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***AFNOR validation following the EN ISO 16140 standard  
of the TRANSIA PLATE *Listeria monocytogenes* method***

**SUMMARY REPORT**

Tplate Lmono – summary 2008 v01

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## APPENDICES

# 1 Introduction

## 1.1 Validation references

The TRANSIA PLATE *Listeria monocytogenes* method has been validated according to the EN ISO 16140:2003 standard, with respect to the reference method EN ISO 11290-1/A1:2004.

## 1.2 Protocols and principle of the alternative method

### 1.2.1 Protocols

The diagram summarising the method is shown in appendix A.

The protocols are the following:

#### 1) for all products except raw meat products and raw dairy products

- enrichment on ½ Fraser broth for 20 to 26 hours at 30°C ± 1°C,
- then inoculation of 0.25mL of the ½ Fraser broth in 10 mL of Fraser broth, incubated 22 to 26 h at 30°C +/-1°C, and then incubated 16 to 24 hours at 37°C ± 1°C

*Note: the incubation steps at 30°C are common with the TRANSIA PLATE Listeria genus method, to have a first screening before performing the TRANSIA PLATE Listeria monocytogenes test.*

#### 2) for all products except raw meat products and raw dairy products

- enrichment on ½ Fraser broth for 20 to 26 hours at 30°C ± 1°C,
- then inoculation of 0.25mL of the ½ Fraser broth in 10 mL of Fraser broth, incubated 24 to 26 h at 37°C +/-1°C.

*Note: with this protocol, a screening for Listeria monocytogenes is done in 2 days.*

#### 3) for raw meat products and raw dairy products

A first protocol with Fraser ½ broth is proposed:

- enrichment on ½ Fraser broth for 20 to 26 hours at 30°C ± 1°C,
- then inoculation of 0.25mL of the ½ Fraser broth in 10 mL of Fraser broth, incubated 40 to 48 h at 37°C +/-1°C.

A second protocol with L-PALCAM broth exists although, for raw meat product only, and offers the possibility to reduce the time-to-result:

- enrichment on L-PALCAM broth for 23 to 25 hours at 37°C ± 1°C,
- then inoculation of 0.1mL of the L-PALCAM broth in 10 mL of Fraser broth, incubated 22 to 26 h at 37°C +/-1°C.

All these protocols are followed by a TRANSIA® PLATE *Listeria monocytogenes* test after heating of 1 to 2 mL of the enrichment broth Fraser at 95-100°C (boiling water) for 20 minutes.

Positive or doubtful results with TRANSIA® PLATE *Listeria monocytogenes* have to be confirmed by streaking the non-heated Fraser broth:

- on Palcam or chromogenic agar according to Ottaviani & Agosti, according to classical tests described in methods standardized by CEN, ISO or AFNOR, including a purification step,
- on chromogenic agar according to Ottaviani & Agosti or RAPID'L.mono agar: if one suspicious colony, characteristic of *Listeria monocytogenes*, is present, the positive test may be considered as confirmed.

On the other hand, assays were made on samples tested during the accuracy test to evaluate the possibility of keeping the Fraser broths for 72 hours at 2°C – 8°C after incubation to verify that this storage does not modify the result.

## 1.2.2 Principle of the TRANSIA® PLATE *Listeria monocytogenes* test

The assay reliably recovers and detects *Listeria monocytogenes*, after the steps of enrichment and a heating shock which allows the release of *Listeria monocytogenes* antigens possibly presents in the analysed sample.

TRANSIA™ PLATE *Listeria monocytogenes* is based on a two-step, sandwich-type ELISA (Enzyme Linked Immuno Sorbent Assay) using:

- a microtitre plate with divisible strips coated with antibodies specific for *Listeria monocytogenes* P60 protein,
- and ready-to-use reagents.

The reading of the microtitre plate is done with a spectrophotometer at a wavelength of 450 nm.

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A result is considered negative if:

$$\text{O.D.} < (\text{NC1} + \text{NC2})/2 + 0.10$$

A result is considered positive if:

$$\text{O.D.} \geq 0.9 \times \{(\text{NC1} + \text{NC2})/2 + 0.10\}$$

The result is considered as doubtful if its optical density is lower than the positive threshold but equal to or higher than the negative threshold.

---

Every doubtful result should be seen as a potential positive and has to be confirmed. The result of the confirmation is the one to be considered as the final result.

## 1.3 Application scope

- All food products,
- Environmental samples.

## 1.4 Reference method

The validation study was carried out by reference to the EN ISO 11290-1/A1:2004 standard method: "Horizontal method for the detection and enumeration of *Listeria monocytogenes* — Part 1: Detection method – Amendment 1: Modification of the isolation media, of the haemolysis test and inclusion of precision data" (#).

The diagram summarising the method is shown in annex A.

# 2 Comparative study of methods

## 2.1 Relative accuracy, relative specificity and relative sensitivity

The aim of this study, according to the reference document EN ISO 16140, is to compare the performances of the two methods:

- the reference method EN ISO 11290-1/A1 :2004,
  - the TRANSIA™ PLATE *Listeria monocytogenes*,
- on samples naturally contaminated and not contaminated with *Listeria monocytogenes*.

## 2.1.1 Number and nature of the samples

According to the ISO 16140 standard, a minimum of 60 products per category must be analysed, with around 50% of positive products (at least 30 results) and 50% of negative products.

Each category was divided into various types and the results are displayed as follows:

| Category  | Types                                | Positive*  | Negative   | Total      |
|---|--------------------------------------|------------|------------|------------|
| Meat products<br>(raw products with<br>L-PALCAM protocol) | raw meats                            | 8          | 7          | 15         |
|   | seasoned, ready to cook              | 13         | 5          | 18         |
|   | cooked pork, ready-cooked meals, ... | 11         | 18         | 29         |
|   | <b>Total</b>                         | <b>32</b>  | <b>30</b>  | <b>62</b>  |
| Meat products<br>(raw products with<br>Fraser ½ protocol) | raw meats                            | 11         | 12         | 23         |
|   | seasoned, ready to cook              | 10         | 12         | 22         |
|   | cooked pork, ready-cooked meals, ... | 9          | 21         | 30         |
|   | <b>Total</b>                         | <b>30</b>  | <b>45</b>  | <b>75</b>  |
| Dairy products  | cheeses from cow milk                | 11         | 12         | 23         |
|   | cheeses from goat or sheep milk      | 11         | 14         | 25         |
|   | desserts, milk powders, raw milks    | 8          | 11         | 19         |
|   | <b>Total</b>                         | <b>30</b>  | <b>37</b>  | <b>67</b>  |
| Seafood products  | fresh fish fillets and shellfish     | 13         | 22         | 35         |
|   | smoked fish                          | 10         | 20         | 30         |
|   | fish-based ready-cooked meals        | 7          | 4          | 11         |
|   | <b>Total</b>                         | <b>30</b>  | <b>46</b>  | <b>76</b>  |
| Vegetables  | frozen                               | 7          | 12         | 19         |
|   | raw vegetables                       | 10         | 8          | 18         |
|   | seasoned                             | 13         | 11         | 24         |
|   | <b>Total</b>                         | <b>30</b>  | <b>31</b>  | <b>61</b>  |
| Environment   | various waters                       | 11         | 8          | 19         |
|   | surface samplings                    | 10         | 24         | 34         |
|   | residues                             | 9          | 13         | 22         |
|   | <b>Total</b>                         | <b>30</b>  | <b>45</b>  | <b>75</b>  |
| <b>TOTAL (raw meat products with L-PALCAM protocol)</b>   |                                      | <b>152</b> | <b>189</b> | <b>341</b> |
| <b>TOTAL (raw meat products with Fraser ½ protocol)</b>   |                                      | <b>150</b> | <b>204</b> | <b>354</b> |

\* These are positive results by one or other of the methods

## 2.1.2 Artificial contaminations of the samples and percentage

Artificial contamination was achieved by mixture with a naturally contaminated product (7 samples) or by using stressed contaminating suspensions (use of 14 different strains), the stress treatment and efficiency of which have been determined according to EN ISO 16140 and AFNOR validation rules.

59 samples were positive after artificial contamination.

In total, 39% were obtained as a result of artificial contamination.

## 2.1.3 Results of assays

The analyses have been conducted singly using the two methods.

The results of analysed samples were presented:

- in appendix C : **raw meat products** with
  - appendix C1 : Fraser ½ protocol
  - appendix C2 : L-PALCAM protocol
- in appendix D : **raw milk products**
- in appendix E : **other products**, including non-raw meat products and non-raw milk products, with:
  - appendix E1 : protocol with Fraser ½ + Fraser 24 hours at 37°C
  - appendix E2 : protocol with Fraser ½ + Fraser 22 hours at 30°C and 16 hours at 37°C

The obtained results for all analyzed samples can be interpreted in different ways, depending on the profile of protocols used:

- 1) General protocol (20h, 30°C then 24h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (Fraser ½ 20h, 30°C then 40h, 37°C)
- 2) General protocol (20h, 30°C then 24h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (LPALCAM 23h, 37°C then 22h, 37°C)
- 3) General protocol (20h, 30°C then 22h, 30°C, then 16h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (Fraser ½ 20h, 30°C then 40h, 37°C)
- 4) General protocol (20h, 30°C then 22h, 30°C, then 16h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (LPALCAM 23h, 37°C then 22h, 37°C)

Depending on these profiles, the different interpretations are below:

- 1) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser ½ 20h, 30°C then 40h, 37°C**)

|   | Positive reference method (R+)                | Negative reference method (R-)                  | Total |
|---|---|---|-------|
| <b>Positive alternative method (A+)</b> | Positive agreement (A+/R+)<br><b>PA = 142</b> | Positive deviation (R-/A+)<br><b>PD = 1</b>     | 143   |
| <b>Negative alternative method (A-)</b> | Negative deviation (A-/R+)<br><b>ND = 7*</b>  | Negative agreement (A-/R-)<br><b>NA = 204**</b> | 211   |
| Total                                   | 149   | 205   | 354   |

- 2) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM 23h, 37°C then 22h, 37°C**)

|   | Positive reference method (R+)                | Negative reference method (R-)                  | Total |
|---|---|---|-------|
| <b>Positive alternative method (A+)</b> | Positive agreement (A+/R+)<br><b>PA = 131</b> | Positive deviation (R-/A+)<br><b>PD = 9</b>     | 140   |
| <b>Negative alternative method (A-)</b> | Negative deviation (A-/R+)<br><b>ND = 12*</b> | Negative agreement (A-/R-)<br><b>NA = 189**</b> | 201   |
| Total                                   | 143   | 198   | 341   |

Legend:

A+ = positives confirmed

A- = immediate negatives **and** negatives after confirmation when presumed positive

\* not including any non-confirmed positive result

- 3) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser ½ 20h, 30°C then 40h, 37°C**)

|   | Positive reference method (R+)                | Negative reference method (R-)                  | Total |
|---|---|---|-------|
| <b>Positive alternative method (A+)</b> | Positive agreement (A+/R+)<br><b>PA = 145</b> | Positive deviation (R-/A+)<br><b>PD = 1</b>     | 146   |
| <b>Negative alternative method (A-)</b> | Negative deviation (A-/R+)<br><b>ND = 4*</b>  | Negative agreement (A-/R-)<br><b>NA = 204**</b> | 208   |
| Total                                   | 149   | 205   | 354   |

- 4) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM 23h, 37°C then 22h, 37°C**)

|   | Positive reference method (R+)                | Negative reference method (R-)                  | Total |
|---|---|---|-------|
| <b>Positive alternative method (A+)</b> | Positive agreement (A+/R+)<br><b>PA = 134</b> | Positive deviation (R-/A+)<br><b>PD = 9</b>     | 143   |
| <b>Negative alternative method (A-)</b> | Negative deviation (A-/R+)<br><b>ND = 9*</b>  | Negative agreement (A-/R-)<br><b>NA = 189**</b> | 198   |
| Total                                   | 143   | 198   | 341   |

Legend:

A+ = positives confirmed

A- = immediate negatives **and** negatives after confirmation when presumed positive

\* not including any non-confirmed positive result

\*\* including one positive TRANSIA PLATE *Listeria monocytogenes* result, not confirmed

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

All of these results help calculate the relative accuracy, relative sensitivity and relative specificity for each of the categories and for all of the categories, according to the formulae of the EN ISO 16140 standard.

- 1) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser** ½ 20h, 30°C then 40h, 37°C)

| Category       | PA         | NA         | ND       | PD       | Sum N      | Relative accuracy AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|---|---------------|--|---------------|--|
| Meat products  | 29         | 45         | 1        | 0        | 75         | 98.7  | 30            | 96.7                                       | 45            | 100  |
| Dairy products | 29         | 37         | 1        | 0        | 67         | 98.5  | 30            | 96.7                                       | 37            | 100  |
| Seafood        | 28         | 46         | 2        | 0        | 76         | 97.4  | 30            | 93.3                                       | 46            | 100  |
| Vegetables     | 29         | 31         | 1        | 0        | 61         | 98.4  | 30            | 96.7                                       | 31            | 100  |
| Environment    | 27         | 45         | 2        | 1        | 75         | 96.0  | 29            | 93.1                                       | 46            | 97.8                                       |
| <b>TOTAL</b>   | <b>142</b> | <b>204</b> | <b>7</b> | <b>1</b> | <b>354</b> | <b>97.7</b>                                 | <b>149</b>    | <b>95.3</b>                                | <b>205</b>    | <b>99.5</b>                                |

- 2) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM** 23h, 37°C then 22h, 37°C)

| Category       | PA         | NA         | ND        | PD       | Sum N      | Relative accuracy AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|-----------|----------|------------|---|---------------|--|---------------|--|
| Meat products  | 18         | 30         | 6         | 8        | 62         | 77.4  | 24            | 75.0                                       | 38            | 78.9                                       |
| Dairy products | 29         | 37         | 1         | 0        | 67         | 98.5  | 30            | 96.7                                       | 37            | 100  |
| Seafood        | 28         | 46         | 2         | 0        | 76         | 97.4  | 30            | 93.3                                       | 46            | 100  |
| Vegetables     | 29         | 31         | 1         | 0        | 61         | 98.4  | 30            | 96.7                                       | 31            | 100  |
| Environment    | 27         | 45         | 2         | 1        | 75         | 96.0  | 29            | 93.1                                       | 46            | 97.8                                       |
| <b>TOTAL</b>   | <b>131</b> | <b>189</b> | <b>12</b> | <b>9</b> | <b>341</b> | <b>93.8</b>                                 | <b>143</b>    | <b>91.6</b>                                | <b>198</b>    | <b>95.5</b>                                |

- 3) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser** ½ 20h, 30°C then 40h, 37°C)

| Category       | PA         | NA         | ND       | PD       | Sum N      | Relative accuracy AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|---|---------------|--|---------------|--|
| Meat products  | 29         | 45         | 1        | 0        | 75         | 98.7  | 30            | 96.7                                       | 45            | 100  |
| Dairy products | 30         | 37         | 0        | 0        | 67         | 100   | 30            | 100  | 37            | 100  |
| Seafood        | 29         | 46         | 1        | 0        | 76         | 98.7  | 30            | 96.7                                       | 46            | 100  |
| Vegetables     | 30         | 31         | 0        | 0        | 61         | 100.0                                       | 30            | 100  | 31            | 100  |
| Environment    | 27         | 45         | 2        | 1        | 75         | 96.0  | 29            | 93.1                                       | 46            | 97.8                                       |
| <b>TOTAL</b>   | <b>145</b> | <b>204</b> | <b>4</b> | <b>1</b> | <b>354</b> | <b>98.6</b>                                 | <b>149</b>    | <b>97.3</b>                                | <b>205</b>    | <b>99.5</b>                                |

- 4) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM** 23h, 37°C then 22h, 37°C)

| Category       | PA         | NA         | ND       | PD       | Sum N      | Relative accuracy AC (%)<br>[100x(PA+NA)]/N | N+<br>PA + ND | Relative sensitivity SE (%)<br>[100xPA]/N+ | N-<br>NA + PD | Relative specificity SP (%)<br>[100xNA]/N- |
|----------------|------------|------------|----------|----------|------------|---|---------------|--|---------------|--|
| Meat products  | 18         | 30         | 6        | 8        | 62         | 77.4  | 24            | 75.0                                       | 38            | 78.9                                       |
| Dairy products | 30         | 37         | 0        | 0        | 67         | 100   | 30            | 100  | 37            | 100  |
| Seafood        | 29         | 46         | 1        | 0        | 76         | 98.7  | 30            | 96.7                                       | 46            | 100  |
| Vegetables     | 30         | 31         | 0        | 0        | 61         | 100.0                                       | 30            | 100  | 31            | 100  |
| Environment    | 27         | 45         | 2        | 1        | 75         | 96.0  | 29            | 93.1                                       | 46            | 97.8                                       |
| <b>TOTAL</b>   | <b>134</b> | <b>189</b> | <b>9</b> | <b>9</b> | <b>341</b> | <b>94.7</b>                                 | <b>143</b>    | <b>93.7</b>                                | <b>198</b>    | <b>95.5</b>                                |

For the alternative method, the values as a percentage calculated for the following three criteria according to the EN ISO 16140 standard were, for the various profiles of protocols used:

|   | 1)            | 2)            | 3)            | 4)            |
|---|---------------|---------------|---------------|---------------|
| <i>Relative accuracy</i> : <b>AC</b>    | <b>97.7 %</b> | <b>93.8 %</b> | <b>98.6 %</b> | <b>94.7 %</b> |
| <i>Relative specificity</i> : <b>SP</b> | <b>99.5 %</b> | <b>95.5 %</b> | <b>99.5 %</b> | <b>95.5 %</b> |
| <i>Relative sensitivity</i> : <b>SE</b> | <b>95.3 %</b> | <b>91.6 %</b> | <b>97.3 %</b> | <b>93.7 %</b> |

The AFNOR Technical Bureau requests 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):

| Profile of protocols used |   | Alternative method:<br>(PA + PD) / (PA + PD + ND) | Reference method:<br>(PA + ND) / (PA + PD + ND) |
|---------------------------|---|---|---|
| 1                         | - general protocol (20h, 30°C then <b>24h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- raw meat products ( <b>Fraser ½</b> )                   | <b>95.3 %</b>                                     | <b>99.3 %</b>                                   |
| 2                         | - general protocol (20h, 30°C then <b>24h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- produits carnés crus ( <b>LPALCAM</b> )                 | <b>92.1 %</b>                                     | <b>94.1 %</b>                                   |
| 3                         | - general protocol (20h, 30°C then <b>22h, 30°C, then 16h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- raw meat products ( <b>Fraser ½</b> )   | <b>97.3 %</b>                                     | <b>99.3 %</b>                                   |
| 4                         | - general protocol (20h, 30°C then <b>22h, 30°C, then 16h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- produits carnés crus ( <b>LPALCAM</b> ) | <b>94.1 %</b>                                     | <b>94.1 %</b>                                   |

## 2.1.5 Analysis of discordances

The number of discordances between the reference method and the alternative depends on the different considered protocols.

According to annex F of the NF EN ISO 16140 standard, the minimum number of discordances for which a statistical test must be conducted in order to compare the two methods is 6.

The statistic test has been done.

The aim is the determination of the M value, depending on the total number of discordances and according to the EN ISO 16140 (appendix F) and the comparison between M and an m-value, as the smaller of the two values of PD and ND. Both methods would be considered as equivalent if  $m > M$ .

| Profile of protocols used |   | Number of discordances | M | m | Conclusion  |
|---------------------------|---|------------------------|---|---|-------------|
| 1                         | - general protocol (20h, 30°C then <b>24h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- raw meat products ( <b>Fraser ½</b> )                   | 8                      | 0 | 1 | Equivalence |
| 2                         | - general protocol (20h, 30°C then <b>24h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- produits carnés crus ( <b>LPALCAM</b> )                 | 21                     | 5 | 9 | Equivalence |
| 3                         | - general protocol (20h, 30°C then <b>22h, 30°C, then 16h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- raw meat products ( <b>Fraser ½</b> )   | 5                      |   |   | Equivalence |
| 4                         | - general protocol (20h, 30°C then <b>22h, 30°C, then 16h, 37°C</b> )<br>- raw dairy products (20h, 30°C then 40h, 37°C)<br>- produits carnés crus ( <b>LPALCAM</b> ) | 18                     | 4 | 9 | Equivalence |

The TRANSIA™ PLATE *Listeria monocytogenes* method and the reference method EN ISO 11290-1/A1 can be considered as equivalent.

## 2.1.6 Comments on the Fraser broths conservation at 2°C – 8°C for 72 hours

The Fraser broths have been tested by the test TRANSIA™ PLATE *Listeria monocytogenes*, just after incubation, then these Fraser broths were kept for three days at 2°C – 8°C and a new TRANSIA test has been realized, with, in parallel, streaking on selective plates.

The obtained results were the same as those obtained directly after incubation for the additional positive samples. One of the spiked samples (goat milk cheese), negative with both methods just after incubation, became additional positive after a storage of the Fraser broth three days at 2°C – 8°C.

Among the false negative results, the results of 5 samples became in positive agreement with the reference method.

Among the results in positive agreement, one result of vegetable (frozen green peas) became false negative with the "Fraser 24h 37°C" protocol. The test result just after incubation was doubtful.

All the identifications realized after Fraser conservation were the same as those obtained directly after incubation.

In conclusion, the storage of the Fraser broths three days at 2–8°C did not affect the results of the alternative method.

## 2.1.7 Comments on the confirmation protocol

All the confirmation procedures performed after TRANSIA™ PLATE *Listeria monocytogenes* positive tests allowed to confirm the presence of *Listeria monocytogenes* on ALOA® medium.

## 2.2 Relative detection level

The objective was to determine the level of contamination for which less than 50% of the responses obtained are positive and that for which more than 50% of the responses obtained are positive.

Different 'food strain matrix' couples were studied in parallel with the reference method and the TRANSIA™ PLATE *Listeria* method, for five relevant studied categories.

The artificial contaminations have been realised according to EN ISO 16140 and AFNOR validation rules.

The detection levels, calculated according to Spearman-Kärber\* (LOD<sub>50</sub>) and obtained for each food-strain couple are as follows:

| Matrix               | Strain                      | Relative detection level for the reference method (UFC / 25 g or 25 mL) | Relative detection level for the alternative method (UFC / 25 g or 25 mL) |
|----------------------|-----------------------------|---|---|
| Raw minced beef meat | <i>L.monocytogenes</i> 1/2c | 1.7 [1.3 – 2.4]   | <b>Fraser</b> ½ : 1.9 [1.3 – 2.8]<br><b>L PALCAM</b> : 1.3 [0.7 – 2.5]    |
| Raw milk             | <i>L.monocytogenes</i> 1/2b | 0.4 [0.2 – 0.5]   | 0.4 [0.2 – 0.5]   |
| Smoked salmon        | <i>L.monocytogenes</i> 1/2a | 0.6 [0.3 – 1.0]   | 0.6 [0.3 – 1.0]   |
| Mixed raw vegetables | <i>L.monocytogenes</i> 4b   | 0.8 [0.5 – 1.3]   | 0.8 [0.5 – 1.3]   |
| Process water        | <i>L.monocytogenes</i> 1/2c | 0.5 [0.3 – 0.8]   | 0.5 [0.3 – 0.8]   |

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

## Conclusion

The level of detection obtained for the TRANSIA™ PLATE *Listeria monocytogenes* method for the raw beef minced meat, with the specific protocols «raw meat products» is between entre 0.7 and 2.8 cells per 25 grams. For the reference method, it is between 1.3 and 2.4 cells per 25 grams.

The level of detection obtained for the TRANSIA™ PLATE *Listeria monocytogenes* method is between 0.2 and 1.3 cells per 25 grams for the other categories and it is identical to the one obtained for the reference method.

## 2.3 Inclusivity / exclusivity

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

### 2.3.1 Inclusivity

#### **Protocol**

For each of the *Listeria monocytogenes* strains, a culture in nutrient broth was made over 24 hours at 30°C. A ½ Fraser broth and a L-PALCAM broth was inoculated with around 10 to 100 *Listeria monocytogenes* per 225 mL and incubated at 30°C and 37°C respectively, then subcultured in Fraser broth before performing the TRANSIA™ PLATE *Listeria monocytogenes* assay.

#### **Results**

The results are listed in appendix F.  
The 50 strains of *Listeria monocytogenes* gave all positive results.

### 2.3.2 Exclusivity

#### **Protocol**

The different negative strains (*Listeria* other than *monocytogenes* and other genus) were cultivated and diluted in nutrient broth to obtain levels of around  $10^5$  cells per mL. After incubation at 30°C for 20–26 hours, the TRANSIA™ PLATE *Listeria monocytogenes* assay was performed.

#### **Results**

The results are listed in appendix F.  
The study of the 30 non-targeted strains by the TRANSIA™ PLATE *Listeria monocytogenes* assay did not detect the presence of any cross-reaction, except for three strains of *Listeria ivanovii*.

The complete protocol of the alternative method was then performed for these three strains.

An additional investigation was conducted on 21 *L.ivanovii* strains.

The tests were realized with inocula of around  $10^5$  cells per mL (culture in Fraser ½ and in L-PALCAM broths 24 hours at 30°C, then culture in Fraser broth 24 hours at 37°C) and the results were all negative.

In parallel, the streaks on Agar *Listeria* according to Ottaviani and Agosti and on PALCAM gave characteristic colonies of *Listeria*, with halos on the chromogenic medium.

We can note that, for two spiked samples with *L.ivanovii* in the “relative accuracy study”, the test results were negative.

### 2.3.3 Conclusion

In conclusion, the inclusivity of the method is satisfactory since all the strains of *Listeria monocytogenes* were detected and no cross-reactions were observed in the non *Listeria* strains and in the other species of *Listeria* strains (exclusivity). The *Listeria ivanovii* strains gave negative results when the complete protocol of the method was performed.

## 3 Interlaboratory study

### Note:

For the interlaboratory study, the laboratories performed the **general protocol** for all products except raw meat products and raw dairy products with the first enrichment in Fraser ½ broth and the **second enrichment in Fraser broth during 24 to 26 hours at 37°C.**

### 3.1 Study organization

- Number of participating laboratories

13 laboratories received samples. The list of the laboratories is presented in appendix G.

- Matrix used

The "pasteurized milk" matrix was used to perform the interlaboratory study.

- Strain used

The strain used for spiking is a strain of de *Listeria monocytogenes* (origin « dairy product »).

- Number of samples per laboratory

24 samples were prepared per laboratory, and were distributed in 3 levels, with 8 samples per level and method.

### 3.2 Control of experimental parameters

#### 3.2.1 Contamination rates obtained after artificial contamination

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

| Level           | Samples               | Targeted theoretical rate (b/25ml) | Real rate (b/25ml sample) | Estimated lower contamination limit per 25ml sample | Estimated upper contamination limit per 25ml sample |
|-----------------|-----------------------|------------------------------------|---------------------------|---|---|
| Level 0 (L0)    | 5-6-11-12-19-20-23-24 | 0                                  | 0                         |   |   |
| Low level (L1)  | 1-2-9-10-13-14-15-16  | 3                                  | 4                         | 1.1   | 10.2  |
| High level (L2) | 3-4-7-8-17-18-21-22   | 30                                 | 56                        | 43  | 74  |

#### 3.2.2 Problems of temperature recorded during transport, temperature on reception and reception times

##### Analysis of temperature monitoring curves during transport

The temperature curves obtained from thermobutton data recorders show that temperatures were stable during transport and were between 3°C and 8°C for most of the laboratories.

The temperature was below 0°C for two laboratories (H and M) during the night transport, but the samples were not frozen at reception.

##### Temperatures on reception and reception times

The temperatures obtained are recorded in the following tables:

| Laboratory | Reception Temperatures (°C)    |                               | Comments |
|------------|--------------------------------|-------------------------------|----------|
|            | communicated by the laboratory | indicated by the thermobutton |          |
| A          | 4.5                            | 5.1                           | /        |
| B          | 7.0                            | 4.1                           | /        |
| C          | 4.1                            | 2.0                           | /        |
| D          | 4.8                            | 4.7                           | /        |
| E          | 2.5                            | 2.5                           | /        |
| F          | 5.2                            | 1.7                           | /        |
| G          | 8.3                            | 7.7                           | /        |
| H          | 3.8                            | 0.6                           | /        |
| I          | 8.0                            | 2.6                           | /        |
| J          | 2.2                            | 1.6                           | /        |
| K          | 4.9                            | 0.6                           | /        |
| L          | 3.7                            | 2.6                           | /        |
| M          | 2.2                            | 1.5                           | /        |

The laboratory G claimed a delivery temperature of 8.3°C, however conform. After analysis of the temperature curve, the temperature on reception was slightly below 8°C.

### 3.2.3 Conclusion

All the results from the 13 participating laboratories could be analyzed after considering the conditions of shipment and delivery.

## 3.3 Results

### 3.3.1 Results obtained by cooperating laboratories

The detailed results are presented in appendix G and the following tables give a synthesis of the results obtained by all the laboratories.

#### Positive results obtained by the reference method

| Laboratories | Levels of contamination |            |          |            |          |            |
|--------------|-------------------------|------------|----------|------------|----------|------------|
|              | L0                      |            | L1       |            | L2       |            |
|              | Obtained                | Nr samples | Obtained | Nr samples | Obtained | Nr samples |
| Lab A        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab B        | 8                       | 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          | 8        | 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          |

#### Positive results obtained by the alternative method

| Laboratories | Levels of contamination |            |          |            |          |            |
|--------------|-------------------------|------------|----------|------------|----------|------------|
|              | L0                      |            | L1       |            | L2       |            |
|              | Obtained                | Nr samples | Obtained | Nr samples | Obtained | Nr samples |
| Lab A        | 0                       | 8          | 8        | 8          | 8        | 8          |
| Lab B        | 5                       | 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          | 8        | 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          |

The laboratory B found with the reference method all the non contaminated samples as positive and with the alternative method, five of them positive as well. Some important problems of cross-contaminations were revealed. The laboratory informed us for leakages in its Fraser ½ enrichment bags. The results of this laboratory are shown in grey, but they were excluded from the interpretation.

### 3.3.2 Comments (discrepancies with expected results, exclusions,...)

The results of the reference method and the alternative method **were in agreement** for the 12 laboratories: the non-spiked samples were negative and the spiked samples were positive.

Among these laboratories,

- the laboratory I found a first negative control higher than 0.200 (OD=0.559). The OD of the negative samples were all lower than 0.100. This lab tested a second time its negative samples and the negative controls and the OD values of the negative controls were correct (OD=0.126 and 0.130).
- the laboratory K obtained one of the negative control value higher than 1 (NC2=1.791), so its positive threshold was calculated with the second value of negative control (OD=0.132).
- for the laboratory F, both values of negative controls were higher than 0.200 (OD= 0.294 and OD=0.241), but completely consistent with the values of the negative samples. That means probably that the reader was not good calibrated, but does not prevent the exploitation of the obtained results. However, the technical board decided to exclude this laboratory from the calculations.

The results of the laboratories G and H, for which the temperature during the transport was below 0°C for several hours, were correct.

Finally, the results of 11 laboratories were considered.

## 3.4 Calculations

*Note: the positive results of the alternative method were all confirmed.*

### 3.4.1 Calculation of specificity percentage (%SP) and sensitivity percentage (%SE) for both methods

The percentages of specificity (SP) and sensitivity (SE) have been calculated with the EN ISO 16140 formulas.

**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-, 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+, 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        | 98      | SP% = 100          | 98      |
| L1    | SE% = 100        | 75      | SE% = 100          | 73      |
| L2    | SE% = 100        | 98      | SE% = 100          | 98      |
| L1+L2 | SE% = 100        | 84      | SE% = 100          | 84      |

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

### 3.4.2 Calculation of the 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

|                                     | Positive reference method<br>(R+)      | Negative reference method<br>(R-)      | Total             |
|-------------------------------------|--|--|-------------------|
| Positive alternative method<br>(A+) | Positive agreement (A+/R+)<br>PA = 176 | Positive deviation (R-/A+)<br>PD = 0   | <b>(N+) = 176</b> |
| Negative alternative method<br>(A-) | Negative deviation (A-/R+)<br>ND = 0   | Negative agreement (A-/R-)<br>NA = 88* | <b>(N-) = 88</b>  |
| Total                               | <b>(N+) = 176</b>                      | <b>(N-) = 88</b>                       | <b>N = 264</b>    |

\* including no positive samples (not confirmed)

For this study, the relative accuracy is 100%.

### 3.4.3 Analysis of discordances

As defined in appendix F in EN ISO 16140 standard, the minimum number of discordances beyond which a statistical test must be carried out to compare the two methods is 6. Therefore, this statistical test was not used because no discordance was observed between the two methods.

## 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 | Comparative study |               |               |               |
|-------------------------------|-----------------------|-------------------|---------------|---------------|---------------|
|                               |                       | 1)                | 2)            | 3)            | 4)            |
| <b>Relative accuracy (AC)</b> | 100 %                 | <b>97.7 %</b>     | <b>93.8 %</b> | <b>98.6 %</b> | <b>94.7 %</b> |
| <b>Sensitivity (SE)</b>       | 100 %                 | <b>95.3 %</b>     | <b>91.6 %</b> | <b>97.3 %</b> | <b>93.7 %</b> |
| <b>Specificity (SP)</b>       | 100 %                 | <b>99.5 %</b>     | <b>95.5 %</b> | <b>99.5 %</b> | <b>95.5 %</b> |

Note: relative specificity below 100% results from a number of confirmed supplementary positives and not from false positives.

- 1) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser** ½ 20h, 30°C then 40h, 37°C)
- 2) General protocol (20h, 30°C then **24h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM** 23h, 37°C then 22h, 37°C)
- 3) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**Fraser** ½ 20h, 30°C then 40h, 37°C)
- 4) General protocol (20h, 30°C then **22h, 30°C, then 16h, 37°C**) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (**LPALCAM** 23h, 37°C then 22h, 37°C)

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)

The accordance is the percentage chance of finding the same result from two identical test portions analyzed in the same laboratory under repeatability conditions, in other words a single operator using the same instrument and the same reagents within the shortest feasible time interval.

The first step to calculate the accordance is to calculate the probability that two identical samples give the same result for each of the participating laboratories, and then to determine the average of the probabilities of all laboratories.

The different tables used to deduce the accordance are given in appendix H and the accordance for each of the methods at each of the levels are given in the following table:

| 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 chance of finding the same result for two identical samples analyzed in two different laboratories.

The objective is to calculate the percentage of all pairs giving the same results on all possible pairs of results.

Result tables used to make these calculations are given in appendix I and the concordance for each of the methods and for 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)

The concordance odds ratio is calculated using the following formula:

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

The concordance odds ratio for each of the methods and for each of the levels is given in the following table:

| 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     |

## 4 Practicability

Practicability was studied according to 13 criteria defined by the technical bureau in comparing the reference method EN ISO 11290-1 to the TRANSIA™ PLATE *Listeria monocytogenes* method.

|   |   |
|---|---|
| <p>1. <i>Packaging mode of the components of the method (cf package insert)</i></p> <p>2. <i>Reagent volumes (cf package insert and vial packaging)</i></p> | <p>The TRANSIA™ PLATE <i>Listeria monocytogenes</i> kit contains the quantity of reagent necessary for 96 analyses :</p> <ul style="list-style-type: none"> <li>- one 96 wells microtitre plate with divisible strips, individually packed</li> <li>- one vial (n°1) of negative control : 6mL</li> <li>- one vial (n°2) of positive control: 3mL</li> <li>- one vial (n°3) of conjugate: 15 mL</li> <li>- washing buffer (n°4) 20X concentrated: 60 mL</li> <li>- one vial (n°5) of substrate: 10 mL</li> <li>- one vial (n°6) of chromogen (TMB): 10 mL</li> <li>- one vial (n°7) of Stop solution (H<sub>2</sub>SO<sub>4</sub>) : 10 mL</li> </ul> |
| <p>3. <i>Storage conditions of the elements method (cf package insert) – Expiry of products not opened (cf package insert)</i></p>                          | <p>The storage temperature is of 2-8°C for the TRANSIA™ PLATE <i>Listeria monocytogenes</i> kit</p> <p>The kit expiry date is shown on the box label and on the different vials.</p>  |
| <p>4. <i>Modalities of use after first use (cf package insert)</i></p>  | <p>The kit components should be stored at 2-8°C.</p> <p>The reconstituted washing buffer should be stored at 2-8°C for a maximum of three months.</p>   |
| <p>5. <i>Equipment or necessary specific premises (cf package insert)</i></p>   | <p>Among the required equipment,</p> <ul style="list-style-type: none"> <li>- an air incubator at 30°C ± 1°C</li> <li>- an air incubator at 37°C ± 1°C</li> <li>- a water bath at 95-100°C</li> <li>- a microtitre plate reader (450 nm) or a TRANSIA Elisamatic II automate</li> </ul> <p>And for the immunoenzymatic assay:</p> <ul style="list-style-type: none"> <li>- micropipette 100-1000 µL,</li> <li>- multipipette with 5 and 2.5 mL Combitips</li> </ul>   |
| <p>6. <i>Reagents ready for use or to be reconstituted (cf package insert)</i></p>  | <p>All the reagents are ready-to-use, except the washing buffer to reconstitute</p>   |
| <p>7. <i>Duration of training of the operator not familiar with the method</i></p>  | <p>For an operator trained in standard techniques of microbiology, training in the technique requires less than 1 day.</p>  |

### 8. Real handling time – Flexibility of the method according to the number of samples to be tested

| Steps  | Average time for a sample (min) |                                     | Average time for 40 samples (min) |                                  |
|--|---------------------------------|-------------------------------------|-----------------------------------|----------------------------------|
|  | Standard ISO 11290-1            | TRANSIA PLATE L.mono method         | Standard ISO 11290-1              | TRANSIA PLATE L.mono method      |
| Preparation, weighing, dilution and crushing   | 7                               | 7                                   | 120                               | 120                              |
| Transfer to Fraser broths  | 1                               | 1                                   | 35                                | 30                               |
| TRANSIA PLATE <i>Listeria monocytogenes</i> test (heating and automated assay procedure) | /                               | 5                                   | /                                 | 10                               |
| TRANSIA PLATE <i>Listeria monocytogenes</i> test (heating and manual assay procedure)    | /                               | 120                                 | /                                 | 165                              |
| Streaking of ½ Fraser and Fraser broths, on two selective media                          | 2                               | /                                   | 25                                | /                                |
| Plates reading   | 2                               | /                                   | 20                                | /                                |
| <b>Average total time (per sample)</b>   | 12 minutes                      | Manual :128 min<br>Automate :13 min | 5 minutes                         | Manual :7 min<br>Automate :4 min |

These times correspond to negative samples for which no confirmation is necessary.

In the case of positive samples, the necessary time for streaking the Fraser broth on selective media must be added to the confirmations (around 1 minute).

And the average time for the confirmation of a typical colony by reference method tests can be evaluated at around 5 minutes.

The advantage of the alternative method particularly lies in the possibility to sort negative samples from the suspicious samples and thus reducing the number of confirmations.

## 9. Time-to-result

| Steps  | Time required                               | Time required                |
|--|---|------------------------------|
|  | TRANSIA PLATE Listeria monocytogenes method | ISO 11290-1 reference method |
| Realisation of first enrichment  | D0  | D0                           |
| Transfer to Fraser broth   | D1  | D1                           |
| TRANSIA PLATE Listeria monocytogenes procedure                                       | D2 to D3 <sup>(1)</sup>                     | /                            |
| <b>Test result</b>   |   |                              |
| <b>Obtaining negative result (if test is negative)</b>                               | <b>D2 to D3 <sup>(1)</sup></b>              | <b>/</b>                     |
| Streaking of selective broths on selective media                                     | D2 to D3 <sup>(1)</sup>                     | D1 and D3                    |
| Reading the plates   |   |                              |
| Confirmation tests : identification strips, serology if necessary                    | D3 to D5                                    | D2 to D5                     |
| <b>Obtaining negative result (after streaking and negative confirmation if done)</b> | <b>D3 to D10</b>                            | <b>D5 to D11</b>             |
| <b>Obtaining positive result</b>   |   |                              |
| Confirmation by reference method tests (CAMP tests, haemolysis, TSBYE broth)         | <b>D9 to D10</b>                            | <b>D9 to D11</b>             |
| Confirmation by biochemical gallery  | <b>D5 to D6</b>                             | <b>D4 to D7</b>              |
| Streaking on ALOA <sup>®</sup> ou RAPID'L.mono                                       | <b>D3 to D5</b>                             |                              |

(1) : depending on the considered protocol

|  |  |
|--|--|
| 10. Type of qualification of the operator: | level identical to that necessary for the reference method   |
| 11. Steps common to the reference method   | First step of enrichment<br>Confirmations  |
| 12. Traceability of the analysis results   | The work sheet is identified as ENR COM 620.<br><br>If the TRANSIA Elisamatic II is used, all the results are saved in a history file. A result sheet is printed with the reagents lot numbers, time, test result, and sample identification. The results can be exported to a LIMS. |
| 13. Maintenance by the laboratory          | No specific maintenance, other than classical procedure for the Microtitre plate reader<br>Note: the BioControl Systems firm offers a customer technical support for the possible problems during the ELISA procedure.   |

## 5 Conclusion

The validation study of the methods was conducted according to the reference document EN ISO 16140.

The **comparative study** allows assessing:

- the relative accuracy, the relative sensitivity and the relative specificity,
- the relative detection level,
- the inclusivity and the exclusivity.

The performances of the TRANSIA™ PLATE *Listeria monocytogenes* method are equivalent to those of the reference method EN ISO 11290-1/A1:2004. They were determined by analysis of 341 to 354 samples spread over five categories of products.

Different profiles of protocols were studied to cover all food categories and all available protocols. According to the EN ISO 16140 standard, the results are the followings:

1) General protocol (20h, 30°C then 24h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (Fraser ½ 20h, 30°C then 40h, 37°C)

The relative accuracy obtained was 97.7%, the relative sensitivity 95.3% and the relative specificity 99.5%, according to the calculations required by the EN ISO 16140 standard.

8 discordant results were obtained: 1 additional positive result and 7 false negative results.

Because the positive samples by the alternative method are positive confirmed samples, the sensitivities were recalculated relative to all positive results and are:

- 99.3% sensitivity for the reference method,
- 95.3% sensitivity for the alternative method.

2) General protocol (20h, 30°C then 24h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (LPALCAM 23h, 37°C then 22h, 37°C)

The relative accuracy obtained was 93.3%, the relative sensitivity 91.6% and the relative specificity 95.5%, according to the calculations required by the EN ISO 16140 standard.

21 discordant results were obtained: 9 additional positive results and 12 false negative results.

Because the positive samples by the alternative method are positive confirmed samples, the sensitivities were recalculated relative to all positive results and are:

- 94.1% sensitivity for the reference method,
- 92.1% sensitivity for the alternative method.

3) General protocol (20h, 30°C then 22h, 30°C, then 16h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (Fraser ½ 20h, 30°C then 40h, 37°C)

The relative accuracy obtained was 98.6%, the relative sensitivity 97.3% and the relative specificity 99.5%, according to the calculations required by the EN ISO 16140 standard.

5 discordant results were obtained: 1 additional positive result and 4 false negative results.

Because the positive samples by the alternative method are positive confirmed samples, the sensitivities were recalculated relative to all positive results and are:

- 99.3% sensitivity for the reference method,
- 97.3% sensitivity for the alternative method.

4) General protocol (20h, 30°C then 22h, 30°C, then 16h, 37°C) + raw milk products (20h, 30°C then 40h, 37°C) + raw meat products (LPALCAM 23h, 37°C then 22h, 37°C)

The relative accuracy obtained was 94.7%, the relative sensitivity 93.76% and the relative specificity 95.5%, according to the calculations required by the EN ISO 16140 standard.

18 discordant results were obtained: 9 additional positive results and 9 false negative results.

Because the positive samples by the alternative method are positive confirmed samples, the sensitivities were recalculated relative to all positive results and are:

- 94.1% sensitivity for the reference method,
- 94.1% sensitivity for the alternative method.

The relative level of detection of the TRANSIA™ PLATE *Listeria monocytogenes* method and of the reference method was evaluated by spiking of five different products, representative of the five categories tested.

The level of detection obtained for the TRANSIA™ PLATE *Listeria monocytogenes* method for the raw beef minced meat, with the specific protocols «raw meat products» is between 0.7 and 2.8 cells per 25 grams. For the reference method, it is between 1.3 and 2.4 cells per 25 grams.

For the other tested categories, the level of detection obtained for the TRANSIA™ PLATE *Listeria monocytogenes* method is between 0.2 and 1.3 cells per 25 grams and it is identical to the one obtained for the reference method.

The specificity of the method is good since all the strains of *Listeria monocytogenes* were detected (inclusivity) and no cross-reactions were observed in the non *Listeria monocytogenes* strains tested (exclusivity). The *Listeria ivanovii* strains gave negative results when the complete protocol of the method was performed.

The **interlaboratory study results** obtained for all of the 11 selected laboratories show that the alternative method and the reference method have comparable values of relative accuracy, specificity and sensitivity as those obtained during the preliminary study.

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

Based on these results, the validation of the TRANSIA™ PLATE *Listeria monocytogenes* method was validated in March 2008, under the certificate number TRA 02/11-03/08.

Lille, the 22<sup>nd</sup> September 2008



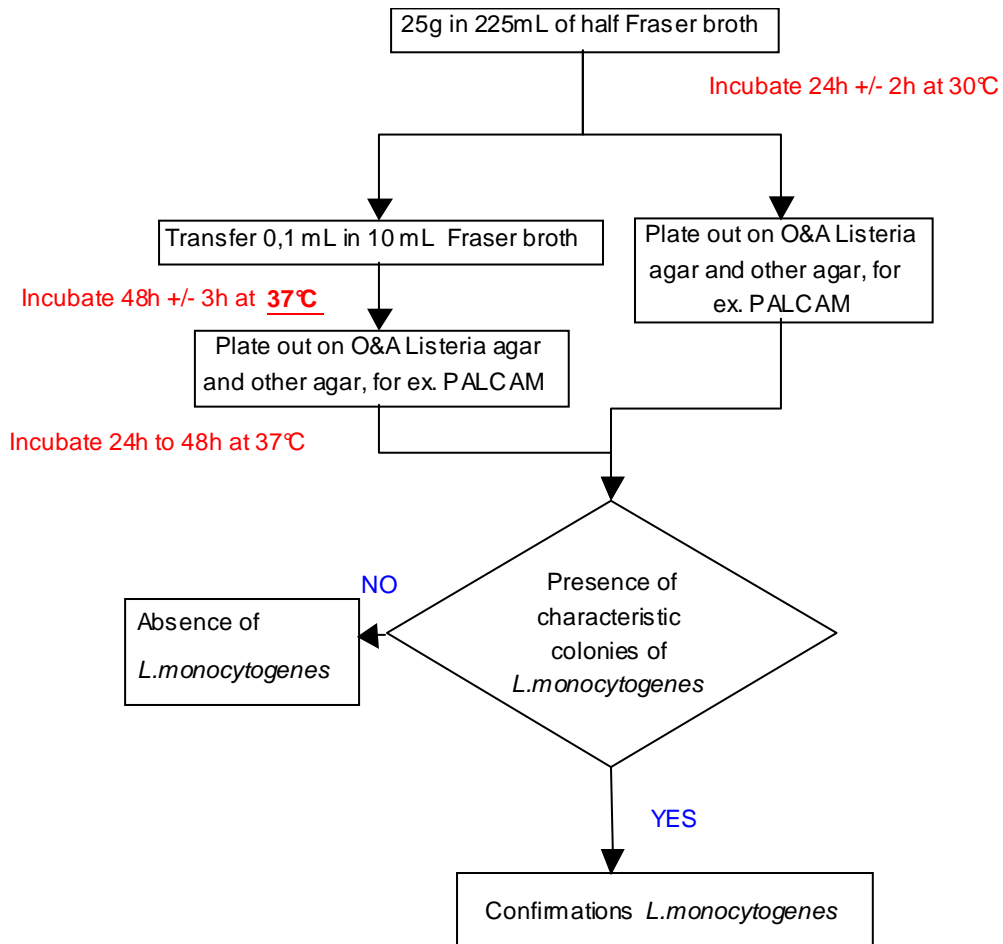
Virginie Ewe  
Responsable Etudes

# APPENDICES

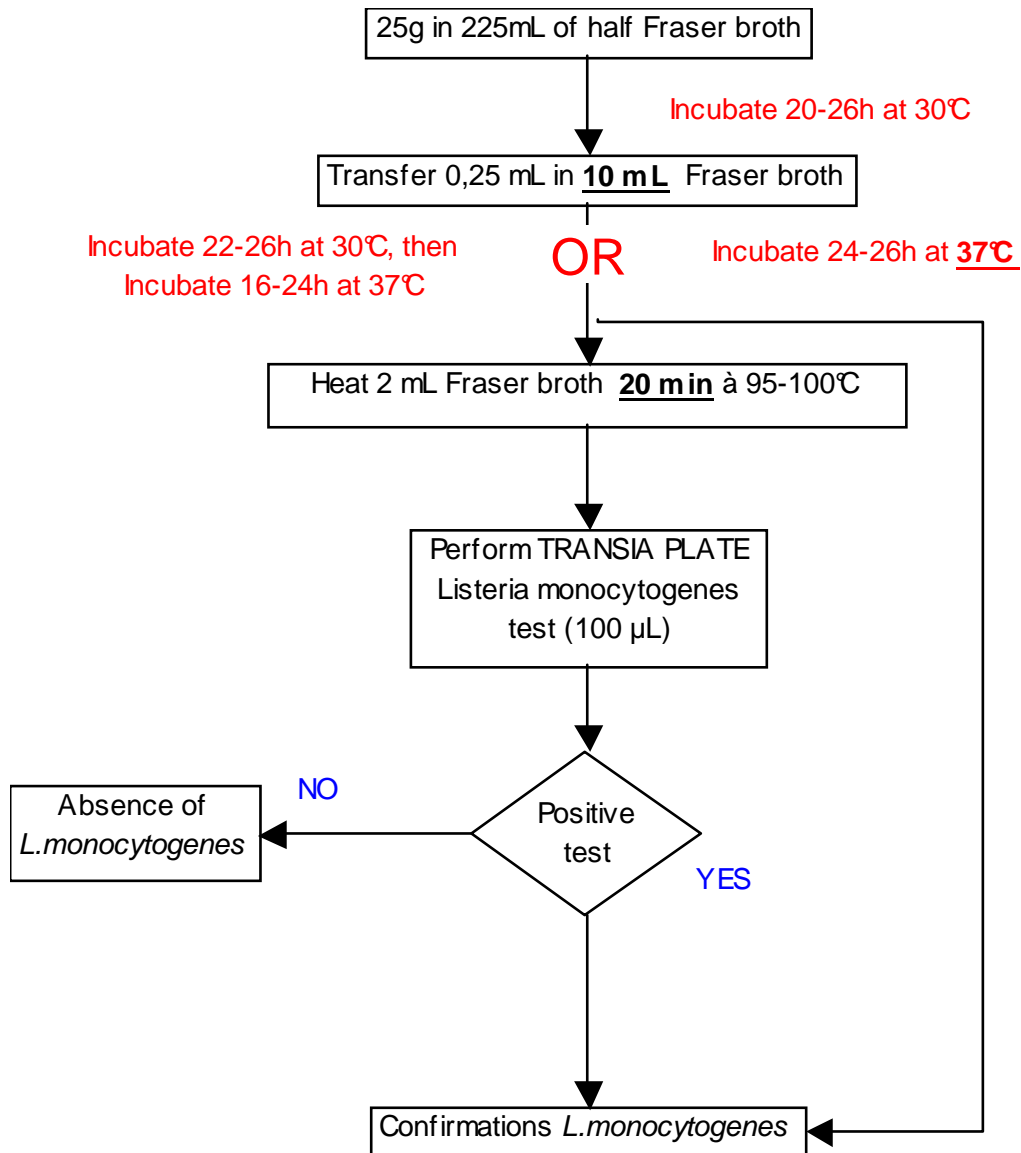
APPENDIX A :

ANALYTICAL PROTOCOLS

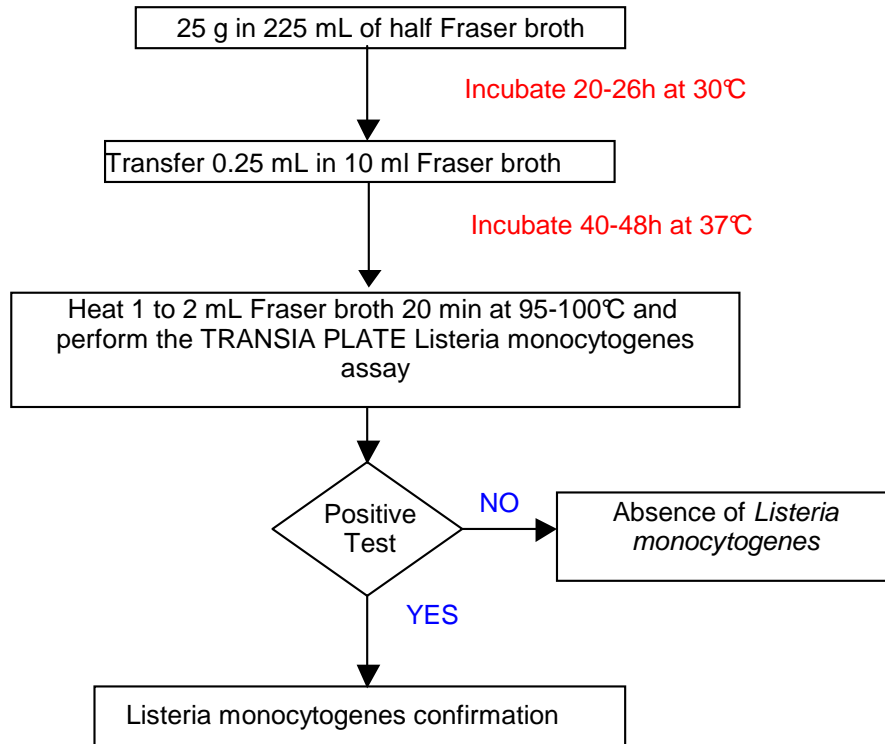
# EN ISO STANDARD 11290-1/A1 : 2004 (#)



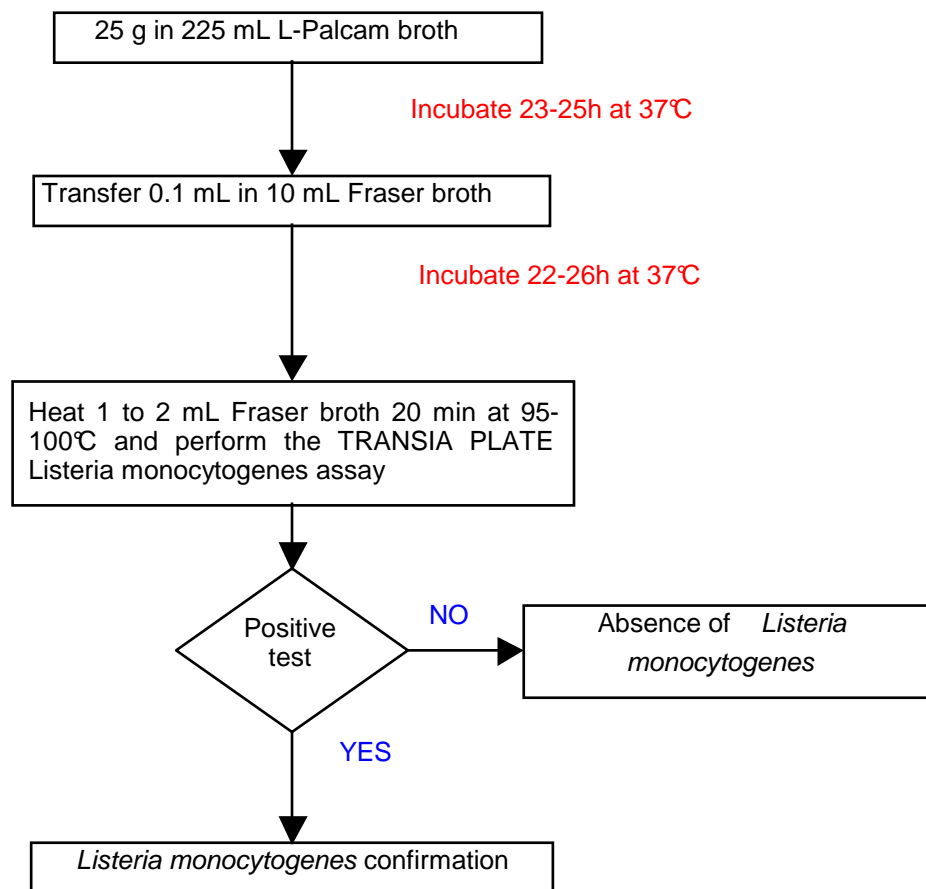
**TRANSIA PLATE *Listeria monocytogenes* method  
ALL PRODUCTS EXCEPT RAW MEAT PRODUCTS  
AND RAW MILK PRODUCTS**



# TRANSIA PLATE *Listeria monocytogenes* method RAW MEAT PRODUCTS AND RAW MILK PRODUCTS



# TRANSIA PLATE *Listeria monocytogenes* method RAW MEAT PRODUCTS



APPENDIX B :  
RELATIVE ACCURACY, RELATIVE SPECIFICITY,  
RELATIVE SENSITIVITY  
-  
DETAILED RESULTS TABLES  
FOR RAW MEAT PRODUCTS

**Bacterial presence**

∅ : no growth  
L = light growth  
M = medium growth  
H = high growth

**Distribution of the flora**

A = pure culture of suspicious colonies  
B = mixed culture with a majority of suspicious colonies  
C = mixed culture with a minority of suspicious colonies  
D = mixed culture with very few suspicious colonies  
E = no suspicious colonies  
(x) : x characteristic colonies of *Listeria monocytogenes* if  $x \leq 5$   
\* : presence of two types of characteristic colonies

ANNEXE B1 :

RAW MEAT PRODUCTS

FRASER ½ PROTOCOL

Raw meat products

| CODE | MATRICES                       | Cat. | Spiked | Reference Method ISO 11290-1/A1 # |        |        |     |   |              |       | Alternative method (Raw meat products - Fraser demi protocol) |      |      |              |   |    |                               | Alternative method (Raw meat products - Fraser demi protocol) after storage of Fraser broth for 72 hours at 2-8°C |                             |      |              |     |   |                               |            |
|------|--------------------------------|------|--------|-----------------------------------|--------|--------|-----|---|--------------|-------|---|------|------|--------------|---|----|-------------------------------|---|-----------------------------|------|--------------|-----|---|-------------------------------|------------|
|      |                                |      |        | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                                    |              |       | TP Lmono (40 hours at 37°C)                                   |      |      | CONFIRMATION |   |    | FINAL RESULT 40 hours at 37°C | Comparison  | TP Lmono (40 hours at 37°C) |      | CONFIRMATION |     |   | FINAL RESULT 40 hours at 37°C | Comparison |
|      |                                |      |        | O&A1                              | P1     | O&A2   | P2  | IDENTIF.  | Result Lmono | OD    | Cut-off   | Res. | ALOA | RLM          | Identification                                  | OD |                               |   | Cut-off                     | Res. | ALOA         | RLM | Identification                                  |                               |            |
|      |                                |      |        |                                   |        |        |     |   |              |       |   |      |      |              |   |    |                               |   |                             |      |              |     |   |                               |            |
| A11  | Pope's eye                     | MP1  | Non    | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                         | +            | 3.117 | 0.194   | +    | +MA  | +HA          | <i>L. monocytogenes</i>                         | +  | =                             | 3.140   | 0.213                       | +    | +MA          | +LA | <i>L. monocytogenes</i>                         | +                             | =          |
| A12  | Mincéd beef                    | MP1  | Non    | +LA                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 2.874 | 0.194   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 2.976   | 0.213                       | +    | +MA          | +HA | <i>L. monocytogenes</i>                         | +                             | =          |
| A13  | Beef meat                      | MP1  | Non    | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                         | -            | 3.079 | 0.194   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 3.223   | 0.213                       | +    | +MA          | +MA | <i>L. monocytogenes</i>                         | +                             | =          |
| A14  | Mincéd beef                    | MP1  | Non    | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.064 | 0.194   | -    | -MA  | +HA          | <i>L. innocua</i>                               | -  | =                             | 0.071   | 0.213                       | -    | -MA          | +HA | <i>L. innocua</i>                               | -                             | =          |
| A15  | Mincéd horse meat              | MP1  | Non    | +LA(4)                            | +LA(1) | +MA    | +MA | <i>L. monocytogenes</i>                         | -            | 3.091 | 0.194   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 3.214   | 0.213                       | +    | +MA          | +MB | <i>L. monocytogenes</i>                         | +                             | =          |
| A16  | Mincéd beef                    | MP1  | Non    | -LE                               | Ø      | -LE    | -LE | /   | -            | 0.064 | 0.194   | -    | Ø    | Ø            | Ø   | -  | =                             | 0.076   | 0.213                       | -    | Ø            | Ø   | Ø   | -                             | =          |
| A17  | Poultry leg                    | MP1  | No     | +LA                               | +LA    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +            | 3.025 | 0.194   | +    | +MA  | +MB          | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +  | =                             | 3.243   | 0.213                       | +    | +MB          | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +                             | =          |
| B1   | Duck breast                    | MP1  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.088 | 0.207   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| B2   | Chicken breast                 | MP1  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.076 | 0.207   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| B3   | Pork fillet                    | MP1  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.075 | 0.207   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| J9   | Mincéd beef                    | MP1  | No     | -ME                               | Ø      | -LE    | Ø   | /   | -            | 0.091 | 0.211   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| K30  | Pork chop                      | MP1  | No     | -LA                               | +LA(2) | -MB    | +MB | <i>L. welshimeri</i>                            | -            | 0.045 | 0.185   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| N20  | Mincéd beef                    | MP1  | No     | -LE                               | Ø      | +MA    | +MA | <i>L. monocytogenes</i>                         | +            | 2.902 | 0.224   | +    | +MB  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 2.917   | 0.202                       | +    | +MB          | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +                             | =          |
| N24  | Pork liver                     | MP1  | No     | Ø                                 | Ø      | Ø      | -LE | /   | -            | 0.109 | 0.224   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| O1   | Mincéd horse meat              | MP1  | No     | Ø                                 | Ø      | +MA    | +MA | <i>L. monocytogenes</i>                         | +            | 3.124 | 0.226   | +    | +MA  | +HA          | <i>L. monocytogenes</i>                         | +  | =                             | 3.051   | 0.286                       | +    | +MA          | +HA | <i>L. monocytogenes</i>                         | +                             | =          |
| O2   | Mincéd beef                    | MP1  | No     | Ø                                 | Ø      | -LE    | Ø   | /   | -            | 0.101 | 0.226   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| O3   | Pork meat                      | MP1  | No     | Ø                                 | -LE    | Ø      | Ø   | /   | -            | 0.104 | 0.226   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| Q2   | Duck breast                    | MP1  | No     | +LA(2)                            | +LA(1) | +MA    | +HA | <i>L. monocytogenes</i>                         | +            | 3.072 | 0.289   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 3.151   | 0.296                       | +    | +MA          | +HB | <i>L. monocytogenes</i>                         | +                             | =          |
| R1   | Mincéd beef                    | MP1  | No     | +LB                               | +LB    | +MB    | +MB | <i>L. ivanovii</i><br><i>L. welshimeri</i>      | -            | 0.168 | 0.291   | -    | +MC  | +HC          | <i>L. ivanovii</i><br><i>L. welshimeri</i>      | -  | =                             |   |                             |      |              |     |   |                               |            |
| R2   | Mincéd beef                    | MP1  | No     | +LB                               | +LA    | +MA    | +MA | <i>L. ivanovii</i>                              | -            | 0.281 | 0.291   | -    | +MA  | +MA          | <i>L. ivanovii</i>                              | -  | =                             |   |                             |      |              |     |   |                               |            |
| S4   | Mincéd horse meat              | MP1  | No     | +LB                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                         | +            | 3.144 | 0.291   | +    | +MA  | +MA          | <i>L. monocytogenes</i>                         | +  | =                             | 3.133   | 0.294                       | +    | +MB          | +MB | <i>L. monocytogenes</i>                         | +                             | =          |
| T1   | Mincéd calf meat               | MP1  | No     | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 0.313 | 0.279   | +    | +MB  | +MB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             |   |                             |      |              |     |   |                               |            |
| T2   | Mincéd calf meat               | MP1  | No     | +LB                               | +LD    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 0.355 | 0.279   | +    | +MB  | +MB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             |   |                             |      |              |     |   |                               |            |
| A1   | Chipolata sausages             | MP2  | No     | +LB                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 0.319 | 0.194   | +    | +MB  | +HB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             | 0.266   | 0.213                       | +    | +MB          | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +                             | =          |
| A2   | Sausagemeat                    | MP2  | No     | -LA                               | +LB    | -MA    | +HA | <i>L. innocua</i>                               | -            | 0.067 | 0.194   | -    | -MA  | +HA          | <i>L. innocua</i>                               | -  | =                             | 0.071   | 0.213                       | -    | -MA          | +MA | <i>L. innocua</i>                               | -                             | =          |
| A4   | Sausagemeat                    | MP2  | No     | -LA                               | +LA    | -MB    | +HB | <i>L. welshimeri</i>                            | -            | 0.059 | 0.194   | -    | -MB  | +HB          | <i>L. welshimeri</i>                            | -  | =                             | 0.081   | 0.213                       | -    | -MB          | +HB | <i>L. welshimeri</i>                            | -                             | =          |
| A10  | "Montbéliard" sausage          | MP3  | No     | -LE                               | Ø      | -LA    | +HA | <i>L. innocua</i>                               | -            | 0.068 | 0.194   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| B4   | Beef carpaccio                 | MP2  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.074 | 0.207   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| J3   | Sausages                       | MP2  | No     | -LE                               | Ø      | Ø      | Ø   | /   | -            | 0.1   | 0.211   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| J8   | Merguez                        | MP2  | No     | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 2.507 | 0.211   | +    | +MB  | +MB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             | 2.705   | 0.234                       | +    | +MB          | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +                             | =          |
| J12  | Raw thin sliced pork + mustard | MP3  | No     | -LE                               | Ø      | Ø      | Ø   | /   | -            | 0.094 | 0.211   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| K24  | Chipolata sausages             | MP2  | No     | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 0.405 | 0.185   | +    | +MB  | +LB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             | 0.646   | 0.157                       | +    | +MB          | +LB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +                             | =          |
| K25  | Merguez                        | MP2  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.049 | 0.185   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| K26  | Chipolata sausages             | MP2  | No     | -LA(2)                            | +LA    | -MA    | +HA | <i>L. welshimeri</i>                            | -            | 0.059 | 0.185   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| K27  | Sausage                        | MP2  | No     | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                         | +            | 2.835 | 0.185   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 2.874   | 0.157                       | +    | +MB          | +MB | <i>L. monocytogenes</i>                         | +                             | =          |
| K28  | Organic pork sausage           | MP2  | No     | -LA(2)                            | Ø      | -MA    | +HA | <i>L. welshimeri</i>                            | -            | 0.057 | 0.185   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| K29  | Porc sausage                   | MP2  | No     | +MB                               | +LB    | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +            | 0.275 | 0.185   | +    | +LB  | +LB          | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +  | =                             | 0.359   | 0.157                       | +    | +MB          | +LB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +                             | =          |
| K31  | Beef meatballs                 | MP2  | No     | +MB                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i>                         | +            | 2.948 | 0.185   | +    | +MB  | +HB          | <i>L. monocytogenes</i>                         | +  | =                             | 3.018   | 0.157                       | +    | +MB          | +HB | <i>L. monocytogenes</i>                         | +                             | =          |
| N19  | Sausages                       | MP2  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.099 | 0.224   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| N21  | Merguez                        | MP2  | No     | +LA                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +            | 2.809 | 0.224   | +    | +MB  | +HB          | <i>L. monocytogenes</i>                         | +  | =                             | 2.872   | 0.202                       | +    | +MA          | +HA | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +                             | =          |
| N23  | American filet                 | MP2  | No     | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i>                         | +            | 2.930 | 0.224   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 2.967   | 0.202                       | +    | +MB          | +MB | <i>L. monocytogenes</i>                         | +                             | =          |
| O4   | Herb sausage                   | MP2  | No     | +LA(1)                            | -LE    | +MB    | +MA | <i>L. monocytogenes</i>                         | +            | 3.129 | 0.226   | +    | +MA  | +HA          | <i>L. monocytogenes</i>                         | +  | =                             | 3.073   | 0.286                       | +    | +MA          | +HA | <i>L. monocytogenes</i>                         | +                             | =          |
| O5   | Tomato burger                  | MP2  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.099 | 0.226   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| O6   | Pork meat with marinade        | MP2  | No     | Ø                                 | -LE    | -LA    | +MA | <i>L. innocua</i>                               | -            | 0.105 | 0.226   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| Q1   | Merguez                        | MP2  | No     | +LB(2)                            | +LB    | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +            | 0.601 | 0.289   | +    | +MB  | +HB          | <i>L. monocytogenes</i>                         | +  | =                             | 0.786   | 0.296                       | +    | +MB          | +HB | <i>L. monocytogenes</i>                         | +                             | =          |
| A5   | Smoked bacon                   | MP3  | No     | -LE                               | +LD    | -MA    | +HB | <i>L. innocua</i>                               | -            | 0.059 | 0.194   | -    | -LE  | -LE          | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| A6   | Pork caul                      | MP3  | No     | +LA                               | +LA    | +MB    | +MB | <i>L. monocytogenes</i>                         | +            | 3.043 | 0.194   | +    | +MA  | +MB          | <i>L. monocytogenes</i>                         | +  | =                             | 3.146   | 0.213                       |      | +MB          | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +                             | =          |
| A7   | Peppered salami-type sausage   | MP3  | No     | Ø                                 | Ø      | -LA    | +HA | <i>L. innocua</i>                               | -            | 0.065 | 0.194   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| A8   | Salami-type sausage            | MP3  | No     | +LB                               | +LB    | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +            | 0.067 | 0.194   | -    | -LA  | +MA          | <i>L. innocua</i>                               | -  | FN                            | 0.073   | 0.213                       |      | -MA          | +HA | <i>L. innocua</i>                               | -                             | FN         |
| A9   | Bacon                          | MP3  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.077 | 0.194   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| A18  | Smoked bacon                   | MP3  | No     | +LB                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +            | 1.421 | 0.194   | +    | +MB  | +HB          | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +  | =                             | 1.398   | 0.213                       | +    | +MB          | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +                             | =          |
| J1   | Foie gras                      | MP3  | No     | +MA                               | +HA    | +MA    | +MB | <i>L. monocytogenes</i>                         | +            | 3.008 | 0.211   | +    | +MA  | +HA          | <i>L. monocytogenes</i>                         | +  | =                             | 2.965   | 0.234                       | +    | +MA          | +HA | <i>L. monocytogenes</i>                         | +                             | =          |
| J2   | Sliced smoked bacon            | MP3  | No     | -LA                               | +LA    | -MB    | +HA | <i>L. welshimeri</i>                            | -            | 0.104 | 0.211   | -    | -MA  | +MA          | <i>L. welshimeri</i>                            | -  | =                             | 0.121   | 0.234                       | -    | /            | /   | /   | -                             | =          |
| J10  | Peppered salami-type sausage   | MP3  | No     | Ø                                 | -LE    | Ø      | -LE | /   | -            | 0.09  | 0.211   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |
| J11  | Bacon                          | MP3  | No     | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                         | +            | 3.128 | 0.211   | +    | +MA  | +HA          | <i>L. monocytogenes</i>                         | +  | =                             | 2.928   | 0.234                       | +    | +MA          | +HA | <i>L. monocytogenes</i>                         | +                             | =          |
| J13  | Smoked bacon                   | MP3  | No     | Ø                                 | Ø      | Ø      | Ø   | /   | -            | 0.093 | 0.211   | -    | /    | /            | /   | -  | =                             |   |                             |      |              |     |   |                               |            |

ANNEXE B2 :

RAW MEAT PRODUCTS

L-PALCAM PROTOCOL

Raw meat products

| CODE | MATRICES                       | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |   |                 | Alternative method (Raw meat products - L-PALCAM protocol) |         |              |      |     |   |            | Alternative method (Raw meat products - L-PALCAM protocol)<br>after storage of L-PALCAM broth for 72 hours at 2 - 8°C |       |              |      |      |                                  |   |     |                |
|------|--------------------------------|------|----------------------------|-----------------------------------|--------|--------|-----|---|-----------------|--|---------|--------------|------|-----|---|------------|---|-------|--------------|------|------|----------------------------------|---|-----|----------------|
|      |                                |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                                    |                 | TP Lmono (L-PALCAM)  |         | CONFIRMATION |      |     | FINAL RESULT<br>TPLmono L-PALCAM                | Comparison | TP Lmono (L-PALCAM)   |       | CONFIRMATION |      |      | FINAL RESULT<br>TPLmono L-PALCAM | Comparison                                      |     |                |
|      |                                |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.  | Result<br>Lmono | OD   | Cut-off | Res.         | ALOA | RLM |   |            | Identification  | OD    | Cut-off      | Res. | ALOA |                                  |   | RLM | Identification |
|      |                                |      |                            |                                   |        |        |     |   |                 |  |         |              |      |     |   |            |   |       |              |      |      |                                  |   |     |                |
| A11  | Pope's eye                     | MP1  | Non                        | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                         | +               | 2.886  | 0.211   | +            | +MA  | +MA | <i>L. monocytogenes</i>                         | +          | =   | 3.179 | 0.213        | +    | +MA  | +MA                              | <i>L. monocytogenes</i>                         | +   | =              |
| A12  | Minced beef                    | MP1  | Non                        | +LA                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 2.953  | 0.211   | +            | +MA  | +HA | <i>L. monocytogenes</i>                         | +          | =   | 3.013 | 0.213        | +    | +MA  | +HA                              | <i>L. monocytogenes</i>                         | +   | =              |
| A13  | Beef meat                      | MP1  | Non                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                         | +               | 2.816  | 0.211   | +            | +MA  | +HA | <i>L. monocytogenes</i>                         | +          | =   | 3.084 | 0.213        | +    | +MA  | +MB                              | <i>L. monocytogenes</i>                         | +   | =              |
| A14  | Minced beef                    | MP1  | Non                        | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 1.154  | 0.211   | +            | +MB  | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +          | PS  | 3.075 | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +   | PS             |
| A15  | Minced horse meat              | MP1  | Non                        | +LA(4)                            | +LA(1) | +MA    | +MA | <i>L. monocytogenes</i>                         | +               | 2.833  | 0.211   | +            | +LA  | +HA | <i>L. monocytogenes</i>                         | +          | =   | 2.907 | 0.213        | +    | +MA  | +MA                              | <i>L. monocytogenes</i>                         | +   | =              |
| A16  | Minced beef                    | MP1  | Non                        | -LE                               | Ø      | -LE    | -LE | /   | -               | 2.561  | 0.211   | +            | +MA  | +MB | <i>L. monocytogenes</i>                         | +          | PS  | 3.010 | 0.213        | +    | +LA  | +MB                              | <i>L. monocytogenes</i>                         | +   | PS             |
| A17  | Poultry leg                    | MP1  | No                         | +LA                               | +LA    | +MB    | +MB | <i>L. monocytogenes</i>                         | +               | 2.684  | 0.211   | +            | +MB  | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +          | =   | 2.420 | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +   | =              |
| B1   | Duck breast                    | MP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.094  | 0.207   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| B2   | Chicken breast                 | MP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.087  | 0.207   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| B3   | Pork fillet                    | MP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.094  | 0.207   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| B4   | Beef carpaccio                 | MP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.095  | 0.207   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| J9   | Minced beef                    | MP1  | No                         | -ME                               | Ø      | -LE    | Ø   | /   | -               | 0.085  | 0.198   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| K30  | Pork chop                      | MP1  | No                         | -LA                               | +LA(2) | -MB    | +MB | <i>L. welshimeri</i>                            | -               | 0.115  | 0.185   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| N20  | Minced beef                    | MP1  | No                         | -LE                               | Ø      | +MA    | +MA | <i>L. monocytogenes</i>                         | +               | 0.113  | 0.200   | -            | -MA  | +MA | <i>L. innocua</i>                               | -          | FN  | 0.097 | 0.202        | -    | -MA  | +MA                              | <i>L. innocua</i>                               | -   | FN             |
| N24  | Pork liver                     | MP1  | No                         | Ø                                 | Ø      | Ø      | -LE | /   | -               | 0.082  | 0.200   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| A1   | Chipolata sausages             | MP2  | No                         | +LB                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 0.102  | 0.211   | -            | -MA  | +HA | <i>L. welshimeri</i>                            | -          | FN  | 0.089 | 0.213        | -    | -MA  | +HA                              | <i>L. welshimeri</i>                            | -   | FN             |
| A2   | Sausage                        | MP2  | No                         | -LA                               | +LB    | -MA    | +HA | <i>L. innocua</i>                               | -               | 3.095  | 0.211   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +          | PS  | 3.239 | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +   | PS             |
| A3   | "Toulouse" sausage             | PC2  | Non                        | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 2.833  | 0.211   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | =   | 2.984 | 0.213        | +    | +MA  | +MB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | =              |
| A4   | Sausage                        | MP2  | No                         | -LA                               | +LA    | -MB    | +HB | <i>L. welshimeri</i>                            | -               | 3.063  | 0.211   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | PS  | 3.235 | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | PS             |
| A10  | "Montbéliard" sausage          | MP3  | No                         | -LE                               | Ø      | -LA    | +HA | <i>L. innocua</i>                               | -               | 0.094  | 0.211   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| J3   | Sausages                       | MP2  | No                         | -LE                               | Ø      | Ø      | Ø   | /   | -               | 0.087  | 0.198   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| J8   | Merguez                        | MP2  | No                         | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 1.707  | 0.198   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | =   | 2.854 | 0.234        | +    | +MB  | +MB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | =              |
| J12  | Raw thin sliced pork + mustard | MP3  | No                         | -LE                               | Ø      | Ø      | Ø   | /   | -               | 0.087  | 0.198   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| K24  | Chipolata sausages             | MP2  | No                         | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 2.978  | 0.185   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | =   | 2.834 | 0.157        | +    | +MB  | +MB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | =              |
| K25  | Merguez                        | MP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.062  | 0.185   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| K26  | Chipolata sausages             | MP2  | No                         | -LA(2)                            | +LA    | -MA    | +HA | <i>L. welshimeri</i>                            | -               | 0.234  | 0.185   | +            | +LB  | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | PS  |       |              |      |      |                                  |   |     |                |
| K27  | Sausage                        | MP2  | No                         | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                         | +               | 0.642  | 0.185   | +            | +LA  | +LA | <i>L. monocytogenes</i>                         | +          | =   | 2.913 | 0.157        | +    | +MA  | +LA                              | <i>L. monocytogenes</i>                         | +   | =              |
| K28  | Organic pork sausage           | MP2  | No                         | -LA(2)                            | Ø      | -MA    | +HA | <i>L. welshimeri</i>                            | -               | 0.177  | 0.185   | d            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | PS  | 0.496 | 0.157        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | PS             |
| K29  | Porc sausage                   | MP2  | No                         | +MB                               | +LB    | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +               | 0.760  | 0.185   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +          | =   | 2.865 | 0.157        | +    | +MB  | +MB                              | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +   | =              |
| K31  | Beef meatballs                 | MP2  | No                         | +MB                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i>                         | +               | 0.844  | 0.185   | +            | +LB  | +MB | <i>L. monocytogenes</i>                         | +          | =   | 2.921 | 0.157        | +    | +MB  | +MB                              | <i>L. monocytogenes</i>                         | +   | =              |
| N19  | Sausages                       | MP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.082  | 0.200   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| N21  | Merguez                        | MP2  | No                         | +LA                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +               | 3.087  | 0.200   | +            | +MB  | +MB | <i>L. monocytogenes</i>                         | +          | =   | 2.9   | 0.202        | +    | +MA  | +MA                              | <i>L. monocytogenes</i>                         | +   | =              |
| N23  | American fillet                | MP2  | No                         | +LB                               | +LB    | +MB    | +MB | <i>L. monocytogenes</i>                         | +               | 0.087  | 0.200   | -            | Ø    | Ø   | Ø   | -          | FN  | 0.084 | 0.202        | -    | Ø    | Ø                                | Ø   | -   | FN             |
| A5   | Smoked bacon                   | MP3  | No                         | -LE                               | +LD    | -MA    | +HB | <i>L. innocua</i>                               | -               | 0.093  | 0.211   | -            | -LE  | -LE | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| A6   | Pork caul                      | MP3  | No                         | +LA                               | +LA    | +MB    | +MB | <i>L. monocytogenes</i>                         | +               | 0.531  | 0.211   | +            | +MB  | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +          | =   | 0.49  | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. innocua</i>    | +   | =              |
| A7   | Peppered salami-type sausage   | MP3  | No                         | Ø                                 | Ø      | -LA    | +HA | <i>L. innocua</i>                               | -               | 0.089  | 0.211   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| A8   | Salami-type sausage            | MP3  | No                         | +LB                               | +LB    | +MB    | +HB | <i>L. monocytogenes</i>                         | +               | 0.085  | 0.211   | -            | Ø    | Ø   | Ø   | -          | FN  | 0.069 | 0.213        | -    | Ø    | Ø                                | Ø   | -   | FN             |
| A9   | Bacon                          | MP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.086  | 0.211   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| A18  | Smoked bacon                   | MP3  | No                         | +LB                               | +LB    | +LB    | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +               | 1.689  | 0.211   | +            | +LB  | +HB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | =   | 2.532 | 0.213        | +    | +MB  | +HB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | =              |
| J1   | Foie gras                      | MP3  | No                         | +MA                               | +HA    | +MA    | +MB | <i>L. monocytogenes</i>                         | +               | 2.941  | 0.198   | +            | +MA  | +MA | <i>L. monocytogenes</i>                         | +          | =   | 2.839 | 0.234        | +    | +MA  | +MA                              | <i>L. monocytogenes</i>                         | +   | =              |
| J2   | Sliced smoked bacon            | MP3  | No                         | -LA                               | +LA    | -MB    | +HA | <i>L. welshimeri</i>                            | -               | 2.885  | 0.198   | +            | +MA  | +MA | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | PS  | 2.814 | 0.234        | +    | +MA  | +MA                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | PS             |
| J10  | Peppered salami-type sausage   | MP3  | No                         | Ø                                 | -LE    | Ø      | -LE | /   | -               | 0.087  | 0.198   | -            | /    | /   | /   | -          | =   |       |              |      |      |                                  |   |     |                |
| J11  | Bacon                          | MP3  | No                         | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                         | +               | 0.083  | 0.198   | -            | +LB  | +LA | <i>L. monocytogenes</i>                         | -          | FN  | 0.113 | 0.234        | -    | +LB  | +LA                              | <i>L. monocytogenes</i>                         | -   | FN             |
| J13  | Smoked bacon                   | MP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 1.75   | 0.198   | +            | +MB  | +MB | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +          | PS  | 2.179 | 0.204        | +    | +MB  | +MB                              | <i>L. monocytogenes</i><br><i>L. welshimeri</i> | +   | PS             |
| N22  | Sliced smoked bacon            | MP3  | No                         | +LA(5)                            | +LB(2) | +MA    | +HA | <i>L. monocytogenes</i>                         | +               | 0.087  | 0.200   | -            | Ø    | Ø   | Ø   | -          | FN  | 0.084 | 0.202        | -    | Ø    | Ø                                | Ø   | -   | FN             |

APPENDIX C :  
RELATIVE ACCURACY, RELATIVE SPECIFICITY,  
RELATIVE SENSITIVITY  
-  
DETAILED RESULTS TABLES  
FOR RAW MILK PRODUCTS

# Legend

## Bacterial presence

∅ : no growth

L = light growth

M = medium growth

H = high growth

## Distribution of the flora

A = pure culture of suspicious colonies

B = mixed culture with a majority of suspicious colonies

C = mixed culture with a minority of suspicious colonies

D = mixed culture with very few suspicious colonies

E = no suspicious colonies

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

\* : presence of two types of characteristic colonies

# Raw milk products

| CODE | MATRICES                               | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |  |              | Alternative method (Raw milk products - Fraser demi protocol) |         |              |     |     |  | Alternative method (Raw milk products - Fraser demi protocol) after storage of Fraser broth for 72 hours at 2 - 8°C |                             |       |              |      |     |                               |  |     |                |
|------|--|------|----------------------------|-----------------------------------|-----|--------|-----|--|--------------|---|---------|--------------|-----|-----|--|---|-----------------------------|-------|--------------|------|-----|-------------------------------|--|-----|----------------|
|      |  |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION                                 |              | TP Lmono (40 hours at 37°C)                                   |         | CONFIRMATION |     |     | FINAL RESULT 40 hours at 37°C                | Comparison  | TP Lmono (40 hours at 37°C) |       | CONFIRMATION |      |     | FINAL RESULT 40 hours at 37°C | Comparison                                   |     |                |
|      |  |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.                                     | Result Lmono | OD  | Cut-off | Res.         | ALO | RLM |  |   | Identification              | OD    | Cut-off      | Res. | ALO |                               |  | RLM | Identification |
| A25  | "Maroilles fermier" raw milk cheese    | DP1  | No                         | +MA                               | +MA | +MA    | +HA | <i>L. monocytogenes</i>                      | +            | 3.086   | 0.194   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 3.086 | 0.213        | +    | +MA | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| A26  | "Tome de Cambrai" raw milk cheese      | DP1  | No                         | +LB                               | +LB | +MB    | +MB | <i>L. monocytogenes</i>                      | +            | 0.320   | 0.194   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 0.320 | 0.213        | +    | +MB | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| A28  | "Maroilles fermier" raw milk cheese    | DP1  | No                         | +MA                               | +MB | +MB    | +HB | <i>L. monocytogenes</i>                      | +            | 2.870   | 0.194   | +            | +MA | +HB | <i>L. monocytogenes</i>                      | +   | =                           | 2.870 | 0.213        | +    | +MB | +MB                           | <i>L. monocytogenes</i>                      | +   | =              |
| B17  | "Reblochon" raw milk cheese            | DP1  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.091   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| B18  | "Reblochon" raw milk cheese            | DP1  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.078   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| B19  | "Maroilles" raw milk cheese            | DP1  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.072   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| B20  | "Epoisses" raw milk cheese             | DP1  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.092   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| K17  | Raw milk cheese                        | PL1  | Non                        | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.066   | 0.185   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| K18  | Raw milk cheese                        | DP1  | No                         | Ø                                 | Ø   | -LE    | -ME | /  | -            | 0.049   | 0.185   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| K19  | Raw milk cheese                        | DP1  | No                         | +LB                               | +LB | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i> | +            | 2.905   | 0.185   | +            | +MB | +MB | <i>L. monocytogenes</i><br><i>L. innocua</i> | +   | =                           | 2.974 | 0.157        | +    | +MB | +MB                           | <i>L. monocytogenes</i><br><i>L. innocua</i> | +   | =              |
| K20  | "Epoisses" cheese                      | DP1  | No                         | +LB                               | +LB | +MB    | +MB | <i>L. monocytogenes</i>                      | +            | 2.891   | 0.185   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 2.923 | 0.157        | +    | +MA | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| L26  | "Camembert" raw milk cheese            | DP1  | Yes                        | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.074   | 0.200   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| L27  | "Reblochon" cheese                     | DP1  | Yes                        | -LE                               | -LE | Ø      | Ø   | /  | -            | 0.069   | 0.200   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| M27  | "Camembert" raw milk cheese            | DP1  | Yes                        | +LA                               | +LA | +MA    | +MB | <i>L. monocytogenes</i>                      | +            | 2.869   | 0.207   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 2.873 | 0.233        | +    | +MA | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| M28  | "Coulommiers" raw milk cheese          | DP1  | Yes                        | +MA                               | +MA | +MA    | +HA | <i>L. monocytogenes</i>                      | +            | 2.903   | 0.207   | +            | +MA | +HA | <i>L. monocytogenes</i>                      | +   | =                           | 2.884 | 0.233        | +    | +HA | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| M31  | "Camembert" raw milk cheese            | DP1  | No                         | Ø                                 | Ø   | Ø      | -LE | /  | -            | 0.103   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| M32  | "Camembert" raw milk cheese            | DP1  | No                         | -LE                               | Ø   | Ø      | Ø   | /  | -            | 0.109   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| N13  | "Maroilles" raw milk cheese            | DP1  | Yes                        | +LA                               | +LA | +MA    | +HA | <i>L. monocytogenes</i>                      | +            | 2.968   | 0.224   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 2.941 | 0.202        | +    | +MA | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| O24  | "Camembert" raw milk cheese            | DP1  | No                         | +LA                               | +LB | +MA    | +MB | <i>L. monocytogenes</i>                      | +            | 3.098   | 0.226   | +            | +MB | +MB | <i>L. monocytogenes</i>                      | +   | =                           | 3.035 | 0.286        | +    | +MA | +HB                           | <i>L. monocytogenes</i>                      | +   | =              |
| O25  | Raw milk cheese                        | DP1  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.105   | 0.226   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| A24  | "Roquefort" cheese                     | DP2  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.061   | 0.194   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| A27  | "Petit vinageois" raw milk cheese      | DP2  | No                         | +LA                               | +MA | +MA    | +HA | <i>L. monocytogenes</i>                      | +            | 3.034   | 0.194   | +            | +MA | +HA | <i>L. monocytogenes</i>                      | +   | =                           | 3.034 | 0.213        | +    | +MA | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| A29  | Raw goat milk cheese                   | DP2  | No                         | +MA                               | +MA | +MA    | +MA | <i>L. monocytogenes</i>                      | +            | 2.953   | 0.194   | +            | +MA | +HB | <i>L. monocytogenes</i>                      | +   | =                           | 2.953 | 0.213        | +    | +MA | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| A30  | "Munster fermier" cheese               | DP2  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i>                      | +            | 2.838   | 0.194   | +            | +MA | +HA | <i>L. monocytogenes</i>                      | +   | =                           | 2.838 | 0.213        | +    | +MB | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| A31  | "Munster fermier" cheese               | DP2  | No                         | +MA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i>                      | +            | 3.063   | 0.194   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 3.083 | 0.213        | +    | +MB | +MB                           | <i>L. monocytogenes</i>                      | +   | =              |
| B14  | "Selles sur Cher" raw goat milk cheese | DP2  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.074   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| B15  | "Valençay" raw goat milk cheese        | DP2  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.073   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| B16  | "Selles sur Cher" raw goat milk cheese | DP2  | No                         | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.071   | 0.207   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| N11  | Goat cheese                            | DP2  | Yes                        | -LE                               | -LE | -LE    | -ME | /  | -            | 0.115   | 0.224   | -            | +LA | +LB | <i>L. monocytogenes</i>                      | -   | =                           | 0.766 | 0.202        | +    | +LA | +LB                           | <i>L. monocytogenes</i>                      | +   | PS             |
| L25  | Raw milk                               | DP3  | Yes                        | +MB                               | +MA | +HB    | +HB | <i>L. monocytogenes</i>                      | +            | 3.091   | 0.200   | +            | +MA | +MA | <i>L. monocytogenes</i>                      | +   | =                           | 2.776 | 0.207        | +    | +MA | +MA                           | <i>L. monocytogenes</i>                      | +   | =              |
| L29  | Raw milk                               | DP3  | Yes                        | -LE                               | -LE | -LE    | Ø   | /  | -            | 0.079   | 0.200   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| L30  | Raw milk                               | DP3  | Yes                        | Ø                                 | Ø   | Ø      | Ø   | /  | -            | 0.075   | 0.200   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| L31  | Raw milk                               | DP3  | Yes                        | -LE                               | Ø   | -LE    | Ø   | /  | -            | 0.071   | 0.200   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| M29  | Raw milk                               | DP3  | Yes                        | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i>                      | +            | 2.917   | 0.207   | +            | +HA | +HA | <i>L. monocytogenes</i>                      | +   | =                           | 2.883 | 0.233        | +    | +HA | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| N12  | Raw milk                               | DP3  | Yes                        | +MA                               | +HA | +MA    | +HA | <i>L. monocytogenes</i>                      | +            | 2.867   | 0.224   | +            | +MA | +HA | <i>L. monocytogenes</i>                      | +   | =                           | 2.879 | 0.202        | +    | +MA | +HA                           | <i>L. monocytogenes</i>                      | +   | =              |
| O26  | Raw milk                               | DP3  | Yes                        | -LE                               | Ø   | Ø      | Ø   | /  | -            | 0.105   | 0.226   | -            | /   | /   | /  | -   | =                           |       |              |      |     |                               |  |     |                |
| O27  | Raw milk                               | DP3  | Yes                        | +LA                               | +LA | +MA    | +HB | <i>L. monocytogenes</i>                      | +            | 3.152   | 0.226   | +            | +HB | +HB | <i>L. monocytogenes</i>                      | +   | =                           | 3.082 | 0.286        | +    | +HA | +HB                           | <i>L. monocytogenes</i>                      | +   | =              |

APPENDIX D :  
RELATIVE ACCURACY, RELATIVE SPECIFICITY,  
RELATIVE SENSITIVITY  
-  
DETAILED RESULTS TABLES  
FOR OTHER PRODUCTS

## Legend

### Bacterial presence

∅ : no growth

L = light growth

M = medium growth

H = high growth

### Distribution of the flora

A = pure culture of suspicious colonies

B = mixed culture with a majority of suspicious colonies

C = mixed culture with a minority of suspicious colonies

D = mixed culture with very few suspicious colonies

E = no suspicious colonies

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

\* : presence of two types of characteristic colonies

APPENDIX D1 :

OTHER PRODUCTS

FRASER ½,  
THEN FRASER 24 HOURS AT 37°C

**Meat product except raw**

| CODE | MATRICES                    | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                         |                  | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |         |      |              |     |                         |                                |            | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |         |      |              |     |                         |                                |            |
|------|-----------------------------|------|----------------------------|-----------------------------------|-----|--------|-----|-------------------------|------------------|---|---------|------|--------------|-----|-------------------------|--------------------------------|------------|--|---------|------|--------------|-----|-------------------------|--------------------------------|------------|
|      |                             |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION            |                  | TPLmono<br>(TPmono direct 24H)  |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono direct | Comparison | TPLmono<br>(TPmono direct 24H)   |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono direct | Comparison |
|      |                             |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.                | Result<br>L.mono | OD  | Cut-off | Res. | ALOA         | RLM | Identification          |                                |            | OD   | Cut-off | Res. | ALOA         | RLM | Identification          |                                |            |
|      |                             |      |                            |                                   |     |        |     |                         |                  |   |         |      |              |     |                         |                                |            |  |         |      |              |     |                         |                                |            |
| A19  | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.086   | 0.211   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| A20  | Cooked chitterlings sausage | MP3  | No                         | -ME                               | -ME | -ME    | -ME | /                       | -                | 0.086   | 0.211   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| A21  | Cooked chitterlings sausage | MP3  | No                         | -ME                               | -ME | -LE    | -LE | /                       | -                | 0.088   | 0.211   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B5   | Streaky bacon               | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.082   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B6   | Rolled and stuffed ham      | MP3  | No                         | -LE                               | -LE | -ME    | -ME | /                       | -                | 0.083   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B7   | Pâté de campagne            | MP3  | No                         | -LE                               | -LE | -ME    | -ME | /                       | -                | 0.072   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B8   | Pork head pâté              | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.073   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B9   | Horse salami-like sausage   | MP3  | No                         | -LE                               | -LE | Ø      | Ø   | /                       | -                | 0.079   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B10  | Grilled chicken             | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.073   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| B11  | Saveloy                     | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.076   | 0.207   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| L32  | Salami-type sausage         | MP3  | No                         | -ME                               | Ø   | -ME    | Ø   | /                       | -                | 0.071   | 0.200   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| M15  | Cooked sausage              | MP3  | No                         | +LA                               | +LA | +LA    | +MA | <i>L. monocytogenes</i> | +                | 2.876   | 0.207   | +    | +MA          | +MB | <i>L. monocytogenes</i> | +                              | =          | 2.920  | 0.233   | +    | +MA          | +HB | <i>L. monocytogenes</i> | +                              | =          |
| M16  | Duck pâté                   | MP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +                | 2.889   | 0.207   | +    | +MB          | +MB | <i>L. monocytogenes</i> | +                              | =          | 2.921  | 0.233   | +    | +MB          | +MB | <i>L. monocytogenes</i> | +                              | =          |
| N17  | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.078   | 0.200   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| N18  | Foie gras                   | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.077   | 0.200   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| Q4   | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                | 0.110   | 0.225   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| Q5   | Pâté                        | MP3  | No                         | +MA                               | +MA | +HA    | +HA | <i>L. monocytogenes</i> | +                | 2.612   | 0.225   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                              | =          | 3.007  | 0.296   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          |

Dairy products except raw

| CODE | MATRICES                                     | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |                                |                 | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |         |      |              |     |                  |                                |            | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |         |      |              |     |                  |                                |            |
|------|--|------|----------------------------|-----------------------------------|--------|--------|-----|--------------------------------|-----------------|---|---------|------|--------------|-----|------------------|--------------------------------|------------|--|---------|------|--------------|-----|------------------|--------------------------------|------------|
|      |  |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                   |                 | TPLmono<br>(TPmono direct 24H)  |         |      | CONFIRMATION |     |                  | FINAL RESULT<br>TPLmono direct | Comparison | TPLmono<br>(TPmono direct 24H)   |         |      | CONFIRMATION |     |                  | FINAL RESULT<br>TPLmono direct | Comparison |
|      |  |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                       | Result<br>Lmono | OD  | Cut-off | Res. | ALOA         | RLM | Identification   |                                |            | OD   | Cut-off | Res. | ALOA         | RLM | Identification   |                                |            |
|      |  |      |                            |                                   |        |        |     |                                |                 |   |         |      |              |     |                  |                                |            |  |         |      |              |     |                  |                                |            |
| A23  | Feta cheese                                  | DP1  | No                         | +LA                               | +LA    | +MA    | +MB | L. monocytogenes               | +               | 0.088   | 0.211   | -    | +LA          | +LA | L. monocytogenes | -                              | FN         | 0.075  | 0.213   | -    | +MB          | +LB | L. monocytogenes | -                              | FN         |
| M26  | "Petit Billy affiné" cheese                  | DP1  | Yes                        | +LA(3)                            | +LA(4) | +MA    | +MA | L. monocytogenes               | +               | 2.893   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                              | =          | 2.939  | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                              | =          |
| M33  | "Neufchâtel" cheese                          | DP1  | No                         | -LE                               | Ø      | Ø      | Ø   | /                              | -               | 0.111   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| B12  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.067   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| B13  | Goat cheese                                  | DP2  | No                         | -LE                               | Ø      | Ø      | Ø   | /                              | -               | 0.075   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| L23  | Pasteurized goat cheese                      | DP2  | Yes                        | -LE                               | -LE    | Ø      | -LE | /                              | -               | 0.069   | 0.200   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| L24  | Pasteurized goat cheese                      | DP2  | Yes                        | +LB                               | +LB(3) | +LB    | +MB | L. monocytogenes<br>L. innocua | +               | 3.085   | 0.200   | +    | +MB          | +MB | L. monocytogenes | +                              | =          | 2.873  | 0.207   | +    | +MB          | +MB | L. monocytogenes | +                              | =          |
| L28  | Pasteurized goat cheese                      | DP2  | Yes                        | Ø                                 | -LE    | Ø      | Ø   | /                              | -               | 0.067   | 0.200   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M18  | Goat cheese                                  | DP2  | Yes                        | +LA                               | +LA    | +MA    | +HB | L. monocytogenes               | +               | 2.869   | 0.207   | +    | +HA          | +MB | L. monocytogenes | +                              | =          | 2.821  | 0.233   | +    | +HA          | +HB | L. monocytogenes | +                              | =          |
| M19  | Goat cheese                                  | DP2  | Yes                        | +LA(1)                            | +LA    | +MA    | +MA | L. monocytogenes               | +               | 2.844   | 0.207   | +    | +MB          | +HB | L. monocytogenes | +                              | =          | 2.888  | 0.233   | +    | +MB          | +HB | L. monocytogenes | +                              | =          |
| M20  | "Sainte Maure" ashy goat cheese              | DP2  | Yes                        | +LA                               | +LA    | +MA    | +HA | L. monocytogenes               | +               | 2.869   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                              | =          | 2.880  | 0.233   | +    | +MA          | +HA | L. monocytogenes | +                              | =          |
| M21  | "Sainte Maure" ashy goat cheese              | DP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.079   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M22  | Goat cheese                                  | DP2  | Yes                        | +MA                               | +MA    | +MA    | +MA | L. monocytogenes               | +               | 2.968   | 0.207   | +    | +MB          | +HB | L. monocytogenes | +                              | =          | 3.086  | 0.200   | +    | +MB          | +HB | L. monocytogenes | +                              | =          |
| M23  | Goat cheese                                  | DP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.071   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M24  | Goat cheese                                  | DP2  | Yes                        | +MA                               | +LA    | +HA    | +HA | L. monocytogenes               | +               | 2.948   | 0.207   | +    | +HA          | +HA | L. monocytogenes | +                              | =          | 2.976  | 0.233   | +    | +MA          | +HA | L. monocytogenes | +                              | =          |
| M25  | Goat cheese                                  | DP2  | Yes                        | +LA                               | +LA    | +MA    | +MA | L. monocytogenes               | +               | 2.905   | 0.207   | +    | +MA          | +HA | L. monocytogenes | +                              | =          | 2.921  | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                              | =          |
| M30  | "Petit Pouligny" goat cheese                 | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.095   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M35  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.087   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M36  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.085   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| A22  | Opéra chocolate cake                         | DP3  | No                         | +LB                               | +MD    | +MB    | +MB | L. monocytogenes               | +               | 3.083   | 0.211   | +    | +MB          | +HB | L. monocytogenes | +                              | =          | 3.194  | 0.213   | +    | +MB          | +HB | L. monocytogenes | +                              | =          |
| K8   | Vanilla ice-cream                            | DP3  | Yes                        | +LA                               | +LA    | +MA    | +HB | L. monocytogenes               | +               | 2.904   | 0.204   | +    | +LA          | +LA | L. monocytogenes | +                              | =          | 2.963  | 0.127   | +    | +MA          | +MA | L. monocytogenes | +                              | =          |
| K9   | "Mystère" ice-cream                          | DP3  | No                         | -MB                               | +MB    | -MA    | +HA | L. innocua                     | -               | 0.091   | 0.204   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| K10  | Choux pastry + Chantilly cream               | DP3  | Yes                        | +LA                               | +LA    | +MA    | +HA | L. monocytogenes               | +               | 2.983   | 0.204   | +    | +LA          | +MA | L. monocytogenes | +                              | =          | 2.996  | 0.127   | +    | +MA          | +MA | L. monocytogenes | +                              | =          |
| K11  | Strawberries + ice-cream and Chantilly cream | DP3  | No                         | -MA                               | +MA    | -MA    | +MA | L. innocua                     | -               | 0.091   | 0.204   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| K13  | Milk powder                                  | DP3  | No                         | -LA                               | +LA    | -MA    | +HA | L. innocua                     | -               | 0.081   | 0.204   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| K15  | Profiteroles                                 | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.051   | 0.185   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| K16  | Choux pastry + Chantilly cream               | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.049   | 0.185   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| L21  | Mix for cookies                              | DP3  | No                         | -HD                               | +MD    | -HB    | +MD | L. innocua                     | -               | 0.070   | 0.200   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |
| M17  | Choux pastry + Chantilly cream               | DP3  | Yes                        | +LA                               | +LA    | +MA    | +MA | L. monocytogenes               | +               | 2.857   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                              | =          | 2.919  | 0.233   | +    | +MA          | +MB | L. monocytogenes | +                              | =          |
| M34  | Raspberry tart                               | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                              | -               | 0.105   | 0.207   | -    | /            | /   | /                | -                              | =          |  |         |      |              |     |                  |                                |            |

Seafood products

| CODE | MATRICES                    | Cat. | S<br>p<br>/<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |                              |                 | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |         |      |              |     |                              |                                | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |            |         |                                |      |              |                |                              |                                |    |            |  |
|------|-----------------------------|------|----------------------------|-----------------------------------|--------|--------|-----|------------------------------|-----------------|---|---------|------|--------------|-----|------------------------------|--------------------------------|--|------------|---------|--------------------------------|------|--------------|----------------|------------------------------|--------------------------------|----|------------|--|
|      |                             |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                 |                 | TPLmono<br>(TPmono direct 24H)  |         |      | CONFIRMATION |     |                              | FINAL RESULT<br>TPLmono direct |  | Comparison |         | TPLmono<br>(TPmono direct 24H) |      | CONFIRMATION |                |                              | FINAL RESULT<br>TPLmono direct |    | Comparison |  |
|      |                             |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                     | Result<br>Lmono | OD  | Cut-off | Res. | ALOA         | RLM | Identification               |                                |  | OD         | Cut-off | Res.                           | ALOA | RLM          | Identification |                              |                                |    |            |  |
|      |                             |      |                            |                                   |        |        |     |                              |                 |   |         |      |              |     |                              |                                |  |            |         |                                |      |              |                |                              |                                |    |            |  |
| C10  | Shrimps                     | SP1  | No                         | +MB                               | +LB    | +MB    | +MB | L.monocytogenes              | +               | 3.250   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.034   | 0.249                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| C11  | Shrimps                     | SP1  | No                         | +MB                               | +LA    | +MB    | +MA | L.monocytogenes              | +               | 3.228   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.012   | 0.249                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| C12  | Shrimps                     | SP1  | No                         | -LE                               | -LE    | -ME    | -ME | /                            | -               | 0.111   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C13  | Shrimps                     | SP1  | No                         | +MA                               | +MB    | +MA    | +MB | L.monocytogenes              | +               | 3.255   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.475   | 0.249                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| D12  | Mixed seafood               | SP1  | No                         | +LB(1)                            | +LB(5) | +MA    | +MA | L.monocytogenes              | +               | 2.135   | 0.23    | +    | +MA          | +HA | L.monocytogenes              | +                              | =  | =          | 2.572   | 0.249                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| D16  | Sweet herring fillet        | SP1  | No                         | +LA                               | Ø      | +MB    | +HB | L.monocytogenes              | +               | 1.566   | 0.23    | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.591   | 0.249                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| D17  | Frozen salmon fillet        | SP1  | No                         | +LA                               | +LA    | +MA    | +MA | L.monocytogenes              | +               | 2.196   | 0.23    | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.753   | 0.249                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| F3   | Sweet herring fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.140   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| F4   | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.207   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| G1   | Raw fish                    | SP1  | No                         | Ø                                 | -LE    | Ø      | Ø   | /                            | -               | 0.052   | 0.163   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| G3   | Fresh halibut               | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.053   | 0.163   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| G4   | Fresh salmon                | SP1  | No                         | +MA                               | +MA    | +MA    | +MA | L.monocytogenes              | +               | 2.949   | 0.163   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.921   | 0.198                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| G5   | Fresh herring               | SP1  | No                         | Ø                                 | Ø      | -LE    | -LE | /                            | -               | 0.052   | 0.163   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| H11  | Haddock fillet              | SP1  | No                         | -LA(3)                            | +LB    | -MA    | +HA | L.innocua                    | -               | 0.079   | 0.187   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| H12  | Sweet herring fillet        | SP1  | No                         | -MA                               | +MA    | -MA    | +MB | L.innocua                    | -               | 0.07  | 0.187   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| I8   | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | -MA    | +MA | L.welshimeri                 | -               | 0.065   | 0.171   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| I9   | Sweet herring fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | -LE | /                            | -               | 0.066   | 0.171   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| I10  | Haddock                     | SP1  | No                         | +MB                               | +MB    | +LB    | +LB | L.monocytogenes<br>L.innocua | +               | 0.287   | 0.171   | +    | +MB          | +MB | L.monocytogenes<br>L.innocua | +                              | =  | =          | 0.295   | 0.198                          | +    | +MB          | +MB            | L.monocytogenes<br>L.innocua | +                              | =  |            |  |
| I11  | Skate                       | SP1  | No                         | -LE                               | Ø      | -LE    | -LE | /                            | -               | 0.063   | 0.171   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| J4   | Salmon fillet               | SP1  | No                         | -LB                               | +LB(3) | -LB    | +MB | L.innocua                    | -               | 0.088   | 0.198   | -    | -LA          | +LA | L.innocua                    | -                              | =  | =          | 0.124   | 0.234                          | -    | /            | /              | /                            | /                              | -  | =          |  |
| J5   | Herring fillet              | SP1  | No                         | -LA(3)                            | +LA(2) | -LA    | +HA | L.innocua                    | -               | 0.091   | 0.198   | -    | Ø            | Ø   | L.innocua                    | -                              | =  | =          | 0.118   | 0.234                          | -    | /            | /              | /                            | /                              | -  | =          |  |
| J14  | Fish fillet                 | SP1  | No                         | -LA(4)                            | +LA(2) | -LA    | +HA | L.innocua                    | -               | 0.094   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          | 0.114   | 0.234                          | -    | /            | /              | /                            | /                              | -  | =          |  |
| J15  | Fish fillet                 | SP1  | No                         | -LA                               | +LA    | -MA    | +MA | L.innocua                    | -               | 0.085   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          | 0.115   | 0.234                          | -    | /            | /              | /                            | /                              | -  | =          |  |
| J21  | Medium sole                 | SP1  | No                         | Ø                                 | Ø      | -LE    | -LE | /                            | -               | 0.098   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| J22  | Sea perch from Iceland      | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.094   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| J23  | Panga fillet                | SP1  | No                         | +HB                               | +HB    | +MB    | +MB | L.monocytogenes<br>L.innocua | +               | 1.794   | 0.198   | +    | +MB          | +MB | L.monocytogenes<br>L.innocua | +                              | =  | =          | 1.917   | 0.234                          | +    | +MB          | +MB            | L.monocytogenes<br>L.innocua | +                              | =  |            |  |
| J24  | Cod fillet                  | SP1  | No                         | Ø                                 | Ø      | -LE    | Ø   | /                            | -               | 0.103   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| J25  | Scallop                     | SP1  | No                         | -ME                               | -LE    | -ME    | -ME | /                            | -               | 0.099   | 0.198   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| K22  | Shrimps                     | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.052   | 0.185   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| K23  | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.054   | 0.185   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| O10  | Shrimps                     | SP1  | No                         | +LB(3)                            | +LA    | +MA    | +HB | L.monocytogenes              | +               | 3.159   | 0.233   | +    | +MA          | +HA | L.monocytogenes              | +                              | =  | =          | 2.916   | 0.288                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| O11  | Shellfish                   | SP1  | No                         | +LB                               | +LB(1) | +MA    | +MB | L.monocytogenes              | +               | 0.494   | 0.233   | +    | +MA          | +MB | L.monocytogenes              | +                              | =  | =          | 2.810   | 0.288                          | +    | +MA          | +MB            | L.monocytogenes              | +                              | =  |            |  |
| O12  | Shrimps                     | SP1  | No                         | Ø                                 | Ø      | +MA    | +LB | L.monocytogenes              | +               | 1.653   | 0.233   | +    | +MA          | +HA | L.monocytogenes              | +                              | =  | =          | 3.133   | 0.288                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| O13  | Shellfish                   | SP1  | No                         | +LC                               | +LA    | +MD    | +MD | L.monocytogenes<br>L.innocua | +               | 0.128   | 0.233   | -    | +MD          | +MD | L.monocytogenes<br>L.innocua | -                              | FN   | FN         | 0.278   | 0.286                          | d    | +MB          | +HB            | L.monocytogenes              | +                              | =  |            |  |
| O14  | Fresh herring               | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.124   | 0.233   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C1   | Smoked salmon tartare       | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.119   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C2   | Smoked salmon               | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.117   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C3   | Smoked salmon               | SP2  | No                         | Ø                                 | Ø      | -LE    | Ø   | /                            | -               | 0.121   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C4   | Smoked salmon bits          | SP2  | No                         | +LA                               | +LA    | +MA    | +MA | L.monocytogenes              | +               | 3.243   | 0.206   | +    | +MA          | +HA | L.monocytogenes              | +                              | =  | =          | 1.913   | 0.249                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| C5   | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.147   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C6   | Smoked salmon carpaccio     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.107   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C7   | Smoked salmon from Ireland  | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.104   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| C9   | Smoked kippers              | SP2  | No                         | -LA                               | +LA    | -MA    | +HA | L.innocua                    | -               | 0.114   | 0.206   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| D1   | Smoked salmon bits          | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.121   | 0.230   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| D2   | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.110   | 0.230   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| D5   | Smoked salmon carpaccio     | SP2  | No                         | +MB                               | +MB    | +MB    | +HB | L.monocytogenes              | +               | 2.011   | 0.230   | +    | +MB          | +MB | L.monocytogenes              | +                              | =  | =          | 3.026   | 0.249                          | +    | +MB          | +MB            | L.monocytogenes              | +                              | =  |            |  |
| D7   | Smoked salmon from Norway   | SP2  | No                         | Ø                                 | Ø      | +MA    | +HA | L.monocytogenes              | +               | 0.107   | 0.230   | -    | -LE          | Ø   | Ø                            | -                              | FN   | FN         | 0.139   | 0.249                          | -    | -LE          | -LE            | Ø                            | -                              | FN |            |  |
| D8   | Smoked haddock              | SP2  | No                         | Ø                                 | Ø      | +MB    | +MB | L.monocytogenes              | +               | 2.978   | 0.230   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.479   | 0.249                          | +    | +MA          | +HB            | L.monocytogenes              | +                              | =  |            |  |
| D9   | Small smoked trout          | SP2  | No                         | -LE                               | -ME    | -LE    | -ME | /                            | -               | 0.122   | 0.230   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| D10  | Small slice of smoked trout | SP2  | No                         | +LA                               | +LA    | +MA    | +MB | L.monocytogenes              | +               | 2.693   | 0.230   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 2.490   | 0.249                          | +    | +MA          | +HA            | L.monocytogenes              | +                              | =  |            |  |
| F1   | Smoked haddock              | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.213   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| F2   | Smoked trout                | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.167   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| F6   | Smoked salmon               | SP2  | No                         | +LA                               | -LE    | +MA    | +LB | L.monocytogenes              | +               | 3.164   | 0.247   | +    | +MA          | +MA | L.monocytogenes              | +                              | =  | =          | 3.117   | 0.226                          | +    | +MA          | +MA            | L.monocytogenes              | +                              | =  |            |  |
| F7   | Smoked salmon bits          | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.136   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| F8   | Smoked salmon from Norway   | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.143   | 0.247   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| G2   | Kippers                     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.052   | 0.163   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| H5   | Kippers                     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.061   | 0.187   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| O15  | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -               | 0.123   | 0.233   | -    | /            | /   | /                            | -                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |
| O6   | Smoked salmon bits          | SP2  | No                         | +LA                               | +LA(1) | +MB    | +MB | L.monocytogenes              | +               | 3.150   | 0.225   | +    | +MB          | +MB | L.monocytogenes              | +                              | =  | =          |         |                                |      |              |                |                              |                                |    |            |  |

Seafood products

| CODE | MATRICES                         | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                         |                 | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |         |      |              |     |                         |                                |            | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |         |      |              |     |                         |                                |            |
|------|----------------------------------|------|----------------------------|-----------------------------------|-----|--------|-----|-------------------------|-----------------|---|---------|------|--------------|-----|-------------------------|--------------------------------|------------|--|---------|------|--------------|-----|-------------------------|--------------------------------|------------|
|      |                                  |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION            |                 | TPLmono<br>(TPmono direct 24H)  |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono direct | Comparison | TPLmono<br>(TPmono direct 24H)   |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono direct | Comparison |
|      |                                  |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.                | Result<br>Lmono | OD  | Cut-off | Res. | ALOA         | RLM | Identification          |                                |            | OD   | Cut-off | Res. | ALOA         | RLM | Identification          |                                |            |
|      |                                  |      |                            |                                   |     |        |     |                         |                 |   |         |      |              |     |                         |                                |            |  |         |      |              |     |                         |                                |            |
| C8   | Shrimps in spicy sauce           | SP3  | No                         | Ø                                 | -LE | Ø      | Ø   | /                       | -               | 0.105   | 0.206   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| D11  | Cooked mussels from Chile        | SP3  | No                         | -LE                               | -LE | -LE    | Ø   | /                       | -               | 0.125   | 0.230   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| D13  | Salad of scampi                  | SP3  | No                         | -ME                               | -LE | -ME    | -LE | /                       | -               | 0.112   | 0.230   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| D15  | Shrimps in sauce                 | SP3  | No                         | +LA                               | +MA | +MA    | +MA | <i>L. monocytogenes</i> | +               | 1.976   | 0.230   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          | 2.643  | 0.249   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          |
| F9   | Salmon olives                    | SP3  | No                         | +LA                               | +LA | +MA    | +HA | <i>L. monocytogenes</i> | +               | 3.215   | 0.247   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          | 2.878  | 0.226   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                              | =          |
| F10  | Scallops with vegetables         | SP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +               | 3.223   | 0.247   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          | 3.145  | 0.226   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          |
| I6   | Salmon tartare                   | SP3  | No                         | +LA                               | +LA | +HB*   | +MB | <i>L. monocytogenes</i> | +               | 2.956   | 0.171   | +    | +MA          | +HB | <i>L. monocytogenes</i> | +                              | =          | 2.919  | 0.198   | +    | +MA          | +HB | <i>L. monocytogenes</i> | +                              | =          |
| J26  | Salmon cake                      | SP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -               | 0.103   | 0.198   | -    | /            | /   | /                       | -                              | =          |  |         |      |              |     |                         |                                |            |
| O7   | Tuna sandwich                    | SP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +               | 2.911   | 0.233   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          | 2.998  | 0.286   | +    | +MA          | +MA | <i>L. monocytogenes</i> | +                              | =          |
| O8   | Salmon olives                    | SP3  | Yes                        | +MA                               | +MA | +MA    | +HB | <i>L. monocytogenes</i> | +               | 2.978   | 0.233   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                              | =          | 3.033  | 0.286   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                              | =          |
| O9   | Coalfish fillet with leeks sauce | SP3  | Yes                        | +MA                               | +MA | +MA    | +HB | <i>L. monocytogenes</i> | +               | 2.894   | 0.233   | +    | +HA          | +HA | <i>L. monocytogenes</i> | +                              | =          | 3.117  | 0.286   | +    | +HA          | +HA | <i>L. monocytogenes</i> | +                              | =          |

## Vegetables

| CODE | MATRICES                                | Cat. | S<br>P<br>/<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |      |                                | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |       |                                |      |      |              |                                | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |                                |            |                                |      |      |              |                                |   |                                |            |
|------|---|------|----------------------------|-----------------------------------|--------|--------|------|--------------------------------|---|-------|--------------------------------|------|------|--------------|--------------------------------|--|--------------------------------|------------|--------------------------------|------|------|--------------|--------------------------------|---|--------------------------------|------------|
|      |   |      |                            | FRASER 1/2                        |        | FRASER |      | CONFIRMATION                   |   |       | TPLmono<br>(TPmono direct 24H) |      |      | CONFIRMATION |                                |  | FINAL RESULT<br>TPLmono direct | Comparison | TPLmono<br>(TPmono direct 24H) |      |      | CONFIRMATION |                                |   | FINAL RESULT<br>TPLmono direct | Comparison |
|      |   |      |                            | O&A1                              | P1     | O&A2   | P2   | IDENTIF.                       | Result<br>Lmono   | OD    | Cut-off                        | Res. | ALOA | RLM          | Identification                 | OD   |                                |            | Cut-off                        | Res. | ALOA | RLM          | Identification                 |   |                                |            |
|      |   |      |                            |                                   |        |        |      |                                |   |       |                                |      |      |              |                                |  |                                |            |                                |      |      |              |                                |   |                                |            |
| D18  | Pre-cooked potatoes                     | VP1  | No                         | -LE                               | Ø      | Ø      | Ø    | /                              | -   | 0.106 | 0.230                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| D19  | Pre-cooked potatoes                     | VP1  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.109 | 0.230                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| D20  | Frozen chopped parsley                  | VP1  | No                         | -LE                               | -LE    | -ME    | -HE  | /                              | -   | 0.100 | 0.230                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| D21  | Pre-cooked potatoes                     | VP1  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.105 | 0.230                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| D23  | Frozen fries                            | VP1  | No                         | +MA                               | +MA    | +HA    | +HA  | L. monocytogenes               | +   | 2.094 | 0.230                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 3.012      | 0.249                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| F11  | Frozen peas                             | VP1  | No                         | +LB                               | +LB    | +MB    | +MB  | L. monocytogenes<br>L. innocua | +   | 0.230 | 0.247                          | d    | +LB  | +MB          | L. monocytogenes<br>L. innocua | +  | =                              | 0.173      | 0.226                          | -    | +MB  | +MB          | L. monocytogenes<br>L. innocua | - | FN                             |            |
| I4   | Frozen fries                            | VP1  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.062 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I5   | Frozen fries                            | VP1  | No                         | +MA                               | +MA    | +MB    | +MB  | L. monocytogenes               | +   | 2.966 | 0.171                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.778      | 0.198                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| I7   | Frozen fries                            | VP1  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.060 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I13  | Frozen cauliflower                      | VP1  | No                         | -LE                               | -LE    | -ME    | -ME  | /                              | -   | 0.068 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I14  | Frozen Brussels sprout                  | VP1  | No                         | -LE                               | Ø      | -HE    | -ME  | /                              | -   | 0.070 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I15  | Frozen leaf spinach                     | VP1  | No                         | -LE                               | -LE    | -HE    | -ME  | /                              | -   | 0.061 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K21  | Frozen fries                            | VP1  | No                         | -LE                               | +LB    | -LA    | +LB  | L. seeligeri                   | -   | 0.061 | 0.185                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L5   | Frozen fries                            | VP1  | No                         | +MA                               | +MA    | +MB    | +MB  | L. monocytogenes               | +   | 3.135 | 0.200                          | +    | +HA  | +HA          | L. monocytogenes               | +  | =                              | 2.712      | 0.207                          | +    | +MA  | +HB          | L. monocytogenes               | + | =                              |            |
| L10  | String beans                            | VP1  | No                         | -LA                               | +LA    | -MA    | +MA  | L. innocua                     | -   | 0.075 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| N3   | Frozen string beans                     | VP1  | Yes                        | +LA                               | +LA    | +MA    | +MA  | L. monocytogenes               | +   | 2.836 | 0.200                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.890      | 0.202                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| N4   | Frozen leaf spinach                     | VP1  | Yes                        | +MA                               | +HA    | +HA    | +HA  | L. monocytogenes               | +   | 3.019 | 0.200                          | +    | +HA  | +HA          | L. monocytogenes               | +  | =                              | 2.836      | 0.202                          | +    | +HA  | +HA          | L. monocytogenes               | + | =                              |            |
| O18  | Frozen fries                            | VP1  | No                         | -LE                               | -LE    | Ø      | Ø    | /                              | -   | 0.140 | 0.233                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| O19  | Frozen fries                            | VP1  | No                         | +LA                               | +LA(2) | +MA    | +MB  | L. monocytogenes               | +   | 3.167 | 0.233                          | +    | +MA  | +HA          | L. monocytogenes               | +  | =                              | 3.050      | 0.286                          | +    | +MA  | +HB          | L. monocytogenes               | + | =                              |            |
| D26  | Red cabbage                             | VP2  | Yes                        | Ø                                 | Ø      | +MB    | +HB  | L. monocytogenes               | +   | 1.974 | 0.230                          | +    | +MA  | +MB          | L. monocytogenes               | +  | =                              | 3.088      | 0.249                          | +    | +MA  | +MB          | L. monocytogenes               | + | =                              |            |
| I12  | Fresh fruit salad                       | VP2  | No                         | Ø                                 | Ø      | -ME    | -HE  | /                              | -   | 0.065 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K2   | Steamed turnip                          | VP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.082 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K3   | Steamed carrots                         | VP2  | No                         | -LA                               | +LA    | -LA    | +MA  | L. innocua                     | -   | 0.092 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K7   | Grated red cabbage                      | VP2  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.082 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L1   | Grated carrots                          | VP2  | Yes                        | -LE                               | Ø      | -LE    | Ø    | /                              | -   | 0.087 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L2   | Mixed salad                             | VP2  | Yes                        | +LA(1)                            | Ø      | +MB    | +MB  | L. monocytogenes               | +   | 2.870 | 0.200                          | +    | +LA  | +LA          | L. monocytogenes               | +  | =                              | 2.811      | 0.207                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| L3   | String beans                            | VP2  | Yes                        | +LA                               | +LB    | +HB    | +MB  | L. monocytogenes               | +   | 3.071 | 0.200                          | +    | +LA  | +LB          | L. monocytogenes               | +  | =                              | 2.818      | 0.207                          | +    | +MB  | +MB          | L. monocytogenes               | + | =                              |            |
| L4   | Chickpeas                               | VP2  | Yes                        | +MA                               | +MA    | +HB    | +MB  | L. monocytogenes               | +   | 2.922 | 0.200                          | +    | +MA  | +MB          | L. monocytogenes               | +  | =                              | 2.725      | 0.207                          | +    | +MB  | +MB          | L. monocytogenes               | + | =                              |            |
| L7   | Mixed salad                             | VP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.077 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L8   | Mixed vegetables                        | VP2  | No                         | -LA                               | +LA    | -MA    | +LA  | L. innocua                     | -   | 0.080 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| M2   | Cauliflower                             | VP2  | Yes                        | +MA                               | +MB    | +MB    | +MB  | L. monocytogenes               | +   | 2.783 | 0.207                          | +    | +MB  | +MB          | L. monocytogenes               | +  | =                              | 2.940      | 0.233                          | +    | +MB  | +MB          | L. monocytogenes               | + | =                              |            |
| M4   | Grated carrots                          | VP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.090 | 0.207                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| M1   | Grated carrots                          | VP2  | Yes                        | +MB                               | +MB    | +MB    | +MB  | L. monocytogenes               | +   | 2.918 | 0.200                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.932      | 0.202                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| N2   | Mixed vegetables                        | VP2  | Yes                        | +LA                               | +LA    | +MB    | +MA  | L. monocytogenes               | +   | 2.981 | 0.200                          | +    | +MB  | +MA          | L. monocytogenes               | +  | =                              | 2.880      | 0.202                          | +    | +MB  | +MA          | L. monocytogenes               | + | =                              |            |
| O21  | Mixed vegetables                        | VP2  | Yes                        | +MA                               | +MA    | +MB    | +MB  | L. monocytogenes               | +   | 2.867 | 0.233                          | +    | +MB  | +HB          | L. monocytogenes               | +  | =                              | 2.859      | 0.286                          | +    | +MA  | +HB          | L. monocytogenes               | + | =                              |            |
| O22  | Carrots/white cabbage                   | VP2  | Yes                        | +LA                               | +LA    | +LA    | +LB  | L. monocytogenes               | +   | 2.856 | 0.233                          | +    | +MA  | +MB          | L. monocytogenes               | +  | =                              | 3.011      | 0.286                          | +    | +MA  | +HB          | L. monocytogenes               | + | =                              |            |
| O23  | String beans                            | VP2  | Yes                        | +MA                               | +MA    | +MA    | +MA  | L. monocytogenes               | +   | 2.949 | 0.233                          | +    | +MA  | +HA          | L. monocytogenes               | +  | =                              | 3.021      | 0.286                          | +    | +MA  | +HA          | L. monocytogenes               | + | =                              |            |
| D22  | Mixed vegetable panful                  | VP3  | No                         | +LA                               | +LA(1) | +MB    | +HB  | L. monocytogenes               | +   | 1.999 | 0.230                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.774      | 0.249                          | +    | +MA  | +HA          | L. monocytogenes               | + | =                              |            |
| D24  | Tabbouleh with vegetables               | VP3  | No                         | -LE                               | Ø      | -ME    | -ME  | /                              | -   | 0.108 | 0.230                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I1   | "Rustic" potatoes                       | VP3  | No                         | +MA                               | +MA    | +MB    | +MB  | L. monocytogenes               | +   | 2.987 | 0.171                          | +    | +MA  | +LA          | L. monocytogenes               | +  | =                              | 2.946      | 0.198                          | +    | +MA  | +LA          | L. monocytogenes               | + | =                              |            |
| I2   | Mixed vegetable panful                  | VP3  | No                         | -LE                               | -LE    | -LE    | -LE  | /                              | -   | 0.067 | 0.171                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| I3   | Sauté potatoes                          | VP3  | No                         | +MB                               | +LB    | +MB    | +MB  | L. monocytogenes<br>L. innocua | +   | 0.928 | 0.171                          | +    | +MB  | +MB          | L. monocytogenes<br>L. innocua | +  | =                              | 1.251      | 0.198                          | +    | +MB  | +MB          | L. monocytogenes<br>L. innocua | + | =                              |            |
| I16  | Cauliflower and broccoli cake           | VP3  | No                         | +MA                               | +MA    | +MB    | +HA  | L. innocua<br>L. monocytogenes | +   | 0.081 | 0.171                          | -    | +MB  | +MB          | L. monocytogenes<br>L. innocua | -  | FN                             | 0.306      | 0.198                          | +    | +MB  | +MB          | L. monocytogenes<br>L. innocua | + | =                              |            |
| K1   | Saffron-flavoured rice                  | VP3  | Yes                        | Ø                                 | -LE    | -ME    | -ME  | /                              | -   | 0.089 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K4   | Ratatouille                             | VP3  | No                         | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.089 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K5   | Cooked mixed vegetables                 | VP3  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.084 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| K6   | Mixed sala (curly lettuce/walnuts/corn) | VP3  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.085 | 0.204                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L6   | Pasta salad                             | VP3  | No                         | -LE                               | -LE    | -LE    | -ME  | /                              | -   | 0.079 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L9   | Seasoned mushrooms                      | VP3  | Yes                        | -LE                               | -LE    | +HA    | +MA  | L. monocytogenes               | +   | 1.984 | 0.200                          | +    | +LA  | +LA          | L. monocytogenes               | +  | =                              | 2.819      | 0.207                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| L11  | Seasoned grated carrots                 | VP3  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.078 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| L12  | Seasoned red cabbage                    | VP3  | No                         | -LA                               | +LA    | -HB    | +MB  | L. innocua                     | -   | 0.076 | 0.200                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| M1   | Spinashes with cream                    | VP3  | Yes                        | -LE                               | Ø      | Ø      | Ø    | /                              | -   | 0.075 | 0.207                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| M5   | Cauliflower and potato gratin           | VP3  | Yes                        | Ø                                 | Ø      | Ø      | Ø    | /                              | -   | 0.079 | 0.207                          | -    | /    | /            | /                              | -  | =                              |            |                                |      |      |              |                                |   |                                |            |
| M6   | Celeriac in a remoulade                 | VP3  | Yes                        | +MB                               | +LB    | +MB*   | +MB* | L. monocytogenes               | +   | 2.950 | 0.207                          | +    | +MB  | +MB          | L. monocytogenes               | +  | =                              | 2.754      | 0.233                          | +    | +MB  | +MB          | L. monocytogenes               | + | =                              |            |
| N5   | Cooked carrots                          | VP3  | Yes                        | +MA                               | +MA    | +MA    | +MB  | L. monocytogenes               | +   | 2.821 | 0.200                          | +    | +MA  | +HA          | L. monocytogenes               | +  | =                              | 2.851      | 0.202                          | +    | +MA  | +HA          | L. monocytogenes               | + | =                              |            |
| N6   | Cooked mixed vegetables                 | VP3  | Yes                        | +MA                               | +MA    | +MA    | +MB  | L. monocytogenes               | +   | 3.090 | 0.200                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.861      | 0.202                          | +    | +MA  | +MB          | L. monocytogenes               | + | =                              |            |
| N7   | Rice and pepper                         | VP3  | Yes                        | +MA                               | +MA    | +MB    | +MB  | L. monocytogenes               | +   | 2.883 | 0.200                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.923      | 0.202                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| N8   | Potatoes with chives                    | VP3  | Yes                        | +MA                               | +MA    | +MB    | +HA  | L. monocytogenes               | +   | 3.128 | 0.200                          | +    | +MA  | +MA          | L. monocytogenes               | +  | =                              | 2.869      | 0.202                          | +    | +MA  | +MA          | L. monocytogenes               | + | =                              |            |
| O16  | Pre-cooked potatoes                     | VP3  | No                         | +MA                               | +MA    | +MA    | +HB  | L. monocytogenes               | +   | 3.054 | 0.233                          | +    | +HA  | +HA          | L. monocytogenes               | +  | =                              | 3.133      | 0.286                          | +    | +HA  | +HB          | L. monocytogenes               | + | =                              |            |
| O17  | Pre-cooked potatoes                     | VP3  | No                         | +MA                               | +MA    | +MA    | +MB  | L. monocytogenes               | +   | 3.147 | 0.233                          | +    | +MA  | +HA          | L. monocytogenes               | +  | =                              | 2.969      | 0.286                          | +    | +MA  | +HB          | L. monocytogenes               | + | =                              |            |
| O20  | Spinashes with cream                    | VP3  | Yes                        | +MA                               | +MA    | +MA    | +HB  | L. monocytogenes               | +   | 2.767 | 0.233                          | +    | +MA  | +HA          | L. monocytogenes               | +  | =                              | 3.125      | 0.286                          | +    | +MA  | +HA          | L. monocytogenes               | + | =                              |            |

Environment

| CODE | MATRICES                               | Cat. | S<br>P<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |   |                 |       | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |      |      |              |                         |   |                                | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |                                |      |      |              |                         |   |                                |            |
|------|--|------|----------------------------|-----------------------------------|--------|--------|-----|---|-----------------|-------|---|------|------|--------------|-------------------------|---|--------------------------------|--|--------------------------------|------|------|--------------|-------------------------|---|--------------------------------|------------|
|      |  |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                                |                 |       | TPLmono<br>(TPmono direct 24H)  |      |      | CONFIRMATION |                         |   | FINAL RESULT<br>TPLmono direct | Comparison   | TPLmono<br>(TPmono direct 24H) |      |      | CONFIRMATION |                         |   | FINAL RESULT<br>TPLmono direct | Comparison |
|      |  |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                                    | Result<br>Lmono | OD    | Cut-off   | Res. | ALOA | RLM          | Identification          |   |                                | OD   | Cut-off                        | Res. | ALOA | RLM          | Identification          |   |                                |            |
|      |  |      |                            |                                   |        |        |     |   |                 |       |   |      |      |              |                         |   |                                |  |                                |      |      |              |                         |   |                                |            |
| D27  | Process water                          | EN1  | Yes                        | +LA(2)                            | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                     | +               | 1.860 | 0.230   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.831  | 0.249                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| D28  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                     | +               | 1.818 | 0.230   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                              | 2.742  | 0.249                          | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                              |            |
| D29  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                     | +               | 1.856 | 0.230   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              | 2.704  | 0.249                          | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              |            |
| D30  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 2.157 | 0.230   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.702  | 0.249                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| H8   | Wahbasin in dishwashing room           | EN1  | No                         | Ø                                 | -LE    | -LE    | -LE | /   | -               | 0.072 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H18  | Pickler                                | EN1  | No                         | -LE                               | -LE    | Ø      | Ø   | /   | -               | 0.077 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| J16  | Water from collecting trap during work | EN1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.087 | 0.198   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| L17  | Process water                          | EN1  | Yes                        | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.074 | 0.200   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| L18  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 2.954 | 0.200   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.804  | 0.207                          | +    | +MA  | +HB          | <i>L. monocytogenes</i> | + | =                              |            |
| L19  | Process water                          | EN1  | Yes                        | +LA(2)                            | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                     | +               | 3.037 | 0.200   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                              | 2.780  | 0.207                          | +    | +MA  | +HB          | <i>L. monocytogenes</i> | + | =                              |            |
| L20  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 3.068 | 0.200   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                              | 2.778  | 0.207                          | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                              |            |
| M7   | Process water                          | EN1  | No                         | Ø                                 | -MA    | -MA    | +MA | <i>L.innocua</i>                            | -               | 0.069 | 0.207   | -    | /    | /            | /                       | - | =                              | 0.094  | 0.200                          | -    | -LA  | +MA          | <i>L.innocua</i>        | - | =                              |            |
| M8   | Process water                          | EN1  | No                         | -LA                               | +MA    | -MA    | +HB | <i>L.innocua</i>                            | -               | 0.072 | 0.207   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| M9   | Stagnant water in dirty container      | EN1  | No                         | -LA                               | +MA    | -MA    | +HA | <i>L.innocua</i>                            | -               | 0.089 | 0.207   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| M13  | Process water                          | EN1  | No                         | +LA                               | +MA    | +MB    | +MB | <i>L. monocytogenes</i>                     | +               | 2.852 | 0.207   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              | 3.105  | 0.200                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| N9   | Process water                          | EN1  | No                         | -LA                               | +MA    | -MA    | +MA | <i>L.innocua</i>                            | -               | 0.098 | 0.200   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| O28  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 3.033 | 0.233   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              | 3.01   | 0.286                          | +    | +MA  | +HB          | <i>L. monocytogenes</i> | + | =                              |            |
| O29  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MB | <i>L. monocytogenes</i>                     | +               | 2.853 | 0.233   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 3.058  | 0.286                          | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              |            |
| O30  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 2.938 | 0.233   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              | 3.109  | 0.286                          | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              |            |
| D31  | Surface of filleting table             | EN2  | No                         | -LA                               | Ø      | +MB    | +HB | <i>L. monocytogenes</i><br><i>L.innocua</i> | +               | 0.156 | 0.230   | -    | +LB  | +MB          | <i>L. monocytogenes</i> | - | FN                             | 3.055  | 0.249                          | +    | +LB  | +MB          | <i>L. monocytogenes</i> | + | =                              |            |
| D32  | Stainless steel table in workroom      | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.128 | 0.230   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| D33  | Vacuum machine                         | EN2  | Yes                        | Ø                                 | Ø      | Ø      | -LE | /   | +               | 2.018 | 0.230   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | PS                             | 2.919  | 0.249                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | PS                             |            |
| D39  | Surface grille haddock                 | EN2  | Yes                        | +LA(3)                            | +LA(1) | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 0.409 | 0.230   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 3.129  | 0.249                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G6   | Fish container                         | EN2  | No                         | +MA                               | +MB    | +MA    | +MB | <i>L. monocytogenes</i>                     | +               | 2.966 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.926  | 0.198                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G7   | Fish bone extractor                    | EN2  | No                         | +LA                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i>                     | +               | 2.915 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.750  | 0.198                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G8   | Plastic pallet                         | EN2  | No                         | +MA                               | +MA    | +MB    | +MB | <i>L. monocytogenes</i>                     | +               | 2.945 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.911  | 0.198                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G9   | Thawing chamber                        | EN2  | No                         | -LE                               | -LE    | Ø      | -LE | /   | -               | 0.066 | 0.163   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| G10  | Salmon container                       | EN2  | No                         | +MA                               | +MA    | +MA    | +MB | <i>L. monocytogenes</i>                     | +               | 2.974 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.952  | 0.198                          | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G11  | Plastic bin                            | EN2  | No                         | +LA                               | +MA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 2.980 | 0.163   | +    | +LA  | +MA          | <i>L. monocytogenes</i> | + | =                              | 2.951  | 0.198                          | +    | +LA  | +MA          | <i>L. monocytogenes</i> | + | =                              |            |
| G12  | Grille                                 | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.066 | 0.163   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| G13  | Dry salt table                         | EN2  | No                         | -LE                               | -LE    | -LE    | -LE | /   | -               | 0.060 | 0.163   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| G14  | Peeling table                          | EN2  | No                         | Ø                                 | Ø      | -LE    | -LE | /   | -               | 0.048 | 0.163   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| G15  | Stainless steel table                  | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.063 | 0.163   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H1   | "Bolness" tank                         | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.064 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H2   | Vacuum scales                          | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.066 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H3   | Filleting table                        | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.065 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H7   | Vacuum machine                         | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.065 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H9   | Filleting table                        | EN2  | No                         | Ø                                 | -LE    | Ø      | Ø   | /   | -               | 0.068 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H10  | MAIE equipment                         | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.067 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H13  | Racks                                  | EN2  | No                         | Ø                                 | -LE    | Ø      | Ø   | /   | -               | 0.075 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H14  | Table for roasts and skewers           | EN2  | No                         | -LE                               | -LE    | -LE    | -ME | /   | -               | 0.07  | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H15  | Scale for salted meat                  | EN2  | No                         | -LE                               | -LE    | Ø      | -LE | /   | -               | 0.068 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H16  | Salted meat rack                       | EN2  | No                         | -LE                               | -LE    | -ME    | -ME | /   | -               | 0.076 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H17  | Grille                                 | EN2  | No                         | -LE                               | -LE    | -ME    | -ME | /   | -               | 0.069 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H19  | Door to scrap room                     | EN2  | No                         | -LE                               | -LE    | -LE    | -ME | /   | -               | 0.077 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H21  | Scale for salmons                      | EN2  | No                         | Ø                                 | Ø      | -LE    | -ME | /   | -               | 0.082 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| H22  | Table for manual filleting             | EN2  | No                         | Ø                                 | -LE    | Ø      | -LE | /   | -               | 0.080 | 0.187   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| J6   | Fish container                         | EN2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /   | -               | 0.079 | 0.198   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| J7   | Fish bone extractor                    | EN2  | No                         | Ø                                 | Ø      | Ø      | -LE | /   | -               | 0.084 | 0.198   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| J17  | Table for salmons                      | EN2  | No                         | -LE                               | Ø      | Ø      | Ø   | /   | -               | 0.089 | 0.198   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| Q31  | Mincing machine                        | EN2  | Oui                        | +LA                               | +MA    | +MA    | +MA | <i>L. monocytogenes</i>                     | +               | 3.030 | 0.233   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              | 2.834  | 0.286                          | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                              |            |
| Q34  | Floor of scrap room                    | EN2  | No                         | Ø                                 | -LE    | Ø      | Ø   | /   | -               | 0.157 | 0.233   | -    | /    | /            | /                       | - | =                              |  |                                |      |      |              |                         |   |                                |            |
| P13  | Surface of filleting table             | EN2  | No                         | +MB                               | +LB    | +LB    | +MB | <i>L. monocytogenes</i>                     | +               | 0.258 | 0.276   | d    | +MB  | +MB          | <i>L. monocytogenes</i> | + | =                              |  |                                |      |      |              |                         |   |                                |            |

| CODE | MATRICES   | Cat. | S<br>P<br>/<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                 |                  | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 24h 37°C |         |              |      |     |                                |            | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 24h 37°C |       |         |              |      |     |                                |            |   |
|------|--|------|----------------------------|-----------------------------------|-----|--------|-----|-----------------|------------------|---|---------|--------------|------|-----|--------------------------------|------------|--|-------|---------|--------------|------|-----|--------------------------------|------------|---|
|      |  |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION    |                  | TPLmono<br>(TPmono direct 24H)  |         | CONFIRMATION |      |     | FINAL RESULT<br>TPLmono direct | Comparison | TPLmono<br>(TPmono direct 24H)   |       |         | CONFIRMATION |      |     | FINAL RESULT<br>TPLmono direct | Comparison |   |
|      |  |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.        | Result<br>L.mono | OD  | Cut-off | Res.         | ALOA | RLM | Identification                 |            |  | OD    | Cut-off | Res.         | ALOA | RLM | Identification                 |            |   |
|      |  |      |                            |                                   |     |        |     |                 |                  |   |         |              |      |     |                                |            |  |       |         |              |      |     |                                |            |   |
| D34  | Salmon scraps from dirty tank                    | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.115   | 0.230   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| D35  | Scraps from kippers container                    | EN3  | No                         | -LA                               | +LA | -MB    | +HB | L.innocua       | -                | 0.125   | 0.230   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| D36  | Scraps from vacuum machine                       | EN3  | Yes                        | Ø                                 | Ø   | -LE    | Ø   | /               | -                | 0.121   | 0.230   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| D37  | Scraps from workroom's floor                     | EN3  | Yes                        | Ø                                 | Ø   | +MA    | +MA | L.monocytogenes | +                | 0.435   | 0.230   | +            | +LA  | +LA | L.monocytogenes                | +          | =  | 2.947 | 0.249   | +            | +MA  | +MA | L.monocytogenes                | +          | = |
| D38  | Scraps from dirty tank fish shop                 | EN3  | No                         | +MA                               | +HA | +MA    | +HA | L.monocytogenes | +                | 2.133   | 0.230   | +            | +MA  | +MA | L.monocytogenes                | +          | =  | 2.955 | 0.249   | +            | +MA  | +MA | L.monocytogenes                | +          | = |
| H4   | Grille for salmon                                | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.074   | 0.187   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| H6   | Grille for haddock                               | EN3  | No                         | -LE                               | -LE | Ø      | -LE | /               | -                | 0.067   | 0.187   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| H20  | Salmon cutting machine                           | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.079   | 0.187   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| J18  | Scraps from whitening fish container             | EN3  | No                         | -LA                               | -LE | -MB    | +LA | L.seeligeri     | -                | 0.089   | 0.198   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| J19  | Scraps from ice tank                             | EN3  | No                         | Ø                                 | -LE | Ø      | Ø   | /               | -                | 0.097   | 0.198   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| J20  | Fish display during work                         | EN2  | No                         | -LE                               | -LE | Ø      | Ø   | /               | -                | 0.089   | 0.198   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| L13  | Scraps from cutting table                        | EN3  | No                         | -LE                               | -LE | -LE    | Ø   | /               | -                | 0.068   | 0.200   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| L14  | Scraps from stainless steel table                | EN3  | No                         | -LE                               | -LE | -ME    | -LE | /               | -                | 0.089   | 0.200   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| L15  | Salmon scraps from dirty tank                    | EN3  | No                         | -LE                               | Ø   | Ø      | Ø   | /               | -                | 0.077   | 0.200   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| L16  | Scraps from dirty container                      | EN3  | No                         | +LA                               | +LA | +MA    | +MB | L.monocytogenes | +                | 3.086   | 0.200   | +            | +MA  | +HB | L.monocytogenes                | +          | =  | 2.697 | 0.207   | +            | +MB  | +MB | L.monocytogenes                | +          | = |
| M10  | Scraps from vegetable production line            | EN3  | No                         | +HA                               | +MA | +MA    | +MA | L.monocytogenes | +                | 2.819   | 0.207   | +            | +MA  | +MA | L.monocytogenes                | +          | =  | 2.880 | 0.233   | +            | +MA  | +MB | L.monocytogenes                | +          | = |
| M11  | Scraps from production area's floor              | EN3  | No                         | +HB                               | +MB | +MA    | +MB | L.monocytogenes | +                | 2.825   | 0.207   | +            | +MB  | +MB | L.monocytogenes                | +          | =  | 2.864 | 0.233   | +            | +MB  | +HB | L.monocytogenes                | +          | = |
| M12  | Scraps from stainless steel table (cutting room) | EN3  | No                         | +MB                               | +LB | +MB    | +MB | L.monocytogenes | +                | 2.762   | 0.207   | +            | +MB  | +MB | L.monocytogenes                | +          | =  | 2.879 | 0.233   | +            | +MB  | +MB | L.monocytogenes                | +          | = |
| M14  | Salmon scraps from dirty tank                    | EN3  | No                         | Ø                                 | Ø   | +MA    | +LA | L.monocytogenes | +                | 0.110   | 0.207   | -            | +LA  | +LB | L.monocytogenes                | -          | FN   | 0.248 | 0.233   | +            | +LA  | +LB | L.monocytogenes                | +          | = |
| N10  | Scraps from cheese production booth              | EN3  | No                         | -LA                               | +MA | -MA    | +MB | L.innocua       | -                | 0.097   | 0.200   | -            | /    | /   | /                              | -          | =  |       |         |              |      |     |                                |            |   |
| O32  | Scraps from meat cutting table                   | EN3  | Yes                        | +MA                               | +MA | +MA    | +HA | L.monocytogenes | +                | 3.143   | 0.233   | +            | +LA  | +MA | L.monocytogenes                | +          | =  | 3.012 | 0.286   | +            | +MA  | +MA | L.monocytogenes                | +          | = |
| O33  | Poultry scraps from dirty container              | EN3  | Yes                        | +LA                               | +MA | +MB    | +MB | L.monocytogenes | +                | 3.150   | 0.233   | +            | +LB  | +HB | L.monocytogenes                | +          | =  | 3.055 | 0.286   | +            | +MA  | +HB | L.monocytogenes                | +          | = |

APPENDIX D2 :

OTHER PRODUCTS

FRASER ½,  
THEN FRASER 22 HOURS AT 30°C + 16 HOURS AT 37°C

**Meat product except raw**

| CODE | MATRICES                    | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                         |                         | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                         |                                     |            | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                         |                                     |            |
|------|-----------------------------|------|----------------------------|-----------------------------------|-----|--------|-----|-------------------------|-------------------------|---|---------|------|--------------|-----|-------------------------|-------------------------------------|------------|--|---------|------|--------------|-----|-------------------------|-------------------------------------|------------|
|      |                             |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION            |                         | TPLmono (30 - 37°C)   |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono 30-<br>37°C | Comparison | TPLmono (30 - 37°C)  |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono 30-<br>37°C | Comparison |
|      |                             |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.                | Result<br><i>L.mono</i> | OD  | Cut-off | Res. | ALOA         | RLM | Identification          |                                     |            | OD   | Cut-off | Res. | ALOA         | RLM | Identification          |                                     |            |
|      |                             |      |                            |                                   |     |        |     |                         |                         |   |         |      |              |     |                         |                                     |            |  |         |      |              |     |                         |                                     |            |
| A19  | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.066   | 0.194   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| A20  | Cooked chitterlings sausage | MP3  | No                         | -ME                               | -ME | -ME    | -ME | /                       | -                       | 0.079   | 0.194   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| A21  | Cooked chitterlings sausage | MP3  | No                         | -ME                               | -ME | -LE    | -LE | /                       | -                       | 0.069   | 0.194   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B5   | Streaky bacon               | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.073   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B6   | Rolled and stuffed ham      | MP3  | No                         | -LE                               | -LE | -ME    | -ME | /                       | -                       | 0.079   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B7   | Pâté de campagne            | MP3  | No                         | -LE                               | -LE | -ME    | -ME | /                       | -                       | 0.075   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B8   | Pork head pâté              | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.077   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B9   | Horse salami-like sausage   | MP3  | No                         | -LE                               | -LE | Ø      | Ø   | /                       | -                       | 0.089   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B10  | Grilled chicken             | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.077   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| B11  | Saveloy                     | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.073   | 0.207   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| L32  | Salami-type sausage         | MP3  | No                         | -ME                               | Ø   | -ME    | Ø   | /                       | -                       | 0.073   | 0.200   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| M15  | Cooked sausage              | MP3  | No                         | +LA                               | +LA | +LA    | +MA | <i>L. monocytogenes</i> | +                       | 2.872   | 0.207   | +    | +MB          | +MB | <i>L. monocytogenes</i> | +                                   | =          | 2.916  | 0.233   | +    | +MB          | +HB | <i>L. monocytogenes</i> | +                                   | =          |
| M16  | Duck pâté                   | MP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +                       | 2.872   | 0.207   | +    | +MB          | +MB | <i>L. monocytogenes</i> | +                                   | =          | 2.906  | 0.233   | +    | +MB          | +MB | <i>L. monocytogenes</i> | +                                   | =          |
| N17  | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.099   | 0.224   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| N18  | Foie gras                   | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.100   | 0.224   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| Q4   | Pâté de campagne            | MP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.252   | 0.289   | -    | /            | /   | /                       | -                                   | =          |  |         |      |              |     |                         |                                     |            |
| Q5   | Pâté                        | MP3  | No                         | +MA                               | +MA | +HA    | +HA | <i>L. monocytogenes</i> | +                       | 3.054   | 0.289   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                                   | =          | 3.110  | 0.296   | +    | +MA          | +HA | <i>L. monocytogenes</i> | +                                   | =          |

**Dairy products except raw**

| CODE | MATRICES                                     | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |                               |                  | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                  |                                 | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |                     |         |      |              |     |                  |                                 |            |
|------|--|------|----------------------------|-----------------------------------|--------|--------|-----|-------------------------------|------------------|---|---------|------|--------------|-----|------------------|---------------------------------|--|---------------------|---------|------|--------------|-----|------------------|---------------------------------|------------|
|      |  |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                  |                  | TPLmono (30 - 37°C)   |         |      | CONFIRMATION |     |                  | FINAL RESULT<br>TPLmono 30-37°C | Comparison   | TPLmono (30 - 37°C) |         |      | CONFIRMATION |     |                  | FINAL RESULT<br>TPLmono 30-37°C | Comparison |
|      |  |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                      | Result<br>L.mono | OD  | Cut-off | Res. | ALOA         | RLM | Identification   |                                 |  | OD                  | Cut-off | Res. | ALOA         | RLM | Identification   |                                 |            |
|      |  |      |                            |                                   |        |        |     |                               |                  |   |         |      |              |     |                  |                                 |  |                     |         |      |              |     |                  |                                 |            |
| A23  | Feta cheese                                  | DP1  | No                         | +LA                               | +LA    | +MA    | +MB | L. monocytogenes              | +                | 0.182   | 0.194   | d    | +LA          | +LA | L. monocytogenes | +                               | =  | 0.209               | 0.213   | d    | +LA          | +MA | L. monocytogenes | +                               | =          |
| M26  | "Petit Billy affiné" cheese                  | DP1  | Yes                        | +LA(3)                            | +LA(4) | +MA    | +MA | L. monocytogenes              | +                | 2.921   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                               | =  | 2.900               | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| M33  | "Neufchâtel" cheese                          | DP1  | No                         | -LE                               | Ø      | Ø      | Ø   | /                             | -                | 0.096   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| B12  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.072   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| B13  | Goat cheese                                  | DP2  | No                         | -LE                               | Ø      | Ø      | Ø   | /                             | -                | 0.081   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| L23  | Pasteurized goat cheese                      | DP2  | Yes                        | -LE                               | -LE    | Ø      | -LE | /                             | -                | 0.074   | 0.200   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| L24  | Pasteurized goat cheese                      | DP2  | Yes                        | +LB                               | +LB(3) | +LB    | +MB | L. monocytogenes<br>L.innocua | +                | 3.141   | 0.200   | +    | +MB          | +MB | L. monocytogenes | +                               | =  | 2.836               | 0.207   | +    | +MB          | +MB | L. monocytogenes | +                               | =          |
| L28  | Pasteurized goat cheese                      | DP2  | Yes                        | Ø                                 | -LE    | Ø      | Ø   | /                             | -                | 0.074   | 0.200   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M18  | Goat cheese                                  | DP2  | Yes                        | +LA                               | +LA    | +MA    | +HB | L. monocytogenes              | +                | 2.891   | 0.207   | +    | +HA          | +MA | L. monocytogenes | +                               | =  | 2.805               | 0.233   | +    | +HA          | +HA | L. monocytogenes | +                               | =          |
| M19  | Goat cheese                                  | DP2  | Yes                        | +LA(1)                            | +LA    | +MA    | +MA | L. monocytogenes              | +                | 2.878   | 0.207   | +    | +MB          | +MB | L. monocytogenes | +                               | =  | 2.880               | 0.233   | +    | +MB          | +MB | L. monocytogenes | +                               | =          |
| M20  | "Sainte Maure" ashy goat cheese              | DP2  | Yes                        | +LA                               | +LA    | +MA    | +HA | L. monocytogenes              | +                | 2.932   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                               | =  | 0.447               | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| M21  | "Sainte Maure" ashy goat cheese              | DP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.100   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M22  | Goat cheese                                  | DP2  | Yes                        | +MA                               | +MA    | +MA    | +MA | L. monocytogenes              | +                | 2.944   | 0.207   | +    | +MB          | +HB | L. monocytogenes | +                               | =  | 2.964               | 0.233   | +    | +MB          | +HB | L. monocytogenes | +                               | =          |
| M23  | Goat cheese                                  | DP2  | Yes                        | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.085   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M24  | Goat cheese                                  | DP2  | Yes                        | +MA                               | +LA    | +HA    | +HA | L. monocytogenes              | +                | 2.948   | 0.207   | +    | +HA          | +HA | L. monocytogenes | +                               | =  | 2.892               | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| M25  | Goat cheese                                  | DP2  | Yes                        | +LA                               | +LA    | +MA    | +MA | L. monocytogenes              | +                | 2.876   | 0.207   | +    | +MA          | +HA | L. monocytogenes | +                               | =  | 2.923               | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| M30  | "Petit Pouligny" goat cheese                 | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.094   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M35  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.093   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M36  | Goat cheese                                  | DP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.096   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| A22  | Opéra chocolate cake                         | DP3  | No                         | +LB                               | +MD    | +MB    | +MB | L. monocytogenes              | +                | 3.044   | 0.194   | +    | +MB          | +MB | L. monocytogenes | +                               | =  | 3.190               | 0.213   | +    | +MB          | +MB | L. monocytogenes | +                               | =          |
| K8   | Vanilla ice-cream                            | DP3  | Yes                        | +LA                               | +LA    | +MA    | +HB | L. monocytogenes              | +                | 2.976   | 0.185   | +    | +LA          | +MA | L. monocytogenes | +                               | =  | 2.948               | 0.127   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| K9   | "Mystère" ice-cream                          | DP3  | No                         | -MB                               | +MB    | -MA    | +HA | L.innocua                     | -                | 0.052   | 0.185   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| K10  | Choux pastry + Chantilly cream               | DP3  | Yes                        | +LA                               | +LA    | +MA    | +HA | L. monocytogenes              | +                | 2.973   | 0.185   | +    | +MA          | +MA | L. monocytogenes | +                               | =  | 2.985               | 0.127   | +    | +MA          | +HA | L. monocytogenes | +                               | =          |
| K11  | Strawberries + ice-cream and Chantilly cream | DP3  | No                         | -MA                               | +MA    | -MA    | +MA | L.innocua                     | -                | 0.053   | 0.185   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| K13  | Milk powder                                  | DP3  | No                         | -LA                               | +LA    | -MA    | +HA | L.innocua                     | -                | 0.055   | 0.185   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| K15  | Profiteroles                                 | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.056   | 0.185   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| K16  | Choux pastry + Chantilly cream               | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.043   | 0.185   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| L21  | Mix for cookies                              | DP3  | No                         | -HD                               | +MD    | -HB    | +MD | L.innocua                     | -                | 0.074   | 0.200   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |
| M17  | Choux pastry + Chantilly cream               | DP3  | Yes                        | +LA                               | +LA    | +MA    | +MA | L. monocytogenes              | +                | 2.879   | 0.207   | +    | +MA          | +MA | L. monocytogenes | +                               | =  | 2.880               | 0.233   | +    | +MA          | +MA | L. monocytogenes | +                               | =          |
| M34  | Raspberry tart                               | DP3  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                             | -                | 0.107   | 0.207   | -    | /            | /   | /                | -                               | =  |                     |         |      |              |     |                  |                                 |            |

Seafood products

| CODE | MATRICES                    | Cat. | S<br>p<br>/<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |                              |                  | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                              |                                 | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |                     |         |       |              |     |                              |                                 |            |   |
|------|-----------------------------|------|----------------------------|-----------------------------------|--------|--------|-----|------------------------------|------------------|---|---------|------|--------------|-----|------------------------------|---------------------------------|--|---------------------|---------|-------|--------------|-----|------------------------------|---------------------------------|------------|---|
|      |                             |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                 |                  | TPLmono (30 - 37°C)   |         |      | CONFIRMATION |     |                              | FINAL RESULT<br>TPLmono 30-37°C | Comparison   | TPLmono (30 - 37°C) |         |       | CONFIRMATION |     |                              | FINAL RESULT<br>TPLmono 30-37°C | Comparison |   |
|      |                             |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                     | Result<br>L.mono | OD  | Cut-off | Res. | ALOA         | RLM | Identification               |                                 |  | OD                  | Cut-off | Res.  | ALOA         | RLM | Identification               |                                 |            |   |
|      |                             |      |                            |                                   |        |        |     |                              |                  |   |         |      |              |     |                              |                                 |  |                     |         |       |              |     |                              |                                 |            |   |
| C10  | Shrimps                     | SP1  | No                         | +MB                               | +LB    | +MB    | +MB | L.monocytogenes              | +                | 3.215   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 2.712               | 0.233   | +     | +MA          | +MA | L.monocytogenes              | +                               | =          |   |
| C11  | Shrimps                     | SP1  | No                         | +MB                               | +LA    | +MB    | +MA | L.monocytogenes              | +                | 3.192   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 2.483               | 0.233   | +     | +MA          | +MA | L.monocytogenes              | +                               | =          |   |
| C12  | Shrimps                     | SP1  | No                         | -LE                               | -LE    | -ME    | -ME | /                            | -                | 0.095   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C13  | Shrimps                     | SP1  | No                         | +MA                               | +MB    | +MA    | +MB | L.monocytogenes              | +                | 3.215   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 3.215               | 0.249   | +     | +MA          | +MA | L.monocytogenes              | +                               | =          |   |
| D12  | Mixed seafood               | SP1  | No                         | +LB(1)                            | +LB(5) | +MA    | +MA | L.monocytogenes              | +                | 1.481   | 0.233   | +    | +MA          | +HA | L.monocytogenes              | +                               | =  | 2.327               | 0.249   | +     | +MA          | +HA | L.monocytogenes              | +                               | =          |   |
| D16  | Sweet herring fillet        | SP1  | No                         | +LA                               | Ø      | +MB    | +HB | L.monocytogenes              | +                | 2.482   | 0.233   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 2.704               | 0.249   | +     | +MA          | +MA | L.monocytogenes              | +                               | =          |   |
| D17  | Frozen salmon fillet        | SP1  | No                         | +LA                               | +LA    | +MA    | +MA | L.monocytogenes              | +                | 2.694   | 0.233   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 2.940               | 0.249   | +     | +MA          | +HA | L.monocytogenes              | +                               | =          |   |
| F3   | Sweet herring fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.146   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| F4   | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.199   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| G1   | Raw fish                    | SP1  | No                         | Ø                                 | -LE    | Ø      | Ø   | /                            | -                | 0.065   | 0.163   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| G3   | Fresh halibut               | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.063   | 0.163   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| G4   | Fresh salmon                | SP1  | No                         | +MA                               | +MA    | +MA    | +MA | L.monocytogenes              | +                | 2.967   | 0.163   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| G5   | Fresh herring               | SP1  | No                         | Ø                                 | Ø      | -LE    | -LE | /                            | -                | 0.060   | 0.163   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| H11  | Haddock fillet              | SP1  | No                         | -LA(3)                            | +LB    | -MA    | +HA | L.innocua                    | -                | 0.062   | 0.187   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| H12  | Sweet herring fillet        | SP1  | No                         | -MA                               | +MA    | -MA    | +MB | L.innocua                    | -                | 0.075   | 0.187   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| I8   | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | -MA    | +MA | L.welshimeri                 | -                | 0.044   | 0.125   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| I9   | Sweet herring fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | -LE | /                            | -                | 0.047   | 0.125   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| I10  | Haddock                     | SP1  | No                         | +MB                               | +MB    | +LB    | +LB | L.monocytogenes<br>L.innocua | +                | 0.344   | 0.125   | +    | +LB          | +LB | L.monocytogenes<br>L.innocua | +                               | =  | 0.406               | 0.198   | +     | +LB          | +LB | L.monocytogenes<br>L.innocua | +                               | =          |   |
| I11  | Skate                       | SP1  | No                         | -LE                               | Ø      | -LE    | -LE | /                            | -                | 0.047   | 0.125   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| J4   | Salmon fillet               | SP1  | No                         | -LB                               | +LB(3) | -LB    | +MB | L.innocua                    | -                | 0.091   | 0.211   | -    | -LA          | +LA | L.innocua                    | -                               | =  | 0.105               | 0.234   | -     | /            | /   | /                            | -                               | =          |   |
| J5   | Herring fillet              | SP1  | No                         | -LA(3)                            | +LA(2) | -LA    | +HA | L.innocua                    | -                | 0.108   | 0.211   | -    | -MA          | +MA | L.innocua                    | -                               | =  | 0.109               | 0.234   | -     | /            | /   | /                            | -                               | =          |   |
| J14  | Fish(4)                     | SP1  | No                         | -LA(4)                            | +LA(2) | -LA    | +HA | L.innocua                    | -                | 0.105   | 0.211   | -    | /            | /   | /                            | -                               | =  | 0.111               | 0.234   | -     | /            | /   | /                            | -                               | =          |   |
| J15  | Fish fillet                 | SP1  | No                         | -LA                               | +LA    | -MA    | +MA | L.innocua                    | -                | 0.096   | 0.211   | -    | /            | /   | /                            | -                               | =  | 0.112               | 0.234   | -     | /            | /   | /                            | -                               | =          |   |
| J21  | Medium sole                 | SP1  | No                         | Ø                                 | Ø      | -LE    | -LE | /                            | -                | 0.095   | 0.211   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| J22  | Sea perch from Iceland      | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.102   | 0.211   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| J23  | Panga fillet                | SP1  | No                         | +HB                               | +HB    | +MB    | +MB | L.monocytogenes<br>L.innocua | +                | 3.036   | 0.211   | +    | +MB          | +MB | L.monocytogenes<br>L.innocua | +                               | =  | 2.793               | 0.234   | +     | +MB          | +MB | L.monocytogenes<br>L.innocua | +                               | =          |   |
| J24  | Cod fillet                  | SP1  | No                         | Ø                                 | Ø      | -LE    | Ø   | /                            | -                | 0.110   | 0.211   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| J25  | Scallop                     | SP1  | No                         | -ME                               | -LE    | -ME    | -ME | /                            | -                | 0.113   | 0.211   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| K22  | Shrimps                     | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.048   | 0.185   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| K23  | Frozen salmon fillet        | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.046   | 0.185   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| O10  | Shrimps                     | SP1  | No                         | +LB(3)                            | +LA    | +MA    | +HB | L.monocytogenes              | +                | 3.142   | 0.226   | +    | +MA          | +HA | L.monocytogenes              | +                               | =  | 2.960               | 0.286   | +     | +MA          | +HA | L.monocytogenes              | +                               | =          |   |
| O11  | Shellfish                   | SP1  | No                         | +LB                               | +LB(1) | +MA    | +MB | L.monocytogenes              | +                | 0.466   | 0.226   | +    | +MA          | +HB | L.monocytogenes              | +                               | =  | 0.715               | 0.286   | +     | +MA          | +HB | L.monocytogenes              | +                               | =          |   |
| O12  | Shrimps                     | SP1  | No                         | Ø                                 | Ø      | +MA    | +LB | L.monocytogenes<br>L.innocua | +                | 3.127   | 0.226   | +    | +MA          | +HA | L.monocytogenes<br>L.innocua | +                               | =  | 3.141               | 0.286   | +     | +MA          | +HA | L.monocytogenes<br>L.innocua | +                               | =          |   |
| O13  | Shellfish                   | SP1  | No                         | +LC                               | +LA    | +MD    | +MD | L.innocua                    | +                | 0.160   | 0.226   | -    | +MC          | +HD | L.monocytogenes<br>L.innocua | -                               | =  | FN                  | 0.367   | 0.286 | d            | +MB | +HB                          | L.monocytogenes                 | +          | = |
| O14  | Fresh herring               | SP1  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.108   | 0.226   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C1   | Smoked salmon tartare       | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.113   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C2   | Smoked salmon               | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.107   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C3   | Smoked salmon               | SP2  | No                         | Ø                                 | Ø      | -LE    | Ø   | /                            | -                | 0.108   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C4   | Smoked salmon bits          | SP2  | No                         | +LA                               | +LA    | +MA    | +MA | L.monocytogenes              | +                | 3.203   | 0.206   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 2.525               | 0.233   | +     | +MA          | +HA | L.monocytogenes              | +                               | =          |   |
| C5   | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.114   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C6   | Smoked salmon carpaccio     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.094   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C7   | Smoked salmon from Ireland  | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.096   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| C9   | Smoked kippers              | SP2  | No                         | -LA                               | +LA    | -MA    | +HA | L.innocua                    | -                | 0.104   | 0.206   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| D1   | Smoked salmon bits          | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.126   | 0.233   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| D2   | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.117   | 0.233   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| D5   | Smoked salmon carpaccio     | SP2  | No                         | +MB                               | +MB    | +MB    | +HB | L.monocytogenes              | +                | 3.059   | 0.233   | +    | +MB          | +MB | L.monocytogenes              | +                               | =  | 3.077               | 0.249   | +     | +MB          | +MB | L.monocytogenes              | +                               | =          |   |
| D7   | Smoked salmon from Norway   | SP2  | No                         | Ø                                 | Ø      | +MA    | +HA | L.monocytogenes              | +                | 2.572   | 0.233   | +    | +MB          | +HB | L.monocytogenes              | +                               | =  | 2.567               | 0.249   | +     | +MB          | +HB | L.monocytogenes              | +                               | =          |   |
| D8   | Smoked haddock              | SP2  | No                         | Ø                                 | Ø      | +MB    | +MB | L.monocytogenes              | +                | 3.184   | 0.233   | +    | +MA          | +MB | L.monocytogenes              | +                               | =  | 2.914               | 0.249   | +     | +MA          | +MB | L.monocytogenes              | +                               | =          |   |
| D9   | Small smoked trout          | SP2  | No                         | -LE                               | -ME    | -LE    | -ME | /                            | -                | 0.119   | 0.233   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| D10  | Small slice of smoked trout | SP2  | No                         | +LA                               | +LA    | +MA    | +MB | L.monocytogenes              | +                | 3.059   | 0.233   | +    | +MA          | +HA | L.monocytogenes              | +                               | =  | 2.744               | 0.249   | +     | +MA          | +HA | L.monocytogenes              | +                               | =          |   |
| F1   | Smoked haddock              | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.140   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| F2   | Smoked trout                | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.148   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| F6   | Smoked salmon               | SP2  | No                         | +LA                               | -LE    | +MA    | +LB | L.monocytogenes              | +                | 3.157   | 0.256   | +    | +MA          | +MA | L.monocytogenes              | +                               | =  | 3.077               | 0.226   | +     | +MA          | +MA | L.monocytogenes              | +                               | =          |   |
| F7   | Smoked salmon bits          | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.161   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| F8   | Smoked salmon from Norway   | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.155   | 0.256   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| G2   | Kippers                     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.066   | 0.163   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| H5   | Kippers                     | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.060   | 0.187   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| O15  | Smoked salmon from Atlantic | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.095   | 0.226   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| O6   | Smoked salmon bits          | SP2  | No                         | +LA                               | +LA(1) | +MB    | +MB | L.monocytogenes              | +                | 3.134   | 0.289   | +    | +MB          | +HB | L.monocytogenes              | +                               | =  | 3.147               | 0.296   | +     | +MA          | +HB | L.monocytogenes              | +                               | =          |   |
| O7   | Smoked salmon from Scotland | SP2  | No                         | Ø                                 | Ø      | Ø      | Ø   | /                            | -                | 0.185   | 0.289   | -    | /            | /   | /                            | -                               | =  |                     |         |       |              |     |                              |                                 |            |   |
| O8   | Smoked salmon from Atlantic | SP2  | No                         | +HA                               | +MB    | +MB    | +MB | L.monocytogenes              | +                | 3.151   | 0.289   | +    | +MA          | +HB | L.monocytogenes</            |                                 |  |                     |         |       |              |     |                              |                                 |            |   |

Seafood products

| CODE | MATRICES                         | Cat. | S<br>p<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                         |                         | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                         |                                 | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |                     |       |         |              |      |                         |                                 |            |  |  |
|------|----------------------------------|------|----------------------------|-----------------------------------|-----|--------|-----|-------------------------|-------------------------|---|---------|------|--------------|-----|-------------------------|---------------------------------|--|---------------------|-------|---------|--------------|------|-------------------------|---------------------------------|------------|--|--|
|      |                                  |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION            |                         | TPLmono (30 - 37°C)   |         |      | CONFIRMATION |     |                         | FINAL RESULT<br>TPLmono 30-37°C | Comparison   | TPLmono (30 - 37°C) |       |         | CONFIRMATION |      |                         | FINAL RESULT<br>TPLmono 30-37°C | Comparison |  |  |
|      |                                  |      |                            | Q&A1                              | P1  | Q&A2   | P2  | IDENTIF.                | Result<br><i>L.mono</i> | OD  | Cut-off | Res. | ALOA         | RLM | Identification          |                                 |  |                     | OD    | Cut-off | Res.         | ALOA | RLM                     | Identification                  |            |  |  |
|      |                                  |      |                            |                                   |     |        |     |                         |                         |   |         |      |              |     |                         |                                 |  |                     |       |         |              |      |                         |                                 |            |  |  |
| C8   | Shrimps in spicy sauce           | SP3  | No                         | Ø                                 | -LE | Ø      | Ø   | /                       | -                       | 0.091   | 0.206   | -    | /            | /   | /                       | -                               | =  |                     |       |         |              |      |                         |                                 |            |  |  |
| D11  | Cooked mussels from Chile        | SP3  | No                         | -LE                               | -LE | -LE    | Ø   | /                       | -                       | 0.102   | 0.233   | -    | /            | /   | /                       | -                               | =  |                     |       |         |              |      |                         |                                 |            |  |  |
| D13  | Salad of scampi                  | SP3  | No                         | -ME                               | -LE | -ME    | -LE | /                       | -                       | 0.098   | 0.233   | -    | /            | /   | /                       | -                               | =  |                     |       |         |              |      |                         |                                 |            |  |  |
| D15  | Shrimps in sauce                 | SP3  | No                         | +LA                               | +MA | +MA    | +MA | <i>L. monocytogenes</i> | +                       | 2.729   | 0.233   | +    | +MA          | +MA | <i>L.monocytogenes</i>  | +                               | =  | 2.890               | 0.249 | +       | +MA          | +MA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |
| F9   | Salmon olives                    | SP3  | No                         | +LA                               | +LA | +MA    | +HA | <i>L. monocytogenes</i> | +                       | 3.117   | 0.256   | +    | +MA          | +MA | <i>L.monocytogenes</i>  | +                               | =  | 3.009               | 0.226 | +       | +MA          | +MA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |
| F10  | Scallops with vegetables         | SP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +                       | 3.215   | 0.256   | +    | +MA          | +MA | <i>L.monocytogenes</i>  | +                               | =  | 3.135               | 0.226 | +       | +MA          | +HA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |
| I6   | Salmon tartare                   | SP3  | No                         | +LA                               | +LA | +HB*   | +MB | <i>L. monocytogenes</i> | +                       | 3.053   | 0.125   | +    | +MA          | +HB | <i>L. monocytogenes</i> | +                               | =  | 2.919               | 0.198 | +       | +MA          | +HB  | <i>L. monocytogenes</i> | +                               | =          |  |  |
| J26  | Salmon cake                      | SP3  | No                         | Ø                                 | Ø   | Ø      | Ø   | /                       | -                       | 0.092   | 0.211   | -    | /            | /   | /                       | -                               | =  |                     |       |         |              |      |                         |                                 |            |  |  |
| O7   | Tuna sandwich                    | SP3  | No                         | +LA                               | +LA | +MA    | +MA | <i>L. monocytogenes</i> | +                       | 3.036   | 0.226   | +    | +MA          | +MA | <i>L.monocytogenes</i>  | +                               | =  | 2.999               | 0.286 | +       | +MA          | +HA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |
| O8   | Salmon olives                    | SP3  | Yes                        | +MA                               | +MA | +MA    | +HB | <i>L. monocytogenes</i> | +                       | 3.063   | 0.226   | +    | +MA          | +HA | <i>L.monocytogenes</i>  | +                               | =  | 3.04                | 0.286 | +       | +MA          | +HA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |
| O9   | Coalfish fillet with leeks sauce | SP3  | Yes                        | +MA                               | +MA | +MA    | +HB | <i>L. monocytogenes</i> | +                       | 2.909   | 0.226   | +    | +HA          | +HA | <i>L.monocytogenes</i>  | +                               | =  | 3.108               | 0.286 | +       | +HA          | +HA  | <i>L.monocytogenes</i>  | +                               | =          |  |  |



Environment

| CODE | MATRICES                               | Cat. | S<br>P<br>i<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |        |        |     |  |                 |       | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |      |      |              |                         |    |                                 | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |                     |      |      |              |                         |   |                                 |            |
|------|--|------|----------------------------|-----------------------------------|--------|--------|-----|--|-----------------|-------|---|------|------|--------------|-------------------------|----|---------------------------------|--|---------------------|------|------|--------------|-------------------------|---|---------------------------------|------------|
|      |  |      |                            | FRASER 1/2                        |        | FRASER |     | CONFIRMATION                                 |                 |       | TPLmono (30 - 37°C)   |      |      | CONFIRMATION |                         |    | FINAL RESULT<br>TPLmono 30-37°C | Comparison   | TPLmono (30 - 37°C) |      |      | CONFIRMATION |                         |   | FINAL RESULT<br>TPLmono 30-37°C | Comparison |
|      |  |      |                            | O&A1                              | P1     | O&A2   | P2  | IDENTIF.                                     | Result<br>Lmono | OD    | Cut-off   | Res. | ALOA | RLM          | Identification          | OD |                                 |  | Cut-off             | Res. | ALOA | RLM          | Identification          |   |                                 |            |
|      |  |      |                            |                                   |        |        |     |  |                 |       |   |      |      |              |                         |    |                                 |  |                     |      |      |              |                         |   |                                 |            |
| D27  | Process water                          | EN1  | Yes                        | +LA(2)                            | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                      | +               | 2.498 | 0.233   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 2.805  | 0.249               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                               |            |
| D28  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                      | +               | 2.532 | 0.233   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | +  | =                               | 2.724  | 0.249               | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                               |            |
| D29  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                      | +               | 2.496 | 0.233   | +    | +MB  | +MB          | <i>L. monocytogenes</i> | +  | =                               | 2.73   | 0.249               | +    | +MB  | +MB          | <i>L. monocytogenes</i> | + | =                               |            |
| D30  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 2.833 | 0.233   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 2.765  | 0.249               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                               |            |
| H8   | Wahbasin in dishwashing room           | EN1  | No                         | ∅                                 | -LE    | -LE    | -LE | /  | -               | 0.208 | 0.187   | +    | ∅    | ∅            | ∅                       | -  | = (FP)                          |  |                     |      |      |              |                         |   |                                 |            |
| H18  | Pickler                                | EN1  | No                         | -LE                               | -LE    | ∅      | ∅   | /  | -               | 0.062 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| J16  | Water from collecting trap during work | EN1  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.100 | 0.211   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| L17  | Process water                          | EN1  | Yes                        | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.076 | 0.200   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| L18  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 3.079 | 0.200   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 2.794  | 0.207               | +    | +MA  | +HB          | <i>L. monocytogenes</i> | + | =                               |            |
| L19  | Process water                          | EN1  | Yes                        | +LA(2)                            | +LA    | +MA    | +HA | <i>L. monocytogenes</i>                      | +               | 2.904 | 0.200   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | +  | =                               | 2.779  | 0.207               | +    | +MB  | +MB          | <i>L. monocytogenes</i> | + | =                               |            |
| L20  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 3.127 | 0.200   | +    | +MA  | +MB          | <i>L. monocytogenes</i> | +  | =                               | 2.764  | 0.207               | +    | +MA  | +MB          | <i>L. monocytogenes</i> | + | =                               |            |
| M7   | Process water                          | EN1  | No                         | ∅                                 | ∅      | -MA    | +MA | <i>L. innocua</i>                            | -               | 0.085 | 0.207   | -    | /    | /            | /                       | -  | =                               | 0.084  | 0.200               | -    | ∅    | ∅            | ∅                       | - | =                               |            |
| M8   | Process water                          | EN1  | No                         | -LA                               | +MA    | -MA    | +HB | <i>L. innocua</i>                            | -               | 0.083 | 0.207   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| M9   | Stagnant water in dirty container      | EN1  | No                         | -LA                               | +MA    | -MA    | +HA | <i>L. innocua</i>                            | -               | 0.082 | 0.207   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| M13  | Process water                          | EN1  | No                         | +LA                               | +MA    | +MB    | +MB | <i>L. monocytogenes</i>                      | +               | 2.832 | 0.207   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 2.786  | 0.233               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                               |            |
| N9   | Process water                          | EN1  | No                         | -LA                               | +MA    | -MA    | +MA | <i>L. innocua</i>                            | -               | 0.121 | 0.224   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| O28  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 3.127 | 0.226   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | +  | =                               | 2.983  | 0.286               | +    | +MA  | +HB          | <i>L. monocytogenes</i> | + | =                               |            |
| O29  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MB | <i>L. monocytogenes</i>                      | +               | 3.073 | 0.226   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 3.054  | 0.286               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                               |            |
| O30  | Process water                          | EN1  | Yes                        | +LA                               | +LA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 2.895 | 0.226   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 3.107  | 0.286               | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                               |            |
| D31  | Surface of filleting table             | EN2  | No                         | -LA                               | ∅      | +MB    | +HB | <i>L. monocytogenes</i><br><i>L. innocua</i> | +               | 0.117 | 0.233   | -    | +MB  | +MB          | <i>L. monocytogenes</i> | -  | FN                              | 0.184  | 0.249               | -    | +MB  | +MB          | <i>L. monocytogenes</i> | - | FN                              |            |
| D32  | Stainless steel table in workroom      | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.123 | 0.233   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| D33  | Vacuum machine                         | EN2  | Yes                        | ∅                                 | ∅      | ∅      | -LE | /  | +               | 2.775 | 0.233   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | PS                              | 2.972  | 0.249               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | PS                              |            |
| D39  | Surface grille haddock                 | EN2  | Yes                        | +LA(3)                            | +LA(1) | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 0.282 | 0.233   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               | 1.046  | 0.249               | +    | +MA  | +MA          | <i>L. monocytogenes</i> | + | =                               |            |
| G6   | Fish container                         | EN2  | No                         | +MA                               | +MB    | +MA    | +MB | <i>L. monocytogenes</i>                      | +               | 2.931 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G7   | Fish bone extractor                    | EN2  | No                         | +LA                               | +MB    | +MB    | +MB | <i>L. monocytogenes</i>                      | +               | 2.939 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G8   | Plastic pallet                         | EN2  | No                         | +MA                               | +MA    | +MB    | +MB | <i>L. monocytogenes</i>                      | +               | 2.976 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G9   | Thawing chamber                        | EN2  | No                         | -LE                               | -LE    | ∅      | -LE | /  | -               | 0.060 | 0.163   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G10  | Salmon container                       | EN2  | No                         | +MA                               | +MA    | +MA    | +MB | <i>L. monocytogenes</i>                      | +               | 2.979 | 0.163   | +    | +MA  | +MA          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G11  | Plastic bin                            | EN2  | No                         | +LA                               | +MA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 2.950 | 0.163   | +    | +LA  | +MA          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G12  | Grille                                 | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.063 | 0.163   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G13  | Dry salt table                         | EN2  | No                         | -LE                               | -LE    | -LE    | -LE | /  | -               | 0.055 | 0.163   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G14  | Peeling table                          | EN2  | No                         | ∅                                 | ∅      | -LE    | -LE | /  | -               | 0.070 | 0.163   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| G15  | Stainless steel table                  | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.059 | 0.163   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H1   | "Bolness" tank                         | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.062 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H2   | Vacuum scales                          | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.064 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H3   | Filleting table                        | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.054 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H7   | Vacuum machine                         | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.061 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H9   | Filleting table                        | EN2  | No                         | ∅                                 | -LE    | ∅      | ∅   | /  | -               | 0.061 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H10  | MAIE equipment                         | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.059 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H13  | Racks                                  | EN2  | No                         | ∅                                 | -LE    | ∅      | ∅   | /  | -               | 0.066 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H14  | Table for roasts and skewers           | EN2  | No                         | -LE                               | -LE    | -LE    | -ME | /  | -               | 0.070 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H15  | Scale for salted meat                  | EN2  | No                         | -LE                               | -LE    | ∅      | -LE | /  | -               | 0.059 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H16  | Salted meat rack                       | EN2  | No                         | -LE                               | -LE    | -ME    | -ME | /  | -               | 0.064 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H17  | Grille                                 | EN2  | No                         | -LE                               | -LE    | -ME    | -ME | /  | -               | 0.061 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H19  | Door to scrap room                     | EN2  | No                         | -LE                               | -LE    | -LE    | -ME | /  | -               | 0.075 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H21  | Scale for salmon                       | EN2  | No                         | ∅                                 | ∅      | -LE    | -ME | /  | -               | 0.070 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| H22  | Table for manual filleting             | EN2  | No                         | ∅                                 | -LE    | ∅      | -LE | /  | -               | 0.063 | 0.187   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| J6   | Fish container                         | EN2  | No                         | ∅                                 | ∅      | ∅      | ∅   | /  | -               | 0.083 | 0.211   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| J7   | Fish bone extractor                    | EN2  | No                         | ∅                                 | ∅      | ∅      | -LE | /  | -               | 0.090 | 0.211   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| J17  | Table for salmon                       | EN2  | No                         | -LE                               | ∅      | ∅      | ∅   | /  | -               | 0.098 | 0.211   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| Q31  | Mincing machine                        | EN2  | Oui                        | +LA                               | +MA    | +MA    | +MA | <i>L. monocytogenes</i>                      | +               | 2.933 | 0.226   | +    | +MA  | +HA          | <i>L. monocytogenes</i> | +  | =                               | 3.127  | 0.286               | +    | +MA  | +HA          | <i>L. monocytogenes</i> | + | =                               |            |
| Q34  | Floor of scrap room                    | EN2  | No                         | ∅                                 | -LE    | ∅      | ∅   | /  | -               | 0.114 | 0.226   | -    | /    | /            | /                       | -  | =                               |  |                     |      |      |              |                         |   |                                 |            |
| P13  | Surface of filleting table             | EN2  | No                         | +MB                               | +LB    | +LB    | +MB | <i>L. monocytogenes</i>                      | +               | 3.151 | 0.276   | +    | +MB  | +HB          | <i>L. monocytogenes</i> | +  | =                               |  |                     |      |      |              |                         |   |                                 |            |

| CODE | MATRICES   | Cat. | S<br>P<br>/<br>k<br>e<br>d | Reference Method ISO 11290-1/A1 # |     |        |     |                 |                  | Alternative method all products (except raw meat products and raw milk products)<br>Fraser demi protocol 22h 30°C then 16h 37°C |         |      |              |     |                 |                                 | Alternative method all products (except raw meat products and raw milk products)<br>after storage of Fraser broth for 72 hours at 2 - 8°C<br>Fraser demi protocol 22h 30°C then 16h 37°C |                     |         |      |              |     |                 |                                 |            |
|------|--|------|----------------------------|-----------------------------------|-----|--------|-----|-----------------|------------------|---|---------|------|--------------|-----|-----------------|---------------------------------|--|---------------------|---------|------|--------------|-----|-----------------|---------------------------------|------------|
|      |  |      |                            | FRASER 1/2                        |     | FRASER |     | CONFIRMATION    |                  | TPLmono (30 - 37°C)   |         |      | CONFIRMATION |     |                 | FINAL RESULT<br>TPLmono 30-37°C | Comparison   | TPLmono (30 - 37°C) |         |      | CONFIRMATION |     |                 | FINAL RESULT<br>TPLmono 30-37°C | Comparison |
|      |  |      |                            | O&A1                              | P1  | O&A2   | P2  | IDENTIF.        | Result<br>L.mono | OD  | Cut-off | Res. | ALOA         | RLM | Identification  |                                 |  | OD                  | Cut-off | Res. | ALOA         | RLM | Identification  |                                 |            |
|      |  |      |                            |                                   |     |        |     |                 |                  |   |         |      |              |     |                 |                                 |  |                     |         |      |              |     |                 |                                 |            |
| D34  | Salmon scraps from dirty tank                    | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.130   | 0.233   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| D35  | Scraps from kippers container                    | EN3  | No                         | -LA                               | +LA | -MB    | +HB | L.innocua       | -                | 0.122   | 0.233   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| D36  | Scraps from vacuum machine                       | EN3  | Yes                        | Ø                                 | Ø   | -LE    | Ø   | /               | -                | 0.127   | 0.233   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| D37  | Scraps from workroom's floor                     | EN3  | Yes                        | Ø                                 | Ø   | +MA    | +MA | L.monocytogenes | +                | 0.134   | 0.233   | -    | +LA          | +MA | L.monocytogenes | -                               | FN   | 0.231               | 0.249   | d    | +LA          | +MA | L.monocytogenes | +                               | =          |
| D38  | Scraps from dirty tank fish shop                 | EN3  | No                         | +MA                               | +HA | +MA    | +HA | L.monocytogenes | +                | 2.705   | 0.233   | +    | +MA          | +MA | L.monocytogenes | +                               | =  | 2.245               | 0.249   | +    | +MA          | +MA | L.monocytogenes | +                               | =          |
| H4   | Grille for salmon                                | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.057   | 0.187   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| H6   | Grille for haddock                               | EN3  | No                         | -LE                               | -LE | Ø      | -LE | /               | -                | 0.171   | 0.187   | d    | Ø            | Ø   | Ø               | -                               | =  | 0.144               | 0.211   | -    | Ø            | Ø   | Ø               | -                               | =          |
| H20  | Salmon cutting machine                           | EN3  | No                         | Ø                                 | Ø   | Ø      | -LE | /               | -                | 0.068   | 0.187   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| J18  | Scraps from whitening fish container             | EN3  | No                         | -LA                               | -LE | -MB    | +LA | L.seeligeri     | -                | 0.098   | 0.211   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| J19  | Scraps from ice tank                             | EN3  | No                         | Ø                                 | -LE | Ø      | Ø   | /               | -                | 0.099   | 0.211   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| J20  | Fish display during work                         | EN2  | No                         | -LE                               | -LE | Ø      | Ø   | /               | -                | 0.098   | 0.211   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| L13  | Scraps from cutting table                        | EN3  | No                         | -LE                               | -LE | -LE    | Ø   | /               | -                | 0.063   | 0.200   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| L14  | Scraps from stainless steel table                | EN3  | No                         | -LE                               | -LE | -ME    | -LE | /               | -                | 0.063   | 0.200   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| L15  | Salmon scraps from dirty tank                    | EN3  | No                         | -LE                               | Ø   | Ø      | Ø   | /               | -                | 0.071   | 0.200   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| L16  | Scraps from dirty container                      | EN3  | No                         | +LA                               | +LA | +MA    | +MB | L.monocytogenes | +                | 3.130   | 0.200   | +    | +MA          | +HB | L.monocytogenes | +                               | =  | 2.758               | 0.207   | +    | +MB          | +HB | L.monocytogenes | +                               | =          |
| M10  | Scraps from vegetable production line            | EN3  | No                         | +HA                               | +MA | +MA    | +MA | L.monocytogenes | +                | 2.843   | 0.207   | +    | +MA          | +MB | L.monocytogenes | +                               | =  | 2.867               | 0.233   | +    | +MA          | +MB | L.monocytogenes | +                               | =          |
| M11  | Scraps from production area's floor              | EN3  | No                         | +HB                               | +MB | +MA    | +MB | L.monocytogenes | +                | 2.884   | 0.207   | +    | +MB          | +MB | L.monocytogenes | +                               | =  | 2.891               | 0.233   | +    | +MB          | +MB | L.monocytogenes | +                               | =          |
| M12  | Scraps from stainless steel table (cutting room) | EN3  | No                         | +MB                               | +LB | +MB    | +MB | L.monocytogenes | +                | 2.789   | 0.207   | +    | +MB          | +HB | L.monocytogenes | +                               | =  | 0.613               | 0.233   | +    | +MB          | +MB | L.monocytogenes | +                               | =          |
| M14  | Salmon scraps from dirty tank                    | EN3  | No                         | Ø                                 | Ø   | +MA    | +LA | L.monocytogenes | +                | 2.927   | 0.207   | +    | +MA          | +MB | L.monocytogenes | +                               | =  | 2.888               | 0.233   | +    | +MA          | +MB | L.monocytogenes | +                               | =          |
| N10  | Scraps from cheese production booth              | EN3  | No                         | -LA                               | +MA | -MA    | +MB | L.innocua       | -                | 0.125   | 0.224   | -    | /            | /   | /               | -                               | =  |                     |         |      |              |     |                 |                                 |            |
| O32  | Scraps from meat cutting table                   | EN3  | Yes                        | +MA                               | +MA | +MA    | +HA | L.monocytogenes | +                | 2.998   | 0.226   | +    | +MA          | +MA | L.monocytogenes | +                               | =  | 3.103               | 0.286   | +    | +MA          | +MA | L.monocytogenes | +                               | =          |
| O33  | Poultry scraps from dirty container              | EN3  | Yes                        | +LA                               | +MA | +MB    | +MB | L.monocytogenes | +                | 3.131   | 0.226   | +    | +MB          | +HB | L.monocytogenes | +                               | =  | 3.145               | 0.286   | +    | +MB          | +HB | L.monocytogenes | +                               | =          |

## APPENDIX E :

### INCLUSIVITY / EXCLUSIVITY

| Reference | Strain                             | Origin                 | Inoculum into 225mL 1/2 Fraser broth (cfu) | TPLmono |         |      | Inoculum into 225mL L-PALCAM broth (cfu) | TPLmono |         |      |
|-----------|------------------------------------|------------------------|--|---------|---------|------|--|---------|---------|------|
|           |                                    |                        |  | OD      | Cut-off | Res. |  | OD      | Cut-off | Res. |
| L26       | <i>Listeria monocytogenes</i> 1/2  | "Saucisson"            | 26.4                                       | 2.977   | 0.231   | +    | 13.2                                     | 3.007   | 0.231   | +    |
| L10       | <i>Listeria monocytogenes</i> 1/2a | "Rillettes"            | 25.2                                       | 2.968   | 0.231   | +    | 12.6                                     | 3.013   | 0.231   | +    |
| L116      | <i>Listeria monocytogenes</i> 1/2a | Scalloped salmon       | 20   | 3.248   | 0.215   | +    | 8  | 3.176   | 0.215   | +    |
| L118      | <i>Listeria monocytogenes</i> 1/2a | "Munster" cheese       | 22.4                                       | 3.038   | 0.231   | +    | 11.2                                     | 3.165   | 0.231   | +    |
| L12       | <i>Listeria monocytogenes</i> 1/2a | Smoked salmon          | 23   | 3.204   | 0.231   | +    | 11.5                                     | 3.224   | 0.231   | +    |
| L4        | <i>Listeria monocytogenes</i> 1/2a | ATCC 35152             | 24   | 3.125   | 0.231   | +    | 12                                       | 3.150   | 0.231   | +    |
| L40       | <i>Listeria monocytogenes</i> 1/2a | "Munster" cheese       | 26.3                                       | 2.748   | 0.215   | +    | 10.5                                     | 2.996   | 0.215   | +    |
| L42       | <i>Listeria monocytogenes</i> 1/2a | Chicken breast         | 19   | 3.242   | 0.215   | +    | 7.6                                      | 1.617   | 0.215   | +    |
| L43       | <i>Listeria monocytogenes</i> 1/2a | Minced beef            | 26.4                                       | 3.152   | 0.231   | +    | 13.2                                     | 3.224   | 0.231   | +    |
| L44       | <i>Listeria monocytogenes</i> 1/2a | Sausage                | 25.5                                       | 3.116   | 0.231   | +    | 12.7                                     | 2.97    | 0.231   | +    |
| L45       | <i>Listeria monocytogenes</i> 1/2a | Rabbit pâté            | 32.5                                       | 3.242   | 0.215   | +    | 13                                       | 3.246   | 0.215   | +    |
| L47       | <i>Listeria monocytogenes</i> 1/2a | Sauté potatoes         | 24   | 3.212   | 0.231   | +    | 12                                       | 3.15    | 0.231   | +    |
| L5        | <i>Listeria monocytogenes</i> 1/2a | Sliced smoked salmon   | 28   | 2.966   | 0.231   | +    | 14                                       | 2.987   | 0.231   | +    |
| L6        | <i>Listeria monocytogenes</i> 1/2a | Pizza                  | 24.8                                       | 2.996   | 0.231   | +    | 12.4                                     | 3.072   | 0.231   | +    |
| L7        | <i>Listeria monocytogenes</i> 1/2a | "Munster" cheese       | 22.8                                       | 3.045   | 0.231   | +    | 11.4                                     | 3.196   | 0.231   | +    |
| L9        | <i>Listeria monocytogenes</i> 1/2a | Munster croûte         | 27.5                                       | 3.064   | 0.231   | +    | 13.7                                     | 2.821   | 0.231   | +    |
| L13       | <i>Listeria monocytogenes</i> 1/2b | Pork hear              | 13.6                                       | 3.136   | 0.250   | +    | 13.6                                     | 3.015   | 0.250   | +    |
| L37       | <i>Listeria monocytogenes</i> 1/2b | "Maroilles" cheese     | 22.5                                       | 2.810   | 0.215   | +    | 9  | 3.240   | 0.215   | +    |
| L48       | <i>Listeria monocytogenes</i> 1/2b | Pork tongue            | 21.3                                       | 3.065   | 0.215   | +    | 8.5                                      | 2.963   | 0.215   | +    |
| L49       | <i>Listeria monocytogenes</i> 1/2b | Poultry liver pâté     | 32.5                                       | 3.049   | 0.215   | +    | 13                                       | 3.098   | 0.215   | +    |
| L51       | <i>Listeria monocytogenes</i> 1/2b | Aged Germain cheese    | 21.3                                       | 2.965   | 0.215   | +    | 10.5                                     | 2.707   | 0.215   | +    |
| L52       | <i>Listeria monocytogenes</i> 1/2b | SLCC 2755              | 25   | 3.242   | 0.215   | +    | 10                                       | 3.242   | 0.215   | +    |
| L117      | <i>Listeria monocytogenes</i> 1/2c | "Montbéliard" sausage  | 35   | 2.899   | 0.215   | +    | 14                                       | 3.016   | 0.215   | +    |
| L14       | <i>Listeria monocytogenes</i> 1/2c | Minced beef            | 25   | 2.756   | 0.215   | +    | 10                                       | 3.062   | 0.215   | +    |
| L15       | <i>Listeria monocytogenes</i> 1/2c | Beef                   | 50   | 3.133   | 0.215   | +    | 20                                       | 2.892   | 0.215   | +    |
| L16       | <i>Listeria monocytogenes</i> 1/2c | Minced beef            | 25,0                                       | 3.094   | 0.215   | +    | 10,0                                     | 2.987   | 0.215   | +    |
| L17       | <i>Listeria monocytogenes</i> 1/2c | Pork belly             | 20   | 2.961   | 0.215   | +    | 8  | 3.185   | 0.215   | +    |
| L18       | <i>Listeria monocytogenes</i> 1/2c | "Munster" cheese       | 35   | 3.076   | 0.215   | +    | 14                                       | 2.989   | 0.215   | +    |
| L54       | <i>Listeria monocytogenes</i> 1/2c | Bœuf bourguignon       | 60   | 2.998   | 0.215   | +    | 24                                       | 3.089   | 0.215   | +    |
| L55       | <i>Listeria monocytogenes</i> 3b   | SLCC 2540              | 22.5                                       | 3.023   | 0.215   | +    | 9  | 3.103   | 0.215   | +    |
| L56       | <i>Listeria monocytogenes</i> 3c   | SLCC 2479              | 42.5                                       | 3.080   | 0.215   | +    | 17                                       | 3.216   | 0.215   | +    |
| L57       | <i>Listeria monocytogenes</i> 4a   | ATCC 19114             | 20   | 0.251   | 0.215   | +    | 14                                       | 3.243   | 0.202   | +    |
| L58       | <i>Listeria monocytogenes</i> 4a   | ATCC 19115             | 27.5                                       | 2.931   | 0.245   | +    | 11                                       | 3.072   | 0.245   | +    |
| L32       | <i>Listeria monocytogenes</i> 4b   | "Munster" cheese       | 32.5                                       | 3.016   | 0.245   | +    | 13                                       | 3.022   | 0.245   | +    |
| L60       | <i>Listeria monocytogenes</i> 4d   | ATCC                   | 60   | 2.995   | 0.245   | +    | 24                                       | 3.186   | 0.245   | +    |
| L62       | <i>Listeria monocytogenes</i> 4e   | "Reblochon" cheese     | 30   | 2.769   | 0.245   | +    | 12                                       | 3.036   | 0.245   | +    |
| L63       | <i>Listeria monocytogenes</i> 4e   | "Munster" cheese       | 35   | 2.935   | 0.245   | +    | 14                                       | 3.069   | 0.245   | +    |
| L67       | <i>Listeria monocytogenes</i> 7    | SLCC 2482              | 35   | 2.970   | 0.245   | +    | 14                                       | 3.024   | 0.245   | +    |
| L119      | <i>Listeria monocytogenes</i>      | Spinash                | 14   | 3.064   | 0.250   | +    | 14                                       | 3.018   | 0.250   | +    |
| L123      | <i>Listeria monocytogenes</i>      | Mozzarella cheese      | 24   | 3.058   | 0.231   | +    | 12                                       | 2.776   | 0.231   | +    |
| L124      | <i>Listeria monocytogenes</i>      | Sea perch fillet       | 26.5                                       | 2.898   | 0.231   | +    | 13.2                                     | 3.040   | 0.231   | +    |
| L125      | <i>Listeria monocytogenes</i>      | Mixed vegetable panful | 25   | 2.991   | 0.245   | +    | 10                                       | 3.024   | 0.245   | +    |
| L130      | <i>Listeria monocytogenes</i>      | Minced beef            | 15.6                                       | 3.047   | 0.250   | +    | 15.6                                     | 2.967   | 0.250   | +    |
| L137      | <i>Listeria monocytogenes</i>      | Cheese                 | 16.8                                       | 3.157   | 0.250   | +    | 16.8                                     | 3.142   | 0.250   | +    |
| L152      | <i>Listeria monocytogenes</i>      | Environment            | 25.6                                       | 3.038   | 0.231   | +    | 12.8                                     | 3.048   | 0.231   | +    |
| L176      | <i>Listeria monocytogenes</i>      | Beef meat              | 24,0                                       | 3.133   | 0.231   | +    | 12,0                                     | 3.123   | 0.231   | +    |
| L20       | <i>Listeria monocytogenes</i>      | Smoked salmon bits     | 24.5                                       | 3.179   | 0.231   | +    | 12.2                                     | 3.086   | 0.231   | +    |
| L25       | <i>Listeria monocytogenes</i>      | Chicken                | 25.6                                       | 2.661   | 0.231   | +    | 12.8                                     | 3.099   | 0.231   | +    |
| L35       | <i>Listeria monocytogenes</i>      | "Brie de Meaux" cheese | 26.5                                       | 2.868   | 0.231   | +    | 13.2                                     | 3.083   | 0.231   | +    |
| L39       | <i>Listeria monocytogenes</i>      | Ham                    | 25   | 2.998   | 0.245   | +    | 10                                       | 3.237   | 0.245   | +    |

## Exclusivity

| Reference | Strain                            | Origin                     | Inoculum into 225mL nutrient broth (cfu) | TPLmono |         |      |
|-----------|-----------------------------------|----------------------------|--|---------|---------|------|
|           |                                   |                            |  | OD      | Cut-off | Res. |
| L64       | <i>Listeria innocua</i>           | "Epoisses" cheese          | 6,0E+08                                  | 0.135   | 0.194   | -    |
| L2        | <i>Listeria innocua</i>           | Minced beef                | 3,4E+08                                  | 0.138   | 0.194   | -    |
| L3        | <i>Listeria innocua</i>           | Cow liver                  | 5,0E+07                                  | 0.158   | 0.194   | -    |
| L66       | <i>Listeria innocua</i>           | Spinach                    | 4,7E+08                                  | 0.141   | 0.194   | -    |
| L83       | <i>Listeria seeligeri</i> 1/2b    | Pork tongue                | 4,5E+08                                  | 0.106   | 0.194   | -    |
| L115      | <i>Listeria seeligeri</i>         | Surface water (lake)       | 2,2E+08                                  | 0.105   | 0.194   | -    |
| L143      | <i>Listeria grayi</i>             | Frozen fries               | 6,4E+07                                  | 0.105   | 0.194   | -    |
| L188      | <i>Listeria grayi</i>             | Environment                | 6,0E+07                                  | 0.123   | 0.194   | -    |
| L87       | <i>Listeria welshimeri</i>        | Minced beef                | 6,5E+05                                  | 0.175   | 0.250   | -    |
| L100      | <i>Listeria welshimeri</i>        | Cocoa spread               | 8,0E+07                                  | 0.125   | 0.194   | -    |
| L155      | <i>Listeria welshimeri</i>        | Salmon                     | 2,9E+08                                  | 0.120   | 0.194   | -    |
| L151      | <i>Listeria ivanovii</i>          | Minced beef                | 7,2E+05                                  | 0.297   | 0.250   | +    |
| L133      | <i>Listeria ivanovii</i>          | "Roquefort" cheese         | 3,5E+08                                  | 0.175   | 0.194   | d    |
|           |                                   |                            | 7,2E+05                                  | 0.215   | 0.250   | d    |
| L150      | <i>Listeria ivanovii</i>          | Dairy product              | 1,0E+05                                  | 0.294   | 0.261   | +    |
| BA 9      | <i>Bacillus cereus</i>            | Dehydrated mashed potatoes | 2,5E+05                                  | 0.096   | 0.194   | -    |
| BA 14     | <i>Bacillus cereus</i>            | Egg                        | 1,3E+05                                  | 0.102   | 0.194   | -    |
| BA 15     | <i>Bacillus cereus</i>            | Vanilla custard            | 1,8E+05                                  | 0.096   | 0.194   | -    |
| BA 19     | <i>Bacillus cereus</i>            | Environmental sample       | 2,1E+05                                  | 0.107   | 0.194   | -    |
| BA 21     | <i>Bacillus cereus</i>            | Tabbouleh (with poultry)   | 1,7E+05                                  | 0.097   | 0.194   | -    |
| L139      | <i>Jonesia denitrificans</i>      | Collection                 | 2,0E+05                                  | 0.093   | 0.194   | -    |
| Lb2       | <i>Lactobacillus casei</i>        | Dairy product              | 1,5E+04                                  | 0.095   | 0.194   | -    |
| 41        | <i>Lactobacillus fermentum</i>    | ATCC 9338                  | 1,5E+03                                  | 0.091   | 0.194   | -    |
| E10       | <i>Streptococcus bovis</i>        | Collection                 | 2,3E+05                                  | 0.112   | 0.194   | -    |
| ST26      | <i>Staphylococcus intermedius</i> | Collection                 | 1,2E+05                                  | 0.112   | 0.194   | -    |
| ST17      | <i>Staphylococcus aureus</i>      | Yogurt ice-cream           | 2,6E+05                                  | 0.119   | 0.194   | -    |
| E8        | <i>Enterococcus durans</i>        | Meat product               | 3,0E+05                                  | 0.107   | 0.194   | -    |
| E9        | <i>Enterococcus faecium</i>       | Taramasalata               | 3,0E+05                                  | 0.108   | 0.194   | -    |
| E14       | <i>Streptococcus anginosus</i>    | Collection                 | 1,3E+05                                  | 0.113   | 0.194   | -    |
| E17       | <i>Streptococcus equinus</i>      | Collection                 | 1,0E+05                                  | 0.107   | 0.194   | -    |
| 38        | <i>Corynebacterium variabilis</i> | ATCC 15753                 | 1,8E+05                                  | 0.106   | 0.194   | -    |

APPENDIX F :

INCLUSIVITY / EXCLUSIVITY  
-  
ADDITIONAL RESULTS FOR  
*Listeria ivanovii*

## Additional results Exclusivity

| Reference | Strain  | Origin               | Inoculum into 225mL Fraser 1/2 broth or L-PALCAM broth (cfu) | TPLmono<br>(Fraser 1/2 protocol) |         |      | TPLmono<br>(L-PALCAM protocol) |         |      |
|-----------|---|----------------------|--|----------------------------------|---------|------|--------------------------------|---------|------|
|           |   |                      |  | OD                               | Cut-off | Res. | OD                             | Cut-off | Res. |
| L133      | <i>Listeria ivanovii</i>                          | "Roquefort" cheese   | 7,2E+05  | 0.087                            | 0.210   | -    | 0.088                          | 0.210   | -    |
| L150      | <i>Listeria ivanovii</i>                          | Dairy product        | 9,8E+05  | 0.070                            | 0.185   | -    | 0.070                          | 0.185   | -    |
| L151      | <i>Listeria ivanovii</i>                          | Minced beef          | 1,4E+05  | 0.091                            | 0.210   | -    | 0.084                          | 0.210   | -    |
| L153      | <i>Listeria ivanovii</i>                          | Environmental sample | 7,1E+05  | 0.065                            | 0.185   | -    | 0.060                          | 0.185   | -    |
| L154      | <i>Listeria ivanovii</i>                          | Herbs sausage        | 1,2E+06  | 0.058                            | 0.185   | -    | 0.060                          | 0.185   | -    |
| L157      | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Collection           | 7,8E+05  | 0.076                            | 0.185   | -    | 0.064                          | 0.185   | -    |
| L158      | <i>Listeria ivanovii</i>                          | Collection           | 5,5E+05  | 0.062                            | 0.185   | -    | 0.064                          | 0.185   | -    |
| L159      | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Collection           | 5,5E+05  | 0.062                            | 0.185   | -    | 0.060                          | 0.185   | -    |
| L160      | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Collection           | 6,8E+05  | 0.054                            | 0.185   | -    | 0.056                          | 0.185   | -    |
| L161      | <i>Listeria ivanovii</i> spp. <i>ivanovii</i>     | Meat product         | 4,2E+05  | 0.062                            | 0.185   | -    | 0.070                          | 0.185   | -    |
| L166      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Collection           | 4,7E+05  | 0.064                            | 0.185   | -    | 0.064                          | 0.185   | -    |
| L167      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Cheede               | 8,8E+05  | 0.055                            | 0.185   | -    | 0.074                          | 0.185   | -    |
| L168      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Water                | 3,1E+05  | 0.056                            | 0.185   | -    | 0.064                          | 0.185   | -    |
| L169      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Mud                  | 3,2E+05  | 0.056                            | 0.185   | -    | 0.054                          | 0.185   | -    |
| L170      | <i>Listeria ivanovii</i> spp. <i>londoniensis</i> | Collection           | 2,9E+05  | 0.060                            | 0.185   | -    | 0.056                          | 0.185   | -    |
| L177      | <i>Listeria ivanovii</i>                          | Anti-bird net        | 7,2E+05  | 0.051                            | 0.185   | -    | 0.066                          | 0.185   | -    |
| L178      | <i>Listeria ivanovii</i>                          | Surface basin        | 7,5E+05  | 0.054                            | 0.185   | -    | 0.080                          | 0.185   | -    |
| L179      | <i>Listeria ivanovii</i>                          | Environmental sample | 8,8E+05  | 0.060                            | 0.185   | -    | 0.069                          | 0.185   | -    |
| L180      | <i>Listeria ivanovii</i>                          | Anti-bird net        | 9,7E+05  | 0.067                            | 0.185   | -    | 0.063                          | 0.185   | -    |
| L181      | <i>Listeria ivanovii</i>                          | Anti-bird net        | 4,1E+05  | 0.057                            | 0.185   | -    | 0.062                          | 0.185   | -    |
| L182      | <i>Listeria ivanovii</i>                          | Surface basin        | 1,9E+05  | 0.056                            | 0.185   | -    | 0.079                          | 0.185   | -    |
| L183      | <i>Listeria ivanovii</i>                          | Surface basin        | 1,4E+06  | 0.060                            | 0.185   | -    | 0.060                          | 0.185   | -    |
| L184      | <i>Listeria ivanovii</i>                          | Anti-bird net        | 7,8E+05  | 0.073                            | 0.185   | -    | 0.068                          | 0.185   | -    |
| L185      | <i>Listeria ivanovii</i>                          | Anti-bird net        | 6,2E+05  | 0.058                            | 0.185   | -    | 0.065                          | 0.185   | -    |

APPENDIX G :

INTERLABORATORY STUDY  
-  
LIST AND DETAILED RESULTS OF  
PARTICIPANT LABORATORIES

| Laboratory                        | Town          | Country |
|-----------------------------------|---------------|---------|
| ADRIA DEVELOPPEMENT               | QUIMPER       | France  |
| ALICONTROL                        | MADRID        | Spain   |
| APPLUS NORCONTROL                 | MADRID        | Spain   |
| AVEYRON LABO                      | RODEZ         | France  |
| GRANAROLO SpA                     | BOLOGNA       | Italy   |
| ISHA SAS                          | MASSY         | France  |
| LABCO                             | SURGERES      | France  |
| LABO. DE ANALISIS Dr ECHEVARNE    | BARCELONA     | Spain   |
| LABO. DEPARTEMENTAL FRANCK DUNCOM | SAINT CONTEST | France  |
| LIAL                              | AURILLAC      | France  |
| GALYS                             | CHATEAUDUN    | France  |
| PRIMEX S.A.                       | LANGUIDIC     | France  |
| SERVICE COMMUN DES LABORATOIRES   | RENNES        | France  |

## Laboratory A

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 2,045                                | 0,158   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 1,913                                | 0,158   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 1,996                                | 0,158   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 2,002                                | 0,158   | +           | +            | +      | =                             |
| 5           | -                               | -      | -      | -      | -      | =                             | 0,060                                | 0,158   | -           | -            | -      | =                             |
| 6           | -                               | -      | -      | -      | -      | =                             | 0,057                                | 0,158   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 2,027                                | 0,158   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 2,080                                | 0,158   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 1,967                                | 0,158   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 1,911                                | 0,158   | +           | +            | +      | =                             |
| 11          | -                               | -      | -      | -      | -      | =                             | 0,059                                | 0,158   | -           | -            | -      | =                             |
| 12          | -                               | -      | -      | -      | -      | =                             | 0,060                                | 0,158   | -           | -            | -      | =                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 1,928                                | 0,158   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 1,874                                | 0,158   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 1,989                                | 0,158   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 2,066                                | 0,158   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 1,833                                | 0,158   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 1,906                                | 0,158   | +           | +            | +      | =                             |
| 19          | -                               | -      | -      | -      | -      | =                             | 0,062                                | 0,158   | -           | -            | -      | =                             |
| 20          | -                               | -      | -      | -      | -      | =                             | 0,057                                | 0,158   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 1,911                                | 0,158   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 1,887                                | 0,158   | +           | +            | +      | =                             |
| 23          | -                               | -      | -      | -      | -      | =                             | 0,054                                | 0,158   | -           | -            | -      | =                             |
| 24          | -                               | -      | -      | -      | -      | =                             | 0,057                                | 0,158   | -           | -            | -      | =                             |

Total flora of milk (UFC/ml): > 300 000

## Laboratory B

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 3,297                                | 0,288   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 2,727                                | 0,288   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 3,389                                | 0,288   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 3,151                                | 0,288   | +           | +            | +      | =                             |
| 5           | -                               | -      | +      | +      | +      | #                             | 0,138                                | 0,288   | -           | -            | -      | =                             |
| 6           | -                               | -      | +      | +      | +      | #                             | 0,140                                | 0,288   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 2,634                                | 0,288   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 2,554                                | 0,288   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 3,297                                | 0,288   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 3,093                                | 0,288   | +           | +            | +      | =                             |
| 11          | -                               | -      | +      | +      | +      | #                             | 3,179                                | 0,288   | +           | +            | +      | #                             |
| 12          | -                               | -      | +      | +      | +      | #                             | 3,343                                | 0,288   | +           | +            | +      | #                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 3,111                                | 0,288   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 3,207                                | 0,288   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 3,075                                | 0,288   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 2,893                                | 0,288   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 3,569                                | 0,288   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 3,436                                | 0,288   | +           | +            | +      | =                             |
| 19          | -                               | -      | +      | +      | +      | #                             | 3,311                                | 0,288   | +           | +            | +      | #                             |
| 20          | -                               | -      | +      | +      | +      | #                             | 0,171                                | 0,288   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 3,407                                | 0,288   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 3,649                                | 0,288   | +           | +            | +      | =                             |
| 23          | -                               | -      | +      | +      | +      | #                             | 3,038                                | 0,288   | +           | +            | +      | #                             |
| 24          | -                               | -      | +      | +      | +      | #                             | 3,131                                | 0,288   | +           | +            | +      | #                             |

Total flora of milk (UFC/ml): 3,10<sup>7</sup>

## Laboratory C

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 2,917                                | 0,247   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 2,927                                | 0,247   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 2,947                                | 0,247   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 2,822                                | 0,247   | +           | +            | +      | =                             |
| 5           | -                               | -      | -      | -      | -      | =                             | 0,119                                | 0,247   | -           | -            | -      | =                             |
| 6           | -                               | -      | -      | -      | -      | =                             | 0,119                                | 0,247   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 3,102                                | 0,247   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 3,102                                | 0,247   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 2,959                                | 0,247   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 2,976                                | 0,247   | +           | +            | +      | =                             |
| 11          | -                               | -      | -      | -      | -      | =                             | 0,117                                | 0,247   | -           | -            | -      | =                             |
| 12          | -                               | -      | -      | -      | -      | =                             | 0,115                                | 0,247   | -           | -            | -      | =                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 2,639                                | 0,247   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 2,979                                | 0,247   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 3,170                                | 0,247   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 3,169                                | 0,247   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 2,959                                | 0,247   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 3,154                                | 0,247   | +           | +            | +      | =                             |
| 19          | -                               | -      | -      | -      | -      | =                             | 0,120                                | 0,247   | -           | -            | -      | =                             |
| 20          | -                               | -      | -      | -      | -      | =                             | 0,135                                | 0,247   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 2,743                                | 0,247   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 3,106                                | 0,247   | +           | +            | +      | =                             |
| 23          | -                               | -      | -      | -      | -      | =                             | 0,106                                | 0,247   | -           | -            | -      | =                             |
| 24          | -                               | -      | -      | -      | -      | =                             | 0,116                                | 0,247   | -           | -            | -      | =                             |

Total flora of milk (UFC/ml): 800 000

**Laboratory D**

| Code sample                   | Reference method EN ISO 11290-1 |                   |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |        |         |             |              | Comparison / expected results |        |
|-------------------------------|---------------------------------|-------------------|--------|--------|-------------------------------|--------------------------------------|--------|---------|-------------|--------------|-------------------------------|--------|
|                               | Fraser 1/2                      |                   | Fraser |        |                               | Result                               | Test   |         | Test result | Confirmation |                               | Result |
|                               | O&A                             | PALCAM            | O&A    | PALCAM |                               |                                      | OD     | Cut-off |             | COMPASS      |                               |        |
| 1                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 2                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 3                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 4                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 5                             | -                               | -                 | -      | -      | -                             | =                                    | 0,139  | 0,260   | -           | -            | -                             | =      |
| 6                             | -                               | -                 | -      | -      | -                             | =                                    | 0,150  | 0,260   | -           | -            | -                             | =      |
| 7                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 8                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 9                             | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 10                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 11                            | -                               | -                 | -      | -      | -                             | =                                    | 0,116  | 0,260   | -           | -            | -                             | =      |
| 12                            | -                               | -                 | -      | -      | -                             | =                                    | 0,110  | 0,260   | -           | -            | -                             | =      |
| 13                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 14                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 15                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 16                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 17                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 18                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 19                            | -                               | -                 | -      | -      | -                             | =                                    | 0,131  | 0,260   | -           | -            | -                             | =      |
| 20                            | -                               | -                 | -      | -      | -                             | =                                    | 0,148  | 0,260   | -           | -            | -                             | =      |
| 21                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 22                            | +                               | +                 | +      | +      | +                             | =                                    | >3,000 | 0,260   | +           | +            | +                             | =      |
| 23                            | -                               | -                 | -      | -      | -                             | =                                    | 0,122  | 0,260   | -           | -            | -                             | =      |
| 24                            | -                               | -                 | -      | -      | -                             | =                                    | 0,163  | 0,260   | -           | -            | -                             | =      |
| Total flora of milk (UFC/ml): |                                 | 3.10 <sup>6</sup> |        |        |                               |                                      |        |         |             |              |                               |        |

**Laboratory E**

| Code sample                   | Reference method EN ISO 11290-1 |           |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |       |         |             |              | Comparison / expected results |        |
|-------------------------------|---------------------------------|-----------|--------|--------|-------------------------------|--------------------------------------|-------|---------|-------------|--------------|-------------------------------|--------|
|                               | Fraser 1/2                      |           | Fraser |        |                               | Result                               | Test  |         | Test result | Confirmation |                               | Result |
|                               | O&A                             | PALCAM    | O&A    | PALCAM |                               |                                      | OD    | Cut-off |             | COMPASS      |                               |        |
| 1                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 2                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 3                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 4                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 5                             | -                               | -         | -      | -      | -                             | =                                    | 0,098 | 0,229   | -           | -            | -                             | =      |
| 6                             | -                               | -         | -      | -      | -                             | =                                    | 0,105 | 0,229   | -           | -            | -                             | =      |
| 7                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 8                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 9                             | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 10                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 11                            | -                               | -         | -      | -      | -                             | =                                    | 0,106 | 0,229   | -           | -            | -                             | =      |
| 12                            | -                               | -         | -      | -      | -                             | =                                    | 0,101 | 0,229   | -           | -            | -                             | =      |
| 13                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 14                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 15                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 16                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 17                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 18                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 19                            | -                               | -         | -      | -      | -                             | =                                    | 0,131 | 0,229   | -           | -            | -                             | =      |
| 20                            | -                               | -         | -      | -      | -                             | =                                    | 0,102 | 0,229   | -           | -            | -                             | =      |
| 21                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 22                            | +                               | +         | +      | +      | +                             | =                                    | >2,5  | 0,229   | +           | +            | +                             | =      |
| 23                            | -                               | -         | -      | -      | -                             | =                                    | 0,107 | 0,229   | -           | -            | -                             | =      |
| 24                            | -                               | -         | -      | -      | -                             | =                                    | 0,110 | 0,229   | -           | -            | -                             | =      |
| Total flora of milk (UFC/ml): |                                 | > 300 000 |        |        |                               |                                      |       |         |             |              |                               |        |

**Laboratory F**

| Code sample                   | Reference method EN ISO 11290-1 |          |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |       |         |             |              | Comparison / expected results |        |
|-------------------------------|---------------------------------|----------|--------|--------|-------------------------------|--------------------------------------|-------|---------|-------------|--------------|-------------------------------|--------|
|                               | Fraser 1/2                      |          | Fraser |        |                               | Result                               | Test  |         | Test result | Confirmation |                               | Result |
|                               | O&A                             | PALCAM   | O&A    | PALCAM |                               |                                      | OD    | Cut-off |             | COMPASS      |                               |        |
| 1                             | +                               | +        | +      | +      | +                             | =                                    | 2,915 | 0,368   | +           | +            | +                             | =      |
| 2                             | +                               | +        | +      | +      | +                             | =                                    | 2,942 | 0,368   | +           | +            | +                             | =      |
| 3                             | +                               | +        | +      | +      | +                             | =                                    | 2,918 | 0,368   | +           | +            | +                             | =      |
| 4                             | +                               | +        | +      | +      | +                             | =                                    | 3,097 | 0,368   | +           | +            | +                             | =      |
| 5                             | -                               | -        | -      | -      | -                             | =                                    | 0,240 | 0,368   | -           | -            | -                             | =      |
| 6                             | -                               | -        | -      | -      | -                             | =                                    | 0,203 | 0,368   | -           | -            | -                             | =      |
| 7                             | +                               | +        | +      | +      | +                             | =                                    | 2,803 | 0,368   | +           | +            | +                             | =      |
| 8                             | +                               | +        | +      | +      | +                             | =                                    | 2,832 | 0,368   | +           | +            | +                             | =      |
| 9                             | +                               | +        | +      | +      | +                             | =                                    | 2,941 | 0,368   | +           | +            | +                             | =      |
| 10                            | +                               | +        | +      | +      | +                             | =                                    | 3,069 | 0,368   | +           | +            | +                             | =      |
| 11                            | -                               | -        | -      | -      | -                             | =                                    | 0,195 | 0,368   | -           | -            | -                             | =      |
| 12                            | -                               | -        | -      | -      | -                             | =                                    | 0,265 | 0,368   | -           | -            | -                             | =      |
| 13                            | +                               | +        | +      | +      | +                             | =                                    | 2,901 | 0,368   | +           | +            | +                             | =      |
| 14                            | +                               | +        | +      | +      | +                             | =                                    | 2,671 | 0,368   | +           | +            | +                             | =      |
| 15                            | +                               | +        | +      | +      | +                             | =                                    | 2,743 | 0,368   | +           | +            | +                             | =      |
| 16                            | +                               | +        | +      | +      | +                             | =                                    | 2,816 | 0,368   | +           | +            | +                             | =      |
| 17                            | +                               | +        | +      | +      | +                             | =                                    | 2,869 | 0,368   | +           | +            | +                             | =      |
| 18                            | +                               | +        | +      | +      | +                             | =                                    | 3,042 | 0,368   | +           | +            | +                             | =      |
| 19                            | -                               | -        | -      | -      | -                             | =                                    | 0,240 | 0,368   | -           | -            | -                             | =      |
| 20                            | -                               | -        | -      | -      | -                             | =                                    | 0,216 | 0,368   | -           | -            | -                             | =      |
| 21                            | +                               | +        | +      | +      | +                             | =                                    | 3,004 | 0,368   | +           | +            | +                             | =      |
| 22                            | +                               | +        | +      | +      | +                             | =                                    | 2,885 | 0,368   | +           | +            | +                             | =      |
| 23                            | -                               | -        | -      | -      | -                             | =                                    | 0,203 | 0,368   | -           | -            | -                             | =      |
| 24                            | -                               | -        | -      | -      | -                             | =                                    | 0,199 | 0,368   | -           | -            | -                             | =      |
| Total flora of milk (UFC/ml): |                                 | > 30 000 |        |        |                               |                                      |       |         |             |              |                               |        |

## Laboratory G

| Code sample                   | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |  |
|-------------------------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|--|
|                               | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |  |
|                               | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |  |
| 1                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 2                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 3                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 4                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 5                             | -                               | -      | -      | -      | -      | =                             | 0,107                                | 0,211   | -           | -            | -      | =                             |  |
| 6                             | -                               | -      | -      | -      | -      | =                             | 0,097                                | 0,211   | -           | -            | -      | =                             |  |
| 7                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 8                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 9                             | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 10                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 11                            | -                               | -      | -      | -      | -      | =                             | 0,094                                | 0,211   | -           | -            | -      | =                             |  |
| 12                            | -                               | -      | -      | -      | -      | =                             | 0,100                                | 0,211   | -           | -            | -      | =                             |  |
| 13                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 14                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 15                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 16                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 17                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 18                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 19                            | -                               | -      | -      | -      | -      | =                             | 0,124                                | 0,211   | -           | -            | -      | =                             |  |
| 20                            | -                               | -      | -      | -      | -      | =                             | 0,111                                | 0,211   | -           | -            | -      | =                             |  |
| 21                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 22                            | +                               | +      | +      | +      | +      | =                             | >3,5                                 | 0,211   | +           | +            | +      | =                             |  |
| 23                            | -                               | -      | -      | -      | -      | =                             | 0,147                                | 0,211   | -           | -            | -      | =                             |  |
| 24                            | -                               | -      | -      | -      | -      | =                             | 0,098                                | 0,211   | -           | -            | -      | =                             |  |
| Total flora of milk (UFC/ml): |                                 | 23 000 |        |        |        |                               |                                      |         |             |              |        |                               |  |

## Laboratory H

| Code sample                   | Reference method EN ISO 11290-1 |          |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |  |
|-------------------------------|---------------------------------|----------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|--|
|                               | Fraser 1/2                      |          | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |  |
|                               | O&A                             | PALCAM   | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |  |
| 1                             | +                               | +        | +      | +      | +      | =                             | 2,465                                | 0,119   | +           | +            | +      | =                             |  |
| 2                             | +                               | +        | +      | +      | +      | =                             | 2,527                                | 0,119   | +           | +            | +      | =                             |  |
| 3                             | +                               | +        | +      | +      | +      | =                             | 2,474                                | 0,119   | +           | +            | +      | =                             |  |
| 4                             | +                               | +        | +      | +      | +      | =                             | 2,613                                | 0,119   | +           | +            | +      | =                             |  |
| 5                             | -                               | -        | -      | -      | -      | =                             | 0,016                                | 0,119   | -           | -            | -      | =                             |  |
| 6                             | -                               | -        | -      | -      | -      | =                             | 0,016                                | 0,119   | -           | -            | -      | =                             |  |
| 7                             | +                               | +        | +      | +      | +      | =                             | 2,012                                | 0,119   | +           | +            | +      | =                             |  |
| 8                             | +                               | +        | +      | +      | +      | =                             | 2,130                                | 0,119   | +           | +            | +      | =                             |  |
| 9                             | +                               | +        | +      | +      | +      | =                             | 2,273                                | 0,119   | +           | +            | +      | =                             |  |
| 10                            | +                               | +        | +      | +      | +      | =                             | 2,549                                | 0,119   | +           | +            | +      | =                             |  |
| 11                            | -                               | -        | -      | -      | -      | =                             | 0,017                                | 0,119   | -           | -            | -      | =                             |  |
| 12                            | -                               | -        | -      | -      | -      | =                             | 0,018                                | 0,119   | -           | -            | -      | =                             |  |
| 13                            | +                               | +        | +      | +      | +      | =                             | 3,129                                | 0,119   | +           | +            | +      | =                             |  |
| 14                            | +                               | +        | +      | +      | +      | =                             | 2,215                                | 0,119   | +           | +            | +      | =                             |  |
| 15                            | +                               | +        | +      | +      | +      | =                             | 2,171                                | 0,119   | +           | +            | +      | =                             |  |
| 16                            | +                               | +        | +      | +      | +      | =                             | 2,346                                | 0,119   | +           | +            | +      | =                             |  |
| 17                            | +                               | +        | +      | +      | +      | =                             | 2,416                                | 0,119   | +           | +            | +      | =                             |  |
| 18                            | +                               | +        | +      | +      | +      | =                             | 2,209                                | 0,119   | +           | +            | +      | =                             |  |
| 19                            | -                               | -        | -      | -      | -      | =                             | 0,017                                | 0,119   | -           | -            | -      | =                             |  |
| 20                            | -                               | -        | -      | -      | -      | =                             | 0,016                                | 0,119   | -           | -            | -      | =                             |  |
| 21                            | +                               | +        | +      | +      | +      | =                             | 3,121                                | 0,119   | +           | +            | +      | =                             |  |
| 22                            | +                               | +        | +      | +      | +      | =                             | 2,378                                | 0,119   | +           | +            | +      | =                             |  |
| 23                            | -                               | -        | -      | -      | -      | =                             | 0,016                                | 0,119   | -           | -            | -      | =                             |  |
| 24                            | -                               | -        | -      | -      | -      | =                             | 0,018                                | 0,119   | -           | -            | -      | =                             |  |
| Total flora of milk (UFC/ml): |                                 | > 30 000 |        |        |        |                               |                                      |         |             |              |        |                               |  |

## Laboratory I

| Code sample                   | Reference method EN ISO 11290-1 |                     |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |  |
|-------------------------------|---------------------------------|---------------------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|--|
|                               | Fraser 1/2                      |                     | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |  |
|                               | O&A                             | PALCAM              | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |  |
| 1                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 2                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 3                             | +                               | +                   | +      | +      | +      | =                             | 2,175                                | 0,228   | +           | +            | +      | =                             |  |
| 4                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 5                             | -                               | -                   | -      | -      | -      | =                             | 0,087                                | 0,228   | -           | -            | -      | =                             |  |
| 6                             | -                               | -                   | -      | -      | -      | =                             | 0,091                                | 0,228   | -           | -            | -      | =                             |  |
| 7                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 8                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 9                             | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 10                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 11                            | -                               | -                   | -      | -      | -      | =                             | 0,100                                | 0,228   | -           | -            | -      | =                             |  |
| 12                            | -                               | -                   | -      | -      | -      | =                             | 0,097                                | 0,228   | -           | -            | -      | =                             |  |
| 13                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 14                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 15                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 16                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 17                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 18                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 19                            | -                               | -                   | -      | -      | -      | =                             | 0,092                                | 0,228   | -           | -            | -      | =                             |  |
| 20                            | -                               | -                   | -      | -      | -      | =                             | 0,099                                | 0,228   | -           | -            | -      | =                             |  |
| 21                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 22                            | +                               | +                   | +      | +      | +      | =                             | 2,500                                | 0,228   | +           | +            | +      | =                             |  |
| 23                            | -                               | -                   | -      | -      | -      | =                             | 0,101                                | 0,228   | -           | -            | -      | =                             |  |
| 24                            | -                               | -                   | -      | -      | -      | =                             | 0,096                                | 0,228   | -           | -            | -      | =                             |  |
| Total flora of milk (UFC/ml): |                                 | > 3.10 <sup>7</sup> |        |        |        |                               |                                      |         |             |              |        |                               |  |

**Laboratory J**

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 3,257                                | 0,218   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 3,860                                | 0,218   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 3,690                                | 0,218   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 3,153                                | 0,218   | +           | +            | +      | =                             |
| 5           | -                               | -      | -      | -      | -      | =                             | 0,108                                | 0,218   | -           | -            | -      | =                             |
| 6           | -                               | -      | -      | -      | -      | =                             | 0,103                                | 0,218   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 3,462                                | 0,218   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 3,681                                | 0,218   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 3,108                                | 0,218   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 3,617                                | 0,218   | +           | +            | +      | =                             |
| 11          | -                               | -      | -      | -      | -      | =                             | 0,093                                | 0,218   | -           | -            | -      | =                             |
| 12          | -                               | -      | -      | -      | -      | =                             | 0,114                                | 0,218   | -           | -            | -      | =                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 3,461                                | 0,218   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 3,507                                | 0,218   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 3,421                                | 0,218   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 3,459                                | 0,218   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 3,312                                | 0,218   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 3,617                                | 0,218   | +           | +            | +      | =                             |
| 19          | -                               | -      | -      | -      | -      | =                             | 0,107                                | 0,218   | -           | -            | -      | =                             |
| 20          | -                               | -      | -      | -      | -      | =                             | 0,103                                | 0,218   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 3,461                                | 0,218   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 3,206                                | 0,218   | +           | +            | +      | =                             |
| 23          | -                               | -      | -      | -      | -      | =                             | 0,113                                | 0,218   | -           | -            | -      | =                             |
| 24          | -                               | -      | -      | -      | -      | =                             | 0,107                                | 0,218   | -           | -            | -      | =                             |

Total flora of milk (UFC/ml): > 30 000

**Laboratory K**

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 2,994                                | 0,232   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 3,007                                | 0,232   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 2,980                                | 0,232   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 3,109                                | 0,232   | +           | +            | +      | =                             |
| 5           | -                               | -      | -      | -      | -      | =                             | 0,115                                | 0,232   | -           | -            | -      | =                             |
| 6           | -                               | -      | -      | -      | -      | =                             | 0,084                                | 0,232   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 3,119                                | 0,232   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 2,919                                | 0,232   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 3,053                                | 0,232   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 3,093                                | 0,232   | +           | +            | +      | =                             |
| 11          | -                               | -      | -      | -      | -      | =                             | 0,092                                | 0,232   | -           | -            | -      | =                             |
| 12          | -                               | -      | -      | -      | -      | =                             | 0,103                                | 0,232   | -           | -            | -      | =                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 3,102                                | 0,232   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 2,625                                | 0,232   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 2,883                                | 0,232   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 2,874                                | 0,232   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 3,041                                | 0,232   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 3,093                                | 0,232   | +           | +            | +      | =                             |
| 19          | -                               | -      | -      | -      | -      | =                             | 0,105                                | 0,232   | -           | -            | -      | =                             |
| 20          | -                               | -      | -      | -      | -      | =                             | 0,112                                | 0,232   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 3,102                                | 0,232   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 3,118                                | 0,232   | +           | +            | +      | =                             |
| 23          | -                               | -      | -      | -      | -      | =                             | 0,109                                | 0,232   | -           | -            | -      | =                             |
| 24          | -                               | -      | -      | -      | -      | =                             | 0,118                                | 0,232   | -           | -            | -      | =                             |

Total flora of milk (UFC/ml): > 3 000 000

**Laboratory L**

| Code sample | Reference method EN ISO 11290-1 |        |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------|---------------------------------|--------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|             | Fraser 1/2                      |        | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|             | O&A                             | PALCAM | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1           | +                               | +      | +      | +      | +      | =                             | 2,656                                | 0,253   | +           | +            | +      | =                             |
| 2           | +                               | +      | +      | +      | +      | =                             | 2,419                                | 0,253   | +           | +            | +      | =                             |
| 3           | +                               | +      | +      | +      | +      | =                             | 2,745                                | 0,253   | +           | +            | +      | =                             |
| 4           | +                               | +      | +      | +      | +      | =                             | 2,858                                | 0,253   | +           | +            | +      | =                             |
| 5           | -                               | -      | -      | -      | -      | =                             | 0,099                                | 0,253   | -           | -            | -      | =                             |
| 6           | -                               | -      | -      | -      | -      | =                             | 0,118                                | 0,253   | -           | -            | -      | =                             |
| 7           | +                               | +      | +      | +      | +      | =                             | 2,867                                | 0,253   | +           | +            | +      | =                             |
| 8           | +                               | +      | +      | +      | +      | =                             | 2,705                                | 0,253   | +           | +            | +      | =                             |
| 9           | +                               | +      | +      | +      | +      | =                             | 2,697                                | 0,253   | +           | +            | +      | =                             |
| 10          | +                               | +      | +      | +      | +      | =                             | 2,868                                | 0,253   | +           | +            | +      | =                             |
| 11          | -                               | -      | -      | -      | -      | =                             | 0,126                                | 0,253   | -           | -            | -      | =                             |
| 12          | -                               | -      | -      | -      | -      | =                             | 0,104                                | 0,253   | -           | -            | -      | =                             |
| 13          | +                               | +      | +      | +      | +      | =                             | 2,756                                | 0,253   | +           | +            | +      | =                             |
| 14          | +                               | +      | +      | +      | +      | =                             | 2,673                                | 0,253   | +           | +            | +      | =                             |
| 15          | +                               | +      | +      | +      | +      | =                             | 2,694                                | 0,253   | +           | +            | +      | =                             |
| 16          | +                               | +      | +      | +      | +      | =                             | 2,686                                | 0,253   | +           | +            | +      | =                             |
| 17          | +                               | +      | +      | +      | +      | =                             | 2,698                                | 0,253   | +           | +            | +      | =                             |
| 18          | +                               | +      | +      | +      | +      | =                             | 2,906                                | 0,253   | +           | +            | +      | =                             |
| 19          | -                               | -      | -      | -      | -      | =                             | 0,140                                | 0,253   | -           | -            | -      | =                             |
| 20          | -                               | -      | -      | -      | -      | =                             | 0,135                                | 0,253   | -           | -            | -      | =                             |
| 21          | +                               | +      | +      | +      | +      | =                             | 2,721                                | 0,253   | +           | +            | +      | =                             |
| 22          | +                               | +      | +      | +      | +      | =                             | 3,038                                | 0,253   | +           | +            | +      | =                             |
| 23          | -                               | -      | -      | -      | -      | =                             | 0,108                                | 0,253   | -           | -            | -      | =                             |
| 24          | -                               | -      | -      | -      | -      | =                             | 0,166                                | 0,253   | -           | -            | -      | =                             |

Total flora of milk (UFC/ml): 5 000 000

**Laboratory M**

| Code sample                   | Reference method EN ISO 11290-1 |         |        |        |        | Comparison / expected results | TRANSIA PLATE L.monocytogenes method |         |             |              |        | Comparison / expected results |
|-------------------------------|---------------------------------|---------|--------|--------|--------|-------------------------------|--------------------------------------|---------|-------------|--------------|--------|-------------------------------|
|                               | Fraser 1/2                      |         | Fraser |        | Result |                               | Test                                 |         | Test result | Confirmation | Result |                               |
|                               | O&A                             | PALCAM  | O&A    | PALCAM |        |                               | OD                                   | Cut-off |             | COMPASS      |        |                               |
| 1                             | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 2                             | +                               | +       | +      | +      | +      | =                             | 3,503                                | 0,216   | +           | +            | +      | =                             |
| 3                             | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 4                             | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 5                             | -                               | -       | -      | -      | -      | =                             | 0,100                                | 0,216   | -           | -            | -      | =                             |
| 6                             | -                               | -       | -      | -      | -      | =                             | 0,093                                | 0,216   | -           | -            | -      | =                             |
| 7                             | +                               | +       | +      | +      | +      | =                             | 3,503                                | 0,216   | +           | +            | +      | =                             |
| 8                             | +                               | +       | +      | +      | +      | =                             | 3,456                                | 0,216   | +           | +            | +      | =                             |
| 9                             | +                               | +       | +      | +      | +      | =                             | 3,481                                | 0,216   | +           | +            | +      | =                             |
| 10                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 11                            | -                               | -       | -      | -      | -      | =                             | 0,096                                | 0,216   | -           | -            | -      | =                             |
| 12                            | -                               | -       | -      | -      | -      | =                             | 0,096                                | 0,216   | -           | -            | -      | =                             |
| 13                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 14                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 15                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 16                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 17                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 18                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 19                            | -                               | -       | -      | -      | -      | =                             | 0,094                                | 0,216   | -           | -            | -      | =                             |
| 20                            | -                               | -       | -      | -      | -      | =                             | 0,098                                | 0,216   | -           | -            | -      | =                             |
| 21                            | +                               | +       | +      | +      | +      | =                             | 3,456                                | 0,216   | +           | +            | +      | =                             |
| 22                            | +                               | +       | +      | +      | +      | =                             | 3,509                                | 0,216   | +           | +            | +      | =                             |
| 23                            | -                               | -       | -      | -      | -      | =                             | 0,091                                | 0,216   | -           | -            | -      | =                             |
| 24                            | -                               | -       | -      | -      | -      | =                             | 0,093                                | 0,216   | -           | -            | -      | =                             |
| Total flora of milk (UFC/ml): |                                 | >30 000 |        |        |        |                               |                                      |         |             |              |        |                               |

APPENDIX H :

INTERLABORATORY STUDY  
-  
ACCORDANCE

ALTERNATIVE METHOD**Level L0**

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

**Level L1**

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

**Level L2**

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

## REFERENCE METHOD

## Level L0

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

## Level L1

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

## Level L2

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Probability of negative result | Probability of negative pairs | Probability of positives | Probability of positive pairs | Probability of identical result pairs |
|--------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------------------|
| Laboratory A       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory C       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory D       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory E       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory H       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory G       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory I       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory J       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory K       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory L       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| Laboratory M       | 8                               | 8                               | 1,00                           | 1,00                          | 0,00                     | 0,00                          | 1,00                                  |
| <b>Mean:</b>       |                                 |                                 |                                |                               |                          |                               | <b>1,00</b>                           |
| <b>Accordance:</b> |                                 |                                 |                                |                               |                          |                               | <b>100%</b>                           |

APPENDIX I :

INTERLABORATORY STUDY  
-  
CONCORDANCE

ALTERNATIVE METHOD

Number of laboratories 11

Number of positives per laboratory 8

**Level L0**

| Laboratory         | Nr of negative results expected | Nr of negative results obtained | Inter-laboratory pairs with the same result | Total number of inter-laboratory pairs |
|--------------------|---------------------------------|---------------------------------|---|--|
| Laboratory A       | 8                               | 8                               | 640   | 640                                    |
| Laboratory C       | 8                               | 8                               | 640   | 640                                    |
| Laboratory D       | 8                               | 8                               | 640   | 640                                    |
| Laboratory E       | 8                               | 8                               | 640   | 640                                    |
| Laboratory G       | 8                               | 8                               | 640   | 640                                    |
| Laboratory H       | 8                               | 8                               | 640   | 640                                    |
| Laboratory I       | 8                               | 8                               | 640   | 640                                    |
| Laboratory J       | 8                               | 8                               | 640   | 640                                    |
| Laboratory K       | 8                               | 8                               | 640   | 640                                    |
| Laboratory L       | 8                               | 8                               | 640   | 640                                    |
| Laboratory M       | 8                               | 8                               | 640   | 640                                    |
| <b>Total</b>       |                                 |                                 | <b>7040</b>                                 | <b>7040</b>                            |
| <b>Concordance</b> | 100,00%                         |                                 |   |  |

Number of laboratories 11

Number of positives per laboratory 8

**Level L1**

| Laboratory         | Nb de positifs attendus | Nb de positifs obtenus | Paires interlaboratoires avec le même résultat | Nombre total de paires interlaboratoires |
|--------------------|-------------------------|------------------------|--|--|
| Laboratory A       | 8                       | 8                      | 640  | 640                                      |
| Laboratory C       | 8                       | 8                      | 640  | 640                                      |
| Laboratory D       | 8                       | 8                      | 640  | 640                                      |
| Laboratory E       | 8                       | 8                      | 640  | 640                                      |
| Laboratory G       | 8                       | 8                      | 640  | 640                                      |
| Laboratory H       | 8                       | 8                      | 640  | 640                                      |
| Laboratory I       | 8                       | 8                      | 640  | 640                                      |
| Laboratory J       | 8                       | 8                      | 640  | 640                                      |
| Laboratory K       | 8                       | 8                      | 640  | 640                                      |
| Laboratory L       | 8                       | 8                      | 640  | 640                                      |
| Laboratory M       | 8                       | 8                      | 640  | 640                                      |
| <b>Total</b>       |                         |                        | <b>7040</b>                                    | <b>7040</b>                              |
| <b>Concordance</b> | 100,00%                 |                        |  |  |

Number of laboratories 11

Number of positives per laboratory 8

**Level L2**

| Laboratory         | Nb de positifs attendus | Nb de positifs obtenus | Paires interlaboratoires avec le même résultat | Nombre total de paires interlaboratoires |
|--------------------|-------------------------|------------------------|--|--|
| Laboratory A       | 8                       | 8                      | 640  | 640                                      |
| Laboratory C       | 8                       | 8                      | 640  | 640                                      |
| Laboratory D       | 8                       | 8                      | 640  | 640                                      |
| Laboratory E       | 8                       | 8                      | 640  | 640                                      |
| Laboratory G       | 8                       | 8                      | 640  | 640                                      |
| Laboratory H       | 8                       | 8                      | 640  | 640                                      |
| Laboratory J       | 8                       | 8                      | 640  | 640                                      |
| Laboratory I       | 8                       | 8                      | 640  | 640                                      |
| Laboratory K       | 8                       | 8                      | 640  | 640                                      |
| Laboratory L       | 8                       | 8                      | 640  | 640                                      |
| Laboratory M       | 8                       | 8                      | 640  | 640                                      |
| <b>Total</b>       |                         |                        | <b>7040</b>                                    | <b>7040</b>                              |
| <b>Concordance</b> | 100,00%                 |                        |  |  |

**REFERENCE METHOD**

Number of laboratories 11

Number of positives per laboratory 8

**Level L0**

| Laboratory         | Nb de négatifs attendus | Nb de négatifs obtenus | Paires interlaboratoires avec le même résultat | Nombre total de paires interlaboratoires |
|--------------------|-------------------------|------------------------|--|--|
| Laboratory A       | 8                       | 8                      | 640  | 640                                      |
| Laboratory C       | 8                       | 8                      | 640  | 640                                      |
| Laboratory D       | 8                       | 8                      | 640  | 640                                      |
| Laboratory E       | 8                       | 8                      | 640  | 640                                      |
| Laboratory G       | 8                       | 8                      | 640  | 640                                      |
| Laboratory H       | 8                       | 8                      | 640  | 640                                      |
| Laboratory I       | 8                       | 8                      | 640  | 640                                      |
| Laboratory J       | 8                       | 8                      | 640  | 640                                      |
| Laboratory K       | 8                       | 8                      | 640  | 640                                      |
| Laboratory L       | 8                       | 8                      | 640  | 640                                      |
| Laboratory M       | 8                       | 8                      | 640  | 640                                      |
| <b>Total</b>       |                         |                        | <b>7040</b>                                    | <b>7040</b>                              |
| <b>Concordance</b> | 100,00%                 |                        |  |  |

Number of laboratories 11

Number of positives per laboratory 8

**Level L1**

| Laboratory         | Nb de positifs attendus | Nb de positifs obtenus | Paires interlaboratoires avec le même résultat | Nombre total de paires interlaboratoires |
|--------------------|-------------------------|------------------------|--|--|
| Laboratory A       | 8                       | 8                      | 640  | 640                                      |
| Laboratory C       | 8                       | 8                      | 640  | 640                                      |
| Laboratory D       | 8                       | 8                      | 640  | 640                                      |
| Laboratory E       | 8                       | 8                      | 640  | 640                                      |
| Laboratory G       | 8                       | 8                      | 640  | 640                                      |
| Laboratory H       | 8                       | 8                      | 640  | 640                                      |
| Laboratory I       | 8                       | 8                      | 640  | 640                                      |
| Laboratory J       | 8                       | 8                      | 640  | 640                                      |
| Laboratory K       | 8                       | 8                      | 640  | 640                                      |
| Laboratory L       | 8                       | 8                      | 640  | 640                                      |
| Laboratory M       | 8                       | 8                      | 640  | 640                                      |
| <b>Total</b>       |                         |                        | <b>7040</b>                                    | <b>7040</b>                              |
| <b>Concordance</b> | 100,00%                 |                        |  |  |

Number of laboratories 11

Number of positives per laboratory 8

**Level L2**

| Laboratory         | Nb de positifs attendus | Nb de positifs obtenus | Paires interlaboratoires avec le même résultat | Nombre total de paires interlaboratoires |
|--------------------|-------------------------|------------------------|--|--|
| Laboratory A       | 8                       | 8                      | 640  | 640                                      |
| Laboratory C       | 8                       | 8                      | 640  | 640                                      |
| Laboratory D       | 8                       | 8                      | 640  | 640                                      |
| Laboratory E       | 8                       | 8                      | 640  | 640                                      |
| Laboratory G       | 8                       | 8                      | 640  | 640                                      |
| Laboratory H       | 8                       | 8                      | 640  | 640                                      |
| Laboratory I       | 8                       | 8                      | 640  | 640                                      |
| Laboratory J       | 8                       | 8                      | 640  | 640                                      |
| Laboratory K       | 8                       | 8                      | 640  | 640                                      |
| Laboratory L       | 8                       | 8                      | 640  | 640                                      |
| Laboratory M       | 8                       | 8                      | 640  | 640                                      |
| <b>Total</b>       |                         |                        | <b>7040</b>                                    | <b>7040</b>                              |
| <b>Concordance</b> | 100,00%                 |                        |  |  |