

***NF Validation Certification of the  
AL *Listeria* spp and *Listeria monocytogenes*  
detection method***

Certificate number: BRD 07/16 – 01/09

*Comparative and collaborative studies as per the standard  
EN ISO 16140 – Alternative qualitative analysis method  
(microbiology of food)*

**SUMMARY REPORT**

|                                                                    |            |
|--------------------------------------------------------------------|------------|
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| <u>Extension date:</u><br><i>Extension to <i>Listeria</i> spp.</i> | 02/02/2012 |
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AL detection – Summary 2013

This document contains 13 pages and 4 appendices

# CONTENT

|          |                                                                                                                                                |           |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION .....</b>                                                                                                                      | <b>2</b>  |
| 1.1      | VALIDATION REFERENCE AND SCOPE .....                                                                                                           | 2         |
| 1.2      | PROTOCOL AND PRINCIPLE OF THE AL DETECTION METHOD .....                                                                                        | 2         |
| 1.2.1    | <i>Protocol .....</i>                                                                                                                          | 2         |
| 1.2.2    | <i>Principle of the AL detection method .....</i>                                                                                              | 3         |
| 1.3      | REFERENCE METHOD .....                                                                                                                         | 3         |
| 1.4      | VALIDATION HISTORY .....                                                                                                                       | 3         |
| <b>2</b> | <b>COMPARATIVE STUDY OF METHODS.....</b>                                                                                                       | <b>3</b>  |
| 2.1      | RELATIVE ACCURACY, RELATIVE SPECIFICITY AND RELATIVE SENSITIVITY .....                                                                         | 3         |
| 2.1.1    | <i>Results of assays .....</i>                                                                                                                 | 3         |
| 2.1.2    | <i>Calculation of relative accuracy (AC), relative specificity (SP) and relative sensitivity (SE) according to EN ISO 16140 standard .....</i> | 4         |
| 2.1.3    | <i>Analysis of discrepant results .....</i>                                                                                                    | 5         |
| 2.1.4    | <i>Comments on results obtained after storage at 2–8 °C.....</i>                                                                               | 5         |
| 2.1.5    | <i>Comments on confirmation protocol .....</i>                                                                                                 | 5         |
| 2.2      | RELATIVE DETECTION LEVEL.....                                                                                                                  | 5         |
| 2.3      | INCLUSIVITY / EXCLUSIVITY .....                                                                                                                | 6         |
| 2.3.1    | <i>Protocols .....</i>                                                                                                                         | 6         |
| 2.3.2    | <i>Results and conclusion .....</i>                                                                                                            | 6         |
| <b>3</b> | <b>INTERLABORATORY STUDY .....</b>                                                                                                             | <b>7</b>  |
| 3.1      | STUDY ORGANIZATION .....                                                                                                                       | 7         |
| 3.2      | EXPERIMENTAL PARAMETER TESTS.....                                                                                                              | 7         |
| 3.2.1    | <i>Levels obtained after artificial contamination .....</i>                                                                                    | 7         |
| 3.2.2    | <i>Temperature recorded during transport, temperature on receipt and reception times.....</i>                                                  | 7         |
|          | <i>Conclusion .....</i>                                                                                                                        | 8         |
| 3.3      | RESULTS OF ANALYSES.....                                                                                                                       | 8         |
| 3.3.1    | <i>Results obtained by collaborating laboratories .....</i>                                                                                    | 8         |
| 3.3.2    | <i>Comments (discordances with expected results, exclusions... for instance) .....</i>                                                         | 8         |
| 3.3.3    | <i>Conclusion (discordances with expected results, exclusions... for instance).....</i>                                                        | 9         |
| 3.4      | CALCULATIONS.....                                                                                                                              | 9         |
| 3.4.1    | <i>Specificity (%SP) and sensitivity (% SE) for both methods .....</i>                                                                         | 9         |
| 3.4.2    | <i>Relative accuracy (AC) .....</i>                                                                                                            | 9         |
| 3.4.3    | <i>Study of discrepant results.....</i>                                                                                                        | 10        |
| 3.5      | INTERPRETATION .....                                                                                                                           | 10        |
| 3.5.1    | <i>Comparison of relative precision (AC), specificity (SP) and sensitivity (SE) values.....</i>                                                | 10        |
| 3.5.2    | <i>Accordance (DA).....</i>                                                                                                                    | 10        |
| 3.5.3    | <i>Concordance.....</i>                                                                                                                        | 10        |
| 3.5.4    | <i>Odds Ratio (COR).....</i>                                                                                                                   | 11        |
| <b>4</b> | <b>PRACTICABILITY.....</b>                                                                                                                     | <b>12</b> |
| <b>5</b> | <b>CONCLUSION .....</b>                                                                                                                        | <b>13</b> |
|          | <b>APPENDICES</b>                                                                                                                              |           |

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# **1 Introduction**

## **1.1 Validation reference and scope**

The AL detection method has been validated for the detection of *Listeria* spp and *Listeria monocytogenes* in food products for human and environmental samples. The validation was conducted based on the EN ISO 16140 (2003) standard and the requirements carried out by an expert laboratory (Revision 3, validated by the Microbiological Technical Department of NF Validation dated Feb. 3, 2011) with respect to the EN ISO 11290-1:1997 reference method including its amendment A1:2004.

The scope is as follows:

- Human food products:
  - o Meat products,
  - o Dairy products (including raw milk cheeses),
  - o Seafood (including smoked fishes),
  - o Vegetables,
- Environmental samples.

## **1.2 Protocol and principle of the AL detection method**

### **1.2.1 Protocol**

The diagram summarising the method is shown in appendix A.

The analytical steps are as follows:

- enrichment in Fraser ½ complete broth for 24 hours +/- 2 heures at 30°C +/- 1°C,
- plating out 0.1ml on an AL plate for isolation, incubation for 24 hours +/- 2 hours at 37°C +/- 1°C,

The characteristic colonies of *Listeria* on AL plates (blue to green with or without halo) must be confirmed:

- 1) using the conventional tests described in the standardized CEN or ISO methods, including a purification step,
- 2) by streaking sub-culture on Palcam agar, without purification if the colony is sufficiently isolated;
- 3) by streaking sub-culture on RAPID *Listeria* spp agar, without purification if the colony is sufficiently isolated;
- 4) by streaking sub-culture on RAPID *L. Mono* agar, without purification if the colony is sufficiently isolated, to confirm the presence of *Listeria monocytogenes*;
- 5) using nucleic probes, directly from an isolated colony.

The AL plates are reading after 24 hours incubation, and at 48 hours incubation.

The enrichment broths were also stored for 72 hours at 2 – 8°C and a second series of AL agar inoculation and confirmation tests was performed from the accuracy study in order to validate the possibility of deferring the AL isolation and the confirmations.

## 1.2.2 Principle of the AL detection method

The AL medium is specific for *Listeria spp.* and *Listeria monocytogenes*.

The principle of AL medium (Agar *Listeria* according to Ottaviani and Agosti) is based on the simultaneous detection of 2 enzyme activities:  $\beta$ -glucosidase and phosphatidylinositol-specific phospholipase C (PI-PLC).

- $\beta$ -D-glucosidase activity, common to all *Listeria* genus bacteria is detected using a chromogenic substrate (X-glucoside). Its hydrolysis induces the formation of a blue to blue-green colour in all *Listeria* colonies.
- PI-PLC is an enzyme only detected in pathogenic *Listeria* species: *L. monocytogenes* and *L. ivanovii*. AL medium contains phosphatidylinositol which, when it breaks down, produces an opaque halo around colonies of bacteria of these 2 species.

This halo generally appears after 24 hours of incubation in *L. monocytogenes* and after only 48 hours of incubation in *L. ivanovii*.

## 1.3 Reference method

The validation study was performed with respect to the EN ISO 11290-1 (#) standard method, including its amendment A1:2004.

The outline summarizing the method is given in appendix A.

## 1.4 Validation history

January 2009: initial validation of AL detection method for the detection of *Listeria monocytogenes*;

February 2012: extension to the detection of *Listeria spp.*

November 2012: first reconduction

## 2 Comparative study of methods

### 2.1 Relative accuracy, relative specificity and relative sensitivity

The purpose of this study was to evaluate the performances of the AL detection method with respect to the reference EN ISO 11290-1/A1:2004 method on samples naturally and artificially contaminated with *Listeria* and uncontaminated samples, for the categories falling within the scope.

#### 2.1.1 Results of assays

According to the EN ISO 16140 standard, at least 60 products per category should be analyzed, with around 50% positive products and 50% negative products. At least 30 positive results per category should be obtained. Within the scope of the NF Validation certification study, 683 samples were analysed (339 samples for the initial validation and 344 samples for the extension study).

The analyses were performed in single using both methods.

The various samples analysed and their results are detailed in appendix B.

- **Initial validation : incubation of AL plates for 22 hours at 37°C**

|                                     | Positive reference method<br>(R+)             | Negative reference method<br>(R-)               |
|-------------------------------------|-----------------------------------------------|-------------------------------------------------|
| Positive alternative method<br>(A+) | Positive agreement (A+/R+)<br><b>PA = 155</b> | Positive deviation (R-/A+)<br><b>PD = 1</b>     |
| Negative alternative method<br>(A-) | Negative deviation (A-/R+)<br><b>ND = 2 *</b> | Negative agreement (A-/R-)<br><b>NA = 181 *</b> |

- Initial validation : incubation of AL plates for 48 hours at 37°C**

|                                             | <b>Positive reference method<br/>(R+)</b>     | <b>Negative reference method<br/>(R-)</b>       |
|---------------------------------------------|-----------------------------------------------|-------------------------------------------------|
| <b>Positive alternative method<br/>(A+)</b> | Positive agreement (A+/R+)<br><b>PA = 156</b> | Positive deviation (R-/A+)<br><b>PD = 1</b>     |
| <b>Negative alternative method<br/>(A-)</b> | Negative deviation (A-/R+)<br><b>ND = 1 *</b> | Negative agreement (A-/R-)<br><b>NA = 181 *</b> |

Legend: A+ = positive results confirmed

A- = immediate negative results and negative results after confirmation when presumed positive

\* not including any non-confirmed positive result with AL method

- Extension to Listeria spp - incubation of AL agar for 22 and 48 hours at 37°C**

|                                              | <b>Positive reference method<br/>(R+)</b>    | <b>Negative reference method<br/>(R-)</b>   |
|----------------------------------------------|----------------------------------------------|---------------------------------------------|
| <b>Méthode alternative positive<br/>(A+)</b> | Accord positif (A+/R+)<br><b>PA = 156</b>    | Déviation positive (R-/A+)<br><b>PD = 1</b> |
| <b>Méthode alternative négative<br/>(A-)</b> | Déviation négative (A-/R+)<br><b>ND = 0*</b> | Accord négatif (A-/R-)<br><b>NA = 187*</b>  |

Legend: A+ = positive results confirmed

A- = immediate negative results and negative results after confirmation when presumed positive

\* including 17presumed 22h-results and 9 presumed 48h-results with AL detection method not confirmed

## 2.1.2 Calculation of relative accuracy (AC), relative specificity (SP) and relative sensitivity (SE) according to EN ISO 16140 standard

The set of results obtained were used to calculate the relative accuracy, relative sensitivity and relative specificity for each of the categories and for all the categories, according to the formulas in the EN ISO 16140 standard:

- Initial validation : incubation of AL plates for 22 hours at 37°C**

| Category       | PA         | NA         | ND       | PD       | Sum<br>N   | Relative accuracy<br>AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity<br>SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity<br>SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|------------------------------------------------|---------------|-----------------------------------------------|---------------|-----------------------------------------------|
| Meat products  | 35         | 30         | 2        | 0        | 67         | 97,0                                           | 37            | 94,6                                          | 30            | 100                                           |
| Dairy products | 29         | 47         | 0        | 1        | 77         | 98,7                                           | 29            | 100                                           | 48            | 97,9                                          |
| Seafood        | 30         | 39         | 0        | 0        | 69         | 100                                            | 30            | 100                                           | 39            | 100                                           |
| Vegetables     | 31         | 33         | 0        | 0        | 64         | 100                                            | 31            | 100                                           | 33            | 100                                           |
| Environment    | 30         | 32         | 0        | 0        | 62         | 100                                            | 30            | 100                                           | 32            | 100                                           |
| <b>TOTAL</b>   | <b>155</b> | <b>181</b> | <b>2</b> | <b>1</b> | <b>339</b> | <b>99.1</b>                                    | <b>157</b>    | <b>98.7</b>                                   | <b>182</b>    | <b>99.5</b>                                   |

- Initial validation : incubation of AL plates for 48 hours at 37°C**

| Category       | PA         | NA         | ND       | PD       | Sum<br>N   | Relative accuracy<br>AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity<br>SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity<br>SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|------------------------------------------------|---------------|-----------------------------------------------|---------------|-----------------------------------------------|
| Meat products  | 36         | 30         | 1        | 0        | 67         | 98,5                                           | 37            | 97,3                                          | 30            | 100                                           |
| Dairy products | 29         | 47         | 0        | 1        | 77         | 98,7                                           | 29            | 100                                           | 48            | 97,9                                          |
| Seafood        | 30         | 39         | 0        | 0        | 69         | 100                                            | 30            | 100                                           | 39            | 100                                           |
| Vegetables     | 31         | 33         | 0        | 0        | 64         | 100                                            | 31            | 100                                           | 33            | 100                                           |
| Environment    | 30         | 32         | 0        | 0        | 62         | 100                                            | 30            | 100                                           | 32            | 100                                           |
| <b>TOTAL</b>   | <b>156</b> | <b>181</b> | <b>1</b> | <b>1</b> | <b>339</b> | <b>99.4</b>                                    | <b>157</b>    | <b>99.4</b>                                   | <b>182</b>    | <b>99.5</b>                                   |

- **Extension *Listeria* spp**

| Category       | PA         | NA         | ND       | PD       | Sum<br>N   | Relative accuracy<br>AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity<br>SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity<br>SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|------------------------------------------------|---------------|-----------------------------------------------|---------------|-----------------------------------------------|
| Meat products  | 30         | 46         | 0        | 1        | 77         | 99                                             | 30            | 100                                           | 47            | 98                                            |
| Dairy products | 31         | 33         | 0        | 0        | 64         | 100                                            | 31            | 100                                           | 33            | 100                                           |
| Seafood        | 31         | 45         | 0        | 0        | 76         | 100                                            | 31            | 100                                           | 45            | 100                                           |
| Vegetables     | 31         | 30         | 0        | 0        | 61         | 100                                            | 31            | 100                                           | 30            | 100                                           |
| Environment    | 33         | 33         | 0        | 0        | 66         | 100                                            | 33            | 100                                           | 33            | 100                                           |
| <b>TOTAL</b>   | <b>156</b> | <b>187</b> | <b>0</b> | <b>1</b> | <b>344</b> | <b>99.7</b>                                    | <b>156</b>    | <b>100.0</b>                                  | <b>188</b>    | <b>99.5</b>                                   |

For the alternative method, the percentage values calculated for the following three criteria according to the EN ISO 16140 standard are:

|                                 | AL incubation 22h | AL incubation 48h | AL extension <i>L</i> spp |
|---------------------------------|-------------------|-------------------|---------------------------|
| Relative accuracy: <b>AC</b>    | 99.1 %            | 99.4 %            | 99.7 %                    |
| Relative specificity: <b>SP</b> | 99.5 %            | 99.5 %            | 99.5 %                    |
| Relative sensitivity: <b>SE</b> | 98.7 %            | 99.4 %            | 100.0 %                   |

The AFNOR Technical Board asks the sensitivity of the two methods to be recalculated with consideration of all the confirmed positives (this includes the additional positives of the alternative method):

|                                   | Alternative method<br>(PA + PD) / (PA + PD + ND) | Reference method<br>(PA + ND) / (PA + PD + ND) |
|-----------------------------------|--------------------------------------------------|------------------------------------------------|
| AL incubation 22h                 | 98.7 %                                           | 99.4 %                                         |
| AL incubation 48h                 | 99.4 %                                           | 99.4 %                                         |
| AL extension <i>Listeria</i> spp. | 100%                                             | 99.4%                                          |

### 2.1.3 Analysis of discrepant results

According to annex F of the EN ISO 16140 standard, the number of discrepant results for which a statistical test needs to be performed to compare the two methods is 6.

In this study, out of the 683 samples analysed and of the 315 positive results, 4 results (2 FN + 2 PS) were discrepant; a statistical test is not necessary.

The AL detection method can be considered to be equivalent to the EN ISO 11290-1 reference method (including amendment A1) for the detection of *Listeria* in human food products and environmental samples.

### 2.1.4 Comments on results obtained after storage at 2–8 °C

The results obtained after storing the enrichment broths at 2-8°C for 72 hours are identical to those obtained directly after 22h and 48 incubations.

No evolution of the plates aspect (characteristic colonies and interferent flora) was observed.

### 2.1.5 Comments on confirmation protocol

All the characteristic *Listeria* colonies detected after the incubation of AL agar were confirmed.

The results obtained by the different ways of confirmation were consistent with those expected.

However, steps of purification were realized for 10% of the positive samples, because the colonies were not sufficiently isolated (different types of *Listeria* were often present).

## 2.2 Relative detection level

The objective was to determine the level of contamination to obtain about 50% of positive results and 50% negative results.

Various “food matrix-strain” pairs were studied in parallel with the reference method and the AL detection method, for the studied categories.

The levels of detection, calculated using the Spearman – Kärber method (LOD<sub>50</sub>)<sup>(1)</sup>, obtained for each “food matrix-strain” combination are:

| Matrix                | Strain                       | Relative detection level<br>for the <b>reference method</b><br>(UFC / 25 g or 25 mL) | Relative detection level<br>for the <b>alternative method</b><br>(UFC / 25 g or 25 mL) |
|-----------------------|------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Rillettes</b>      | <i>L. monocytogenes</i> 1/2b | 0.7 [0.4 – 1.1]                                                                      | 0.7 [0.4 – 1.1]                                                                        |
| <b>Raw milk</b>       | <i>L. monocytogenes</i> 4b   | 0.7 [0.4 – 1.1]                                                                      | 0.7 [0.4 – 1.1]                                                                        |
| <b>Raw vegetables</b> | <i>L. monocytogenes</i> 4b   | 0.3 [0.2 – 0.5]                                                                      | 0.3 [0.2 – 0.5]                                                                        |
| <b>Smoked salmon</b>  | <i>L. monocytogenes</i> 1/2a | 0.4 [0.2 – 0.6]                                                                      | 0.4 [0.2 – 0.6]                                                                        |
| <b>Process water</b>  | <i>L. monocytogenes</i> 1/2c | 0.4 [0.2 – 0.6]                                                                      | 0.4 [0.2 – 0.6]                                                                        |
| <b>Raw milk</b>       | <i>L. ivanovii</i>           | 0.6 [0.3 – 1.2]                                                                      | 0.6 [0.3 – 1.2]                                                                        |
| <b>Red cabbage</b>    | <i>L. welshimeri</i>         | 0.7 [0.3 – 1.5]                                                                      | 0.7 [0.3 – 1.5]                                                                        |
| <b>Process water</b>  | <i>L. innocua</i>            | 0.6 [0.3 – 1.1]                                                                      | 0.6 [0.3 – 1.1]                                                                        |

<sup>(1)</sup>“Hitchins A. Proposed Use of a 50% Limit of Detection Value in Defining Uncertainty Limits in the Validation of Presence-Absence Microbial Detection Methods, Draft 10<sup>th</sup> December, 2003.”

<sup>(2)</sup>LOD<sub>50</sub>: estimated level of contamination enabling a positive detection using the alternative method in 50 % of cases.

### **Conclusion:**

The level of detection was between 0.2 and 1.5 cells per 25 g or 25 mL for the AL detection method and is the same as the reference method.

## **2.3 Inclusivity / exclusivity**

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

### Initial validation:

The inclusivity was studied on 60 strains of *Listeria monocytogenes*

The exclusivity was studied on 19 strains of *Listeria* and 18 other strains

### Extension study:

The inclusivity was studied on 51 strains of *Listeria*, including 26 *Listeria monocytogenes* strains

The exclusivity was studied on 24 other strains

The detailed results are given in appendix C.

### **2.3.1 Protocols**

#### Protocol for inclusivity

For each of the *Listeria* strains, a culture in nutrient broth was prepared and tested with the complete AL detection protocol.

#### Protocol for exclusivity

The different negative strains were cultured in nutrient broth before isolation onto AL plates.

### **2.3.2 Results and conclusion**

#### Initial validation:

The 60 *Listeria monocytogenes* strains were detected with the AL detection method (blue colony with halo).

The 19 *Listeria* other than *monocytogenes* strains were blue without halo on AL medium, except the *Listeria ivanovii* strains, which gave blue colonies with halo in 24 hours incubation. Consistent results were observed with the reference method (after 48 hours incubation on Palcam plates and 24 hours incubation on AL plates). However, the size of halo for the *Listeria ivanovii* strains is smaller than the size of halo for the *Listeria monocytogenes* strains.

No cross reaction was observed with the 18 non-*Listeria* strains, tested on AL medium.

#### Extension study:

The 51 *Listeria* strains were detected with the AL detection method. Blue colonies are typical of *Listeria* strains and *Listeria monocytogenes* strains were blue with halo.

Of the 24 non-target strains tested, 5 cross reactions were observed on AL medium. But all positive results with AL detection method were not confirmed.

The specificity of the method is satisfactory.

## **3 Interlaboratory study**

### **3.1 Study organization**

The inter-laboratory study was performed in November 2008 based on the EN ISO 16140 standard.

The samples were sent to sixteen laboratories. They received 24 x 25mL of pasteurized milk (3 contamination levels, 8 samples per contamination level) to be analyzed in parallel using the EN ISO 11290-1 (including the amendment A1) reference method and the AL detection method.

The strain used for the contamination was a *Listeria monocytogenes* strain (source: raw milk cheese).

### **3.2 Experimental parameter tests**

#### **3.2.1 Levels obtained after artificial contamination**

The contamination levels obtained in the matrix with the estimated limits are given in table below:

| Level           | Samples               | Targeted theoretical rate (b/25ml) | Real rate (b/25ml) | Estimated lower limit of contamination per 25ml | Estimated upper limit of contamination per 25ml |
|-----------------|-----------------------|------------------------------------|--------------------|-------------------------------------------------|-------------------------------------------------|
| Level 0 (L0)    | 5-6-7-8-17-18-19-20   | 0                                  | 0                  |                                                 |                                                 |
| Low level (L1)  | 1-2-9-10-11-12-21-22  | 3                                  | 3.9                | 1.1                                             | 11.6                                            |
| High level (L2) | 9-4-13-14-15-16-23-24 | 30                                 | 42.3               | 30                                              | 58                                              |

#### **3.2.2 Temperature recorded during transport, temperature on receipt and reception times**

The temperature curves obtained following the temperature logger demonstrated that the temperatures were between -0.5°C and 7.2°C during transport and thus less than 8°C until the receipt of the samples in the various laboratories.

Of the 16 laboratories to receive the samples, 15 laboratories received the samples on the day following dispatch. One laboratory (O) received its shipment on the following day (D2).

The laboratory I has informed that some leakages occurred in the package that could lead to cross-contamination. These two laboratories were excluded from the interpretation of the results.

## Conclusion

Following the dispatch of the samples to the 16 laboratories, the results are suitable for processing for 15 laboratories (exclusion of laboratories O following the sample receipt conditions).

## 3.3 Results of analyses

### 3.3.1 Results obtained by collaborating laboratories

The detailed *Listeria* results are given in appendix D for the 16 laboratories.

The results are summarized below:

#### Positive results obtained by the reference method

| Laboratories | Levels of contamination |            |          |            |          |            |
|--------------|-------------------------|------------|----------|------------|----------|------------|
|              | L0                      |            | L1       |            | L2       |            |
|              | Obtained                | Nb samples | Obtained | Nb samples | Obtained | Nb samples |
| Lab A        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab B        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab C        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab D        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab E        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab F        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab G        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab H        | 0                       | 8          | 8        | 8          | 4        | 8          |
| Lab I        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab J        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab K        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab L        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab M        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab N        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab O        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab P        | 0                       | 8          | 8        | 8          | 8        | 8          |

#### Positive results obtained by the alternative method

| Laboratories | Levels of contamination |            |          |            |          |            |
|--------------|-------------------------|------------|----------|------------|----------|------------|
|              | L0                      |            | L1       |            | L2       |            |
|              | Obtained                | Nb samples | Obtained | Nb samples | Obtained | Nb samples |
| Lab A        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab B        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab C        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab D        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab E        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab F        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab G        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab H        | 0                       | 8          | 8        | 8          | 4        | 8          |
| Lab I        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab J        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab K        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab L        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab M        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab N        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab O        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab P        | 0                       | 8          | 8        | 8          | 8        | 8          |

### 3.3.2 Comments (discordances with expected results, exclusions... for instance)

The uncontaminated samples (level L0) were all found to be negative with both methods.

The samples with the lowest level of contamination (level L1) were all found to be positive with both methods.

For the highest level of contamination (level L2), all samples were found to be positive with both methods, except for the laboratory H.

Since the results are consistent between methods and the enrichment broth is the same, the most likely hypothesis to explain these results is that the last batch of 4 samples was not well inoculated by the expert laboratory during the samples preparation.

The laboratory "I" has informed that some leakages occurred in the package. But, the results are consistent.

### 3.3.3 Conclusion (discordances with expected results, exclusions... for instance)

Finally it is thus possible to interpret the results from 14 laboratories (receipt of D1, temperature 0 and 8°C). The results of the reference method and the alternative method are consistent for the 14 laboratories selected.

## 3.4 Calculations

### 3.4.1 Specificity (%SP) and sensitivity (%SE) for both methods

**For level L0**, it is requested that the specificity percentage (%SP) should be calculated using each of the methods:

$$SP = \{1 - (FP/N_-)\} \times 100$$

where FP, number of false positives  
N<sub>-</sub>, total number of tests L0

**For levels L1 and L2**, it is requested that the sensitivity percentage (%SE) should be calculated for each of the methods, compared with the number of expected positive results:

$$SE = (TP/N_+) \times 100$$

where TP, number of true positives  
N<sub>+</sub>, total number of tests L1 or L2

The results are given in the following table:

| Level | Reference method |        | Alternative method |        |
|-------|------------------|--------|--------------------|--------|
|       | SP/SE            | LCL* % | SP/SE              | LCL* % |
| L0    | SP% = 100        | 100    | SP% = 100          | 100    |
| L1    | SE% = 100        | 100    | SE% = 100          | 100    |
| L2    | SE% = 100        | 100    | SE% = 100          | 100    |
| L1+L2 | SE% = 100        | 100    | SE% = 100          | 100    |

\* LCL: low critical value, defined in standard EN ISO 16140

### 3.4.2 Relative accuracy (AC)

The relative precision is calculated using the following formula:

$$AC = \{(PA + NA) / N\} \times 100$$

where PA, number of positive agreements  
NA, number of negative agreements

The results of the pairs of results from the alternative method and the reference method are given below:

|                                     | Positive reference method<br>(R+)      | Negative reference method<br>(R-)       | Total      |
|-------------------------------------|----------------------------------------|-----------------------------------------|------------|
| Positive alternative method<br>(A+) | Positive agreement (A+/R+)<br>PA = 224 | Positive deviation (R-/A+)<br>PD = 0    | (N+) = 224 |
| Negative alternative method<br>(A-) | Negative deviation (A-/R+)<br>ND = 0*  | Negative agreement (A-/R-)<br>NA = 112* | (N-) = 112 |
| Total                               | (N+) = 224                             | (N-) = 112                              | N = 336    |

\* not including any non-confirmed positive AL result

The relative accuracy values for the alternative method with respect to the reference method were calculated for each of the levels. The result is AC = 100%.

### 3.4.3 Study of discrepant results

According to annex F of the EN ISO 16140 standard, the number of discrepant results from which a statistical test needs to be performed to compare the two methods is 6.

No discrepant result was observed. Thus, no statistical test was used.

The AL detection method can be considered to be equivalent to the ISO 11290-1 reference method (including amendment A1) for the detection of *Listeria* in human food products and environmental samples.

## 3.5 Interpretation

### 3.5.1 Comparison of relative precision (AC), specificity (SP) and sensitivity (SE) values

The values obtained in the two parts of the validation study are given in the following table:

|                        | Interlaboratory study | Preliminary study |                   |
|------------------------|-----------------------|-------------------|-------------------|
|                        |                       | Incubation AL 22h | Incubation AL 48h |
| Relative accuracy (AC) | 100 %                 | 99.1 %            | 99.4 %            |
| Sensitivity (SE)       | 100 %                 | 99.5 %            | 99.5 %            |
| Specificity (SP)       | 100 %                 | 98.7 %            | 99.4 %            |

The values obtained following the interlaboratory study are higher than the values obtained during the preliminary study, explained by the fact that the interlaboratory study is realized with only one spiked matrix.

The AFNOR Technical Bureau requests the sensitivity of the two methods to be recalculated with consideration of all the confirmed positives (true positive results):

| Alternative method                    | Reference method                      |
|---------------------------------------|---------------------------------------|
| $(PA + PD) / (PA + PD + ND) = 100 \%$ | $(PA + ND) / (PA + PD + ND) = 100 \%$ |

### 3.5.2 Accordance (DA)

Accordance is the percentage of likelihood of obtaining the same result for two identical test samples analyzed in the same laboratory under repeatability conditions, i.e. a single operator using the same apparatus and the same reagents within the shortest possible time interval.

To calculate the accordance, it is necessary to calculate the probability of two identical samples giving the same result, for each of the participating laboratories, and subsequently determine the mean of the probabilities of all the laboratories.

The degrees of accordance for each of the methods, at each of the levels are given below:

| Level | Reference method | Alternative method |
|-------|------------------|--------------------|
| L0    | DA % = 100 %     | DA % = 100 %       |
| L1    | DA % = 100 %     | DA % = 100 %       |
| L2    | DA % = 100 %     | DA % = 100 %       |

### 3.5.3 Concordance

The concordance is the percentage of likelihood of obtaining the same result for two identical samples analyzed in two different laboratories.

It thus consists of calculating the percentage of all the pairs giving the same results on all the possible pairs of results.

The concordance percentages for each of the methods, at each of the levels are given in the following table:

| Level | Reference method      | Alternative method    |
|-------|-----------------------|-----------------------|
| L0    | Concordance % = 100 % | Concordance % = 100 % |
| L1    | Concordance % = 100 % | Concordance % = 100 % |
| L2    | Concordance % = 100 % | Concordance % = 100 % |

### 3.5.4 Odds Ratio (COR)

Calculated using the following formula:

$$\text{COR} = \frac{\text{accordance} \times (100 - \text{concordance})}{\text{concordance} \times (100 - \text{accordance})}$$

The odds ratios for each of the methods, at each of the levels are given below:

| Level | Alternative method | Reference method |
|-------|--------------------|------------------|
| L0    | COR = 1.00         | COR = 1.00       |
| L1    | COR = 1.00         | COR = 1.00       |
| L2    | COR = 1.00         | COR = 1.00       |

A value of 1.00 for the odds ratio means that the degree of agreement and the agreement are equal. The higher is the odds ratio, the more predominant is the inter-laboratory variation.

## 4 Practicability

Practicability is studied based on the 13 criteria defined by AFNOR Certification by comparing the EN ISO 11290-1 reference method (including amendment A1) to the AL detection method.

|                                                                                                                        |                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Method component – packaging mode (see package insert)<br>2. Reagent volume (see package insert and vial packaging) | Agar plates are packaged in 20 90mm-plates boxes                                                                                                                                                                   |
| 3. Component storage conditions and shelf-life of unopened products (see package insert)                               | The plates storage temperature is +2°C - +8°C                                                                                                                                                                      |
| 4. Conditions for use after first use (see package insert)                                                             | Each plate plate should be stored at 2–8°C, and used in 1 month                                                                                                                                                    |
| 5. Specific equipment or premises required (see package insert)                                                        | Normal configuration and standard microbiology laboratory equipment (Stomacher type mixer, incubators, etc...)<br>The equipment required includes:<br>- an incubator at 30°C ± 1°C<br>- an incubator at 37°C ± 1°C |
| 6. Reagents ready for use or requiring reconstitution (see package insert)                                             | All plates are ready for use.                                                                                                                                                                                      |
| 7. Training time for operators with no previous experience of method                                                   | For an operator trained on conventional microbiology techniques, training on the technique requires less than 1 day.                                                                                               |

### 8. Actual handling time - Flexibility of method with respect to number of samples under analysis

| Steps                                                      | Mean time for one sample (min) |                     |
|------------------------------------------------------------|--------------------------------|---------------------|
|                                                            | Standard ISO 11290-1           | AL detection method |
| Preparation, weighing, dilution Fraser ½ and grinding      | 7                              | 7                   |
| Transfer from Fraser ½ to Fraser                           | 1                              | /                   |
| Isolation of Fraser ½ and Fraser, onto two selective media | 2                              | /                   |
| Isolation of Fraser ½ onto AL agar                         | /                              | 1                   |
| Readings                                                   | 2                              | 1                   |
| <b>Total (per sample)</b>                                  | <b>12 minutes</b>              | <b>9 minutes</b>    |

### 9. Time required to obtain results

| Stage                                                                                                       | Time obtained (in days)<br>AL detection method | Time obtained (in days)<br>ISO 11290-1<br>reference method |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------|
| Completion of pre-enrichment (Fraser 1/2)                                                                   | D0                                             | D0                                                         |
| Inoculation of enrichment broths (Fraser)                                                                   | /                                              | D1                                                         |
| Isolation of selective broths on selective agar                                                             | D1                                             | D1 and D3                                                  |
| <b>Obtaining negative result</b><br>(if no characteristic colony)                                           | <b>D2</b>                                      | <b>D4 to D5</b>                                            |
| Confirmation tests on characteristic colonies                                                               | D2                                             | D2 to D5                                                   |
| <b>Obtaining negative result</b><br>(after negative confirmation if required)                               | <b>D2 to D9</b>                                | <b>D5 to D11</b>                                           |
| <b>Obtaining positive result</b><br>(after confirmation)                                                    |                                                |                                                            |
| Confirmation with reference method tests (CAMP tests, haemolysis, TSBYE broth), including purification step | <b>D4 to D9</b>                                |                                                            |
| Confirmation with reference method tests (CAMP tests, haemolysis, sugar fermentation (strip))               | <b>D3 to D4</b>                                | <b>D8 to D11</b>                                           |
| Confirmation straking onto RAPID'L.mono plate                                                               | <b>D3 to D4</b>                                | <b>D4 to D7</b>                                            |

|                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| 10. Type of operator qualification       | Identical level to that required for reference method |
| 11. Common steps with reference method   | Enrichment step in Fraser ½ broth and confirmations   |
| 12. Traceability of the analysis results | /                                                     |
| 13. Maintenance by the laboratory        | /                                                     |

## 5 Conclusion

The comparative study of the methods was performed according to the EN ISO 16140 standard.

The performances of the AL detection method were compared to those of the EN ISO 11290-1 reference method (including the amendment A1) by analyzing 683 samples divided into five product categories.

The relative accuracy obtained for the AL detection method is between 99.1% and 99.7%, the relative sensitivity is between 98.7% and 100%, and the relative specificity is 99.5%, based on the calculations stipulated by the EN ISO 16140 standard.

Based on the calculations recommended by AFNOR, and based on the number of results selected, the sensitivity of the AL detection method is between 98.7 and 100.0%. That of the reference method is 99.4%.

Finally, both methods are considered to be statistically equivalent.

The storage of the enrichment broths after incubation, for 72 hours at 2-8°C, did not modify the performances of the method.

The level of detection obtained for the AL detection method is between 0.2 and 1.5 cells per 25 g or 25 mL. It is equivalent to that of the reference method.

The specificity of the method is satisfactory, all *Listeria* strains were detected and few cross-reactions were observed with non-target strains but results were never confirmed.

The results of the inter-laboratory study obtained for all 14 laboratories selected demonstrate that the alternative method has same relative accuracy, specificity and sensitivity values as that of the reference method, even though they are higher than those obtained in the preliminary study.

The sensitivity of the alternative method recalculated accounting for all the confirmed positives (including the additional positives from the alternative method) is also higher than that obtained in the preliminary study.

Both methods are equivalent (no discrepant results).

The variability of the alternative method (accordance, concordance, Odds ratio) is comparable to that of the reference method.

On the basis of all the results obtained according to the EN ISO 16140 (2003) standard, it is possible to grant the **NF VALIDATION certification** to the AL detection method for the detection of *Listeria* spp. and *Listeria monocytogenes* in food products for humans and environment samples (excluding primary production samples), with the certificate number BIO 07/16 – 01/09.

Lille, February 18th 2013



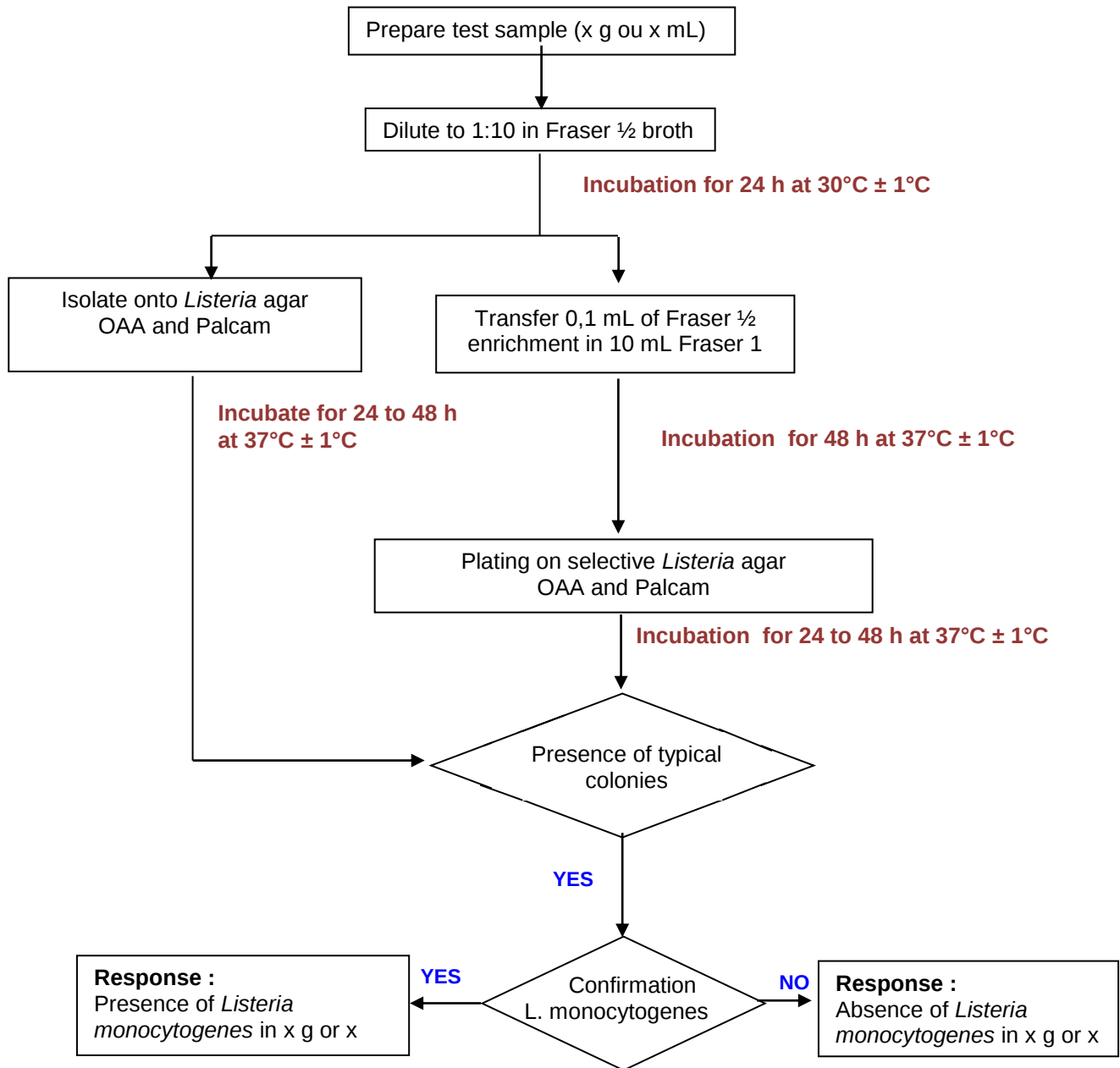
Mélinna Maux  
Technical Manager

# APPENDICES

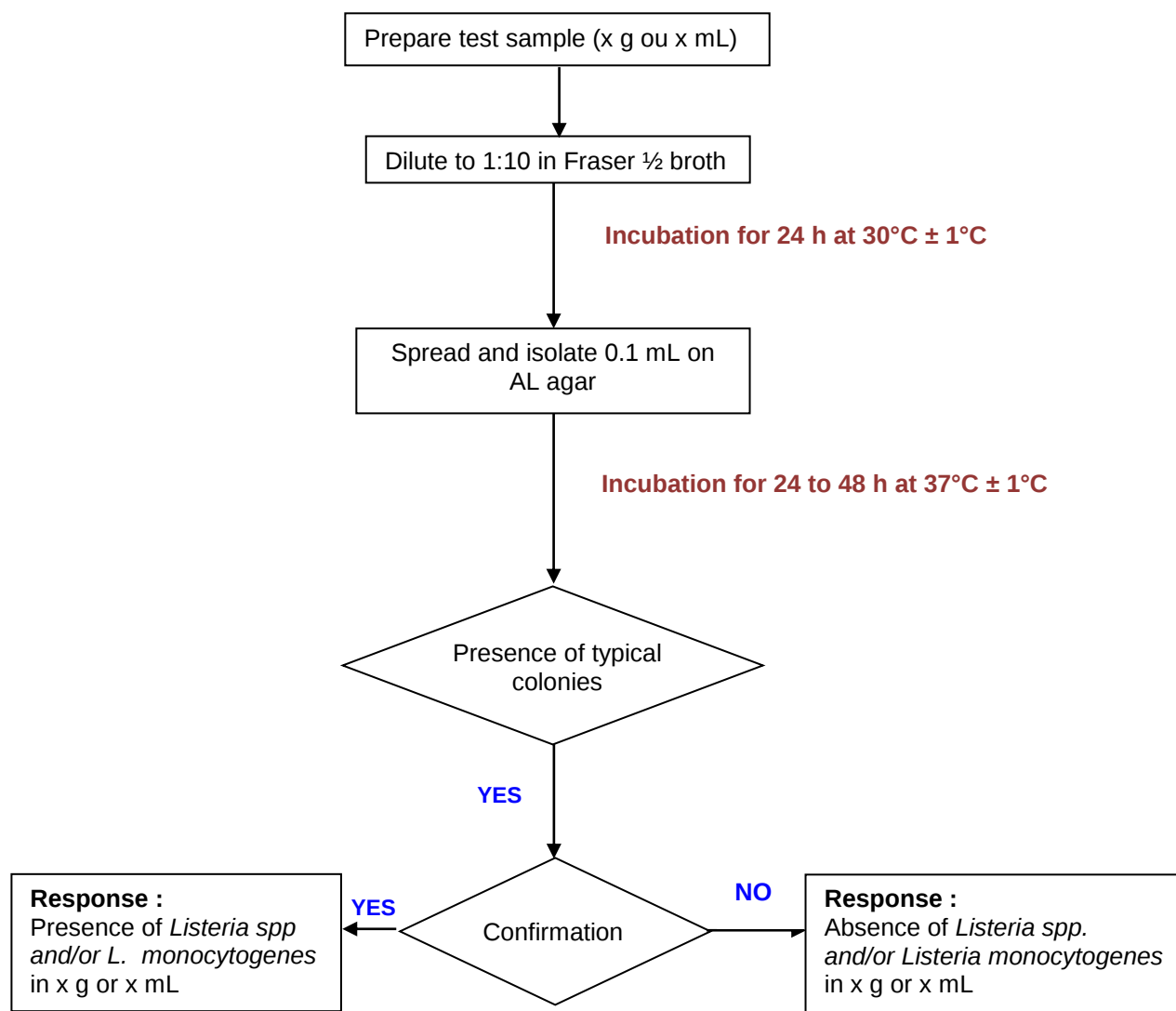
## APPENDIX A

### ANALYTICAL PROTOCOLS

**EN ISO 11290-1 (#)**  
**INCLUDING AMENDMENT A1: 2004**



## AL DETECTION METHOD



## APPENDIX B

RELATIVE ACCURACY, RELATIVE SPECIFICITY,  
RELATIVE SENSITIVITY

-

DETAILED RESULTS TABLES

## Legend

### Bacterial burden

Ø : no culture

L = Low relance après purification car 1er résultat négatif

M = Moderate

H = High

CA : Artificial contamination (O: Yes - N: No)

### Breakdown of flora

suspect colonies = colonies of *Listeria*

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 characteristic *Listeria* colonies if  $x \leq 5$

\* : mixture of *Listeria*

### Results

+ : positif result

- : negative result

Black type : comparable result (=) to reference method

Blue type : additional positif result (PS) with respect to reference method

Red type : false negative result (FN) with respect to reference method

Pnk type : false positive result (FP) with respect to reference method

### Sample categories (Cat.) :

PC : Meat products

PL : Dairy products

PV : Plants products

PP : Fish products

EN : Environment samples

PS : Surface samples

## Meat Products: initial validation

| Code | Sample             | Cat. | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                                 |        | Alternative method AL detection |                         |                             |                        |             |             |                                 |        | Comparison<br>(L.monocytogenes) |
|------|--------------------|------|----|--------------------------------------|--------|--------|--------|---------------------------------|--------|---------------------------------|-------------------------|-----------------------------|------------------------|-------------|-------------|---------------------------------|--------|---------------------------------|
|      |                    |      |    | Fraser 1/2                           |        | Fraser |        | Identification                  | Result | Reading<br>after<br>22h         | Reading<br>after<br>48h | Storage<br>72h at<br>+2-8°C | Confirmation<br>L.mono |             |             | Identification                  | Result |                                 |
|      |                    |      |    | AL                                   | PALCAM | AL     | PALCAM |                                 |        |                                 |                         |                             | Purif                  | Spot<br>RLM | iQ<br>Lmono |                                 |        |                                 |
| A6   | Choppd beefsteak   | PC1  | N  | Ø                                    | -LE    | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                               | -      | =                               |
| A7   | Hamburger          | PC1  | N  | -LA                                  | +LA    | -MA    | +MA    | L.welshimeri                    | -      | -MA                             | -MA                     | -MA                         | non                    | /           | /           | L.welshimeri                    | -      | =                               |
| A15  | Beef meat          | PC1  | N  | +LA(1)                               | Ø      | +MB    | +MB    | L.monocytogenes                 | +      | +LB(8)                          | +LB                     | +LB                         | oui                    | +           | +           | L.monocytogenes                 | +      | =                               |
| A16  | Hamburger          | PC1  | N  | +LA                                  | Ø      | +MA    | +MB    | L.monocytogenes                 | +      | +LB                             | +LB                     | +MB                         | oui                    | +           | +           | L.monocytogenes                 | +      | =                               |
| A17  | Frozen ground beef | PC1  | N  | +MB                                  | +MB    | +MB    | +MB    | L.monocytogenes<br>L.innocua    | +      | +MD                             | +MB                     | +MB                         | oui                    | +           | +           | L.monocytogenes<br>L.innocua    | +      | =                               |
| A18  | Roast pork         | PC1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                               | -      | =                               |
| A23  | Turkey cutlet      | PC1  | N  | +LA                                  | +LA    | +MA    | +MB    | L.monocytogenes<br>L.innocua    | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes<br>L.innocua    | +      | =                               |
| A24  | Horse meat         | PC1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                               | -      | =                               |
| A25  | Pork chop          | PC1  | N  | +MB                                  | +MB    | +LB    | +MB    | L.monocytogenes<br>L.welshimeri | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes<br>L.welshimeri | +      | =                               |
| A26  | Pork chop          | PC1  | N  | -MA                                  | +MA    | -MA    | +MA    | L.welshimeri                    | -      | -MA                             | -MA                     | -MA                         | non                    | /           | /           | L.welshimeri                    | -      | =                               |
| B16  | Ground beef        | PC1  | N  | +LB                                  | +LB    | +HB    | +MB    | L.monocytogenes<br>L.welshimeri | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes<br>L.welshimeri | +      | =                               |
| B18  | Ground beef        | PC1  | N  | +LA                                  | +LA    | +HB    | +HB    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes                 | +      | =                               |
| B19  | Hala beef balls    | PC1  | N  | -ME                                  | -ME    | -ME    | -ME    | /                               | -      | -LE                             | -LE                     | -LE                         | /                      | /           | /           | /                               | -      | =                               |
| D4   | Minced beef        | PC1  | N  | +LA(1)                               | -LE    | +HB    | +LB    | L.monocytogenes                 | +      | -LE                             | +LB(3)                  | +LB                         | non                    | +           | +           | L.monocytogenes                 | +      | FN(24H)                         |
| E1   | Hamburger          | PC1  | N  | +MB                                  | +MB    | +MB    | +MB    | L.monocytogenes<br>L.welshimeri | +      | +HB                             | +HB                     | +HB                         | non                    | +           | +           | L.monocytogenes<br>L.welshimeri | +      | =                               |
| E3   | Minced beef        | PC1  | N  | -LA                                  | +LA    | +HB    | +HA    | L.welshimeri<br>L.monocytogenes | +      | -LA                             | -LA                     | -LA                         | oui                    | /           | /           | L.welshimeri                    | -      | FN                              |
| E14  | Hamburger          | PC1  | N  | +LA                                  | +LA    | +HA    | +MB    | L.monocytogenes                 | +      | +MB                             | +MB                     | +HB                         | non                    | +           | +           | L.monocytogenes                 | +      | =                               |
| E15  | Ground beef        | PC1  | N  | Ø                                    | Ø      | Ø      | -LE    | /                               | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                               | -      | =                               |
| E20  | Pork meat          | PC1  | N  | +MB                                  | +MB    | +HB    | +HB    | L.monocytogenes<br>L.innocua    | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes<br>L.innocua    | +      | =                               |
| F3   | Ground beef        | PC1  | N  | +MA                                  | +MA    | +HA    | +MA    | L.monocytogenes                 | +      | +HA                             | +HA                     | +HA                         | non                    | +           | +           | L.monocytogenes                 | +      | =                               |
| F4   | Frozen ground beef | PC1  | N  | +MB                                  | +MB    | +HA    | +MA    | L.monocytogenes<br>L.innocua    | +      | +HA                             | +HA                     | +HA                         | non                    | +           | +           | L.monocytogenes                 | +      | =                               |
| F8   | Choppd beefsteak   | PC1  | N  | -LB                                  | -LB    | -HB    | -MB    | L.innocua<br>L.welshimeri       | -      | -MB                             | -MB                     | -MB                         | non                    | /           | /           | L.innocua<br>L.welshimeri       | -      | =                               |
| F10  | Turkey lef         | PC1  | N  | +MB                                  | +MB    | +HB    | +MB    | L.monocytogenes<br>L.innocua    | +      | +HC                             | +HA                     | +HB                         | oui                    | +           | +           | L.monocytogenes<br>L.innocua    | +      | =                               |

|     |                            |     |   |        |     |     |     |                                                                   |   |        |        |     |            |   |   |                                               |   |   |
|-----|----------------------------|-----|---|--------|-----|-----|-----|-------------------------------------------------------------------|---|--------|--------|-----|------------|---|---|-----------------------------------------------|---|---|
| F11 | Halal ground beef          | PC1 | N | +MB    | +MB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + | +HA    | +HA    | +HB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | = |
| F14 | Halal ground beef          | PC1 | N | +LB    | +LB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + | +MB    | +MB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| N18 | Lamb cutlet                | PC1 | N | -ME    | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| A1  | Sausage                    | PC2 | N | +LB    | +LB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + | +MB    | +MB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| A8  | Merguez                    | PC2 | N | +LB(1) | +LD | +MD | +MB | <i>L.welshimeri</i><br><i>L.innocua</i><br><i>L.monocytogenes</i> | + | +MD(2) | +MD(2) | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| A20 | Thai Chicken               | PC2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| B15 | Chopped beef for bolognese | PC2 | N | -LE    | Ø   | -LE | -LE | /                                                                 | - | -LE    | -LE    | -LE | /          | / | / | /                                             | - | = |
| B17 | Tomato burger              | PC2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| B20 | Tomato burger              | PC2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| D1  | Merguez                    | PC2 | N | +LB    | +LB | +MB | +HB | <i>L.monocytogenes</i>                                            | + | +HB    | +HB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| E10 | Burger                     | PC2 | N | +MB    | +MB | +HB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + | +HB    | +HB    | +HB | <i>oui</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| E11 | Burger                     | PC2 | N | -MB    | -MB | -MB | -HB | <i>L.innocua</i><br><i>L.grayi</i>                                | - | -HB    | -HB    | -HB | <i>non</i> | / | / | <i>L.innocua</i><br><i>L.grayi</i>            | - | = |
| E18 | Chipolatas                 | PC2 | N | Ø      | -LE | -LE | -LE | /                                                                 | - | Ø      | -LE    | -LE | /          | / | / | /                                             | - | = |
| F5  | Chipolatas                 | PC2 | N | +MB    | +MA | +HC | +HA | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + | +HD    | +HD    | +HA | <i>oui</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| H1  | Toulouse sausage           | PC2 | N | -LA    | +LB | -MA | -MB | <i>L.welshimeri</i>                                               | - | -MA    | -MA    | -MA | /          | / | / | <i>L.welshimeri</i>                           | - | = |
| H2  | Toulouse sausage           | PC2 | N | +LB    | +LA | +HB | +HA | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + | +MB    | +MB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | = |
| H3  | Chipolatas                 | PC2 | N | -LE    | -LE | +MA | +MA | <i>L.monocytogenes</i>                                            | + | +LA(2) | +LA(2) | +LB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| H5  | Chipolatas                 | PC2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| H7  | Merguez                    | PC2 | N | -MB    | +MB | -MA | +MB | <i>L.innocua</i>                                                  | - | -MB    | -MB    | /   | /          | / | / | <i>L.innocua</i>                              | - | = |
| M15 | Chipolatas                 | PC2 | N | -LE    | -LE | -ME | -ME | /                                                                 | - | -ME    | -ME    | -ME | /          | / | / | /                                             | - | = |
| M16 | Chipolatas with herbs      | PC2 | N | +MB    | +MB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + | +MB    | +MB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | = |
| A4  | Chorizo                    | PC3 | N | +LB    | +MD | +MB | +MD | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + | +MD    | +MD    | +MB | <i>oui</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| A9  | Saucisson                  | PC3 | N | +LD    | +LB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + | +MB    | +MB    | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| A30 | Ham                        | PC3 | N | Ø      | Ø   | -ME | -ME | /                                                                 | - | Ø      | Ø      | Ø   | /          | / | / | /                                             | - | = |
| D3  | Ham                        | PC3 | N | +LA    | +MB | +HA | +MA | <i>L.monocytogenes</i>                                            | + | +HA    | +HA    | +HA | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| D18 | Pizza                      | PC3 | N | -LE    | -ME | -LE | -LE | /                                                                 | - | -ME    | -ME    | -ME | /          | / | / | /                                             | - | = |
| D19 | Pizza with cheese          | PC3 | N | -LE    | -LE | -LE | -LE | /                                                                 | - | -ME    | -ME    | -ME | /          | / | / | /                                             | - | = |
| D20 | Pizza                      | PC3 | N | -LE    | -LE | -LE | -LE | /                                                                 | - | -LE    | -LE    | -LE | /          | / | / | /                                             | - | = |
| E4  | Bacon                      | PC3 | N | +MA    | +MA | +MA | +MA | <i>L.monocytogenes</i>                                            | + | +HA    | +HA    | +HA | <i>oui</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| E17 | Bacon                      | PC3 | N | -LE    | -LE | -ME | -ME | /                                                                 | - | -ME    | -ME    | -ME | /          | / | / | /                                             | - | = |

|     |                       |     |   |        |        |     |     |                                                                   |   |  |     |     |     |            |   |   |                                                                   |   |   |
|-----|-----------------------|-----|---|--------|--------|-----|-----|-------------------------------------------------------------------|---|--|-----|-----|-----|------------|---|---|-------------------------------------------------------------------|---|---|
| F1  | Snails pie            | PC3 | N | +MA    | +MA    | +MA | +MA | <i>L.monocytogenes</i>                                            | + |  | +HA | +HA | +HA | <i>oui</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| F9  | Shepherd's pie        | PC3 | N | +LB    | +LB    | +HB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>                        | + |  | +HB | +HB | +HB | <i>non</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| F13 | Shepherd's pie        | PC3 | N | +LA    | +LA    | +HA | +HA | <i>L.monocytogenes</i>                                            | + |  | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| F15 | Potjevleesch          | PC3 | N | +LB    | +LA    | +HC | +HA | <i>L.monocytogenes</i><br><i>L.innocua</i><br><i>L.welshimeri</i> | + |  | +MC | +MC | +MC | <i>oui</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i><br><i>L.welshimeri</i> | + | = |
| G1  | Ham                   | PC3 | N | +LA(3) | +LA(2) | +MA | +MA | <i>L.monocytogenes</i>                                            | + |  | +LA | +LA | +LA | <i>non</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| G2  | Ham                   | PC3 | N | +MB    | +LA    | +MB | +MA | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + |  | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                     | + | = |
| G5  | Ham                   | PC3 | N | +MA    | +MA    | +MA | +MA | <i>L.monocytogenes</i>                                            | + |  | +MA | +MA | +HA | <i>non</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| H4  | Saucisson             | PC3 | N | -LE    | -LE    | Ø   | -LE | /                                                                 | - |  | -ME | -ME | -ME | /          | / | / | /                                                                 | - | = |
| H6  | Franfurter            | PC3 | N | +LA    | +LB    | +MA | +MB | <i>L.monocytogenes</i>                                            | + |  | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i>                                            | + | = |
| K16 | Shepherd's pie        | PC3 | N | Ø      | Ø      | Ø   | Ø   | /                                                                 | - |  | Ø   | Ø   | Ø   | /          | / | / | /                                                                 | - | = |
| K17 | Roasted Chicken       | PC3 | N | -LE    | Ø      | Ø   | Ø   | /                                                                 | - |  | Ø   | -ME | -ME | /          | / | / | /                                                                 | - | = |
| K18 | Stuffed crepe         | PC3 | N | -LE    | Ø      | Ø   | Ø   | /                                                                 | - |  | Ø   | -LE | -LE | /          | / | / | /                                                                 | - | = |
| K19 | Potjevlesch           | PC3 | N | Ø      | Ø      | Ø   | Ø   | /                                                                 | - |  | Ø   | -LE | -LE | /          | / | / | /                                                                 | - | = |
| K20 | Chicken fillet cooked | PC3 | N | Ø      | -LE    | Ø   | -LE | /                                                                 | - |  | Ø   | Ø   | Ø   | /          | / | / | /                                                                 | - | = |

## Meat Products: extension study

| Code | Sample                   | CAT | CA | Reference method NF EN ISO 11290-1 # |         |        |        |                                                                    |        | Alternative method AL detection |              |      |           |              |      |                      |              |      |                                                                    |        |   | Comparison<br>(Listeria spp.) |
|------|--------------------------|-----|----|--------------------------------------|---------|--------|--------|--------------------------------------------------------------------|--------|---------------------------------|--------------|------|-----------|--------------|------|----------------------|--------------|------|--------------------------------------------------------------------|--------|---|-------------------------------|
|      |                          |     |    | Fraser 1/2                           |         | Fraser |        | Identification                                                     | Result | AL<br>24H                       | Confirmation |      | AL<br>48H | Confirmation |      | AL<br>72H at<br>+4°C | Confirmation |      | Identification                                                     | Result |   |                               |
|      |                          |     |    | AL                                   | Palcam  | AL     | Palcam |                                                                    |        |                                 | Palcam       | RLSP |           | Palcam       | RLSP |                      | Palcam       | RLSP |                                                                    |        |   |                               |
| A15  | Minced turkey leg        | PC1 | N  | +MB                                  | +MB     | +MA    | +MB    | <i>L.welshimeri</i>                                                | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| D3   | Pork ham                 | PC1 | N  | Ø                                    | Ø       | +MA    | +MA    | <i>L.welshimeri</i>                                                | +      | +LA(1)                          | +            | +    | +LA(1)    | +            | +    | +LA(1)               | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| D17  | Chicken leg              | PC1 | N  | +MB*                                 | +MB*    | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | +MB*                            | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*                 | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | = |                               |
| D20  | Minced beef              | PC1 | N  | +MB                                  | +MB     | +MB    | +HB    | <i>L.welshimeri</i>                                                | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| F1   | Veal shank               | PC1 | N  | +LB                                  | +LB     | +LB    | +MB    | <i>L.welshimeri</i>                                                | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| F2   | Minced veal              | PC1 | N  | +MB                                  | +LA     | +MB    | +MC    | <i>Listeria ivanovi</i>                                            | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.ivanovi</i>                                                   | +      | = |                               |
| G15  | Deep-frozen minced beef  | PC1 | N  | +LB                                  | +LB     | +LB    | +MB    | <i>L.welshimeri</i>                                                | +      | +LA                             | +            | +    | +LB       | +            | +    | +LB                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| H12  | Minced beef way butcher  | PC1 | N  | +LA                                  | +LA     | +MA    | +MB    | <i>L.monocytogenes</i>                                             | +      | +LA                             | +            | +    | +LA       | +            | +    | +LA                  | +            | +    | <i>L.monocytogenes</i>                                             | +      | = |                               |
| H27  | Minced meat of horse     | PC1 | N  | +LB                                  | +LA     | +LB    | +LA    | <i>L.monocytogenes</i>                                             | +      | +LB                             | +            | +    | +LB       | +            | +    | +LB                  | +            | +    | <i>L.monocytogenes</i>                                             | +      | = |                               |
| H30  | Charolais ribs           | PC1 | N  | +MA                                  | +LA     | +MA    | +MA    | <i>L.welshimeri</i>                                                | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| A1   | Merguez mouton           | PC2 | N  | +LB                                  | +LB     | +MB    | +MB    | <i>L.innocua</i>                                                   | +      | +LA                             | +            | +    | +LB       | +            | +    | +LB                  | +            | +    | <i>L.innocua</i>                                                   | +      | = |                               |
| A3   | Poultry sausages         | PC2 | N  | +MA                                  | +MB     | +MB    | +MB    | <i>L.innocua</i>                                                   | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                                                   | +      | = |                               |
| A5   | Rabbit sausages          | PC2 | N  | +MB*                                 | +MB*    | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | +MB                             | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*                 | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | = |                               |
| A6   | Sausages                 | PC2 | N  | +LA                                  | +LA     | +LA    | +MB    | <i>L.welshimeri</i>                                                | +      | +LA                             | +            | +    | +LA       | +            | +    | +LA                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| A7   | Poultry balls            | PC2 | N  | +MB*                                 | +MB     | +MB    | +MB    | <i>L.welshimeri</i>                                                | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| A8   | Merguez with ox and lamb | PC2 | N  | +LA                                  | +LA     | +MA    | +HA    | <i>L.innocua</i>                                                   | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.innocua</i>                                                   | +      | = |                               |
| B5   | Bolognaise               | PC2 | N  | +LB(1)                               | +LA (1) | +MB    | +MA    | <i>L.welshimeri</i>                                                | +      | +LA                             | +            | +    | +LA       | +            | +    | +LB                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |
| B7   | Merguez boeuf-mouton     | PC2 | N  | +MB*                                 | +MB*    | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.welshimeri</i><br><i>L.ivanovii</i> | +      | +LB*                            | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*                 | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.welshimeri</i><br><i>L.ivanovii</i> | +      | = |                               |
| B8   | Spiced balls             | PC2 | N  | +MB                                  | +MB     | +MB    | +HB    | <i>L.monocytogenes</i>                                             | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.monocytogenes</i>                                             | +      | = |                               |
| B40  | Spiced sausages          | PC2 | N  | +LB*                                 | +LB*    | +MB*   | +HB    | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | +MB*                            | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*                 | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +      | = |                               |
| D6   | Marinated chicken fillet | PC2 | N  | +LB*                                 | +LB*    | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.innocua</i>                         | +      | +MB*                            | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*                 | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.innocua</i>                         | +      | = |                               |
| F37  | Merguez                  | PC2 | N  | +LB                                  | +LC     | +LB    | +MB    | <i>L.innocua</i>                                                   | +      | +MC                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                                                   | +      | = |                               |
| I12  | Thai chicken             | PC2 | N  | +LC                                  | -LE     | +LC    | -ME    | <i>L.seeligeri</i>                                                 | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.seeligeri</i>                                                 | +      | = |                               |
| A9   | Smoked bacon             | PC3 | N  | +LB                                  | +LA     | +MB    | +HB    | <i>L.welshimeri</i>                                                | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.welshimeri</i>                                                | +      | = |                               |

|     |                            |     |   |      |      |      |      |                                              |   |        |     |     |      |     |     |      |     |     |                                              |   |          |
|-----|----------------------------|-----|---|------|------|------|------|----------------------------------------------|---|--------|-----|-----|------|-----|-----|------|-----|-----|----------------------------------------------|---|----------|
| A10 | Pork mussel                | PC3 | N | -LE  | -LE  | +LA  | +LA  | <i>L. welshimeri</i>                         | + | +MA    | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L. welshimeri</i>                         | + | =        |
| C22 | Royal pizza                | PC3 | N | +LA  | +LB  | +MB  | +MB  | <i>L. welshimeri</i>                         | + | +MB    | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L. welshimeri</i>                         | + | =        |
| E14 | Royal pizza                | PC3 | N | +MB* | +LB* | +MB* | +HB* | <i>L. monocytogenes</i><br><i>L. innocua</i> | + | +MB*   | +/+ | +/+ | +MB* | +/+ | +/+ | +MB* | +/+ | +/+ | <i>L. monocytogenes</i><br><i>L. innocua</i> | + | =        |
| F9  | Horse sausages             | PC3 | N | +LA  | +LA  | +HA  | +HA  | <i>L. monocytogenes</i>                      | + | +MA    | +/+ | +/+ | +MA  | +/+ | +/+ | +MA  | +/+ | +/+ | <i>L. monocytogenes</i>                      | + | =        |
| G10 | Dry sausages               | PC3 | N | +LB  | +LB  | +MB* | +MB  | <i>L. welshimeri</i>                         | + | +LA    | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L. welshimeri</i>                         | + | =        |
| J12 | Dices of chorizo           | PC3 | N | -LE  | -LE  | +HB  | +HB  | <i>L. welshimeri</i>                         | + | +MB    | +/+ | +/+ | +MB  | +/+ | +/+ | +MB  | +/+ | +/+ | <i>L. welshimeri</i>                         | + | =        |
| J14 | Paté                       | PC3 | N | Ø    | Ø    | -LE  | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| K8  | Pizza from Oran            | PC3 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| B41 | Minced beef way butcher    | PC1 | N | -LE  | Ø    | -ME  | -LE  | /                                            | - | -LE    | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                            | - | =        |
| D15 | Pork meat                  | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| E15 | Chicken fillet             | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| G12 | Chicken fillet             | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| H10 | Chicken fillet             | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| H11 | Chicken fillet             | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | -LE    | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                            | - | =        |
| H29 | Ox ribs to grill           | PC1 | N | +LB  | Ø    | -LE  | -LE  | /                                            | - | -LE    | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                            | - | =        |
| J10 | Raw turkey breast          | PC1 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A2  | Sausages with onion        | PC2 | N | -LE  | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A13 | Cooked ox balls            | PC2 | N | Ø    | Ø    | -LE  | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| D2  | Thai chicken               | PC2 | N | -LE  | -LE  | -LE  | Ø    | /                                            | - | +LB    | +   | +   | +LB  | +   | +   | +LB  | +   | +   | <i>L. welshimeri</i>                         | + | PS       |
| F7  | Pork sausages              | PC2 | N | -LE  | -LE  | Ø    | -LE  | /                                            | - | +LC(1) | -   | -   | -LE  | -   | -   | -LE  | -   | -   | <i>Bacillus pumilus</i>                      | - | FP (24h) |
| F8  | Merguez                    | PC2 | N | +LB  | -LE  | -LE  | -ME  | <i>Bacillus circulans</i>                    | - | +MB    | -   | -   | +MB  | -   | -   | +MB  | -   | -   | <i>Bacillus circulans</i>                    | - | FP       |
| G16 | Thai chicken               | PC2 | N | Ø    | -LE  | Ø    | Ø    | /                                            | - | -LE    | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                            | - | =        |
| K9  | Merguez                    | PC2 | N | +MB  | -ME  | -LE  | -ME  | <i>Bacillus</i>                              | - | +MB    | -   | -   | -ME  | -   | -   | -ME  | -   | -   | <i>Bacillus</i>                              | - | FP (24h) |
| A4  | Paté of head with pickles  | PC3 | N | -LE  | -LE  | -LE  | -LE  | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A11 | Ham dices                  | PC3 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A12 | Minced of smoked ham       | PC3 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A14 | Mortadelle                 | PC3 | N | -ME  | -ME  | -ME  | -ME  | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| A16 | Dices of marinaded chicken | PC3 | N | Ø    | Ø    | -LE  | -LE  | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| B6  | Ham                        | PC3 | N | Ø    | Ø    | -LE  | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |
| B42 | Paté                       | PC3 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | -LE  | /   | /   | /                                            | - | =        |
| B43 | Pork brawn                 | PC3 | N | Ø    | Ø    | Ø    | Ø    | /                                            | - | Ø      | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                            | - | =        |

|     |                             |     |   |     |     |     |     |                           |   |     |   |   |     |   |   |     |   |   |                           |   |          |
|-----|-----------------------------|-----|---|-----|-----|-----|-----|---------------------------|---|-----|---|---|-----|---|---|-----|---|---|---------------------------|---|----------|
| C20 | Paté of head with pickles   | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| C31 | Bacon                       | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| D1  | Paté of head                | PC3 | N | -LE | Ø   | -LE | -ME | /                         | - | -LE | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| D4  | Paté                        | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| D5  | Ham                         | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| D13 | Dry ham                     | PC3 | N | Ø   | -LE | Ø   | -LE | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| E12 | Goulash with pears          | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| E13 | Paté of head                | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| F3  | Nem                         | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| F4  | Liver paté                  | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | -LE | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| F5  | Chorizo                     | PC3 | N | +LB | -ME | -ME | -ME | <i>Bacillus circulans</i> | - | +LB | - | - | +MB | - | - | +MB | - | - | <i>Bacillus circulans</i> | - | FP       |
| F6  | Smoked bacon                | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| F10 | Ham                         | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| F11 | Bacon                       | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| F12 | Black sausage               | PC3 | N | -ME | Ø   | Ø   | Ø   | /                         | - | -LE | / | / | -ME | / | / | -ME | / | / | /                         | - | =        |
| F33 | Salad of muzzle vinaigrette | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| F34 | Salted meat from Lille      | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| F35 | Smoked ham                  | PC3 | N | -LE | -LE | -ME | -ME | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| F36 | Spiced paté                 | PC3 | N | -LE | -LE | -LE | -ME | /                         | - | +MC | - | - | -ME | - | - | -ME | - | - | <i>Bacillus pumilus</i>   | - | FP (24h) |
| G11 | Foie gras                   | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| G14 | Pork rillettes              | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| I13 | Dry smoked ham              | PC3 | N | Ø   | Ø   | Ø   | Ø   | /                         | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |

| Code | Sample                   | CAT | CA | AL detection - Test after Fraser 1/2 storage 72h at 4°C |              |       |        |              |       |                                                                    | Comparison<br>(Listeria spp.) |        |
|------|--------------------------|-----|----|---------------------------------------------------------|--------------|-------|--------|--------------|-------|--------------------------------------------------------------------|-------------------------------|--------|
|      |                          |     |    | AL 24H                                                  | Confirmation |       | AL 48H | Confirmation |       | Identification                                                     |                               | Result |
|      |                          |     |    |                                                         | Palcam       | RLSP  |        | Palcam       | RLSP  |                                                                    |                               |        |
| A15  | Minced turkey leg        | PC1 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| D3   | Pork ham                 | PC1 | N  | +LA(1)                                                  | +            | +     | +LA(1) | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| D17  | Chicken leg              | PC1 | N  | +MB*                                                    | +/+          | +/+   | +MB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +                             | =      |
| D20  | Minced beef              | PC1 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| F1   | Veal shank               | PC1 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| F2   | Minced veal              | PC1 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.ivanovi</i>                                                   | +                             | =      |
| G15  | Deep-frozen minced beef  | PC1 | N  | +LA                                                     | +            | +     | +LB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| H12  | Minced beef way butcher  | PC1 | N  | +LA                                                     | +            | +     | +LA    | +            | +     | <i>L.monocytogenes</i>                                             | +                             | =      |
| H27  | Minced meat of horse     | PC1 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                             | +                             | =      |
| H30  | Charolais ribs           | PC1 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| A1   | Merguez mouton           | PC2 | N  | +LA                                                     | +            | +     | +LB    | +            | +     | <i>L.innocua</i>                                                   | +                             | =      |
| A3   | Poultry sausages         | PC2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.innocua</i>                                                   | +                             | =      |
| A5   | Rabbit sausages          | PC2 | N  | +MB                                                     | +/+          | +/+   | +MB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +                             | =      |
| A6   | Sausages                 | PC2 | N  | +LB                                                     | +            | +     | +LB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| A7   | Poultry balls            | PC2 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| A8   | Merguez with ox and lamb | PC2 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                                   | +                             | =      |
| B5   | Bolognaise               | PC2 | N  | /                                                       | +            | +     | +LB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| B7   | Merguez bœuf-mouton      | PC2 | N  | /                                                       | +/+/+        | +/+/+ | +MB*   | +/+/+        | +/+/+ | <i>L.monocytogenes</i><br><i>L.welshimeri</i><br><i>L.ivanovii</i> | +                             | =      |
| B8   | Spiced balls             | PC2 | N  | /                                                       | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                             | +                             | =      |
| B40  | Spiced sausages          | PC2 | N  | /                                                       | +/+          | +/+   | +MB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.welshimeri</i>                      | +                             | =      |
| D6   | Marinated chicken fillet | PC2 | N  | +LB*                                                    | +/+          | +/+   | +LB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.innocua</i>                         | +                             | =      |
| F37  | Merguez                  | PC2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.innocua</i>                                                   | +                             | =      |
| I12  | Thai chicken             | PC2 | N  | +LA(1)                                                  | +            | +     | +LA(1) | +            | +     | <i>L.seeligeri</i>                                                 | +                             | =      |
| A9   | Smoked bacon             | PC3 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| A10  | Pork mussel              | PC3 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| C22  | Royal pizza              | PC3 | N  | /                                                       | +            | +     | +MB    | +            | +     | <i>L.welshimeri</i>                                                | +                             | =      |
| E14  | Royal pizza              | PC3 | N  | +MB*                                                    | +/+          | +/+   | +MB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.innocua</i>                         | +                             | =      |

|     |                            |     |   |      |     |     |      |     |     |                           |   |          |
|-----|----------------------------|-----|---|------|-----|-----|------|-----|-----|---------------------------|---|----------|
| F9  | Horse sausages             | PC3 | N | +HA  | +/+ | +/+ | +HA  | +/+ | +/+ | <i>L.monocytogenes</i>    | + | =        |
| G10 | Dry sausages               | PC3 | N | +LB* | +   | +   | +LB* | +   | +   | <i>L.welshimeri</i>       | + | =        |
| J12 | Dices of chorizo           | PC3 | N | +MB  | +/+ | +/+ | +MB  | +/+ | +/+ | <i>L.welshimeri</i>       | + | =        |
| J14 | Paté                       | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| K8  | Pizza from Oran            | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| B41 | Minced beef way butcher    | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D15 | Pork meat                  | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| E15 | Chicken fillet             | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| G12 | Chicken fillet             | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| H10 | Chicken fillet             | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| H11 | Chicken fillet             | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| H29 | Ox ribs to grill           | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| J10 | Raw turkey breast          | PC1 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A2  | Sausages with onion        | PC2 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A13 | Cooked ox balls            | PC2 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D2  | Thai chicken               | PC2 | N | +LB  | +   | +   | +LB  | +   | +   | <i>L. welshimeri</i>      | + | PS       |
| F7  | Pork sausages              | PC2 | N | Ø    | -   | -   | -LE  | -   | -   | <i>Bacillus pumilus</i>   | - | FP (24h) |
| F8  | Merguez                    | PC2 | N | +LB  | -   | -   | -LE  | -   | -   | <i>Bacillus circulans</i> | - | FP       |
| G16 | Thai chicken               | PC2 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| K9  | Merguez                    | PC2 | N | /    | -   | -   | -ME  | -   | -   | <i>Bacillus</i>           | - | FP (24h) |
| A4  | Paté of head with pickles  | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A11 | Ham dices                  | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A12 | Minced of smoked ham       | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A14 | Mortadelle                 | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| A16 | Dices of marinated chicken | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| B6  | Ham                        | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| B42 | Paté                       | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| B43 | Pork brawn                 | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| C20 | Paté of head with pickles  | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| C31 | Bacon                      | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D1  | Paté of head               | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D4  | Paté                       | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D5  | Ham                        | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| D13 | Dry ham                    | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| E12 | Goulash with pears         | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| E13 | Paté of head               | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |
| F3  | Nem                        | PC3 | N | /    | /   | /   | /    | /   | /   | /                         | - | =        |

|     |                             |     |   |     |   |   |     |   |   |                           |   |          |
|-----|-----------------------------|-----|---|-----|---|---|-----|---|---|---------------------------|---|----------|
| F4  | Liver paté                  | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F5  | Chorizo                     | PC3 | N | -LE | - | - | -LE | - | - | <i>Bacillus circulans</i> | - | FP       |
| F6  | Smoked bacon                | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F10 | Ham                         | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F11 | Bacon                       | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F12 | Black sausage               | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F33 | Salad of muzzle vinaigrette | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F34 | Salted meat from Lille      | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F35 | Smoked ham                  | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| F36 | Spiced paté                 | PC3 | N | +MC | - | - | +MC | - | - | <i>Bacillus pumilus</i>   | - | FP (24h) |
| G11 | Foie gras                   | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| G14 | Pork rillettes              | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |
| I13 | Dry smoked ham              | PC3 | N | /   | / | / | /   | / | / | /                         | - | =        |

## Dairy products: initial validation

| Code | Sample                              | Cat. | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                              |        | Alternative method AL detection |                         |                             |                        |             |             |                              |        | Comparison<br>(L.monocytogenes) |
|------|-------------------------------------|------|----|--------------------------------------|--------|--------|--------|------------------------------|--------|---------------------------------|-------------------------|-----------------------------|------------------------|-------------|-------------|------------------------------|--------|---------------------------------|
|      |                                     |      |    | Fraser 1/2                           |        | Fraser |        | Identification               | Result | Reading<br>after<br>22h         | Reading<br>after<br>48h | Storage<br>72h at<br>+2-8°C | Confirmation<br>L.mono |             |             | Identification               | Result |                                 |
|      |                                     |      |    | AL                                   | PALCAM | AL     | PALCAM |                              |        |                                 |                         |                             | Purif                  | Spot<br>RLM | iQ<br>Lmono |                              |        |                                 |
| A14  | Gouda<br>cheese                     | PL1  | N  | -ME                                  | -ME    | -ME    | -ME    | /                            | -      | -HE                             | -HE                     | -HE                         | /                      | /           | /           | /                            | -      | =                               |
| B9   | Tomette de<br>savoie<br>cheese      | PL1  | N  | -LE                                  | -LE    | -HE    | -HE    | /                            | -      | Ø                               | -ME                     | -ME                         | /                      | /           | /           | /                            | -      | =                               |
| B10  | Reblochon<br>cheese                 | PL1  | N  | +MB                                  | +MB    | +MB    | +MB    | L.monocytogenes              | +      | +HB                             | +HB                     | +HB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| F7   | Reblochon<br>cheese                 | PL1  | N  | -MA                                  | -MA    | -MA    | -MA    | L.innocua<br>L.seeligeri     | -      | -HA                             | -HA                     | -HA                         | non                    | /           | /           | L.innocua                    | -      | =                               |
| G7   | Tomme<br>cheese                     | PL1  | N  | +LB                                  | +LA    | +MB    | +MA    | L.monocytogenes<br>L.innocua | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes<br>L.innocua | +      | =                               |
| G10  | Maroilles<br>cheese                 | PL1  | N  | -LE                                  | Ø      | Ø      | Ø      | /                            | -      | -LE                             | -ME                     | -ME                         | /                      | /           | /           | /                            | -      | =                               |
| G12  | Munster<br>cheese                   | PL1  | N  | Ø                                    | Ø      | -LE    | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| G13  | Maroilles<br>cheese (raw<br>milk)   | PL1  | N  | Ø                                    | Ø      | -LE    | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| G15  | Comté<br>cheese                     | PL1  | N  | Ø                                    | Ø      | -LE    | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| G16  | Munster<br>cheese (raw<br>milk)     | PL1  | N  | -LE                                  | Ø      | Ø      | Ø      | /                            | -      | -LE                             | -LE                     | -LE                         | /                      | /           | /           | /                            | -      | =                               |
| G17  | Munster<br>cheese (raw<br>milk)     | PL1  | N  | Ø                                    | Ø      | -LE    | Ø      | /                            | -      | -LE                             | -ME                     | -ME                         | /                      | /           | /           | /                            | -      | =                               |
| G20  | Le<br>Chartreux<br>cheese           | PL1  | N  | -LE                                  | -LE    | -ME    | -LE    | /                            | -      | -LE                             | -LE                     | -LE                         | /                      | /           | /           | /                            | -      | =                               |
| I1   | Salers<br>cheese (raw<br>milk)      | PL1  | O  | +LB                                  | +LB    | +MB    | +MB    | L.monocytogenes              | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| I3   | Munster<br>cheese (raw<br>milk)     | PL1  | O  | +LA(5)                               | Ø      | +MA    | +MA    | L.monocytogenes              | +      | +LA                             | +LB                     | +LB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| I7   | Munster<br>cheese (raw<br>milk)     | PL1  | O  | +LA                                  | +LB    | +MA    | +MB    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| I9   | St Nectaire<br>cheese (raw<br>milk) | PL1  | N  | +MB                                  | +LB    | +MA    | +MA    | L.monocytogenes              | +      | +MA                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| I10  | Munster                             | PL1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |

|     |                                |     |   |     |     |      |      |                        |   |     |     |     |            |   |   |                        |   |   |
|-----|--------------------------------|-----|---|-----|-----|------|------|------------------------|---|-----|-----|-----|------------|---|---|------------------------|---|---|
|     | cheese (raw milk)              |     |   |     |     |      |      |                        |   |     |     |     |            |   |   |                        |   |   |
| J1  | Raw milk cheese                | PL1 | O | -LE | -LE | Ø    | -LE  | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |
| J2  | Reblochon cheese (raw milk)    | PL1 | O | +LB | +LB | +MB  | +MB  | <i>L.monocytogenes</i> | + | +LA | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| J6  | Tomme de savoie cheese         | PL1 | O | Ø   | Ø   | -LE  | Ø    | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| J7  | Tomme cheese                   | PL1 | O | -LE | Ø   | -LE  | Ø    | /                      | - | Ø   | -LE | -LE | /          | / | / | /                      | - | = |
| J8  | Reblochon cheese (raw milk)    | PL1 | O | Ø   | -LE | Ø    | -LE  | /                      | - | Ø   | -LE | -LE | /          | / | / | /                      | - | = |
| M9  | Raw milk cheese                | PL1 | O | -LE | -LE | -2LE | -LE  | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M11 | Tomme de savoie cheese         | PL1 | O | -LE | -LE | -ME  | -LE  | /                      | - | Ø   | -LE | -LE | /          | / | / | /                      | - | = |
| M12 | St Félicien cheese             | PL1 | O | Ø   | Ø   | Ø    | Ø    | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| N1  | Camembert cheese (raw milk)    | PL1 | O | +LB | +LB | +MB  | +MA  | <i>L.monocytogenes</i> | + | +MA | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| N2  | Brie cheese (raw milk)         | PL1 | O | Ø   | Ø   | Ø    | Ø    | /                      | - | Ø   | Ø   | /   | /          | / | / | /                      | - | = |
| N3  | Brie cheese (raw milk)         | PL1 | O | +LB | +LA | +MA  | +MA  | <i>L.monocytogenes</i> | + | +LA | +LB | +LB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| N4  | Tomme de savoie cheese         | PL1 | O | +MA | +MB | +MB  | +MA  | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| P1  | Brie cheese (raw milk)         | PL1 | N | -LE | Ø   | Ø    | Ø    | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |
| F2  | Tomme goat's milk cheese       | PL2 | N | -LE | Ø   | -LE  | Ø    | /                      | - | Ø   | -LE | -LE |            | / | / | /                      | - | = |
| G6  | Pyrénées goat's milk cheese    | PL2 | N | +LB | +LB | +MA  | +MB  | <i>L.monocytogenes</i> | + | +MA | +MA | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| G8  | Petit basque ewe's milk cheese | PL2 | N | -LE | -LE | -LE  | -LE  | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |
| G9  | Goat's milk cheese             | PL2 | N | Ø   | Ø   | Ø    | Ø    | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| G11 | Goat's milk cheese             | PL2 | N | -LE | -LE | -LE  | -LE  | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |
| G14 | Goat's milk cheese             | PL2 | N | -ME | -LE | -ME  | -LE  | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |
| G18 | Goat's milk cheese             | PL2 | N | -LE | -LE | -LE  | -4LE | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |
| G19 | Roquefort cheese               | PL2 | N | -LE | Ø   | Ø    | Ø    | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |

|     |                          |     |   |        |        |     |     |                                            |   |        |        |        |     |   |   |                                            |   |    |
|-----|--------------------------|-----|---|--------|--------|-----|-----|--------------------------------------------|---|--------|--------|--------|-----|---|---|--------------------------------------------|---|----|
| I2  | Goat's milk cheese       | PL2 | O | +LB    | +LA    | +MA | +MA | <i>L.monocytogenes</i>                     | + | +MA    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| I4  | Crottin chavignol cheese | PL2 | O | Ø      | -LE    | Ø   | -LE | /                                          | - | +LA(2) | +LB(2) | +LB(6) | non | + | + | <i>L.monocytogenes</i>                     | + | PS |
| I5  | Goat's milk cheese       | PL2 | O | +LA(2) | +LA(2) | +MA | +MB | <i>L.monocytogenes</i>                     | + | +LA    | +LA    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| I6  | Goat's milk cheese       | PL2 | O | +LA(3) | +LA    | +MA | +MB | <i>L.monocytogenes</i>                     | + | +LA    | +LB    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| I8  | Goat's milk cheese       | PL2 | O | +MB    | +LB    | +MB | +MB | <i>L.monocytogenes</i>                     | + | +MA    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| I11 | Goat's milk cheese       | PL2 | N | Ø      | Ø      | Ø   | -LE | /                                          | - | Ø      | Ø      | Ø      | /   | / | / | /                                          | - | =  |
| I12 | Goat's milk cheese       | PL2 | N | Ø      | Ø      | Ø   | Ø   | /                                          | - | Ø      | Ø      | Ø      | /   | / | / | /                                          | - | =  |
| J3  | Goat's milk cheese       | PL2 | O | Ø      | Ø      | Ø   | Ø   | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| J4  | Ste Maure cheese         | PL2 | O | Ø      | Ø      | Ø   | Ø   | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| J5  | Valencay cheese          | PL2 | O | -LE    | Ø      | Ø   | Ø   | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| K1  | Valencay cheese          | PL2 | N | Ø      | Ø      | -LE | Ø   | /                                          | - | -LE    | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| K2  | Ste Maure cheese         | PL2 | N | Ø      | -LE    | Ø   | Ø   | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| K3  | Goat's milk cheese       | PL2 | N | Ø      | Ø      | Ø   | -LE | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| M13 | Goat's milk cheese       | PL2 | O | Ø      | Ø      | Ø   | Ø   | /                                          | - | Ø      | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| M14 | Goat's milk cheese       | PL2 | O | Ø      | Ø      | -LE | Ø   | /                                          | - | -LE    | -LE    | -LE    | /   | / | / | /                                          | - | =  |
| N5  | Goat's milk cheese       | PL2 | O | +LB    | +LB    | +MA | +MA | <i>L.monocytogenes</i>                     | + | +MA    | +MB    | +MA    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| N6  | Goat's milk cheese       | PL2 | O | +LB    | +LB    | +MB | +MA | <i>L.monocytogenes</i>                     | + | +MA    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| O1  | Ste Maure cheese         | PL2 | O | +LB    | +LB    | +MA | +MA | <i>L.monocytogenes</i>                     | + | +MA    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |
| A2  | Pastry                   | PL3 | N | Ø      | -LE    | Ø   | -ME | /                                          | - | Ø      | Ø      | Ø      | /   | / | / | /                                          | - | =  |
| A10 | Strawberries pastry      | PL3 | N | +MA    | +MA    | +MB | +MA | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | +HB    | +HB    | +MB    | oui | + | + | <i>L.monocytogenes</i>                     | + | =  |
| A19 | Whipped cream pastry     | PL3 | N | +MB    | +MB    | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | +MB    | +MB    | +MB    | oui | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | =  |
| B8  | Pastry                   | PL3 | N | +MB    | +MB    | +HB | +HB | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | +HA    | +HB    | +HB    | non | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | =  |
| F6  | Chocolate cream pastry   | PL3 | N | -HE    | -LE    | -ME | -ME | /                                          | - | -HE    | -HE    | -HE    | /   | / | / | /                                          | - | =  |
| G3  | Apple pie                | PL3 | N | -LA    | +LA    | -MA | +MA | <i>L.innocua</i>                           | - | -MA    | -MB    | -MB    | /   | / | / | <i>L.innocua</i>                           | - | =  |
| I13 | Chocolate cream pastry   | PL3 | O | +MB    | +MB    | +MB | +MB | <i>L.monocytogenes</i>                     | + | +MC    | +MC    | +MC    | non | + | + | <i>L.monocytogenes</i>                     | + | =  |

|     |                        |     |   |     |     |     |     |                        |   |     |     |     |            |   |   |                        |   |   |
|-----|------------------------|-----|---|-----|-----|-----|-----|------------------------|---|-----|-----|-----|------------|---|---|------------------------|---|---|
| I14 | Chocolate cream pastry | PL3 | O | +MB | +MB | +MB | +MB | <i>L.monocytogenes</i> | + | +MB | +MB | +HB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I15 | Moka                   | PL3 | O | +MA | +MB | +MA | +MB | <i>L.monocytogenes</i> | + | +MA | +MA | +HA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I16 | Cake                   | PL3 | O | +MB | +MA | +MB | +MA | <i>L.monocytogenes</i> | + | +MB | +MB | +HB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I17 | Butter cream           | PL3 | N | -MB | +MB | -MB | +MB | <i>L.innocua</i>       | - | -MB | -MB | -MA | /          | / | / | <i>L.innocua</i>       | - | = |
| I18 | Milk powder            | PL3 | O | +LA | +LA | +MA | +MA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I19 | Milk powder            | PL3 | O | +MA | +MA | +MA | +MA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I20 | Milk powder            | PL3 | O | +MA | +MA | +MB | +MB | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| I21 | Milk powder            | PL3 | O | +MA | +MA | +MB | +MA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| J17 | Light cream            | PL3 | N | Ø   | Ø   | -ME | -ME | /                      | - | Ø   | -LE | -LE | /          | / | / | /                      | - | = |
| J18 | Whipped cream pastry   | PL3 | N | -LE | -LE | Ø   | -LE | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| J19 | Millefeuille pastry    | PL3 | N | -LE | -LE | Ø   | -ME | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| J20 | Milk powder            | PL3 | N | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| K14 | Milk powder            | PL3 | N | -LE | -LE | -ME | Ø   | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |
| K15 | Milk powder            | PL3 | N | Ø   | -LE | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |

## Dairy products: extension study

| Code | Sample                        | CAT | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                                               |        | Alternative method AL detection |              |      |           |              |      |                   |              |      |                                               |        | Comparison<br>(Listeria spp.) |
|------|-------------------------------|-----|----|--------------------------------------|--------|--------|--------|-----------------------------------------------|--------|---------------------------------|--------------|------|-----------|--------------|------|-------------------|--------------|------|-----------------------------------------------|--------|-------------------------------|
|      |                               |     |    | Fraser 1/2                           |        | Fraser |        | Identification                                | Result | AL<br>24H                       | Confirmation |      | AL<br>48H | Confirmation |      | AL 72H<br>at +4°C | Confirmation |      | Identification                                | Result |                               |
|      |                               |     |    | AL                                   | Palcam | AL     | Palcam |                                               |        |                                 | Palcam       | RLSP |           | Palcam       | RLSP |                   | Palcam       | RLSP |                                               |        |                               |
| B21  | Munster cheese                | PL1 | N  | +MA                                  | +MB    | +HB    | +HB    | <i>L.innocua</i>                              | +      | +HA                             | +            | +    | +HA       | +            | +    | +HA               | +            | +    | <i>L. innocua</i>                             | +      | =                             |
| B28  | Raw milk cheese               | PL1 | N  | +LB                                  | +LA    | +MA    | +HB    | <i>L.innocua</i>                              | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B31  | Raw milk cheese               | PL1 | N  | +MB*                                 | +MB*   | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.innocua</i>    | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i><br><i>L.innocua</i>    | +      | =                             |
| C3   | Bergues cheese                | PL1 | N  | +MB*                                 | +LB*   | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.innocua</i>    | +      | +MB*                            | +/+          | +/+  | +MB*      | +/+          | +/+  | +MB*              | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.innocua</i>    | +      | =                             |
| C6   | Raw milk cheese               | PL1 | N  | +LA                                  | +LB    | +MB    | +MB    | <i>L.innocua</i>                              | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| F19  | Dices of raclette cheese      | PL1 | N  | +MA                                  | +MB    | +MA    | +HB    | <i>L.innocua</i>                              | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| F20  | Le ch'ti roux cheese          | PL1 | N  | +MB                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i>                        | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |
| G2   | Cheese                        | PL1 | N  | +MA                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i>                        | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |
| J4   | Maroille farmer cheese        | PL1 | N  | +MB                                  | +MB    | +MB    | +MB    | <i>L.monocytogenes</i>                        | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |
| J5   | Cheese for pizza              | PL1 | N  | +MA                                  | +MB    | +MA    | +MB    | <i>L.innocua</i>                              | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B27  | Goat cheese Saint Felicien    | PL2 | O  | +LA                                  | +LB    | +MB    | +MB    | <i>L.innocua</i>                              | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B44  | Goat cheese                   | PL2 | O  | +LA                                  | +LA    | +MB    | +MB    | <i>L.innocua</i>                              | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B45  | "Valençai" with raw goat milk | PL2 | O  | +MA                                  | +MB    | +MB    | +MB    | <i>L.innocua</i>                              | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B46  | Goat cheese                   | PL2 | O  | +LB                                  | +LB    | +MB    | +HB    | <i>L.innocua</i>                              | +      | +LB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| G17  | Goat farmer cheese            | PL2 | N  | +LB                                  | +MB    | +MB    | +MB    | <i>L.ivanovii</i>                             | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.ivanovii</i>                             | +      | =                             |
| K19  | Goat cheese                   | PL2 | O  | +LA                                  | +LA    | +HA    | +MA    | <i>L.monocytogenes</i>                        | +      | +LA                             | +            | +    | +LB       | +            | +    | +LB               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |
| K20  | Goat cheese                   | PL2 | O  | +LA                                  | +LA    | +LB    | +MB    | <i>L.innocua</i>                              | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| K21  | Goat cheese                   | PL2 | O  | +LA                                  | +LA    | +MB    | +MB    | <i>L.innocua</i>                              | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                              | +      | =                             |
| B12  | Pizza with cheese             | PL3 | N  | +MB*                                 | +MB    | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | +      | +MA                             | +            | +    | +MB*      | +/+          | +/+  | +MB*              | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | +      | =                             |
| B13  | Pizza with cheese             | PL3 | N  | +MA                                  | +MB    | +MB    | +MB    | <i>L.welshimeri</i>                           | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB               | +            | +    | <i>L.welshimeri</i>                           | +      | =                             |
| B17  | Profiteroles                  | PL3 | N  | +MA                                  | +MA    | +MA    | +MB    | <i>L.monocytogenes</i>                        | +      | +HA                             | +            | +    | +HA       | +            | +    | +HA               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |
| B18  | Raspberries dessert           | PL3 | N  | +LA                                  | +LA    | +MA    | +MA    | <i>L.monocytogenes</i>                        | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA               | +            | +    | <i>L.monocytogenes</i>                        | +      | =                             |

|     |                               |     |   |         |      |      |      |                                            |   |     |   |   |     |   |   |     |   |   |                        |   |   |
|-----|-------------------------------|-----|---|---------|------|------|------|--------------------------------------------|---|-----|---|---|-----|---|---|-----|---|---|------------------------|---|---|
| B19 | Tropézienne with strawberries | PL3 | N | +MB     | +MB* | +MB* | +MB* | <i>L.monocytogenes</i><br><i>L.innocua</i> | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.monocytogenes</i> | + | = |
| C1  | Pizza with goat cheese        | PL3 | N | +LB     | +LB  | +MB  | +MB  | <i>L.welshimeri</i>                        | + | +MA | + | + | +MB | + | + | +MB | + | + | <i>L.welshimeri</i>    | + | = |
| C4  | Profiteroles pie              | PL3 | N | +MA     | +MA  | +MA  | +MB  | <i>L.monocytogenes</i>                     | + | +MA | + | + | +MA | + | + | +MA | + | + | <i>L.monocytogenes</i> | + | = |
| F14 | Pizza with cheese             | PL3 | N | +MB     | +LB  | +HB  | +HB  | <i>L.welshimeri</i>                        | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.welshimeri</i>    | + | = |
| F15 | Versillais                    | PL3 | N | +MB     | +MC  | +MB  | +HB  | <i>L.monocytogenes</i>                     | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.monocytogenes</i> | + | = |
| F17 | Strawberries dessert          | PL3 | N | +MB     | +MB  | +MB  | +HB  | <i>L.monocytogenes</i>                     | + | +MA | + | + | +MB | + | + | +MB | + | + | <i>L.monocytogenes</i> | + | = |
| G1  | Macarons                      | PL3 | N | +MB     | +MC  | +MB  | +MB  | <i>L.monocytogenes</i>                     | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.monocytogenes</i> | + | = |
| K22 | Milk powder                   | PL3 | O | +LC (2) | +HA  | +MB  | +LB  | <i>L.innocua</i>                           | + | +MC | + | + | +MC | + | + | +MC | + | + | <i>L.innocua</i>       | + | = |
| K23 | Raw milk                      | PL3 | O | +MA     | +MA  | +MA  | +MB  | <i>L.monocytogenes</i>                     | + | +MA | + | + | +MB | + | + | +MB | + | + | <i>L.monocytogenes</i> | + | = |
| B22 | Brie de Meaux cheese          | PL1 | N | -LE     | Ø    | -LE  | Ø    | /                                          | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B23 | Munster farmer cheese         | PL1 | N | -LE     | Ø    | -LE  | Ø    | /                                          | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B24 | P'tit Bergues ripe cheese     | PL1 | N | -LE     | -LE  | -LE  | -LE  | /                                          | - | -LE | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B26 | Brie de Meaux cheese          | PL1 | N | -LE     | Ø    | -LE  | Ø    | /                                          | - | -LE | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B29 | Neufchatel farmer cheese      | PL1 | N | -LE     | -LE  | -ME  | -ME  | /                                          | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                      | - | = |
| B30 | Brie de Meaux cheese          | PL1 | N | -LE     | Ø    | -ME  | Ø    | /                                          | - | -LE | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B32 | Cheese "le Boulonnais"        | PL1 | N | Ø       | Ø    | Ø    | Ø    | /                                          | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B33 | Cheese                        | PL1 | N | -LE     | Ø    | -ME  | Ø    | /                                          | - | -LE | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B34 | "Vieux Samer" with raw milk   | PL1 | N | Ø       | Ø    | Ø    | Ø    | /                                          | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B35 | Camembert with raw milk       | PL1 | N | -LE     | Ø    | Ø    | Ø    | /                                          | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                      | - | = |
| B36 | Raw milk cheese with algae    | PL1 | N | Ø       | Ø    | Ø    | Ø    | /                                          | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                      | - | = |
| B37 | Roblechon farmer cheese       | PL1 | N | -LE     | -ME  | -LE  | -LE  | /                                          | - | -ME | / | / | -ME | / | / | -ME | / | / | /                      | - | = |
| C2  | Le ch'ti roux cheese          | PL1 | N | -LE     | -LE  | Ø    | Ø    | /                                          | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                      | - | = |
| C7  | Le ch'ti roux cheese          | PL1 | N | -LE     | -LE  | Ø    | Ø    | /                                          | - | Ø   | / | / | Ø   | / | / | -LE | / | / | /                      | - | = |
| C24 | Roblechon                     | PL1 | N | -LE     | Ø    | -LE  | Ø    | /                                          | - | Ø   | / | / | -ME | / | / | -ME | / | / | /                      | - | = |

|     |                                          |     |   |     |     |     |     |                        |   |      |   |   |     |   |   |     |   |   |                           |   |          |
|-----|------------------------------------------|-----|---|-----|-----|-----|-----|------------------------|---|------|---|---|-----|---|---|-----|---|---|---------------------------|---|----------|
|     | farmer cheese                            |     |   |     |     |     |     |                        |   |      |   |   |     |   |   |     |   |   |                           |   |          |
| D12 | Maroilles farmer cheese                  | PL1 | N | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø    | / | / | Ø   | / | / | -LE | / | / | /                         | - | =        |
| F21 | Roquefort                                | PL1 | N | -ME | -LE | -ME | -ME | /                      | - | +MA  | - | - | -ME | - | - | -ME | - | - | <i>Bacillus circulans</i> | - | FP (24)  |
| G3  | Camembert cheese                         | PL1 | N | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø    | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| G4  | Opera                                    | PL1 | N | -ME | -LE | -LE | -ME | /                      | - | -ME  | / | / | -ME | / | / | -ME | / | / | /                         | - | =        |
| G5  | Dôme de Boulogne                         | PL1 | N | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø    | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| B25 | Goat cheese                              | PL2 | N | -LE | -LE | -LE | -ME | /                      | - | +MB  | - | - | +MB | - | - | +MB | - | - | <i>Bacillus circulans</i> | - | FP       |
| F38 | Goat cheese                              | PL2 | O | -LE | -LE | -LE | -ME | /                      | - | +MB  | - | - | -ME | - | - | -ME | - | - | <i>Bacillus circulans</i> | - | FP (24h) |
| F39 | Ewe ricotta                              | PL2 | O | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø    | / | / | Ø   | / | / | -LE | / | / | /                         | - | =        |
| F40 | Goat cheese                              | PL2 | O | -ME | -LE | -LE | -LE | /                      | - | +MB  | - | - | +MB | - | - | +MB | - | - | <i>Bacillus circulans</i> | - | FP       |
| F41 | Goat cheese                              | PL2 | O | -LE | -LE | Ø   | -ME | /                      | - | +LB? | - | - | -LE | - | - | -LE | - | - | <i>Bacillus circulans</i> | - | FP (24h) |
| B14 | Pizza with 4 cheeses                     | PL3 | N | +LC | +LC | -LE | -LE | <i>Bacillus lentus</i> | - | +MB  | - | - | +MB | - | - | +MB | - | - | <i>Bacillus lentus</i>    | - | FP       |
| B15 | Strawberries pie                         | PL3 | N | -LE | Ø   | -LE | Ø   | /                      | - | Ø    | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| B16 | Saint honoré                             | PL3 | N | Ø   | Ø   | -LE | Ø   | /                      | - | -LE  | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| B20 | Strawberries pie                         | PL3 | N | -LE | Ø   | -LE | Ø   | /                      | - | -LE  | / | / | -LE | / | / | -LE | / | / | /                         | - | =        |
| C5  | Opera                                    | PL3 | N | -ME | -ME | -ME | -ME | /                      | - | +MC  | - | - | -ME | - | - | -ME | - | - | <i>Bacillus pumilus</i>   | - | FP (24)  |
| F16 | Chantilly                                | PL3 | N | Ø   | Ø   | Ø   | Ø   | /                      | - | Ø    | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |
| F18 | Chocolate cake                           | PL3 | N | -LE | -LE | -LE | -LE | /                      | - | +MB  | - | - | +MB | - | - | +MB | - | - | <i>Bacillus circulans</i> | - | FP       |
| F22 | Paninis with goat and sun-dried tomatoes | PL3 | N | Ø   | Ø   | -LE | -LE | /                      | - | Ø    | / | / | Ø   | / | / | Ø   | / | / | /                         | - | =        |

| Code | Sample                        | CAT | CA | AL detection - Test after Fraser 1/2 storage 72h at 4°C |              |      |        |              |      |                                                             |        | Comparison<br>(Listeria spp.) |
|------|-------------------------------|-----|----|---------------------------------------------------------|--------------|------|--------|--------------|------|-------------------------------------------------------------|--------|-------------------------------|
|      |                               |     |    | AL 24H                                                  | Confirmation |      | AL 48H | Confirmation |      | Identification                                              | Result |                               |
|      |                               |     |    |                                                         | Palcam       | RLSP |        | Palcam       | RLSP |                                                             |        |                               |
| B21  | Munster cheese                | PL1 | N  | /                                                       | /            | /    | +HA    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B28  | Raw milk cheese               | PL1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B31  | Raw milk cheese               | PL1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria monocytogenes</i><br><i>Listeria innocua</i>    | +      | =                             |
| C3   | Bergues cheese                | PL1 | N  | /                                                       | /            | /    | +MB    | +/+          | +/+  | <i>Listeria monocytogenes</i><br><i>Listeria innocua</i>    | +      | =                             |
| C6   | Raw milk cheese               | PL1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| F19  | Dices of raclette cheese      | PL1 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| F20  | Le ch'ti roux cheese          | PL1 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| G2   | Cheese                        | PL1 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| J4   | Maroille farmer cheese        | PL1 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| J5   | Cheese for pizza              | PL1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B27  | Goat cheese Saint Felicien    | PL2 | O  | /                                                       | /            | /    | +MA    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B44  | Goat cheese                   | PL2 | O  | /                                                       | /            | /    | +MA    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B45  | "Valençai" with raw goat milk | PL2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B46  | Goat cheese                   | PL2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| G17  | Goat farmer cheese            | PL2 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>Listeria ivanovii</i>                                    | +      | =                             |
| K19  | Goat cheese                   | PL2 | O  | /                                                       | /            | /    | +LB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| K20  | Goat cheese                   | PL2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| K21  | Goat cheese                   | PL2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| B12  | Pizza with cheese             | PL3 | N  | /                                                       | /            | /    | +MB*   | +/+          | +/+  | <i>Listeria monocytogenes</i><br><i>Listeria welshimeri</i> | +      | =                             |
| B13  | Pizza with cheese             | PL3 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria welshimeri</i>                                  | +      | =                             |
| B17  | Profiteroles                  | PL3 | N  | /                                                       | /            | /    | +HA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| B18  | Raspberries dessert           | PL3 | N  | /                                                       | /            | /    | +MA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| B19  | Tropézienne with strawberries | PL3 | N  | /                                                       | /            | /    | +HB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| C1   | Pizza with goat cheese        | PL3 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria welshimeri</i>                                  | +      | =                             |
| C4   | Profiteroles pie              | PL3 | N  | /                                                       | /            | /    | +HA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| F14  | Pizza with cheese             | PL3 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>Listeria welshimeri</i>                                  | +      | =                             |
| F15  | Versaillais                   | PL3 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| F17  | Strawberries dessert          | PL3 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| G1   | Macarons                      | PL3 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| K22  | Milk powder                   | PL3 | O  | /                                                       | /            | /    | +LB    | +            | +    | <i>Listeria innocua</i>                                     | +      | =                             |
| K23  | Raw milk                      | PL3 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>Listeria monocytogenes</i>                               | +      | =                             |
| B22  | Brie de Meaux cheese          | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |
| B23  | Munster farmer cheese         | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |
| B24  | P'tit Bergues ripe cheese     | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |
| B26  | Brie de Meaux cheese          | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |
| B29  | Neufchatel farmer cheese      | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |
| B30  | Brie de Meaux cheese          | PL1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                                           | -      | =                             |

|     |                                          |     |   |        |   |   |        |   |   |                           |   |          |
|-----|------------------------------------------|-----|---|--------|---|---|--------|---|---|---------------------------|---|----------|
| B32 | Cheese "le Boulonnais"                   | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B33 | Cheese                                   | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B34 | "Vieux Samer" with raw milk              | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B35 | Camembert with raw milk                  | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B36 | Raw milk cheese with algae               | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B37 | Roblechon farmer cheese                  | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| C2  | Le ch'ti roux cheese                     | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| C7  | Le ch'ti roux cheese                     | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| C24 | Roblechon farmer cheese                  | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| D12 | Maroilles farmer cheese                  | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| F21 | Roquefort                                | PL1 | N | +MA    | - | - | +MB    | - | - | <i>Bacillus circulans</i> | - | FP (24)  |
| G3  | Camembert cheese                         | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| G4  | Opera                                    | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| G5  | Dôme de Boulogne                         | PL1 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B25 | Goat cheese                              | PL2 | N | /      | - | - | +MB    | - | - | <i>Bacillus circulans</i> | - | FP       |
| F38 | Goat cheese                              | PL2 | O | +MB    | - | - | +MB    | - | - | <i>Bacillus circulans</i> | - | FP (24h) |
| F39 | Ewe ricotta                              | PL2 | O | /      | / | / | /      | / | / | /                         | - | =        |
| F40 | Goat cheese                              | PL2 | O | +MB    | - | - | +MB    | - | - | <i>Bacillus circulans</i> | - | FP       |
| F41 | Goat cheese                              | PL2 | O | +LA(2) | - | - | +LA(2) | - | - | <i>Bacillus circulans</i> | - | FP (24h) |
| B14 | Pizza with 4 cheeses                     | PL3 | N | /      | - | - | /      | - | - | <i>Bacillus lentus</i>    | - | FP       |
| B15 | Strawberries pie                         | PL3 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B16 | Saint honoré                             | PL3 | N | /      | / | / | /      | / | / | /                         | - | =        |
| B20 | Strawberries pie                         | PL3 | N | /      | / | / | /      | / | / | /                         | - | =        |
| C5  | Opera                                    | PL3 | N | /      | - | - | -ME    | - | - | <i>Bacillus pumilus</i>   | - | FP (24)  |
| F16 | Chantilly                                | PL3 | N | /      | / | / | /      | / | / | /                         | - | =        |
| F18 | Chocolate cake                           | PL3 | N | -LE    | - | - | -LE    | - | - | <i>Bacillus circulans</i> | - | FP       |
| F22 | Paninis with goat and sun-dried tomatoes | PL3 | N | /      | / | / | /      | / | / | /                         | - | =        |

## Seafood products: initial validation

| Code | Sample                   | Cat. | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                              |        | Alternative method AL detection |                         |                             |                        |             |             |                              |        | Comparison<br>(L.monocytogenes) |
|------|--------------------------|------|----|--------------------------------------|--------|--------|--------|------------------------------|--------|---------------------------------|-------------------------|-----------------------------|------------------------|-------------|-------------|------------------------------|--------|---------------------------------|
|      |                          |      |    | Fraser 1/2                           |        | Fraser |        | Identification               | Result | Reading<br>after<br>22h         | Reading<br>after<br>48h | Storage<br>72h at<br>+2-8°C | Confirmation<br>L.mono |             |             | Identification               | Result |                                 |
|      |                          |      |    | AL                                   | PALCAM | AL     | PALCAM |                              |        |                                 |                         |                             | Purif                  | Spot<br>RLM | iQ<br>Lmono |                              |        |                                 |
| A11  | Fish fillet              | PP1  | N  | -MA                                  | +MA    | -MA    | +MA    | L.innocua                    | -      | -HB                             | -HB                     | -HB                         | non                    | /           | /           | L.innocua                    | -      | =                               |
| A22  | Tartar of white fish     | PP1  | N  | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes              | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| B14  | Crayfish                 | PP1  | N  | +HB                                  | +HA    | +HB    | +HA    | L.monocytogenes              | +      | +HA                             | +HB                     | +HA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| C6   | Cod fillet               | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C7   | Sea fruit cocktail       | PP1  | N  | -MA                                  | +MA    | -HA    | +MA    | L.innocua                    | -      | -MA                             | -MA                     | -MA                         | non                    | /           | /           | L.innocua                    | -      | =                               |
| C10  | Sushis                   | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C13  | Fish fillet              | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C14  | Fish brochette           | PP1  | N  | Ø                                    | -LE    | -LE    | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| F16  | Shrimps                  | PP1  | N  | -MA                                  | -MA    | -HA    | -MA    | L.innocua                    | -      | -HA                             | -HA                     | -HA                         | oui                    | /           | /           | L.innocua                    | -      | =                               |
| F17  | Shrimps                  | PP1  | N  | +LB                                  | +LB    | +HA    | +HA    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | /                      | +           | +           | L.monocytogenes              | +      | =                               |
| F18  | Shrimps                  | PP1  | N  | +MA                                  | +MB    | +HB    | +HA    | L.monocytogenes              | +      | +HA                             | +HA                     | +HA                         | /                      | +           | +           | L.monocytogenes              | +      | =                               |
| F19  | Shrimps                  | PP1  | N  | +MA                                  | +MA    | +HB    | +MB    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | /                      | +           | +           | L.monocytogenes              | +      | =                               |
| J12  | Fish fillet              | PP1  | O  | +LA                                  | +LA    | +MA    | +MA    | L.monocytogenes              | +      | +LA                             | +LA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| J13  | Perch fillet             | PP1  | O  | +LA(3)                               | +LA(3) | +MA    | +MA    | L.monocytogenes              | +      | +LA                             | +LA                     | +LA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| J14  | Whiting fillet           | PP1  | O  | +LA                                  | +LA    | +MB    | +MA    | L.monocytogenes              | +      | +LA                             | +LA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| J15  | Saithe fillet            | PP1  | O  | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| J16  | Fish fillet              | PP1  | O  | +MA                                  | +MB    | +MA    | +MB    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| K4   | Fish fillet              | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| K8   | Fish fillet              | PP1  | N  | Ø                                    | Ø      | Ø      | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| K9   | Saithe fillet            | PP1  | N  | -LE                                  | -LE    | -LE    | -LE    | /                            | -      | Ø                               | -ME                     | -ME                         | /                      | /           | /           | /                            | -      | =                               |
| K10  | Whiting fillet           | PP1  | N  | Ø                                    | Ø      | -ME    | -ME    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| K11  | Fish fillet              | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| K12  | Perch fillet             | PP1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| P4   | Gurnard fillet           | PP1  | O  | +LA                                  | +LA    | +MA    | +LA    | L.monocytogenes              | +      | +MB                             | +MB                     | +MB                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| P5   | Saithe fillet            | PP1  | O  | Ø                                    | Ø      | Ø      | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| P6   | Cod fillet               | PP1  | O  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| P8   | Cod fillet               | PP1  | O  | +LA                                  | +LA    | +LA    | +LA    | L.monocytogenes              | +      | +MA                             | +MA                     | +MA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| B12  | Smoked herring           | PP2  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C2   | Smoked salmon<br>Ireland | PP2  | N  | Ø                                    | -ME    | Ø      | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C8   | Smoked haddock           | PP2  | N  | Ø                                    | -LE    | Ø      | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| C11  | Smoked salmon            | PP2  | N  | Ø                                    | Ø      | Ø      | -LE    | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |
| F12  | Smoked salmon            | PP2  | N  | +HB                                  | +HA    | -HE    | +MA    | L.monocytogenes<br>L.innocua | +      | +HD                             | +HB                     | +HC                         | oui                    | +           | +           | L.monocytogenes<br>L.innocua | +      | =                               |
| H8   | Smoked salmon            | PP2  | N  | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes              | +      | +MA                             | +MA                     | +HA                         | non                    | +           | +           | L.monocytogenes              | +      | =                               |
| H9   | Smoked salmon            | PP2  | N  | Ø                                    | Ø      | Ø      | Ø      | /                            | -      | Ø                               | Ø                       | Ø                           | /                      | /           | /           | /                            | -      | =                               |

|     |                          |     |   |        |        |     |     |                                              |   |     |     |     |     |   |   |                                              |   |   |
|-----|--------------------------|-----|---|--------|--------|-----|-----|----------------------------------------------|---|-----|-----|-----|-----|---|---|----------------------------------------------|---|---|
| H10 | Smoked herring           | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H11 | Smoked salmon            | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H12 | Smoked salmon            | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H13 | Smoked salmon Scotland   | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H14 | Smoked salmon Scotland   | PP2 | N | +MA    | +LA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| H15 | Kippers                  | PP2 | N | Ø      | Ø      | -LE | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H16 | Smoked herring           | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| H17 | Tartar of smoked salmon  | PP2 | N | -MA    | +LA    | -HA | +HA | <i>L.innocua</i>                             | - | -MA | -MA | -MA | /   | / | / | <i>L.innocua</i>                             | - | = |
| H18 | Smoked salmon            | PP2 | N | +MA    | +LB    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| L9  | Smoked salmon            | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| L10 | Smoked salmon            | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| L13 | Smoked trout             | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| L14 | Smoked salmon            | PP2 | N | Ø      | Ø      | Ø   | -LE | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| L15 | Smoked salmon            | PP2 | N | +LA    | +LA    | +MA | +LA | <i>L.monocytogenes</i>                       | + | +LA | +LB | +LB | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| L19 | Kippers                  | PP2 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| P7  | Smoked haddock           | PP2 | O | +MA    | +LA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| Q11 | Smoked salmon            | PP2 | O | +MA    | +MA    | +MA | +LA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| Q12 | Smoked salmon            | PP2 | O | +MA    | +MA    | +MA | +LA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| Q13 | Smoked salmon            | PP2 | O | +MA    | +HA    | +MA | +LA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| Q14 | Smoked salmon            | PP2 | O | +MA    | +MA    | +MA | +LA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| C4  | Ready-to-eat meal        | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| C12 | Frozen pre-cooked squids | PP3 | N | +MB    | +MB    | +MB | +MB | <i>L.monocytogenes</i>                       | + | +MB | +MB | +HB | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| E19 | Tuna sandwich            | PP3 | N | +LB    | Ø      | +MA | +MA | <i>L.monocytogenes</i>                       | + | +LB | +MB | +MB | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| H20 | Salmon salad             | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| J9  | Fish gratin              | PP3 | O | +LA    | +LA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +LA | +LA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| J10 | Cooked red mullet fillet | PP3 | O | +LA    | +LA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +LA | +LA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| J11 | Cooked salmon            | PP3 | O | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| K5  | Cooked salmon            | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| K6  | Cooked red mullet fillet | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| K7  | Fish gratin              | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| K13 | Salmon brochette         | PP3 | N | Ø      | Ø      | Ø   | Ø   | /                                            | - | Ø   | Ø   | Ø   | /   | / | / | /                                            | - | = |
| L17 | Stuffed squids           | PP3 | N | +LB(2) | +LA(4) | +LB | +LB | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | + | +LA | +LB | +MB | non | + | + | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | + | = |
| Q1  | Fish with sauce          | PP3 | O | +MA    | +MA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + | + | <i>L.monocytogenes</i>                       | + | = |
| Q2  | Cooked salmon            | PP3 | O | +MA    | +MA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + |   | <i>L.monocytogenes</i>                       | + | = |
| Q3  | Fish with vegetables     | PP3 | O | +LA    | +MA    | +MA | +MA | <i>L.monocytogenes</i>                       | + | +MA | +MA | +MA | non | + |   | <i>L.monocytogenes</i>                       | + | = |

## Seafood products: extension study

| Code | Sample                          | CAT | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                                              |        | Alternative method AL detection |              |      |           |              |      |                      |              |      |                                              | Comparison<br>(Listeria spp.) |        |
|------|---------------------------------|-----|----|--------------------------------------|--------|--------|--------|----------------------------------------------|--------|---------------------------------|--------------|------|-----------|--------------|------|----------------------|--------------|------|----------------------------------------------|-------------------------------|--------|
|      |                                 |     |    | Fraser 1/2                           |        | Fraser |        | Identification                               | Result | AL<br>24H                       | Confirmation |      | AL<br>48H | Confirmation |      | AL<br>72H at<br>+4°C | Confirmation |      | Identification                               |                               | Result |
|      |                                 |     |    | AL                                   | Palcam | AL     | Palcam |                                              |        |                                 | Palcam       | RLSP |           | Palcam       | RLSP |                      | Palcam       | RLSP |                                              |                               |        |
| B11  | Shrimps                         | PP1 | N  | +MA                                  | +MA    | +MA    | +MB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| C9   | Pangasus fillet                 | PP1 | N  | +MB                                  | +MB    | +MB*   | +MB*   | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| C18  | Brown shrimps                   | PP1 | N  | +MB                                  | -ME    | +MB    | +MD    | <i>L.monocytogenes</i>                       | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| D14  | Pangasus fillet                 | PP1 | N  | +MB                                  | +MB    | +MB    | +MB    | <i>L.monocytogenes</i>                       | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| H5   | Pangasus fillet                 | PP1 | N  | +MA                                  | +MA    | +MA    | +MA    | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| H7   | Scampis                         | PP1 | N  | +LB*                                 | +MB*   | +LB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | +MB                             | +            | +    | +MB*      | +            | +    | +MB*                 | +            | +    | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +                             | =      |
| H18  | Brown shrimps                   | PP1 | O  | +MB                                  | +MA    | +MB    | +MB    | <i>L.innocua</i>                             | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| H19  | Cod piece                       | PP1 | O  | +LB                                  | +MB    | +MB    | +MB    | <i>L.innocua</i>                             | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| H26  | Deep-frozen sea fruit cocktail  | PP1 | N  | +LC (3)                              | Ø      | +LA    | +LB    | <i>L.monocytogenes</i>                       | +      | +LC (1)                         | +            | +    | +LC(1)    | +            | +    | +LC(1)               | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| H28  | Pangasus fillet                 | PP1 | N  | +MB                                  | +MB    | +LB    | +MB    | <i>L.monocytogenes</i>                       | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| J8   | Shrimps                         | PP1 | N  | +LA                                  | +LB    | +LA    | +MB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| K10  | Pangasus fillet                 | PP1 | N  | +MA                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i>                       | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| K18  | Smoked herring fillet           | PP1 | O  | +MA                                  | +LA    | +MA    | +MA    | <i>L.innocua</i>                             | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| B9   | Smoked salmon from Norway       | PP2 | N  | +MA                                  | +MA    | +MA    | +HA    | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| C8   | Smoked haddock fillet           | PP2 | N  | +LB                                  | +LB    | +LB    | +LB    | <i>L.innocua</i>                             | +      | +LA                             | +            | +    | +LB       | +            | +    | +LB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| C11  | Smoked haddock fillet           | PP2 | N  | +MC                                  | +LB    | +LB    | +MB    | <i>L.innocua</i>                             | +      | +MB                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| C15  | Smoked halibut                  | PP2 | N  | +LA(5)                               | +LA(3) | +MB    | +MB    | <i>L.monocytogenes</i>                       | +      | +LA                             | +            | +    | +LA       | +            | +    | +LA                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| C16  | Smoked trout                    | PP2 | N  | +LA                                  | +LA    | +MB    | +MB    | <i>L.innocua</i>                             | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |
| E8   | Smoked eels                     | PP2 | N  | +LA                                  | +LA    | +MA    | +HB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.monocytogenes</i>                       | +                             | =      |
| E9   | Scottish smoked salmon          | PP2 | N  | +LA                                  | +LA    | +MA    | +MB    | <i>L.welshimeri</i>                          | +      | +MA                             | +            | +    | +MA       | +            | +    | +MA                  | +            | +    | <i>L.welshimeri</i>                          | +                             | =      |
| K16  | Dices of smoked Atlantic salmon | PP2 | O  | +LA                                  | +LA    | +MA    | +MA    | <i>L.innocua</i>                             | +      | +MA                             | +            | +    | +MB       | +            | +    | +MB                  | +            | +    | <i>L.innocua</i>                             | +                             | =      |

|     |                                |     |   |      |        |      |     |                                  |   |     |     |     |      |     |     |      |     |     |                                  |   |    |
|-----|--------------------------------|-----|---|------|--------|------|-----|----------------------------------|---|-----|-----|-----|------|-----|-----|------|-----|-----|----------------------------------|---|----|
| K17 | Smoked salmon from Norway      | PP2 | O | +MA  | +MA    | +MA  | +HA | <i>L.innocua</i>                 | + | +MB | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.innocua</i>                 | + | =  |
| E2  | Deep-frozen breaded fish       | PP3 | N | +MB* | +MB*   | +MB* | +HB | <i>L.monocytogenes L.innocua</i> | + | +MB | +/+ | +/+ | +MB* | +/+ | +/+ | +MB* | +/+ | +/+ | <i>L.monocytogenes L.innocua</i> | + | =  |
| E6  | Curry schrimps                 | PP3 | N | +LB  | +LA(2) | +MA  | +MB | <i>l; monocytogenes</i>          | + | +MA | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.monocytogenes</i>           | + | =  |
| H15 | Dices of surimi                | PP3 | O | +MA  | +MB    | +MA  | +MB | <i>L.innocua</i>                 | + | +MA | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.innocua</i>                 | + | =  |
| H16 | Schrimps terrine               | PP3 | O | +MA  | +MA    | +MA  | +MA | <i>L.innocua</i>                 | + | +MA | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.innocua</i>                 | + | =  |
| H17 | Minced hake fillet             | PP3 | O | +MA  | +MA    | +MA  | +HA | <i>L.innocua</i>                 | + | +MA | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.innocua</i>                 | + | =  |
| H20 | Breaded fish with cheese       | PP3 | O | +LA  | +LA    | +MA  | +MA | <i>L.innocua</i>                 | + | +MB | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.innocua</i>                 | + | =  |
| I8  | Fish balls                     | PP3 | N | +LA  | +LA    | +MA  | +MA | <i>L.monocytogenes</i>           | + | +LA | +   | +   | +LA  | +   | +   | +LA  | +   | +   | <i>L.monocytogenes</i>           | + | =  |
| K13 | Fish balls                     | PP3 | N | +LA  | +LA    | +MB  | +MB | <i>L.monocytogenes</i>           | + | +MA | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.monocytogenes</i>           | + | =  |
| K15 | Olives with two fishes         | PP3 | O | +LB  | +LA    | +MA  | +MA | <i>L.innocua</i>                 | + | +LA | +   | +   | +LA  | +   | +   | +LA  | +   | +   | <i>L.innocua</i>                 | + | =  |
| C10 | Piece of Atlantic salmon       | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C21 | Piece of salmon                | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| D10 | Shrimps                        | PP1 | N | -LE  | -LE    | -LE  | -LE | <i>Lactobacillus</i>             | - | -ME | /   | /   | -ME  | /   | /   | -ME  | /   | /   | <i>Lactobacillus</i>             | - | =  |
| D19 | Fillet whiting                 | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| E11 | Piece of salmon                | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| F29 | Shrimps                        | PP1 | N | -LE  | -ME    | -LE  | -ME | /                                | - | -ME | /   | /   | -ME  | /   | /   | -ME  | /   | /   | /                                | - | =  |
| F30 | Shrimps                        | PP1 | N | Ø    | -LE    | Ø    | Ø   | /                                | - | -LE | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                | - | =  |
| F32 | Scampis                        | PP1 | N | +LA  | -LE    | -LE  | Ø   | <i>Bacillus circulans</i>        | - | +MA | -   | -   | +MA  | -   | -   | +MA  | -   | -   | <i>Bacillus circulans</i>        | - | FP |
| I4  | Shrimps                        | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                | - | =  |
| I7  | Shrimps                        | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| K11 | Shrimps                        | PP1 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| B10 | Smoked trout                   | PP2 | N | Ø    | Ø      | -LE  | -LE | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C12 | Wild smoked salmon from Alaska | PP2 | N | -LE  | Ø      | -LE  | -LE | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C13 | Atlantic smoked salmon         | PP2 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C14 | Smoked trout                   | PP2 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C19 | Smoked salmon                  | PP2 | N | Ø    | Ø      | -LE  | -LE | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |
| C23 | Fillet of smoked herring       | PP2 | N | Ø    | Ø      | Ø    | Ø   | /                                | - | Ø   | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                | - | =  |

|     |                                 |     |   |     |     |     |     |                 |   |     |   |   |     |   |   |     |   |   |                 |   |    |
|-----|---------------------------------|-----|---|-----|-----|-----|-----|-----------------|---|-----|---|---|-----|---|---|-----|---|---|-----------------|---|----|
| E7  | Smoked salmon from Norway       | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| F26 | Fillet of sprat                 | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| F31 | Smoked haddock                  | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| G6  | Atlantic smoked salmon          | PP2 | N | Ø   | -LE | Ø   | -LE | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| G7  | Smoked marinated herring fillet | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| G8  | Cooked whelks                   | PP2 | N | -LE | -LE | Ø   | Ø   | /               | - | -LE | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| G9  | Smoked salmon from Norway       | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| G18 | Fillet of sprat                 | PP2 | N | Ø   | Ø   | -LE | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| H1  | Dices of smoked salmon          | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| H2  | Herring fillets                 | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| H3  | Dices of smoked salmon          | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| H4  | Scottish smoked salmon          | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| H6  | Marinated herring fillet        | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| I5  | Smoked salmon from Norway       | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| J9  | Smoked salmon                   | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| J13 | Marinated herrings              | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| K12 | Smoked scallops                 | PP2 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| C17 | Stuffed squids                  | PP3 | N | -LE | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| E1  | Rice salad with surimi          | PP3 | N | Ø   | Ø   | -LE | -LE | /               | - | -LE | / | / | -LE | / | / | -LE | / | / | /               | - | =  |
| E10 | Olive of Salmon                 | PP3 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| F27 | Shrimps salad with sauce        | PP3 | N | +LA | -LE | -LE | -LE | Bacillus lentus | - | +MA | - | - | +MB | - | - | +MB | - | - | Bacillus lentus | - | FP |
| F28 | Olive of Salmon                 | PP3 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /               | - | =  |
| I1  | Scallops béchamel               | PP3 | N | Ø   | Ø   | Ø   | Ø   | /               | - | Ø   | / | / | -LE | / | / | -LE | / | / | /               | - | =  |

|     |                                       |     |   |     |   |     |   |   |   |     |   |   |     |   |   |     |   |   |   |   |   |
|-----|---------------------------------------|-----|---|-----|---|-----|---|---|---|-----|---|---|-----|---|---|-----|---|---|---|---|---|
| I2  | Cooked<br>whelks                      | PP3 | N | Ø   | Ø | Ø   | Ø | / | - | Ø   | / | / | -LE | / | / | -LE | / | / | / | - | = |
| I3  | Olive of<br>Salmon with<br>vegetables | PP3 | N | Ø   | Ø | Ø   | Ø | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| I6  | Olive of<br>salmon and<br>fish        | PP3 | N | Ø   | Ø | Ø   | Ø | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| J7  | Cuttlefish                            | PP3 | N | -LE | Ø | Ø   | Ø | / | - | -LE | / | / | -LE | / | / | -LE | / | / | / | - | = |
| K14 | Olive of<br>salmon                    | PP3 | N | Ø   | Ø | -ME | Ø | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |

| Code | Sample                          | CAT | CA | AL detection - Test after Fraser 1/2 storage 72h at 4°C |              |      |        |              |      |                                              |        | Comparison<br>(Listeria spp.) |
|------|---------------------------------|-----|----|---------------------------------------------------------|--------------|------|--------|--------------|------|----------------------------------------------|--------|-------------------------------|
|      |                                 |     |    | AL 24H                                                  | Confirmation |      | AL 48H | Confirmation |      | Identification                               | Result |                               |
|      |                                 |     |    |                                                         | Palcam       | RLSP |        | Palcam       | RLSP |                                              |        |                               |
| B11  | Shrimps                         | PP1 | N  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| C9   | Pangasus fillet                 | PP1 | N  | /                                                       | /            | /    | +MB*   | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| C18  | Brown shrimps                   | PP1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| D14  | Pangasus fillet                 | PP1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| H5   | Pangasus fillet                 | PP1 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| H7   | Scampis                         | PP1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | =                             |
| H18  | Brown shrimps                   | PP1 | O  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| H19  | Cod piece                       | PP1 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| H26  | Deep-freezed sea fruit cocktail | PP1 | N  | +MC(1)                                                  | +            | +    | +MC(1) | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| H28  | Pangasus fillet                 | PP1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| J8   | Shrimps                         | PP1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| K10  | Pangasus fillet                 | PP1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| K18  | Smoked herring fillet           | PP1 | O  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| B9   | Smoked salmon from Norway       | PP2 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| C8   | Smoked haddock fillet           | PP2 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| C11  | Smoked haddock fillet           | PP2 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| C15  | Smoked halibut                  | PP2 | N  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| C16  | Smoked trout                    | PP2 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| E8   | Smoked eels                     | PP2 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| E9   | Scottish smoked salmon          | PP2 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.welshimeri</i>                          | +      | =                             |
| K16  | Dices of smoked Atlantic salmon | PP2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| K17  | Smoked salmon from Norway       | PP2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| E2   | Deep-freezed breaded fish       | PP3 | N  | +MB*                                                    | +/+          | +/+  | +MB*   | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.innocua</i>   | +      | =                             |
| E6   | Curry schrimps                  | PP3 | N  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| H15  | Dices of surimi                 | PP3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| H16  | Schrimps terrine                | PP3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| H17  | Minced hake fillet              | PP3 | O  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| H20  | Breaded fish with cheese        | PP3 | O  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| I8   | Fish balls                      | PP3 | N  | +LA                                                     | +            | +    | +LA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| K13  | Fish balls                      | PP3 | N  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.monocytogenes</i>                       | +      | =                             |
| K15  | Olives with two fishes          | PP3 | O  | /                                                       | /            | /    | +LA    | +            | +    | <i>L.innocua</i>                             | +      | =                             |
| C10  | Piece of Atlantic salmon        | PP1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                            | -      | =                             |

|     |                                 |     |   |     |   |   |     |   |   |                           |   |    |
|-----|---------------------------------|-----|---|-----|---|---|-----|---|---|---------------------------|---|----|
| C21 | Piece of salmon                 | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| D10 | Shrimps                         | PP1 | N | -LE | / | / | -LE | / | / | <i>Lactobacillus</i>      | - | =  |
| D19 | Fillet whiting                  | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| E11 | Piece of salmon                 | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| F29 | Shrimps                         | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| F30 | Shrimps                         | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| F32 | Scampis                         | PP1 | N | +LA | - | - | +LB | - | - | <i>Bacillus circulans</i> | - | FP |
| I4  | Shrimps                         | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| I7  | Shrimps                         | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| K11 | Shrimps                         | PP1 | N | /   | / | / | /   | / | / | /                         | - | =  |
| B10 | Smoked trout                    | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C12 | Wild smoked salmon from Alaska  | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C13 | Atlantic smoked salmon          | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C14 | Smoked trout                    | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C19 | Smoked salmon                   | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C23 | Fillet of smoked herring        | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| E7  | Smoked salmon from Norway       | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| F26 | Fillet of sprat                 | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| F31 | Smoked haddock                  | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| G6  | Atlantic smoked salmon          | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| G7  | Smoked marinated herring fillet | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| G8  | Cooked whelks                   | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| G9  | Smoked salmon from Norway       | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| G18 | Fillet of sprat                 | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| H1  | Dices of smoked salmon          | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| H2  | Herring fillets                 | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| H3  | Dices of smoked salmon          | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| H4  | Scottish smoked salmon          | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| H6  | Marinated herring fillet        | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| I5  | Smoked salmon from Norway       | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| J9  | Smoked salmon                   | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| J13 | Marinated herrings              | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| K12 | Smoked scallops                 | PP2 | N | /   | / | / | /   | / | / | /                         | - | =  |
| C17 | Stuffed squids                  | PP3 | N | /   | / | / | /   | / | / | /                         | - | =  |
| E1  | Rice salad with surimi          | PP3 | N | /   | / | / | /   | / | / | /                         | - | =  |
| E10 | Olive of Salmon                 | PP3 | N | /   | / | / | /   | / | / | /                         | - | =  |

| F27 | Shrimps salad with sauce        | PP3 | N | +LA(1) | - | - | +LB(2) | - | - | <i>Bacillus lentus</i> | - | FP |
|-----|---------------------------------|-----|---|--------|---|---|--------|---|---|------------------------|---|----|
| F28 | Olive of Salmon                 | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| I1  | Scallops béchamel               | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| I2  | Cooked whelks                   | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| I3  | Olive of Salmon with vegetables | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| I6  | Olive of salmon and fish        | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| J7  | Cuttlefish                      | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |
| K14 | Olive of salmon                 | PP3 | N | /      | / | / | /      | / | / | /                      | - | =  |

## Vegetables: initial validation

| Code | Sample                  | Cat. | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                                              |        | Alternative method AL detection |                         |                             |                            |             |          |                                              |        | Comparison<br>( <i>L.monocytogenes</i> ) |
|------|-------------------------|------|----|--------------------------------------|--------|--------|--------|----------------------------------------------|--------|---------------------------------|-------------------------|-----------------------------|----------------------------|-------------|----------|----------------------------------------------|--------|------------------------------------------|
|      |                         |      |    | Fraser 1/2                           |        | Fraser |        | Identification                               | Result | Reading<br>after<br>22h         | Reading<br>after<br>48h | Storage<br>72h at<br>+2-8°C | Confirmation <i>L.mono</i> |             |          | Identification                               | Result |                                          |
|      |                         |      |    | AL                                   | PALCAM | AL     | PALCAM |                                              |        |                                 |                         |                             | Purif                      | Spot<br>RLM | iQ Lmono |                                              |        |                                          |
| B1   | Frozen french fries     | PV1  | N  | Ø                                    | Ø      | -ME    | -ME    | /                                            | -      | -LE                             | -LE                     | -LE                         | /                          | /           | /        | /                                            | -      | =                                        |
| B3   | Frozen potatoes         | PV1  | N  | -LE                                  | Ø      | Ø      | Ø      | /                                            | -      | -ME                             | -ME                     | -ME                         | /                          | /           | /        | /                                            | -      | =                                        |
| B4   | Frozen french fries     | PV1  | N  | +LB                                  | +LA    | +HB    | +HB    | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | +MA                             | +HB                     | +HB                         | <i>oui</i><br><i>oui</i>   | +           | +        | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | =                                        |
| D6   | Frozen french fries     | PV1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                                            | -      | Ø                               | Ø                       | Ø                           | /                          | /           | /        | /                                            | -      | =                                        |
| D7   | Frozen french fries     | PV1  | N  | +MA                                  | +MA    | +HA    | +MA    | <i>L.monocytogenes</i>                       | +      | +HA                             | +HA                     | +HA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| D8   | Frozen potatoes         | PV1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                                            | -      | Ø                               | Ø                       | Ø                           | /                          | /           | /        | /                                            | -      | =                                        |
| D9   | Frozen potatoes         | PV1  | N  | -LE                                  | -LE    | -LE    | -LE    | /                                            | -      | -ME                             | -ME                     | -ME                         | /                          | /           | /        | /                                            | -      | =                                        |
| D10  | Frozen french fries     | PV1  | N  | -LA                                  | -LA    | -MA    | -MA    | <i>L.seeligeri</i>                           | -      | -MA                             | -MA                     | -MA                         | <i>non</i>                 | /           | /        | <i>L.seeligeri</i>                           | -      | =                                        |
| D12  | Frozen peas             | PV1  | N  | Ø                                    | -LE    | -LE    | Ø      | /                                            | -      | Ø                               | -LE                     | -LE                         | /                          | /           | /        | /                                            | -      | =                                        |
| D13  | Frozen peas             | PV1  | N  | -LE                                  | -LE    | -LE    | -LE    | /                                            | -      | -LE                             | -LE                     | -LE                         | /                          | /           | /        | /                                            | -      | =                                        |
| D14  | Frozen french fries     | PV1  | N  | +MA                                  | +MB    | +MB    | +MB    | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | +HA                             | +HA                     | +HA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | =                                        |
| D15  | Frozen french fries     | PV1  | N  | Ø                                    | Ø      | Ø      | Ø      | /                                            | -      | Ø                               | Ø                       | Ø                           | /                          | /           | /        | /                                            | -      | =                                        |
| D16  | Frozen french fries     | PV1  | N  | Ø                                    | -LE    | -LE    | -LE    | /                                            | -      | Ø                               | -LE                     | -LE                         | /                          | /           | /        | /                                            | -      | =                                        |
| D17  | Frozen french fries     | PV1  | N  | +MA                                  | +MB    | +HA    | +MB    | <i>L.monocytogenes</i>                       | +      | +HA                             | +HA                     | +HA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| E8   | Frozen french fries     | PV1  | N  | +MA                                  | +LA    | +MA    | +MA    | <i>L.monocytogenes</i>                       | +      | +MA                             | +MA                     | +MA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| E9   | Frozen french fries     | PV1  | N  | Ø                                    | Ø      | -ME    | -LE    | /                                            | -      | Ø                               | Ø                       | Ø                           | /                          | /           | /        | /                                            | -      | =                                        |
| L1   | Frozen french fries     | PV1  | N  | -LE                                  | -LE    | +MA    | +MA    | <i>L.monocytogenes</i>                       | +      | +LA(2)                          | +LC(2)                  | +LB                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| L2   | Frozen french fries     | PV1  | N  | +MA                                  | +MB    | +MA    | +MB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +MA                     | +MA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| L3   | Frozen roasted potatoes | PV1  | N  | +MA                                  | +MA    | +MA    | +MB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +MA                     | +MA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| L4   | Frozen french fries     | PV1  | N  | +LB                                  | +LB    | +MB    | +MB    | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | +LB                             | +MB                     | +MB                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i><br><i>L.seeligeri</i> | +      | =                                        |
| L5   | Cauliflower             | PV1  | N  | +MB                                  | +MA    | +MA    | +HA    | <i>L.monocytogenes</i>                       | +      | +MA                             | +MB                     | +MA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |
| L6   | Frozen french fries     | PV1  | N  | +MB                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i>                       | +      | +MA                             | +MA                     | +MA                         | <i>non</i>                 | +           | +        | <i>L.monocytogenes</i>                       | +      | =                                        |

| L7  | Frozen french fries       | PV1 | N | +MB | +MB    | +MA | +MA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
|-----|---------------------------|-----|---|-----|--------|-----|-----|------------------------|---|-----|-----|-----|------------|---|---|------------------------|---|---|
| B5  | Peas                      | PV2 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| B7  | Broccoli                  | PV2 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| C1  | Steam vegetables          | PV2 | N | +MA | +MA    | +MA | +HA | <i>L.monocytogenes</i> | + | +MA | +MA | +HA | <i>oui</i> | + | + | <i>L.monocytogenes</i> | + | = |
| D2  | Green beans               | PV2 | N | Ø   | -LE    | -ME | -ME | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| E6  | Broccoli                  | PV2 | N | -ME | -LE    | -ME | -LE | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |
| H19 | Reddish                   | PV2 | N | -ME | -LE    | Ø   | Ø   | /                      | - | -LE | -ME | -ME | /          | / | / | /                      | - | = |
| M1  | Grated carrots            | PV2 | O | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M2  | Grated carrots            | PV2 | O | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M3  | Cucumber                  | PV2 | O | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M4  | Salad                     | PV2 | O | -LE | -LE    | -ME | -LE | /                      | - | -LE | -LE | -LE | /          | / | / | /                      | - | = |
| M5  | Grated carrots            | PV2 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M6  | Grated carrots            | PV2 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | -LE | -LE | /          | / | / | /                      | - | = |
| M7  | Cucumber                  | PV2 | N | -LE | Ø      | -LE | -LE | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| M8  | Salad                     | PV2 | N | -LE | -LE    | -LE | -LE | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |
| N7  | Salad                     | PV2 | O | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | /   | /          | / | / | /                      | - | = |
| N8  | Cucumber                  | PV2 | O | +MA | +MA    | +MA | +HA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| N9  | Cucumber                  | PV2 | O | +MA | +MA    | +MA | +MA | <i>L.monocytogenes</i> | + | +MA | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| N10 | Grated carrots            | PV2 | O | +LA | +LA    | +MA | +HA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| O2  | Salad                     | PV2 | O | +LA | +LA    | +LB | +MB | <i>L.monocytogenes</i> | + | +MA | +MA | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| O3  | Salad                     | PV2 | O | +LB | +MA    | +MB | +MB | <i>L.monocytogenes</i> | + | +MB | +MB | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| O4  | Grated carrots and celeri | PV2 | O | +LA | +LA    | +MA | +MA | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| O5  | Grated carrots and celeri | PV2 | O | Ø   | +LA(1) | +MA | +MA | <i>L.monocytogenes</i> | + | +LA | +LA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| O6  | Salad                     | PV2 | O | +LA | -LE    | +MA | +LB | <i>L.monocytogenes</i> | + | +MA | +MA | +MA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| A3  | Tomato salad              | PV3 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| A21 | Thai salad                | PV3 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| B2  | Fried vegetables          | PV3 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| D5  | Tagliatelles carbonara    | PV3 | N | Ø   | Ø      | Ø   | Ø   | /                      | - | Ø   | Ø   | Ø   | /          | / | / | /                      | - | = |
| D11 | Fried vegetables          | PV3 | N | Ø   | -LE    | -ME | -LE | /                      | - | Ø   | -ME | -ME | /          | / | / | /                      | - | = |
| E2  | Taboulleh                 | PV3 | N | +LA | +LA    | +MA | +MB | <i>L.monocytogenes</i> | + | +HA | +HA | +HA | <i>non</i> | + | + | <i>L.monocytogenes</i> | + | = |
| E5  | Fried vegetables and      | PV3 | N | -LE | -LE    | -LE | -LE | /                      | - | -ME | -ME | -ME | /          | / | / | /                      | - | = |

|     |                         |     |   |     |     |     |     |                                               |   |     |     |     |            |   |   |                                               |   |   |
|-----|-------------------------|-----|---|-----|-----|-----|-----|-----------------------------------------------|---|-----|-----|-----|------------|---|---|-----------------------------------------------|---|---|
|     | mushrooms               |     |   |     |     |     |     |                                               |   |     |     |     |            |   |   |                                               |   |   |
| E12 | Taboulleh               | PV3 | N | -LE | -LE | -LE | -LE | /                                             | - | -LE | -ME | -ME | /          | / | / | /                                             | - | = |
| E13 | Paëlla                  | PV3 | N | Ø   | Ø   | Ø   | Ø   | /                                             | - | Ø   | Ø   | Ø   | /          | / | / | /                                             | - | = |
| H21 | Pasta and chicken salad | PV3 | N | +MB | +MB | +MC | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| O7  | Fried vegetables        | PV3 | O | +MB | +MB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| O8  | Fried vegetables        | PV3 | O | +MB | +MB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | = |
| O9  | Ratatouille             | PV3 | O | +MB | +MB | +LB | +MB | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.welshimeri</i> | + | = |
| O10 | Fried vegetables        | PV3 | O | +MB | +MB | +MB | +MB | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i><br><i>L.innocua</i>    | + | = |
| O11 | Fried vegetables        | PV3 | O | +MA | +MB | +MA | +LA | <i>L.monocytogenes</i>                        | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| O12 | Fried vegetables        | PV3 | O | +MA | +MB | +LA | +LB | <i>L.monocytogenes</i>                        | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| O13 | Fried vegetables        | PV3 | O | +MB | +MB | +MB | +HB | <i>L.monocytogenes</i>                        | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |
| O14 | Ratatouille             | PV3 | O | +MA | +MB | +MB | +MB | <i>L.monocytogenes</i>                        | + | +MB | +MB | +MB | <i>non</i> | + | + | <i>L.monocytogenes</i>                        | + | = |

## Vegetables : extension study

| Code | Sample                               | CAT | CA | Reference method NF EN ISO 11290-1 # |        |        |        |                                            |        | Alternative method AL detection |              |      |            |              |      |                   |              |      |                                            | Comparison<br>(Listeria spp.) |        |
|------|--------------------------------------|-----|----|--------------------------------------|--------|--------|--------|--------------------------------------------|--------|---------------------------------|--------------|------|------------|--------------|------|-------------------|--------------|------|--------------------------------------------|-------------------------------|--------|
|      |                                      |     |    | Fraser 1/2                           |        | Fraser |        | Identification                             | Result | AL<br>24H                       | Confirmation |      | AL<br>48H  | Confirmation |      | AL 72H<br>at +4°C | Confirmation |      | Identification                             |                               | Result |
|      |                                      |     |    | AL                                   | Palcam | AL     | Palcam |                                            |        |                                 | Palcam       | RLSP |            | Palcam       | RLSP |                   | Palcam       | RLSP |                                            |                               |        |
| E3   | Chips                                | PV1 | N  | +MB                                  | +MB    | +MB    | +MB    | <i>L.monocytogenes</i>                     | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| F23  | Deep-freeze chips                    | PV1 | N  | +MB                                  | +LA    | +MB    | +MB    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| F24  | Deep-freeze chips                    | PV1 | N  | +MB                                  | +MB    | +MA    | +MB    | <i>L.monocytogenes</i>                     | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| H9   | Minced spinach                       | PV1 | N  | +MB<br>*                             | +MB*   | +MB*   | +MB*   | <i>L.monocytogenes</i><br><i>L.innocua</i> | +      | +MB<br>*                        | +/+          | +/+  | +MB*       | +/+          | +/+  | +MB*              | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.innocua</i> | +                             | =      |
| H13  | Deep-freeze chips                    | PV1 | N  | +LA                                  | +LB(2) | -LE    | -ME    | <i>L.grayi</i>                             | +      | +MB                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.grayi</i>                             | +                             | =      |
| I9   | Chips                                | PV1 | N  | +MB                                  | +LB    | +MB    | +MB    | <i>L.monocytogenes</i>                     | +      | +MB                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| I15  | Deep-frozen french green bean sticks | PV1 | O  | +LB                                  | +LA(1) | +LB    | +LB    | <i>L.welshimeri</i>                        | +      | +LB                             | +            | +    | +LB        | +            | +    | +LB               | +            | +    | <i>L.welshimeri</i>                        | +                             | =      |
| J1   | Chips                                | PV1 | N  | +MB                                  | +MB    | +HB    | +HB    | <i>L.monocytogenes</i>                     | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| K7   | Chips                                | PV1 | N  | +LA                                  | +LB    | +MB    | +MB    | <i>L.monocytogenes</i>                     | +      | +MB                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| B50  | Oak leaf                             | PV2 | O  | +LA                                  | +MB    | +MA    | +MB    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| C27  | Fresh vegetables mix                 | PV2 | O  | +LA<br>(5)                           | +LA    | +MA    | +MA    | <i>L.monocytogenes</i>                     | +      | +LA                             | +            | +    | +LA        | +            | +    | +LA               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| C28  | Minced red cabbage                   | PV2 | O  | +MA                                  | +LA    | +MB    | +MB    | <i>L.monocytogenes</i>                     | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| C29  | Vegetables mix                       | PV2 | O  | +LA<br>(3)                           | Ø      | +MA    | +MA    | <i>L.monocytogenes</i>                     | +      | +LA<br>(3)                      | +            | +    | +LA<br>(5) | +            | +    | +LB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| C30  | Lettuce mix                          | PV2 | O  | +LA<br>(2)                           | Ø      | +MA    | +MB    | <i>L.monocytogenes</i>                     | +      | +LA                             | +            | +    | +LA        | +            | +    | +LB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| D8   | Fried vegetables                     | PV2 | N  | +MA                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i>                     | +      | +MA                             | +            | +    | +MA        | +            | +    | +MB               | +            | +    | <i>L.monocytogenes</i>                     | +                             | =      |
| F42  | Fried vegetables                     | PV2 | O  | +MA                                  | +MB    | +MA    | +MB    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| F43  | Fried vegetables                     | PV2 | O  | +MB                                  | +MB    | +MB    | +MC    | <i>L.innocua</i>                           | +      | +MB                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| H23  | Fried vegetables                     | PV2 | O  | +LA                                  | +LA    | +MB    | +HA    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| I16  | Batavia                              | PV2 | O  | +LA                                  | +LB    | +LA    | +MB    | <i>L.welshimeri</i>                        | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.welshimeri</i>                        | +                             | =      |
| I18  | Fresh vegetables mix                 | PV2 | O  | +LA                                  | +LA    | +MA    | +MA    | <i>L.welshimeri</i>                        | +      | +MA                             | +            | +    | +MB        | +            | +    | +MB               | +            | +    | <i>L.welshimeri</i>                        | +                             | =      |
| B47  | Fresh spinach                        | PV3 | O  | +MA                                  | +MB    | +MA    | +MB    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| B48  | Peas                                 | PV3 | O  | +MA                                  | +MA    | +MA    | +MA    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| B49  | Brussels sprouts                     | PV3 | O  | +MA                                  | +MA    | +MA    | +MB    | <i>L.innocua</i>                           | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.innocua</i>                           | +                             | =      |
| D7   | Pasta with oliva and                 | PV3 | N  | +LA                                  | +LA    | +MA    | +MA    | <i>L.welshimeri</i>                        | +      | +MA                             | +            | +    | +MA        | +            | +    | +MA               | +            | +    | <i>L.welshimeri</i>                        | +                             | =      |

|     |                                               |     |   |     |     |     |     |                         |   |     |   |   |     |   |   |     |   |   |                              |   |   |
|-----|-----------------------------------------------|-----|---|-----|-----|-----|-----|-------------------------|---|-----|---|---|-----|---|---|-----|---|---|------------------------------|---|---|
|     | pepper sauce                                  |     |   |     |     |     |     |                         |   |     |   |   |     |   |   |     |   |   |                              |   |   |
| F44 | Lasagnes with eggplants                       | PV3 | O | +MA | +MB | +MA | +MB | <i>L.innocua</i>        | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.innocua</i>             | + | = |
| F45 | Vichy carrots                                 | PV3 | O | +LA | +LB | +MB | +MB | <i>L.innocua</i>        | + | +MA | + | + | +MA | + | + | +MA | + | + | <i>L.innocua</i>             | + | = |
| H21 | Steamed lentils                               | PV3 | O | +MA | +MA | +MA | +MA | <i>Listeria innocua</i> | + | +MA | + | + | +MA | + | + | +MA | + | + | <i>L.innocua</i>             | + | = |
| H22 | Minced carrots vinaigrette                    | PV3 | O | +MA | +LA | +MA | +MB | <i>L.innocua</i>        | + | +MA | + | + | +MA | + | + | +MA | + | + | <i>L.innocua</i>             | + | = |
| H24 | Steamed sliced carrots                        | PV3 | O | +MA | +MA | +MA | +MA | <i>L.innocua</i>        | + | +MB | + | + | +MB | + | + | +MB | + | + | <i>L.innocua</i>             | + | = |
| I17 | Wheat salad with mushrooms, walnut and rocket | PV3 | O | +LC | +LC | +MB | +MB | <i>L.welshimeri</i>     | + | +MB | + | + | +MC | + | + | +MC | + | + | <i>L.welshimeri Bacillus</i> | + | = |
| K6  | Cucumbers and tomatoes                        | PV3 | N | +LA | +LA | +MA | +HA | <i>L.monocytogenes</i>  | + | +LC | + | + | +LC | + | + | +LC | + | + | <i>L.monocytogenes</i>       | + | = |
| L8  | Minced carrots vinaigrette                    | PV3 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| L10 | Lentils                                       | PV3 | N | Ø   | Ø   | -LE | -LE | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| L11 | Minced carrots                                | PV3 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| L12 | Vegetables mix                                | PV3 | N | Ø   | Ø   | -LE | -ME | /                       | - | -LE | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| E4  | Chips                                         | PV1 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| J3  | Deep-frozen aromatic herbs                    | PV1 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| L9  | Prefried onions                               | PV1 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| L13 | Spinach                                       | PV1 | N | -LE | Ø   | -LE | -LE | /                       | - | -LE | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| B1  | Minced red cabbage                            | PV2 | N | -LE | -LE | -LE | -LE | /                       | - | Ø   | / | / | Ø   | / | / | -LE | / | / | /                            | - | = |
| B2  | Vegetables mix                                | PV2 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| B3  | Fresh vegetables mix                          | PV2 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| B4  | Lettuce mix                                   | PV2 | N | -LE | -LE | -LE | -LE | /                       | - | Ø   | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| E16 | Fried vegetables                              | PV2 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| H25 | Mix salad                                     | PV2 | N | -ME | Ø   | Ø   | Ø   | /                       | - | -ME | / | / | -ME | / | / | -ME | / | / | /                            | - | = |
| M4  | Minced red cabbage                            | PV2 | N | -LE | -LE | -LE | -LE | /                       | - | -LE | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| D9  | Rice mix with vegetables                      | PV3 | N | Ø   | Ø   | -ME | -ME | /                       | - | -LE | / | / | -LE | / | / | -LE | / | / | /                            | - | = |
| D11 | Spirelli pasta with fresh vegetables          | PV3 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |
| D16 | Red cabbage                                   | PV3 | N | Ø   | Ø   | Ø   | Ø   | /                       | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                            | - | = |

|     |                                              |     |   |     |     |     |     |   |   |     |   |   |     |   |   |     |   |   |                    |   |          |
|-----|----------------------------------------------|-----|---|-----|-----|-----|-----|---|---|-----|---|---|-----|---|---|-----|---|---|--------------------|---|----------|
|     | vinaigrette                                  |     |   |     |     |     |     |   |   |     |   |   |     |   |   |     |   |   |                    |   |          |
| E5  | Tagliatelles                                 | PV3 | N | Ø   | Ø   | Ø   | -LE | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                  | - | =        |
| F25 | Tabbouleh with grapes                        | PV3 | N | -LE | -LE | -LE | -LE | / | - | +LB | - | - | -LE | - | - | -LE | - | - | Bacillus pumilus   | - | FP (24h) |
| G13 | Pasta salad with vegetables and oliva        | PV3 | N | Ø   | Ø   | -LE | -LE | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                  | - | =        |
| G19 | Noddles and vegetables                       | PV3 | N | Ø   | -LE | Ø   | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | /                  | - | =        |
| H8  | Wheat salad with peppers                     | PV3 | N | -LE | Ø   | -LE | -LE | / | - | -LE | / | / | -LE | / | / | -LE | / | / | /                  | - | =        |
| H14 | Tabbouleh with mint and pepper               | PV3 | N | -LE | -LE | Ø   | Ø   | / | - | +MB | - | - | +MB | - | - | -ME | - | - | Bacillus circulans | - | FP       |
| I10 | Salad with rice, peppers, feta and asparagus | PV3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | -LE | / | / | /                  | - | =        |
| I11 | Pasta salad, salmon and feta                 | PV3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                  | - | =        |
| I14 | Pasta salad with vegetables and oliva        | PV3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                  | - | =        |
| J2  | Tabbouleh with graps and pepper              | PV3 | N | -LE | -LE | -LE | -LE | / | - | -ME | / | / | -ME | / | / | -ME | / | / | /                  | - | =        |
| J6  | Vegetables bulghour                          | PV3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | /                  | - | =        |
| K5  | Vegetables mix                               | PV3 | N | Ø   | Ø   | Ø   | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | /                  | - | =        |

| Code | Sample                                        | CAT | CA | AL detection - Test after Fraser 1/2 storage 72h at 4°C |              |      |        |              |      |                                            |        | Comparison<br>(Listeria spp.) |
|------|-----------------------------------------------|-----|----|---------------------------------------------------------|--------------|------|--------|--------------|------|--------------------------------------------|--------|-------------------------------|
|      |                                               |     |    | AL 24H                                                  | Confirmation |      | AL 48H | Confirmation |      | Identification                             | Result |                               |
|      |                                               |     |    |                                                         | Palcam       | RLSP |        | Palcam       | RLSP |                                            |        |                               |
| E3   | Chips                                         | PV1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| F23  | Deep-freeze chips                             | PV1 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| F24  | Deep-freeze chips                             | PV1 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| H9   | Minced spinach                                | PV1 | N  | +MB*                                                    | +/+          | +/+  | +MB*   | +/+          | +/+  | <i>L.monocytogenes</i><br><i>L.innocua</i> | +      | =                             |
| H13  | Deep-freeze chips                             | PV1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.grayi</i>                             | +      | =                             |
| I9   | Chips                                         | PV1 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| I15  | Deep-freezed french green bean sticks         | PV1 | O  | +LB                                                     | +            | +    | +LB    | +            | +    | <i>L.welshimeri</i>                        | +      | =                             |
| J1   | Chips                                         | PV1 | N  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| K7   | Chips                                         | PV1 | N  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| B50  | Oak leaf                                      | PV2 | O  | /                                                       | /            | /    | +MB    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| C27  | Fresh vegetables mix                          | PV2 | O  | /                                                       | /            | /    | +LA    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| C28  | Minced red cabbage                            | PV2 | O  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| C29  | Vegetables mix                                | PV2 | O  | /                                                       | /            | /    | +LA    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| C30  | Lettuce mix                                   | PV2 | O  | /                                                       | /            | /    | +LB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| D8   | Fried vegetables                              | PV2 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| F42  | Fried vegetables                              | PV2 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| F43  | Fried vegetables                              | PV2 | O  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| H23  | Fried vegetables                              | PV2 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| I16  | Batavia                                       | PV2 | O  | +MA                                                     | +            | +    | +MB    | +            | +    | <i>L.welshimeri</i>                        | +      | =                             |
| I18  | Fresh vegetables mix                          | PV2 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.welshimeri</i>                        | +      | =                             |
| B47  | Fresh spinach                                 | PV3 | O  | /                                                       | /            | /    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| B48  | Peas                                          | PV3 | O  | /                                                       | /            | /    | +HA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| B49  | Brussels sprouts                              | PV3 | O  | /                                                       | /            | /    | +HB    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| D7   | Pasta with oliva and pepper sauce             | PV3 | N  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.welshimeri</i>                        | +      | =                             |
| F44  | Lasagnes with eggplants                       | PV3 | O  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| F45  | Vichy carrots                                 | PV3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| H21  | Steamed lentils                               | PV3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| H22  | Minced carrots vinaigrette                    | PV3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| H24  | Steamed sliced carrots                        | PV3 | O  | +MA                                                     | +            | +    | +MA    | +            | +    | <i>L.innocua</i>                           | +      | =                             |
| I17  | Wheat salad with mushrooms, walnut and rocket | PV3 | O  | +MB                                                     | +            | +    | +MB    | +            | +    | <i>L.welshimeri</i><br><i>Bacillus</i>     | +      | =                             |
| K6   | Cucumbers and tomatoes                        | PV3 | N  | /                                                       | /            | /    | +MC    | +            | +    | <i>L.monocytogenes</i>                     | +      | =                             |
| L8   | Minced carrots vinaigrette                    | PV3 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |
| L10  | Lentils                                       | PV3 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |
| L11  | Minced carrots                                | PV3 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |
| L12  | Vegetables mix                                | PV3 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |
| E4   | Chips                                         | PV1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |
| J3   | Deep-freezed aromatic herbs                   | PV1 | N  | /                                                       | /            | /    | /      | /            | /    | /                                          | -      | =                             |

|     |                                              |     |   |     |   |   |     |   |   |                    |   |          |
|-----|----------------------------------------------|-----|---|-----|---|---|-----|---|---|--------------------|---|----------|
| L9  | Prefried onions                              | PV1 | N | /   | / | / | /   | / | / | /                  | - | =        |
| L13 | Spinach                                      | PV1 | N | /   | / | / | /   | / | / | /                  | - | =        |
| B1  | Minced red cabbage                           | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| B2  | Vegetables mix                               | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| B3  | Fresh vegetables mix                         | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| B4  | Lettuce mix                                  | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| E16 | Fried vegetables                             | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| H25 | Mix salad                                    | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| M4  | Minced red cabbage                           | PV2 | N | /   | / | / | /   | / | / | /                  | - | =        |
| D9  | Rice mix with vegetables                     | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| D11 | Spirelli pasta with fresh vegetables         | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| D16 | Red cabbage vinaigrette                      | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| E5  | Tagliatelles                                 | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| F25 | Tabbouleh with grapes                        | PV3 | N | -LE | - | - | -LE | - | - | Bacillus pumilus   | - | FP (24h) |
| G13 | Pasta salad with vegetables and oliva        | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| G19 | Noddles and vegetables                       | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| H8  | Wheat salad with peppers                     | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| H14 | Tabbouleh with mint and pepper               | PV3 | N | +MB | - | - | -ME | - | - | Bacillus circulans | - | FP       |
| I10 | Salad with rice, peppers, feta and asparagus | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| I11 | Pasta salad, salmon and feta                 | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| I14 | Pasta salad with vegetables and oliva        | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| J2  | Tabbouleh with graps and pepper              | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| J6  | Vegetables bulghour                          | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |
| K5  | Vegetables mix                               | PV3 | N | /   | / | / | /   | / | / | /                  | - | =        |

## Environmental samples: initial validation

| Code | Sample                    | Cat. | Artif. | Reference method NF EN ISO 11290-1 # |        |        |        |                                 |        | Alternative method AL detection |                         |                             |                     |             |          |                                 |        | Comparison<br>(L.monocytogenes) |
|------|---------------------------|------|--------|--------------------------------------|--------|--------|--------|---------------------------------|--------|---------------------------------|-------------------------|-----------------------------|---------------------|-------------|----------|---------------------------------|--------|---------------------------------|
|      |                           |      |        | Fraser 1/2                           |        | Fraser |        | Identification                  | Result | Reading<br>after<br>22h         | Reading<br>after<br>48h | Storage<br>72h at<br>+2-8°C | Confirmation L.mono |             |          | Identification                  | Result |                                 |
|      |                           |      |        | AL                                   | PALCAM | AL     | PALCAM |                                 |        |                                 |                         |                             | Purif               | Spot<br>RLM | iQ Lmono |                                 |        |                                 |
| A27  | Rinsing water             | EN1  | N      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| E7   | Rinsing water vegetables  | EN1  | N      | -LE                                  | Ø      | Ø      | Ø      | /                               | -      | -LE                             | -ME                     | -ME                         | /                   | /           | /        | /                               | -      | =                               |
| F20  | Washing water mushrooms   | EN1  | N      | -LE                                  | -LE    | -ME    | -LE    | /                               | -      | Ø                               | -LE                     | -LE                         | /                   | /           | /        | /                               | -      | =                               |
| M19  | Process water             | EN1  | N      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| M20  | Rinsing water fish retail | EN1  | O      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| N11  | Process water             | EN1  | O      | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| N12  | Process water             | EN1  | O      | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| N13  | Process water             | EN1  | O      | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| N14  | Process water             | EN1  | O      | +MA                                  | +MA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| N19  | Process water             | EN1  | N      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| N20  | Process water             | EN1  | N      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| N21  | Process water             | EN1  | N      | -ME                                  | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| N22  | Process water             | EN1  | N      | Ø                                    | Ø      | Ø      | Ø      | /                               | -      | Ø                               | Ø                       | Ø                           | /                   | /           | /        | /                               | -      | =                               |
| Q5   | Process water             | EN1  | O      | +MA                                  | +LA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| Q6   | Process water             | EN1  | O      | +LA                                  | +LA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| Q7   | Process water             | EN1  | O      | +MA                                  | +LA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MA                     | +MA                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| Q8   | Process water             | EN1  | O      | +MA                                  | +LA    | +MA    | +MA    | L.monocytogenes                 | +      | +MA                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| Q9   | Process water             | EN1  | O      | +LA                                  | +LA    | +MA    | +LA    | L.monocytogenes                 | +      | +MA                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| Q10  | Process water             | EN1  | O      | +LA                                  | +LA    | +LA    | +LA    | L.monocytogenes                 | +      | +MA                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes                 | +      | =                               |
| A5   | Surface butchry retail    | EN2  | N      | +LB                                  | +LB    | +MB    | +MB    | L.monocytogenes<br>L.welshimeri | +      | +MB                             | +MB                     | +MB                         | non                 | +           | +        | L.monocytogenes<br>L.welshimeri | +      | =                               |
| A31  | Surface                   | EN2  | N      | Ø                                    | -ME    | -LE    | -LE    | /                               | -      | Ø                               | -LE                     | -LE                         | /                   | /           | /        | /                               | -      | =                               |

|     |                                        |     |   |        |     |     |     |                                                                   |   |        |        |     |     |   |   |                        |   |   |
|-----|----------------------------------------|-----|---|--------|-----|-----|-----|-------------------------------------------------------------------|---|--------|--------|-----|-----|---|---|------------------------|---|---|
|     | cutting table                          |     |   |        |     |     |     |                                                                   |   |        |        |     |     |   |   |                        |   |   |
| L11 | Surface fish retail                    | EN2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| L16 | Surface fish retail                    | EN2 | N | +LA(1) | Ø   | +MA | +LA | <i>L.monocytogenes</i>                                            | + | +LA(3) | +LA(3) | +LA | non | + | + | <i>L.monocytogenes</i> | + | = |
| L18 | Cutting board fish retail              | EN2 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| M18 | Ladle catering retail                  | EN2 | N | +LB    | +LB | +MB | +MB | <i>L.monocytogenes</i>                                            | + | +MA    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| O15 | Floor delicatessen retail              | EN2 | N | -ME    | -LE | -ME | -ME | /                                                                 | - | -ME    | -ME    | -ME | /   | / | / | /                      | - | = |
| O16 | Doorknob                               | EN2 | N | Ø      | Ø   | Ø   | -LE | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| O17 | Area Workshop                          | EN2 | N | -LE    | -ME | -ME | -ME | /                                                                 | - | -ME    | -ME    | -ME | /   | / | / | /                      | - | = |
| O18 | Interior door refrigerator             | EN2 | N | Ø      | Ø   | -LE | -LE | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| O19 | Wall small fridge                      | EN2 | N | -LE    | -LE | -LE | -ME | /                                                                 | - | -ME    | -ME    | -ME | /   | / | / | /                      | - | = |
| O20 | Shelves cold room                      | EN2 | N | -LE    | -LE | -LE | -LE | /                                                                 | - | -LE    | -LE    | -LE | /   | / | / | /                      | - | = |
| P3  | Knife Cheese retail                    | EN2 | N | +MB    | +LB | +MB | +MB | <i>L.monocytogenes</i>                                            | + | +MB    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| P10 | Cutting knife for pâté                 | EN2 | O | +MA    | +MA | +MA | +MA | <i>L.monocytogenes</i>                                            | + | +MA    | +MA    | +MA | non | + | + | <i>L.monocytogenes</i> | + | = |
| P11 | Blade Slicer                           | EN2 | O | +MA    | +MA | +MA | +MA | <i>L.monocytogenes</i>                                            | + | +MA    | +MB    | +MA | non | + | + | <i>L.monocytogenes</i> | + | = |
| P12 | Balance surface                        | EN2 | O | +MB    | +MB | +MA | +MA | <i>L.monocytogenes</i>                                            | + | +MB    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| P13 | Floor delicatessen retail              | EN2 | O | +MB    | +LB | +MB | +MB | <i>L.monocytogenes</i>                                            | + | +MA    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| P14 | Floor colf room                        | EN2 | O | -ME    | -LE | -ME | -LE | /                                                                 | - | -ME    | -HE    | -HE | /   | / | / | /                      | - | = |
| P15 | Shelves cold room                      | EN2 | O | +LA    | +LA | +MA | +LB | <i>L.monocytogenes</i>                                            | + | +MB    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| P16 | Trolley surface                        | EN2 | O | +MB    | +LB | +MA | +LB | <i>L.monocytogenes</i>                                            | + | +MB    | +MB    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| A13 | Scraps from delicatessen retail outlet | EN3 | N | -LB    | +LB | +MB | +MA | <i>L.welshimeri</i><br><i>L.innocua</i><br><i>L.monocytogenes</i> | + | +MD(3) | +MD    | +MB | non | + | + | <i>L.monocytogenes</i> | + | = |
| A28 | Scraps from smoked salmon              | EN3 | N | Ø      | Ø   | Ø   | -LE | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| A29 | Scraps from ham                        | EN3 | N | Ø      | -LE | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| B6  | Scraps from delicatessen retail outlet | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |
| B13 | Scraps from                            | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                                                                 | - | Ø      | Ø      | Ø   | /   | / | / | /                      | - | = |

|     |                                        |     |   |        |     |     |     |                        |   |        |        |        |     |   |   |                        |   |   |
|-----|----------------------------------------|-----|---|--------|-----|-----|-----|------------------------|---|--------|--------|--------|-----|---|---|------------------------|---|---|
|     | smoked salmon                          |     |   |        |     |     |     |                        |   |        |        |        |     |   |   |                        |   |   |
| C3  | Scraps from smoked salmon              | EN3 | N | Ø      | Ø   | +MA | +MA | <i>L.monocytogenes</i> | + | +LA(6) | +LA(4) | +LA    | non | + | + | <i>L.monocytogenes</i> | + | = |
| C5  | Résidus stand poissonnerie             | EN3 | N | +LA    | +LA | +HA | +MA | <i>L.monocytogenes</i> | + | +LA    | +LA    | +MA    | non | + | + | <i>L.monocytogenes</i> | + | = |
| C9  | Scraps from smoked salmon              | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| C15 | Scraps from fish cutting line          | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| E16 | Scraps from butchery retail outlet     | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| G4  | Scraps from butchery retail outlet     | EN3 | N | -LA    | +LA | -MA | +MA | <i>L.welshimeri</i>    | - | -MA    | -MA    | -MA    | /   | / | / | <i>L.welshimeri</i>    | - | = |
| H22 | Scraps from sausages retail outlet     | EN3 | N | -LA    | +LA | -MA | -MA | <i>L.welshimeri</i>    | - | -MA    | -MA    | -MA    | /   | / | / | <i>L.welshimeri</i>    | - | = |
| H23 | Scraps from smoked salmon              | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| L8  | Scraps from smoked salmon              | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| L12 | Scraps from smoked trout               | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| L20 | Scraps from fish cutting line          | EN3 | N | Ø      | Ø   | Ø   | Ø   | /                      | - | Ø      | Ø      | Ø      | /   | / | / | /                      | - | = |
| M17 | Scraps from delicatessen retail outlet | EN3 | N | +LB(3) | -LE | +MB | +MA | <i>L.monocytogenes</i> | + | +LA    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i> | + | = |
| N15 | Meat scraps                            | EN3 | O | +LA    | +LA | +MA | +MA | <i>L.monocytogenes</i> | + | +MA    | +MA    | +MA    | non | + | + | <i>L.monocytogenes</i> | + | = |
| N16 | Salad scraps                           | EN3 | O | +LA(2) | Ø   | +MA | +MA | <i>L.monocytogenes</i> | + | +LA    | +LA    | +LA    | non | + | + | <i>L.monocytogenes</i> | + | = |
| N17 | Cheese scraps                          | EN3 | O | +MB    | +MA | +MB | +MB | <i>L.monocytogenes</i> | + | +MB    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i> | + | = |
| P2  | Cheese scraps                          | EN3 | N | +LC(1) | -LE | +MA | +MA | <i>L.monocytogenes</i> | + | +LA(6) | +LA(6) | +LB(4) | non | + | + | <i>L.monocytogenes</i> | + | = |
| P9  | Cheese scraps                          | EN3 | O | +MA    | +LA | +MB | +LA | <i>L.monocytogenes</i> | + | +MB    | +MB    | +MB    | non | + | + | <i>L.monocytogenes</i> | + | = |
| Q4  | Cooked fish scraps                     | EN3 | O | +LA    | +MA | +MA | +MA | <i>L.monocytogenes</i> | + | +MA    | +MA    | +MA    | non | + | + | <i>L.monocytogenes</i> | + | = |

## Environmental samples: extension study

| Code | Sample                               | CAT                           | CA  | Reference method NF EN ISO 11290-1 # |        |        |        |                        |                        | Alternative method AL detection |              |      |        |              |      |                         |              |      |                        |                        | Comparison<br>(Listeria spp.) |
|------|--------------------------------------|-------------------------------|-----|--------------------------------------|--------|--------|--------|------------------------|------------------------|---------------------------------|--------------|------|--------|--------------|------|-------------------------|--------------|------|------------------------|------------------------|-------------------------------|
|      |                                      |                               |     | Fraser 1/2                           |        | Fraser |        | Identification         | Result                 | AL<br>24H                       | Confirmation |      | AL 48H | Confirmation |      | AL<br>72H<br>at<br>+4°C | Confirmation |      | Identification         | Result                 |                               |
|      |                                      |                               |     | AL                                   | Palcam | AL     | Palcam |                        |                        |                                 | Palcam       | RLSP |        | Palcam       | RLSP |                         | Palcam       | RLSP |                        |                        |                               |
| F49  | Clean water                          | EN1                           | O   | +LA                                  | +LA    | +LA    | +LB    | <i>L.innocua</i>       | +                      | +LA                             | +            | +    | +LA    | +            | +    | +LA                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| G26  | Water downstream filtration          | EN1                           | O   | +LA                                  | +LA    | +MA    | +MA    | <i>L.monocytogenes</i> | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
|      | G27                                  | Network water                 | EN1 | O                                    | +LA    | +LA    | +MA    | +MA                    | <i>L.monocytogenes</i> | +                               | +MA          | +    | +      | +MA          | +    | +                       | +MA          | +    | +                      | <i>L.monocytogenes</i> | +                             |
| G28  | Drinking water                       | EN1                           | O   | +LA                                  | +LA    | +MA    | +MA    | <i>L.monocytogenes</i> | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
| H31  | Freezed water                        | EN1                           | O   | +MA                                  | +MA    | +MA    | +MB    | <i>L.innocua</i>       | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| H32  | Network water                        | EN1                           | O   | +MA                                  | +MA    | +MA    | +MB    | <i>L.innocua</i>       | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| H33  | Freezed water                        | EN1                           | O   | +MA                                  | +MA    | +MA    | +MB    | <i>L.innocua</i>       | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| J24  | Water upstream filtration            | EN1                           | O   | +LA                                  | +MA    | +LA    | +MA    | <i>L.ivanovii</i>      | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.ivanovii</i>      | +                      | =                             |
|      | J25                                  | Water downstream filtration   | EN1 | O                                    | +LA    | +LA    | +LA    | +MB                    | <i>L.innocua</i>       | +                               | +MA          | +    | +      | +MB          | +    | +                       | +MB          | +    | +                      | <i>L.innocua</i>       | +                             |
| B38  | PS butcher stand                     | EN2                           | N   | +LA                                  | +LA    | +MB    | +MB    | <i>L.ivanovi</i>       | +                      | +MA                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.ivanovi</i>       | +                      | =                             |
| G21  | Spatula from pastries workshop       | EN2                           | O   | +LA                                  | +LA    | +MB    | +MB    | <i>L.monocytogenes</i> | +                      | +MA                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
|      | G22                                  | Cutting board                 | EN2 | O                                    | +LA    | +LB    | +LB    | +MB                    | <i>L.monocytogenes</i> | +                               | +MA          | +    | +      | +MA          | +    | +                       | +MA          | +    | +                      | <i>L.monocytogenes</i> | +                             |
| G23  | Power saw tray                       | EN2                           | O   | +MA                                  | +MA    | +MB    | +MB    | <i>L.monocytogenes</i> | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
| G24  | Slicer blade                         | EN2                           | O   | +LB                                  | +LC    | +LB    | +LD    | <i>L.monocytogenes</i> | +                      | +MB                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
| G25  | Vortex blade                         | EN2                           | O   | +LB                                  | +LA    | +MA    | +HA    | <i>L.monocytogenes</i> | +                      | +MA                             | +            | +    | +MA    | +            | +    | +MA                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
| H34  | PS cold room handle                  | EN2                           | O   | +MA                                  | +LA    | +MA    | +LA    | <i>L.innocua</i>       | +                      | +MB                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| H35  | PS tray trolley in workshop          | EN2                           | O   | +MC                                  | -ME    | +LC    | +MD    | <i>L.innocua</i>       | +                      | +MB                             | +            | +    | +MC    | +            | +    | +MC                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
| H36  | PS Siphon sink in workshop           | EN2                           | O   | +MA                                  | +MB    | +MA    | +MB    | <i>L.innocua</i>       | +                      | +MB                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.innocua</i>       | +                      | =                             |
|      | J15                                  | PS line 2 upstream tunnel DFC | EN2 | N                                    | +MB    | +MB    | +MB    | +HB                    | <i>L.monocytogenes</i> | +                               | +MB          | +    | +      | +MB          | +    | +                       | +MB          | +    | +                      | <i>L.monocytogenes</i> | +                             |
| J16  | PS line 2 ventilator upstream cooler | EN2                           | N   | +MB                                  | +MB    | +MB    | +MB    | <i>L.monocytogenes</i> | +                      | +MB                             | +            | +    | +MB    | +            | +    | +MB                     | +            | +    | <i>L.monocytogenes</i> | +                      | =                             |
|      | J17                                  | PS line 1 conveyor            | EN2 | N                                    | +MB    | +MB    | +MB    | +MB                    | <i>L.monocytogenes</i> | +                               | +MB          | +    | +      | +MB          | +    | +                       | +MB          | +    | +                      | <i>L.monocytogenes</i> | +                             |

|     |                                    |     |   |      |      |      |      |                                               |   |      |     |     |      |     |     |      |     |     |                                               |   |   |
|-----|------------------------------------|-----|---|------|------|------|------|-----------------------------------------------|---|------|-----|-----|------|-----|-----|------|-----|-----|-----------------------------------------------|---|---|
|     | upstream cooler                    |     |   |      |      |      |      |                                               |   |      |     |     |      |     |     |      |     |     |                                               |   |   |
| J18 | PS line 2 sewerage drainage        | EN2 | N | +MB  | +MB  | +MB  | +MB  | <i>L.innocua</i>                              | + | +MB  | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.innocua</i>                              | + | = |
| C25 | Waste from fisher stand            | EN3 | N | +LA  | -ME  | +MA  | +MC  | <i>L.monocytogenes</i>                        | + | +MB  | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.monocytogenes</i>                        | + | = |
| G30 | Turkey waste                       | EN3 | N | +LA  | +LA  | +MA  | +MA  | <i>L.welshimeri</i>                           | + | +MB  | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.welshimeri</i>                           | + | = |
| G31 | Lamb waste                         | EN3 | N | +LA  | +LA  | +MA  | +MB  | <i>L.monocytogenes</i>                        | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.monocytogenes</i>                        | + | = |
| G32 | Pork waste                         | EN3 | N | +LB* | +LB* | +MB* | +HB  | <i>L.monocytogenes L.innocua</i>              | + | +MB* | +/+ | +/+ | +MB* | +/+ | +/+ | +MB* | +/+ | +/+ | <i>L.monocytogenes L.innocua</i>              | + | = |
| G33 | Veal waste                         | EN3 | N | +LB  | +LB  | +MA  | +MA  | <i>L.welshimeri</i>                           | + | +MA  | +   | +   | +MB  | +   | +   | +MB  | +   | +   | <i>L.welshimeri</i>                           | + | = |
| J20 | Residues slicer from butcher stand | EN3 | N | +MB* | +MB* | +MB* | +MB* | <i>L.monocytogenes L.innocua L.welshimeri</i> | + | +MB  | +/+ | +/+ | +MB* | +/+ | +/+ | +MB* | +/+ | +/+ | <i>L.monocytogenes L.innocua L.welshimeri</i> | + | = |
| J21 | PS threader fisher stand           | EN3 | N | +LA  | +LA  | +MA  | +MA  | <i>L.monocytogenes</i>                        | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.monocytogenes</i>                        | + | = |
| J27 | Residues line 3 salad              | EN3 | O | +LA  | +MA  | +MA  | +MA  | <i>L.ivanovii</i>                             | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.ivanovii</i>                             | + | = |
| J28 | Residues line 2 spinach            | EN3 | O | +MA  | +MA  | +MA  | +MA  | <i>L.ivanovii</i>                             | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.ivanovii</i>                             | + | = |
| J29 | Residues vegetables mix waste      | EN3 | O | +MA  | +MA  | +LA  | +MA  | <i>L.innocua</i>                              | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.innocua</i>                              | + | = |
| J30 | Residues meat waste                | EN3 | O | +LA  | +LA  | +LA  | +MA  | <i>L.innocua</i>                              | + | +MA  | +   | +   | +MA  | +   | +   | +MA  | +   | +   | <i>L.innocua</i>                              | + | = |
| F46 | Freezed water                      | EN1 | O | Ø    | Ø    | Ø    | Ø    | /                                             | - | -LE  | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                             | - | = |
| F47 | Network water                      | EN1 | O | Ø    | -LE  | Ø    | Ø    | /                                             | - | -LE  | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                             | - | = |
| F48 | Freezed water                      | EN1 | O | Ø    | Ø    | Ø    | Ø    | /                                             | - | -LE  | /   | /   | -LE  | /   | /   | -LE  | /   | /   | /                                             | - | = |
| G29 | PS threader fisher                 | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| J23 | Freezed water                      | EN1 | O | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| J26 | Network water                      | EN1 | O | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L1  | Process water                      | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L2  | Laboratory water                   | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L3  | Clean water                        | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L4  | Freezed water                      | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L5  | Drinking water                     | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L6  | Clean water                        | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| L7  | Freezed water                      | EN1 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| B39 | PS threader white fishes           | EN2 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| B51 | PS dirty butcher knife             | EN2 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| B52 | PS slicer butcher stand            | EN2 | N | Ø    | Ø    | -LE  | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |
| C26 | PS weighing pan from fisher stand  | EN2 | N | Ø    | Ø    | Ø    | Ø    | /                                             | - | Ø    | /   | /   | Ø    | /   | /   | Ø    | /   | /   | /                                             | - | = |

|     |                                      |     |   |     |     |     |     |   |   |     |   |   |     |   |   |     |   |   |   |   |   |
|-----|--------------------------------------|-----|---|-----|-----|-----|-----|---|---|-----|---|---|-----|---|---|-----|---|---|---|---|---|
| I20 | PS dirty knife in workshop           | EN2 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| J22 | PS dirty knife blade                 | EN2 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| K4  | PS cold room handle                  | EN2 | N | -LE | -LE | Ø   | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | / | - | = |
| M1  | PS rack in cold room                 | EN2 | N | -LE | Ø   | -LE | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | / | - | = |
| M2  | PS stainless steel table workshop    | EN2 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| M3  | PS weighing pan                      | EN2 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| D18 | Waste from delicatessen stand        | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| F13 | Waste from butcher stand             | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | / | - | = |
| G20 | Slicer waste from delicatessen stand | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| G34 | Chicken waste                        | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | -LE | / | / | -LE | / | / | / | - | = |
| G35 | Ox waste                             | EN3 | N | Ø   | -LE | -LE | -LE | / | - | Ø   | / | / | -LE | / | / | -LE | / | / | / | - | = |
| I19 | Waste from fisher workshop           | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| I21 | Waste from chicken cut               | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| i22 | Residues sol workshop                | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| J11 | Residues butcher workshop            | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | Ø   | / | / | Ø   | / | / | Ø   | / | / | / | - | = |
| J19 | Residues sewerage line 1 beans       | EN3 | N | Ø   | Ø   | Ø   | Ø   | / | - | -LE | / | / | -LE | / | / | -LE | / | / | / | - | = |

| Code | Sample                               | CAT | CA | AL detection - Test after Fraser 1/2 storage 72h at 4°C |              |       |        |              |       |                                                                |        | Comparison<br>(Listeria spp.) |
|------|--------------------------------------|-----|----|---------------------------------------------------------|--------------|-------|--------|--------------|-------|----------------------------------------------------------------|--------|-------------------------------|
|      |                                      |     |    | AL 24H                                                  | Confirmation |       | AL 48H | Confirmation |       | Identification                                                 | Result |                               |
|      |                                      |     |    |                                                         | Palcam       | RLSP  |        | Palcam       | RLSP  |                                                                |        |                               |
| F49  | Clean water                          | EN1 | O  | +LA                                                     | +            | +     | +LA    | +            | +     | <i>L. innocua</i>                                              | +      | =                             |
| G26  | Water downstream filtration          | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G27  | Network water                        | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G28  | Drinking water                       | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| H31  | Freezed water                        | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| H32  | Network water                        | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| H33  | Freezed water                        | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| J24  | Water upstream filtration            | EN1 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.ivanovii</i>                                              | +      | =                             |
| J25  | Water downstream filtration          | EN1 | O  | +MA                                                     | +            | +     | +MB    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| B38  | PS butcher stand                     | EN2 | N  | /                                                       | +            | +     | +MB    | +            | +     | <i>L.ivanovi</i>                                               | +      | =                             |
| G21  | Spatula from pastries workshop       | EN2 | O  | +MA                                                     | +            | +     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G22  | Cutting board                        | EN2 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G23  | Power saw tray                       | EN2 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G24  | Slicer blade                         | EN2 | O  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G25  | Vortex blade                         | EN2 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| H34  | PS cold room handle                  | EN2 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| H35  | PS tray trolley in workshop          | EN2 | O  | +MC                                                     | +            | +     | +MC    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| H36  | PS Siphon sink in workshop           | EN2 | O  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| J15  | PS line 2 upstream tunnel DFC        | EN2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| J16  | PS line 2 ventilator upstream cooler | EN2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| J17  | PS line 1 conveyor upstream cooler   | EN2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| J18  | PS line 2 sewerage drainage          | EN2 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| C25  | Waste from fisher stand              | EN3 | N  | /                                                       | /            | /     | +MB    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G30  | Turkey waste                         | EN3 | N  | +MB                                                     | +            | +     | +MB    | +            | +     | <i>L.welshimeri</i>                                            | +      | =                             |
| G31  | Lamb waste                           | EN3 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| G32  | Pork waste                           | EN3 | N  | +MB*                                                    | +/+          | +/+   | +MB*   | +/+          | +/+   | <i>L.monocytogenes</i><br><i>L.innocua</i>                     | +      | =                             |
| G33  | Veal waste                           | EN3 | N  | +MA                                                     | +            | +     | +MB    | +            | +     | <i>L.welshimeri</i>                                            | +      | =                             |
| J20  | Residues slicer from butcher stand   | EN3 | N  | +MB*                                                    | +/+/+        | +/+/+ | +MB*   | +/+/+        | +/+/+ | <i>L.monocytogenes</i><br><i>L.innocua</i> <i>L.welshimeri</i> | +      | =                             |
| J21  | PS threader fisher stand             | EN3 | N  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.monocytogenes</i>                                         | +      | =                             |
| J27  | Residues line 3 salad                | EN3 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.ivanovii</i>                                              | +      | =                             |
| J28  | Residues line 2 spinach              | EN3 | O  | +MA                                                     | +            | +     | +MB    | +            | +     | <i>L.ivanovii</i>                                              | +      | =                             |
| J29  | Residues waste from vegetables mix   | EN3 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| J30  | Residues meat waste                  | EN3 | O  | +MA                                                     | +            | +     | +MA    | +            | +     | <i>L.innocua</i>                                               | +      | =                             |
| F46  | Freezed water                        | EN1 | O  | /                                                       | /            | /     | /      | /            | /     | /                                                              | -      | =                             |
| F47  | Network water                        | EN1 | O  | /                                                       | /            | /     | /      | /            | /     | /                                                              | -      | =                             |
| F48  | Freezed water                        | EN1 | O  | /                                                       | /            | /     | /      | /            | /     | /                                                              | -      | =                             |
| G29  | PS threader fisher                   | EN1 | N  | /                                                       | /            | /     | /      | /            | /     | /                                                              | -      | =                             |

|     |                                      |     |   |   |   |   |   |   |   |   |   |   |
|-----|--------------------------------------|-----|---|---|---|---|---|---|---|---|---|---|
| J23 | Freezed water                        | EN1 | O | / | / | / | / | / | / | / | - | = |
| J26 | Network water                        | EN1 | O | / | / | / | / | / | / | / | - | = |
| L1  | Process water                        | EN1 | N | / | / | / | / | / | / | / | - | = |
| L2  | Laboratory water                     | EN1 | N | / | / | / | / | / | / | / | - | = |
| L3  | Clean water                          | EN1 | N | / | / | / | / | / | / | / | - | = |
| L4  | Freezed water                        | EN1 | N | / | / | / | / | / | / | / | - | = |
| L5  | Drinking water                       | EN1 | N | / | / | / | / | / | / | / | - | = |
| L6  | Clean water                          | EN1 | N | / | / | / | / | / | / | / | - | = |
| L7  | Freezed water                        | EN1 | N | / | / | / | / | / | / | / | - | = |
| B39 | PS threader white fishes             | EN2 | N | / | / | / | / | / | / | / | - | = |
| B51 | PS dirty butcher knife               | EN2 | N | / | / | / | / | / | / | / | - | = |
| B52 | PS slicer butcher stand              | EN2 | N | / | / | / | / | / | / | / | - | = |
| C26 | PS weighing pan from fisher stand    | EN2 | N | / | / | / | / | / | / | / | - | = |
| I20 | PS dirty knife in workshop           | EN2 | N | / | / | / | / | / | / | / | - | = |
| J22 | PS dirty knife blade                 | EN2 | N | / | / | / | / | / | / | / | - | = |
| K4  | PS cold room handle                  | EN2 | N | / | / | / | / | / | / | / | - | = |
| M1  | PS rack in cold room                 | EN2 | N | / | / | / | / | / | / | / | - | = |
| M2  | PS stainless steel table workshop    | EN2 | N | / | / | / | / | / | / | / | - | = |
| M3  | PS weighing pan                      | EN2 | N | / | / | / | / | / | / | / | - | = |
| D18 | Waste from delicatessen stand        | EN3 | N | / | / | / | / | / | / | / | - | = |
| F13 | Waste from butcher stand             | EN3 | N | / | / | / | / | / | / | / | - | = |
| G20 | Slicer waste from delicatessen stand | EN3 | N | / | / | / | / | / | / | / | - | = |
| G34 | Chicken waste                        | EN3 | N | / | / | / | / | / | / | / | - | = |
| G35 | Ox waste                             | EN3 | N | / | / | / | / | / | / | / | - | = |
| I19 | Waste from fisher workshop           | EN3 | N | / | / | / | / | / | / | / | - | = |
| I21 | Waste from chicken cut               | EN3 | N | / | / | / | / | / | / | / | - | = |
| i22 | Residues sol workshop                | EN3 | N | / | / | / | / | / | / | / | - | = |
| J11 | Residues butcher workshop            | EN3 | N | / | / | / | / | / | / | / | - | = |
| J19 | Residues sewerage line 1 beans       | EN3 | N | / | / | / | / | / | / | / | - | = |

## APPENDIX C

### INCLUSIVITY / EXCLUSIVITY

## Inclusivity : Validation initiale

| Strain |                                    | Origin                  | Inoculation level in<br>225 mL 1/2 Fraser | Colonies on AL medium after<br>incubation for 22 hours at 37°C |           | Result |
|--------|------------------------------------|-------------------------|-------------------------------------------|----------------------------------------------------------------|-----------|--------|
|        |                                    |                         |                                           | Color                                                          | with halo |        |
| L 4    | <i>Listeria monocytogenes</i> 1/2a | ATCC 35152              | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L5     | <i>Listeria monocytogenes</i> 1/2a | Pieces of smoked salmon | 9,5E+03                                   | blue                                                           | Yes       | +MA    |
| L6     | <i>Listeria monocytogenes</i> 1/2a | Pizza                   | 1,0E+06                                   | blue                                                           | Yes       | +MA    |
| L7     | <i>Listeria monocytogenes</i> 1/2a | Munster cheese (rind)   | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L9     | <i>Listeria monocytogenes</i> 1/2a | Munster cheese (rind)   | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L10    | <i>Listeria monocytogenes</i> 1/2a | Rillettes               | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L11    | <i>Listeria monocytogenes</i> 1/2a | Munster cheese (rind)   | 5,7E+05                                   | blue                                                           | Yes       | +MA    |
| L12    | <i>Listeria monocytogenes</i> 1/2a | Smoked salmon           | 1,2E+01                                   | blue                                                           | Yes       | +MA    |
| L13    | <i>Listeria monocytogenes</i> 1/2b | Pork ear                | 9,0E+00                                   | blue                                                           | Yes       | +MA    |
| L14    | <i>Listeria monocytogenes</i> 1/2c | Ground meat             | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L15    | <i>Listeria monocytogenes</i> 1/2c | Beef meat               | 1,1E+04                                   | blue                                                           | Yes       | +MA    |
| L16    | <i>Listeria monocytogenes</i> 1/2c | Ground meat             | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L17    | <i>Listeria monocytogenes</i> 1/2c | Bacon                   | 1,5E+04                                   | blue                                                           | Yes       | +MA    |
| L18    | <i>Listeria monocytogenes</i> 1/2c | Munster cheese (rind)   | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L20    | <i>Listeria monocytogenes</i> 1/2  | Smoked salmon           | 1,5E+01                                   | blue                                                           | Yes       | +MA    |
| L25    | <i>Listeria monocytogenes</i> 1/2  | Chicken                 | 4,0E+00                                   | blue                                                           | Yes       | +MA    |
| L28    | <i>Listeria monocytogenes</i> 1/2c | Environment sample      | 1,2E+01                                   | blue                                                           | Yes       | +MA    |
| L32    | <i>Listeria monocytogenes</i> 4b   | Munster cheese (rind)   | 6,0E+03                                   | blue                                                           | Yes       | +MA    |
| L33    | <i>Listeria monocytogenes</i> 4b   | ATCC 19115              | 1,0E+04                                   | blue                                                           | Yes       | +MA    |
| L37    | <i>Listeria monocytogenes</i> 1/2b | Maroille cheese         | 3,2E+05                                   | blue                                                           | Yes       | +MA    |
| L39    | <i>Listeria monocytogenes</i>      | Sausage                 | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L40    | <i>Listeria monocytogenes</i> 1/2a | Munster cheese (rind)   | 4,2E+05                                   | blue                                                           | Yes       | +MA    |
| L42    | <i>Listeria monocytogenes</i> 1/2a | Chicken meat            | 6,0E+00                                   | blue                                                           | Yes       | +MA    |
| L43    | <i>Listeria monocytogenes</i> 1/2a | Ground meat             | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L44    | <i>Listeria monocytogenes</i> 1/2a | Sausage                 | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L45    | <i>Listeria monocytogenes</i> 1/2a | Wind terrine            | 4,0E+00                                   | blue                                                           | Yes       | +MA    |
| L47    | <i>Listeria monocytogenes</i> 1/2a | Browed potatoes         | 1,5E+01                                   | blue                                                           | Yes       | +MA    |
| L48    | <i>Listeria monocytogenes</i> 1/2b | Pork tongue             | 3,0E+00                                   | blue                                                           | Yes       | +MA    |
| L49    | <i>Listeria monocytogenes</i> 1/2b | Poultry pâté            | 9,0E+00                                   | blue                                                           | Yes       | +MA    |
| L51    | <i>Listeria monocytogenes</i> 1/2b | Germain cheese          | 1,5E+01                                   | blue                                                           | Yes       | +MA    |
| L52    | <i>Listeria monocytogenes</i> 1/2b | SLCC 2755               | 5,0E+00                                   | blue                                                           | Yes       | +MA    |
| L53    | <i>Listeria monocytogenes</i> 1/2c | Ground meat             | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L54    | <i>Listeria monocytogenes</i> 1/2c | Meat product            | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L55    | <i>Listeria monocytogenes</i> 3b   | SLCC 2540               | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L56    | <i>Listeria monocytogenes</i> 3c   | SLCC 2479               | 5,0E+00                                   | blue                                                           | Yes       | +MA    |
| L57    | <i>Listeria monocytogenes</i> 4a   | ATCC 19114              | 3,0E+00                                   | blue                                                           | Yes       | +MA    |
| L58    | <i>Listeria monocytogenes</i> 4b   | Salad                   | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L60    | <i>Listeria monocytogenes</i> 4d   | ATCC 19117              | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L61    | <i>Listeria monocytogenes</i> 4e   | ATCC 19118              | 4,0E+00                                   | blue                                                           | Yes       | +MA    |
| L62    | <i>Listeria monocytogenes</i> 4e   | Reblochon cheese        | 3,0E+00                                   | blue                                                           | Yes       | +MA    |
| L63    | <i>Listeria monocytogenes</i> 4e   | Munster cheese (rind)   | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L67    | <i>Listeria monocytogenes</i> 7    | SLCC 2482               | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L69    | <i>Listeria monocytogenes</i>      | Sausage                 | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L70    | <i>Listeria monocytogenes</i>      | Salmon from Ireland     | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L116   | <i>Listeria monocytogenes</i> 1/2a | Fish meal               | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L117   | <i>Listeria monocytogenes</i> 1/2c | Montbeliard sausage     | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L119   | <i>Listeria monocytogenes</i>      | Spinashes               | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L121   | <i>Listeria monocytogenes</i>      | Neufchatel cheese       | 9,0E+03                                   | blue                                                           | Yes       | +MA    |
| L123   | <i>Listeria monocytogenes</i>      | Mozzarella cheese       | 1,2E+01                                   | blue                                                           | Yes       | +MA    |
| L124   | <i>Listeria monocytogenes</i>      | Perch fillet            | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L125   | <i>Listeria monocytogenes</i>      | Vegetables pan fry      | 6,0E+00                                   | blue                                                           | Yes       | +MA    |
| L128   | <i>Listeria monocytogenes</i> 1/2a | Soya cattle cake        | 9,0E+03                                   | blue                                                           | Yes       | +MA    |
| L129   | <i>Listeria monocytogenes</i> 1/2a | Browed potatoes         | 7,0E+00                                   | blue                                                           | Yes       | +MA    |
| L130   | <i>Listeria monocytogenes</i>      | Ground meat             | 5,0E+00                                   | blue                                                           | Yes       | +MA    |
| L137   | <i>Listeria monocytogenes</i>      | Ground meat             | 1,0E+01                                   | blue                                                           | Yes       | +MA    |
| L141   | <i>Listeria monocytogenes</i>      | Environmental sample    | 8,0E+00                                   | blue                                                           | Yes       | +MA    |
| L149   | <i>Listeria monocytogenes</i>      | Environmental sample    | 5,0E+00                                   | blue                                                           | Yes       | +MA    |
| L152   | <i>Listeria monocytogenes</i>      | Environmental sample    | 1,0E+04                                   | blue                                                           | Yes       | +MA    |
| L156   | <i>Listeria monocytogenes</i>      | French pies             | 2,7E+04                                   | blue                                                           | Yes       | +MA    |
| L176   | <i>Listeria monocytogenes</i>      | Beef meat               | 1,0E+04                                   | blue                                                           | Yes       | +MA    |

## Inclusivity : Extension study

| Reference | Strain                                            | Origin                     | Inoculation level (CFU/225 mL) | Colonies on AL agar following 22 h incubation at 37°C |                  | Confirmations    |                | Result |
|-----------|---------------------------------------------------|----------------------------|--------------------------------|-------------------------------------------------------|------------------|------------------|----------------|--------|
|           |                                                   |                            |                                | Color                                                 | Presence of halo | Streak on Palcam | Streak on RLSP |        |
| L12       | <i>Listeria monocytogenes</i> 1/2a                | Smoked salmon              | 15.0                           | blue                                                  | Yes              | +                | +              | +      |
| L43       | <i>Listeria monocytogenes</i> 1/2a                | Minced meat                | 12.8                           | blue                                                  | Yes              | +                | +              | +      |
| L44       | <i>Listeria monocytogenes</i> 1/2a                | Sausage                    | 13.8                           | blue                                                  | Yes              | +                | +              | +      |
| L47       | <i>Listeria monocytogenes</i> 1/2a                | Fried potatoes             | 9.4                            | blue                                                  | Yes              | +                | +              | +      |
| L116      | <i>Listeria monocytogenes</i> 1/2a                | Shell fish                 | 11.4                           | blue                                                  | Yes              | +                | +              | +      |
| L119      | <i>Listeria monocytogenes</i> 1/2a                | Spinach                    | 16.2                           | blue                                                  | Yes              | +                | +              | +      |
| L152      | <i>Listeria monocytogenes</i> 1/2a                | Environment sample         | 18.2                           | blue                                                  | Yes              | +                | +              | +      |
| L37       | <i>Listeria monocytogenes</i> 1/2b                | Maroilles mith raw milk    | 13.6                           | blue                                                  | Yes              | +                | +              | +      |
| L49       | <i>Listeria monocytogenes</i> 1/2b                | Chicken livers cream       | 15.4                           | blue                                                  | Yes              | +                | +              | +      |
| L51       | <i>Listeria monocytogenes</i> 1/2b                | Ripened cheese             | 14.4                           | blue                                                  | Yes              | +                | +              | +      |
| L14       | <i>Listeria monocytogenes</i> 1/2c                | Minced meat                | 18.2                           | blue                                                  | Yes              | +                | +              | +      |
| L17       | <i>Listeria monocytogenes</i> 1/2c                | Bacon                      | 9.8                            | blue                                                  | Yes              | +                | +              | +      |
| L18       | <i>Listeria monocytogenes</i> 1/2c                | Munster cheese             | 14.6                           | blue                                                  | Yes              | +                | +              | +      |
| L117      | <i>Listeria monocytogenes</i> 1/2c                | Sausages from Montbéliard  | 14.2                           | blue                                                  | Yes              | +                | +              | +      |
| L223      | <i>Listeria monocytogenes</i> 1/2c                | Environment sample         | 34.0                           | blue                                                  | Yes              | +                | +              | +      |
| L226      | <i>Listeria monocytogenes</i> 3a                  | Terrine of herrings fillet | 19.6                           | blue                                                  | Yes              | +                | +              | +      |
| L55       | <i>Listeria monocytogenes</i> 3b                  | Collection SLCC 2540       | 13.2                           | blue                                                  | Yes              | +                | +              | +      |
| L56       | <i>Listeria monocytogenes</i> 3c                  | Collection SLCC 2479       | 9.5                            | blue                                                  | Yes              | +                | +              | +      |
| L57       | <i>Listeria monocytogenes</i> 4a                  | Collection ATCC 19114      | 9.6                            | blue                                                  | Yes              | +                | +              | +      |
| L58       | <i>Listeria monocytogenes</i> 4b                  | Salad                      | 12.5                           | blue                                                  | Yes              | +                | +              | +      |
| L217      | <i>Listeria monocytogenes</i> 4b                  | Environment sample         | 27.6                           | blue                                                  | Yes              | +                | +              | +      |
| L60       | <i>Listeria monocytogenes</i> 4d                  | Collection ATCC 19117      | 11.0                           | blue                                                  | Yes              | +                | +              | +      |
| L61       | <i>Listeria monocytogenes</i> 4e                  | Collection ATCC 19118      | 13.8                           | blue                                                  | Yes              | +                | +              | +      |
| L62       | <i>Listeria monocytogenes</i> 4e                  | Reblochon cheese           | 13.8                           | blue                                                  | Yes              | +                | +              | +      |
| L81       | <i>Listeria grayi</i>                             | Collection ATCC 19120      | 3.0                            | blue                                                  | NO               | +                | +              | +      |
| L143      | <i>Listeria grayi</i>                             | Deep-frozen chips          | 20.8                           | blue                                                  | NO               | +                | +              | +      |
| L147      | <i>Listeria grayi</i>                             | Collection CIP 103213      | 0.8                            | blue                                                  | NO               | +                | +              | +      |
| L3        | <i>Listeria innocua</i>                           | Of calf liver              | 4.6                            | blue                                                  | NO               | +                | +              | +      |
| L64       | <i>Listeria innocua</i>                           | Epoisses cheese            | 11.4                           | blue                                                  | NO               | +                | +              | +      |
| L66       | <i>Listeria innocua</i>                           | Spinach                    | 13.0                           | blue                                                  | NO               | +                | +              | +      |
| L72       | <i>Listeria innocua</i>                           | Cheese                     | 15.2                           | blue                                                  | NO               | +                | +              | +      |
| L76       | <i>Listeria innocua</i> 6b                        | Minced beef                | 7.8                            | blue                                                  | NO               | +                | +              | +      |
| L77       | <i>Listeria innocua</i> 6a                        | Toulouse sausages          | 18.2                           | blue                                                  | NO               | +                | +              | +      |
| L78       | <i>Listeria innocua</i>                           | Cockrel                    | 15.4                           | blue                                                  | NO               | +                | +              | +      |
| L108      | <i>Listeria innocua</i>                           | Gorgonzola                 | 6.2                            | blue                                                  | NO               | +                | +              | +      |
| L113      | <i>Listeria innocua</i>                           | Smoked halibut             | 15.6                           | blue                                                  | NO               | +                | +              | +      |
| L133      | <i>Listeria ivanovii</i>                          | Roquefort                  | 18.4                           | blue                                                  | NO               | +                | +              | +      |
| L151      | <i>Listeria ivanovii</i>                          | Piece of minced beef       | 19.6                           | blue                                                  | NO               | +                | +              | +      |
| L153      | <i>Listeria ivanovii</i>                          | Environment sample         | 18.2                           | blue                                                  | NO               | +                | +              | +      |
| L161      | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Meat product               | 24.4                           | blue                                                  | NO               | +                | +              | +      |
| L167      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Cheese                     | 20.0                           | blue                                                  | NO               | +                | +              | +      |
| L83       | <i>Listeria seeligeri</i> 1/2b                    | Jellied pork tongue        | 11.2                           | blue                                                  | NO               | +                | +              | +      |
| L140      | <i>Listeria seeligeri</i>                         | Deep-frozen chips          | 7.8                            | blue                                                  | NO               | +                | +              | +      |
| L142      | <i>Listeria seeligeri</i>                         | Raw milk cheese            | 8.2                            | blue                                                  | NO               | +                | +              | +      |
| L89       | <i>Listeria welshimeri</i> 6a                     | Minced beef                | 7.2                            | blue                                                  | NO               | +                | +              | +      |
| L86       | <i>Listeria welshimeri</i> 6b                     | Collection ATCC 35897      | 12.4                           | blue                                                  | NO               | +                | +              | +      |
| L100      | <i>Listeria welshimeri</i>                        | Spread                     | 15.0                           | blue                                                  | NO               | +                | +              | +      |
| L101      | <i>Listeria welshimeri</i>                        | Ham                        | 15.8                           | blue                                                  | NO               | +                | +              | +      |
| L155      | <i>Listeria welshimeri</i>                        | Salmon fillet              | 15.2                           | blue                                                  | NO               | +                | +              | +      |
| L124      | <i>Listeria monocytogenes</i> 1/2                 | Perch fillet               | 18.2                           | blue                                                  | Yes              | +                | +              | +      |
| L125      | <i>Listeria monocytogenes</i>                     | Fried vegetables           | 19.8                           | blue                                                  | Yes              | +                | +              | +      |

## Exclusivity : Initial validation

|       | Strain                                            | Origin                     | Inoculation level in<br>225 mL non<br>selective nutrient<br>broth | Colonies on AL medium after<br>incubation for 22 hours at<br>37°C |                     | Result |
|-------|---------------------------------------------------|----------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|---------------------|--------|
|       |                                                   |                            |                                                                   | Color                                                             | Presence of<br>halo |        |
| L143  | <i>Listeria grayi</i>                             | Frozen french fries        | 9,5E+03                                                           | blue                                                              | no                  | -      |
| L146  | <i>Listeria grayi</i>                             | CIP 103 213                | 1,0E+06                                                           | blue                                                              | no                  | -      |
| L64   | <i>Listeria innocua</i>                           | Epoisses cheese            | 5,7E+05                                                           | blue                                                              | no                  | -      |
| L72   | <i>Listeria innocua</i>                           | Boulettes d'Avesnes cheese | 1,1E+04                                                           | blue                                                              | no                  | -      |
| L108  | <i>Listeria innocua</i>                           | Gorgonzola cheese          | 1,5E+04                                                           | blue                                                              | no                  | -      |
| L76   | <i>Listeria innocua</i> 6b                        | Ground meat                | 6,0E+03                                                           | blue                                                              | no                  | -      |
| L80   | <i>Listeria ivanovii</i>                          | Collection                 | 1,0E+04                                                           | blue                                                              | yes                 | +      |
| L133  | <i>Listeria ivanovii</i>                          | Roquefort cheese           | 3,2E+05                                                           | blue                                                              | yes                 | +      |
| L150  | <i>Listeria ivanovii</i>                          | Dairy product              | 1,7E+05                                                           | blue                                                              | yes                 | +      |
| L151  | <i>Listeria ivanovii</i>                          | Ground meat                | 4,2E+05                                                           | blue                                                              | yes                 | +      |
| L154  | <i>Listeria ivanovii</i>                          | Sausage with herbs         | 2,4E+05                                                           | blue                                                              | yes                 | +      |
| L161  | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Meat product               | 1,9E+05                                                           | blue                                                              | yes                 | +      |
| L166  | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Collection                 | 2,8E+08                                                           | blue                                                              | yes                 | +      |
| L84   | <i>Listeria seeligeri</i>                         | Beef ground meat           | 9,0E+03                                                           | blue                                                              | no                  | -      |
| L142  | <i>Listeria seeligeri</i>                         | Raw milk cheese            | 9,0E+03                                                           | blue                                                              | no                  | -      |
| L83   | <i>Listeria seeligeri</i> 1/2b                    | Beef tongue                | 1,4E+04                                                           | blue                                                              | no                  | -      |
| L101  | <i>Listeria welshimeri</i>                        | Ham                        | 1,0E+04                                                           | blue                                                              | no                  | -      |
| L91   | <i>Listeria welshimeri</i>                        | Saucisson                  | 2,7E+04                                                           | blue                                                              | no                  | -      |
| L99   | <i>Listeria welshimeri</i>                        | Sausages                   | 1,0E+04                                                           | blue                                                              | no                  | -      |
| BA1   | <i>Bacillus cereus</i>                            | Eggproduct                 | 9,0E+04                                                           | Ø                                                                 | Ø                   | -      |
| BA2   | <i>Bacillus cereus</i>                            | Sausage                    | 7,0E+05                                                           | Ø                                                                 | Ø                   | -      |
| BA14  | <i>Bacillus cereus</i>                            | Egg                        | 6,0E+04                                                           | Ø                                                                 | Ø                   | -      |
| BA5   | <i>Bacillus megaterium</i>                        | Collection                 | 5,4E+05                                                           | Ø                                                                 | Ø                   | -      |
| BA6   | <i>Bacillus mycoïdes</i>                          | Collection                 | 4,3E+03                                                           | Ø                                                                 | Ø                   | -      |
| BA22  | <i>Bacillus pumilus</i>                           | Sausage                    | 1,3E+04                                                           | blue                                                              | no                  | -      |
| BA4   | <i>Bacillus stearothermophilus</i>                | Collection                 | 9,2E+06                                                           | Ø                                                                 | Ø                   | -      |
| BA29  | <i>Bacillus thuringiensis</i>                     | Collection                 | 1,2E+04                                                           | Ø                                                                 | Ø                   | -      |
| E10   | <i>Enterococcus durans</i>                        | Collection                 | 1,1E+05                                                           | Ø                                                                 | Ø                   | -      |
| E1    | <i>Enterococcus faecalis</i>                      | Eggproduct                 | 9,0E+05                                                           | Ø                                                                 | Ø                   | -      |
| E2    | <i>Enterococcus faecium</i>                       | ATCC 3286                  | 8,0E+05                                                           | Ø                                                                 | Ø                   | -      |
| E9    | <i>Enterococcus faecium</i>                       | Tarama                     | 8,0E+05                                                           | Ø                                                                 | Ø                   | -      |
| L139  | <i>Jonesia denitrificans</i>                      | ATCC 55134                 | 1,0E+04                                                           | blue                                                              | no                  | -      |
| LAC5  | <i>Lactobacillus reuteri</i>                      | Dairy product              | 3,0E+04                                                           | Ø                                                                 | Ø                   | -      |
| LAC22 | <i>Lactobacillus plantarum</i>                    | Collection                 | 5,4E+04                                                           | Ø                                                                 | Ø                   | -      |
| 39    | <i>Oekskovia xanthineolytica</i>                  | Reblochon cheese           | 1,8E+05                                                           | blue                                                              | no                  | -      |
| 32    | <i>Rhodococcus equi</i>                           | Meat product               | 1,2E+05                                                           | blue                                                              | no                  | -      |
| STA3  | <i>Staphylococcus epidermidis</i>                 | Yoghurt                    | 2,5E+05                                                           | blue                                                              | no                  | -      |

## Exclusivity : Extension study

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

in grey : results obtained during initial validation study

APPENDIX D

INTERLABORATORY STUDY

-

DETAILED RESULTS OF  
PARTICIPANT LABORATORIES

**Laboratory A**

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

VTC numeration (CFU/ml): &lt;1

**Laboratory B**

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

VTC numeration (CFU/ml): &lt;1

# Laboratory C

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

VTC numeration (CFU/ml): <1

# Laboratory D

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

VTC numeration (CFU/ml): 30

**Laboratory E**

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

VTC numeration (CFU/ml): 1

**Laboratory F**

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

VTC numeration (CFU/ml): NC

**Laboratory G**

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

VTC numeration (CFU/ml): &lt;1

**Laboratory H**

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

VTC numeration (CFU/ml): &lt;1

**Laboratory I**

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

VTC numeration (CFU/ml): &lt;1

**Laboratory J**

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

VTC numeration (CFU/ml): 20

**Laboratory K**

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

**Laboratory L**

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

**Laboratory M**

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

**Laboratory N**

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

**Laboratory O**

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

**Laboratory P**

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