout from Aquitaine	s2	No	/	Ø	-LE	Ø	-LE	/	-		0.00	-	/	/	/	-	NA
2006	B18	Haddock	smoked haddock	s2	No	/	Ø	Ø	Ø	Ø	/	-	24	0.00	-	/	/	/	-	NA
2006	A7	Truite fumée	Smoked trout	s2	No	/	Ø	Ø	Ø	Ø	/	-	18	0.00	-	/	/	/	-	NA
2006	H1	Lardons de saumon fumé	Bacon of smoked salmon	s2	No	/	Ø	Ø	Ø	Ø	/	-	8	0.00	-	/	/	/	-	NA
2006	H2	Flétan fumé	Smoked Halibut	s2	No	/	Ø	Ø	Ø	Ø	/	-	5	0.00	-	/	/	/	-	NA
2018	18-18	Truite fumée	Smoked trout	s2	No	/	OM	OM	OL	OL	/	-	27	0.00	-	OL	OL	/	-	NA
2018	18-20	Saumon fumé	Smoked salmon	s2	No	/	OM	OM	OL	OL	/	-	24	0.00	-	OL	OL	/	-	NA
2003	2003	Assiette marine	Marine plate	s3	No	/	Ø	-LE	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Assiette marine	Marine plate	s3	No	/	Ø	-LE	Ø	-LE	/	-		0.00	-	/	/	/	-	NA
2003	2003	Saumon au basilic	Salmon with basil	s3	No	/	Ø	Ø	-LE	-LE	/	-		0.00	-	/	/	/	-	NA
2003	2003	Paupiettes de saumon et de St Jacques	Paupiettes of salmon and scallops	s3	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Tarama de cabillaud	Cod Tarama	s3	No	/	Ø	Ø	-ME	-LE	/	-		0.00	-	/	/	/	-	NA
2003	2003	Tartare de thon	Tuna tartar sauce	s3	No	/	Ø	-LE	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Tartare de saumon	Salmon tartare	s3	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2006	A20	Terrine de saumon	Salmon terrine	s3	No	/	Ø	Ø	Ø	Ø	/	-	13	0.00	-	/	/	/	-	NA
2006	B1	Accras de morue	Cod fousls	s3	No	/	Ø	Ø	Ø	Ø	/	-	28	0.00	-	/	/	/	-	NA
2006	B25	Terrine de langoustines	Terrine of langoustines	s3	No	/	Ø	Ø	Ø	Ø	/	-	19	0.00	-	/	/	/	-	NA
2006	F16	Coquilles St Jacques	St Jacques shells	s3	No	/	Ø	Ø	Ø	-LE	/	-	5	0.00	-	/	/	/	-	NA
2006	G23	Fruits de mer en sauce	Seafood in sauce	s3	No	/	-LE	-LE	-ME	-LE	/	-	2	0.00	-	/	/	/	-	NA
2003	2003	Pavés de saumon surgelés	Frozen salmon steaks	s1	No	/	+MA	+MB	+HA	+HA	<i>L.monocytogenes</i>	+		2.74	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Tendre de saumon	Tender salmon	s1	No	/	+LA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.73	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Tendre de saumon	Tender salmon	s1	No	/	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.03	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Pavés de saumon	Salmon steaks	s1	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		0.96	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Pavés de saumon	Salmon steaks	s1	No	/	+MA	+MA	+HA	+HB	<i>L.monocytogenes</i>	+		2.28	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2006	B3	Crevettes cuites	Cooked shrimps	s1	No	/	+LA	+LA	+HA	+MA	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	7817	2.48	+	+HA	+MA	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	PA
2006	B20	Crevettes	shrimps	s1	No	/	Ø	+LA	+LC	+MA	<i>L.seeligeri</i>	+	6495	2.06	+	+LA	+MA*	<i>L.seeligeri</i>	+	PA
2006	D28	Pavé de saumon	Salmon steak	s1	No	/	+MA	+MA	+HA	+MA	<i>L.welshimeri</i>	+	7062	2.27	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2006	E13	Pavé de saumon	Salmon steak	s1	No	/	+MA	+MA	+MA*	+MA*	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6821	2.25	+	+HA	+HA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2018	18-17	Filet de cabillaud	Cod fillet	s1	Se	1.8	3h+M	2M	3h+L	3L	<i>L.seeligeri</i>	+	10977	3.47	+	3h+L	3L	<i>L.seeligeri</i>	+	PA
2018	18-73	Filet de saumon	Salmon fillet	s1	No	/	3h+M	3M	3h+L	3L	<i>L.innocua</i>	+	10530	3.38	+	3h+L	3L	<i>L.innocua</i>	+	PA
2018	18-75	Filet de truite	Trout fillet	s1	No	/	3h+M	4M	3h+L	3L	<i>L.seeligeri</i>	+	12724	4.09	+	3h+L	3L	<i>L.seeligeri</i>	+	PA
2003	2003	Saumon fumé d'Irlande	Irish smoked salmon	s2	No	/	+MA	+MA	+HA	+HA	<i>L.monocytogenes</i>	+		2.39	+	+MA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Saumon fumé Atlantique	Atlantic smoked salmon	s2	No	/	+MA	+MA	+HA	+HA	<i>L.monocytogenes</i>	+		3.32	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Saumon fumé au basilic	Smoked salmon with basil	s2	No	/	+MA	+MB	+HA	+HA	<i>L.monocytogenes</i>	+		3.76	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Saumon fumé à l'estragon	Smoked salmon with tarragon	s2	No	/	+LA	+LB	+HA	+HA	<i>L.monocytogenes</i>	+		2.59	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Saumon fumé au genièvre	Smoked salmon with juniper	s2	No	/	+LC	+MC	+HA	+HB	<i>L.monocytogenes</i>	+		3.25	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Truite fumée	Smoked trout	s2	No	/	+MA	+LA	+HA	+HB	<i>L.monocytogenes</i>	+		2.45	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2006	A8	Truite fumée	Smoked trout	s2	No	/	+LA	+LA	+MA	+MA	<i>L.monocytogenes</i>	+	10815	3.43	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2006	B2	Saumon fumé	Smoked salmon	s2	No	/	+LA	+LA	+HA	+MA	<i>L.monocytogenes</i>	+	7352	2.33	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2006	B19	Brisures de saumon fumé	Smoked salmon chips	s2	No	/	+LA	+LA*	+HA	+MA*	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6483	2.05	+	+HA	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA

Seafood products

Year	Code	Matrices (french name)	Matrices	Cat.	AC	Level	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OA1(2006)	P2	OX2(2003) OA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2006	F10	Médailon de saumon fumé (crus)	Medallion of smoked salmon (raw)	s2	No	/	+MA	+MA*	+HA*	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	6743	2.17	+	+HA	+MA*	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	PA
2018	18-77	Saumon fumé	smoked salmon	s2	No	/	3h+M	3M	3h+L	3L	<i>L.innocua</i>	+	11344	3.58	+	3h+L	3L	<i>L.innocua</i>	+	PA
2018	18-79	Truite fumée	smoked trout	s2	No	/	3h+M	3M	3h+L	3L	<i>L.innocua</i>	+	10446	3.36	+	3h+L	3L	<i>L.innocua</i>	+	PA
2018	18-81	Dés de saumon fumé	Diced of smoked salmon	s2	No	/	3h+M	2M	3h+L	3L	<i>L.welshimeri</i>	+	11921	3.77	+	3h+L	3L	<i>L.welshimeri</i>	+	PA
2018	18-83	Saumon fumé	Smoked salmon	s2	No	/	3h+M	4M	3h+L	3L	<i>L.welshimeri</i>	+	12676	4.07	+	3h+L	3L	<i>L.welshimeri</i>	+	PA
2003	2003	Assiette marine	Marine plate	s3	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		3.68	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Assiette marine	Marine plate	s3	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		3.35	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Filets de harengs saurs	Herring fillets	s3	No	/	+LA(3)	+LA(1)	+HA	+HA	<i>L.monocytogenes</i>	+		3.08	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Tarama de saumon	Salmon Tarama	s3	No	/	∅	+LA(3)	+HB	+HB	<i>L.monocytogenes</i>	+		2.47	+	+HB	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Tarama de saumon	Salmon Tarama	s3	No	/	+MB	+MB	+HA	+HA	<i>L.monocytogenes</i>	+		2.22	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Tarama de saumon	Salmon Tarama	s3	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		3.04	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Filets de harengs saurs	Herring fillets	s3	No	/	+LA	+LB	+HA	+HB	<i>L.monocytogenes</i>	+		3.17	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Filets de harengs saurs	Herring fillets	s3	No	/	+LA	+LC	+HA	+HB	<i>L.monocytogenes</i>	+		3.37	+	+MA	+MB	<i>L.monocytogenes</i>	+	PA
2003	2003	Saumon salé au sel sec	Salted salmon with dry salt	s3	No	/	+MB	+MB	+HB	+HB	<i>L.monocytogenes</i>	+		3.71	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Brochettes de saumon et julienne de légumes	Skewers of salmon and julienne of vegetables	s3	No	/	+LA	∅	+HA	+HA	<i>L.innocua</i>	+		0.62	+	+MA	+MA	<i>L.innocua</i>	+	PA
2003	2003	Terrine de filets de harengs	Terrine of herring fillets	s3	No	/	∅	∅	+HA	+HA	<i>L.monocytogenes</i>	+		3.60	+	+MC	+MC	<i>L.monocytogenes</i>	+	PA
2006	E12	Poisson à la bordelaise	Bordelaise fish	s3	No	/	+MA	+MA	+HA	+MA	<i>L.monocytogenes</i>	+	7469	2.47	+	+HB	+HA	<i>L.monocytogenes</i>	+	PA
2006	E14	Terrine de saumon	Salmon terrine	s3	No	/	∅	+LA(1)	+MA	+MA	<i>L.monocytogenes</i>	+	541	0.17	+	+LA	+MA	<i>L.monocytogenes</i>	+	PA
2006	F15	Filet de colin sauce fruits de mer	Fillet of hake with seafood sauce	s3	No	/	+LA	+MD	+MA	+MA	<i>L.welshimeri</i>	+	10139	3.27	+	+MA	+MB	<i>L.welshimeri</i>	+	PA

Vegetables

Year	Code	Matrices (french name)	Matrices	Cat.	CA	CFU / 25g	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OAI(2006)	P2	OX2(2003) OAI(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Brocolis surgelés	Frozen broccoli	v1	No	/	Ø	-LE	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Haricots verts surgelés	Frozen green beans	v1	No	/	Ø	-ME	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Dés de navets surgelés	Frozen turnip dice	v1	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Mélange de légumes surgelés	Mix of frozen vegetables	v1	No	/	Ø	-LE	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Haricots verts surgelés	Frozen green beans	v1	No	/	Ø	Ø	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2003	2003	Frites surgelées	Frozen french fries	v1	No	/	Ø	-LE	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2006	A3	Frites surgelées	Frozen french fries	v1	No	/	Ø	-LE	Ø	Ø	/	-	16	0.00	-	/	/	/	-	NA
2006	C30	Pommes de terre rissolées surgelées	Frozen frozen potatoes	v1	No	/	Ø	Ø	Ø	Ø	/	-	15	0.00	-	/	/	/	-	NA
2006	F8	Frites surgelées	Frozen french fries	v1	No	/	Ø	-LE	-LE	-ME	/	-	8	0.00	-	/	/	/	-	NA
2006	G20	Frites surgelées	Frozen french fries	v1	No	/	Ø	-ME	-ME	-ME	/	-	4	0.00	-	/	/	/	-	NA
2003	2003	Petits pois	Peas	v2	No	/	Ø	-LE	-ME	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Champignons	Mushrooms	v2	No	/	Ø	-LE	Ø	Ø	/	-		0.00	-	/	/	/	-	NA
2006	A2	Champignons	Mushrooms	v2	No	/	Ø	-LE	Ø	-LE	/	-	18	0.00	-	/	/	/	-	NA
2006	D23	Carottes râpées	Grated carrots	v2	No	/	Ø	Ø	Ø	Ø	/	-	15	0.00	-	/	/	/	-	NA
2006	D24	Mélange de crudités carottes chou blanc	Mixed raw vegetables carrots white cabbage	v2	No	/	Ø	Ø	Ø	Ø	/	-	20	0.00	-	/	/	/	-	NA
2006	E20	Chou rouge	Red cabbage	v2	No	/	Ø	Ø	-LE	Ø	/	-	7	0.00	-	/	/	/	-	NA
2006	F5	Chou rouge	Red cabbage	v2	No	/	Ø	Ø	Ø	Ø	/	-	12	0.00	-	/	/	/	-	NA
2006	F6	Soja sous-vide	Vacuum soybeans	v2	No	/	-LE	-ME	-ME	-ME	/	-	6	0.00	-	/	/	/	-	NA
2006	F9	Champignons	Mushrooms	v2	No	/	Ø	-LE	Ø	Ø	/	-	9	0.00	-	/	/	/	-	NA
2006	G22	Carottes râpées	Grated carrots	v2	No	/	Ø	-LE	Ø	-ME	/	-	2	0.00	-	/	/	/	-	NA
2003	2003	Epinards à la crème	Spinach with cream	v3	No	/	-LE	-ME	Ø	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Poêlée méridionale	Southern stir-fry	v3	No	/	-LE	-LE	-LE	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Galettes de légumes	Vegetable patties	v3	No	/	-LE	-LE	-LE	-ME	/	-		0.00	-	/	/	/	-	NA
2003	2003	Galettes de légumes	Vegetable patties	v3	No	/	-LE	-LE	-ME	-ME	/	-		0.00	-	/	/	/	-	NA
2006	A4	Poêlée chou-fleur brocolis	Pan-fried cauliflower broccoli	v3	No	/	Ø	-LE	-LE	-LE	/	-	14	0.00	-	/	/	/	-	NA
2006	F1	Soja vinaigrette	Soy vinaigrette	v3	No	/	Ø	Ø	Ø	Ø	/	-	7	0.00	-	/	/	/	-	NA
2006	F2	Carottes râpées assaisonnées	Seasoned shredded carrots	v3	No	/	Ø	-LE	-LE	-ME	/	-	8	0.00	-	/	/	/	-	NA
2006	F3	Salade de riz	Rice salad	v3	No	/	Ø	Ø	-ME	-LE	/	-	5	0.00	-	/	/	/	-	NA
2006	F4	Salade de blé	Wheat salad	v3	No	/	-LE	-LE	-LE	-LE	/	-	9	0.00	-	/	/	/	-	NA
2006	G17	Mélange de légumes mayonnaise	Mayonnaise vegetable mix	v3	No	/	-ME	-LE	-ME	Ø	/	-	3	0.00	-	/	/	/	-	NA
2006	G18	Mélange chou carottes assaisonnés	Seasoned Carrot Cabbage Mix	v3	No	/	-LE	-ME	-ME	-LE	/	-	8	0.00	-	/	/	/	-	NA
2006	G19	Céleri rémoulade	Celery remoulade	v3	No	/	Ø	-LE	Ø	-ME	/	-	6	0.00	-	/	/	/	-	NA
2003	2003	Brocolis surgelés	Frozen broccoli	v1	No	/	+MA	+MA	+HA	+HA	<i>L.monocytogenes</i>	+		2.33	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Brocolis surgelés	Frozen broccoli	v1	No	/	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.31	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Pommes de terres rissolées surgelées	Frozen pickled potatoes	v1	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		2.28	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Poireaux surgelés	Frozen leeks	v1	No	/	+LB	+LD	+HA	+HD	<i>L.monocytogenes</i>	+		3.16	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Frites surgelées	Frozen french fries	v1	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		2.23	+	+MA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Frites précuites surgelées	Frozen pre-fried fries	v1	No	/	+MB	+MB	+HB	+HA	<i>L.monocytogenes</i>	+		2.10	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Brocolis surgelés	Frozen broccoli	v1	No	/	+MA	+MB	+HB	+HB	<i>L.monocytogenes</i>	+		2.50	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Epinards surgelés	Frozen spinach	v1	No	/	+LA	+LB	+HB	+MB	<i>L.monocytogenes</i>	+		3.49	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2003	2003	Frites surgelées	Frozen french fries	v1	No	/	-LE	+MA	-ME	+HC	<i>L.seeligeri</i>	+		2.26	+	+HC	+HA	<i>L.seeligeri</i>	+	PA
2003	2003	Pommes de terres rissolées surgelées	Frozen pickled potatoes	v1	No	/	+MA	+MA	+HA	+HA	<i>L.monocytogenes</i>	+		2.27	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2006	F7	Frites précuites	Pre-cooked fries	v1	No	/	+MA	+MB	+HA	+HB	<i>L.monocytogenes</i>	+	7095	2.29	+	+HA	+HB	<i>L.monocytogenes</i>	+	PA
2006	G6	Pommes frites surgelées	Frozen french fries	v1	No	/	+MA	+MB	+MA	+MB	<i>L.monocytogenes</i>	+	7116	2.35	+	+HA	+MB	<i>L.monocytogenes</i>	+	PA
2006	A1	Chou rouge	Red cabbage	v2	No	/	+LA	+LB	+LB	+MA	<i>L.seeligeri</i>	+	7426	2.35	+	+HA	+MA	<i>L.seeligeri</i>	+	PA
2006	D22	Salade mêlée	Mixed salad	v2	sp	3.75	+LA	+LA	+MA	+MA	<i>L.innocua</i>	+	6668	2.15	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	D18	Chou rouge	Red cabbage	v2	sp	4	+LA(1)	+LA(2)	+MA	+MB	<i>L.innocua</i>	+	10256	3.30	+	+LA	+LA	<i>L.innocua</i>	+	PA
2006	G4	Champignons	Mushrooms	v2	sp	7.1	Ø	-LE	+MA	+MB	<i>L.monocytogenes</i>	+	10631	3.51	+	+MA	+LB	<i>L.monocytogenes</i>	+	PA
2006	E16	Soja	Soy	v2	sp	8.1	+LA(5)	+LA	+MD	+MD	<i>L.monocytogenes</i>	+	5998	1.98	+	+LA	+LB	<i>L.monocytogenes</i>	+	PA
2006	G5	Chou rouge	Red cabbage	v2	sp	9.6	+LA	+LA(1)	+MA	+MA	<i>L.innocua</i>	+	7487	2.47	+	+MA	+MB	<i>L.innocua</i>	+	PA
2006	D15	Cœur de laitue	Heart of lettuce	v2	sp	12.8	+LA	+LB	+MA	+MB	<i>L.innocua</i>	+	6359	2.05	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	D16	Mélange de crudités carottes chou blanc	Mixed raw vegetables carrots white cabbage	v2	sp	12.8	+LA	+LA	+MA	+MA	<i>L.innocua</i>	+	7371	2.37	+	+MA	+LA	<i>L.innocua</i>	+	PA
2018	18-19	Laitue	Lettuce	v2	Se	2.8	3h+L	2L	3h+Ø	3Ø	<i>L.welshimeri</i>	+	11021	3.48	+	3h+Ø	3Ø	<i>L.welshimeri</i>	+	PA
2018	18-21	Tomates	Tomato	v2	Se	2.8	2h+L	3L	3h+Ø	3Ø	<i>L.welshimeri</i>	+	14411	4.63	+	3h+Ø	3Ø	<i>L.welshimeri</i>	+	PA
2018	18-85	Chou rouge	red cabbage	v2	No	/	2h+L	3L	3h+L	3L	<i>L.innocua</i>	+	12333	3.90	+	3h+L	3L	<i>L.innocua</i>	+	PA

## Vegetables

Year	Code	Matrices (french name)	Matrices	Cat.	CA	CFU / 25g	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OA1(2006)	P2	OX2(2003) OA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Epinards à la crème	Spinach with cream	v3	No	/	+MA	+MA	+HB	+HB	<i>L.monocytogenes</i>	+		2.22	+	+HB	+HB	<i>L.monocytogenes</i>	+	PA
2006	A5	Poêlée champêtre	Pan-fried country	v3	No	/	+LA	+LA	+MA	+MA	<i>L.monocytogenes</i>	+	7493	2.38	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2006	A6	Galettes de légumes	Vegetable patties	v3	No	/	+MA	+MA	+HA	+MA*	<i>L.monocytogenes</i> <i>L.innocua</i>	+	7059	2.24	+	+MA	+MA*	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	D21	Macédoine de légumes	mixed vegetables	v3	sp	3.75	+LA	+LA	+HA	+MA	<i>L.innocua</i>	+	6925	2.23	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	D17	Mélange catalan	Catalan blend	v3	sp	6	+LA(1)	+LB(4)	+MA	+MA	<i>L.innocua</i>	+	9577	3.09	+	+MA	+LA	<i>L.innocua</i>	+	PA
2006	G1	Salade de pâtes assaisonnées	Seasoned pasta salad	v3	sp	7.1	+LA	+LA	+MA	+MB	<i>L.monocytogenes</i>	+	7635	2.52	+	+HA	+MB	<i>L.monocytogenes</i>	+	PA
2006	E17	Céleri remoulade	Celery remoulade	v3	sp	8.1	+LA	+LA	+MA	+MA	<i>L.monocytogenes</i>	+	6708	2.22	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2006	D19	Concombres vinaigrette	Vinaigrette cucumbers	v3	sp	9.6	+MA	+LB	+HA	+MB	<i>L.innocua</i>	+	6552	2.11	+	+MA	+MB	<i>L.innocua</i>	+	PA
2006	G3	Céleri remoulade	Celery remoulade	v3	sp	9.6	+MA	+LB	+MA	+MB	<i>L.innocua</i>	+	6797	2.24	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	E18	Carottes râpées vinaigrette	Grated carrots vinaigrette	v3	sp	16.2	+LB	+LC	+HB	+HB	<i>L.monocytogenes</i>	+	6889	2.28	+	+MB	+MB	<i>L.monocytogenes</i>	+	PA

Composite food

ST	Year	SN	Sample	Contamination			RM: NF EN ISO 11290-1 ( 0 )					AM: VIDAS LIS					Concordance RM/AM				
				Strain	Type	Level	Half Fraser		Fraser		Confirmation	Final result	LIS from fraser			Confirmation from fraser			Final result	Final result	
							O&A	Palcam	O&A	Palcam	Identification		RFV	TV	Results	O&A		Palcam			Identification
c1-	2018	18-22	Sandwich with tuna and crudeness	/	/	/	OL	OL	OL	OØ	/	A	25	0.00	-	OØ	OØ	/	A	NA	
c1-	2018	18-24	Sandwich with sal.mon and cream	/	/	/	OL	OL	OL	OØ	/	A	27	0.00	-	OØ	OØ	/	A	NA	
c1-	2018	18-26	Sandwich with sal.mon and chives	/	/	/	OL	OL	OØ	OØ	/	A	67	0.02	-	OØ	OØ	/	A	NA	
c1-	2018	18-28	Sandwich with surimi	/	/	/	OL	OL	OØ	OØ	/	A	71	0.02	-	OØ	OØ	/	A	NA	
c1-	2018	18-30	Tabbouleh with chicken	/	/	/	OM	OL	OL	OØ	/	A	63	0.01	-	OØ	OØ	/	A	NA	
c1-	2018	18-32	Sandwich with chicken	/	/	/	OM	OL	OL	OØ	/	A	60	0.01	-	OØ	OØ	/	A	NA	
c1-	2018	18-34	Chicken rice salad	/	/	/	OM	OL	OL	OØ	/	A	65	0.02	-	OØ	OØ	/	A	NA	
c1-	2018	18-36	Crudeness salad	/	/	/	OM	OL	OL	OL	/	A	66	0.02	-	OL	OL	/	A	NA	
c1-	2018	18-38	Grated carrot with dressing	/	/	/	OM	OM	OL	OL	/	A	67	0.02	-	OL	OL	/	A	NA	
c1-	2018	18-40	Cucumber with dressing	/	/	/	OL	OL	OL	OØ	/	A	65	0.02	-	OØ	OØ	/	A	NA	
c1-	2016	1	Piémontaise salad	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	2	Sandwich with tuna and crudeness	/	/	/	OL	OM	OH	OH	/	A	/	0.00	-	OH	OH	/	A	NA	
c1-	2016	3	white cabbage, carrot, and onion with salad dressing	/	/	/	OØ	OØ	OL	OH	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	4	Sandwich with ham	/	/	/	OØ	OL	OL	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	5	Tabbouleh	/	/	/	OM	OM	OM	OH	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	11	Sandwich with tomato, letuce and chicken	LIS.5.12	se	1.0	OØ	OØ	OM	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	12	Pasta with surimi	LIS.5.12	se	1.0	OØ	OH	OH	OH	/	A	/	0.00	-	OH	OM	/	A	NA	
c1-	2016	32	Falafels, chickpea, carrot	LIS.2.7	se	1.2	OL	OL	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	45	Wrap chiken caesar, letuce, parmesan	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	46	Sandwich chicken kebab, crudeness	/	/	/	OL	OM	OØ	OØ	/	A	/	0.00	-	OØ	OL	/	A	NA	
c1-	2016	51	Falafels, chickpea, carrot	/	/	/	OØ	OØ	OL	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	53	Alaska salad: surimi and pineapple	/	/	/	OØ	OØ	OL	OM	/	A	/	0.00	-	OØ	OL	/	A	NA	
c1-	2016	61	Potatoe salad with carrot, tomato and herring	/	nc	/	OØ	OØ	OØ	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	62	Potatoe salad with carrot, tomato and herring	/	nc	/	OØ	OØ	OØ	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	63	Potatoe salad with carrot, tomato and herring	/	nc	/	OØ	OØ	OM	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	68	Chicken salad with crudeness	LIS.3.13	se	8.0	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c1-	2016	71	Sandwich salami	LIS.6.24	se	5.0	OL	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2003	2003	Three cheese tart	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	/	/	/	A	NA	
c2-	2018	18-42	Pizza with goat cheese and bacon	/	/	/	OM	OL	OØ	OØ	/	A	85	0.02	-	OØ	OØ	/	A	NA	
c2-	2018	18-44	Pizza with three cheeses	/	/	/	OL	OL	OØ	OØ	/	A	24	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-46	Zucchini gratin with porc meat	/	/	/	OL	OL	OØ	OØ	/	A	29	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-48	Hamburger	/	/	/	OM	OM	OØ	OØ	/	A	23	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-50	Beef bourgignon	/	/	/	OL	OL	OØ	OØ	/	A	45	0.01	-	OØ	OØ	/	A	NA	
c2-	2018	18-52	Blanquette of veal	/	/	/	OØ	OØ	OØ	OØ	/	A	26	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-54	Porc with caramel	/	/	/	OØ	OØ	OØ	OØ	/	A	27	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-56	Spaghetti carbonara	/	/	/	OØ	OØ	OØ	OØ	/	A	24	0.00	-	OØ	OØ	/	A	NA	
c2-	2018	18-58	Flamenkuche	/	/	/	OØ	OØ	OØ	OØ	/	A	27	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	6	Quiche Lorraine	LIS.5.11	se	0.8	OØ	OØ	OL	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	7	Kebab of chicken	LIS.5.11	se	0.8	OØ	OØ	OL	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	8	Pizza 3 cheeses	LIS.5.11	se	0.8	OØ	OØ	OM	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	9	Gratin of endives with ham	LIS.5.11	se	0.8	OØ	OØ	OM	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	13	Moussaka	LIS.5.12	se	1.0	OØ	OØ	OL	OM	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	24	Polenta with duck confit and vegetables	LIS.2.1	se	1.8	OØ	OL	OL	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	36	Caramelized chicken with rice and vegetables	/	/	/	OL	OL	OL	OL	/	A	/	0.00	-	OL	OL	/	A	NA	
c2-	2016	37	Porc with caramel, rice and onions sauce	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	38	Tortilla with onions, potatoes, eggs	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	39	Flammkuchen with white cheese and lardon	/	/	/	OL	OL	OM	OL	/	A	/	0.00	-	OØ	OL	/	A	NA	
c2-	2016	42	Pasta with poultry, basilic and tomato sauce	/	/	/	OØ	OL	OL	OM	/	A	/	0.00	-	OØ	OL	/	A	NA	
c2-	2016	44	Polenta with duck confit and vegetables	/	/	/	OØ	OL	OØ	OØ	/	A	/	0.00	-	OØ	OL	/	A	NA	
c2-	2016	47	Tiny involtini porc meat	/	/	/	OL	OM	OØ	OØ	/	A	/	0.00	-	OØ	OL	/	A	NA	
c2-	2016	48	Tagliatelle carbonara	/	/	/	OØ	OL	OL	OL	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	49	Pizza 4 cheeses	/	/	/	OL	OØ	OØ	OØ	/	A	/	0.00	-	OL	OL	/	A	NA	
c2-	2016	50	Pizza mushroom and ham	/	/	/	OØ	OL	OL	OH	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c2-	2016	52	Croissant with chicken and emmental	/	/	/	OØ	OØ	OM	OL	/	A	/	0.00	-	OØ	OL	/	A	NA	
c2-	2016	54	Bouché à la reine	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	OØ	OØ	/	A	NA	
c3-	2003	2003	profiteroles	/	/	/	OØ	OØ	OØ	-LE	/	A	/	0.00	-	/	/	/	A	NA	
c3-	2003	2003	Dessert milk and chocolate	/	/	/	OØ	OØ	OØ	OØ	/	A	/	0.00	-	/	/	/	A	NA	
c3-	2006	D7	Strawberry tart	/	/	/	OØ	OØ	OØ	-LE	/	A	13	0.00	-	/	/	/	A	NA	
c3-	2018	18-60	Pudding	/	/	/	OØ	OØ	OØ	OØ	/	A	25	0.00	-	OØ	OØ	/	A	NA	



Composite food

ST	Year	SN	Sample	Contamination			RM: NF EN ISO 11290-1 ( 0 )						AM: VIDAS LIS						Concordance RM/AM		
				Strain	Type	Level	Half Fraser		Fraser		Confirmation	Final result	LIS from fraser			Confirmation from fraser				Final result	Final result
							O&A	Palcam	O&A	Palcam	Identification		RFV	TV	Results	O&A	Palcam	Identification			
c3+	2006	F18	Whipped cream	/	/	/	∅	+LA(1)	+MA	+LA	Lm + Lw	+	6675	2.15	+	+MA	+LA	Lm + Lw	P	PA	
c3+	2018	18-63	Pudding	LIS.6.5	se	1.4	3h+L	3L	3h+∅	4∅	Lw	P	11423	3.67	+	4h+∅	3∅	Lw	P	PA	
c3+	2018	18-65	Pudding with coconuts	LIS.6.5	se	1.4	2h+L	2L	3h+∅	3∅	Lw	P	10452	3.36	+	3h+∅	3∅	Lw	P	PA	
c3+	2018	18-67	Apple pie	LIS.6.5	se	1.4	3h+L	3L	4h+∅	3∅	Lw	P	10434	3.35	+	3h+∅	3∅	Lw	P	PA	
c3+	2018	18-69	Lemon pie	LIS.5.4	se	2	3h+L	3L	3h+∅	4∅	L.se	P	10417	3.35	+	4h+∅	4∅	L.se	P	PA	
c3+	2018	18-71	Strawberry pie	LIS.5.4	se	2	3h+L	3L	3h+∅	3∅	L.se	P	11418	3.67	+	3h+∅	3∅	L.se	P	PA	
c3+	2016	14	Fruit pie	LIS.6.24	se	3.8	2h-∅	1∅	2h-∅	1M	Lw	P	/	3.44	+	2h-∅	2∅	Lw	P	PA	
c3+	2016	21	Pudding	LIS.2.1	se	1.8	2h+∅	2∅	2h+∅	2∅	Lm	P	/	3.29	+	2h+∅	2∅	Lm	P	PA	
c3+	2016	22	ParisBrest	LIS.2.1	se	1.8	2h+∅	2∅	1h+∅	2∅	Lm	P	/	3.29	+	2h+∅	2L	Lm	P	PA	
c3+	2016	25	Eclair with coffee	/	nc	/	2h+∅	1L	2h+∅	3∅	Lm	P	/	0.97	+	2h+∅	2L	Lm	P	PA	
c3+	2016	65	Coco pearl	/	nc	/	2h+∅	2∅	2h+∅	2h+∅	Lm	P	/	3.39	+	2h+∅	2∅	Lm	P	PA	
c3+	2016	66	Coco pearl	/	nc	/	2h+∅	2∅	2h+∅	2∅	Lm	P	/	3.36	+	2h+∅	2∅	Lm	P	PA	
c3+	2016	67	Coco pearl	/	nc	/	2h+∅	2∅	2h+∅	2M	Lm	P	/	3.34	+	2h+∅	2∅	Lm	P	PA	
c3+	2016	74	Baba au rhum with whipping cream	LIS.6.25	se	3.4	1h-∅	1∅	1h-∅	1∅	Lw	P	/	3.61	+	2h-∅	2∅	Lw	P	PA	
c3+	2016	75	Rolled cake with butter cream and vanilla	LIS.6.25	se	3.4	1h-∅	1L	2h-∅	2∅	Lw	P	/	3.42	+	2h-∅	2∅	Lw	P	PA	
c3+	2016	76	Rolled cake with butter cream and vanilla	LIS.6.25	se	3.4	1h-∅	1L	2h-∅	2∅	Lw	P	/	3.96	+	1h-∅	1∅	Lw	P	PA	
c3+	2016	77	Cornet with pastry cream and vanilla sugar	LIS.6.25	se	3.4	1h-∅	1∅	2h-∅	2∅	Lw	P	/	3.81	+	1h-∅	1∅	Lw	P	PA	

Environmental sample

Year	Code	Matrices (french name)	Matrices	Cat.	CA	CFU / 25g	EN ISO 11290-1 method						VIDAS LIS						Final result	Comparison
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				
							P1	OX1(2003) OAI(2006)	P2	OX2(2003) OAI(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2006	A15	Eau sortie machine à laver	Water outlet washing machine	e1	No	/	Ø	Ø	Ø	Ø	/	-	13	0.00	-	/	/	/	-	NA
2006	A16	Eau stagnante sol	Standing water	e1	No	/	Ø	Ø	Ø	-LE	/	-	19	0.00	-	/	/	/	-	NA
2006	A17	Eau de rinçage Doseuse	Rinsing water Dosing	e1	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2006	A18	Eau stagnante sol stockage	Stagnant water soil storage	e1	No	/	Ø	Ø	-ME	-LE	/	-	15	0.00	-	/	/	/	-	NA
2006	B26	Eau de réseau	Network water	e1	No	/	Ø	Ø	Ø	Ø	/	-	18	0.00	-	/	/	/	-	NA
2006	B27	Eau glacée	Frozen water	e1	No	/	Ø	Ø	Ø	Ø	/	-	14	0.00	-	/	/	/	-	NA
2006	B28	Eau de réseau	Network water	e1	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2006	B29	Eau glacée	Frozen water	e1	No	/	Ø	Ø	Ø	Ø	/	-	17	0.00	-	/	/	/	-	NA
2006	E6	Eau stagnante bac propre	Stagnant water clean tray	e1	No	/	Ø	Ø	Ø	-LE	/	-	3	0.00	-	/	/	/	-	NA
2006	E7	Eau machine à laver	Water washing machine	e1	No	/	Ø	Ø	Ø	Ø	/	-	3	0.00	-	/	/	/	-	NA
2006	G11	Eau Stériflow	Stériflow water	e1	No	/	Ø	Ø	Ø	Ø	/	-	2	0.00	-	/	/	/	-	NA
2006	E2	Eau Steriflow	Steriflow Water	e1	sp	3	Ø	Ø	Ø	Ø	/	-	8	0.00	-	/	/	/	-	NA
2006	F29	Eau bac de rinçage final	Water final rinse tank	e1	sp	ND	Ø	Ø	Ø	Ø	/	-	6	0.00	-	/	/	/	-	NA
2006	F30	Eau de process	Process water	e1	sp	ND	Ø	Ø	Ø	Ø	/	-	7	0.00	-	/	/	/	-	NA
2018	82	Eau station de lavage	Washing station water	e1	se	1.2	0Ø	0Ø	0Ø	0Ø	/	-	/	0.00	-	0Ø	0Ø	/	-	NA
2018	85	Eau de rinçage 3	Rince water 3	e1	se	1.2	0Ø	0Ø	0Ø	0Ø	/	-	/	0.00	-	0Ø	0Ø	/	-	NA
2003	2003	Ecouvillon siphon	Siphon swab	e2	No	/	Ø	-HE	Ø	-HE	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Ecouvillon siphon	Siphon swab	e2	No	/	Ø	-HE	Ø	-LE	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Plan de travail	Workplan	e2	No	/	Ø	Ø	Ø	-LE	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Plan de travail secteur production	Production sector work plan	e2	No	/	Ø	Ø	Ø	-ME	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Surface hotte	Surface hood	e2	No	/	-ME	-HE	-ME	-HE	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Table inox - stand fromagerie	Stainless steel table - cheese stand	e2	No	/	Ø	-ME	Ø	-ME	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Ecouvillon sur lame couteau - stand fromagerie	Swab on knife blade - cheese stand	e2	No	/	Ø	Ø	Ø	Ø	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Ecouvillon tablette - stand fromagerie	Swab tablet - cheese stand	e2	No	/	Ø	-LE	Ø	Ø	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Surface chambre froide de refroidissement	Cold room cooling surface	e2	No	/	Ø	-LE	-LE	-ME	/	-	0.00	-	/	/	/	-	NA	
2003	2003	Surface - salle des épices	Surface - Spice Room	e2	No	/	-LE	-ME	-ME	-ME	/	-	0.00	-	/	/	/	-	NA	
2006	F25	Ecouvillon jonction sol mur	Swab junction ground wall	e2	sp	1	-LE	-LE	-LE	-LE	/	-	13	0.00	-	/	/	/	-	NA
2006	F26	Sol chambre froide	Cold room floor	e2	sp	0.57	-LE	-LE	-ME	-ME	/	-	6	0.00	-	/	/	/	-	NA
2006	D29	Résidus atelier poisson	Fish workshop residues	e3	No	/	-LE	-LE	Ø	-LE	/	-	13	0.00	-	/	/	/	-	NA
2006	E10	Résidus table découpe poisson	Residue table cutting fish	e3	No	/	Ø	Ø	Ø	Ø	/	-	6	0.00	-	/	/	/	-	NA
2006	F22	Résidus dans hachoir	Residue in chopper	e3	No	/	Ø	-LE	Ø	Ø	/	-	3	0.00	-	/	/	/	-	NA
2006	F23	Résidus plateau hachoir	Residue chopper tray	e3	No	/	Ø	-LE	Ø	-LE	/	-	156	0.05	-	/	/	/	-	NA
2006	G12	Résidus stand poisson	Residue fish stand	e3	No	/	Ø	-ME	-ME	-ME	/	-	60	0.01	-	/	/	/	-	NA
2006	G14	Résidus table inox atelier	Residue table stainless steel workshop	e3	No	/	Ø	Ø	Ø	Ø	/	-	8	0.00	-	/	/	/	-	NA
2006	G16	Résidus plateau atelier poisson	Residue tray fish workshop	e3	No	/	-LE	-LE	-LE	-LE	/	-	2	0.00	-	/	/	/	-	NA
2006	H9	Résidus hachoir	Chopper residue	e3	No	/	-LE	-LE	-LE	-LE	/	-	8	0.00	-	/	/	/	-	NA
2006	H11	Résidus atelier découpe	Residue cutting workshop	e3	No	/	Ø	Ø	Ø	Ø	/	-	8	0.00	-	/	/	/	-	NA
2006	F28	Résidus table découpe fromage	Residue table cut cheese	e3	sp	ND	Ø	-LE	-LE	-ME	/	-	6	0.00	-	/	/	/	-	NA
2006	H10	Résidus hachoir	Chopper residue	e3	sp	/	-LE	-LE	Ø	Ø	/	-	6	0.00	-	/	/	/	-	NA
2003	2003	Eau d'égout 1 zone de fabrication	Sewage 1 manufacturing area	e1	No	/	+LA	+LB	+HB	+HA	<i>L.innocua</i>	+	2.50	+	+HA	+HA	<i>L.innocua</i>	+	PA	
2003	2003	Eau d'égout 2 zone de fabrication	Sewage 2 manufacturing area	e1	No	/	+HB	+HB	+HB	+HB	<i>L.innocua</i>	+	2.26	+	+HB	+HB	<i>L.innocua</i>	+	PA	
2003	2003	Eau stagnante sous stériflow	Stagnant water under steriflow	e1	No	/	+MB	+MB	+MB	+HB	<i>L.monocytogenes L.innocua</i>	+	2.52	+	+HB	+HB	<i>L.monocytogenes L.innocua</i>	+	PA	
2003	2003	Eau d'égout zone de production	Sewage production area	e1	No	/	+LB	+LB	+MB	+MB	<i>L.monocytogenes L.innocua</i>	+	2.29	+	+HB	+HB	<i>L.monocytogenes L.innocua</i>	+	PA	
2006	D30	Eau sortie machine à laver	Water outlet washing machine	e1	No	/	+LA	+LA	+MA	+MA	<i>L.innocua</i>	+	7268	2.34	+	+MA	+MA	<i>L.innocua</i>	+	PA
2006	E1	Eau sortie saucier	Sauce water outlet	e1	sp	3	Ø	+LA(1)	+MA	+MA	<i>L.innocua</i>	+	10333	3.42	+	+LA	+LA	<i>L.innocua</i>	+	PA
2006	E3	Eau résiduelle bac gris	Residual water gray tray	e1	sp	3.8	+LA(4)	+LA(3)	+HA	+MA	<i>L.innocua</i>	+	10772	3.56	+	+LA	+LA	<i>L.innocua</i>	+	PA
2006	E4	Eau sortie filtre	Water outlet filter	e1	sp	2.2	Ø	Ø	+MA	+MA	<i>L.monocytogenes</i>	+	32	0.01	-	+LA	+LA	<i>L.monocytogenes</i>	-	ND
2006	E5	Eau rinçage doseuse	Water dosing rinse	e1	sp	4.4	+LA	+LA	+HA	+MA	<i>L.monocytogenes</i>	+	8796	2.91	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2006	G10	Eau bac de rinçage final	Water final rinse tank	e1	sp	21.6	+LA	+LA	+HA	+MA	<i>L.innocua</i>	+	6839	2.26	+	+MA	+MA	<i>L.innocua</i>	+	PA
2018	83	Eau de rinçage 1	Rince water 1	e1	se	1.2	1h-Ø	1Ø	3h-Ø	4Ø	<i>L.innocua</i>	+	/	3.19	+	4h-Ø	4Ø	<i>L.innocua</i>	+	PA
2018	84	Eau de rinçage 2	Rince water 2	e1	se	1.2	1h-Ø	1Ø	3h-Ø	4Ø	<i>L.innocua</i>	+	/	3.12	+	3h-Ø	4Ø	<i>L.innocua</i>	+	PA
2018	86	Eau de station de lavage 2	Washing station water 2	e1	se	1.2	1h+Ø	1Ø	3h+Ø	4Ø	<i>L.innocua</i>	+	/	3.18	+	3h+Ø	2Ø	<i>L.innocua</i>	+	PA
2003	2003	Surface cellule de refroidissement	Surface cooling cell	e2	No	/	+MB	+HB	+HB	+HB	<i>L.innocua</i>	+	2.50	+	+HA	+HB	<i>L.innocua</i>	+	PA	
2003	2003	Surface chambre froide	Cold room surface	e2	No	/	+MA	+MA	+HA	+HA	<i>L.monocytogenes</i>	+	2.65	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA	



Environmental sample

Year	Code	Matrices (french name)	Matrices	Cat.	CA	CFU / 25g	EN ISO 11290-1 method						VIDAS LIS						Comparison	
							FRASER 1/2		FRASER		CONFIRMATION		VIDAS LIS			CONFIRMATION				Final result
							P1	OX1(2003) OAA1(2006)	P2	OX2(2003) OAA2(2006)	Identification	Result	RFV	TV	Test result	PAL	OX(2003) OAA(2006)	Identification		
2003	2003	Surface chambre froide de refroidissement	Cold room cooling surface	e2	No	/	+MB	+MB	+HA	+HA	<i>L.monocytogenes</i>	+		2.44	+	+MA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Surface secteur poissonnerie	Surface area fish	e2	No	/	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+		2.31	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Plan de travail stand charcuterie	Work table stand deli	e2	No	/	+HA	+HA	+HA	+HA	<i>L.monocytogenes</i>	+		2.32	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2003	2003	Surface chambre froide boyau -Industrie charcutière	Surface cold room gutter -Housted industry	e2	No	/	+MA	+LB	+HA	+HB	<i>L.innocua</i>	+		2.40	+	+HA	+HB	<i>L.innocua</i>	+	PA
2003	2003	Surface chambre froide viande fraîche - Industrie charcutière	Fresh meat cold meat surface - Cooking industry	e2	No	/	+HA	+MB	+HB	+HB	<i>L.welshimeri</i>	+		2.43	+	+HA	+HA	<i>L.welshimeri</i>	+	PA
2003	2003	Surface chambre froide produits saumurées - Industrie charcutière	Surface cold room brine products - Delicatessen industry	e2	No	/	+LA	+LD	+MB	+MB	<i>L.welshimeri</i>	+		2.53	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2018	87	Ecouvillon 1	Swab 1	e2	se	1.2	1h+Ø	1Ø	2h+Ø	3Ø	+ ( <i>L.m</i> )	+		3.10	+	2h+Ø	2Ø	+ ( <i>L.m</i> )	+	PA
2018	88	Ecouvillon 2	Swab 2	e2	se	1.4	2h-Ø	2Ø	2h-Ø	3Ø	+ ( <i>L.se</i> )	+		3.25	+	2h-Ø	4Ø	+ ( <i>L.se</i> )	+	PA
2018	89	Eponge 1	Sponge 1	e2	se	1.4	2h-Ø	3Ø	2h-Ø	2Ø	+ ( <i>L.se</i> )	+		3.42	+	2h-Ø	2Ø	+ ( <i>L.se</i> )	+	PA
2006	E9	Prélèvement surface atelier poisson	Sampling fish workshop area	e2	No	/	+MA	+MA	+HB	+MA	<i>L.monocytogenes</i>	+	8935	2.95	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2006	E11	Prélèvement surface découpe	Cutting surface sampling	e2	No	/	+MA	+MA	+HA	+MA	<i>L.innocua</i>	+	7144	2.36	+	+HA	+HA	<i>L.innocua</i>	+	PA
2006	G15	Bac sale atelier poisson	Dirty fish workshop	e2	No	/	+MA	+MA	+MA	+MA	<i>L.monocytogenes</i>	+	6806	2.25	+	+HA	+MA	<i>L.monocytogenes</i>	+	PA
2003	2003	Résidus dans lave-bottes	Residue in boot washer	e3	No	/	+MB	+MB	+HB	+HB	<i>L.monocytogenes</i> <i>L.innocua</i>	+		2.49	+	+HB	+HB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	E8	Résidus bac poisson	Fish tank residues	e3	No	/	+MA	+MA	+MA	+HA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	7165	2.37	+	+HA	+HA	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	F24	Résidus atelier poisson	Fish workshop residues	e3	No	/	+MA	+MA	+MA	+MA	<i>L.welshimeri</i>	+	6861	2.21	+	+MA	+MA	<i>L.welshimeri</i>	+	PA
2006	G13	Résidus atelier poisson	Fish workshop residues	e3	No	/	-LE	-ME	+LD	+MB	<i>L.seeligeri</i>	+	7860	2.60	+	+LD	+MB	<i>L.seeligeri</i>	+	PA
2006	H13	Résidus atelier charcuterie	Residues workshop charcuterie	e3	No	/	+LA	+LB	+MA	+LA	<i>L.monocytogenes</i>	+	6355	2.05	+	+HA	+LA	<i>L.monocytogenes</i>	+	PA
2006	H14	Résidus atelier charcuterie	Residues workshop charcuterie	e3	No	/	+LA	+LA	+HB	+LA	<i>L.monocytogenes</i>	+	6279	2.02	+	+HA	+HA	<i>L.monocytogenes</i>	+	PA
2006	H15	Résidus table inox atelier	Residue table stainless steel workshop	e3	No	/	+LB	+LD	+LA	+LA	<i>L.welshimeri</i>	+	6346	2.04	+	+HA	+LA	<i>L.welshimeri</i>	+	PA
2006	H16	Résidus table inox atelier	Residue table stainless steel workshop	e3	No	/	+LB	+LB	+LB	+LB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	6134	1.98	+	+HB	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	PA
2006	H12	Résidus atelier découpe	Residue cutting workshop	e3	sp	2.2	+LA	+LB	+HA	+LA	<i>L.innocua</i>	+	3391	1.09	+	+LA	+LA	<i>L.innocua</i>	+	PA

## **Appendix D**

### **Sensitivity**

#### **Extension study - Raw results**

**Caption:** Bacterial burden  
∅: no culture  
L = low  
M = moderate  
H = high

#### Breakdown of flora

A = pure culture of suspect colonies  
B = mixture with a majority of suspect colonies  
C = mixture with a minority of suspect colonies  
D = mixture with rare suspect colonies  
E = absence of suspect colonies  
(x): x colonies characteristic of Listeria if  $x \leq 5$



Dairy products excluding raw milk

Type	Code	Sample	Contamination				Reference method ISO 11290-1 #										Alternative method VIDAS Listeria LIS 22-26h						Agreement	Alternative method VIDAS Listeria LIS 22-26h - 4°C						Agreement		
							Fraser 1/2					Fraser					Identification	Final result	VIDAS test LIS			Confirmation			VIDAS test LIS						Final result	
			Strain	Type	Stress	Level	ALOA	Palcam	ALOA	Palcam	ALOA	Palcam	RFV	VT	Test result	Palcam			ALOA	Identification	RFV	VT		Test result	Palcam	ALOA	Identification					
b+	1977550	Pasteurized sheep cheese	<i>L.mono</i> FMJ325	ac	Seeding	1,8	∅	AL halo	EM	EM	AM halo	AM halo	BM	BM	<i>L.monocytogenes</i>	P	7852	2,67	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA	8032	2,73	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA
b+	1977552	Pasteurized cow cheese (Emmental)	<i>L.ivanovii</i> GQD028	ac	Seeding	2,4	EL	DL	EM	EM	AM	CM	EM	EM	<i>L.ivanovii</i>	P	8761	2,98	POSITIF	EM	AM halo	<i>L.ivanovii</i>	P	PA	8891	3,02	POSITIF	EM	AM halo	<i>L.ivanovii</i>	P	PA
b+	1977553	Pasteurized cow cheese (Camembert)	<i>L.ivanovii</i> GQD028	ac	Seeding	2,4	EL	DL	EM	EM	AM	BM	EM	EM	<i>L.ivanovii</i>	P	5418	1,84	POSITIF	EM	AM halo	<i>L.ivanovii</i>	P	PA	5064	1,72	POSITIF	EM	AM halo	<i>L.ivanovii</i>	P	PA
b-	1977512	Pasteurized cow cheese (Merzer)	/	/	/	/	∅	∅	EM	EM	∅	∅	EM	EM	/	A	16	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	/	/
b-	1977513	Pasteurized cow cheese (Munster)	/	/	/	/	∅	∅	EM	EM	∅	∅	EM	EM	/	A	16	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	/	/
b-	1977514	Pasteurized cow cheese (Le Bleu)	/	/	/	/	EM	EM	EM	EM	∅	∅	EM	EM	/	A	19	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	/
b-	1977515	Pasteurized cow cheese (Brie)	/	/	/	/	EL	EL	EM	EM	∅	∅	EM	EM	/	A	16	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	/
b-	1977516	Pasteurized sheep cheese (Bleu)	/	/	/	/	EL	EL	EM	EM	∅	EM	EM	EM	/	A	15	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	/	/
b-	1977517	Pasteurized sheep cheese	/	/	/	/	EL	EL	EM	EM	∅	∅	EM	EM	/	A	15	0,00	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	/	/
b-	1977518	Pasteurized goat chees	/	/	/	/	EL	EL	EM	EM	∅	∅	EM	EM	/	A	15	0,00	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	/	/
b-	1977519	Pasteurized goat cheese (Ossau Iraty)	/	/	/	/	EM	EM	EM	EM	EL	EL	EM	EM	/	A	18	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	/	/
b-	1977536	Pasteurized cow cheese	/	/	/	/	EM	EM	EM	EM	EM	EM	EM	EM	/	A	8,00	0,00	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	/	/
b-	1977537	Pasteurized cow cheese with pepper	/	/	/	/	∅	EM	EM	EM	EL	EL	EM	EM	/	A	44,00	0,01	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	/	/
b-	1977606	Pasteurized cow cheese (Emmental)	/	/	/	/	∅	EL	EL	EL	/	EM	/	EM	/	A	26	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	NA
b-	1977607	Pasteurized cow cheese (Le Paillé)	/	/	/	/	∅	EL	EL	EL	/	∅	/	EL	/	A	28	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	NA
c+	1977554	Powdered whole milk	<i>L.innocua</i> GPQ140	ac	Spiking	4,0	EM	EM	DM	EM	BM sans halo	BM sans halo	DM	DM	<i>L.innocua</i>	P	8728	2,97	POSITIF	DM	BM sans halo	<i>L.innocua</i>	P	PA	8622,0	2,93	POSITIF	BM	BM sans halo	<i>L.innocua</i>	P	PA
c+	1977555	Powdered whey	<i>L.mono</i> HBP652 <i>L.innocua</i> GPQ140	ac	Spiking	4,8/4,0	∅	EL	EL	EL	AM sans halo	AM sans halo	DM	DM	<i>L.innocua</i>	P	8552	2,91	POSITIF	CM	halo+sans halo	<i>L.innocua</i> <i>L.monocytogenes</i>	P	PA	8589	2,92	POSITIF	AM	halo+sans halo	<i>L.innocua</i> <i>L.monocytogenes</i>	P	PA
c+	1977556	Semi-skimmed milk powder LOT 1	<i>L.innocua</i> GPQ140	ac	Spiking	4,0	EM	EM	DM	EM	BM sans halo	BM sans halo	DM	DM	<i>L.innocua</i>	P	8755	2,98	POSITIF	DM	BM sans halo	<i>L.innocua</i>	P	PA	8664	2,94	POSITIF	DM	BM sans halo	<i>L.innocua</i>	P	PA
c+	1977557	Skimmed milk powder	<i>L.mono</i> FLD375	ac	Spiking	4,6	EM	DM	EM	EM	AM halo	AM halo	DM	DM	<i>L.monocytogenes</i>	P	8940	3,04	POSITIF	DM	BM halo	<i>L.monocytogenes</i>	P	PA	8820	3,00	POSITIF	DM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977558	Goat milk powder	<i>L.mono</i> FLD375	ac	Spiking	4,6	EM	EM	EM	EM	BM halo	BM halo	DM	DM	<i>L.monocytogenes</i>	P	8933	3,04	POSITIF	DM	BM halo	<i>L.monocytogenes</i>	P	PA	8786	2,99	POSITIF	DM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977559	Powdered caseinate	<i>L.mono</i> FLD375	ac	Spiking	4,6	∅	AL halo	EL	AL	AM halo	AM halo	DM	DM	<i>L.monocytogenes</i>	P	8965	3,05	POSITIF	DM	BM halo	<i>L.monocytogenes</i>	P	PA	9008	3,06	POSITIF	DM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977580	Skimmed milk powder LOT2	<i>L.welshimeri</i> GLX736	ac	Spiking	3,2	DM sans halo	DM sans halo	EM	EM	∅	EL	EL	EL	<i>L.welshimeri</i>	P	8628	2,82	POSITIF	EM	BM sans halo	<i>L.welshimeri</i>	P	PA	8327	2,61	POSITIF	EM	AM sans halo	<i>L.welshimeri</i>	P	PA
c+	1977581	Powdered whole milk	<i>L.mono</i> JAR249	ac	Spiking	4	EM	EM	EM	EM	∅	EL	EM	EM	/	A	11638	3,70	POSITIF	EM	CL halo	<i>L.monocytogenes</i>	P	PD	10033	3,19	POSITIF	EM	BM halo	<i>L.monocytogenes</i>	P	PD
c+	1977582	Skimmed milk powder	<i>L.mono</i> JAR249	ac	Spiking	4	EM	EM	EM	EM	∅	EL	EM	EM	/	A	9769	3,11	POSITIF	EM	BM halo	<i>L.monocytogenes</i>	P	PD	8938	2,84	POSITIF	EM	BM halo	<i>L.monocytogenes</i>	P	PD
c+	1977584	Powdered buttermilk	<i>L.mono</i> LAS822	ac	Spiking	4,4	EM	EM	EM	EM	EL	EL	EL	EL	/	A	8660	2,75	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PD	7806	2,48	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PD
c+	1977585	Semi-skimmed milk powder	<i>L.mono</i> LAS822	ac	Spiking	4,4	BM halo	BM halo	EM	EM	AM halo	AM halo	BM	BM	<i>L.monocytogenes</i>	P	8723	2,77	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA	7757	2,47	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA
c-	1977577	Whey permeat	<i>L.mono</i> GND673	ac	Spiking	4,4	∅	∅	∅	∅	∅	∅	∅	∅	/	A	14	0,00	NEGATIF	EM	∅	/	A	NA	13	0,00	NEGATIF	EM	∅	/	A	NA
c-	1977583	Whey permeat	<i>L.mono</i> JAR249	ac	Spiking	4	∅	∅	∅	∅	∅	∅	∅	∅	/	A	21	0,00	NEGATIF	EM	EL	/	A	NA	11	0,00	NEGATIF	EM	∅	/	A	NA
c-	1977579	Semi-skimmed milk powder batch 2	<i>L.welshimeri</i> GLX736	ac	Spiking	3,2	EM	EM	EM	EM	∅	EL	EL	EL	/	A	283	0,09	NEGATIF	EM	EM	/	A	NA	632	0,19	POSITIF	EM	DL sans halo	<i>L.welshimeri</i>	P	PD
c-	1977732	Powdered whole milk	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	20	0,00	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	/	NA
c-	1977733	Powdered whey	/	/	/	/	∅	∅	EM	EM	∅	∅	EM	EM	/	A	16	0,00	NEGATIF	EL	∅	/	A	NA	/	/	/	/	/	/	/	NA
c-	1977734	Semi-skimmed milk powder batch 1	/	/	/	/	∅	EL	EL	EL	EL	EL	EM	EM	/	A	21	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	NA
c-	1977735	Skimmed milk	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	10	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	/	NA

Dairy products excluding raw milk

Type	Code	Sample	Contamination				Reference method ISO 11290-1 #								Alternative method VIDAS <i>Listeria LIS</i> 22-26h							Agreement	Alternative method VIDAS <i>Listeria LIS</i> 22-26h - 4°C							Agreement		
							Fraser 1/2				Fraser				Identification	Final result	VIDAS test LIS			Confirmation			Final result	VIDAS test LIS			Confirmation				Final result	
			Strain	Type	Stress	Level	ALOA		Palcam		ALOA		Palcam				RFV	VT	Test result	Palcam	ALOA			Identification	RFV	VT	Test result	Palcam	ALOA			Identification
c-	1977736	Goat milk powder	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	16	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977737	Skimmed milk	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	12	0,00	NEGATIF	EL	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977738	Powdered buttermilk	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	16	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977739	Whey permeate	/	/	/	/	∅	∅	EL	EL	∅	∅	EM	EM	/	A	20	0,00	NEGATIF	EL	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977740	Organic skimmed milk powder	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	15	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977741	Semi-skimmed milk powder batch 2	/	/	/	/	EL	EL	EM	EM	EL	EL	EM	EM	/	A	22	0,00	NEGATIF	EM	EM	/	A	NA	/	/	/	/	/	/	A	NA

**Powdered Infant Formula and cereals**

Type	Code	Sample	Reference method ISO 11290-1 #										Alternative method VIDAS Listeria LIS 26-30h							Agreement	Alternative method VIDAS Listeria LIS 26-30h - 4°C							Agreement
			Contamination				Fraser 1/2		Fraser		Identification	Final result	VIDAS test LIS			Confirmation			Final result		Test VIDAS LIS			Confirmation			Final result	
			Strain	Type	Stress	Level	ALOA	Palcam	ALOA	Palcam			RFV	VT	Test result	Palcam	ALOA	Identification			RFV	VT	Test result	Palcam	ALOA	Identification		
							BM halo + sans	BM halo + sans	DM	DM	AM halo + sans	AM halo + sans	BM	BM	L. innocua L.monocytogenes			P	PA		8511	2.78	POSITIF	DM	BM halo + sans	L. innocua L.monocytogenes	P	
a+	1977560	Baby milk powder 0-6 months	L.innocua GRR943 L.mono BMU793	ac	Spiking	2,8/3,0		BM halo + sans	BM halo + sans	DM	DM	AM halo + sans	AM halo + sans	BM	BM	L. innocua L.monocytogenes	P	PA	8511	2.78	POSITIF	DM	BM halo + sans	L. innocua L.monocytogenes	P	PA		
a+	1977561	Baby milk powder 6-12 months LOT 1	L.innocua GRR943 L.mono BMU793	ac	Spiking	2,8/3,0		BM halo + sans	BM halo + sans	DM	DM	AM halo + sans	AM halo + sans	BM	BM	L. innocua L.monocytogenes	P	PA	8701	2.84	POSITIF	DM	AM halo + sans	L. innocua L.monocytogenes	P	PA		
a+	1977562	Baby milk powder 1-3 years LOT 1	L.innocua GRR943 L.mono BMU793	ac	Spiking	2,8/3,0		AM halo + sans	BM halo + sans	DM	DM	AM halo + sans	AM halo + sans	DM	DM	L. innocua L.monocytogenes	P	PA	8723	2.85	POSITIF	DM	AM halo + sans	L. innocua L.monocytogenes	P	PA		
a+	1977563	Baby growth milk powder 1-3 years	L.innocua GLE603 L.mono BLV059	ac	Spiking	3,0/4,0		BM halo + sans	BM halo + sans	EM	EM	AM halo + sans	AM halo + sans	BM	BM	L.monocytogenes L. innocua	P	PA	8871	2.90	POSITIF	BM	AM	L.monocytogenes	P	PA		
a+	1977564	Baby goat milk powder 1-3 years	L.innocua GLE603 L.mono BLV059	ac	Spiking	3,0/4,0		BM halo + sans	BM halo + sans	EM	EM	AM halo + sans	AM halo + sans	BM	BM	L.monocytogenes L. innocua	P	PA	8935	2.92	POSITIF	DM	AM halo + sans	L.monocytogenes L. innocua	P	PA		
a+	1977565	Baby milk powder 1-3 years LOT 2	L.innocua GLE603 L.mono BLV059	ac	Spiking	3,0/4,0		BM halo + sans	BM halo	EM	EM	AM halo	AM halo	BM	BM	L.monocytogenes	P	PA	9062	2.96	POSITIF	DM	AM halo + sans	L.monocytogenes L. innocua	P	PA		
a+	1977568	Junior baby milk powder + 18 months	L.mono PCA920	ac	Spiking	4,0		∅	∅	EL	EL	/	∅	/	EL	/	A	PD	8395	2.74	POSITIF	BM	AM avec halo	L.monocytogenes	P	PD		
a+	1977570	Baby milk powder 1-3 years LOT 1	L.innocua QHW317	ac	Spiking	4,6		AL sans halo	AL sans halo	EM	EM	/	AM sans halo	/	BM	L. innocua	P	PA	8316	2.72	POSITIF	BM	AM sans halo	L. innocua	P	PA		
a+	1977571	Baby milk powder 1-3 years LOT 2	L.innocua QHW317	ac	Spiking	4,6		AL sans halo	AL sans halo	EM	DM	/	AM sans halo	/	BM	L. innocua	P	PA	8302	2.71	POSITIF	BM	AM sans halo	L. innocua	P	PA		
a-	1977566	Baby growth milk powder 1-3 years	L.mono PCA920	ac	Spiking	4,0		∅	∅	EM	EM	∅	∅	EL	EL	/	A	NA	25	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977596	Baby milk powder 0-6 months	/	/	/	/		∅	EL	EL	EL	/	EL	/	EM	/	A	NA	19	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977597	Baby milk powder 6-12 months LOT 1	/	/	/	/		∅	EL	EL	EL	/	∅	/	EL	/	A	NA	13	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977598	Baby milk powder 1-3 years LOT 1	/	/	/	/		∅	EL	EL	EL	/	EL	/	EM	/	A	NA	12	0,00	NEGATIF	EM	EM	/	/	/		
a-	1977599	Baby growth milk powder 1-3 years	/	/	/	/		∅	EL	EL	EL	/	∅	/	EL	/	A	NA	14	0,00	NEGATIF	EM	EL	/	/	/		
a-	1977600	Baby growth milk powder 1-3 years	/	/	/	/		∅	EL	EL	EL	/	∅	/	EL	/	A	NA	19	0,00	NEGATIF	EM	EL	/	/	/		
a-	1977601	Baby milk powder 1-3 years LOT 2	/	/	/	/		∅	EL	EL	EL	/	EL	/	EL	/	A	NA	16	0,00	NEGATIF	EM	EM	/	/	/		
a-	1977602	Baby milk powder 1-3 years	/	/	/	/		∅	EL	∅	EL	/	∅	/	∅	/	A	NA	18	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977603	Baby milk powder thickened formula 6-12 months	/	/	/	/		∅	∅	∅	EL	/	∅	/	EL	/	A	NA	16	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977604	Junior baby milk powder + 18 months	/	/	/	/		∅	∅	∅	∅	∅	∅	∅	∅	/	A	NA	16	0,00	NEGATIF	EM	∅	/	/	/		
a-	1977605	Baby milk powder 6-12 months LOT 2	/	/	/	/		∅	EL	EL	EL	∅	∅	EL	∅	/	A	NA	11	0,00	NEGATIF	EM	EL	/	/	/		
b+	1977754	Infant milk 6-12 months thickened formula <i>Bifidobacterium infantis</i> - 4,1x10 <sup>9</sup> UFC/g	Livanovii GD028	ac	Spiking	4,4		∅	AL halo	EL	EL	/	AM halo	/	EM	Livanovii	P	PA	8345	2,65	POSITIF	EM	AM halo	Livanovii	P	PA		
b+	1977756	Organic infant milk 6-12 months <i>L. fermentum hereditum</i> CECS716 - 1,0x10 <sup>6</sup> UFC/g	Livanovii GD028	ac	Spiking	4,4		∅	AL halo	EL	EL	/	AM halo	/	EM	Livanovii	P	ND	294	0,09	NEGATIF	EM	∅	/	/	/		
b+	1977760	Infant milk 6-12 months <i>S.thermophilus</i> - 7,7x10 <sup>6</sup> UFC/g	L.mono GND673	ac	Spiking	2,6		EL	EL	EL	EL	/	∅	/	EL	L.monocytogenes	P	PD	8357	2,66	POSITIF	EM	AM halo	L.monocytogenes	P	PD		
b+	1977761	Infant milk 6-12 months thickened formula Bifidobactéries - 1,6x10 <sup>8</sup> UFC/g	L.mono GND673	ac	Spiking	2,6		∅	∅	EL	EL	/	∅	/	EL	/	A	PD	8306	2,64	POSITIF	EM	AM halo	L.monocytogenes	P	PD		
b-	1977752	Infant milk 0-6 months thickened formula <i>B.Lactis</i> - 4,7x10 <sup>6</sup> UFC/g	L.innocua QBB281	ac	Spiking	4,4		∅	∅	∅	∅	/	∅	/	EL	/	A	NA	16	0,00	NEGATIF	EL	∅	/	/	/		
b-	1977753	Infant milk 0-6 months (breastfeeding relay) <i>Lactobacillus reuteri</i> DSM 17938 - 4,0x10 <sup>5</sup> UFC/g	Lwelshimeri GLX736	ac	Spiking	2,8		∅	∅	∅	∅	/	∅	/	EL	/	A	NA	17	0,00	NEGATIF	EL	∅	/	/	/		
b-	1977755	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 5,5x10 <sup>6</sup> UFC/g	L.innocua QBB281	ac	Spiking	4,4		EL	EL	DM	EL	/	EL	/	EL	/	A	NA	25	0,00	NEGATIF	EL	∅	/	/	/		
b-	1977757	Organic infant milk 1-3 years <i>Bifidobacterium lactis</i> - 2,1x10 <sup>7</sup> UFC/g	L.mono CLM641	ac	Spiking	3		EL	EL	EL	EL	/	EL	/	EL	/	A	NA	16	0,00	NEGATIF	EL	∅	/	/	/		
b-	1977758	Infant milk 0-6 months greedy baby <i>B.Lactis</i> - 4,4x10 <sup>6</sup> UFC/g	L.mono CLM641	ac	Spiking	3		∅	∅	∅	∅	/	∅	/	∅	/	A	NA	20	0,00	NEGATIF	∅	∅	/	/	/		
b-	1977759	Infant milk 6-12 months <i>Lactobacillus reuteri</i> DSM 17938 - 6,1x10 <sup>5</sup> UFC/g	L.mono CLM641	ac	Spiking	3		EL	EL	EL	EL	/	∅	/	EL	/	A	NA	18	0,00	NEGATIF	EL	EL	/	/	/		
b-	1977762	Infant milk 0-6 months thickened formula <i>B.Lactis</i> - 4,4x10 <sup>6</sup> UFC/g	/	/	/	/		∅	∅	∅	∅	∅	∅	∅	∅	/	A	NA	38	0,01	NEGATIF	∅	∅	/	/	/		

Powdered Infant Formula and cereals

Type	Code	Sample	Contamination				Reference method ISO 11290-1 #								Alternative method VIDAS <i>Listeria LIS</i> 26-30h						Agreement	Alternative method VIDAS <i>Listeria LIS</i> 26-30h - 4°C						Agreement				
							Fraser 1/2				Fraser				Identification	Final result	VIDAS test LIS			Confirmation			Test VIDAS LIS			Confirmation			Final result			
			Strain	Type	Stress	Level	ALOA	Palcam	ALOA	Palcam	ALOA	Palcam	RFV	VT			Test result	Palcam	ALOA	Identification		RFV	VT	Test result	Palcam	ALOA	Identification					
b-	197763	Infant milk 0-6 months (breastfeeding relay) <i>Lactobacillus reuteri</i> DSM 17938 - 4,0x10 <sup>5</sup> UFC/g	/	/	/	/	Ø	Ø	Ø	Ø	Ø	Ø	Ø	/	A	13	0,00	NEGATIF	Ø	Ø	/	A	NA	/	/	/	/	/	/	A	NA	
b-	197764	Infant milk 6-12 months thickened formula <i>Bifidobacterium infantis</i> - 4,1x10 <sup>6</sup> UFC/g	/	/	/	/	Ø	Ø	EL	EL	Ø	Ø	EL	EL	/	A	17	0,00	NEGATIF	EL	Ø	/	A	NA	/	/	/	/	/	/	A	NA
b-	197765	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 5,5x10 <sup>6</sup> UFC/g	/	/	/	/	EL	EL	EL	EL	Ø	Ø	Ø	Ø	/	A	27	0,00	NEGATIF	Ø	EL	/	A	NA	/	/	/	/	/	/	A	NA
b-	197766	Organic infant milk 6-12 months <i>Lactobacillus fermentum hereditum</i> - 1,0x10 <sup>5</sup> UFC/g	/	/	/	/	Ø	Ø	Ø	Ø	Ø	Ø	EL	EL	/	A	16	0,00	NEGATIF	EL	Ø	/	A	NA	/	/	/	/	/	/	A	NA
b-	197767	Organic infant milk 1-3 years <i>Bifidobacterium lactis</i> - 2,1x10 <sup>7</sup> UFC/g	/	/	/	/	EL	EL	EM	EM	EL	EL	EL	EL	/	A	14	0,00	NEGATIF	EL	EL	/	A	NA	/	/	/	/	/	/	A	NA
b-	197768	Infant milk 0-6 months greedy baby <i>B.Lactis</i> - 4,4x10 <sup>5</sup> UFC/g	/	/	/	/	Ø	Ø	EL	EL	Ø	Ø	EL	EL	/	A	19	0,00	NEGATIF	EL	Ø	/	A	NA	/	/	/	/	/	/	A	NA
b-	197769	Infant milk 6-12 months <i>Lactobacillus reuteri</i> DSM 17938 - 6,1x10 <sup>6</sup> UFC/g	/	/	/	/	Ø	Ø	EL	EL	Ø	Ø	Ø	Ø	/	A	24	0,00	NEGATIF	Ø	Ø	/	A	NA	/	/	/	/	/	/	A	NA
b-	197770	Infant milk 6-12 months <i>S.thermophilus</i> - 5,5x10 <sup>5</sup> UFC/g	/	/	/	/	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	/	A	22	0,0,0,	NEGATIF	Ø	EL	/	A	NA	/	/	/	/	/	/	A	NA
b-	197771	Organic infant milk 1-3 years <i>Lactobacillus fermentum hereditum</i> - 5,8x10 <sup>5</sup> UFC/g	/	/	/	/	Ø	Ø	EL	EL	Ø	Ø	EL	EL	/	A	16	0,00	NEGATIF	EL	Ø	/	A	NA	/	/	/	/	/	/	A	NA
b+	1978396	Infant milk 6-12 months thickened formula <i>Bifidobacterium infantis</i> - 3,4x10 <sup>5</sup> UFC/g	<i>Linnocua</i> GPQ140	ac	Spiking	5	Ø	Ø	Ø	EL	Ø	AM sans halo	Ø	AM	<i>Linnocua</i>	P	8841	2,80	POSITIF	BM	AM sans halo	<i>Linnocua</i>	P	PA	8797	2,79	POSITIF	BM	AM sans halo	<i>Linnocua</i>	P	PA
b+	1978397	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 5,4x10 <sup>6</sup> UFC/g	<i>Linnocua</i> GPQ140	ac	Spiking	5	Ø	Ø	EM	EM	Ø	AM sans halo	EM	AM	<i>Linnocua</i>	P	8848	2,80	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA	8857	2,81	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA
b+	1978398	Infant milk 1-3 years <i>Lactobacillus reuteri</i> DSM 17938 - 1,1x10 <sup>7</sup> UFC/g	<i>Linnocua</i> GPQ140	ac	Spiking	5	Ø	Ø	EM	EM	Ø	AL sans halo	AL	AL	<i>Linnocua</i>	P	8838	2,80	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA	8885	2,81	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA
b+	1978399	Organic infant milk 1-3 years <i>L.fermentum hereditum</i> - 3,6x10 <sup>5</sup> UFC/g	<i>Linnocua</i> GLE603	ac	Spiking	4,8	Ø	Ø	EM	EM	Ø	AM sans halo	EM	AL	<i>Linnocua</i>	P	875	0,27	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA	1607	0,5	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA
b+	1978400	Infant milk 6-12 months <i>S.thermophilus</i> - 5,5x10 <sup>5</sup> UFC/g	<i>Linnocua</i> QHW317	ac	Spiking	4,8	AL sans halo	AL sans halo	AL	AL	AM sans halo	AM sans halo	AM	AM	<i>Linnocua</i>	P	9069	2,87	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA	9035	2,86	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA
c+	1977742	Infant cereal quinoa banana plum <i>B. lactis</i> 1,1x10 <sup>5</sup> CFU/g	L.mono RCJ280	ac	Spiking	4,0	AL halo	AL halo	BM	BM	AM halo	AM halo	BM	BM	<i>L.monocytogenes</i>	P	8357	2,66	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PA	9156	2,90	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977743	Infant cereals with honey <i>B. lactis</i> 3,4x10 <sup>6</sup> CFU/g	L.mono RCJ280	ac	Spiking	4,0	AL halo	AL halo	BM	BM	AM halo	AM halo	BM	BM	<i>L.monocytogenes</i>	P	7908	2,74	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA	8717	2,85	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977744	Biscuit flavored infant cereals <i>B. lactis</i> 7,0x10 <sup>5</sup> CFU/g	L.mono RCJ280	ac	Spiking	4,0	AL halo	AL halo	EL	EL	AM halo	AM halo	EM	EM	<i>L.monocytogenes</i>	P	8425	2,61	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PA	8128	2,57	POSITIF	BM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977773	Infant cereals with honey	<i>Linnocua</i> QBB281	ac	Spiking	4,2	Ø	Ø	EL	EL	Ø	Ø	EL	EL	/	A	8922	3,09	POSITIF	EL	AM sans halo	<i>Linnocua</i>	P	PD	8734	3,02	POSITIF	EL	AM sans halo	<i>Linnocua</i>	P	PD
c+	1977774	Biscuit flavored infant cereals	<i>L.mono</i> PCA920	ac	Spiking	5	AM halo	AM halo	EM	EM	AM halo	AM halo	EM	EM	<i>L.mono</i>	P	8930	3,09	POSITIF	EL	AM halo	<i>L.monocytogenes</i>	P	PA	8850	3,06	POSITIF	EL	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977775	Infant cereals with 5 cereals	<i>L.mono</i> PCA920	ac	Spiking	5	AL halo	AM halo	EM	EM	AL halo	AM halo	AL	AM	<i>L.mono</i>	P	9094	3,15	POSITIF	EL	AM halo	<i>L.monocytogenes</i>	P	PA	8708	3,01	POSITIF	EL	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977776	Whole oat and wheat infant cereals	<i>Livanovii</i> GQD028	ac	Spiking	4,8	AM halo	AM halo	EM	EM	AM halo	AM halo	EM	EM	<i>Livanovii</i>	P	9196	3,18	POSITIF	EM	AM halo	<i>Livanovii</i>	P	PA	8879	3,07	POSITIF	EM	AM halo	<i>Livanovii</i>	P	PA
c+	1977777	Infant multi-cereals with exotic fruits	<i>Livanovii</i> GQD028	ac	Spiking	4,8	AL halo	AL halo	EM	EM	AM halo	AM halo	EM	EM	<i>Livanovii</i>	P	9407	3,26	POSITIF	EM	AM halo	<i>Livanovii</i>	P	PA	8858	3,07	POSITIF	EM	AM halo	<i>Livanovii</i>	P	PA
c+	1977780	Infant chocolate cereals	<i>L.mono</i> GND673	ac	Spiking	5	AM halo	AM halo	EM	EM	AM halo	AM halo	EM	EM	<i>L.mono</i>	P	7908	2,74	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA	8884	3,08	POSITIF	EM	AM halo	<i>L.monocytogenes</i>	P	PA
c+	1977781	Infant caramel cereals	<i>L.mono</i> GND673	ac	Spiking	5	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	/	A	7960	2,76	POSITIF	Ø	AM halo	<i>L.monocytogenes</i>	P	PD	8015	2,77	POSITIF	Ø	AM halo	<i>L.monocytogenes</i>	P	PD
c+	1978401	Wheat and cocoa infant cereals	<i>Linnocua</i> GRR943	ac	Spiking	3,4	Ø	Ø	EL	EL	Ø	Ø	EL	EL	/	A	9149	2,90	POSITIF	BM	AM sans halo	<i>Linnocua</i>	P	PD	9156	2,90	POSITIF	BM	AM sans halo	<i>Linnocua</i>	P	PD
c+	1978402	Infant cereals brioche flavor with nuggets	<i>Linnocua</i> GRR943	ac	Spiking	3,4	AL sans halo	AL sans halo	EM	EM	AM sans halo	AM sans halo	AM	AM	<i>Linnocua</i>	P	7843	2,48	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA	8054	2,55	POSITIF	AM	AM sans halo	<i>Linnocua</i>	P	PA
c-	1977524	Infant cereal quinoa banana plum <i>B. lactis</i> 1,1x10 <sup>5</sup> CFU/g	/	/	/	/	EL	EL	EL	EL	Ø	Ø	Ø	Ø	/	A	14	0,00	NEGATIF	EM	Ø	/	A	NA	/	/	/	/	/	A	NA	
c-	1977525	Infant cereals with honey <i>B. lactis</i> 3,4x10 <sup>6</sup> CFU/g	/	/	/	/	EL	EL	EL	EL	Ø	Ø	EM	EM	/	A	16	0,00	NEGATIF	EM	Ø	/	A	NA	/	/	/	/	/	A	NA	
c-	1977526	Biscuit flavored infant cereals <i>B. lactis</i> 7,0x10 <sup>5</sup> CFU/g	/	/	/	/	EL	EL	EL	EL	Ø	Ø	EL	EL	/	A	15	0,00	NEGATIF	EM	Ø	/	A	NA	/	/	/	/	/	A	NA	
c-	1977527	Infant multi-cereals with exotic fruits	/	/	/	/	EL	EL	EL	EL	Ø	Ø	Ø	Ø	/	A	18	0,00	NEGATIF	EM	Ø	/	A	NA	/	/	/	/	/	A	NA	
c-	1977528	Infant cereals with 5 cereals <i>B. lactis</i> 5,0x10 <sup>5</sup> CFU/g	/	/	/	/	EL	EL	EM	EM	Ø	Ø	EM	EM	/	A	55	0,01	NEGATIF	EM	Ø	/	A	NA	/	/	/	/	/	A	NA	

Powdered Infant Formula and cereals

Type	Code	Sample	Contamination				Reference method ISO 11290-1 #								Alternative method VIDAS <i>Listeria LIS</i> 26-30h						Agreement	Alternative method VIDAS <i>Listeria LIS</i> 26-30h - 4°C						Agreement				
							Fraser 1/2				Fraser				Identification	Final result	VIDAS test LIS			Confirmation			Final result	Test VIDAS LIS			Confirmation			Final result		
			Strain	Type	Stress	Level	ALOA	Palcam	ALOA	Palcam	ALOA	Palcam	RFV	VT			Test result	Palcam	ALOA	Identification		RFV		VT	Test result	Palcam	ALOA		Identification			
c-	1977529	Whole oat and wheat infant cereals <i>B. lactis</i> 6,8x10 <sup>6</sup> CFU/g	/	/	/	/	EL	EL	EL	EL	EL	EL	EM	EM	/	A	18	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977538	Brioche flavored Infant cereals	/	/	/	/	∅	∅	EL	EL	∅	∅	EM	EM	/	A	-4	-0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977539	Infant vanilla cereals	/	/	/	/	∅	∅	EL	EL	∅	∅	EM	EM	/	A	25	0,00	NEGATIF	EM	EL	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977540	Infant chocolate cereals	/	/	/	/	EL	EL	EL	EL	∅	∅	∅	∅	/	A	-3	-0,00	NEGATIF	∅	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977541	Infant caramel cereals	/	/	/	/	EL	EL	EL	EL	∅	∅	EM	EM	/	A	15	0,00	NEGATIF	EM	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977772	Infant cereal quinoa banana plum <i>B. lactis</i> 1,1x10 <sup>6</sup> CFU/g	<i>Linnocua</i> QBB281	ac	Spiking	4,2	∅	∅	EL	EL	∅	∅	EL	EL	/	A	15	0,00	NEGATIF	EL	∅	/	A	NA	/	/	/	/	/	/	A	NA
c-	1977778	Brioche flavored Infant cereals	<i>L.mono</i> CLM641	ac	Spiking	4	∅	∅	∅	∅	∅	∅	∅	/	A	15	0,00	NEGATIF	∅	∅	/	A	NA	/	/	/	/	/	/	A	NA	
c-	1977779	Infant vanilla cereals	<i>L.mono</i> CLM641	ac	Spiking	4	∅	∅	EL	EL	∅	∅	EL	EL	/	A	16	0,00	NEGATIF	EL	∅	/	A	NA	/	/	/	/	/	/	A	NA



## Appendix E – RLOD raw results

### RLOD previous validation (2006)

#### **Caption**

OAA : Ottaviani & Agosti agar

PAL: Palcam agar

+: positive result

- : negative result

/ : test not realized

∅ : absence of colonies

∅, L, M, H: level of bacterial load from absence to high

A: pure culture of suspected colonies

B: mixing with a majority of suspected colonies

C: mixing with a minority of suspected colonies

D: mixing with rare suspected colonies

E: absence of suspected colonies

## Appendix E – RLOD raw results (previous validation)

**Rillettes - *Listeria welshimeri* – TVC : 2 200 000 CFU/g et \*2 700 CFU/g**

Level	CFU/25g	Reference method						Alternative method						Comparison	
		Fraser 1/2		Fraser		Result	Conclusion	Signal (RFV)	Test value	Test result	Confirmation		Final result		Conclusion
		PAL	OAA	PAL	OAA						OAA	OAA			
1	0	∅	∅	∅	∅	-	0/6	8	0,00	-	/	/	-	0/6	=
		∅	∅	∅	∅	-		11	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		11	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		10	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		11	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		6	0,00	-	/	/	-		=
2	0,62	+LA	+LA	+HA	+MA	+	3/6	6548	2,11	+	+HA	+MA	+	3/6	=
		∅	∅	∅	∅	-		7	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		9	0,00	-	/	/	-		=
		+LA	+LA	+HA	+MA	+		7344	2,37	+	+HA	+MA	+		=
		+LA	+LA	+HA	+MA	+		7718	2,49	+	+HA	+MA	+		=
		∅	∅	∅	∅	-		11	0,00	-	/	/	-		=
3	1,64	+MA	+MA	+HA	+MA	+	3/6	6759	2,18	+	+HA	+MA	+	3/6	=
		∅	∅	∅	∅	-		10	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		17	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		11	0,00	-	/	/	-		=
		+MA	+MA	+HA	+MA	+		7444	2,40	+	+HA	+MA	+		=
		+MA	+MA	+HA	+MA	+		7908	2,55	+	+HA	+MA	+		=
4	2,05	+LA	+LA	+HA	+MA	+	5/6	4971	1,60	+	+HA	+MA	+	5/6	=
		+MA	+LA	+HA	+MA	+		5141	1,66	+	+HA	+MA	+		=
		∅	-LE	∅	∅	-		10	0,00	-	/	/	-		=
		+MA	+MA	+HA	+MA	+		5513	1,78	+	+HA	+MA	+		=
		+MA	+MA	+HA	+MA	+		5855	1,89	+	+HA	+MA	+		=
		+MA	+MA	+HA	+MA	+		6302	2,03	+	+HA	+MA	+		=
5*	2,32	+MA	+LA	+HA	+MA	+	6/6	6657	2,20	+	+HA	+MA	+	6/6	=
		+MA	+MA	+HA	+MA	+		6572	2,17	+	+MA	+MA	+		=
		+MA	+LA	+HA	+MA	+		6551	2,16	+	+HA	+MA	+		=
		+LA	+LA	+HA	+MA	+		6636	2,19	+	+HA	+MA	+		=
		+MA	+LA	+HA	+MA	+		6527	2,16	+	+HA	+MA	+		=
		+MA	+MA	+HA	+MA	+		6264	2,07	+	+HA	+MA	+		=

**Raw milk - *Listeria innocua* – TVC : 5 800 000 CFU/ml**

Level	CFU/25g	Reference method						Alternative method						Comparison	
		Fraser 1/2		Fraser		Result	Conclusion	Signal (RFV)	Test value	Test result	Confirmation		Final result		Conclusion
		PAL	OAA	PAL	OAA						PAL	PAL			
1	0	∅	-LE	∅	-LE	-	0/6	8	0,00	-	/	/	-	0/6	=
		∅	-LE	∅	-LE	-		7	0,00	-	/	/	-		=
		∅	-LE	∅	-LE	-		11	0,00	-	/	/	-		=
		-LE	-LE	∅	-ME	-		8	0,00	-	/	/	-		=
		-LE	-LE	∅	-LE	-		12	0,00	-	/	/	-		=
		-LE	-LE	-ME	-LE	-		9	0,00	-	/	/	-		=
2	0,54	∅	-LE	-LE	-LE	-	1/6	8	0,00	-	/	/	-	1/6	=
		∅	-LE	∅	-LE	-		11	0,00	-	/	/	-		=
		∅	-LE	-ME	∅	-		35	0,01	-	/	/	-		=
		+MB	+MB	+HA	+HB	+		7115	2,42	+	+HB	+HA	+		=
		-LE	-LE	-ME	-LE	-		11	0,00	-	/	/	-		=
		-LE	-LE	∅	-LE	-		9	0,00	-	/	/	-		=
3	1,44	∅	-LE	∅	-LE	-	3/6	10	0,00	-	/	/	-	3/6	=
		∅	-LE	-ME	-ME	-		11	0,00	-	/	/	-		=
		+MB	+MB	+HA	+HB	+		11382	3,88	+	+MB	+MA	+		=
		+MB	+MB	+HA	+HB	+		7244	2,46	+	+HA	+HA	+		=
		+MB	+MB	+HA	+HB	+		7544	2,57	+	+HB	+HA	+		=
		∅	∅	∅	-LE	-		10	0,00	-	/	/	-		=
4*	2,24	+MA	+MB	+HA	+HA	+	5/6	7144	2,42	+	+HA	+HB	+	5/6	=
		+MA	+MB	+HA	+HA	+		7096	2,40	+	+HA	+HB	+		=
		-LE	-ME	∅	-ME	-		20	0,00	-	/	/	-		=
		+MA	+MB	+HA	+HA	+		6519	2,21	+	+HA	+HB	+		=
		+MA	+MB	+HA	+HA	+		6774	2,29	+	+HA	+HB	+		=
		+HA	+MB	+HA	+HA	+		7224	2,45	+	+HA	+HB	+		=
5	2,93	+HA	+HB	+HA	+HB	+	6/6	6954	2,24	+	+HA	+HB	+	6/6	=
		+MA	+HB	+HA	+HB	+		7090	2,28	+	+HA	+HB	+		=
		+MA	+MB	+HA	+HB	+		7192	2,32	+	+HA	+HB	+		=
		+MA	+MB	+HA	+HB	+		7503	2,42	+	+HA	+HB	+		=
		+MA	+MB	+HA	+HB	+		7501	2,42	+	+HA	+MB	+		=
		+MA	+MB	+HA	+HB	+		6669	2,15	+	+HA	+HB	+		=

Smoked salmon - *Listeria monocytogenes* 1/2a – TVC : 8 500 CFU/g and \*26 000 CFU/ml

Level	CFU/25g	Reference method						Alternative method							Comparison	
		Fraser 1/2		Fraser		Result	Conclusion	Signal (RFV)	Test value	Test result	Result			Final result		Conclusion
		PAL	OAA	PAL	OAA						PAL	OAA	RLM			
1	0	∅	∅	∅	∅	-	0/6	31	0,01	-	/	/	/	-	0/6	=
		∅	∅	∅	∅	-		17	0,00	-	/	/	/	-		
		∅	∅	∅	∅	-		55	0,01	-	/	/	/	-		
		∅	∅	∅	∅	-		25	0,00	-	/	/	/	-		
		∅	∅	∅	∅	-		43	0,01	-	/	/	/	-		
		∅	∅	∅	∅	-		31	0,01	-	/	/	/	-		
2	0,30	∅	∅	∅	-LE	-	1/6	38	0,01	-	/	/	/	-	1/6	=
		+LA	+LB	+HA	+HA	+		6687	2,27	+	+HA	+HA	+HA	+		
		∅	∅	∅	∅	-		30	0,01	-	/	/	/	-		
		∅	∅	∅	∅	-		38	0,01	-	/	/	/	-		
		∅	∅	∅	-ME	-		33	0,01	-	/	/	/	-		
		∅	∅	∅	∅	-		17	0,00	-	/	/	/	-		
3	0,80	∅	∅	∅	∅	-	1/6	30	0,01	-	/	/	/	-	1/6	=
		∅	∅	∅	∅	-		38	0,01	-	/	/	/	-		
		+LA	+LA	+HA	+HA	+		6590	2,24	+	+HA	+MA	+HA	+		
		∅	-LE	∅	-ME	-		61	0,02	-	/	/	/	-		
		∅	-LE	∅	-HE	-		23	0,00	-	/	/	/	-		
		∅	∅	∅	∅	-		19	0,00	-	/	/	/	-		
4*	1,24	+LA	+LA	+HA	+HA	+	4/6	6872	2,33	+	+HA	+HA	+HA	+	4/6	=
		+LA	+LA	+HA	+HA	+		6928	2,35	+	+HA	+HA	+HA	+		
		+LA	+LA	+HA	+HA	+		7330	2,48	+	+HA	+HA	+HA	+		
		∅	∅	∅	∅	-		30	0,01	-	/	/	/	-		
		+LA	+LA	+HA	+HA	+		6668	2,26	+	+HA	+HA	+HA	+		
		∅	∅	∅	∅	-		38	0,01	-	/	/	/	-		
5*	2,63	+MA	+MA	+HA	+HA	+	6/6	7212	2,44	+	+HA	+HA	+HA	+	6/6	=
		+MA	+MA	+HA	+HA	+		7168	2,43	+	+HA	+HA	+HA	+		
		+LA	+LA	+HA	+HA	+		7591	2,57	+	+HA	+HA	+HA	+		
		+MA	+MA	+HA	+HA	+		6383	2,16	+	+HA	+HA	+HA	+		
		+MA	+MA	+HA	+HA	+		6747	2,28	+	+HA	+HA	+HA	+		
		+MA	+MA	+HA	+HA	+		6652	2,25	+	+HA	+HA	+HA	+		

**Red cabbage - *Listeria monocytogenes* 4b – TVC : 2 200 000 CFU/g et \*200 000 CFU/ml**

Level	CFU/25g	Reference method						Alternative method						Comparison	
		Fraser 1/2		Fraser		Result	Conclusion	Signal (RFV)	Test value	Test result	Confirmation		Final result		Conclusion
		PAL	OAA	PAL	OAA						PAL	OAA			
1	0	∅	∅	∅	∅	-	0/6	22	0,00	-	/	/	-	0/6	=
		∅	∅	∅	∅	-		14	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		19	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		28	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		15	0,00	-	/	/	-		=
		∅	∅	∅	∅	-		204	0,00	-	/	/	-		=
2	0,63	∅	∅	∅	∅	-	2/6	14	0,00	-	/	/	-	2/6	=
		+LA	+LA	+MA	+MA	+		11281	3,58	+	+MA	+MA	+		=
		∅	∅	∅	∅	-		32	0,01	-	/	/	-		=
		∅	∅	+MA	+MA	+		11005	3,49	+	+MA	+MA	+		=
		∅	∅	∅	∅	-		18	0,00	-	/	/	-		=
∅	∅	∅	∅	-	17	0,00	-	/	/	-	=				
3*	1,53	∅	+LC	+HA	+MB	+	5/6	9639	3,11	+	+MA	+LB	+	5/6	=
		∅	-LE	+HA	+MA	+		6819	2,19	+	+MA	+LA	+		=
		+LA	-LE	+HA	+MA	+		10999	3,54	+	+MA	+LA	+		=
		∅	-LE	+HA	+MA	+		10924	3,52	+	+MA	+LA	+		=
		∅	-LE	+HA	+MB	+		10688	3,44	+	+MA	+LB	+		=
		∅	-LE	∅	∅	-		0	0,00	-	/	/	-		=
4*	2,89	∅	-LE	+HA	+MB	+	6/6	8352	2,69	+	+LA	+LB	+	6/6	=
		+LA	+LB	+HA	+MA	+		10548	3,40	+	+MA	+LA	+		=
		∅	-LE	+HA	+MA	+		10081	3,25	+	+MA	+LA	+		=
		+LA	+LB	+HA	+LA	+		7074	2,28	+	+MA	+LA	+		=
		∅	+LC	+HA	+LB	+		10481	3,38	+	+LA	+LA	+		=
		∅	-LE	+HA	+MA	+		11534	3,72	+	+LA	+LA	+		=

**Process water - *Listeria monocytogenes* 1/2c – TVC : 1 100 CFU/ml and \*1 300 CFU/ml and \*\*2300 CFU/ml**

Level	CFU/25g	Reference method						Alternative method							Comparison	
		Fraser 1/2		Fraser		Result	Conclusion	Signal (RFV)	Test value	Test result	Confirmations			Final result		Conclusion
		PAL	OAA	PAL	OAA						PAL	OAA	RLM			
1	0	Ø	Ø	Ø	Ø	-	0/6	31	0,01	-	/	/	/	-	0/6	=
		Ø	Ø	Ø	Ø	-		17	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		55	0,01	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		25	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		43	0,01	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		31	0,01	-	/	/	/	-		=
2*	0,46	Ø	Ø	Ø	Ø	-	0/6	19	0,00	-	/	/	/	-	0/6	=
		Ø	Ø	Ø	Ø	-		17	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		17	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		16	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		21	0,00	-	/	/	/	-		=
		Ø	Ø	Ø	Ø	-		16	0,00	-	/	/	/	-		=
3**	1,05	Ø	Ø	Ø	Ø	-	2/6	16	0,00	-	/	/	/	-	2/6	=
		Ø	Ø	Ø	Ø	-		11	0,00	-	/	/	/	-		=
		Ø	Ø	+HA	+HA	+		9815	2,94	+	+MA	+LA	+MA	+		=
		Ø	Ø	Ø	Ø	-		12	0,00	-	/	/	/	-		=
		Ø	Ø	+HA	+HA	+		8684	2,93	+	+MA	+MA	+MA			=
		Ø	Ø	Ø	Ø	-		8	0,00	-	/	/	/	-		=
4**	1,26	Ø	Ø	+HA	+HA	+	5/6	8660	2,93	+	+HA	+MA	+MA	+	5/6	=
		Ø	Ø	+HA	+HA	+		8032	2,72	+	+HA	+MA	+MA	+		=
		Ø	Ø	+HA	+HA	+		9749	3,30	+	+MA	+MA	+MA	+		=
		Ø	Ø	+HA	+HA	+		10098	3,42	+	+MA	+MA	+MA	+		=
		Ø	Ø	Ø	Ø	-		10	0,00	-	/	/	/	-		=
		Ø	+LA	+HA	+HA	+		6814	2,31	+	+HA	+MA	+MA	+		=
5	1,52	+LA	+LA	+HA	+HA	+	6/6	7395	2,52	+	+HA	+HA	+HA	+	6/6	=
		+LA	+LA	+HA	+MA	+		7700	2,62	+	+HA	+HA	+MA	+		=
		+MA	+MA	+HA	+MA	+		6471	2,20	+	+HA	+HA	+HA	+		=
		+LA	+LA	+HA	+MA	+		6481	2,20	+	+HA	+HA	+HA	+		=
		+LA	+LA	+HA	+HA	+		6773	2,30	+	+HA	+MA	+HA	+		=
		+LA	+LA	+HA	+HA	+		7015	2,39	+	+HA	+HA	+MA	+		=

## Appendix E – RLOD raw results

### RLOD composite food (2016, 2018)

#### Caption

ST : sample type

SN : sample number

# : sample identity

◊ : level determined by 3 to 5 enumerations

sp : spiking

se : seeding

nc : naturally contaminated

cm: contamination by mixture

+ : positive result

- : negative result

/ : test not realized

∅ : absence of colonies

A : absence

P : presence

0 / 1 / 2 / 3 / 4 : level of typical flora, from absence to high

∅ / L / M / H : level of annex flora, from absence to high

*Listeria welshimeri* : L.w

*Listeria seeligeri*: L. se

**Composite food (2016)**

Tabbouleh - *Listeria welshimeri* - TVC : 53 000 UFC/g

ST	SN	Sample	Contamination			RM: NF EN ISO 11290-1 ( Ø )						AM: VIDAS LIS					
			Strain	Type	Level (CFU/25g)	half Fraser		Fraser		Confirmation	Final result	Vidas LIS result		Confirmation from fraser			Final result
						O&A	Palcam	O&A	Palcam	Identification		TV	Results	ALOA	Palcam	Identification	
Composite food	O1	Tabbouleh	/	/	/	0L	0L	0L	0L	/	A	0.00	-	0L	0L	/	A
	O2					0L	0L	0Ø	0Ø	/	A	0.00	-	0Ø	0L	/	A
	O3					0Ø	0L	0Ø	0Ø	/	A	0.00	-	0L	1L	/	A
	O4					0L	0L	0Ø	0Ø	/	A	0.00	-	0Ø	1L	/	A
	O5					1h-L	1L	0L	0L	/	A	0.00	-	0L	0L	/	A
	f1		LIS.6.24	se	0.8	1h-Ø1L	1L	2h-Ø	2Ø	L.w	P	3.49	+	2h-Ø	1Ø	L.w	P
	f2					0Ø	1L	0Ø	0Ø	/	A	0.00	-	0L	1L	/	A
	f3					1h-Ø1L	1L	2h-Ø	2Ø	L.w	P	3.62	+	2h-Ø	2Ø	L.w	P
	f4					0Ø	1L	0Ø	0Ø	/	A	0.00	-	0L	1Ø	/	A
	f5					1h-Ø1L	1L	1h-L	1L	L.w	P	3.41	+	2h-Ø	1Ø	L.w	P
	f6					1h-Ø1L	1L	1h-Ø	1L	L.w	P	3.43	+	1h-Ø	1Ø	L.w	P
	f7					0L	1L	0L	0Ø	/	A	0.00	-	0L	0L	/	A
	f8					1h-L	1L	2h-Ø	2Ø	L.w	P	0.00	-	0Ø	1L	/	A
	f9					1h-Ø	1L	1h-L	1Ø	/	A	3.48	+	2Ø	2Ø	L.w	P
	f10					1h-Ø	1M	1h-Ø	1Ø	/	A	3.39	+	2Ø	2Ø	L.w	P
	f11					1h-Ø	1L	1h-Ø	1Ø	/	A	3.50	+	2h-Ø	2Ø	L.w	P
	f12					0L	1L	0L	0L	/	A	0.00	-	0L	1L	/	A
	f13					0L	1L	0L	0L	/	A	0.00	-	0L	0L	/	A
	f14					1h-Ø	1L	2h-Ø	2Ø	L.w	P	0.00	-	2h-Ø	1L	L.w	P
	f15					1h-Ø	1Ø	1h-Ø	1Ø	L.w	P	3.47	+	2h-Ø	1Ø	L.w	P
	f16					0Ø	1L	0Ø	0Ø	/	P	0.00	-	0L	0Ø	/	A
	f17					1h-Ø	1Ø	2h-Ø	2Ø	L.w	P	3.39	+	2h-Ø	1L	L.w	P
	f18					1h-Ø	1Ø	2h-Ø	2Ø	L.w	P	3.35	+	2h-Ø	1Ø	L.w	P
	f19					0Ø	0L	0Ø	0L	/	A	0.00	-	0L	0Ø	/	A
	f20					1h-L	1L	1h-Ø	1L	L.w	P	3.21	+	2h-Ø	1Ø	L.w	P
	F1		3.8	1h-Ø	1Ø	1h-Ø	1Ø	L.w	P	3.25	+	2h-Ø	2L	L.w	P		
	F2			1h-Ø	1L	1h-Ø	1Ø	L.w	P	3.52	+	2h-Ø	1Ø	L.w	P		
	F3			1h-Ø	1L	2h-Ø	2Ø	L.w	P	3.62	+	1h-Ø	2Ø	L.w	P		
F4	1h-Ø	1L		1h-Ø	1Ø	L.w	P	3.70	+	2h-Ø	2L	L.w	P				
F5	1h-Ø	1L		1h-Ø	1Ø	L.w	P	3.58	+	1h-Ø	1Ø	L.w	P				



**Composite food (2018)**

Pastry cream - *Listeria seligeri* - TVC : 1100 UFC/g

ST	SN	Sample	Contamination			RM: NF EN ISO 11290-1 ( Ø )						AM: VIDAS LIS						
			Strain	Type	Level (CFU/25g)	half Fraser		Fraser		Confirmation	Final result	LIS from fraser			Confirmation from fraser			Final result
						O&A	Palcam	O&A	Palcam	Identification		RFV	TV	Results	O&A	Palcam	Identification	
Composite food	O1	Pastry Cream	/	/	/	0Ø	0Ø	0Ø	0Ø	/	A	26	0.00	-	0Ø	0Ø	/	A
	O2					0Ø	0Ø	0Ø	0Ø	/	A	24	0.00	-	0Ø	0Ø	/	A
	O3					0Ø	0Ø	0Ø	0Ø	/	A	26	0.00	-	0Ø	0Ø	/	A
	O4					0Ø	0Ø	0Ø	0Ø	/	A	22	0.00	-	0Ø	0Ø	/	A
	O5					0Ø	0Ø	0Ø	0Ø	/	A	24	0.00	-	0Ø	0Ø	/	A
	f1		LIS.5.4	se	0.8	3h+Ø	2Ø	3h+Ø	3Ø	/	P	14682	4.72	+	3h+Ø	2Ø	L.se	P
	f2					3h+Ø	2Ø	3h+Ø	3Ø	/	P	14997	4.82	+	2h+Ø	2Ø	L.se	P
	f3					0M	0L	0L	0L	/	A	28	0.00	-	0Ø	0Ø	/	A
	f4					0M	0M	0L	0L	/	A	24	0.00	-	0Ø	0Ø	/	A
	f5					3h+Ø	2Ø	3h+Ø	3Ø	/	P	14474	4.65	+	2h+Ø	3Ø	L.se	P
	f6					2h+Ø	3Ø	3h+Ø	3Ø	/	P	14271	4.59	+	3h+Ø	3Ø	L.se	P
	f7					0L	0L	0Ø	0Ø	/	A	25	0.00	-	0Ø	0Ø	/	A
	f8					3h+Ø	3Ø	3h+Ø	3Ø	/	P	13763	4.42	+	3h+Ø	3Ø	L.se	P
	f9					0M	0M	0Ø	0Ø	/	A	28	0.00	-	0Ø	0Ø	/	A
	f10					0L	0L	0Ø	0Ø	/	A	25	0.00	-	0Ø	0Ø	/	A
	f11					3h+Ø	3Ø	3h+Ø	3Ø	/	P	11618	3.73	+	3h+Ø	3Ø	L.se	P
	f12					3h+Ø	3Ø	3h+Ø	3Ø	/	P	11027	3.54	+	2h+Ø	2Ø	L.se	P
	f13					3h+Ø	3Ø	3h+Ø	3Ø	/	P	11253	3.62	+	3h+Ø	3Ø	L.se	P
	f14					0Ø	0Ø	0Ø	0Ø	/	A	25	0.00	-	0Ø	0Ø	/	A
	f15					2h+Ø	3Ø	3h+Ø	3Ø	/	P	13296	4.27	+	3h+Ø	3Ø	L.se	P
	f16					2h+Ø	2Ø	3h+Ø	3Ø	/	P	10674	3.43	+	3h+Ø	3Ø	L.se	P
	f17					3h+Ø	3Ø	3h+Ø	3Ø	/	P	13070	4.20	+	2h+Ø	3Ø	L.se	P
	f18					2h+Ø	3Ø	3h+Ø	3Ø	/	P	12871	4.14	+	3h+Ø	3Ø	L.se	P
	f19					0Ø	0Ø	0Ø	0Ø	/	A	23	0.00	-	0Ø	0Ø	/	A
	f20					0Ø	0Ø	0Ø	0Ø	/	A	24	0.00	-	0Ø	0Ø	/	A
	F1		3.4	3h+Ø	3Ø	3h+Ø	3Ø	L.se	A	13792	4.43	+	4h+Ø	4Ø	L.se	P		
	F2			3h+Ø	3Ø	3h+Ø	3Ø	L.se	P	13525	4.35	+	4h+Ø	3Ø	L.se	P		
	F3			3h+Ø	3Ø	3h+Ø	3Ø	L.se	P	13458	4.33	+	3h+Ø	3Ø	L.se	P		
	F4			3h+Ø	3Ø	4h+Ø	4Ø	L.se	P	13005	4.18	+	3h+Ø	3Ø	L.se	P		
F5	3h+Ø	3Ø		3h+Ø	3Ø	L.se	P	12783	4.11	+	3h+Ø	3Ø	L.se	P				

## **Appendix E**

### **Relative level of detection**

### **Extension study - Raw results**

#### **Caption**

##### **Bacterial load**

L = low

M = medium

H = high

∅ = absence

##### **Distribution of the microflora**

A = pure culture of typical colonies

B = mix with a majority of typical colonies

C = mix with a minority of typical colonies

D = mix with rare typical colonies

E = absence of typical colonies

Dairy products (excluding raw milk)

Matrix: cottage cheese with raw milk

Bacterial strain: *Listeria ivanovii* GQD028

Enumeration of the microorganisms: 10<sup>9</sup> CFU/g

Code	CFU/ 125g	Reference method: EN ISO 11290-1:2017 (*)							Alternative method: VIDAS LIS							Number of positive results / method
		1/2 Fraser		Fraser		Confirmation		Final result	VIDAS LIS			Alternative method confirmation			Final result	
		ALOA	PALCAM	ALOA	PALCAM	Res.	Identification		RFV LIS	VT	Result LIS	ALOA	PALCAM	Identification		
1978433	0	∅	∅	∅	∅	-	/	A	263	0.08	NEGATIF	∅	EL	/	A	RM: 0/5 AM: 0/5
1978434		∅	∅	∅	∅	-	/	A	112	0.03	NEGATIF	∅	EL	/	A	
1978435		∅	∅	∅	∅	-	/	A	66	0.02	NEGATIF	∅	EL	/	A	
1978436		∅	∅	∅	∅	-	/	A	114	0.03	NEGATIF	∅	EL	/	A	
1978437		∅	∅	EM	EM	-	/	A	112	0.03	NEGATIF	∅	EL	/	A	
2034864	1.2	BM	CM	AM	AM	+	<i>L. ivanovii</i>	P	9205	3.61	POSITIF	AM	AM	<i>L. ivanovii</i>	P	RM:13/20 AM:12/20
2034865		BM	BM	AM	AM	+	<i>L. ivanovii</i>	P	8873	3.48	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034866		EM	EM	EM	EM	-	/	A	14	0.00	NEGATIF	∅	∅	/	A	
2034867		EM	EM	EL	EL	-	/	A	9369	3.68	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034868		BM	BM	AM	AM	+	<i>L. ivanovii</i>	P	12	0.00	NEGATIF	EL	EL	/	A	
2034869		EL	EM	EL	EL	-	/	A	9397	3.69	POSITIF	AM	AL	<i>L. ivanovii</i>	P	
2034870		BM	BM	AM	AL	+	<i>L. ivanovii</i>	P	14	0.00	NEGATIF	∅	EL	/	A	
2034871		BM	BM	AM	AL	+	<i>L. ivanovii</i>	P	11	0.00	NEGATIF	EL	EL	/	A	
2034872		EM	EM	EM	EM	-	/	A	13	0.00	NEGATIF	∅	∅	/	A	
2034873		BM	BM	AM	AM	+	<i>L. ivanovii</i>	P	12	0.00	NEGATIF	∅	∅	/	A	
2034874		CM	CL	BM	BL	+	<i>L. ivanovii</i>	P	8415	3.30	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034875		BM	EL	AM	AM	+	<i>L. ivanovii</i>	P	9297	3.65	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034876		EL	EL	EL	EL	-	/	A	9448	3.71	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034877		BM	CM	AM	AL	+	<i>L. ivanovii</i>	P	8172	3.21	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034878		BM	CM	AM	AM	+	<i>L. ivanovii</i>	P	8834	3.47	POSITIF	AL	AL	<i>L. ivanovii</i>	P	
2034879		EM	EM	EM	EL	-	/	A	8369	3.29	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034880		EL	EL	∅	∅	-	/	A	8909	3.50	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034881		CM	CM	AM	AM	+	<i>L. ivanovii</i>	P	10989	4.32	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
2034882		CL	CL	AL	AL	+	<i>L. ivanovii</i>	P	12	0.00	NEGATIF	∅	∅	/	A	
2034883		BM	BM	AM	AL	+	<i>L. ivanovii</i>	P	10	0.00	NEGATIF	∅	EL	/	A	
1978438	3.3	∅	∅	AM	AM	+	<i>L. ivanovii</i>	P	11524	3.65	POSITIF	AM	AM	<i>L. ivanovii</i>	P	RM: 5/5 AM: 5/5
1978439		∅	∅	AM	AM	+	<i>L. ivanovii</i>	P	9747	3.09	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
1978440		∅	∅	AM	AM	+	<i>L. ivanovii</i>	P	4642	1.47	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
1978441		∅	∅	AM	AM	+	<i>L. ivanovii</i>	P	10953	3.47	POSITIF	AM	AM	<i>L. ivanovii</i>	P	
1978442		∅	∅	AM	AM	+	<i>L. ivanovii</i>	P	11152	3.53	POSITIF	AM	AM	<i>L. ivanovii</i>	P	

**Powder Infant Formula and cereals**

**Matrix:** Infant milk powder with probiotics

**Bacterial strain:** *Listeria monocytogenes* JAR249

**Enumeration of the probiotics *Lactobacillus reuteri* DSM 17938:** 5,4 10<sup>6</sup> CFU/g

Code	CFU/ 125g	Reference method: EN ISO 11290-1:2017 (*)							Alternative method: VIDAS LIS							Number of positive results / method
		1/2 Fraser		Fraser		Confirmation		Final result	VIDAS LIS			Alternative method confirmation			Final result	
		ALOA	PALCAM	ALOA	PALCAM	Res.	Identification		RFV LIS	VT	Result LIS	ALOA	PALCAM	Identification		
1978428	0	∅	∅	∅	∅	-	/	A	16	0,00	NEGATIF	∅	∅	/	A	RM:0/5 AM:0/5
1978429		∅	∅	∅	∅	-	/	A	18	0,00	NEGATIF	∅	∅	/	A	
1978430		∅	∅	∅	∅	-	/	A	20	0,00	NEGATIF	∅	∅	/	A	
1978431		∅	∅	∅	∅	-	/	A	17	0,00	NEGATIF	∅	∅	/	A	
1978432		∅	∅	∅	∅	-	/	A	22	0,00	NEGATIF	∅	∅	/	A	
2045368	1.0	AL	∅	AM	BM	+	<i>L.monocytogenes</i>	P	10	0,00	NEGATIF	∅	∅	/	A	RM:13/20 AM:12/20
2045369		AL	∅	AM	BM	+	<i>L.monocytogenes</i>	P	19	0,00	NEGATIF	∅	∅	/	A	
2045370		∅	∅	AM	BM	+	<i>L.monocytogenes</i>	P	8055	3,16	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045371		∅	∅	∅	EM	-	/	A	8571	3,37	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045372		AL	∅	AM	BM	+	<i>L.monocytogenes</i>	P	18	0,00	NEGATIF	∅	∅	/	A	
2045373		EL	EL	AM	EM	+	<i>L.monocytogenes</i>	P	8730	3,43	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045374		∅	EL	∅	EM	-	/	A	8616	3,38	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045375		AL	AL	AM	BM	+	<i>L.monocytogenes</i>	P	8706	3,42	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045376		∅	EL	∅	EM	-	/	A	8563	3,36	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045377		∅	EL	∅	EM	-	/	A	14	0,00	NEGATIF	∅	EM	/	A	
2045378		∅	EL	AM	BM	+	<i>L.monocytogenes</i>	P	8716	3,42	POSITIF	AM	AM	<i>L.monocytogenes</i>	P	
2045379		∅	EL	∅	EM	-	/	A	8862	3,48	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045380		AL	AL	AM	BM	+	<i>L.monocytogenes</i>	P	7542	2,96	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045381		∅	EL	∅	EM	-	/	A	9598	3,77	POSITIF	AM	EM	<i>L.monocytogenes</i>	P	
2045382		AL	EL	AM	BM	+	<i>L.monocytogenes</i>	P	15	0,00	NEGATIF	EL	EM	/	A	
2045383		AL	AL	AM	BM	+	<i>L.monocytogenes</i>	P	7678	3,01	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045384		∅	∅	AM	BM	+	<i>L.monocytogenes</i>	P	7758	3,05	POSITIF	AM	AM	<i>L.monocytogenes</i>	P	
2045385		∅	∅	∅	EM	-	/	A	17	0,00	NEGATIF	∅	EM	/	A	
2045386		AL	EL	AM	BM	+	<i>L.monocytogenes</i>	P	10	0,00	NEGATIF	∅	EM	/	A	
2045387		AL	EL	AM	BM	+	<i>L.monocytogenes</i>	P	8	0,00	NEGATIF	∅	EM	/	A	
2045393	2.0	AL	BL	AM	BM	+	<i>L.monocytogenes</i>	P	8489	3,33	POSITIF	AM	AM	<i>L.monocytogenes</i>	P	RM:5/5 AM:5/5
2045394		AL	EL	AM	BM	+	<i>L.monocytogenes</i>	P	8635	3,39	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045395		BL	BL	AM	BM	+	<i>L.monocytogenes</i>	P	9352	3,67	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	
2045396		AL	AL	AM	BM	+	<i>L.monocytogenes</i>	P	9746	3,83	POSITIF	AM	AM	<i>L.monocytogenes</i>	P	
2045397		∅	EL	AM	BM	+	<i>L.monocytogenes</i>	P	7799	3,06	POSITIF	AM	DM	<i>L.monocytogenes</i>	P	

## Appendix F – Inclusivity and exclusivity

Reference	Strain	Origin	Inoculation rate in 225 ml of LX broth (CFU/ml)	RFV LIS	VT	LIS test results
L5	<i>Listeria monocytogenes</i> 1/2a	Smoked salmon lardons	100.0	7269	2.34	+
L12	<i>Listeria monocytogenes</i> 1/2a	Smoked salmon	100.0	10697	3.45	+
L43	<i>Listeria monocytogenes</i> 1/2a	Minced meat	8.3	7550	2.46	+
L44	<i>Listeria monocytogenes</i> 1/2a	Dried sausage	11.0	7372	2.40	+
L47	<i>Listeria monocytogenes</i> 1/2a	Fried potatoes	92.0	8463	2.73	+
L116	<i>Listeria monocytogenes</i> 1/2a	Fish in cream sauce	96.0	6528	2.10	+
L129	<i>Listeria monocytogenes</i> 1/2a	Fried potatoes	100.0	7481	2.41	+
L37	<i>Listeria monocytogenes</i> 1/2b	Maroilles made with raw milk	98.0	11197	3.61	+
L51	<i>Listeria monocytogenes</i> 1/2b	Matured cheese	96.0	9088	2.93	+
L14	<i>Listeria monocytogenes</i> 1/2c	Minced meat	5.4	7797	2.54	+
L17	<i>Listeria monocytogenes</i> 1/2c	Pork belly	12.0	7722	2.52	+
L18	<i>Listeria monocytogenes</i> 1/2c	Munster cheese	6.0	432	0.14	+
L117	<i>Listeria monocytogenes</i> 1/2c	Montbéliard sausage	12.0	6898	2.25	+
L57	<i>Listeria monocytogenes</i> 4a	ATCC 19114	1.8	7922	2.58	+
L58	<i>Listeria monocytogenes</i> 4b	Salad	98.0	7997	2.58	+
L61	<i>Listeria monocytogenes</i> 4e	ATCC 19118	7.8	7454	2.43	+
L62	<i>Listeria monocytogenes</i> 4e	Reblochon cheese	30.0	1097	0.35	+
L119	<i>Listeria monocytogenes</i>	Spinach	91.0	6769	2.18	+
L123	<i>Listeria monocytogenes</i>	Mozzarella	8.6	6619	2.14	+
L124	<i>Listeria monocytogenes</i>	Fillet of perch	8.1	6617	2.14	+
L125	<i>Listeria monocytogenes</i>	Pan-fried vegetables	100.0	9715	3.13	+
L141	<i>Listeria monocytogenes</i>	Environmental sample	13.0	6788	2.21	+
L149	<i>Listeria monocytogenes</i>	Environmental sample	15.0	6974	2.24	+
L152	<i>Listeria monocytogenes</i>	Environmental sample	4.4	7201	2.35	+
L70	<i>Listeria monocytogenes</i>	Smoked salmon	13.0	8157	2.66	+

### Inclusivity (continuation)

Reference	Strain	Origin	Inoculation rate in 225 ml of LX broth (CFU/ml)	RFV LIS	VT	LIS test results
L3	<i>Listeria innocua</i>	Heifer's liver	1.3	7239	2.36	+
L1	<i>Listeria innocua</i>	ATCC 33090	16.6	322	0.10	+
L2	<i>Listeria innocua</i>	Minced beef burger	7.2	7347	2.39	+
L64	<i>Listeria innocua</i>	Époisses cheese	8.0	6983	2.26	+
L66	<i>Listeria innocua</i>	Spinach	8.5	7298	2.36	+
L72	<i>Listeria innocua</i>	Boulette d'Avesnes cheese	14.0	7163	2.32	+
L76	<i>Listeria innocua 6b</i>	Minced beef burger	1.7	7278	2.36	+
L77	<i>Listeria innocua 6a</i>	Toulouse sausage	4.8	7012	2.27	+
L78	<i>Listeria innocua</i>	Rooster	9.3	8056	2.63	+
L108	<i>Listeria innocua</i>	Gorgonzola	20.0	156	0.43	+
L113	<i>Listeria innocua</i>	Smoked halibut	24.0	687	0.22	+
L80	<i>Listeria ivanovii</i>	Collection	10.0	1834	0.59	+
L133	<i>Listeria ivanovii</i>	Roquefort cheese	6.4	11553	3.77	+
L151	<i>Listeria ivanovii</i>	Minced beef burger	4.3	1623	0.52	+
L153	<i>Listeria ivanovii</i>	Environmental sample	3.1	9276	3.00	+
L86	<i>Listeria welshimeri 6b</i>	ATCC 35897 Collection	6.8	11682	3.81	+
L87	<i>Listeria welshimeri</i>	Minced beef burger	3.6	7812	2.55	+
L89	<i>Listeria welshimeri 6a</i>	Minced beef burger	5.4	7273	2.37	+
L91	<i>Listeria welshimeri</i>	Rosette dried sausage	9.3	7535	2.46	+
L100	<i>Listeria welshimeri</i>	Spread	5.0	6676	2.17	+
L101	<i>Listeria welshimeri</i>	Traditional ham	5.4	6329	2.06	+
L83	<i>Listeria seeligeri 1/2b</i>	Jellied pork tongue	76.0	694	0.22	+
L84	<i>Listeria seeligeri</i>	Minced beef burger	4.5	9647	3.12	+
L115	<i>Listeria seeligeri</i>	Dirty water	5.8	6401	2.07	+
L80	<i>Listeria grayi</i>	ATCC 19120 Collection	100.0	4631	1.51	+
L147	<i>Listeria grayi</i>	CIP 103213 Collection	15.0	1315	0.42	+

## Exclusivity

Reference	Strain	Origin	Inoculation rate in 225 ml of nutrient broth (CFU/ml)	RFV LIS	VT	LIS test results
BA5	<i>Bacillus sphaericus</i>	Meat product	2.20E+05	8	0.00	-
BA2	<i>Bacillus cereus</i>	Beetroot	3.00E+05	59	0.01	-
BA4	<i>Bacillus stearothermophilus</i>	Dairy product	3.40E+05	4	0.00	-
BA7	<i>Bacillus coagulans</i>	Collection	4.00E+05	11	0.00	-
15	<i>Brochotrix thermosphacta</i>	Minced meat	4.60E+05	5	0.00	-
Le1	<i>Rhodotorula rubra</i>	Pastries	4.00E+05	21	0.00	-
Le3	<i>Candida albicans</i>	Collection	5.00E+05	60	0.02	-
Le5	<i>Saccharomyces cerevisiae</i>	Coffee extract	3.50E+05	279	0.09	-
E1	<i>Enterococcus faecalis</i>	Egg-based product	6.00E+05	6	0.00	-
E6	<i>Enterococcus faecalis</i>	ATCC 19433 Collection	5.20E+05	6	0.00	-
E2	<i>Enterococcus faecium</i>	ATCC 3286 Collection	6.00E+05	18	0.00	-
E7	<i>Enterococcus faecium</i>	CIP 5433 Collection	2.60E+05	5	0.00	-
EN18	<i>Enterobacter cloacae</i>	Collection	2.34E+05	12	0.00	-
EN63	<i>Klebsiella pneumoniae</i>	Celery	8.00E+05	4	0.00	-
EN49	<i>Serratia marcescens</i>	Raw milk	3.60E+05	14	0.00	-
L139	<i>Jonesia denitrificans</i>	Collection	7.60E+05	96	0.03	-
33	<i>Lactobacillus casei</i>	Dairy product	3.10E+05	4	0.00	-
34	<i>Lactobacillus plantarum</i>	Dairy product	4.50E+05	17	0.00	-
35	<i>Lactobacillus paracasei</i>	Dairy product	3.60E+05	3	0.00	-
PS87	<i>Pseudomonas putida</i>	Fish	6.20E+05	32	0.01	-
PS90	<i>Pseudomonas putida</i>	Fish	5.50E+05	18	0.00	-
PS91	<i>Pseudomonas putida</i>	Mushrooms	7.50E+05	35	0.01	-
32	<i>Rhodococcus equi</i>	Meat product	2.40E+05	3	0.00	-
R1	<i>Rhodococcus equi</i>	Collection	6.80E+05	14	0.00	-
COR1	<i>Corynebacterium</i>	Collection (695)	4.20E+05	10	0.00	-
COR2	<i>Corynebacterium</i>	Collection (102112)	6.40E+05	22	0.00	-
E3	<i>Streptococcus bovis</i>	Collection	4.00E+05	6	0.00	-
ST12	<i>Staphylococcus hyicus</i>	Meat product	4.50E+05	6	0.00	-
ST3	<i>Staphylococcus epidermidis</i>	Yogurt	5.50E+05	6	0.00	-
ST17	<i>Staphylococcus aureus</i>	Yogurt	2.60E+05	146	0.04	-

## **Appendix G – Interlaboratory study – Raw results**



**Expert laboratory**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>						Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation		Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT		OAA	PALCAM		
3	Ø	Ø	Ø	Ø	-	=	16	0.00	-	/	/	-	=
4	Ø	Ø	Ø	Ø	-	=	8	0.00	-	/	/	-	=
9	Ø	Ø	Ø	Ø	-	=	6	0.00	-	/	/	-	=
10	Ø	Ø	Ø	Ø	-	=	7	0.00	-	/	/	-	=
17	Ø	Ø	Ø	Ø	-	=	11	0.00	-	/	/	-	=
18	Ø	Ø	Ø	Ø	-	=	21	0.00	-	/	/	-	=
21	Ø	Ø	Ø	Ø	-	=	8	0.00	-	/	/	-	=
22	Ø	Ø	Ø	Ø	-	=	21	0.00	-	/	/	-	=
1	+MA	+MA	+HA	+HA	+	=	7364	2.30	+	+HA	+HA	+	=
2	+MA	+MA	+MA	+HA	+	=	7268	2.27	+	+HA	+HA	+	=
7	+MA	+MA	+HA	+HA	+	=	7088	2.22	+	+HA	+HA	+	=
8	+MA	+MA	+HA	+HA	+	=	7091	2.22	+	+HA	+HA	+	=
13	+MA	+MA	+HA	+HA	+	=	6232	1.95	+	+HA	+HA	+	=
14	+MA	+HA	+HA	+HA	+	=	6197	1.94	+	+MA	+HA	+	=
19	+MA	+MA	+HA	+HA	+	=	6411	2.01	+	+HA	+HA	+	=
20	+MA	+MA	+HA	+HA	+	=	6360	1.99	+	+HA	+HA	+	=
5	+LA	+MA	+MA	+HA	+	=	7053	2.21	+	+HA	+HA	+	=
6	+MA	+HA	+HA	+HA	+	=	7246	2.27	+	+HA	+HA	+	=
11	+LA	+MA	+HA	+HA	+	=	6387	2.00	+	+MA	+HA	+	=
12	+MA	+MA	+HA	+HA	+	=	6350	1.99	+	+HA	+HA	+	=
15	+MA	+HA	+HA	+HA	+	=	6362	1.99	+	+HA	+HA	+	=
16	+MA	+MA	+HA	+HA	+	=	6418	2.01	+	+HA	+HA	+	=
23	+MA	+MA	+HA	+HA	+	=	7168	2.24	+	+HA	+HA	+	=
24	+MA	+HA	+MA	+HA	+	=	6935	2.17	+	+MA	+HA	+	=

Laboratory A

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	RLM	OAA	RLM			RFV	VT				
3	-	-	-	-	-	=	12	0.00	-	-	-	=
4	-	-	-	-	-	=	7	0.00	-	-	-	=
9	-	-	-	-	-	=	11	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	9	0.00	-	-	-	=
18	-	-	-	-	-	=	9	0.01	-	-	-	=
21	-	-	-	-	-	=	10	0.00	-	-	-	=
22	-	-	-	-	-	=	7	0.00	-	-	-	=
1	+	+	+	+	+	=	9031	2.89	+	+	+	=
2	+	+	+	+	+	=	8650	2.74	+	+	+	=
7	+	+	+	+	+	=	9417	2.93	+	+	+	=
8	+	+	+	+	+	=	9600	3.01	+	+	+	=
13	+	+	+	+	+	=	9548	2.93	+	+	+	=
14	+	+	+	+	+	=	9538	2.93	+	+	+	=
19	+	+	+	+	+	=	9071	2.84	+	+	+	=
20	+	+	+	+	+	=	8693	2.72	+	+	+	=
5	+	+	+	+	+	=	9582	3.00	+	+	+	=
6	+	+	+	+	+	=	9547	2.97	+	+	+	=
11	+	+	+	+	+	=	9672	3.08	+	+	+	=
12	+	+	+	+	+	=	9211	2.82	+	+	+	=
15	+	+	+	+	+	=	9040	2.83	+	+	+	=
16	+	+	+	+	+	=	9010	2.82	+	+	+	=
23	+	+	+	+	+	=	8187	2.56	+	+	+	=
24	+	+	+	+	+	=	8423	2.64	+	+	+	=

Enumeration of total viable count (CFU/ml) : 3000

Laboratory B

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
9	-	-	-	-	-	=	9	0.00	-	-	-	=
10	-	-	-	-	-	=	9	0.00	-	-	-	=
3	-	-	-	-	-	=	19	0.00	-	-	-	=
4	-	-	-	-	-	=	10	0.00	-	-	-	=
17	-	-	-	-	-	=	15	0.00	-	-	-	=
18	-	-	-	-	-	=	12	0.01	-	-	-	=
21	-	-	-	-	-	=	22	0.00	-	-	-	=
22	-	-	-	-	-	=	15	0.00	-	-	-	=
1	+	+	+	+	+	=	6637	2.11	+	+	+	=
2	-	-	-	-	-	#	8	0.00	-	-	-	#
7	+	+	+	+	+	=	6252	1.99	+	+	+	=
8	+	+	+	+	+	=	6372	2.03	+	+	+	=
13	+	+	+	+	+	=	6081	1.93	+	+	+	=
14	-	-	-	-	-	#	13	0.00	-	-	-	#
19	+	+	+	+	+	=	6390	2.03	+	+	+	=
20	+	+	+	+	+	=	6353	2.02	+	+	+	=
5	+	+	+	+	+	=	6164	1.96	+	+	+	=
6	+	+	+	+	+	=	6460	2.05	+	+	+	=
11	+	+	+	+	+	=	5971	1.90	+	+	+	=
12	+	+	+	+	+	=	6074	1.93	+	+	+	=
15	+	+	+	+	+	=	5986	1.90	+	+	+	=
16	+	+	+	+	+	=	6050	1.92	+	+	+	=
23	+	+	+	+	+	=	4991	1.59	+	+	+	=
24	+	+	+	+	+	=	4946	1.57	+	+	+	=

Enumeration of total viable count (CFU/ml) : 800

Laboratory C

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	178	0.05	-	-	-	=
4	-	-	-	-	-	=	8	0.00	-	-	-	=
9	-	-	-	-	-	=	15	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	9	0.00	-	-	-	=
18	-	-	-	-	-	=	513	0.16	+	-	-	= (FP)
21	-	-	-	-	-	=	7	0.00	-	-	-	=
22	-	-	-	-	-	=	10	0.00	-	-	-	=
1	+	+	+	+	+	=	6273	1.97	+	+	+	=
2	+	+	+	+	+	=	6834	2.14	+	+	+	=
7	+	+	+	+	+	=	6006	1.88	+	+	+	=
8	+	+	+	+	+	=	7188	2.26	+	+	+	=
13	+	+	+	+	+	=	6487	2.04	+	+	+	=
14	+	+	+	+	+	=	6338	1.99	+	+	+	=
19	+	+	+	+	+	=	6041	1.90	+	+	+	=
20	+	+	+	+	+	=	6568	2.06	+	+	+	=
5	+	+	+	+	+	=	6649	2.09	+	+	+	=
6	+	+	+	+	+	=	6848	2.15	+	+	+	=
11	+	+	+	+	+	=	6079	1.91	+	+	+	=
12	+	+	+	+	+	=	6162	1.93	+	+	+	=
15	+	+	+	+	+	=	6182	1.94	+	+	+	=
16	+	+	+	+	+	=	6003	1.88	+	+	+	=
23	+	+	+	+	+	=	6277	1.97	+	+	+	=
24	+	+	+	+	+	=	6601	2.07	+	+	+	=
Enumeration of total viable count (CFU/ml) :					4000							

Laboratory D

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	5	0.00	-	-	-	=
4	-	-	-	-	-	=	6	0.00	-	-	-	=
17	-	-	-	-	-	=	7	0.00	-	-	-	=
18	-	-	-	-	-	=	37	0.01	-	-	-	=
21	-	-	-	-	-	=	17	0.00	-	-	-	=
22	-	-	-	-	-	=	21	0.00	-	-	-	=
9	-	-	-	-	-	=	5	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
1	+	+	+	+	+	=	5961	1.87	+	+	+	=
2	+	+	+	+	+	=	5991	1.88	+	+	+	=
7	+	+	+	+	+	=	6533	2.05	+	+	+	=
8	-	-	-	-	-	#	6	0.00	-	-	-	#
13	+	+	+	+	+	=	5756	1.76	+	+	+	=
14	+	+	+	+	+	=	5695	1.74	+	+	+	=
19	+	+	+	+	+	=	5789	1.77	+	+	+	=
20	+	+	+	+	+	=	5794	1.77	+	+	+	=
5	+	+	+	+	+	=	6134	1.92	+	+	+	=
6	+	+	+	+	+	=	6270	1.96	+	+	+	=
11	+	+	+	+	+	=	6531	2.05	+	+	+	=
12	+	+	+	+	+	=	6443	2.02	+	+	+	=
15	+	+	+	+	+	=	5638	1.72	+	+	+	=
16	+	+	+	+	+	=	5749	1.76	+	+	+	=
23	+	+	+	+	+	=	5691	1.74	+	+	+	=
24	+	+	+	+	+	=	5663	1.73	+	+	+	=
Enumeration of total viable count (CFU/ml) :					6300							

**Laboratory E**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	7	0.00	-	-	-	=
4	-	-	-	-	-	=	14	0.00	-	-	-	=
9	-	-	-	-	-	=	9	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	6	0.00	-	-	-	=
18	-	-	-	-	-	=	7	0.00	-	-	-	=
21	-	-	-	-	-	=	7	0.00	-	-	-	=
22	-	-	-	-	-	=	8	0.00	-	-	-	=
1	+	+	+	+	+	=	8093	2.65	+	+	+	=
2	+	+	+	+	+	=	7721	2.52	+	+	+	=
7	+	+	+	+	+	=	8219	2.69	+	+	+	=
8	+	+	+	+	+	=	7954	2.60	+	+	+	=
13	+	+	+	+	+	=	8005	2.62	+	+	+	=
14	+	+	+	+	+	=	7903	2.58	+	+	+	=
19	+	+	+	+	+	=	7829	2.56	+	+	+	=
20	-	-	-	-	-	#	13	0.00	-	-	-	#
5	+	+	+	+	+	=	7602	2.49	+	+	+	=
6	+	+	+	+	+	=	7832	2.56	+	+	+	=
11	+	+	+	+	+	=	7929	2.59	+	+	+	=
12	+	+	+	+	+	=	7911	2.59	+	+	+	=
15	+	+	+	+	+	=	7473	2.44	+	+	+	=
16	+	+	+	+	+	=	7708	2.52	+	+	+	=
23	+	+	+	+	+	=	7901	2.58	+	+	+	=
24	+	+	+	+	+	=	7796	2.55	+	+	+	=
Enumeration of total viable count (CFU/ml) :					3900							

**Laboratory F**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	5	0.00	-	-	-	=
4	-	-	-	-	-	=	5	0.00	-	-	-	=
9	-	-	-	-	-	=	19	0.00	-	-	-	=
10	-	-	-	-	-	=	42	0.01	-	-	-	=
17	-	-	-	-	-	=	5	0.00	-	-	-	=
18	-	-	-	-	-	=	3	0.00	-	-	-	=
21	-	-	-	-	-	=	9	0.00	-	-	-	=
22	-	-	-	-	-	=	4	0.00	-	-	-	=
1	+	+	+	+	+	=	7263	2.39	+	+	+	=
2	+	+	+	+	+	=	7008	2.31	+	+	+	=
7	+	+	+	+	+	=	6202	2.04	+	+	+	=
8	+	+	+	+	+	=	6161	2.09	+	+	+	=
13	+	+	+	+	+	=	7333	2.42	+	+	+	=
14	+	+	+	+	+	=	7164	2.36	+	+	+	=
19	+	+	+	+	+	=	6330	2.09	+	+	+	=
20	+	+	+	+	+	=	6112	2.01	+	+	+	=
5	+	+	+	+	+	=	6655	2.19	+	+	+	=
6	+	+	+	+	+	=	6520	2.15	+	+	+	=
11	+	+	+	+	+	=	6015	1.98	+	+	+	=
12	+	+	+	+	+	=	5998	1.98	+	+	+	=
15	+	+	+	+	+	=	7006	2.31	+	+	+	=
16	+	+	+	+	+	=	6938	2.29	+	+	+	=
23	+	+	+	+	+	=	6044	1.99	+	+	+	=
24	+	+	+	+	+	=	5891	1.94	+	+	+	=
Enumeration of total viable count (CFU/ml) :					3400							

**Laboratory G**

Reference	Reference method				Results	Comparison / expected results	Alternative method VIDAS <i>Listeria</i>				Comparison / expected results	
	Fraser 1/2		Fraser				Test LIS		Test results	Confirmation		Results
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	11	0.00	-	-	-	=
4	-	-	-	-	-	=	8	0.00	-	-	-	=
9	-	-	-	-	-	=	9	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	7	0.00	-	-	-	=
18	-	-	-	-	-	=	5	0.00	-	-	-	=
21	-	-	-	-	-	=	10	0.00	-	-	-	=
22	-	-	-	-	-	=	7	0.00	-	-	-	=
1	+	+	+	+	+	=	6535	1.90	+	+	+	=
2	+	+	+	+	+	=	6788	1.98	+	+	+	=
7	+	+	+	+	+	=	7004	2.04	+	+	+	=
8	+	+	+	+	+	=	6734	1.96	+	+	+	=
13	-	-	-	-	-	#	9	0.00	-	-	-	#
14	+	+	+	+	+	=	8768	2.56	+	+	+	=
19	+	+	+	+	+	=	8261	2.41	+	+	+	=
20	+	+	+	+	+	=	7832	2.28	+	+	+	=
5	+	+	+	+	+	=	6601	1.94	+	+	+	=
6	+	+	+	+	+	=	6496	1.88	+	+	+	=
11	+	+	+	+	+	=	8148	2.37	+	+	+	=
12	+	+	+	+	+	=	8448	2.46	+	+	+	=
15	+	+	+	+	+	=	8094	2.36	+	+	+	=
16	+	+	+	+	+	=	8138	2.37	+	+	+	=
23	+	+	+	+	+	=	8210	2.39	+	+	+	=
24	+	+	+	+	+	=	7974	2.32	+	+	+	=
Enumeration of total viable count (CFU/ml) :					6000							

**Laboratory I**

Reference	Reference method				Results	Comparison / expected results	Alternative method VIDAS <i>Listeria</i>				Comparison / expected results	
	Fraser 1/2		Fraser				Test LIS		Test results	Confirmation		Results
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
1	+	+	+	+	+	=	9480	3.19	+	+	+	=
2	+	+	+	+	+	=	9697	3.27	+	+	+	=
7	+	+	+	+	+	=	8134	2.74	+	+	+	=
8	+	+	+	+	+	=	8447	2.85	+	+	+	=
13	+	+	+	+	+	=	8426	2.84	+	+	+	=
14	+	+	+	+	+	=	8697	2.93	+	+	+	=
19	+	+	+	+	+	=	8561	2.88	+	+	+	=
20	-	-	-	-	-	#	15	0.00	-	-	-	#
3	-	-	-	-	-	=	183	0.06	-	-	-	=
4	-	-	-	-	-	=	22	0.00	-	-	-	=
9	-	-	-	-	-	=	13	0.00	-	-	-	=
10	-	-	-	-	-	=	9	0.00	-	-	-	=
17	-	-	-	-	-	=	13	0.00	-	-	-	=
18	-	-	-	-	-	=	14	0.00	-	-	-	=
21	-	-	-	-	-	=	11	0.00	-	-	-	=
22	-	-	-	-	-	=	8	0.00	-	-	-	=
5	+	+	+	+	+	=	9874	3.33	+	+	+	=
6	+	+	+	+	+	=	9862	3.32	+	+	+	=
11	+	+	+	+	+	=	9054	3.05	+	+	+	=
12	+	+	+	+	+	=	8588	2.89	+	+	+	=
15	+	+	+	+	+	=	8807	2.97	+	+	+	=
16	+	+	+	+	+	=	8910	3.00	+	+	+	=
23	+	+	+	+	+	=	9117	3.07	+	+	+	=
24	+	+	+	+	+	=	9116	3.07	+	+	+	=
Enumeration of total viable count (CFU/ml) :					ND							

**Laboratory J**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	6	0.00	-	-	-	=
4	-	-	-	-	-	=	10	0.00	-	-	-	=
9	-	-	-	-	-	=	8	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	6	0.00	-	-	-	=
18	-	-	-	-	-	=	8	0.00	-	-	-	=
21	-	-	-	-	-	=	8	0.00	-	-	-	=
22	-	-	-	-	-	=	8	0.00	-	-	-	=
1	+	+	+	+	+	=	7224	2.17	+	+	+	=
2	+	+	+	+	+	=	7226	2.15	+	+	+	=
7	+	+	+	+	+	=	7367	2.20	+	+	+	=
8	+	+	+	+	+	=	7191	2.14	+	+	+	=
13	+	+	+	+	+	=	8287	2.47	+	+	+	=
14	-	-	-	-	-	#	10	0.00	-	-	-	#
19	+	+	+	+	+	=	8956	2.67	+	+	+	=
20	+	+	+	+	+	=	9013	2.69	+	+	+	=
5	+	+	+	+	+	=	7090	2.29	+	+	+	=
6	+	+	+	+	+	=	7334	2.19	+	+	+	=
11	+	+	+	+	+	=	9314	2.78	+	+	+	=
12	+	+	+	+	+	=	8745	2.61	+	+	+	=
15	+	+	+	+	+	=	9849	2.94	+	+	+	=
16	+	+	+	+	+	=	9721	2.90	+	+	+	=
23	+	+	+	+	+	=	7639	2.28	+	+	+	=
24	+	+	+	+	+	=	7697	2.30	+	+	+	=

Enumeration of total viable count (CFU/ml) : 3000

**Laboratory K**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM & RLM	OAA	PALCAM & RLM			RFV	VT				
3	-	-	-	-	-	=	14	0.00	-	-	-	=
4	-	-	-	-	-	=	28	0.00	-	-	-	=
9	-	-	-	-	-	=	11	0.00	-	-	-	=
10	-	-	-	-	-	=	11	0.00	-	-	-	=
17	-	-	-	-	-	=	14	0.00	-	-	-	=
18	-	-	-	-	-	=	7	0.00	-	-	-	=
21	-	-	-	-	-	=	15	0.00	-	-	-	=
22	-	-	-	-	-	=	11	0.00	-	-	-	=
1	+	+	+	+	+	=	6935	2.10	+	+	+	=
2	+	+	+	+	+	=	7022	2.10	+	+	+	=
7	+	+	+	+	+	=	6516	2.00	+	+	+	=
8	+	+	+	+	+	=	6644	2.04	+	+	+	=
13	+	+	+	+	+	=	6689	2.06	+	+	+	=
14	+	+	+	+	+	=	6894	2.12	+	+	+	=
19	+	+	+	+	+	=	6460	1.99	+	+	+	=
20	+	+	+	+	+	=	6600	2.09	+	+	+	=
5	+	+	+	+	+	=	6957	2.14	+	+	+	=
6	+	+	+	+	+	=	6953	2.14	+	+	+	=
11	+	+	+	+	+	=	6246	1.92	+	+	+	=
12	+	+	+	+	+	=	6268	1.93	+	+	+	=
15	+	+	+	+	+	=	6765	2.08	+	+	+	=
16	+	+	+	+	+	=	6709	2.12	+	+	+	=
23	+	+	+	+	+	=	7505	2.31	+	+	+	=
24	+	+	+	+	+	=	7403	2.28	+	+	+	=

Enumeration of total viable count (CFU/ml) : 3800

**Laboratory L**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	14	0.00	-	-	-	=
4	-	-	-	-	-	=	24	0.00	-	-	-	=
9	-	-	-	-	-	=	9	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	10	0.00	-	-	-	=
18	-	-	-	-	-	=	8	0.00	-	-	-	=
21	-	-	-	-	-	=	110	0.09	-	-	-	=
22	-	-	-	-	-	=	8	0.00	-	-	-	=
1	+	+	+	+	+	=	7645	2.39	+	+	+	=
2	+	+	+	+	+	=	8032	2.52	+	+	+	=
7	+	+	+	+	+	=	7190	2.29	+	+	+	=
8	-	-	-	-	-	#	15	0.00	-	-	-	#
13	+	+	+	+	+	=	7675	2.40	+	+	+	=
14	+	+	+	+	+	=	7619	2.39	+	+	+	=
19	-	-	-	-	-	#	19	0.00	-	-	-	#
20	+	+	+	+	+	=	7745	2.49	+	+	+	#
5	+	+	+	+	+	=	8726	2.73	+	+	+	=
6	+	+	+	+	+	=	8588	2.69	+	+	+	=
11	+	+	+	+	+	=	6971	2.18	+	+	+	=
12	+	+	+	+	+	=	6829	2.14	+	+	+	=
15	+	+	+	+	+	=	7570	2.37	+	+	+	=
16	+	+	+	+	+	=	7591	2.38	+	+	+	=
23	+	+	+	+	+	=	7259	2.29	+	+	+	=
24	+	+	+	+	+	=	6998	2.19	+	+	+	=
Enumeration of total viable count (CFU/ml) :					2400							

**Laboratory M**

Reference	Reference method					Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser		Results		Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	12	0.00	-	-	-	=
4	-	-	-	-	-	=	14	0.00	-	-	-	=
9	-	-	-	-	-	=	13	0.00	-	-	-	=
10	-	-	-	-	-	=	7	0.00	-	-	-	=
17	-	-	-	-	-	=	15	0.00	-	-	-	=
18	-	-	-	-	-	=	11	0.00	-	-	-	=
21	-	-	-	-	-	=	10	0.00	-	-	-	=
22	-	-	-	-	-	=	15	0.00	-	-	-	=
1	+	+	+	+	+	=	7683	2.33	+	+	+	=
2	+	+	+	+	+	=	7468	2.26	+	+	+	=
7	-	-	-	-	-	#	10	0.00	-	-	-	#
8	+	+	+	+	+	=	7111	2.16	+	+	+	=
13	+	+	+	+	+	=	7476	2.27	+	+	+	=
14	+	+	+	+	+	=	7308	2.22	+	+	+	=
19	+	+	+	+	+	=	7462	2.26	+	+	+	=
20	+	+	+	+	+	=	6923	2.10	+	+	+	=
5	+	+	+	+	+	=	7318	2.22	+	+	+	=
6	+	+	+	+	+	=	6977	2.12	+	+	+	=
11	+	+	+	+	+	=	6907	2.09	+	+	+	=
12	+	+	+	+	+	=	6845	2.08	+	+	+	=
15	+	+	+	+	+	=	7350	2.23	+	+	+	=
16	+	+	+	+	+	=	7124	2.16	+	+	+	=
23	+	+	+	+	+	=	6210	1.88	+	+	+	=
24	+	+	+	+	+	=	6095	1.85	+	+	+	=
Enumeration of total viable count (CFU/ml) :					9900							

Laboratory N

Reference	Reference method				Results	Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser				Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	8	0.00	-	-	-	=
4	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	19	0.00	-	-	-	=
18	-	-	-	-	-	=	18	0.00	-	-	-	=
21	-	-	-	-	-	=	11	0.00	-	-	-	=
22	-	-	-	-	-	=	8	0.00	-	-	-	=
9	-	-	-	-	-	=	9	0.00	-	-	-	=
10	-	-	-	-	-	=	9	0.00	-	-	-	=
1	+	+	+	+	+	=	8134	2.63	+	+	+	=
2	+	+	+	+	+	=	8028	2.60	+	+	+	=
7	+	+	+	+	+	=	7202	2.33	+	+	+	=
8	+	+	+	+	+	=	7101	2.30	+	+	+	=
13	+	+	+	+	+	=	7855	2.40	+	+	+	=
14	+	+	+	+	+	=	7891	2.41	+	+	+	=
19	+	+	+	+	+	=	7576	2.32	+	+	+	=
20	+	+	+	+	+	=	7698	2.36	+	+	+	=
5	+	+	+	+	+	=	7297	2.36	+	+	+	=
6	+	+	+	+	+	=	6850	2.22	+	+	+	=
11	+	+	+	+	+	=	6916	2.24	+	+	+	=
12	+	+	+	+	+	=	6655	2.15	+	+	+	=
15	+	+	+	+	+	=	7902	2.42	+	+	+	=
16	+	+	+	+	+	=	8054	2.46	+	+	+	=
23	+	+	+	+	+	=	7469	2.28	+	+	+	=
24	+	+	+	+	+	=	7508	2.30	+	+	+	=
Enumeration of total viable count (CFU/ml) :					4600							

Laboratory O

Reference	Reference method				Results	Comparison / expected results	Alternative method VIDAS <i>Listeria</i>					Comparison / expected results
	Fraser 1/2		Fraser				Test LIS		Test results	Confirmation	Results	
	OAA	PALCAM	OAA	PALCAM			RFV	VT				
3	-	-	-	-	-	=	7	0.00	-	-	-	=
4	-	-	-	-	-	=	7	0.00	-	-	-	=
9	-	-	-	-	-	=	8	0.00	-	-	-	=
10	-	-	-	-	-	=	8	0.00	-	-	-	=
17	-	-	-	-	-	=	10	0.00	-	-	-	=
18	-	-	-	-	-	=	8	0.00	-	-	-	=
21	-	-	-	-	-	=	7	0.00	-	-	-	=
22	-	-	-	-	-	=	10	0.00	-	-	-	=
1	-	-	-	-	-	#	6	0.00	-	-	-	#
2	-	-	-	-	-	#	6	0.00	-	-	-	#
7	+	+	+	+	+	=	6535	2.05	+	+	+	=
8	+	+	+	+	+	=	6785	2.13	+	+	+	=
13	-	-	-	-	-	#	9	0.00	-	-	-	#
14	+	+	+	+	+	=	6928	2.17	+	+	+	=
19	+	+	+	+	+	=	6730	2.11	+	+	+	=
20	+	+	+	+	+	=	7068	2.21	+	+	+	=
5	+	+	+	+	+	=	8238	2.58	+	+	+	=
6	+	+	+	+	+	=	8241	2.58	+	+	+	=
11	+	+	+	+	+	=	7183	2.25	+	+	+	=
12	+	+	+	+	+	=	7004	2.19	+	+	+	=
15	+	+	+	+	+	=	7513	2.35	+	+	+	=
16	+	+	+	+	+	=	7129	2.23	+	+	+	=
23	+	+	+	+	+	=	6945	2.18	+	+	+	=
24	+	+	+	+	+	=	6878	2.16	+	+	+	=
Enumeration of total viable count (CFU/ml) :					6600							