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NF VALIDATION
Validation of alternative analytical methods
Application to food microbiology

Summary report

EN ISO 16140 validation of the COMPASS® *Listeria* Agar method for the detection of *Listeria* spp. and *Listeria monocytogenes* in human food products and environmental samples

Qualitative method

This report consists of 119 pages including 12 appendices.
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Foreword

All information required to validate the analysis guarantee is made available to SOLABIA.

The results are summarised in tables and interpreted as per the NF EN ISO 16140 standard.

✓ Manufacturer:	SOLABIA Division Biokar Diagnostics Rue des Quarante Mines - BP10245 60002 BEAUVAIS Cedex
✓ Expert laboratory:	ADRIA Développement ZA Creac'h Gwen 29196 QUIMPER Cedex
✓ Method to validate:	**COMPASS® *Listeria* Agar with 24-hour incubation (detection)**
✓ Validation standard:	EN ISO 16140 (October 2003): microbiology of the food chain - Protocol for the validation of alternative methods
✓ **Reference method♦**:	EN ISO 11290-1/A1 (February 2005): Horizontal method for the detection and enumeration of *Listeria monocytogenes* - Part 1: detection method - Amendment 1: changes to isolation media and haemolysis detection and introduction of reliability data
✓ **Validation scope**	**All human foods and environmental samples**
✓ **Certification body:**	AFNOR Certification

♦ Test conducted under accreditation

Overview of the alternative method

1 VALIDATION HISTORY

The COMPASS® *Listeria* Agar method was validated in 2002 for the detection of *Listeria monocytogenes* in human foods and environmental samples, with two certification references: BKR 23/1 – 09/02 for detection in 48 h and BKR 23/2 – 11/02 for detection in 24 h.

In 2007, a renewal and extension study was conducted on the method for a new confirmation option: COMPASS® *L. mono* Agar. As the formulation of the COMPASS® *Listeria* Agar differs from that of the COMPASS® *L. mono* Agar, a complete validation study was conducted as per the EN ISO 16140 standard. Both of the aforementioned validation certificates were then combined into a single certificate: BKR 23/02 – 11/02.

The method was renewed in September 2010 with no additional tests.

In 2011, an extension study was conducted to extend the detection of *Listeria spp*.; the methods comparative study was repeated in whole.

In 2013, an extension study was conducted to introduce a new conformation option, the CONFIRM'*L. mono*, using rhamnose fermentation to detect *Listeria monocytogenes* by the COMPASS® *Listeria* Agar method.

The COMPASS® *Listeria* Agar method was renewed in 2014.

2 PROTOCOL AND PRINCIPLE OF THE ALTERNATIVE METHOD

COMPASS® *Listeria* Agar is an agar culture medium. The method is used to detect *Listeria monocytogenes* and other species belonging to the genus *Listeria* after a single step of selective enrichment, streaking and incubation of the plates for 24 hours at 37 °C (incubation can be extended to 48 hours).

Characteristic colonies of *Listeria monocytogenes* and of some strains of *Listeria ivanovii* appear blue-green, surrounded by an opaque halo. Other *Listeria* species give blue to blue-green colonies with no halo. Confirmation is then performed from characteristic colonies isolated on COMPASS® *Listeria* Agar.

Positive samples are confirmed in one of the following manners:

- ***Listeria monocytogenes:***
  - by using conventional tests described in standard CEN or ISO tests (including the purification step), starting from the characteristic colonies isolated on COMPASS® *Listeria* Agar,
  - using CONFIRM' *L. mono* Agar®,
  - using CONFIRM'*L. mono* broth,
  - using another NF VALIDATION certified method based on a different principle from that of the COMPASS® *Listeria* Agar. The validated method protocol must be observed in its entirety, i.e. all steps preceding the intermediate step from which confirmation is performed must be common to both methods. Both methods must therefore possess a common part.

- ***Listeria* spp:**
  - by using conventional tests described in standard CEN or ISO tests, including the purification step (e.g.: Gram stain and Catalase test), starting from the characteristic colonies isolated on COMPASS® *Listeria* Agar,
  - by subculturing an isolated colony onto PALCAM or onto biochemical identification mini-galleries,

- using another NF VALIDATION certified method based on a different principle from that of the COMPASS® *Listeria* Agar. The validated method protocol must be observed in its entirety, i.e. all steps preceding the intermediate step from which confirmation is performed must be common to both methods. Both methods must therefore possess a common part.

The corresponding protocol is given in **Appendix 1**.

3 REFERENCE METHOD TO WHICH THE ALTERNATIVE METHOD WAS COMPARED

The reference method is the NF EN ISO 11290-1/A1 standard (February 2005): horizontal method for the detection and enumeration of *Listeria monocytogenes* - Part 1: detection method.

A schematic representation of the protocol is given in **Appendix 2**.

4 DESIRED SCOPE

All human food products
Environmental samples

Main results obtained during the initial validation and renewal and extension studies

1 METHOD COMPARATIVE STUDY

1.1 Initial validation study (2002)

1.1.1 Specificity study (24 and 48 h)

During the initial AFNOR validation as per the AFNOR standard, 50 target strains and 30 non-target strains were tested. All *Listeria monocytogenes* strains grew within 24 h and gave characteristic colonies. All negative strains gave:

- either a non-characteristic reaction (blue colonies with no halo) after incubation for 24 h,
- or a weakly characteristic reaction in the case of *L. ivanovii* (blue colonies with a halo) in 48 h,
- or a lack of growth.

1.1.2 Intrinsic limit of detection (24 and 48 h)

The intrinsic limit of detection is: 100 bacteria/ml

1.1.3 Matrix limit of detection (24 and 48 h)

The limit of detection of the method is of between 1 and 10 bacteria/25 g. The limit of detection is equivalent to that of the reference method.

1.1.4 Accuracy study

- *24 h method*: the study involved 481 samples, 67% of which were naturally contaminated, with 173 positive products. The results obtained were as follows:

Summary table for all categories

Alternative NF EN ISO 11290-1 / Alternative COMPASS® *L. mono* Agar	+	-	Total
+	144	22	166
-	7	308	315
Total	151	330	481

- *48 h method*: the study also involved 481 samples, 67% of which were naturally contaminated. The results obtained were as follows:

Alternative NF EN ISO 11290-1 / Alternative COMPASS® *L. mono* Agar	+	-	Total
+	146	24	170
-	5	306	311
Total	151	330	481

1.2 Renewal study (2007)

1.2.1 Relative accuracy, relative specificity and relative sensitivity

Accuracy is the closeness of fit between the test result and the accepted reference value.

Relative specificity is defined as the degree to which the method is affected (or not) by the other components in a multi-component sample. It represents the method's ability to accurately measure or quantify a given analyte in a sample without interference from other non-target components, such as for example a matrix effect or background noise.

Relative sensitivity is defined as the alternative method's ability to detect two different amounts of analyte previously measured by the reference method, using a given matrix, over the entire measurement range. The variation in minimum quantity (increase in analyte x concentration) that gives a significant variation in measured signal (response y).

- *Number and type of samples*

In total, 334 samples were analysed. The distribution per category is given in the following table:

Categories	Types	Positive (number)	Negative (number)	Total (number)
Meat products	Poultry, pork, beef	29	37	66
Dairy products	Raw milk, cheeses made with raw milk, milk powder	36	31	67
Fishery products	Smoked fish, raw fish and seafood, cooked fish	34	40	74
Vegetables and miscellaneous	Cooked and seasoned vegetables, raw frozen vegetables, miscellaneous	30	33	63
Environmental samples	Salting, pastries, fish and miscellaneous environment	31	33	64
TOTAL		**160**	**174**	**334**

- *Artificial sample contamination*

Samples were artificially contaminated with inocula or cross-contaminations. The strains used, along with the stresses applied, are given in **appendix 3**.

89 samples were artificially contaminated, 74 of which gave a positive result by one or other of the methods. The naturally contaminated samples thus represented 54.6% of positive samples.

- *Confirmation protocols*

Results were confirmed by subculturing one to five suspicious colonies from the COMPASS® *Listeria* Agar. The protocols described in the reference method were applied (Gram, catalase, haemolysis, CAMP Test and *Listeria* APIgalleries).

- *Test results*

A+ = confirmed positive
A- = immediate negative and negative after confirmation when presumed positive

Table 1 - Result pairs for the reference and alternative methods

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 151**	Positive deviation (R-/A+) **PD = 2**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 7**	Negative agreement (A+/R+) **NA = 174 (PPNA = 3)**

Table 2 - Meat products

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 29**	Positive deviation (R-/A+) **PD = 0**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A+/R+) **NA = 37 (PPNA = 1)**

Table 3 - Dairy products

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 30**	Positive deviation (R-/A+) **PD = 1**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 5**	Negative agreement (A+/R+) **NA =31 (PPNA = 1)**

Table 4 – Fishery products

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 34**	Positive deviation (R-/A+) **PD = 0**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A+/R+) **NA = 40**

Table 5 - Vegetables and miscellaneous

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 27**	Positive deviation (R-/A+) **PD = 1**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 2**	Negative agreement (A+/R+) **NA = 33 (PPNA = 1)**

Table 6 - Environmental samples

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 31**	Positive deviation (R-/A+) **PD = 0**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A+/R+) **NA = 33**

Table 7 - Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)

PA = Positive agreement (R+/A+) NA = Negative agreement (R-/A-)
PD = Positive deviation (R-/A+) ND = Negative deviation (A-/R+)

Matrices	AP	NA	ND	PD	N	Accuracy Relative AC (%) [100x(PA+NA])/N]	N+ PA + ND	Sensitivity Relative SE (%) [100xPA]/N+]	N- NA + PD	Specificity Relative SP (%) [100xNA]/N-]
Meat products	29	37	0	0	66	100.0	29	100.0	37	100.0
Dairy products	30	31	5	1	67	91.0	35	85.7	32	96.9
Fishery products	34	40	0	0	74	100.0	34	100.0	40	100.0
Vegetables and miscellaneous	27	33	2	1	63	95.2	29	93.1	34	97.1
Environment	31	33	0	0	64	100.0	31	100.0	33	100.0
TOTAL	**151**	**174**	**7**	**2**	**334**	**97.3**	**158**	**95.6**	**176**	**98.9**

The raw relative accuracy results are given in **Appendix 4**.

- *Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)*

The percentage values calculated for the alternative method are as follows:

Relative accuracy	AC = 97.3
Relative specificity	SP = 98.9
Relative sensitivity	SE = 95.6

The sensitivity of the two methods (recalculated taking into account the additional positive results of the alternative method obtained after conformation) is as follows:

	Alternative method	Reference method
Sensitivity	$\frac{(PA+PD)}{(PA+PD+ND} = 95{,}6$	$\frac{(PA+ND)}{(PA+PD+ND} = 98{,}8$

- *Analysis of discrepancies*

The 9 discordant samples are distributed as follows:

7 NEGATIVE DEVIATIONS	Contamination (inoculation rate/bag)	Comments
Dairy products (5)		
Sample 2710 (raclette cheese)	Natural	The presence of *Listeria monocytogenes* was only detected in the Fraser 1 isolates.
Sample 178 (skimmed milk powder)	Artificial (5)	
Sample 321 (Unripened cheese made with raw milk)	Natural	
Sample 334 (Brie de Meaux)	Natural	
Sample 368 (Soft cheese made with raw milk)	Natural	The presence of *Listeria monocytogenes* was detected by the reference method in the Fraser 1/2 isolates.
Vegetables and miscellaneous (2)		
Sample 73 (sliced carrots)	Natural	The presence of *Listeria monocytogenes* was only detected in the Fraser 1 isolates.
Sample 186 (sliced carrots)	Artificial (2)	

2 POSITIVE DEVIATIONS	Contamination	Comments
Dairy products (1)		
Sample 2603 (raw milk cheese)	Naturally contaminated	The presence of *Listeria monocytogenes* was detected by the alternative method only. Only *Listeria* spp. isolates other than *Listeria monocytogenes* were detected by the reference method.
Vegetables and miscellaneous (1)		
Sample 2618 (buckwheat flour)	Naturally contaminated	The presence of *Listeria monocytogenes* was detected by the alternative method only. Only *Listeria* spp. isolates other than *Listeria monocytogenes* were detected by the reference method.

The number of discordants between the reference method and the alternative method is of:

$Y = ND + PD = 7 + 2 = 9$

$9 < Y < 11, \quad m = 2 \quad M = 1$

$m \geq M$: the two methods are not significantly different at the 0.05 level. The accuracy of the COMPASS® *Listeria* Agar method is equivalent to that of the reference method.

1.2.2 Relative limit of detection

The relative limit of detection corresponds to the smallest number of culturable micro-organisms that can be detected in the sample, with a probability of 50%, using the alternative and reference methods.

- *Matrices used*

The purpose of this study was to determine the minimum amounts of *Listeria monocytogenes* that can be detected in the food matrix and to compare them to those obtained by the reference method.

The limits of detection were determined by the analysis of five matrix/strain pairs at four different levels. Six replicates of each experimental condition were performed.

The matrices tested were as follows:

- rillettes, inoculated with *Listeria monocytogenes* 1/2 V2/124
- smoked salmon, inoculated with *Listeria monocytogenes* 1/2a BR32,
- raw vegetables, inoculated with *Listeria monocytogenes* 1/2 10 11/1410,
- raw milk, inoculated with *Listeria monocytogenes* 4b 153,
- process water, inoculated with *Listeria monocytogenes* 877/113 environmental isolate.

- *Contamination protocol*

Six 25 g bags were prepared per matrix and per rate. The bags were inoculated individually with a bacterial suspension.

Analyses were performed both by the reference method and the alternative method.

The matrices used were analysed before inoculation by the N ISO 11290-1/A1 method (2004) in order to ensure that the samples were not already contaminated with *Listeria monocytogenes*. Total flora counts were also performed on each matrix.

- *Results*

Table 8 - Level values and relative detection

Pairs (strain/matrix)	Relative limit of detection (CFU/25 g or 25 ml) according to the Spearman-Kärber test	
	Reference method	Alternative method
Rillettes / *Listeria monocytogenes* 1/2 V2/124	0.4 [0.1; 1.3]	0.4 [0.1; 1.3]
Raw milk / *Listeria monocytogenes* 4b 153	0.6 [0.4; 0.9]	0.6 [0.4; 1.0]
Smoked salmon *Listeria monocytogenes* 1/2a BR32,	0.4 [0.2; 1.1]	0.4 [0.2; 1.1]
Green beans / *Listeria monocytogenes* 1/2 1011/1410	0.1 [0.1; 0.4]	0.1 [0.1; 0.4]
Process water / *Listeria monocytogenes* 877/113	0.7 [0.5; 0.9]	0.7 [0.5; 0.9]

The relative limit of detection was between 0.1 and 1.3 for both the reference method and the alternative method.

The limits of detection of the alternative method were similar to those of the reference method.

1.2.3 Inclusivity / Exclusivity

Inclusivity is the ability of the alternative method to detect the target analyte in a broad range of strains. Exclusivity is the absence of interference to the alternative method by an appropriate range of non-target strains.

The purpose of the specificity study is to verify that all strains of *Listeria monocytogenes* are detected by the COMPASS® *Listeria* Agar method and that there are no cross-reactions with strains other than *Listeria monocytogenes*.

- *Test protocols*

- **Inclusivity protocol**: Fifty strains of *Listeria monocytogenes* were thawed and cultured in brain-heart broth at 37 °C. The strains were inoculated into Fraser 1/2 broth at rates of between 10 and 100 cells per 225 ml. The full protocol of the COMPASS® *Listeria* Agar method was then applied.

- **Exclusivity protocol**: Thirty negative strains were thawed and cultured in brain-heart broth at 37 °C. These strains were then inoculated into nutrient broth at a rate of 10^5 cells/225 ml. The full protocol of the alternative method was then applied.

  - *Results*

The results are presented in **Appendix 5** .

- **Inclusivity**: All of the *Listeria monocytogenes* strains tested gave characteristic blue colonies with opaque halos.

- **Exclusivity**: Of the thirty strains tested, only the *L. ivanovii* strains gave blue colonies with opaque halos after incubation for 24 h. It should be noted however, that the halos were smaller than those obtained with *Listeria monocytogenes*.

The COMPASS® *Listeria* Agar method is specific and selective.

1.2.4 Practicability

Practicability was evaluated according to the thirteen criteria defined in the validation study requirements:

1. *Conditioning of the method elements:*

   The plates were placed into 20-plate boxes, split into two 10-plate film-wrapped subunits.

2. *Reagent volumes:*

   19 ml per 90 mm diameter plate

3. *Storage conditions*:

   The storage temperature is indicated on the box: 2-8 °C.

4. *Conditions of use after first use*: Not applicable

5. *Specific equipment or rooms required:*

The method does not require specific facilities; it can be performed in rooms and with equipment usually employed in a microbiology laboratory handling pathogenic micro-organisms.

6. *Ready-to-use or powdered reagents*: Not applicable

7. *Training time for uninitiated operators:*

For a technician with microbiology technical training, the method can be acquired in less than half a day.

8. *Actual manipulation time and technique flexibility*

	Time in minutes					
	NF EN ISO 11290-1			COMPASS® *Listeria* Agar		
Number of samples	1	5	15	1	5	15
Sampling and addition of Fraser 1/2	4	20	52.5	4	20	52.5
Crushing	1.5	7.5	22.5	1.5	7.5	22.5
Subculturing into Fraser 1	0.83	4.38	11.85			
O1/P1 streaking	1.65	8.75	24			
COMPASS® streaking				0.83	4.38	11.85
O2/P2 streaking	1.65	8.75	24			
O1/P1 reading	1	4.4	15			
COMPASS® reading				1	4.4	10
O2/P2 reading	1	4.4	15			
Total for negative samples (no suspicious colonies)	11.6	58.2	164.9	7.3	36.3	96.9
Total / negative sample	11.6	11.6	11.0	7.3	7.3	6.5
Streaking on TSYEA agar	2 to 6	33	70	2	5	7
Confirmation tests (haemolysis, CAMP, Gram, Catalase, sugars)	8 to 15	31.7	108	5	18	31
Total for positive samples, or samples displaying suspicious colonies	32.6	122.9	343	14.3	59.3	134.9
Total / positive sample, or sample displaying suspicious colonies	22.6 to 32.6	24.6	22.9	14.3	11.9	9.0

O1 / P1 = Ottaviani Agosti / Pacalm

Conclusion: In the case of large series, for negative samples, the analysis time using the reference method was longer than that for the COMPASS® *Listeria* Agar method.

In the case of positive samples, or samples displaying suspicious colonies, this difference was further enhanced.

9. Time to result

- When no suspicious colonies were visible on the plates, the times to results were as follows:

Step	Reference method NF EN ISO 11290-1	COMPASS® *Listeria* Agar method
Primary enrichment in Fraser 1/2	D0	D0
Initial streaking on selective agar	D1	D1
Secondary enrichment in Fraser 1	D1	
2nd streaking on selective agar	D3	
Read of the initial streaking	D2 - D3	D2
Read of the 2nd streaking	D4 - D5	

- When suspicious colonies were visible on the selective plates, the times to results were as follows:

Step	Reference method NF EN ISO 11290-1	COMPASS® *Listeria* Agar method
Primary enrichment in Fraser 1/2	D0	D0
Initial streaking on selective agar	D1	D1
Secondary enrichment in Fraser 1	D1	
2nd streaking on OAA/Palcam selective agar	D3	
Inittial streaking reading	D2 - D3	D2
Subculturing of suspicious colonies from initial streaking onto TSYEA	D2 - D3	D2
Second streaking reading	D4 - D5	
Subculturing of suspicious colonies from 2nd streaking onto TSYEA	D4 - D5	
Confirmation tests (implementation)	D3 - D6	D3
Confirmation tests (reading)	D4 - D7 (D8 – D11 (1))	D4 (D8 (1))

(1): For cases in which the sugar tests, based on the reference protocol, are performed in tubes.

For a negative result (no suspicious colonies), 5 days were required by the reference method, versus 2 days for the COMPASS® *Listeria* Agar method.

For a positive sample, or one displaying suspicious colonies, the COMPASS® *Listeria* Agar gave a presumed result at D2 and a positive result at D3.

10. *Type of operator qualification:*

    This is identical to that required to use the NF EN ISO 11290-1 reference method.

11. *Steps common with the reference method:*

    The Fraser 1/2 primary enrichment step is common with the reference method.

12. *Analytical result traceability:*

    Analysis and result traceability is that generally applied in the laboratory, i.e.: traceability of media used, operator signatures, analysis dates and recording of results. It is the same as that applied to the reference method.

13. *Maintenance by the laboratory: Not applicable*

1.2.5 Conclusion

The accuracy of the COMPASS® *Listeria* Agar method is equivalent to that of the reference method.

The limits of detection of the alternative method were similar to those of the reference method.

The COMPASS® *Listeria* Agar method is specific and selective.

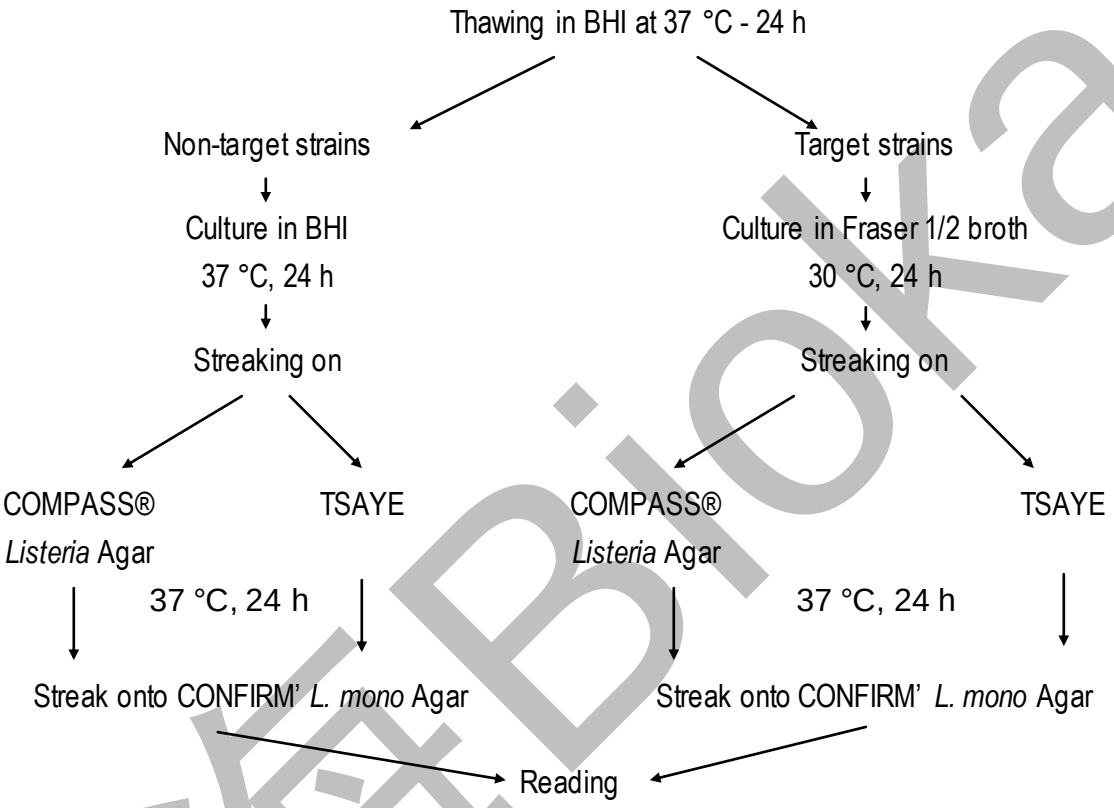
The COMPASS *Listeria* Agar provides ease of manipulation and shorter times to results.

1.3 Extension study (2007)

154 target strains and 108 non-target strains were tested.

1.3.1 Protocol

The protocol is presented below:



In the event of discrepancy with the expected result, the reference method confirmation protocol was applied, i.e.: Gram stain, Catalase, haemolysis, CAMP Test, rhamnose and xylose fermentation.

1.3.2 Results

1.3.2.1 Target strains

The results are presented in **Appendix 6** .

Of the 153 *Listeria monocytogenes* strains tested, 152 gave characteristic blue colonies with opaque halos on COMPASS® *Listeria* Agar. All of these strains gave a characteristic reaction on CONFIRM' *L. mono* Agar.

Listeria monocytogenes strain 6072 failed to grow on COMPASS® *Listeria* Agar from Fraser 1/2. Growth was achieved on CONFIRM' *L. mono* Agar from a colony taken from TSYEA. An opaque halo was obtained with a negative Rhamnose test. This strain, isolated on ALOA and OCLA, gave a characteristic reaction. The strain gave a positive Rhamnose test on a *Listeria* API strip and in a tube. The *Listeria monocytogenes* species identification was confirmed.

1.3.2.2 Non-target strains

In total, 106 strains were tested.

22 *Listeria innocua* strains tested gave non-characteristic colonies on COMPASS® *Listeria* Agar and on CONFIRM' *L. mono* Agar

Of the 15 *Listeria ivanovii* strains tested, 14 gave blue colonies with halos on COMPASS® *Listeria* Agar. These strains gave a negative reaction on CONFIRM' *L. mono* Agar (Rhamnose -), with the exception of the strains L. ivanovii Ad 616 that gave a weakly positive Rhamnose reaction and L. ivanovii Ad 648 that gave a characteristic reaction on CONFIRM' *L. mono* Agar. The strain *Listeria ivanovii* Ad 662 did not give an opaque halo on COMPASS® *Listeria* Agar even after incubation for 48 hours. This strain failed to grow on CONFIRM' *L. mono* Agar.

The nine *Listeria seeligeri* strains and the two *Listeria grayi* strains tested gave negative reactions, both on COMPASS® *Listeria* Agar and on CONFIRM' *L. mono* Agar.

Of the 21 *Bacillus cereus* strains tested, 12 gave an opaque halo on COMPASS® *Listeria* Agar with or without growth (5 strains). The same phenomenon was observed on CONFIRM'*L.mono* agar, but with a negative Rhamnose test.

The other *Bacillus* species tested did not give a characteristic reaction, either on COMPASS® *Listeria* Agar, or on CONFIRM' *L. mono* Agar. The same applied to the *Enterococcus*, *Lactococcus* and *Streptococcus* strains tested, that either failed to grow, or failed to give a characteristic reaction on COMPASS® *Listeria* Agar.

1.3.3 Conclusion

1.3.3.1 Inclusivity

152 out of 153 strains of *L. mono*cytogenes tested showed a characteristic reaction both on COMPASS® *Listeria* Agar and on CONFIRM' *L. mono* Agar.

1.3.3.2 Exclusivity

The CONFIRM' *L. mono* Agar test was able to distinguish strains of *Listeria ivanovii* or *B. cereus* that had given a more or less characteristic reaction on COMPASS® *Listeria* Agar.

1.4 Extension study (2011)

1.4.1 Relative accuracy, relative specificity and relative sensitivity

Accuracy is the closeness of fit between the test result and the accepted reference value.
Relative specificity is defined as the degree to which the method is affected (or not) by the other components in a multi-component sample. It represents the method's ability to accurately measure or quantify a given analyte in a sample without interference from other non-target components, such as for example a matrix effect or background noise.
Relative sensitivity is defined as the alternative method's ability to detect two different amounts of analyte previously measured by the reference method, using a given matrix, over the entire measurement range. The variation in minimum quantity (increase in analyte x concentration) that gives a significant variation in measured signal (response y).

1.4.1.1 Number and type of samples

279 samples were analysed both by the reference method and the COMPASS® *Listeria* Agar method. The distribution per category is given in the following table:

Categories	Type	Positive			Negative	Total
		Listeria spp.	*Listeria* spp other than monocytogenes	*Listeria monocytogenes*		
Meat products	Poultry	13	7	11	6	19
	pork	11	7	6	10	21
	Beef and miscellaneous	9	7	4	5	14
	Total	33	21	21	21	54
Dairy products	Raw dairy	11	10	7	8	19
	Raw milk cheese	12	7	8	11	23
	Powdered milk	12	7	5	3	15
	Total	35	24	20	22	57
Fishery products	Raw	8	5	6	1	9
	Smoked	6	5	2	1	7
	Cooked	22	12	19	12	34
	Total	36	22	27	14	50
Vegetables	Raw	7	6	2	11	18
	Frozen	9	5	7	2	11
	Cooked	18	9	12	9	27
	Total	34	20	21	22	56
Environment	Process water	6	6	3	5	11
	Surfaces	14	10	10	24	38
	Dusts, wash liquids	6	6	0	7	13
	Total	26	22	13	36	62
Total		164	109	102	115	279

1.4.1.2 Artificial sample contamination

Samples were artificially contaminated with inocula or cross-contaminations. 51 samples were inoculated with stressed strains. 43 samples gave a positive result. **73.8% of naturally contaminated samples were analysed**. The stresses applied and injury evaluation are given in **Appendix 7**.

1.4.1.3 Confirmation protocols

Typical *Listeria spp*. colonies were confirmed by culturing onto Palcam agar and by means of a *Listeria* biochemicalgallery.

1.4.1.4 Test results

Results were interpreted after plate incubation for 24 h and 48 h.

Table 9 - Result pairs for the reference and alternative methods - All products

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 158**	Positive deviation (R-/A+) **PD =2**	Positive agreement (A+/R+) **PA = 160**	Positive deviation (R-/A+) **PD = 2**
Alternative method Negative (A-)	Negative deviation (A-/R+) ND = 4 (PPND = 1)	Negative agreement (A-/R-) NA = 115 (PPNA = 7)	Negative deviation (A-/R+) ND = 2 (PPND = 2)	Negative agreement (A-/R-) NA = 115 (PPNA = 8)

A+ = confirmed positive
A- = immediately negative and negative after confirmation when presumed positive
PA = Positive agreement
NA = Negative agreement
PD = Positive deviation
ND = Negative deviation
PP = presumed positive, not confirmed

Table 10 - Meat products

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 31**	Positive deviation (R-/A+) **PD = 1**	Positive agreement (A+/R+) **PA = 32**	Positive deviation (R-/A+) **PD = 1**
Alternative method Negative (A-)	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A-/R-) **NA = 21** (PPNA = 3)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A-/R-) **NA = 21** (PPNA = 3)

Table 11 - Dairy products

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 33**	Positive deviation (R-/A+) **PD = 1**	Positive agreement (A+/R+) **PA = 33**	Positive deviation (R-/A+) **PD = 1**
Alternative method Negative (A-)	Negative deviation (A-/R+) **ND = 1** (PPND = 1)	Negative agreement (A-/R-) **NA = 22**	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A-/R-) **NA = 22** (PPNA = 1)

Table 12 – Fishery products

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	**Reference method negative (R-)**	**Reference method positive (R+)**	**Reference method negative (R-)**
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 36**	Positive deviation (R-/A+) **PD = 0**	Positive agreement (A+/R+) **PA = 36**	Positive deviation (R-/A+) **PD = 0**
Alternative method Negative (A-)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A-/R-) **NA = 14** (PPNA = 2)	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A-/R-) **NA = 14** (PPNA = 1)

Table 13 - Vegetables

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	**Reference method negative (R-)**	**Reference method positive (R+)**	**Reference method negative (R-)**
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 33**	Positive deviation (R-/A+) **PD = 0**	Positive agreement (A+/R+) **PA = 33**	Positive deviation (R-/A+) **PD = 0**
Alternative method Negative (A-)	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A-/R-) **NA = 22** (PPNA = 2)	Negative deviation (A-/R+) **ND = 1** (PPND = 1)	Negative agreement (A-/R-) **NA = 22** (PPNA = 3)

Table 14 - Environmental samples

Answers	24 h incubation		48 h incubation	
	Reference method positive (R+)	**Reference method negative (R-)**	**Reference method positive (R+)**	**Reference method negative (R-)**
Alternative method Positive (A+)	Positive agreement (A+/R+) **PA = 25**	Positive deviation (R-/A+) **PD = 0**	Positive agreement (A+/R+) **PA = 26**	Positive deviation (R-/A+) **PD = 0**
Alternative method Negative (A-)	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A-/R-) **NA = 36**	Negative deviation (A-/R+) **ND = 0**	Negative agreement (A-/R-) **NA = 36**

1.4.1.5 *Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)*

Table 15 - Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)

Incubation: 24 h										
Matrices	**AP**	**NA**	**ND**	**PD**	**N**	**Accuracy Relative AC (%)** [100x(PA+NA])/N]	**N+** PA + ND	**Sensitivity Relative SE (%)** [100xPA]/N+]	**N-** NA + PD	**Specificity Relative SP (%)** [100xNA]/N-]
Meat products	31	21	1	1	54	96.3	32	96.9	22	95.5
Dariy products	33	22	1	1	57	96.5	34	97.1	23	95.7
Fishery products	36	14	0	0	50	100.0	36	100.0	14	100.0
Vegetables	33	22	1	0	56	98.2	34	97.1	22	100.0
Environment	25	36	1	0	62	98.4	26	96.2	36	100.0
TOTAL	**158**	**115**	**4**	**2**	**279**	**97.8**	**162**	**97.5**	**117**	**98.3**

Incubation: 48 h										
Matrices	**AP**	**NA**	**ND**	**PD**	**N**	**Accuracy Relative AC (%)** [100x(PA+NA])/N]	**N+** PA + ND	**Sensitivity Relative SE (%)** [100xPA]/N+]	**N-** NA + PD	**Specificity Relative SP (%)** [100xNA]/N-]
Meat products	32	21	0	1	54	98.1	32	100.0	22	95.5
Dairy products	33	22	1	1	57	96.5	34	97.1	23	95.7
Fishery products	36	14	0	0	50	100.0	36	100.0	14	100.0
Vegetables	33	22	1	0	56	98.2	34	97.1	22	100.0
Environment	26	36	0	0	62	100.0	26	100.0	36	100.0
TOTAL	**160**	**115**	**2**	**2**	**279**	**98.6**	**162**	**98.8**	**117**	**98.3**

PA = Positive agreement (R+/A+)
NA = Negative agreement (R-/A-)
PD = Positive deviation (R-/A+)
ND = Negative deviation (A-/R+)

The raw relative accuracy results are given in **Appendix 8** .

The percentage values calculated for the alternative method are as follows:

	24 h incubation	48 h incubation
Relative accuracy	97.8	98.6
Relative specificity	98.3	98.3
Relative sensitivity	97.5	98.8

The sensitivity of the two methods taking into account the additional positive results of the alternative method is as follows:

	24 h incubation	48 h incubation
Alternative method (SE)	97.6	98.8
Reference method (SE)	98.8	98.8

1.4.1.6 Analysis of discordants

❒ *Negative deviations*

After incubation for 24 h, 4 negative deviations were observed; these are listed in the table below:

No. Spl.	Product	Strains identified	Result of the reference method		Results after 48 h incubation
			Fraser ½ Questionable colonies	Fraser 1	
571	Turkey nuggets	*Listeria innocua*	-	+	+
1335	Tomme made with raw milk	Inoculation with *Listeria innocua*	+ Questionable colonies but not confirmed	+	-
1042	Shortcrust pastry roll	*Listeria monocytogenes*	+	+	-
911	Wipes	*Listeria innocua*	+	+	+

For 2 of these samples, extending the incubation of the COMPASS® *Listeria* Agar plates to 48 h allowed the *Listeria* to be recovered.

❒ *Positive deviations*

2 positive deviations were observed for the following samples:

- sample no. 433 (beef meat): sample naturally contaminated with *Listeria monocytogenes*,
- sample no. 1338 (camembert made with raw milk): sample artificially contaminated with *Listeria monocytogenes*.

❒ *Statistical tests as per appendix F of the ISO 16140 standard*

The results of the statistical tests obtained for 24 incubations are as follows:

Y = ND + PD = 4 + 2 = 6
m = PD = 2
M = 0
m > M: the two methods are not significantly different at α < 0.05.

1.4.1.7 Storage of Fra1/2 broths for 72 h at 4 °C

3 result changes were observed after storing the Fraser 1/2 broths for 72 h at 4 C; these are given below:

Spl. no.	Result of the alternative method		Result of the reference method
	Before storage	After storage	
433	+ (PD)	- (=)	-
741	+ (=)	- (ND)	+
1338	+ (PD)	- (=)	-

The analysis of discrepancies thus becomes:

Y = ND + PD = 5 + 0 = 5
Y < 6
No statistical tests are available
The two methods are not significantly different at α < 0.05.

1.4.2 Relative limit of detection

The relative limit of detection corresponds to the smallest number of culturable micro-organisms that can be detected in the sample, with a probability of 50%, using the alternative and reference methods.

1.4.2.1 Matrices used

The purpose of this study was to determine the minimum amounts of *Listeria monocytogenes* that can be detected in the food matrix and to compare them to those obtained by the reference method.

The limits of detection were determined by the analysis of matrix/strain pair at four different levels. Six replicates of each experimental condition were performed.

The matrix/strain pairs tested were as follows:

- smoked salmon, inoculated with *Listeria innocua* 1,
- goat's fresh cheese inoculated with *Listeria ivanovii* Ad 991.

1.4.2.2 Contamination protocol

Six 25 g bags were prepared per matrix and per rate. The bags were inoculated individually with a bacterial suspension.

Analyses were performed both by the reference method and the alternative method.

The matrices used were analysed before inoculation by the N ISO 11290-1/A1 method (2004) in order to ensure that the samples were not already contaminated with *Listeria monocytogenes*. Total flora counts were also performed on each matrix.

1.4.2.3 Results

Table 16 - Level values and relative detection

Pairs (strain, matrix)	Relative limit of detection (CFU/25 g) according to the Spearman-Kärber test[1]	
	Reference method	Alternative method
Smoked salmon / *Listeria innocua* 1	0.3 [0.2; 0.4]	0.3 [0.2; 0.4]
Goat's fresh cheese / *Listeria ivanovii* Ad 991	0.8 [0.5; 1.5]	0.8 [0.5; 1.5]

The relative limit of detection was between 0.2 and 1.5 for both the reference method and the alternative method.

The limit of detection of the alternative method is identical to that of the reference method for the two matrix/strain pairs tested.

1.4.3 Inclusivity - Exclusivity

The purpose of the specificity study is to verify that all strains of *Listeria monocytogenes* are detected by the COMPASS® *Listeria* Agar method and that there are no cross-reactions with strains other than *Listeria monocytogenes.*

The results of the extension study conducted in 2007 were reused:

- 153 strains of *Listeria monocytogenes*, 22 strains of *Listeria innocua*, 15 strains of *Listeria ivanovii*, 9 strains of *Listeria seeligeri* and finally 25 strains of *Listeria grayi* were included in the inclusivity test. One strain of *Listeria ivanovii sps londoniensis* was tested to complete the study.

- 54 strains were included in the exclusivity study.

The results are presented in **Appendix 9**.

[1] *"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".*

1.4.3.1 Inclusivity

For information, during the previous validation and extension studies, 152 out of 153 strains of *L. monocytogenes* gave characteristic colonies on COMPASS® *Listeria* Agar. One strain (*Listeria monocytogenes* 6072) failed to grow on the medium.

Tests conducted on this same strain in 2011 showed very weak growth on COMPASS® *Listeria Agar* after incubation for 24 h (micro-colonies with large opaque halo), along with the presence of characteristic colonies after incubation for 48 h.

All *Listeria* spp. strains other than *Listeria monocytogenes* gave characteristic blue colonies with or without halo on COMPASS® *Listeria Agar*.

1.4.3.2 Exclusivity

None of the strains tested gave characteristic colonies on COMPASS® *Listeria Agar.*

The COMPASS® *Listeria Agar* method is specific and selective.

1.4.4 Conclusion

The COMPASS® *Listeria Agar* method demonstrates satisfactory relative accuracy, specificity and sensitivity for the detection of *Listeria* spp. in human food samples and environmental samples.

The limits of detection of the COMPASS® *Listeria Agar* method are similar to those of the reference method.

The method is both selective and specific.

1.5 Extension study (2013)

In 2013, an extension study was conducted to introduce a new confirmation option, the CONFIRM'*L. mono*, using rhamnose fermentation to detect *Listeria monocytogenes* by the COMPASS® *Listeria Agar* method. The validation of this confirmation option had already been extended for the count method, with tests conducted on 50 target strains and 30 non-target strains. **The study was completed with 100 target strains and 70 non-target strains in order to conform to AFNOR technical rules.**

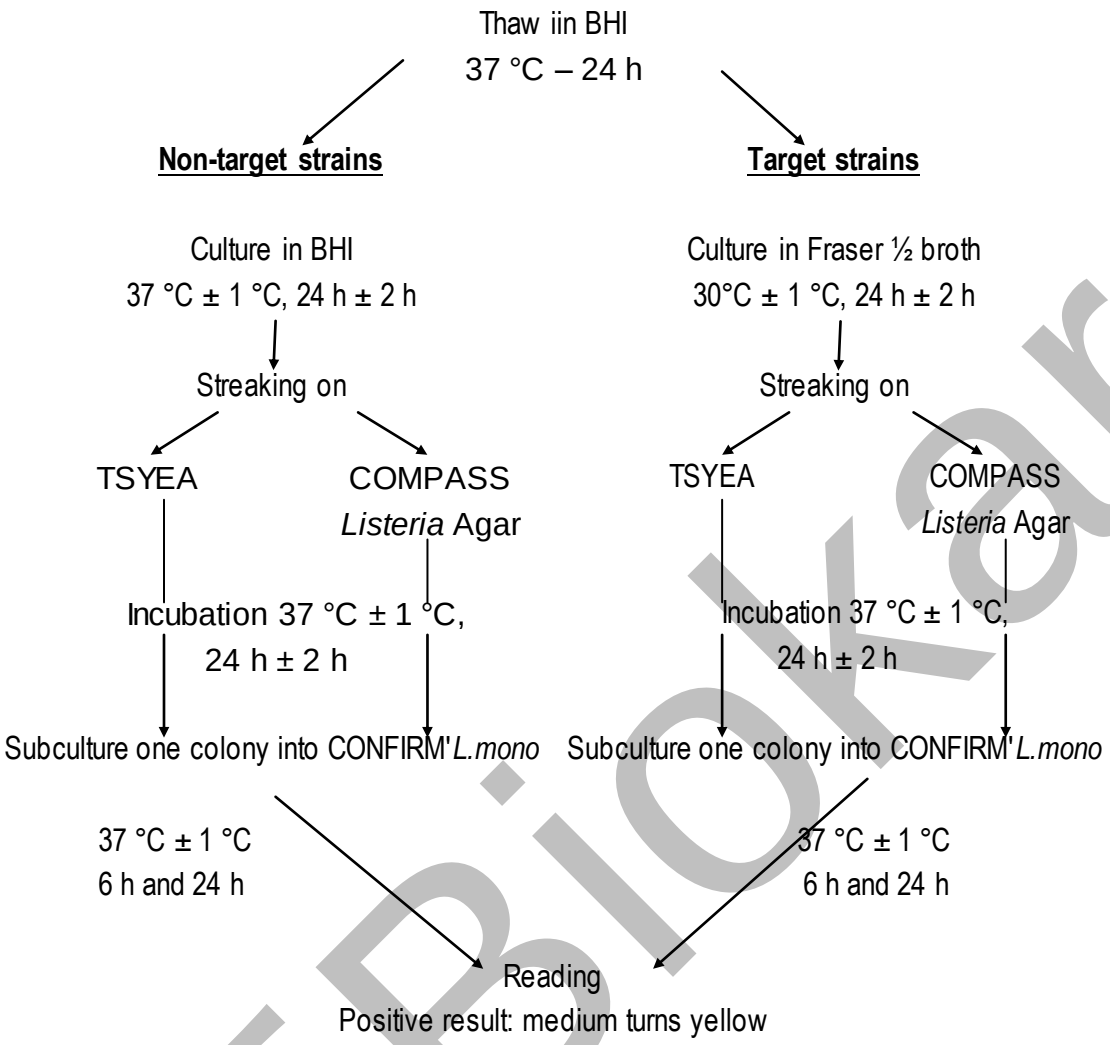
The CONFIRM' *L.mono* broth is used to demonstrate rhamnose fermentation, test positive for *Listeria monocytogenes* and negative for *Listeria ivanovii*. A positive test results in yellow colouring occurring after broth incubation for 6 to 24 h at 37 ±1 °C.

1.5.1 Inclusivity and exclusivity

1.5.1.1 Protocols

The purpose of the specificity study is to verify that all strains of *Listeria monocytogenes* are detected by the COMPASS® *Listeria Agar* method and that there are no cross-reactions with strains other than *Listeria monocytogenes*.

The study was thus completed by testing 100 target strains and 70 non-target strains by applying the following protocol:



1.5.1.2 Results

The results are presented in **Appendix 10**.

❒ ***Inclusivity***

For the CONFIRM'*L.mono* confirmation test, 145 strains gave a positive result (yellow colour change) after incubation for 6 h at 37 °C.

For *Listeria monocytogenes* strains 7711/7516, A00C036, Ad 235, Ad 626 and A00C054, the colour change was weaker (brown colour) at 6 h. For three of these strains, continuing incubation to 24 h gave a positive result.

For *Listeria monocytogenes* strains 7711/7516 and A00C054 on the other hand, the test remained questionable. Identical results were obtained on TSYEA agar.

❒ ***Exclusivity***

Of the 70 strains tested, only the 20 strains of *Listeria ivanovii* gave typical colonies with halo on COMPASS® *Listeria* Agar; all of these strains gave a negative CONFIRM'*L.mono* result (after 6 h and 24 h incubation).

The COMPASS® *Listeria* Agar method is specific and selective.

1.5.2 Conclusion

The CONFIRM'*L. mono* test appears to be specific and selective. In the event of a so-called "questionable" after 24 h, a simple biochemical gallery should be run, or all conformation tests specified in the ISO 11290-2 reference method.

The method is both selective and specific.

2 INTER-LABORATORY STUDIES

2.1 Initial validation study (2002)

The summaries of the results obtained by the partner laboratories are given below:

- *24 h method*

Contamination level (CFU/25 g)	Total number of samples	Number of analysed samples	Number of negative results	Number of positive results	Percentage of fit
0	24	22	22	0	100.0
1 – 10	24	22	1	20 (21)*	95.5
5 – 50	24	22	0	22	100.0
10 – 100	24	22	0	22	100.0

* One laboratory failed to confirm the presence of *Listeria monocytogenes* after performing confirmation tests on questionable colonies obtained on COMPASS® *Listeria* Agar for one sample (Haemolysis -, CAMP -, Rhamnose + and Xylose -). The haemolysis and CAMP tests were repeated on the colonies by the expert laboratory; this latter obtained positive results.

- *48 h method*

Contamination contamination (CFU/25 g)	Total number of samples	Number of samples analysed	Number of identical pairs	Number of results results	Percentage of fit
0	24	22	22	0	100.0
1 – 10	24	22	1	20 (21)*	95.5
5 – 50	24	22	0	22	100.0
10 – 100	24	22	0	22	100.0

* One laboratory failed to confirm the presence of *Listeria monocytogenes* after performing confirmation tests on questionable colonies obtained on COMPASS® *Listeria* Agar for one sample (Haemolysis -, CAMP -, Rhamnose + and Xylose -). The haemolysis and CAMP tests were repeated on the colonies by the expert laboratory; this latter obtained positive results.

2.2 Renewal study (2007)

The results of all partner laboratories were acquired after incubating the COMPASS® *Listeria* Agar plates for 24 h.

2.2.1 Study organisation

Fourteen packages were delivered, but only twelve laboratories took part in the study.

Semi-skimmed pasteurised milk was inoculated with *Listeria monocytogenes* 4b 153. Eight milk bottles were individually inoculated per rate and per laboratory, i.e. 24 bottles to analyse per laboratory.

- *Sample preparation and contamination (including contamination level)*

All samples were dispensed into sterile bottles by the expert laboratory, at a rate of 25 ml per bottle, before being contaminated.

- *Contaminant suspension preparation*

Two suspensions (125 cells/ml and 25 cells/ml) were prepared from an overnight culture in BHI broth at 27 °C according to the protocol described in the requirements for preliminary and collaborative studies of the AFNOR technical rules.

- *Sample contamination protocol*

The low rate inoculation was performed using 200 µl of the 25 cells/ml suspension, while the high rate inoculation was performed using 200 µL of the 125 cells/ml suspension.

After inoculation, the samples were homogenised and sealed with parafilm, then refrigerated prior to shipping.

The target inoculation rates were as follows:

- 0 CFU/25 ml,
- 1-10 CFU/25 ml,
- 5-50 CFU/25 ml,

- *Shipment details: date and means implemented for temperature monitoring (during transport and upon receipt)*

The samples were shipped on Monday 16 April 2007, receipt and analyses were scheduled for Tuesday 17 April 2007.

The coded samples (code known only to the expert laboratory) were placed in isothermal boxes containing refrigerant blocks and shipped to the various laboratories by means of an express transport system.

A temperature control bottle containing a temperature recorder was added to the package, in order to monitor the temperature during transport and to measure it upon receipt.

Each laboratory, identified by a letter, received the following:

- 24 encoded samples (25 g) for the detection of *Listeria monocytogenes* by the COMPASS® *Listeria* Agar method and the EN ISO 11290-1/A1 (2004) method,

- 1 non-encoded sample for the enumeration of aerobic mesophilic flora in milk by the ISO 4833 method,

- 1 bottle of water containing a thermo-button intended to record the temperature during package transport to the laboratory and to measure the temperature upon receipt,

- an acknowledgement of receipt,

- a table of results to be filled in and returned to the expert laboratory.

- *Elements required by the partner laboratories to conduct the tests*

- ***Reagents used**:* Some of the reagents were directly provided to the partner laboratories by SOLABIA, while the remaining reagents were provided by the expert laboratory.

- ***Instructions***: The expert laboratory provided detailed instructions to the laboratories.

2.2.2 Experimental parameter control

- *Level of contamination before inoculation, levels obtained after artificial contamination and sample stability*

✓ ***Before inoculation***

Listeria monocytogenes detection was performed before inoculation on five 25 ml milk samples using the ISO 11290-1/A1 (2004) method. All analyses were negative.

✓ ***Contamination levels obtained***

The contamination levels obtained in the matrix, along with precision estimates, are given in the following table:

Level	Samples	Inoculation concentration level (b/25 ml)	Actual level (b/25 ml of sample)	Estimation of the lower contamination limit per 25 ml of sample	Estimation of the upper contamination limit per 25 ml of sample
Level 0	2 - 3 - 7 - 12 - 17 - 18 - 21 - 23	/	/	/	/
Low level	4 - 8 - 9 - 13 - 16 - 20 - 22 - 24	5	4.9	4.2	5.6
High rate	1 - 5 - 6 - 10 - 11 - 14 - 15 - 19	25	23.1	20.1	26.6

✓ ***Sample stability***

Three milk bottles were inoculated with the high rate (5-50 CFU/25ml) and stored at 7 C for 48h. Counts were performed by inoculating 5ml onto Palcam agar at D0, D1 and D2. In parallel to this, three bottles were inoculated at the low rate (1-10 CFU/25ml) and stored at 7°C for 48h. Detection of *Listeria monocytogenes* was performed on these samples using the reference method. The results are presented in the following table:

Day	Reference method (detection)			CFU/25 ml (Palcam)		
	Bottle 1	Bottle 2	Bottle 3	Bottle 1	Bottle 2	Bottle 3
D0	+	+	+	14	13	13
D1	+	+	+	13	16	8
D2	+	+	+	13	13	13

No changes were observed.

- *Temperature measured during transport, temperature upon receipt and receipt times.*

The temperatures monitored during transport and measured upon receipt, along with sample receipt date are given below:

Sample temperature upon receipt

Laboratories	Temperature read by the thermo-button (°C)	Temperature measured upon receipt (°C)	Receipt date and time sample outlet	
A	0.50	3.0	17/04/2007	12:00
B	3.50	4.2	17/04/2007	09:15
C	1.00	2.7	17/04/2007	10:30
D	3.00	3.6	17/04/2007	09:30
F	0.00	5.0	17/04/2007	09:30
G	2.50	3.6	17/04/2007	08:40
H	0.00	0.7	17/04/2007	09:15
I	1.00	6,8 (checked at 2pm)	17/04/2007	11:00
J	1.50	0.3	17/04/2007	16:00
K	0.50	2.5	17/04/2007	08:45
L	0.50	2.5	17/04/2007	11:15
M	0.00	1.9	17/04/2007	08:45

No problems were encountered during sample transport or upon receipt.

2.2.3 Analysis results

- *Enumeration of the mesophilic aerobic flora*

An non-encoded sample was provided to the laboratories for enumeration of aerobic mesophilic flora in milk by the ISO 4833 method. The counts obtained varied between 360 and 17,000 CFU/ml.

- *Results obtained by the expert laboratory*

The results are presented below:

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

All inoculated samples were given as positive by both methods. The fit between the two methods is of 100%.

- *Results obtained by the partner laboratories*

The detailed results are presented below:

Reference method			
Laboratory	L0	L1	L2
A	0/8	8/8	8/8
B	0/8	8/8	8/8
C	0/8	8/8	8/8
D	0/8	8/8	8/8
F	0/8	**7/8**	8/8
G	0/8	**7/8**	8/8
H	0/8	8/8	8/8
I	0/8	8/8	8/8
J	0/8	**7/8**	8/8
K	0/8	8/8	8/8
L	0/8	8/8	8/8
M	0/8	8/8	8/8

Alternative method			
Laboratory	L0	L1	L2
A	0/8	8/8	8/8
B	0/8	8/8	8/8
C	0/8	8/8	8/8
D	0/8	8/8	8/8
F	0/8	**7/8**	8/8
G	0/8	**7/8**	8/8
H	0/8	8/8	8/8
I	0/8	8/8	8/8
J	0/8	**7/8**	8/8
K	0/8	8/8	8/8
L	0/8	8/8	8/8
M	0/8	8/8	8/8

The interpretation was performed on the results of the twelve laboratories that took part in the study.

All of the alternative method results correlate with those of the reference method.

2.2.4 Calculations

- *Calculation of percent specificity (%SP) and sensitivity (%SE) for both methods.*

The percent specificity, for the L0 level and for each method, was calculated using the following equation:

$$SP = \left[1 - \left(\frac{FP}{N-}\right) x\ 100\%\right]$$

where: N- = total number of all L0 tests
FP = number of false positives

The percent sensitivity, for each contamination level and for each method, was calculated using the following equation:

$$SE = \frac{TP}{N+} x\ 100\%$$

where: N+ = total number of all L1 or L2 tests
TP = number of true positives

The results are presented in the following table:

Level	Reference method		Alternative method	
	SP/SE	LCL %	SP/SE	LCL %
L0	SP% = 100	98	SP% = 100	98
L1	SE% = 96.9	93	SE% = 96.9	93
L2	SE% = 100	98	SE% = 100	98
L1+L2	SE% = 98.4	97	SE% = 98.4	97

- *Calculation of relative accuracy (AC)*

The results for all levels are given below:

Table 17 - Result pairs for the alternative method and the reference method

Alternative method	Reference method		Total
	+	-	
+	PA = 189	PD = 0	189
-	ND = 0	NA = 99	99
Total	N+ = 189	N- = 99	N = 288

The relative accuracy (AC), expressed as a percentage, was calculated using the following equation:

$$AC = \frac{(PA + NA)}{N} x\,100\%$$

where: N = number of samples tested
PA = number of positive agreements
NA = number of negative agreements

The accuracy values of the alternative method relative to the reference method were calculated for each level and are given in the table below:

Table 18

Level	AC %	LCL %
L0	100	98
L1	100	98
L2	100	98
L1 + L2	100	98
Total	100	**98**

- *Analysis of conflicting results*

As no discrepancies were observed this statistical test was not performed.

2.2.5 Interpretation

- *Comparison of relative accuracy, specificity and sensitivity values*

Accuracy is the closeness of fit between the test result and the accepted reference value.

Relative specificity is defined as the degree to which the method is affected (or not) by the other components in a multi-component sample. It represents the method's ability to accurately measure or quantify a given analyte in a sample without interference from other non-target components, such as for example a matrix effect or background noise.

Relative sensitivity is defined as the alternative method's ability to detect two different amounts of analyte previously measured by the reference method, using a given matrix, over the entire measurement range. The variation in minimum quantity (increase in analyte x concentration) that gives a significant variation in measured signal (response y).

The values obtained in both parts of the validation study (method comparative study and inter-laboratory study) are given in table 19:

Table 19 - Comparison of values obtained during the inter-laboratory study with those obtained in the context of the method comparative study, for the alternative method

	Inter-laboratory study	Method comparative study
Relative accuracy (AC)	100	97.3
Sensitivity (SE)	98.4	95.6
Specificity (SP)	100	98.9

- *Degree of agreement (DA)*

The degree of agreement is the percent chance of obtaining the same result (i.e. both positive or both negative) with two identical samples analysed by the same laboratory, under conditions of repeatability (i.e. by a single operator using the same instruments and reagents, within the shortest possible lapse of time).

The degree of agreement is thus equivalent to repeatability for quantitative methods.

The various tables used to infer the degree of agreement are given in **Appendix 11** . The degrees of agreement for the reference and alternative methods, and for each level, are given below:

Level	Reference method	Alternative method
L0	DA % = 100	DA % = 100
L1	DA % = 94.5	DA % = 94.5
L2	DA % = 100	DA % = 100

- *Fit*

The fit is the percent chance of obtaining the same result for two identical samples analysed by two different laboratories.

The fit is thus equivalent to reproducibility for quantitative methods.

Fit calculations are given in **Appendix 12** . The percent fit values for the reference and alternative methods, for each level, are given in the table below:

Level	Reference method	Alternative method
L0	Fit % = 100	Fit % = 100
L1	Fit % = 93.9	Fit % = 93.9
L2	Fit % = 100	Fit % = 100

- *Odds Ratio (COR)*

The odds ratio was calculated using the following formula:

$$COR = \frac{Agreement\ x\ (100 - concordance)}{concordance\ x(100 - Agreement)}$$

The odds ratios obtained for the reference and alternative methods are given below:

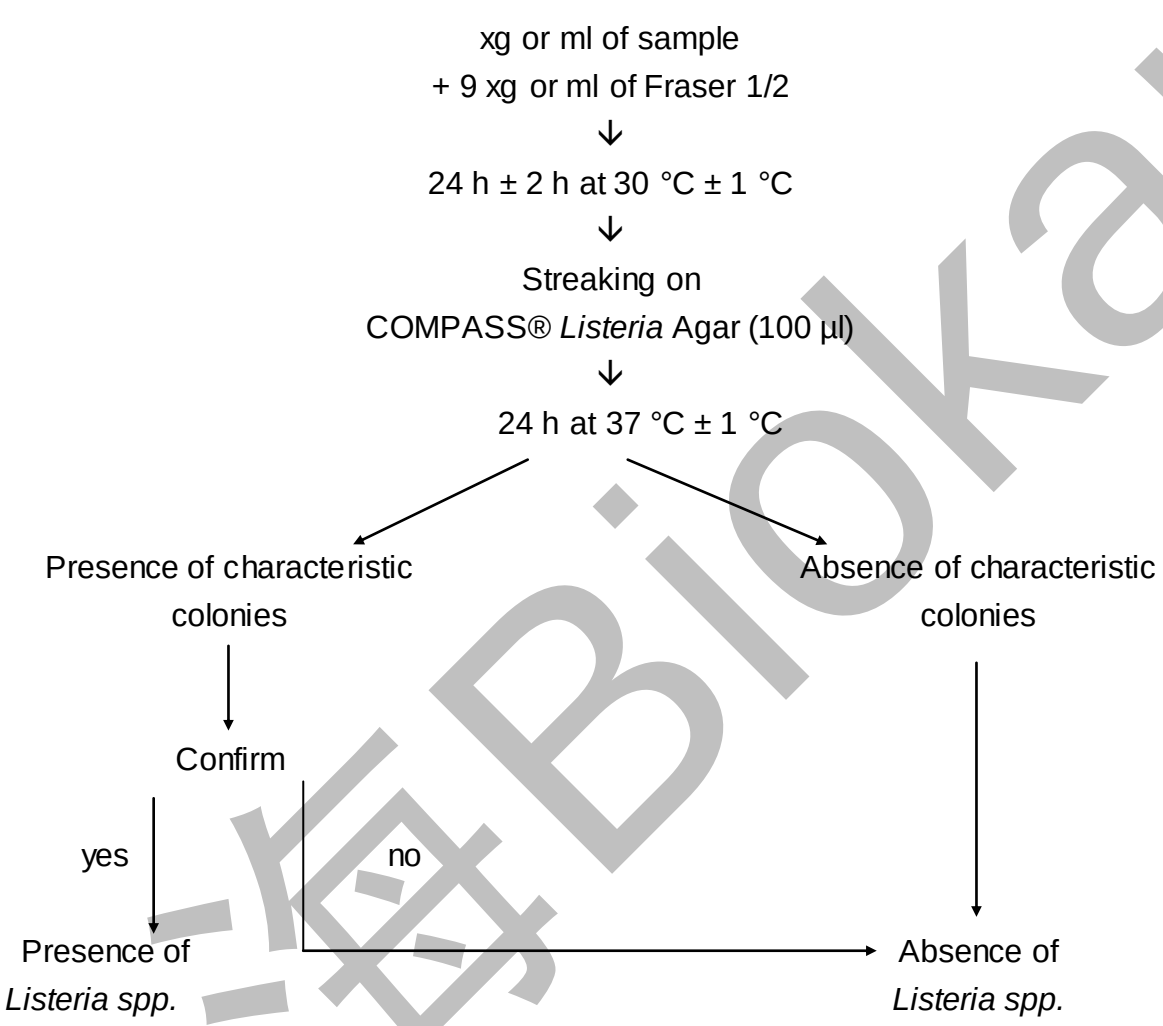
Level	Reference method	Alternative method
L0	COR = 1,00	COR = 1,00
L1	COR = 1,12	COR = 1,12
L2	COR = 1,00	COR = 1,00

2.2.6 Conclusion

The variability of the alternative method (degree of agreement, fit, odds ratio) is equivalent to that of the reference method.

Appendix 1 - COMPASS® *Listeria* Agar method

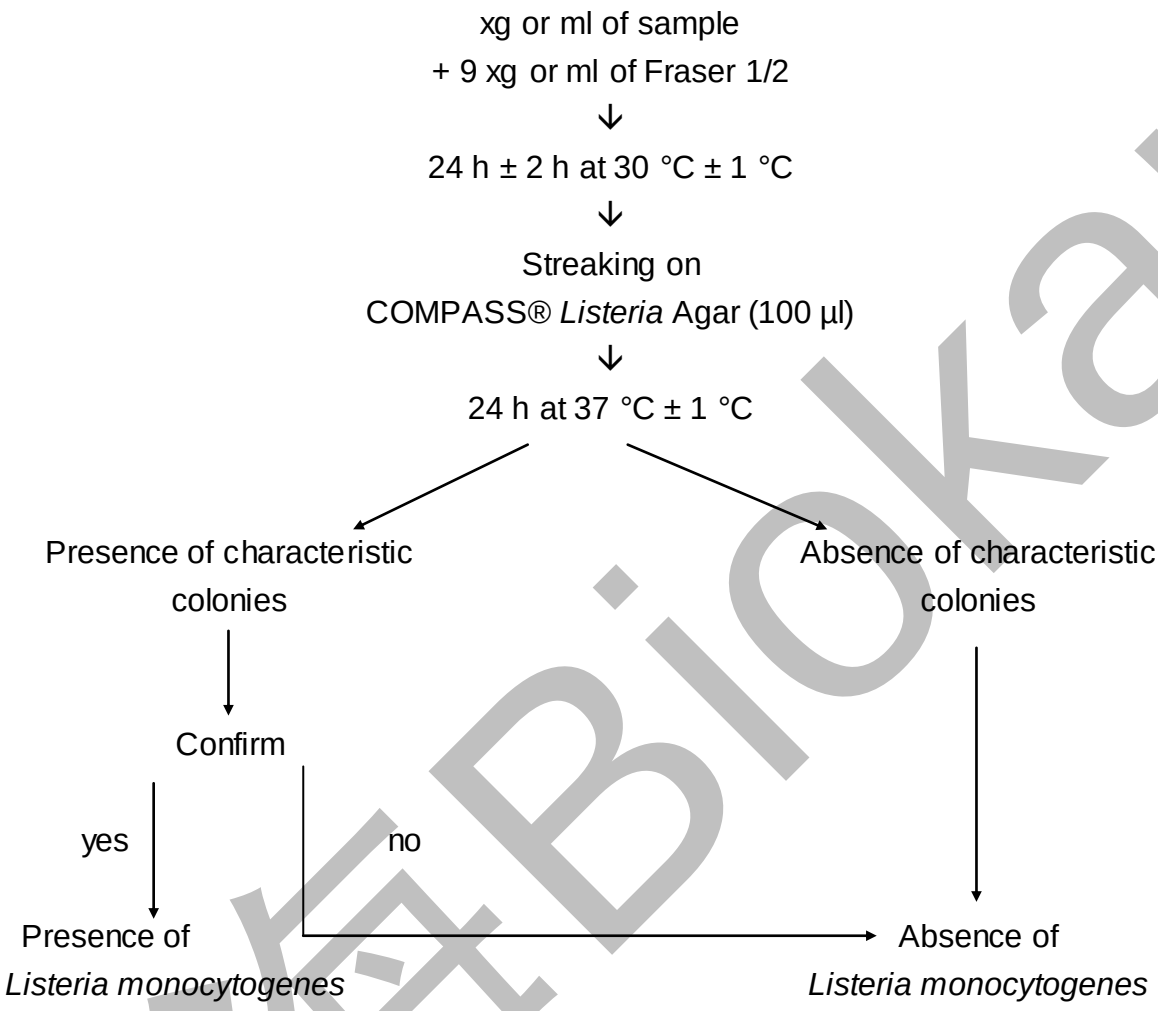
Detection of *Listeria* spp.



Confirmation:

- by subculturing onto Palcam agar
- by identification on *Listeria* biochemical strip
- by means of conventional tests described in the standardised reference methods, including the purification step

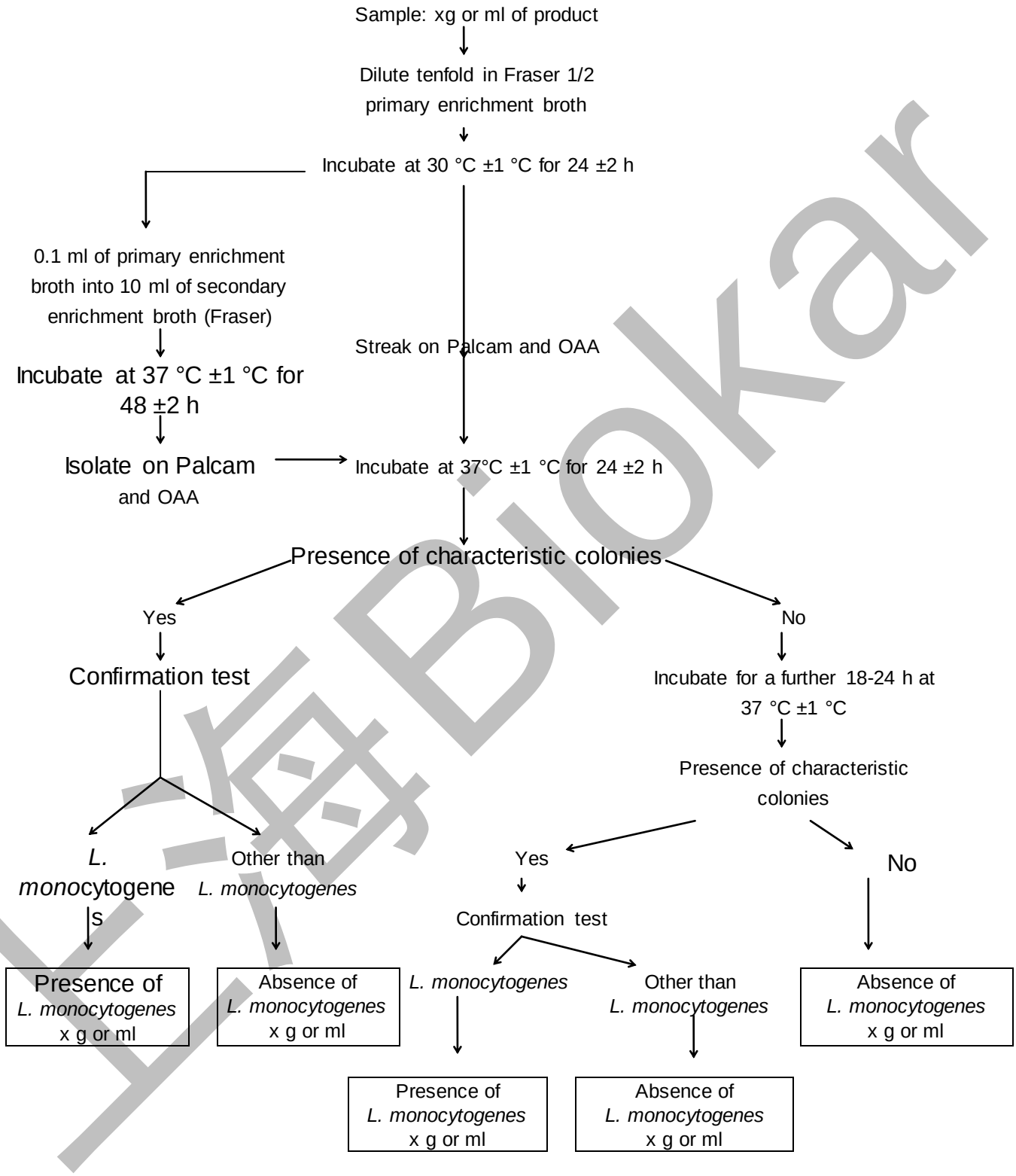
Detection of *Listeria monocytogenes*



Confirmation:

- by subculturing onto Palcam agar
- by identification on *Listeria* biochemical strip
- by means of conventional tests described in the standardised reference methods, including the purification step
- by streaking onto CONFIRM' *L.mono* Agar
- by inoculating one colony into CONFIRM'*L.mono* broth

Appendix 2 - Reference method NF EN ISO 11290-1/A1 (February 2005): method for the detection of *Listeria monocytogenes*



Confirmation test: Gram, Catalase, Haemolysis, CAMP Test, API *Listeria* strip

Appendix 3 - Renewal study (2007): Strains used and stresses applied

Samples		Artificial contaminants					
No.	Product	Strain	Origin	Injury protocol	Inuury measurement	Inoculation level	Final
2674	Powdered milk (RAEMA)						
2675	Powdered milk (RAEMA)						
129	Scallop terrine	*L. monocytogenes* Ad128	Smoked salmon	-20 °C; TT30min 55 °C	0.9	23	+
130	Fish terrine Breton style	*L. monocytogenes* Ad128	Smoked salmon	-20 °C; TT30min 55 °C	0.9	23	+
131	Tuna rillettes	*L. monocytogenes* Ad128	Smoked salmon	-20 °C; TT30min 55 °C	0.9	23	+
132	St Pierre	*L. monocytogenes* A00M023	Smoked salmon	-20 °C; +4 °C	1.7	24	+
133	Marlin loin	*L. monocytogenes* A00M023	Smoked salmon	-20 °C; +4 °C	1.7	24	+
134	Sea bream fillet	*L. monocytogenes* A00M023	Smoked salmon	-20 °C; +4 °C	1.7	24	+
135	Salmon fillet	*L. monocytogenes* A00M010	Fish	-20 °C; +4 °C	0.6	21	+
136	Haddock fillet	*L. monocytogenes* A00M010	Fish	-20 °C; +4 °C	0.6	21	+
137	Whiting fillet	*L. monocytogenes* A00M010	Fish	-20 °C; +4 °C	0.6	21	+
138	Potatoes - carrots	*L. monocytogenes* 1011/1410	Frozen broccoli	-20 °C; +4 °C	0.2	16	+
139	Mixed carrots and leek	*L. monocytogenes* 1011/1410	Frozen broccoli	-20 °C; +4 °C	0.2	16	+
140	Tomato and pepper salad	*L. monocytogenes* 1011/1410	Frozen broccoli	-20 °C; +4 °C	0.2	16	+
141	Sliced vegetables	Cross-contamination with naturally contaminated vegetables					-
142	Spinach branch						-
143	Broccoli						-
144	Sliced vegetables						-
145	Broccoli						-
146	Vegetable and mushroom stir-fry						-
177	Powdered formula milk	*L. monocytogenes* Ad257	Milk	TT30min 55 °C	0.5	5	+
178	Skimmed powdered milk	*L. monocytogenes* Ad257	Milk	TT30min 55 °C	0.5	5	-
179	Skimmed powdered milk	*L. monocytogenes* Ad257	Milk	TT30min 55 °C	0.5	5	+
180	Scallop terrine	*L. monocytogenes* A00M0114	Smoked salmon	TT30min 55 °C	0.3	5	+
181	Tuna rillettes	*L. monocytogenes* A00M0114	Smoked salmon	TT30min 55 °C	0.3	5	+
182	Salmon terrine	*L. monocytogenes* A00M0114	Smoked salmon	TT30min 55 °C	0.3	5	+
183	Cooked lentil salad	*L. monocytogenes* 1016/1413	Frozen broccoli	TT30min 55 °C	0.5	2	+
184	Cooked pumpkin and potatoes	*L. monocytogenes* 1016/1413	Frozen broccoli	TT30min 55 °C	0.5	2	+
185	White cabbage	*L. monocytogenes* 1016/1413	Frozen broccoli	TT30min 55 °C	0.5	2	+
186	Sliced carrots	*L. monocytogenes* 1016/1413	Frozen broccoli	TT30min 55 °C	0.5	2	+
187	Powdered formula milk	*L. monocytogenes* A00L0105	Milk	TT30min 55 °C	1	5	+
188	Powdered formula milk	*L. monocytogenes* A00L0105	Milk	TT30min 55 °C	1	5	+
189	Powdered formula milk	*L. monocytogenes* A00L0105	Milk	TT30min 55 °C	1	5	-
190	Powdered formula milk	*L. monocytogenes* A00L0105	Milk	TT30min 55 °C	1	5	+
228	Smoked salmon off-cuts	Cross-contamination with smoked salmon					+
229	Smoked salmon steaks						+
230	Smoked haddock fillets						+
231	Smoked herring fillets						+
232	Smoked haddock fillets						+
233	Smoked salmon						+
378	Raw milk	Cross-contamination with ewe's milk					+
379	Raw milk						+
380	Raw milk						+
381	Raw milk	Cross-contamination with ewe's milk					+
382	Raw milk						+
383	Raw milk						+
384	Table surface	*L. monocytogenes* Ad 548	Fish environment	pH10	>4.15	6	+
385	Balance	*L. monocytogenes* Ad 548	Fish environment	pH10	>4.15	6	+

Samples		Artificial contaminants					
No.	Product	Strain	Origin	Injury protocol	Inuury measurement	Inoculation level	Final
386	Sewer grid	*L. monocytogenes* Ad 548	Fish environment	pH10	>4.15	6	+
387	Bac	*L. monocytogenes* Ad 548	Fish environment	pH10	>4.15	6	+
388	Knife blade	*L. monocytogenes* Ad 549	Salting environment	pH10	>4.74	2	+
389	Trolley	*L. monocytogenes* Ad 549	Salting environment	pH10	>4.74	2	+
390	Work surface	*L. monocytogenes* Ad 549	Salting environment	pH10	>4.74	2	+
391	Sink	*L. monocytogenes* Ad 549	Salting environment	pH10	>4.74	2	+
392	Belt	*L. monocytogenes* Ad 550	Dairy environment	pH10	>4.58	8	+
393	Work surface	*L. monocytogenes* Ad 550	Dairy environment	pH10	>4.58	8	+
394	Belt	*L. monocytogenes* Ad 550	Dairy environment	pH10	>4.58	8	+
395	Sink	*L. monocytogenes* Ad 550	Dairy environment	pH10	>4.58	8	+
503	Cooked peas	*L. monocytogenes* Ad547	Pancake batter	pH10	>4.30	2	-
504	Broccoli purée	*L. monocytogenes* Ad547	Pancake batter	pH10	>4.30	2	-
505	Chopped spinach with cream	*L. monocytogenes* Ad547	Pancake batter	pH10	>4.30	2	-
506	Plain artichoke purée	*L. monocytogenes* Ad547	Pancake batter	pH10	>4.30	2	-
507	Liquid egg portions	*L. monocytogenes* Ad547	Pancake batter	pH10	>4.30	2	-
537	Ladle	*L. monocytogenes* Ad551	Pastry environment	pH10	>3.6	9	+
538	Biscuit bakery sewer grid	*L. monocytogenes* Ad551	Pastry environment	pH10	>3.6	9	+
539	Packaging room trolley	*L. monocytogenes* Ad551	Pastry environment	pH10	>3.6	9	+
540	Dish washing sink	*L. monocytogenes* Ad548	Fish environment	pH3	>2.7	3	+
541	Cooking room floor	*L. monocytogenes* Ad548	Fish environment	pH3	>2.7	3	+
542	Cooking room belt	*L. monocytogenes* Ad548	Fish environment	pH3	>2.7	3	+
543	Biscuit baking room belt	*L. monocytogenes* Ad549	Salting environment	pH3	0.3	2	+
544	Cooking room table	*L. monocytogenes* Ad549	Salting environment	pH3	0.3	2	-
545	Cooking room sink	*L. monocytogenes* Ad549	Salting environment	pH3	0.3	2	+
546	Packaging room trolley	*L. monocytogenes* Ad550	Dairy environment	pH3	0.6	10	+
547	Cooking room work surface	*L. monocytogenes* Ad550	Dairy environment	pH3	0.6	10	+
548	Cooking room balance	*L. monocytogenes* Ad550	Dairy environment	pH3	0.6	10	+
583	Breton salad	*L. monocytogenes* Ad543	Sliced peppers	pH3	0.3	5	+
584	Piémontaise	*L. monocytogenes* Ad543	Sliced peppers	pH3	0.3	5	+
585	Auvergne salad	*L. monocytogenes* Ad543	Sliced peppers	pH3	0.3	5	+
586	Oriental tabbouleh	*L. monocytogenes* Ad543	Sliced peppers	pH3	0.3	5	+
587	Diced tomatoes	*L. monocytogenes* Ad543	Sliced peppers	pH3	0.3	5	+
588	Frozen red peppers	*L. monocytogenes* Ad544	Pre-fried onions	pH3	0.4	2	+
589	Frozen green beans	*L. monocytogenes* Ad544	Pre-fried onions	pH3	0.4	2	+
590	Diced tomatoes	*L. monocytogenes* Ad544	Pre-fried onions	pH3	0.4	2	+
591	Frozen green peppers	*L. monocytogenes* Ad544	Pre-fried onions	pH3	0.4	2	+
592	Frozen turnips	*L. monocytogenes* Ad544	Pre-fried onions	pH3	0.4	2	+
593	Frozen cooked peas	*L. monocytogenes* Ad545	Cabbage and carrot salad	pH3	0.4	4	+
594	Frozen chopped spinach with cream	*L. monocytogenes* Ad545	Cabbage and carrot salad	pH3	0.4	4	+
595	Frozen sliced vegetables	*L. monocytogenes* Ad545	Cabbage and carrot salad	pH3	0.4	4	+
596	Frozen sliced carrots	*L. monocytogenes* Ad545	Cabbage and carrot salad	pH3	0.4	4	+

Appendix 4 - Renewal study (2007): Raw relative accuracy results

MEAT PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser						
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
2581	Tolled head	+	+	+	+	+	+	+	=
2584	Plain rolls	+	+	+	+	+	+	+	=
2591	Chicken breast	-	-	-	-	-	-	-	=
2592	Chicken breast	-	-	-	-	-	-	-	=
2593	Chicken breast	-	-	-	-	-	-	-	=
2594	Chicken breast	-	-	-	-	-	-	-	=
2615	Veal breast	-	-	-	-	-	-	-	=
2617	Smoked sausage	-	-	-	+	-	-	-	=
2619	Chipolatas	-	-	-	-	-	-	-	=
2620	Merguez	-	-	-	-	-	-	-	=
2621	Merguez	+	+	-	+	+	+	+	=
2622	Sausage	-	-	-	-	-	-	-	=
2623	Minced veal cutlet	-	-	-	-	-	-	-	=
2624	Merguez	-	-	-	-	-	+	-	=
2628	Chorizo	-	+	+	+	+	+	+	=
2634	Foie gras	-	-	-	-	-	-	-	=
2636	Veal chop	+	+	+	+	+	+	+	=
2637	Sliced ham	-	+	-	+	-	-	-	=
2648	Collar	+	+	+	+	+	+	+	=
2649	Minced veal cutlet	+	+	+	+	+	+	+	=
2650	Minced veal cutlet	+	+	+	+	+	+	+	=
2651	Minced veal cutlet	+	+	+	+	+	+	+	=
2652	Minced veal cutlet	+	+	+	+	+	+	+	=
2653	Minced veal cutlet	-	+	-	+	-	-	-	=
2654	Minced veal cutlet	+	+	+	+	+	+	+	=
2655	Minced veal cutlet	-	-	-	-	-	-	-	=
2656	Cooked chicken	+	+	+	+	+	+	+	=
2657	Cooked chicken	-	-	-	-	-	-	-	=
2658	Duck in sweet and sour sauce	+	+	+	+	+	+	+	=
2660	Rolls	+	+	+	+	+	+	+	=
2661	Veal breast	-	+	-	+	-	-	-	=
2662	Rolls	-	+	-	+	-	-	-	=
2663	Dried sausage	-	-	-	-	-	-	-	=
2664	Ham	-	-	-	-	-	-	-	=

◆ Test conducted under accreditation

MEAT PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser						
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
2665	Toulouse sausages	+	+	+	+	+	+	+	=
2666	Rolls	+	+	+	+	+	+	+	=
2667	Shoulder	+	+	+	+	+	+	+	=
2668	Rolls	+	+	+	+	+	+	+	=
2672	Minced veal cutlet	+	+	+	+	+	+	+	=
2673	Minced veal cutlet	+	+	+	+	+	+	+	=
2676	Hen	+	+	+	+	+	+	+	=
2677	Hen	+	+	+	+	+	+	+	=
2678	Hen	+	+	+	+	+	+	+	=
2681	Prime veal cutlet	-	-	-	-	-	-	-	=
2682	Veal sauté	-	-	-	-	-	-	-	=
2683	Veal sauté	-	-	-	-	-	-	-	=
2704	Rolls	+	+	+	+	+	+4col	+	=
2705	Rolls	-	+	-	+	-	-	-	=
2707	Stuffed tomatoes	-	-	-	-	-	-	-	=
2715	Hen	+	+	+	+	+	+	+	=
2716	Hen	+	+	+	+	+	+	+	=
2717	Quasi	-	-	-	+	-	-	-	=
2718	Orloff roast veal	-	+	-	+	-	-	-	=
11	Chicken with herbs	-	-	-	-	-	-	-	=
12	Indian chicken	-	-	-	-	-	-	-	=
13	Turkey cordon bleu	-	-	-	-	-	-	-	=
14	Mexican chicken	-	+	-	+	-	-	-	=
15	Turkey	-	-	-	-	-	-	-	=
16	Duck mousse	-	-	-	-	-	-	-	=
17	Chicken thigh	-	-	-	-	-	-	-	=
21	Breaded turkey	-	-	-	-	-	-	-	=
24	Chicken gizzards	-	-	-	-	-	-	-	=
25	Minced veal cutlet	+	-	+	+	+	+	+	=
26	Minced veal cutlet	+	+	+	+	+	+	+	=
31	Hen	+	+	-	+	+	+	+	=
33	Veal cutlet	-	-	-	-	-	-	-	=

DAIRY PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar		
		Fraser 1/2		Fraser					
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
2585	Raw milk	-	-	-	-	-	-	-	=
2586	Raw milk	-	-	-	-	-	-	-	=
2587	Raw milk	-	-	-	-	-	-	-	=
2588	Raw milk	-	-	-	+	-	-	-	=
2589	Raw milk	-	-	-	-	-	-	-	=
2590	Goat's cheese with smoked salmon	-	+	-	+	-	-	-	=
2603	Raw milk cheese	-	+	-	+	-	+	+	PD
2604	Raw milk cheese	-	+	-	+	-	-	-	=
2638	Soft cheese made (raw milk)	-	-	-	-	-	-	-	=
2639	Blue cheese (raw milk)	-	-	+	+	+	+	+	=
2640	Raw milk cheese	+	+	+	+	+	+1col	+	=
2641	Raw milk cheese	-	+	-	+	-	-	-	=
2642	Raw milk cheese	+	+	+	+	+	+	+	=
2674	**Powdered milk (RAEMA)**	+	+	+	+	+	+	+	=
2675	**Powdered milk (RAEMA)**	+	+	+	+	+	+	+	=
2708	Raclette cheese	-	-	+	+	+	+	+	=
2709	Raclette cheese	+	+	+	+	+	+	+	=
2710	Raclette cheese	-	-	+	+	+	-	-	ND
177	**Powdered formula milk**	+	+	+	+	+	+	+	=
178	**Skimmed powdered milk**	-	-	+	+	+	-	-	ND
179	**Skimmed powdered milk**	+	+	+	+	+	+	+	=
187	**Powdered formula milk**	+	+	+	+	+	+	+	=
188	**Powdered formula milk**	+	+	+	+	+	+	+	=
189	**Powdered formula milk**	-	-	-	-	-	+/-	-	=
190	**Powdered formula milk**	+	+	+	+	+	+	+	=
319	Unripened cheese made with raw milk	-	-	-	-	-	-	-	=
320	Unripened cheese made with raw milk	+	+	+	+	+	+	+	=
321	Unripened cheese made with raw milk	-	+	+	+	+	-	-	ND
322	Unripened cheese made with raw milk	+	+	+	+	+	+	+	=
323	Ripened cheese made with raw milk	-	-	-	-	-	-	-	=
324	Ripened cheese made with	+	+	+	+	+	+	+	=

◆ Test conducted under accreditation

DAIRY PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser						
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
	raw milk								
325	Ewe's milk	+	+	+	+	+	+	+	=
326	Ewe's milk	+	+	+	+	+	+	+	=
327	Ewe's milk	+	+	+	+	+	+	+	=
328	Ewe's milk	+	+	+	+	+	+	+	=
329	Ewe's milk	+	+	+	+	+	+	+	=
330	Ewe's milk	+	+	+	+	+	+	+	=
331	Ewe's milk	+	+	+	+	+	+	+	=
332	Ewe's milk	+	+	+	+	+	+	+	=
333	Cheese made with raw milk	-	-	-	-	-	-	-	=
334	Brie de Meaux	-	-	+	+	+	-	-	ND
335	Tomme	-	-	-	-	-	-	-	=
336	Raclette	-	-	-	-	-	-	-	=
337	Uncooked soft cheese made	-	-	-	-	-	-	-	=
368	Soft cheese made with raw milk	+	+	+	+	+	-	-	ND
378	**Raw milk**	+	+	+	+	+	+	+	=
379	**Raw milk**	+	+	+	+	+	+	+	=
380	**Raw milk**	+	+	+	+	+	+	+	=
381	**Raw milk**	+	+	+	+	+	+	+	=
382	**Raw milk**	+	+	+	+	+	+	+	=
383	**Raw milk**	+	+	+	+	+	+	+	=
522	Raclette made with raw milk	-	-	-	-	-	-	-	=
523	Country style Saint Nectaire	-	-	-	-	-	-	-	=
524	Comté	-	-	-	-	-	-	-	=
525	Savoie Tomme made with raw milk	-	-	-	-	-	-	-	=
526	Crottin de Chavignol	-	-	-	-	-	-	-	=
527	Roquefort	-	-	-	-	-	-	-	=
528	Mountain Tomme	-	-	-	-	-	-	-	=
529	Emmental	-	-	-	-	-	-	-	=
530	Raw milk	-	-	-	-	-	-	-	=
531	Raw milk	+	+	+	+	+	+	+	=
532	Powdered milk	-	-	-	-	-	-	-	=
533	Powdered milk	-	-	-	-	-	-	-	=
534	Powdered milk	-	-	-	-	-	-	-	=
642	Soft cheese	-	-	-	-	-	-	-	=
667	Powdered milk	-	-	-	-	-	-	-	=
668	Powdered milk	-	-	-	-	-	-	-	=

SEAFOOD PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser						
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
2582	Dab fillets meunière	-	-	-	+	-	-	-	=
2598	Smoked Atlantic salmon	+	+	+	+	+	+	+	=
2599	Diced salmon	-	-	-	-	-	-	-	=
2600	Salmon cubes	+	+	+	+	+	+	+	=
2626	Smoked salmon off-cuts	+	+	+	+	+	+	+	=
2627	Smoked salmon	-	+	-	+	-	-	-	=
2629	Smoked salmon	-	-	-	-	-	-	-	=
2630	Smoked salmon	-	-	-	-	-	-	-	=
2631	Smoked salmon	-	-	-	-	-	-	-	=
2632	Smoked salmon	-	-	-	-	-	-	-	=
2633	Smoked salmon	-	-	-	-	-	-	-	=
2659	Paëlla	-	-	-	-	-	-	-	=
2669	Whiting fillet	+	+	+	+	+	+	+	=
2670	Cod pulp	-	+	+	+	+	+	+	=
2671	Whiting fillet	-	-	-	-	-	-	-	=
2679	Whiting fillet	+	+	+	+	+	+	+	=
2680	Salmon	+	+	+	+	+	+	+	=
2684	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2685	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2686	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2687	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2688	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2689	Smoked Atlantic salmon	-	-	-	-	-	-	-	=
2690	Smoked Atlantic salmon	-	-	-	-	-	-	-	=
2691	Smoked Atlantic salmon	-	-	-	-	-	-	-	=
2692	Smoked Irish salmon	-	-	-	-	-	-	-	=
2693	Smoked Scottish salmon	-	-	-	-	-	-	-	=
2694	Smoked Norwegian salmon	-	-	-	-	-	-	-	=
2695	Smoked salmon United Kingdom	-	-	-	-	-	-	-	=
2703	Whiting fillet	+	+	+	+	+	+	+	=
2712	Pangasius fillet	+	+	+	+	+	+	+	=
2713	Pangasius fillet	+	+	+	+	+	+	+	=
2714	Skate fillet	+	+	+	+	+	+	+	=
2719	Whiting	-	-	-	-	-	-	-	=
2720	Skinned whiting	-	-	-	-	-	-	-	=
2721	Zander fillet	-	+	-	+	-	-	-	=

◆ Test conducted under accreditation

SEAFOOD PRODUCTS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser						
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies	Final	Questionable colonies	Final	Fit
2722	Skate fillet	-	-	-	-	-	-	-	=
18	Tuna rillettes	-	-	-	-	-	-	-	=
19	Pike soufflé	-	-	-	-	-	-	-	=
22	Salmon steaks	-	-	-	-	-	-	-	=
27	Hake fillet	+	+	+	+	+	+	+	=
28	Whiting fillet	-	-	-	-	-	-	-	=
29	Salmon steak	-	-	-	-	-	-	-	=
30	Grenadier fillet	-	-	-	-	-	-	-	=
32	Tuna loins	-	-	-	-	-	-	-	=
34	Whiting in curry sauce with rice	-	-	-	-	-	-	-	=
66	Skate	+	+	+	+	+	+	+	=
67	Salmon skewers	-	-	-	-	-	-	-	=
68	Piece of salmon	-	-	-	-	-	-	-	=
69	Smoked salmon	-	-	-	-	-	-	-	=
70	Smoked Atlantic salmon	+	+	+	+	+	+	+	=
71	Smoked Atlantic salmon	+	+	+	+	+	+	+	=
72	Smoked Norwegian salmon	+	+	+	+	+	+	+	=
129	**Scallop terrine**	+	+	+	+	+	+	+	=
130	**Fish terrine Breton style**	+	+	+	+	+	+	+	=
131	**Tuna rillettes**	+	+	+	+	+	+	+	=
132	**St Pierre**	+	+	+	+	+	+	+	=
133	**Marlin loin**	+	+	+	+	+	+	+	=
134	**Sea bream fillet**	+	+	+	+	+	+	+	=
135	**Salmon fillet**	+	-	+	+	+	+	+	=
136	**Haddock fillet**	+	+	+	+	+	+	+	=
137	**Whiting fillet**	+	+	+	+	+	+	+	=
180	**Scallop terrine**	+	+	-	-	+	+	+	=
181	**Tuna rillettes**	+	+	+	+	+	+	+	=
182	**Salmon terrine**	+	+	+	+	+	+	+	=
228	**Smoked salmon off-cuts**	+	+	+	+	+	+	+	=
229	**Smoked salmon steaks**	-	-	-	-	-	-	-	=
230	**Smoked haddock fillets**	+	+	+	+	+	+	+	=
231	**Smoked herring fillets**	+	+	+	+	+	+	+	=
232	**Smoked haddock fillets**	+	+	+	+	+	+	+	=
233	**Smoked salmon**	+	+	+	+	+	+	+	=
303	Salmon patty with diced vegetables	-	-	-	-	-	-	-	=
304	Salmon patty with diced vegetables	-	-	-	-	-	-	-	=
305	Dab fillet	+	+	+	+	+	+	+	=

VEGETABLES AND MISCELLANEOUS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar		
		Fraser 1/2		Fraser		Final	Questionable colonies	Final	Fit
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies				
2583	Red peppers	-	-	-	-	-	-	-	=
2595	Sliced peppers	+	+	+	+	+	+	+	=
2596	Mixed vegetables	-	-	-	-	-	-	-	=
2597	Pre-fried onions	+	+	+	+	+	+	+	=
2601	Leek and chicken salad	-	-	-	-	-	-	-	=
2602	Cabbage and carrot salad	+	-	+	+	+	+	+	=
2616	Red peppers	+	+	+	+	+	+	+	=
2618	Buckwheat flour	-	+	-	+	-	+	+	PD
2625	Pancake batter	-	+	+	+	+	+	+	=
2643	Loaf of bread (raw dough)	-	-	-	-	-	+/- Weak halo	-	=
2644	Red peppers	-	-	-	-	-	-	-	=
2645	Frozen parsley	-	-	-	-	-	-	-	=
2646	Red peppers	-	-	-	-	-	-	-	=
2647	Green peppers	-	-	-	-	-	-	-	=
2706	Oriental tabbouleh	-	-	-	-	-	-	-	=
20	Red peppers	-	-	-	-	-	-	-	=
23	Carrot, green bean and pea salad	-	-	-	-	-	-	-	=
73	Sliced carrots	-	-	+	+	+	-	-	ND
74	Sliced courgettes	-	-	+	+	+	+	+	=
75	Peas	-	-	-	-	-	-	-	=
76	Broccoli	-	-	-	-	-	-	-	=
77	Brussels sprouts	-	-	-	-	-	-	-	=
138	**Potatoes - carrots**	+	+	+	+	+	+	+	=
139	**Mixed carrots and leek**	+	+	+	+	+	+	+	=
140	**Tomato and pepper salad**	+	+	+	+	+	+	+	=
141	**Sliced vegetables**	-	-	-	-	-	-	-	=
142	**Spinach branch**	-	-	-	-	-	-	-	=
143	**Broccoli**	-	-	-	-	-	-	-	=
144	**Sliced vegetables**	-	-	-	-	-	-	-	=
145	**Broccoli**	-	-	-	-	-	-	-	=
146	**Vegetable and mushroom stir-fry**	-	-	-	-	-	-	-	=
183	**Cooked lentil salad**	+	+	+	+	+	+	+	=
184	**Cooked pumpkin and potatoes**	-	-	+	+	+	+	+	=
185	**White cabbage**	+	-	+	+	+	+	+	=
186	**Sliced carrots**	-	-	+	+	+	-	-	ND

◆ Test conducted under accreditation

VEGETABLES AND MISCELLANEOUS										
Samples		NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar		
		Fraser 1/2		Fraser		Final	Questionable colonies	Final	Fit
No. Spl.	Product	OAA Questionable colonies	PALCAM Questionable colonies	OAA Questionable colonies	PALCAM Questionable colonies				
306	Baguette dough	+	+	+	+	+	+	+	=
503	**Cooked peas**	-	-	-	-	-	-	-	=
504	**Broccoli purée**	-	-	-	-	-	-	-	=
505	**Chopped spinach with cream**	-	-	-	-	-	-	-	=
506	**Plain artichoke purée**	-	-	-	-	-	-	-	=
507	**Liquid egg portions**	-	-	-	-	-	-	-	=
582	Green peppers	-	-	-	-	-	-	-	=
583	**Breton salad**	+	+	+	+	+	+	+	=
584	**Piémontaise**	+	+	+	+	+	+	+	=
585	**Auvergne salad**	+	+	+	+	+	+	+	=
586	**Oriental tabbouleh**	+	+	+	+	+	+	+	=
587	**Diced tomatoes**	+	+	+	+	+	+	+	=
588	**Frozen red peppers**	+	+	+	+	+	+	+	=
589	**Frozen green beans**	+	+	+	+	+	+	+	=
590	**Diced tomatoes**	+	+	+	+	+	+	+	=
591	**Frozen green peppers**	+	+	+	+	+	+	+	=
592	**Frozen turnips**	+	+	+	+	+	+	+	=
593	**Frozen cooked peas**	+	+	+	+	+	+	+	=
594	**Frozen chopped spinach with cream**	+	+	+	+	+	+	+	=
595	**Frozen sliced vegetables**	+	+	+	+	+	+	+	=
596	**Frozen sliced carrots**	+	+	+	+	+	+	+	=
597	Frozen sliced courgettes	-	-	-	-	-	-	-	=
598	Frozen broccoli florets	-	-	-	-	-	-	-	=
599	Plain broccoli purée	-	-	-	-	-	-	-	=
600	Plain artichoke purée	-	-	-	-	-	-	-	=
601	Vegetable and mushroom stir-fry	-	-	-	-	-	-	-	=
665	Stew vegetables	-	-	-	-	-	-	-	=
666	Frozen sliced vegetables	-	-	-	-	-	-	-	=

ENVIRONMENTAL SAMPLES										
No. Spl.	Samples	NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar		
		Fraser 1/2		Fraser		Results	Questionable colonies	Final	Fit
		OAA	PALCAM	OAA	PALCAM				
	Products	Questionable colonies	Questionable colonies	Questionable colonies	Questionable colonies				
2605	Boning room swab	+	+	+	+	+	+	+	=
2606	Dosage room swab (proportioner)	-	-	-	-	-	-	-	=
2607	Washroom swab (bins)	-	-	-	-	-	-	-	=
2608	Cutter room (drains)	+	+	+	+	+	+	+	=
2609	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2610	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2611	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2612	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2613	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2614	Pastry workshop surface wipe	-	-	-	-	-	-	-	=
2696	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
2697	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
2698	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
2699	Wipe - Fish cuts workshop	+	+	+	+	+	+	+	=
2700	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
2701	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
2702	Wipe - Fish cuts workshop	-	-	-	-	-	-	-	=
59	Drain wipe - dairy	-	-	-	-	-	-	-	=
60	Outer drain wipe - dairy	-	-	-	-	-	-	-	=
61	Room drain wipe - dairy	-	-	-	-	-	-	-	=
62	Outer drain wipe - dairy	+	+	+	+	+	+	+	=
63	Room drain wipe - dairy	-	-	-	-	-	-	-	=
166	Belt wipe - Pastry workshop	-	+	-	-	-	-	-	=
167	Belt wipe - Pastry workshop	-	-	-	-	-	-	-	=
168	Shoe sole wipe - Pastry workshop	+	+	+	+	+	+	+	=
169	Kneader belt wipe-Pastry workshop		+	-	+	-	-	-	=
170	Yeast measuring device wipe-Pastry workshop	+	+	+	+	+	+	+	=
171	Balance cup wipe-Pastry workshop	-	-	-	-	-	-	-	=
172	Molder belt wipe-Pastry workshop	-	-	-	-	-	-	-	=
264	Wipe-Fish processing workshop	-	-	-	-	-	-	-	=
265	Belt surface wipe - Pastry workshop	-	-	-	+	-	-	-	=
266	Belt surface wipe - Pastry workshop	-	-	-	+	-	-	-	=

◆ Test conducted under accreditation

ENVIRONMENTAL SAMPLES										
No. Spl.	Samples	NF EN ISO 11290-1 ◆					COMPASS® *Listeria* Agar			
		Fraser 1/2		Fraser		Results	Questionable colonies	Final	Fit
		OAA	PALCAM	OAA	PALCAM				
	Products	Questionable colonies	Questionable colonies	Questionable colonies	Questionable colonies				
267	Belt surface wipe - Pastry workshop	+	+	+	-	+	+	+	=
268	Yeast proportioner wipe-Pastry workshop	+	+	+	+	+	+	+	=
384	**Table surface**	+	+	+	+	+	+	+	=
385	**Balance**	+	+	+	+	+	+	+	=
386	**Sewer grid**	+	+	+	+	+	+	+	=
387	**Bac**	+	+	+	+	+	+	+	=
388	**Knife blade**	+	+	+	+	+	+	+	=
389	**Trolley**	+	+	+	+	+	+	+	=
390	**Work surface**	+	+	+	+	+	+	+	=
391	**Sink**	+	+	+	+	+	+	+	=
392	**Belt**	+	+	+	+	+	+	+	=
393	**Work surface**	+	+	+	+	+	+	+	=
394	**Belt**	+	+	+	+	+	+	+	=
395	**Sink**	+	+	+	+	+	+	+	=
396	Scalding tank water	-	-	-	-	-	-	-	=
397	Abattoir entrance foot bath	-	-	-	-	-	-	-	=
398	Machine room gutter	-	-	-	-	-	-	-	=
399	Slaughter water	-	-	-	-	-	-	-	=
400	Ven bench - cutter	-	-	-	-	-	-	-	=
401	Packaging room floor	-	-	-	-	-	-	-	=
537	**Ladle**	+	+	+	+	+	+	+	=
538	**Biscuit bakery sewer grid**	+	+	+	+	+	+	+	=
539	**Packaging room trolley**	+	+	+	+	+	+	+	=
540	**Dish washing sink**	+	+	+	+	+	+	+	=
541	**Cooking room floor**	+	+	+	+	+	+	+	=
542	**Cooking room belt**	+	+	+	+	+	+	+	=
543	**Biscuit baking room belt**	+	+	+	+	+	+	+	=
544	**Cooking room table**	-	-	-	-	-	-	-	=
545	**Cooking room sink**	-	-	+	+	+	+	+	=
546	**Packaging room trolley**	+	+	+	+	+	+	+	=
547	**Cooking room work surface**	+	+	+	+	+	+	+	=
548	**Cooking room balance**	+	+	+	+	+	+	+	=

Appendix 5 - Renewal study (2007): Raw inclusivity and exclusivity results

Negative strains						
No.	Strain	Reference	Origin	COMPASS® *Listeria* Agar 24H		
				Colour of the colony	Size	Halo
1	*Listeria innocua*	SICC 4202		Blue	1-2	-
2	*Listeria innocua*	CIP106065 (NCTC 10528)		Blue	1-2	-
3	*Listeria innocua*	T727	Meat product	Blue	1-2	-
4	*Listeria innocua*	17993	milk	Blue	1-2	-
5	*Listeria ivanovii*	CIP 103466 (ATCC49954)		Blue	0.5	+(1)
6	*Listeria ivanovii*	CIP7842T (ATCC19119)		Blue	0.5	+(1)
7	*Listeria ivanovii*	103505	Fish	Blue	0.5	+(1)
8	*Listeria ivanovii*	BR11	Fish farm environment	Blue	0.5	+(2)
9	*Listeria ivanovii*	BR14	Fish farm environment	Blue	0.5	+(1)
10	*Listeria ivanovii*	BR22	Fish farm environment	Blue	0.5	+(1)
11	*Listeria ivanovii*	BR23	Fish farm environment	Blue	0.5	+(2)
12	*Listeria ivanovii*	Ad466	Veal kidneys	Blue	1.5	+
13	*Listeria seeligeri*	CIP 100100T (ATCC35967)		Blue	<0.5	-
14	*Listeria seeligeri*	CNR 936133		Blue	0.5	-
15	*Listeria welshimeri*	CIP 10413		Blue	1	-
16	*Listeria welshimeri*	CIP 8149T (ATCC35897)		Blue	0.5-1.0	-
17	*Listeria grayi*	CIP 6818T (ATCC19120)		Blue	1.5	-
18	*Listeria murrayi*	CIP 76124 (ATCC25401)		Blue	1.5	-
19	*Lactobacillus brevis Ad405*	86L126	Ham	/	/	/
20	*Lb plantarum*	89L319	Cheese	/	/	/
21	*Enterococcus faecalis*	CIP A186		/	/	/
22	*Enterococcus faecium*	Ad 180	Liquid egg portions	/	/	/
23	*Micrococcus luteus*	ATCC 10240		Blue	µcolonies	-
24	*Staphylococcus aureus*	Adria501	Raw milk	White	0.5	-
25	*Staphylococcus aureus*	ATCC 25923		White	0.5	-
26	*Brochothrix thermosphacta*	CIP 696		/	/	/
27	*Brochothrix thermosphacta*	EN 15129	Trout	/	/	/
28	*Bacillus cereus*	Adria17	Rice pudding	/	/	/
29	*Bacillus subtilis*	CIP5262 (ATCC6635)		/	/	/
30	*Bacillus pumilus*	A00V124	Plants	Blue flat	2	-

Positive strains						
No.	Strain	Reference	Origin	COMPASS® *Listeria* Agar 24H		
				Colour of the colony	Size	Halo
1	*L. monocytogenes*	CIP 7831		Blue	2	+
2	*L. monocytogenes*	CIP87/6172		Blue	2	+
3	*L. monocytogenes*	88/5087		Blue	2	+
4	*L. monocytogenes*	88/6396		Blue	2	+
5	*L. monocytogenes*	1011/140	Frozen broccoli	Blue	2	+
6	*L. monocytogenes*	V2/124	Pork	Blue	2	+
7	*L. monocytogenes*	V5/126	time	Blue	2	+
8	*L. monocytogenes*	V8/127	Beef	Blue	2	+
9	*L. monocytogenes*	38/181	Smoked sausage	Blue	2	+
10	*L. monocytogenes*	2760/3145	Pork belly	Blue	2	+
11	*L. monocytogenes*	850/109	Nordic dish	Blue	2	+
12	*L. monocytogenes*	877/113	Environment	Blue	2	+
13	*L. monocytogenes*	CIP7840 (ATCC19117)	Human	Blue	2	+
14	*L. monocytogenes*	CIP 55143		Blue	2	+
15	*L. monocytogenes*	CIP 7832		Blue	2	+
16	*L. monocytogenes*	CIP 7833		Blue	2	+
17	*L. monocytogenes*	CNR 910314		Blue	2	+
18	*L. monocytogenes*	CIP7834 (ATCC19113)		Blue	2	+
19	*L. monocytogenes*	CIP 7835		Blue	2	+
20	*L. monocytogenes*	CIP 7836		Blue	2	+
21	*L. monocytogenes*	913/1408	Black pudding	Blue	2	+
22	*L. monocytogenes*	5721/6179	Smoked lardoons	Blue	2	+
23	*L. monocytogenes*	1016/1413	Frozen broccoli	Blue	2	+
24	*L. monocytogenes*	7111/7516	Rillettes	Blue	2	+
25	*L. monocytogenes*	7972/2399	Mushroom pie	Blue	2	+
26	*L. monocytogenes*	1973/2400	Quiche Lorraine	Blue	2	+
27	*L. monocytogenes*	2407/3139	Tripe in tomato sauce	Blue	2	+
28	*L. monocytogenes*	Ad 268	Vendée ham	Blue	2	+
29	*L. monocytogenes*	CIP7837 (ATCC19114)	Human	Blue	2	+
30	*L. monocytogenes*	CIP 7838 (ATCC19115)		Blue	2	+
31	*L. monocytogenes*	86/690		Blue	2	+
32	*L. monocytogenes*	88/7137		Blue	2	+
33	*L. monocytogenes*	153	Munster	Blue	2	+
34	*L. monocytogenes*	CIP 7839 (ATCC19116)	Chicken	Blue	2	+
35	*L. monocytogenes*	CIP 7843		Blue	2	+
36	*L. monocytogenes*	17501	Milk	Blue	2	+
37	*L. monocytogenes*	Ad 141	Salmon	Blue	2	+
38	*L. monocytogenes*	Ad 140	Duck breast	Blue	2	+
39	*L. monocytogenes*	Ad 148	Salmon	Blue	2	+
40	*L. monocytogenes*	A00 L098	Dairy product	Blue	2	+
41	*L. monocytogenes*	A00 L101	Dairy product	Blue	2	+
42	*L. monocytogenes*	A00 C022	Merguez	Blue	2	+
43	*L. monocytogenes*	A00 C043	Bacon	Blue	2	+
44	*L. monocytogenes*	A00 M047	Fish	Blue	2	+
45	*L. monocytogenes*	18312	Milk	Blue	2	+
46	*L. monocytogenes*	A00 M011	Fish	Blue	2	+
47	*L. monocytogenes*	A00 M080	Fish	Blue	2	+
48	*L. monocytogenes*	A00 L105	Dairy product	Blue	2	+
49	*L. monocytogenes*	Ad 267	Poultry	Blue	2	+
50	*L. monocytogenes*	Ad 285	Peppers	Blue	2	+

Appendix 6 – Extension study (2007): Raw inclusivity and exclusivity results

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
1.	*Listeria*	*monocytogenes*	153	Munster	blue	2	+	blue	3	+	+	+
2.	*Listeria*	*monocytogenes*	909	milk	blue	2	+	blue	3	+	+	+
3.	*Listeria*	*monocytogenes*	910	milk	blue	2	+	blue	3	+	+	+
4.	*Listeria*	*monocytogenes*	917	milk	blue	2	+	blue	3	+	+ weak	+
5.	*Listeria*	*monocytogenes*	18023	milk	blue	2	+	blue	3	+	+	+
6.	*Listeria*	*monocytogenes*	18024	milk	blue	2	+	blue	3	+	+	+
7.	*Listeria*	*monocytogenes*	1011/1410	frozen broccoli	blue	2	+	blue	3	+	+	+
8.	*Listeria*	*monocytogenes*	1016/1413	frozen broccoli	blue	2	+	blue	3	+	+	+
9.	*Listeria*	*monocytogenes*	17501	milk	blue	2	+	blue	3	+	+	+
10.	*Listeria*	*monocytogenes*	1972/2399	mushroom pie	blue	2	+	blue	3	+	+	+
11.	*Listeria*	*monocytogenes*	1973/2400	quiche Lorraine	blue	2	+	blue	3	+	+	+
12.	*Listeria*	*monocytogenes*	2407/3139	tripe in tomato sauce	blue	2	+	blue	3	+	+	+
13.	*Listeria*	*monocytogenes*	2760/3145	breast trimmings	blue	2	+	blue	3	+	+	+
14.	*Listeria*	*monocytogenes*	32.183	toastie	blue	2	+	blue	3	+	+	+
15.	*Listeria*	*monocytogenes*	38/181	Toulouse sausages	blue	2	+	blue	3	+	+	+
16.	*Listeria*	*monocytogenes*	5721/6179	smoked lardoons	blue	2	+	blue	3	+	+	+
17.	*Listeria*	*monocytogenes*	6072	smoked salmon	No growth	/	/	No growth	/	/	/	/
18.	*Listeria*	*monocytogenes*	7111/7516	rillettes	blue	2	+	blue	3	+	+	+
19.	*Listeria*	*monocytogenes*	850/109	Nordic dish	blue	2	+	blue	3	+	+	+
20.	*Listeria*	*monocytogenes*	86/690	food	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
21.	*Listeria*	*monocytogenes*	87/6172	food	blue	2	+	blue	3	+	+	+
22.	*Listeria*	*monocytogenes*	877/113	glazing tunnel belt swab	blue	2	+	blue	3	+	+	+
23.	*Listeria*	*monocytogenes*	88/7137	food	blue	2	+	blue	3	+	+	+
24.	*Listeria*	*monocytogenes*	913/1,048	black pudding	blue	2	+	blue	3	+	+	+
25.	*Listeria*	*monocytogenes*	A00C014	Chipolatas	blue	2	+	blue	3	+	+	+
26.	*Listeria*	*monocytogenes*	A00C015	Chipolatas	blue	2	+	blue	3	+	+	+
27.	*Listeria*	*monocytogenes*	A00C022	merguez	blue	2	+	blue	3	+	+	+
28.	*Listeria*	*monocytogenes*	A00C024	chipolatas with herbs	blue	2	+	blue	3	+	+	+
29.	*Listeria*	*monocytogenes*	A00C036	guinea fowl	blue	2	+	blue	3	+	+	+
30.	*Listeria*	*monocytogenes*	A00C039	Savoie diots	blue	2	+	blue	3	+	+	+
31.	*Listeria*	*monocytogenes*	A00C040	muzzle	blue	2	+	blue	3	+	+	+
32.	*Listeria*	*monocytogenes*	A00C041	sausage meat	blue	2	+	blue	3	+	+	+
33.	*Listeria*	*monocytogenes*	A00C042	Toulouse sausages	blue	2	+	blue	3	+	+	+
34.	*Listeria*	*monocytogenes*	A00C043	smoked bacon	blue	2	+	blue	3	+	+	+
35.	*Listeria*	*monocytogenes*	A00C044	Muscovy duckling	blue	2	+	blue	3	+	+	+
36.	*Listeria*	*monocytogenes*	A00C052	turkey osso bucco	blue	2	+	blue	3	+	+	+
37.	*Listeria*	*monocytogenes*	A00C053	gizzards	blue	2	+	blue	3	+	+	+
38.	*Listeria*	*monocytogenes*	A00C054	beef heart	blue	2	+	blue	3	+	+	+
39.	*Listeria*	*monocytogenes*	A00C055	Toulouse sausages	blue	2	+	blue	3	+	+	+
40.	*Listeria*	*monocytogenes*	A00E008	reconstitution belt	blue	2	+	blue	3	+	+	+
41.	*Listeria*	*monocytogenes*	A00E033	slicer	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
42.	*Listeria*	*monocytogenes*	A00E049	filleter belt support	blue	2	+	blue	3	+	+	+
43.	*Listeria*	*monocytogenes*	A00E082	smoked salmon environment	blue	2	+	blue	3	+	+	+
44.	*Listeria*	*monocytogenes*	A00L097	milk	blue	2	+	blue	3	+	+	+
45.	*Listeria*	*monocytogenes*	A00L101	milk	blue	2	+	blue	3	+	+	+
46.	*Listeria*	*monocytogenes*	A00L107	milk	blue	2	+	blue	3	+	+	+
47.	*Listeria*	*monocytogenes*	A00M009	smoked salmon	blue	2	+	blue	3	+	+	+
48.	*Listeria*	*monocytogenes*	A00M019	smoked salmon	blue	2	+	blue	3	+	+	+
49.	*Listeria*	*monocytogenes*	A00M020	smoked salmon	blue	2	+	blue	3	+	+	+
50.	*Listeria*	*monocytogenes*	A00M021	smoked salmon	blue	2	+	blue	3	+	+	+
51.	*Listeria*	*monocytogenes*	A00M023	smoked salmon	blue	2	+	blue	3	+	+	+
52.	*Listeria*	*monocytogenes*	A00M029	norv SF raw mat.	blue	2	+	blue	3	+	+	+
53.	*Listeria*	*monocytogenes*	A00M030	smoked salmon raw material	blue	2	+	blue	3	+	+	+
54.	*Listeria*	*monocytogenes*	A00M032	Norwegian salmon	blue	2	+	blue	3	+	+	+
55.	*Listeria*	*monocytogenes*	A00M045	smoked salmon	blue	2	+	blue	3	+	+	+
56.	*Listeria*	*monocytogenes*	A00M050	swordfish raw material	blue	2	+	blue	3	+	+	+
57.	*Listeria*	*monocytogenes*	A00M051	norv SF raw mat.	blue	2	+	blue	3	+	+	+
58.	*Listeria*	*monocytogenes*	A00M080	salmon raw material	blue	2	+	blue	3	+	+	+
59.	*Listeria*	*monocytogenes*	A00M081	smoked salmon	blue	2	+	blue	3	+	+	+
60.	*Listeria*	*monocytogenes*	A00M088	smoked Irish salmon	blue	2	+	blue	3	+	+	+
61.	*Listeria*	*monocytogenes*	A00M089	smoked Norwegian salmon	blue	2	+	blue	3	+	+	+
62.	*Listeria*	*monocytogenes*	A00M096	smoked Scottish salmon	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
63.	*Listeria*	*monocytogenes*	A00M111	smoked Scottish salmon	blue	2	+	blue	3	+	+	+
64.	*Listeria*	*monocytogenes*	A00M112	smoked Norwegian salmon	blue	2	+	blue	3	+	+	+
65.	*Listeria*	*monocytogenes*	A00M113	smoked Irish salmon	blue	2	+	blue	3	+	+	+
66.	*Listeria*	*monocytogenes*	A00M123	smoked salmon	blue	2	+	blue	3	+	+	+
67.	*Listeria*	*monocytogenes*	Ad148	seafood	blue	2	+	blue	3	+	+	+
68.	*Listeria*	*monocytogenes*	Ad235	poultry	blue	2	+	blue	3	+	+	+
69.	*Listeria*	*monocytogenes*	Ad252	dairy product	blue	2	+	blue	3	+	+	+
70.	*Listeria*	*monocytogenes*	Ad253	cooked pressed cheese	blue	2	+	blue	3	+	+	+
71.	*Listeria*	*monocytogenes*	Ad255	dairy product	blue	2	+	blue	3	+	+	+
72.	*Listeria*	*monocytogenes*	Ad258	dairy product	blue	2	+	blue	3	+	+	+
73.	*Listeria*	*monocytogenes*	Ad260	pressed cheese	blue	2	+	blue	3	+	+	+
74.	*Listeria*	*monocytogenes*	Ad262	dairy product	blue	2	+	blue	3	+	+	+
75.	*Listeria*	*monocytogenes*	Ad265	tongue	blue	2	+	blue	3	+	+	+
76.	*Listeria*	*monocytogenes*	Ad266	chicken	blue	2	+	blue	3	+	+	+
77.	*Listeria*	*monocytogenes*	Ad267	dried sausage	blue	2	+	blue	3	+	+	+
78.	*Listeria*	*monocytogenes*	Ad268	Vendée ham	blue	2	+	blue	3	+	+	+
79.	*Listeria*	*monocytogenes*	Ad270	Lyon rosette	blue	2	+	blue	3	+	+	+
80.	*Listeria*	*monocytogenes*	Ad271	bacon fillet	blue	2	+	blue	3	+	+	+
81.	*Listeria*	*monocytogenes*	Ad272	dried Auvergne sausage	blue	2	+	blue	3	+	+	+
82.	*Listeria*	*monocytogenes*	Ad273	dried Savoie ham	blue	2	+	blue	3	+	+	+
83.	*Listeria*	*monocytogenes*	Ad274	Asian assortment	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
84.	*Listeria*	*monocytogenes*	Ad275	Lyon pistachio saveloy	blue	2	+	blue	3	+	+	+
85.	*Listeria*	*monocytogenes*	Ad276	Strasbourg sausage	blue	2	+	blue	3	+	+	+
86.	*Listeria*	*monocytogenes*	Ad277	mild chorizo	blue	2	+	blue	3	+	+	+
87.	*Listeria*	*monocytogenes*	Ad278	smoked belly	blue	2	+	blue	3	+	+	+
88.	*Listeria*	*monocytogenes*	Ad279	cooked Parisian stir-fry	blue	2	+	blue	3	+	+	+
89.	*Listeria*	*monocytogenes*	Ad280	Plain lardoons	blue	2	+	blue	3	+	+	+
90.	*Listeria*	*monocytogenes*	Ad281	raviolines with Roquefort	blue	2	+	blue	3	+	+	+
91.	*Listeria*	*monocytogenes*	Ad285	green peppers	blue	2	+	blue	3	+	+	+
92.	*Listeria*	*monocytogenes*	Ad291	smoked lardoons	blue	2	+	blue	3	+	+	+
93.	*Listeria*	*monocytogenes*	Ad292	knacky	blue	2	+	blue	3	+	+	+
94.	*Listeria*	*monocytogenes*	Ad293	sliced coppa	blue	2	+	blue	3	+	+	+
95.	*Listeria*	*monocytogenes*	Ad294	clinical	blue	2	+	blue	3	+	+	+
96.	*Listeria*	*monocytogenes*	Ad295	clinical	blue	2	+	blue	3	+	+	+
97.	*Listeria*	*monocytogenes*	Ad299	cockles	blue	2	+	blue	3	+	+	+
98.	*Listeria*	*monocytogenes*	Ad470	cheese	blue	2	+	blue	3	+	+	+
99.	*Listeria*	*monocytogenes*	Ad474	smoked salmon	blue	2	+	blue	3	+	+	+
100.	*Listeria*	*monocytogenes*	Ad494	piémontaise	blue	2	+	blue	3	+	+	+
101.	*Listeria*	*monocytogenes*	Ad523	raclette cheese	blue	2	+	blue	3	+	+	+
102.	*Listeria*	*monocytogenes*	Ad532	fruit	blue	2	+	blue	3	+	+	+
103.	*Listeria*	*monocytogenes*	Ad534	fruit	blue	2	+	blue	3	+	+	+
104.	*Listeria*	*monocytogenes*	Ad543	sliced pepper	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
105.	*Listeria*	*monocytogenes*	Ad544	pre-fried onion	blue	2	+	blue	3	+	+	+
106.	*Listeria*	*monocytogenes*	Ad545	cabbage and carrot salad	blue	2	+	blue	3	+	+	+
107.	*Listeria*	*monocytogenes*	Ad546	buckwheat flour	blue	2	+	blue	3	+	+	+
108.	*Listeria*	*monocytogenes*	Ad548	boning room	blue	2	+	blue	3	+	+	+
109.	*Listeria*	*monocytogenes*	Ad549	fish cuts workshop	blue	2	+	blue	3	+	+	+
110.	*Listeria*	*monocytogenes*	Ad550	outdoor drain	blue	2	+	blue	3	+	+	+
111.	*Listeria*	*monocytogenes*	Ad551	sole bath	blue	2	+	blue	3	+	+	+
112.	*Listeria*	*monocytogenes*	Ad610	milk	blue	2	+	blue	3	+	+	+
113.	*Listeria*	*monocytogenes*	Ad611	milk	blue	2	+	blue	3	+	+	+
114.	*Listeria*	*monocytogenes*	Ad612	Livarot	blue	2	+	blue	3	+	+	+
115.	*Listeria*	*monocytogenes*	Ad613	Munster	blue	2	+	blue	3	+	+	+
116.	*Listeria*	*monocytogenes*	Ad614	dairy environment	blue	2	+	blue	3	+	+	+
117.	*Listeria*	*monocytogenes*	Ad615	dairy environment	blue	2	+	blue	3	+	+	+
118.	*Listeria*	*monocytogenes*	Ad617	dairy environment	blue	2	+	blue	3	+	+	+
119.	*Listeria*	*monocytogenes*	Ad618	Munster	blue	2	+	blue	3	+	+	+
120.	*Listeria*	*monocytogenes*	Ad619	cheese	blue	2	+	blue	3	+	+	+
121.	*Listeria*	*monocytogenes*	Ad620	dairy environment	blue	2	+	blue	3	+	+	+
122.	*Listeria*	*monocytogenes*	Ad621	dairy environment (floor)	blue	2	+	blue	3	+	+	+
123.	*Listeria*	*monocytogenes*	Ad622	cheese	blue	2	+	blue	3	+	+	+
124.	*Listeria*	*monocytogenes*	Ad623	breadcrumbs (dairy)	blue	2	+	blue	3	+	+	+
125.	*Listeria*	*monocytogenes*	Ad624	dairy environment	blue	2	+	blue	3	+	+	+
126.	*Listeria*	*monocytogenes*	Ad625	dairy environment	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
127.	*Listeria*	*monocytogenes*	Ad626	Gorgonzola	blue	2	+	blue	3	+	+	+
128.	*Listeria*	*monocytogenes*	Ad627	dairy product packaging	blue	2	+	blue	3	+	+	+
129.	*Listeria*	*monocytogenes*	Ad628	dairy product packaging	blue	2	+	blue	3	+	+	+
130.	*Listeria*	*monocytogenes*	Ad629	Cantal	blue	2	+	blue	3	+	+	+
131.	*Listeria*	*monocytogenes*	Ad630	Cantal	blue	2	+	blue	3	+	+	+
132.	*Listeria*	*monocytogenes*	Ad631	dairy environment	blue	2	+	blue	3	+	+	+
133.	*Listeria*	*monocytogenes*	Ad632	milk	blue	2	+	blue	3	+	+	+
134.	*Listeria*	*monocytogenes*	Ad633	dairy environment	blue	2	+	blue	3	+	+	+
135.	*Listeria*	*monocytogenes*	Ad634	dairy environment (floor)	blue	2	+	blue	3	+	+	+
136.	*Listeria*	*monocytogenes*	ADQP105	smoked salmon	blue	2	+	blue	3	+	+	+
137.	*Listeria*	*monocytogenes*	AER100	chicken	blue	2	+	blue	3	+	+	+
138.	*Listeria*	*monocytogenes*	AER101	milk	blue	2	+	blue	3	+	+	+
139.	*Listeria*	*monocytogenes*	AER102	brine	blue	2	+	blue	3	+	+	+
140.	*Listeria*	*monocytogenes*	AER103	poultry	blue	2	+	blue	3	+	+	+
141.	*Listeria*	*monocytogenes*	BR32	trout	blue	2	+	blue	3	+	+	+
142.	*Listeria*	*monocytogenes*	CL3:29	meat product environment	blue	2	+	blue	3	+	+	+
143.	*Listeria*	*monocytogenes*	LMH180	freshness salad	blue	2	+	blue	3	+	+	+
144.	*Listeria*	*monocytogenes*	V2/124	pork	blue	2	+	blue	3	+	+	+
145.	*Listeria*	*monocytogenes*	V5/126	beef	blue	2	+	blue	3	+	+	+
146.	*Listeria*	*monocytogenes*	V8/127	beef	blue	2	+	blue	3	+	+	+
147.	*Listeria*	*monocytogenes*	Ad 664	unripened cheese made with raw milk	blue	2	+	blue	3	+	+	+

POSITIVE STRAINS												
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
					Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
148.	*Listeria*	*monocytogenes*	Ad 665	raw milk	blue	2	+	blue	3	+	+	+
149.	*Listeria*	*monocytogenes*	Ad 666	cockerel	blue	2	+	blue	3	+	+	+
150.	*Listeria*	*monocytogenes*	Ad 667	chicken thigh	blue	2	+	blue	3	+	+	+
151.	*Listeria*	*monocytogenes*	Ad 668	chicken wing	blue	2	+	blue	3	+	+	+
152.	*Listeria*	*monocytogenes*	Ad 669	rillettes	blue	2	+	blue	3	+	+	+
153.	*Listeria*	*monocytogenes*	Ad 670	smoked salmon	blue	2	+	blue	3	+	+	+

NEGATIVE STRAINS													
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
1	*Listeria*	*innocua*	1	smoked salmon off-cuts	+	Blue	2	-	Blue	2	-	-	+
2	*Listeria*	*innocua*	T727	meat product	+	Blue	2	-	Blue	2	-	-	+
3	*Listeria*	*innocua*	NCTC10528		+	Blue	2	-	Blue	2	-	-	-
4	*Listeria*	*innocua*	T654	cheese	+	Blue	0.5-1	-	Blue	1-2	-	-	+
5	*Listeria*	*innocua*	ATCC33090	cow brain	+	Blue	2	-	Blue	2	-	-	+
6	*Listeria*	*innocua*	CIP8012		+	Blue	2	-	Blue	2	-	-	+
7	*Listeria*	*innocua*	17765	breaded pork belly	+	Blue	2	-	Blue	2	-	-	+
8	*Listeria*	*innocua*	16969	milk	+	Blue	2	-	Blue	2	-	-	+
9	*Listeria*	*innocua*	18313	milk	+	Blue	2	-	Blue	2	-	-	+
10	*Listeria*	*innocua*	Ad 658	Gorgonzola	+	Blue	2	-	Blue	2	-	-	+
11	*Listeria*	*innocua*	Cheese carrier	carrier	+	Blue	2	-	Blue	2	-	-	+
12	*Listeria*	*innocua*	902	dairy product	+	Blue	2	-	Blue	2	-	-	+
13	*Listeria*	*innocua*	DSM20649		+	Blue	2	-	Blue	2	-	-	+
14	*Listeria*	*innocua*	Ad663	ripening cellars	+	Blue	2	-	Blue	2	-	-	+
15	*Listeria*	*innocua*	Ad660	breadcrumbs	+	Blue	2	-	Blue	2	-	-	+
16	*Listeria*	*innocua*	Ad657	Cantal	+	Blue	2	-	Blue	2	-	-	+ very weak
17	*Listeria*	*innocua*	As661	Pont L'Evêque	+	Blue	2	-	Blue	2	-	-	+
18	*Listeria*	*innocua*	Ad656	soft cheese	+	Blue	2	-	Blue	2	-	-	+
19	*Listeria*	*innocua*	Ad655	brine	+	Blue	2	-	Blue	2	-	-	+
20	*Listeria*	*innocua*	Ad653	environment	+	Blue	2	-	Blue	2	-	-	+
21	*Listeria*	*innocua*	Ad654	dairy product	+	Blue	2	-	Blue	2	-	-	+
22	*Listeria*	*innocua*	Ad671	smoked lardoons	+	blue	2	-	Blue	2	-	-	+
23	*Listeria*	*ivanovii*	CIP103466		+	Blue	pin head	+	Blue	1-2	+	+ mild	-
24	*Listeria*	*ivanovii*	CIP7842T		+	Blue	0.5-1	+	Blue	1-2	+	+	-
25	*Listeria*	*ivanovii*	CIP103212		+	Blue	0.5-1	+	Blue	1-2	+	+	-
26	*Listeria*	*ivanovii*	CIP103505	trout	+	Blue	0.5-1	+	Blue	1-2	+	-	-
27	*Listeria*	*ivanovii*	BR11	fish farm environment, bird	+	Blue	0.5-1	+	Blue	1-2	+	+ mild	-

NEGATIVE STRAINS													
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
				net									
28	*Listeria*	*ivanovii*	BR15	fish farm environment, pond wall	+	Blue	0.5-1	+	Blue	1-2	+	+ mild	-
29	*Listeria*	*ivanovii*	Ad466	veal kidneys	+	Blue	0.5-1	+	Blue	1-2	+	+ mild	-
30	*Listeria*	*ivanovii*	Ad662	packaging	+	Blue	1-2	-	Blue	1-2	-	No growth	
31	*Listeria*	*ivanovii*	Ad648 (AERIAL 28)	Collection	+	Blue	1	+	Blue	1-2	+	+ weak at inoculation point	-
32	*Listeria*	*ivanovii*	L2-2	Poultry	+	Blue	1-2	+	Blue	1-2	+	+	-
33	*Listeria*	*ivanovii*	L2-9	Ewe's milk	+	Blue	1-2	+	Blue	1-2	+	+ weak	-
34	*Listeria*	*ivanovii*	L2-11	Raw milk cheese	+	Blue	1-2	+	Blue	1-2	+	+	-
35	*Listeria*	*ivanovii*	L2-12	Powdered milk	+	Blue	1-2	+	Blue	1-2	+	+	-
36	*Listeria*	*ivanovii*	L41	Raw milk	+	Blue	1-2	+	Blue	1-2	+	+	-
37	*Listeria*	*ivanovii*	Ad616	dairy environment (floor)	+	blue	1-2	+ weak	Blue	1-2	+	+ weak at inoculation point	-
38	*Listeria*	*seeligeri*	CIP100100		+	Blue	µcolonies	-	Blue	0.1-1	-	-	+ mild
39	*Listeria*	*seeligeri*	CNR936133		+	Blue	0.1-0.5	-	Blue	0.5-1	-	-	+ mild
40	*Listeria*	*seeligeri*	BR1	trout	+	Blue	0.1-0.5	-	Blue	0.5-1	-	-	+ mild
41	*Listeria*	*seeligeri*	BR4	fish	+	Blue	0.1-0.5	-	Blue	0.5-1	-	-	+ mild
42	*Listeria*	*seeligeri*	BR18	fish farm environment, pond wall	+	Blue	0.1-0.5	-	Blue	0.5-1	-	-	+ mild
43	*Listeria*	*seeligeri*	Ad652	foot bath	+	Blue	µcolonies	-	Blue	0.5-1	-	-	+
44	*Listeria*	*seeligeri*	Ad649 (AERIAL 26)	Cheese	+	Blue	µcolonies	-	Blue	0.5-2	-	No growth	
45	*Listeria*	*seeligeri*	Ad651 (AERIAL 46)	Environment	+	Blue	µcolonies	-	Blue	1-2	+ slight	-	+
46	*Listeria*	*seeligeri*	Ad674	Munster	+	Blue	µcolonies	-	Blue	1-2	-	Very weak growth	
47	*Listeria*	*welshimeri*	CIP10413		+	Blue	2	-	Blue	2	-	-	+
48	*Listeria*	*welshimeri*	CIP8149		+	Blue	0.1-0.5	-	Blue	0.1-1	-	-	+ mild
49	*Listeria*	*welshimeri*	Ad650 (AERIAL 45)	Poultry	+	Blue	0.5	-	Blue	1-2	-	-	+
50	*Listeria*	*welshimeri*	191424	poultry	+	blue	2	-	Blue	1-2	-	-	+

NEGATIVE STRAINS													
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
51	*Listeria*	*grayi*	ATCC19120		+	Pale blue	0.5-1	-	Blue	3	-	-	+ mild
52	*Listeria*	*grayi*	CIP76124		+	Pale blue	0.5-1	-	Blue	3	-	-	+
53	*Bacillus*	*cereus*	1	liquid egg portion	+	No growth	/	-	No growth	/	+	+	No growth
54	*Bacillus*	*cereus*	8	pasta Spanish style	+	No growth	/	-	No growth	/	/	No growth	
55	*Bacillus*	*cereus*	11	rice-purée side dish	+	No growth	/	-	No growth	/	+ at inoculation rate	No growth	
56	*Bacillus*	*cereus*	14.2	île flottante	+	No growth	/	-	No growth	/	/	No growth	
57	*Bacillus*	*cereus*	16	seafood spaghetti	+	No growth	/	+	No growth	/	+	No growth	
58	*Bacillus*	*cereus*	17	rice pudding	+	No growth	/	+	No growth	/	+	No growth	
59	*Bacillus*	*cereus*	20	chicken-carrot sauce	+	No growth	/	+	No growth	/	+ at inoculation rate	+ at inoculum	No growth
60	*Bacillus*	*cereus*	21	curried rice	+	No growth	/	-	No growth	/	+ at inoculation rate	-	+
61	*Bacillus*	*cereus*	22	wheat flour	+	White spread out, blue centre	>2	+	White spread out, blue centre	>2	+	No growth	
62	*Bacillus*	*cereus*	26	raw cow's milk	+	No growth	/	+	No growth	/	+	+ at inoculum	No growth
63	*Bacillus*	*cereus*	30	raw peeled shrimps ionised at 3 kGray	+	No growth	/	+ at inoculation point	No growth	/	+ at inoculation rate	+	No growth
64	*Bacillus*	*cereus*	31	powdered butter	+	No growth	/	+	No growth	/	+	+	No growth
65	*Bacillus*	*cereus*	Ad420	caseinate powder	+	White spread out, blue centre	>2	+	White spread out, blue centre	>2	+	No growth	
66	*Bacillus*	*cereus*	Ad465	salmon terrine	+	No growth	/	-	No growth	/	-	+	No growth
67	*Bacillus*	*cereus*	Ad483	Punch	+	No growth	/	+	No growth	/	+	No growth	
68	*Bacillus*	*cereus*	Ad495	rice flour	+	white spread out, green centre	>2	+	white spread out, green centre	>2	+	No growth	
69	*Bacillus*	*cereus*	INRA104	refrigerated purée	+	No growth	/	-	No growth	/	-	No growth	
70	*Bacillus*	*cereus*	Ad608	baguette dough	+	white spread out, blue-turquoise centre	>2	+	white spread out, blue-turquoise centre	>2	+	+	No growth
71	*Bacillus*	*cereus*	54	dairy product	+	No growth	/	-	A few white	>2	-	+	No growth

NEGATIVE STRAINS													
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
									spread out colonies				
72	*Bacillus*	*cereus*	Ad607	environment	+	Turquoise spread out	>2	+	Turquoise spread out	>2	+	+ mild	No growth
73	*Bacillus*	*cereus*	Ad609	drain wipe, dairy products workshop	+	White, green centre	>2	-	White, green centre	>2	-	No growth	
74	*Bacillus*	*weihenstephanensis*	N12	egg product	+	No growth	/	-	No growth	/	-	No growth	
75	*Bacillus*	*weihenstephanensis*	INRA87	refrigerated purée	+	No growth	/	-	No growth	/	-	No growth	
76	*Bacillus*	*weihenstephanensis*	INRA140	ready-cooked dish	+	No growth	/	-	No growth	/	-	No growth	
77	*Bacillus*	*weihenstephanensis*	INRA171	pasteurised vegetable	+	No growth	/	-	No growth	/	-	No growth	
78	*Bacillus*	*weihenstephanensis*	A1	egg product	+	No growth	/	-	No growth	/	+ at inoculation rate	No growth	
79	*Bacillus*	*weihenstephanensis*	SDA NFFE640	dairy product	+	No growth	/	-	No growth	/	+ at inoculation rate	No growth	
80	*Bacillus*	*thuringiensis*	IEBC T31	vegetables	+	No growth	/	-	No growth	/	-	No growth	
81	*Bacillus*	*licheniformis*	7600	dairy product	+	White spread out	>2	-	White spread out	>2	-	No growth	
82	*Bacillus*	*licheniformis*	LMSA 049	egg product	+	white spread out, green centre	>2	-	white spread out, green centre	>2	-	No growth	
83	*Bacillus*	*pumilus*	7572	dairy product	+	White	01-0.5	-	Blue spread out, runny	1-2	-	No growth	
84	*Bacillus*	*pumilus*	INRA 260	quiche	+	Pale green	1-2	-	White spread out, blue centre	>2	-	No growth	
85	*Bacillus*	*circulans*	B8	dairy product	+	Turquoise	1	-	Blue	1-2	Opaque clarifying	-	+
86	*Bacillus*	*coagulans*	7179	dairy product	+	No growth	/	-	No growth	/	-	-	+ mild
87	*Bacillus*	*sphaericus*	/	dairy product	+	White	1	-	Brown spread out	>2	-	No growth	
88	*Bacillus*	*subtilis*	7750	dairy product	+	No growth	/	-	No growth	/	-	No growth	
89	*Bacillus*	*subtilis*	LMSA 092	egg product	+	No growth	/	-	No growth	/	-	No growth	
90	*Bacillus*	*mycoides*	NFSO60	milk	+	No growth	/	-	No growth	/	-	No growth	
91	*Bacillus*	*pseudomycoides*	W38	vegetables	+	No growth	/	-	No growth	/	-	No growth	

NEGATIVE STRAINS													
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			CONFIRM' *L. mono* Agar	
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	Opaque halo	Discolouration yellow (Rhamnose)
92	*Enterococcus*	*durans*	Ad 149	cooked ham	+	No growth	/	-	No growth	/	-	No growth	
93	*Enterococcus*	*durans*	Ad181	pasteurised liquid egg portion	+	No growth	/	-	No growth	/	-	-	+ mild
94	*Enterococcus*	*faecalis*	89L326	Vacherin	+	No growth	/	-	No growth	/	-	-	+
95	*Enterococcus*	*faecalis*	89L333	Appenzel	+	No growth	/	-	No growth	/	-	No growth	
96	*Enterococcus*	*faecalis*	F4	Cheese	+	No growth	/	-	No growth	/	-	-	-
97	*Enterococcus*	*faecalis*	25	chicken thigh	+	No growth	/	-	No growth	/	-	No growth	
98	*Enterococcus*	*faecalis*	Ad289	ready-cooked dish	+	No growth	/	-	Turquoise	Trace	-	-	+
99	*Enterococcus*	*faecium*	Ad180	pasteurised liquid egg portion	+	Green	µcolonies	-	Pale turquoise	<1	-	-	+
100	*Enterococcus*	*faecium*	CNRZ1391	cheese	+	No growth	/	-	Turquoise	Trace	-	-	+
101	*Enterococcus*	*hirae*	CNRZ1380	cheese	+	Green	µcolonies	-	Pale turquoise	<1	-	-	+ inoculum
102	*Enterococcus*	*avium*	Ad183	raw liquid egg portion	+	No growth	/	-	No growth	/	-	No growth	
103	*Lactococcus*	*lactis cremoris*	91G030	gros lait	+	No growth	/	-	No growth	/	-	-	-
104	*Lactococcus*	*lactis*	89L335	Reblochon	+	No growth	/	-	No growth	/	-	No growth	
105	*Streptococcus*	*salivarius*	Ad441	Milk	+	No growth	/	-	No growth	/	-	No growth	
106	*Streptococcus*	*bovis*	92L613	cheese	+	No growth	/	-	No growth	/	-	No growth	

Appendix 7 – Extension study (2011): Strains used and stresses applied

No. Spl.	Product	Artificial contaminants					Overall result		
		Strain	Origin	Injury protocol	Injury measurement	Inoculation level	*Listeria* spp other than monocytogenes	*Listeria spp.*	*Listeria monocytogenes*
910	Perforated blue belt swab	*Listeria innocua* Ad663	Dairy environment	TT 56 °C 10min	0.7	14-16-20-18-16(16.6)	+	+	-
912	Perforated blue belt swab	*Listeria seeligeri* BR18	Fish farm environment	TT 56 °C 10min	>2.85	17-11-15-16-18(15.4)	-	-	-
913	Swab - cup	*Listeria ivanovii* Ad616	Dairy environment	TT 56 °C 10min	2.25	15-12-12-16-11(13.2)	-	-	-
914	Swab - ceiling pipe	*Listeria ivanovii* Ad616	Dairy environment	TT 56 °C 10min	2.25	15-12-12-16-11(13.2)	+	+	-
915	Swab - mould	*Listeria innocua* Ad663	Dairy environment	TT 56 °C 10min	0.7	14-16-20-18-16(16.6)	+	+	-
917	Water on floor near washer	*Listeria ivanovii* Ad616	Dairy environment	TT 56 °C 10min	2.25	15-12-12-16-11(13.2)	-	-	-
918	Rocamadour made with raw milk	*Listeria innocua* Ad656	Cheese	TT 56 °C 10min	0.9	9-10-7-4-5(7.0)	-	-	-
919	Tomme made with raw milk	*Listeria innocua* Ad656	Cheese	TT 56 °C 10min	0.9	9-10-7-4-5(7.0)	-	-	-
920	Comté made with raw milk	*Listeria innocua* Ad656	Cheese	TT 56 °C 10min	0.9	9-10-7-4-5(7.0)	-	-	-
961	Fresh pasteurised milk	Cross-contamination with raw milk					+	+	+
962	Fresh pasteurised milk	Cross-contamination with raw milk					+	+	-
963	Fresh pasteurised milk	Cross-contamination with raw milk					+	+	-
1331	Minced charolais steak	*Listeria innocua* Ad671	Smoked lardoons	-20 °C	0.5	5-8-6-6-9(6.8)	+	+	-
1332	Minced steak	*Listeria innocua* Ad671	Smoked lardoons	-20 °C	0.5	5-8-6-6-9(6.8)	+	+	-
1333	Extra soft minced steak	*Listeria innocua* Ad671	Smoked lardoons	-20 °C	0.5	5-8-6-6-9(6.8)	+	+	-
1334	Camembert made with raw milk	*Listeria ivanovii* Ad680	Raw milk	TT 56 °C 5min	0.5	15-16-9-14-11(12.6)	-	-	-
1335	Tomme made with raw milk	*Listeria innocua* 913	Raw milk	-20 °C	1.01	23-24-17-17-20(20.2)	+	+	-
1336	Reblochon made with raw milk	*Listeria innocua* 913	Raw milk	-20 °C	1.01	23-24-17-17-20(20.2)	+	+	-
1337	Selles sur Cher	*Listeria innocua* 913	Raw milk	-20 °C	1.01	23-24-17-17-20(20.2)	+	+	-
1338	Camembert made with raw milk	*Listeria innocua* 913	Raw milk	-20 °C	1.01	23-24-17-17-20(20.2)	+	+	-

No. Spl.	Product	Artificial contaminants					Overall result		
		Strain	Origin	Injury protocol	Injury measurement	Inoculation level	*Listeria* spp other than monocytogenes	*Listeria spp.*	*Listeria monocytogenes*
1339	powdered milk (RAEMA)						-	+	+
1340	powdered milk (RAEMA)						-	-	-
1341	powdered milk (RAEMA)						-	+	+
1342	**Sliced leek**	*Listeria innocua* Ad1176	Spinach	4 °C	0.4	7-14-7-11-10(9.8)	+	+	-
1343	**Grated white cabbage**	*Listeria innocua* Ad1176	Spinach	4 °C	0.4	7-14-7-11-10(9.8)	+	+	-
1344	**Grated carrots**	*Listeria innocua* Ad1176	Spinach	4 °C	0.4	7-14-7-11-10(9.8)	+	+	-
1345	**Pea and carrot mix**	*Listeria innocua* Ad1176	Spinach	-20 °C	0.5	8-8-9-12-10(9.4)	+	+	-
1346	**Vegetable stir-fry**	*Listeria innocua* Ad1176	Spinach	-20 °C	0.5	8-8-9-12-10(9.4)	+	+	-
1347	**Sliced vegetables**	*Listeria seeligeri* Ad1293	Chopped parsley	-20 °C	0.72	5-6-10-9-5(7.0)	+	+	-
1348	**Mixed vegetables**	*Listeria seeligeri* Ad1293	Chopped parsley	-20 °C	0.72	5-6-10-9-5(7.0)	+	+	-
1349	**Smoked salmon off-cuts**	*Listeria innocua* 1	Smoked salmon	10% NaCl	0.46	17-14-13-9-19(14.4)	+	+	-
1350	**Smoked salmon lardoons**	*Listeria seeligeri* BR2	Trout	10% NaCl	0.33	5-7-8-5-5(6)	+	+	-
1351	**Smoked trout**	*Listeria seeligeri* BR2	Trout	10% NaCl	0.33	5-7-8-5-5(6)	+	+	-
1352	**Sliced smoked salmon with 5 berries**	*Listeria innocua* 1	Smoked salmon	10% NaCl	0.46	7-3-3-9-9(6.2)	+	+	-
1353	**Tuna steak**	*Listeria innocua* 1	Smoked salmon	10% NaCl	0.46	7-3-3-9-9(6.2)	+	+	-
1354	**Whiting**	*Listeria innocua* 1	Smoked salmon	10% NaCl	0.46	7-3-3-9-9(6.2)	+	+	-
1576	**Powdered whole milk**	*Listeria ivanovii* Ad680	Raw milk	TT 5 min 50 °C	2.64	7-14-6-4-2(6.6)	+	+	-
1577	**Powdered semi-skim milk**	*Listeria ivanovii* Ad680	Raw milk	TT 5 min 50 °C	2.64	7-14-6-4-2(6.6)	+	+	-
1578	**Powdered skim milk**	*Listeria ivanovii* Ad680	Raw milk	TT 5 min 50 °C	2.64	7-14-6-4-2(6.6)	+	+	-
1579	**Powdered semi-skim milk**	*Listeria innocua* Ad659	Dairy environment	TT 10 min 50 °C	0.48	7-13-12-10-13(11.0)	+	+	-
1580	**Powdered milk**	*Listeria innocua* Ad659	Dairy environment	TT 10 min 50 °C	0.48	7-13-12-10-13(11.0)	+	+	-
1581	**Powdered skim milk**	*Listeria innocua* Ad659	Dairy environment	TT 10 min 50 °C	0.48	7-13-12-10-13(11.0)	+	+	-
1582	**Powdered skim milk**	*Listeria innocua* Ad659	Dairy environment	TT 10 min 50 °C	0.48	7-13-12-10-13(11.0)	+	+	-
1672	**Stainless steel plate rinse water**	*Listeria* welshimeri Ad1270	Poultry environment	TT 8min 50 °C	0.61	10-9-5-11-11(9.2)	+	+	-
1673	**Bleeding table rinse water**	*Listeria* welshimeri Ad1262	Environment	TT 8min 50 °C	0.55	9-13-8-16-10(11.2)	+	+	-

No. Spl.	Product	Artificial contaminants					Overall result		
		Strain	Origin	Injury protocol	Injury measurement	Inoculation level	*Listeria* spp other than monocytogenes	*Listeria spp.*	*Listeria monocytogenes*
1674	**Chicken cooling water**	*Listeria* welshimeri Ad1270	Poultry environment	TT 8min 50 °C	0.61	10-9-5-11-11(9.2)	+	+	+
1675	**Bleeding table wash water**	*Listeria* welshimeri Ad1262	Environment	TT 8min 50 °C	0.55	9-13-8-16-10(11.2)	+	+	-
1676	**Neck cooler water**	*Listeria* welshimeri Ad1270	Poultry environment	TT 8min 50 °C	0.61	10-9-5-11-11(9.2)	+	+	-
1677	**Neck cooler water**	*Listeria* welshimeri Ad1262	Environment	TT 8min 50 °C	0.55	9-13-8-16-10(11.2)	+	+	-
1678	**Cutter rinse water**	*Listeria* welshimeri Ad1270	Poultry environment	TT 8min 50 °C	0.61	10-9-5-11-11(9.2)	+	+	-
1679	**Cutter rinse water**	*Listeria* welshimeri Ad1262	Environment	TT 8min 50 °C	0.55	9-13-8-16-10(11.2)	+	+	-

Appendix 8 – Extension study (2011): Relative accuracy results

H-: colonies without halo H+: colonies with halo ? : questionable colonies Boldface: artificially contaminated samples

MEAT PRODUCTS																								
No. Spl.	**Product**	**ISO 11290-1 method ◆**								**COMPASS® *Listeria* Agar method**												**Half Fraser stored for 72H at 4 °C**		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes	Agreement 24h	Agreemnet 48h	COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
421	Fine ham pieces	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
422	White pudding	-	-	H-	+	L. innocua	+	+	-	H-?	H-?	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
423	Chicken salad sandwich	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
424	Mustard pork	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
427	Spicy chicken wings	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
431	Rabbit terrine	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
432	Breaded ham	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
433	Beef	-	-	-	-	/	-	-	-	H+ 1col	H+ 1col	+	+	+	*L. monocytogenes*	+	+	-	+	PD	PD	-	/	=
434	Coarse chicken meat	H+/H-	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
444	Beef tartar	H-?	-	H-	+	L. welshimeri	+	+	-	H-?	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
494	Pork belly	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
495	Chicken meat	H+	+	H+/H-	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H+	+	=
497	Turkey meat	H+	+	H+	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	L. welshimeri *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
498	Pheasant meat	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. grayi/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
499	Chipolatas with herbs	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
506	Toastie	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
507	Paëlla	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
557	Roast chicken sandwich	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
558	Poultry wing	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
559	Bard	H+/H-	+	H+/H-	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H- (L. welshimeri)	+	=
560	Horse meat	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
562	Chicken cubes	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
563	Gras croûte	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
564	Protein	H+/H-	+	H+/H-	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
571	Turkey nuggets	-	-	H-	+	L. innocua	+	+	-	-	H-?	+	+		L. innocua	-	+	-	-	ND	=	H-(L. innocua)	+	=
577	Chili con carne	H-?	-	-	-	-	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			
579	Ham and cheese slice	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
609	Chicken tabbouleh	-	-	-	-	/	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			
613	Pâté	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
615	VSM	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
620	Thin turkey slices	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
621	Livers	-	-	-	-	/	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			

◆ Test conducted under accreditation

MEAT PRODUCTS																									
No. Spl.	Product	ISO 11290-1 method ◆							COMPASS® *Listeria* Agar method											Agreement 24h	Agreemnet 48h	Half Fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
624	Chicken cubes	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
626	Select chicken meat	H+/H-?	-	H-?	+	*L. monocytogenes*/ L. innocua	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
632	Ham and butter sandwich	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
633	Chicken provençale	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
638	Toastie	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
644	Toastie	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
645	Danish salami	-	-	H-?	-	-	-	-	-	-	-					-	-	-	-	=	=			
648	Ground chicken meat	H+/H-	+	H+/H-	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
650	Smoked sausage	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
656	Beefsteak marinated with shallot	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1043	Lean pork	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	+	=	=	H-	+	=
1044	Andouille	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1046	Lean mutton	H+/H-	+	H-	+	L. ivanovii/ L. innocua	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri/ L. ivanovii	+	+	+	-	=	=	H-	+	=
1050	Lean veal	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1051	Pork throat	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1052	Merguez	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1053	Pork stir-fry	H-	+1col	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1054	Minced veal steak	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1055	Beef tartar	-	-	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1331	**Minced charolais steak**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1332	**Minced steak**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1333	**Extra soft minced steak**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

DAIRY PRODUCTS																									
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method												Agreement 24h	Agreement 48h	Half Fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
500	Breaded goat's cheese	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
573	Goat's cheese slices	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua /*L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
614	Breaded Camembert	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
734	Raw ewe's milk no. 10	H+	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	+	+	=	=	H+	+	=
735	Raw ewe's milk A	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
736	Raw ewe's milk C	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
737	Raw cow's milk T82	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
738	Raw cow's milk T72	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
739	Raw cow's milk T81	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
740	Raw milk cheese	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
741	Brie de Maux made with raw milk	-	1col	-	-	*L. monocytogenes*	+	-	+	H+ 2col	H+ 2col	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	-	/	ND
742	Raw cow's milk cheese no. 8	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
743	Unripened cheese made with raw cow's milk no. 2	H+	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	+	+	=	=	H+	+	=
744	Raw cow's milk cheese no. 8	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	+	+	=	=	H+	+	=
745	Unripened cheese made with raw cow's milk no. 3	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
746	Powdered milk 773479	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
747	Powdered milk 199057	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
748	Powdered milk 913083	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
749	Powdered milk 836752	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
750	Powdered milk 889723	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
836	Raw milk T38/1	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/+H-	H+/+H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/+H-	+	=
837	Raw milk T41/1	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
838	Raw milk T42/2	H+	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
839	Raw milk T35/1	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
840	Raw milk T23/1	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
841	Raw milk 32/1	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
842	Raw milk 34/2	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
843	Raw milk 31/1	H+/H-	+	H+/H-	+	L. innocua /*L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
844	Raw milk 32/2	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
845	Raw milk 33/2	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
858	Raw milk cheese no. 10	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
859	Raw milk cheese no. 6	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
891	Raw milk cheese no. 4	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
892	Tartiflette cheese	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=

◆ Test conducted under accreditation

DAIRY PRODUCTS																										
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method												Agreement 24h	Agreement 48h	Half Fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API											
893	Raw cow's milk cheese no. 9	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
918	**Rocamadour made with raw milk**	H-?	-	H-?	-	-	-	-	-	-	H-	-		-		-	- PPNA	-	-	=	=	H-	-	=
919	**Tomme made with raw milk**	-	-	-	-	/	-	-	-	-	-	-				-	-	-	-	=	=			
920	**Comté made with raw milk**	-	+/-	-	-	-	-	-	-	-	H-?	-		-		-	-	-	-	=	=	-	/	=
961	**Fresh pasteurised milk**	H-?	+	H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
962	**Fresh pasteurised milk**	H-	+	H-	+	L. seeligeri	+	+	-	H-?	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
963	**Fresh pasteurised milk**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1057	Raw cow's milk cheese	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1334	**Camembert made with raw milk**	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1335	**Tomme made with raw milk**	H-	-	H-	+	L. innocua	+	+	-	H-?	H-?	-	/	/	/	- PPND	- PPND	-	-	ND	ND	H-?	-	ND
1336	**Reblochon made with raw milk**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1337	**Selles sur Cher**	1col H-	+1col	H-	+	L. innocua	+	+	-	H-1col	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1338	**Camembert made with raw milk**	-	-	-	-	/	-	-	-	H-1col	H-1col	+	+	+	L. innocua	+	+	+	-	PD	PD	-	/	=
1339	**Powdered milk**	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1340	**Powdered milk**	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1341	**Powdered milk**	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1576	Powdered whole milk	H+	-	H+	-	L. ivanovii	+	+	-	H+	H+	+	+	+	L. ivanovii	+	+	+	-	=	=	H+	+	=
1577	Powdered semi-skim milk	H+	+/-	H+	-	L. ivanovii	+	+	-	H+	H+	+	+	+	L. ivanovii	+	+	+	-	=	=	H+	+	=
1578	Powdered skim milk	H+	-	H+	-	L. ivanovii	+	+	-	H+	H+	+	+	+	L. ivanovii	+	+	+	-	=	=	H+	+	=
1579	Powdered semi-skim milk	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1580	Powdered milk	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1581	Powdered skim milk	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1582	Powdered skim milk	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

SEAFOOD																									
No. Sample	Product	ISO 11290-1 method ◆							COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
428	Alaska pollack	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
430	Smoked salmon and fromage frais sandwich	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
436	Whiting fillet	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
437	Breaded hake	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
438	Smoked salmon	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
440	Trout and vegetable terrine	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
442	Salmon terrine	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
496	Salmon tarama	-	-	-	-	/	-	-	-	H-?	-	-				- PPNA	-	-	-	=	=	-		
504	Shellfish	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
509	Sea trout	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
511	Tilapia fillet	H+	+	H+	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
513	Smoked salmon	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
515	Breaded whiting	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
561	Seafood tabbouleh	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
572	Scallop aumonières	H-?	-	-	-	-	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			
575	Scallop and vegetable baskets	H-	-	H-	+	L. innocua	+	+	-	H-2col	H-2col	+	+	+	L. innocua	+	+	+	-	=	=	H-(L. innocua)	+	=
618	Breaded fish	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H+(*L.mono*)/H-	+	=
619	Hake	-	-	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
623	Breaded hake	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
625	Scallops	H-	-	H-	-	-	-	-	-	-	-					-	-	-	-	=	=			
627	Salmon basket	H+	-	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
628	Salmon tarama	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
629	Breaded hake	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
630	Breaded fish in tomato sauce	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
631	Breaded hake slice	H+/H-	+	H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
634	Shellfish	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
637	Salmon verrine	-	-	H-?	-	-	-	-	-	-	-					-	-	-	-	=	=			
639	Tilapia fillet	H+	+	H+/H-	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
640	Tuna rillettes	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H- (L.innocua)	+	=
641	Breaded hake fingers	H+/H-	+	H+/H-	+	L. innocua /*L. monocytogenes*	+	+	+	H+	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
642	Whiting fillet meunière	-	-	H-?	-	-	-	-	-	-	-					-	-	-	-	=	=			
643	Salmon fillets	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
646	Salmon spread	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
649	Fried hoki	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
655	Grilled hake fillet	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1045	Alaska pollack	H+/H-	+	H+	+	L. innocua /*L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

◆ Test conducted under accreditation

SEAFOOD																									
No. Sample	Product	ISO 11290-1 method ◆							COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
1049	Alaska pollock fingers	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	-	=	=	H-	+	=
1202	Plain fish cakes	H+/H-	+2col	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H-	+	=
1204	Scallop terrine	H+	+2col	H+	-	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1206	Cooked breaded fish	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
1228	Fish/vegetable tartar	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1229	Pithiviers scallops shrimp	H-	+1col	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1230	Tomato and breaded whitefish	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+/H-	H+/H-	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1231	Scallop slice	H+/H-	+	H+/H-	-	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
1349	**Smoked salmon off-cuts**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1350	**Smoked salmon lardoons**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1351	**Smoked trout**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1352	**Sliced smoked salmon with 5 berries**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1353	**Tuna steak**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1354	**Whiting**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

VEGETABLES																									
No. Sample	Product	ISO 11290-1 method ◆							COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
425	Spanish rice	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
426	Cauliflower	H+/H-	+	H+/H-	+	L. innocua /*L. monocytogenes*	+	+	+	H+/H-	H+	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
429	Vegetable stir-fry	-	-	-		/	-	-	-	-	-					-	-	-	-	=	=			
435	Broccoli	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
439	Bowl of blended soup	H+	+	H+	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H-	+	=
441	Spinach with cream	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H+/H-	+	=
443	Frozen soup	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
501	Country stir-fry	H+/H-	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
502	Savoie stir-fry	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
503	Puff pastry	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
505	Oriental tabbouleh	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
508	French fries	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
510	Parsley	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
512	Carrot and turnip purée	H+	-	H+	-	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
514	Sliced courgettes	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
516	Couscous vegetables	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
517	Sliced vegetables	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
556	Quinoa	H-?	-	H-?	-	-	-	-	-	-	-					-	-	-	-	=	=			
565	Coating agent	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
566	Ratatouille	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
567	Sliced courgettes	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
568	Couscous vegetables	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
569	Flat-leaf parsley	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
570	Couscous vegetables	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
574	Broccoli	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
576	Chives	H-?	-	H-	-	-	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			
578	Bean faggots	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+/H- (L.innocua)	+	=
610	Chives	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
611	Frozen soup	-	-	H+	+	*L. monocytogenes*	+	-	+	H+1col	H+1col	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
612	Sliced peppers	-	-	-	-	/	-	-	-	H-?	H-?	-	-			- PPNA	- PPNA	-	-	=	=			
616	Sandwich	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
617	Cooked rice	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
622	Mixed salad	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
635	Puff pastry with butter	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
636	Spinach and goat's cheese basket	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
647	Mushrooms	H-	-	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
651	Frozen mixed vegetables	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

◆ Test conducted under accreditation

VEGETABLES																									
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
652	Avocado pulp	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
653	Sliced vegetables	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
654	Raw potatoes	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1042	Shortcrust pastry roll	1H+	-	H+	-	*L. monocytogenes*	+	-	+	-	H-?1col	-	/	/	/	-	- PPND	-	-	ND	ND	H-?	-	ND
1047	Garlic and fine herb nibbles	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1048	Mushrooms	H-	-	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1056	Breton stir-fry	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1200	Mushrooms	H-	-	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1201	Spinach branch	H+/H-	+	H+/H-	+	L. innocua	+	+	-	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H-	+	=
1203	Peas and lardoons	H+	+	H+	-	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1205	Chopped spinach with cream	-	-	-	-	/	-	-	-	-	H-?	-	/	/	/	-	- PPNA	-	-	=	=	H-?	-	=
1207	Flat-leaf parsley	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1342	**Sliced leek**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1343	**Grated white cabbage**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1344	**Grated carrots**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1345	**Pea and carrot mix**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1346	**Vegetable stir-fry**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1347	**Sliced vegetables**	H-	+	H-	+	L. seeligeri	+	+	-	H-	H-	+	+	+	L. seeligeri	+	+	+	-	=	=	H-	+	=
1348	**Mixed vegetables**	H-	+	H-	+	L. seeligeri	+	+	-	H-	H-	+	+	+	L. seeligeri	+	+	+	-	=	=	H-	+	=

ENVIRONMENTAL SAMPLES																										
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method												Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API											
727	Neck cooling water (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
728	Chicken B cooling water	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
729	Chicken cooling water	H+/H-	+	H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H-	H+ 1col/H-	+	+	+	L. innocua / *L. monocytogenes*	+	+	+	+	=	=	H+ 1col/H-	+	=
730	VSM mixer wash water	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
731	I1 shrimp defrosting water	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
732	I2 shrimp rinse water	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
733	Shrimp brine I3	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
846	Block top dust swab (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
847	Co-product belt wipe (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
848	Co-product balance wipe (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
849	Wipe for residual water near co-product balance (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
850	Wipe for floor near sliding door between filleting and co-product (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
851	Wipe for grey washroom tank (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
852	Wipes for shida elevator surface (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
853	Wipes for Neautec elevator surface (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
854	Wipes for shida belt surface (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
855	Wipes for transversal belt surface (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
856	Wipe for ceiling above Neautec environment (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
857	Wipe for S750 refrigeration unit environment (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
900	Water after peeling machine (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
901	Residual water before injection station below trimming belt no. 10 (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
902	Residual water below boning machine no. 11 (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			

◆ Test conducted under accreditation

ENVIRONMENTAL SAMPLES																										
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	COMPASS *Listeria* Agar	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes				COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API										
903	Water below trimming waste removal belt no. 12 (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
904	Swab - floor of salting station no. 7 (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
905	Swab for dust under salting maturation block no. 8 (salmon)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
906	Swab - receiver tower (shrimp)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
907	Swab - top of peeling machine outfeed belt	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
908	Swab - fish guide on belt before peeling machine	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
909	Swab - top of trimming belt	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
910	**Perforated blue belt swab**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
911	Swab - top of fish washing belt	H-	-	H-	-	L. innocua	+	+	-	-	H-	+	+	+	L. innocua	-	+	+	-	ND	=	H-	+	=
912	**Perforated blue belt swab**	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
913	**Swab - cup**	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
914	**Swab - ceiling pipe**	H+	+	H+	+	L. ivanovii	+	+	+	H+	H+	+	+	+	L. ivanovii	+	+	+	-	=	=	H+2col	+	=
915	**Swab - mould**	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
916	Water from pipe below fish washing station	H-	+/-	H-	+	L. innocua	+	+	-	H-?	H-	+	+	+	L. seeligeri/ L. innocua	+	+	+	-	=	=	H-	+	=
917	**Water on floor near washer**	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
965	Swab - bleeding table	H-	+	H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
966	Chute swab	H-	+	H-	+	L. innocua	+	+	-	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
967	Swab - marking guide	H-	+	H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
1232	Swab - floor 1 (poultry)	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1233	Swab - trolley (poultry)	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1234	Swab - trolley (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1235	Swab - elevator belt (poultry)	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1236	Swab - loader housings (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1237	Swab - floor 2 (poultry)	H+	+	H+	+	*L. monocytogenes*	+	-	+	H+	H+	+	+	+	*L. monocytogenes*	+	+	-	+	=	=	H+	+	=
1238	Swab - Meyn belt L1 (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1239	Swab - freezing infeed belt L1 (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1240	Swab - outfeed belt L1 (poultry)	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=

◆ Test conducted under accreditation

ENVIRONMENTAL SAMPLES																								
No. Sample	Product	ISO 11290-1 method ◆								COMPASS® *Listeria* Agar method											Agreement 24h	Agreement 48h	Half fraser stored for 72H at 4 °C		
		Fraser 1/2		Fraser 1		Confirm	*Listeria* spp.	*Listeria* spp. other than monocytogenes	*Listeria monocytogenes*	Compass-Incubation 24h	Compass-Incubation 48h	Confirmations				*Listeria* spp. (24h)	*Listeria* spp. (48h)	*Listeria* spp. other than monocytogenes	*Listeria* monocytogenes			COMPASS *Listeria* Agar	Palcam	Agreement
		OAA	Palcam	OAA	Palcam							Palcam	Gram	Catalase	*Listeria* API									
1241	Swab - sole bath (poultry)	-	-	-	-	/	-	-	-	-	-					-	-	-	-	=	=			
1670	Cooling water	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H+(*L.mono*)/H-	+	=
1671	Cooling water	H-	+	H-	+	L. innocua	+	+	-	H-	H-	+	+	+	L. innocua	+	+	+	-	=	=	H-	+	=
1672	**Stainless steel plate rinse water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1673	**Bleeding table rinse water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1674	**Chicken cooling water**	H+	+	H+/H-	+	L. welshimeri/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. welshimeri/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=
1675	**Bleeding table wash water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1676	**Neck cooler water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1677	**Neck cooler water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1678	**Cutter rinse water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1679	**Cutter rinse water**	H-	+	H-	+	L. welshimeri	+	+	-	H-	H-	+	+	+	L. welshimeri	+	+	+	-	=	=	H-	+	=
1680	Swab - legging	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	-	=	=	H+/H-	+	=
1681	Swab - check bar	H+/H-	+	H+/H-	+	L. innocua/ *L. monocytogenes*	+	+	+	H+/H-	H+/H-	+	+	+	L. innocua/ *L. monocytogenes*	+	+	+	+	=	=	H+/H-	+	=

◆ Test conducted under accreditation

Appendix 9 - Extension study (2011): Raw inclusivity and exclusivity results

POSITIVE STRAINS (*Listeria monocytogenes*)										
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
1.	*Listeria*	*monocytogenes*	153	Munster	blue	2	+	blue	3	+
2.	*Listeria*	*monocytogenes*	909	milk	blue	2	+	blue	3	+
3.	*Listeria*	*monocytogenes*	910	milk	blue	2	+	blue	3	+
4.	*Listeria*	*monocytogenes*	917	milk	blue	2	+	blue	3	+
5.	*Listeria*	*monocytogenes*	18023	milk	blue	2	+	blue	3	+
6.	*Listeria*	*monocytogenes*	18024	milk	blue	2	+	blue	3	+
7.	*Listeria*	*monocytogenes*	1011/1410	frozen broccoli	blue	2	+	blue	3	+
8.	*Listeria*	*monocytogenes*	1016/1413	frozen broccoli	blue	2	+	blue	3	+
9.	*Listeria*	*monocytogenes*	17501	milk	blue	2	+	blue	3	+
10.	*Listeria*	*monocytogenes*	1972/2399	mushroom pie	blue	2	+	blue	3	+
11.	*Listeria*	*monocytogenes*	1973/2400	quiche Lorraine	blue	2	+	blue	3	+
12.	*Listeria*	*monocytogenes*	2407/3139	tripe in tomato sauce	blue	2	+	blue	3	+
13.	*Listeria*	*monocytogenes*	2760/3145	breast trimmings	blue	2	+	blue	3	+
14.	*Listeria*	*monocytogenes*	32.183	toastie	blue	2	+	blue	3	+
15.	*Listeria*	*monocytogenes*	38/181	Toulouse sausages	blue	2	+	blue	3	+
16.	*Listeria*	*monocytogenes*	5721/6179	smoked lardoons	blue	2	+	blue	3	+
17.	*Listeria*	*monocytogenes*	6072	smoked salmon	blue micro-colonies	<0.5	+	blue	3	+
18.	*Listeria*	*monocytogenes*	7111/7516	rillettes	blue	2	+	blue	3	+
19.	*Listeria*	*monocytogenes*	850/109	Nordic dish	blue	2	+	blue	3	+
20.	*Listeria*	*monocytogenes*	86/690	food	blue	2	+	blue	3	+
21.	*Listeria*	*monocytogenes*	87/6172	food	blue	2	+	blue	3	+
22.	*Listeria*	*monocytogenes*	877/113	glazing tunnel belt swab	blue	2	+	blue	3	+
23.	*Listeria*	*monocytogenes*	88/7137	food	blue	2	+	blue	3	+
24.	*Listeria*	*monocytogenes*	913/1,048	black pudding	blue	2	+	blue	3	+

No.	POSITIVE STRAINS (*Listeria monocytogenes*)									
	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
25.	*Listeria*	*monocytogenes*	A00C014	Chipolatas	blue	2	+	blue	3	+
26.	*Listeria*	*monocytogenes*	A00C015	Chipolatas	blue	2	+	blue	3	+
27.	*Listeria*	*monocytogenes*	A00C022	merguez	blue	2	+	blue	3	+
28.	*Listeria*	*monocytogenes*	A00C024	chipolatas with herbs	blue	2	+	blue	3	+
29.	*Listeria*	*monocytogenes*	A00C036	guinea fowl	blue	2	+	blue	3	+
30.	*Listeria*	*monocytogenes*	A00C039	Savoie diots	blue	2	+	blue	3	+
31.	*Listeria*	*monocytogenes*	A00C040	muzzle	blue	2	+	blue	3	+
32.	*Listeria*	*monocytogenes*	A00C041	sausage meat	blue	2	+	blue	3	+
33.	*Listeria*	*monocytogenes*	A00C042	Toulouse sausages	blue	2	+	blue	3	+
34.	*Listeria*	*monocytogenes*	A00C043	smoked bacon	blue	2	+	blue	3	+
35.	*Listeria*	*monocytogenes*	A00C044	Muscovy duckling	blue	2	+	blue	3	+
36.	*Listeria*	*monocytogenes*	A00C052	turkey osso bucco	blue	2	+	blue	3	+
37.	*Listeria*	*monocytogenes*	A00C053	gizzards	blue	2	+	blue	3	+
38.	*Listeria*	*monocytogenes*	A00C054	beef heart	blue	2	+	blue	3	+
39.	*Listeria*	*monocytogenes*	A00C055	Toulouse sausages	blue	2	+	blue	3	+
40.	*Listeria*	*monocytogenes*	A00E008	reconstitution belt	blue	2	+	blue	3	+
41.	*Listeria*	*monocytogenes*	A00E033	slicer	blue	2	+	blue	3	+
42.	*Listeria*	*monocytogenes*	A00E049	filleter belt support	blue	2	+	blue	3	+
43.	*Listeria*	*monocytogenes*	A00E082	smoked salmon environment	blue	2	+	blue	3	+
44.	*Listeria*	*monocytogenes*	A00L097	milk	blue	2	+	blue	3	+
45.	*Listeria*	*monocytogenes*	A00L101	milk	blue	2	+	blue	3	+
46.	*Listeria*	*monocytogenes*	A00L107	milk	blue	2	+	blue	3	+
47.	*Listeria*	*monocytogenes*	A00M009	smoked salmon	blue	2	+	blue	3	+
48.	*Listeria*	*monocytogenes*	A00M019	smoked salmon	blue	2	+	blue	3	+
49.	*Listeria*	*monocytogenes*	A00M020	smoked salmon	blue	2	+	blue	3	+
50.	*Listeria*	*monocytogenes*	A00M021	smoked salmon	blue	2	+	blue	3	+

No.	POSITIVE STRAINS (*Listeria monocytogenes*)									
	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
51.	*Listeria*	*monocytogenes*	A00M023	smoked salmon	blue	2	+	blue	3	+
52.	*Listeria*	*monocytogenes*	A00M029	norv SF raw mat.	blue	2	+	blue	3	+
53.	*Listeria*	*monocytogenes*	A00M030	smoked salmon raw material	blue	2	+	blue	3	+
54.	*Listeria*	*monocytogenes*	A00M032	Norwegian salmon	blue	2	+	blue	3	+
55.	*Listeria*	*monocytogenes*	A00M045	smoked salmon	blue	2	+	blue	3	+
56.	*Listeria*	*monocytogenes*	A00M050	swordfish raw mat.	blue	2	+	blue	3	+
57.	*Listeria*	*monocytogenes*	A00M051	norv SF raw mat.	blue	2	+	blue	3	+
58.	*Listeria*	*monocytogenes*	A00M080	salmon raw material	blue	2	+	blue	3	+
59.	*Listeria*	*monocytogenes*	A00M081	smoked salmon	blue	2	+	blue	3	+
60.	*Listeria*	*monocytogenes*	A00M088	smoked Irish salmon	blue	2	+	blue	3	+
61.	*Listeria*	*monocytogenes*	A00M089	smoked Norwegian salmon	blue	2	+	blue	3	+
62.	*Listeria*	*monocytogenes*	A00M096	smoked Scottish salmon	blue	2	+	blue	3	+
63.	*Listeria*	*monocytogenes*	A00M111	smoked Scottish salmon	blue	2	+	blue	3	+
64.	*Listeria*	*monocytogenes*	A00M112	smoked Norwegian salmon	blue	2	+	blue	3	+
65.	*Listeria*	*monocytogenes*	A00M113	smoked Irish salmon	blue	2	+	blue	3	+
66.	*Listeria*	*monocytogenes*	A00M123	smoked salmon	blue	2	+	blue	3	+
67.	*Listeria*	*monocytogenes*	Ad148	seafood	blue	2	+	blue	3	+
68.	*Listeria*	*monocytogenes*	Ad235	poultry	blue	2	+	blue	3	+
69.	*Listeria*	*monocytogenes*	Ad252	dairy product	blue	2	+	blue	3	+
70.	*Listeria*	*monocytogenes*	Ad253	cooked pressed cheese	blue	2	+	blue	3	+
71.	*Listeria*	*monocytogenes*	Ad255	dairy product	blue	2	+	blue	3	+
72.	*Listeria*	*monocytogenes*	Ad258	dairy product	blue	2	+	blue	3	+
73.	*Listeria*	*monocytogenes*	Ad260	pressed cheese	blue	2	+	blue	3	+
74.	*Listeria*	*monocytogenes*	Ad262	dairy product	blue	2	+	blue	3	+
75.	*Listeria*	*monocytogenes*	Ad265	tongue	blue	2	+	blue	3	+
76.	*Listeria*	*monocytogenes*	Ad266	chicken	blue	2	+	blue	3	+

POSITIVE STRAINS (*Listeria monocytogenes*)										
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
77.	*Listeria*	*monocytogenes*	Ad267	dried sausage	blue	2	+	blue	3	+
78.	*Listeria*	*monocytogenes*	Ad268	Vendée ham	blue	2	+	blue	3	+
79.	*Listeria*	*monocytogenes*	Ad270	Lyon rosette	blue	2	+	blue	3	+
80.	*Listeria*	*monocytogenes*	Ad271	bacon fillet	blue	2	+	blue	3	+
81.	*Listeria*	*monocytogenes*	Ad272	dried Auvergne sausage	blue	2	+	blue	3	+
82.	*Listeria*	*monocytogenes*	Ad273	dried Savoie ham	blue	2	+	blue	3	+
83.	*Listeria*	*monocytogenes*	Ad274	Asian assortment	blue	2	+	blue	3	+
84.	*Listeria*	*monocytogenes*	Ad275	Lyon pistachio saveloy	blue	2	+	blue	3	+
85.	*Listeria*	*monocytogenes*	Ad276	Strasbourg sausage	blue	2	+	blue	3	+
86.	*Listeria*	*monocytogenes*	Ad277	mild chorizo	blue	2	+	blue	3	+
87.	*Listeria*	*monocytogenes*	Ad278	smoked belly	blue	2	+	blue	3	+
88.	*Listeria*	*monocytogenes*	Ad279	cooked Parisian stir-fry	blue	2	+	blue	3	+
89.	*Listeria*	*monocytogenes*	Ad280	Plain lardoons	blue	2	+	blue	3	+
90.	*Listeria*	*monocytogenes*	Ad281	raviolines with Roquefort	blue	2	+	blue	3	+
91.	*Listeria*	*monocytogenes*	Ad285	green peppers	blue	2	+	blue	3	+
92.	*Listeria*	*monocytogenes*	Ad291	smoked lardoons	blue	2	+	blue	3	+
93.	*Listeria*	*monocytogenes*	Ad292	knacky	blue	2	+	blue	3	+
94.	*Listeria*	*monocytogenes*	Ad293	sliced coppa	blue	2	+	blue	3	+
95.	*Listeria*	*monocytogenes*	Ad294	clinical	blue	2	+	blue	3	+
96.	*Listeria*	*monocytogenes*	Ad295	clinical	blue	2	+	blue	3	+
97.	*Listeria*	*monocytogenes*	Ad299	cockles	blue	2	+	blue	3	+
98.	*Listeria*	*monocytogenes*	Ad470	cheese	blue	2	+	blue	3	+
99.	*Listeria*	*monocytogenes*	Ad474	smoked salmon	blue	2	+	blue	3	+
100.	*Listeria*	*monocytogenes*	Ad494	piémontaise	blue	2	+	blue	3	+
101.	*Listeria*	*monocytogenes*	Ad523	raclette cheese	blue	2	+	blue	3	+
102.	*Listeria*	*monocytogenes*	Ad532	fruit	blue	2	+	blue	3	+

POSITIVE STRAINS (*Listeria monocytogenes*)										
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
103.	*Listeria*	*monocytogenes*	Ad534	fruit	blue	2	+	blue	3	+
104.	*Listeria*	*monocytogenes*	Ad543	sliced pepper	blue	2	+	blue	3	+
105.	*Listeria*	*monocytogenes*	Ad544	pre-fried onion	blue	2	+	blue	3	+
106.	*Listeria*	*monocytogenes*	Ad545	cabbage and carrot salad	blue	2	+	blue	3	+
107.	*Listeria*	*monocytogenes*	Ad546	buckwheat flour	blue	2	+	blue	3	+
108.	*Listeria*	*monocytogenes*	Ad548	boning room	blue	2	+	blue	3	+
109.	*Listeria*	*monocytogenes*	Ad549	fish cuts workshop	blue	2	+	blue	3	+
110.	*Listeria*	*monocytogenes*	Ad550	outdoor drain	blue	2	+	blue	3	+
111.	*Listeria*	*monocytogenes*	Ad551	sole bath	blue	2	+	blue	3	+
112.	*Listeria*	*monocytogenes*	Ad610	milk	blue	2	+	blue	3	+
113.	*Listeria*	*monocytogenes*	Ad611	milk	blue	2	+	blue	3	+
114.	*Listeria*	*monocytogenes*	Ad612	Livarot	blue	2	+	blue	3	+
115.	*Listeria*	*monocytogenes*	Ad613	Munster	blue	2	+	blue	3	+
116.	*Listeria*	*monocytogenes*	Ad614	dairy environment	blue	2	+	blue	3	+
117.	*Listeria*	*monocytogenes*	Ad615	dairy environment	blue	2	+	blue	3	+
118.	*Listeria*	*monocytogenes*	Ad617	dairy environment	blue	2	+	blue	3	+
119.	*Listeria*	*monocytogenes*	Ad618	Munster	blue	2	+	blue	3	+
120.	*Listeria*	*monocytogenes*	Ad619	cheese	blue	2	+	blue	3	+
121.	*Listeria*	*monocytogenes*	Ad620	dairy environment	blue	2	+	blue	3	+
122.	*Listeria*	*monocytogenes*	Ad621	dairy environment (floor)	blue	2	+	blue	3	+
123.	*Listeria*	*monocytogenes*	Ad622	cheese	blue	2	+	blue	3	+
124.	*Listeria*	*monocytogenes*	Ad623	breadcrumbs (dairy)	blue	2	+	blue	3	+
125.	*Listeria*	*monocytogenes*	Ad624	dairy environment	blue	2	+	blue	3	+
126.	*Listeria*	*monocytogenes*	Ad625	dairy environment	blue	2	+	blue	3	+
127.	*Listeria*	*monocytogenes*	Ad626	Gorgonzola	blue	2	+	blue	3	+
128.	*Listeria*	*monocytogenes*	Ad627	dairy product packaging	blue	2	+	blue	3	+

POSITIVE STRAINS (*Listeria monocytogenes*)										
No.	Genus	Species	Reference	Origin	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
					Colony colour	Size	Opaque halo	Colony colour	Size	Opaque halo
129.	*Listeria*	*monocytogenes*	Ad628	dairy product packaging	blue	2	+	blue	3	+
130.	*Listeria*	*monocytogenes*	Ad629	Cantal	blue	2	+	blue	3	+
131.	*Listeria*	*monocytogenes*	Ad630	Cantal	blue	2	+	blue	3	+
132.	*Listeria*	*monocytogenes*	Ad631	dairy environment	blue	2	+	blue	3	+
133.	*Listeria*	*monocytogenes*	Ad632	milk	blue	2	+	blue	3	+
134.	*Listeria*	*monocytogenes*	Ad633	dairy environment	blue	2	+	blue	3	+
135.	*Listeria*	*monocytogenes*	Ad634	dairy environment (floor)	blue	2	+	blue	3	+
136.	*Listeria*	*monocytogenes*	ADQP105	smoked salmon	blue	2	+	blue	3	+
137.	*Listeria*	*monocytogenes*	AER100	chicken	blue	2	+	blue	3	+
138.	*Listeria*	*monocytogenes*	AER101	milk	blue	2	+	blue	3	+
139.	*Listeria*	*monocytogenes*	AER102	brine	blue	2	+	blue	3	+
140.	*Listeria*	*monocytogenes*	AER103	poultry	blue	2	+	blue	3	+
141.	*Listeria*	*monocytogenes*	BR32	trout	blue	2	+	blue	3	+
142.	*Listeria*	*monocytogenes*	CL3:29	meat product environment	blue	2	+	blue	3	+
143.	*Listeria*	*monocytogenes*	LMH180	freshness salad	blue	2	+	blue	3	+
144.	*Listeria*	*monocytogenes*	V2/124	pork	blue	2	+	blue	3	+
145.	*Listeria*	*monocytogenes*	V5/126	beef	blue	2	+	blue	3	+
146.	*Listeria*	*monocytogenes*	V8/127	beef	blue	2	+	blue	3	+
147.	*Listeria*	*monocytogenes*	Ad 664	Unripened cheese made with raw milk	blue	2	+	blue	3	+
148.	*Listeria*	*monocytogenes*	Ad 665	Raw milk	blue	2	+	blue	3	+
149.	*Listeria*	*monocytogenes*	Ad 666	Cockerel	blue	2	+	blue	3	+
150.	*Listeria*	*monocytogenes*	Ad 667	Chicken thigh	blue	2	+	blue	3	+
151.	*Listeria*	*monocytogenes*	Ad 668	Chicken wing	blue	2	+	blue	3	+
152.	*Listeria*	*monocytogenes*	Ad 669	rillettes	blue	2	+	blue	3	+
153.	*Listeria*	*monocytogenes*	Ad 670	Smoked salmon	blue	2	+	blue	3	+

No.	POSITIVE STRAINS (*Listeria* other than *Listeria monocytogenes*)											
	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	
1	*Listeria*	*innocua*	1	smoked salmon off-cuts	+	Blue	2	-	Blue	2	-	
2	*Listeria*	*innocua*	T727	meat product	+	Blue	2	-	Blue	2	-	
3	*Listeria*	*innocua*	NCTC10528		+	Blue	2	-	Blue	2	-	
4	*Listeria*	*innocua*	T654	cheese	+	Blue	0.5-1	-	Blue	1-2	-	
5	*Listeria*	*innocua*	ATCC33090	cow brain	+	Blue	2	-	Blue	2	-	
6	*Listeria*	*innocua*	CIP8012		+	Blue	2	-	Blue	2	-	
7	*Listeria*	*innocua*	17765	breaded pork belly	+	Blue	2	-	Blue	2	-	
8	*Listeria*	*innocua*	16969	milk	+	Blue	2	-	Blue	2	-	
9	*Listeria*	*innocua*	18313	milk	+	Blue	2	-	Blue	2	-	
10	*Listeria*	*innocua*	Ad 658	Gorgonzola	+	Blue	2	-	Blue	2	-	
11	*Listeria*	*innocua*	Cheese carrier	carrier	+	Blue	2	-	Blue	2	-	
12	*Listeria*	*innocua*	902	dairy product	+	Blue	2	-	Blue	2	-	
13	*Listeria*	*innocua*	DSM20649		+	Blue	2	-	Blue	2	-	
14	*Listeria*	*innocua*	Ad663	ripening cellars	+	Blue	2	-	Blue	2	-	
15	*Listeria*	*innocua*	Ad660	breadcrumbs	+	Blue	2	-	Blue	2	-	
16	*Listeria*	*innocua*	Ad657	Cantal	+	Blue	2	-	Blue	2	-	
17	*Listeria*	*innocua*	As661	Pont L'Evêque	+	Blue	2	-	Blue	2	-	
18	*Listeria*	*innocua*	Ad656	soft cheese	+	Blue	2	-	Blue	2	-	
19	*Listeria*	*innocua*	Ad655	brine	+	Blue	2	-	Blue	2	-	
20	*Listeria*	*innocua*	Ad653	environment	+	Blue	2	-	Blue	2	-	
21	*Listeria*	*innocua*	Ad654	dairy product	+	Blue	2	-	Blue	2	-	
22	*Listeria*	*innocua*	Ad671	smoked lardoons	+	blue	2	-	Blue	2	-	
23	*Listeria*	*ivanovii londoniensis*	CIP103466		+	Blue	0.5-1	+	Blue	1-2	+	
24	*Listeria*	*ivanovii*	CIP7842T		+	Blue	0.5-1	+	Blue	1-2	+	
25	*Listeria*	*ivanovii*	CIP103212		+	Blue	0.5-1	+	Blue	1-2	+	
26	*Listeria*	*ivanovii*	CIP103505	trout	+	Blue	0.5-1	+	Blue	1-2	+	

No.	POSITIVE STRAINS (*Listeria* other than *Listeria monocytogenes*)											
	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H			
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo	
27	*Listeria*	*ivanovii*	BR11	fish farm environment, bird net	+	Blue	0.5-1	+	Blue	1-2	+	
28	*Listeria*	*ivanovii*	BR15	fish farm environment, pond wall	+	Blue	0.5-1	+	Blue	1-2	+	
29	*Listeria*	*ivanovii*	Ad466	veal kidneys	+	Blue	0.5-1	+	Blue	1-2	+	
30	*Listeria*	*ivanovii*	Ad662	packaging	+	Blue	1-2	-	Blue	1-2	-	
31	*Listeria*	*ivanovii*	Ad648 (AERIAL 28)	Collection	+	Blue	1	+	Blue	1-2	+	
32	*Listeria*	*ivanovii*	L2-2	Poultry	+	Blue	1-2	+	Blue	1-2	+	
33	*Listeria*	*ivanovii*	L2-9	Ewe's milk	+	Blue	1-2	+	Blue	1-2	+	
34	*Listeria*	*ivanovii*	L2-11	Raw milk cheese	+	Blue	1-2	+	Blue	1-2	+	
35	*Listeria*	*ivanovii*	L2-12	Powdered milk	+	Blue	1-2	+	Blue	1-2	+	
36	*Listeria*	*ivanovii*	L41	Raw milk	+	Blue	1-2	+	Blue	1-2	+	
37	*Listeria*	*ivanovii*	Ad616	dairy environment (floor)	+	blue	1-2	+ weak	Blue	1-2	+	
38	*Listeria*	*seeligeri*	CIP100100		+	Blue	µcolonies	-	Blue	0.1-1	-	
39	*Listeria*	*seeligeri*	CNR936133		+	Blue	0.1-0.5	-	Blue	0.5-1	-	
40	*Listeria*	*seeligeri*	BR1	trout	+	Blue	0.1-0.5	-	Blue	0.5-1	-	
41	*Listeria*	*seeligeri*	BR4	fish	+	Blue	0.1-0.5	-	Blue	0.5-1	-	
42	*Listeria*	*seeligeri*	BR18	fish farm environment, pond wall	+	Blue	0.1-0.5	-	Blue	0.5-1	-	
43	*Listeria*	*seeligeri*	Ad652	foot bath	+	Blue	µcolonies	-	Blue	0.5-1	-	
44	*Listeria*	*seeligeri*	Ad649 (AERIAL 26)	Cheese	+	Blue	µcolonies	-	Blue	0.5-2	-	
45	*Listeria*	*seeligeri*	Ad651 (AERIAL 46)	Environment	+	Blue	µcolonies	-	Blue	1-2	+ slight	
46	*Listeria*	*seeligeri*	Ad674	Munster	+	Blue	µcolonies	-	Blue	1-2	-	
47	*Listeria*	*welshimeri*	CIP10413		+	Blue	2	-	Blue	2	-	
48	*Listeria*	*welshimeri*	CIP8149		+	Blue	0.1-0.5	-	Blue	0.1-1	-	
49	*Listeria*	*welshimeri*	Ad650 (AERIAL 45)	Poultry	+	Blue	0.5	-	Blue	1-2	-	
50	*Listeria*	*welshimeri*	191424	poultry	+	blue	2	-	Blue	1-2	-	
51	*Listeria*	*grayi*	ATCC19120		+	Pale blue	0.5-1	-	Blue	3	-	

POSITIVE STRAINS (*Listeria* other than *Listeria monocytogenes*)											
						COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
No.	Genus	Species	Reference	Origin	TSYEA	Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo
52	*Listeria*	*grayi*	CIP76124		+	Pale blue	0.5-1	-	Blue	3	-

NEGATIVE STRAINS											
						COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
No.	Genus	Species	Reference	Origin	TSYEA	Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo
1	*Bacillus*	*cereus*	1	liquid egg portion	+	No growth	/	-	No growth	/	+
2	*Bacillus*	*cereus*	8	pasta Spanish style	+	No growth	/	-	No growth	/	/
3	*Bacillus*	*cereus*	11	rice-purée side dish	+	No growth	/	-	No growth	/	+ at inoculation rate
4	*Bacillus*	*cereus*	14.2	île flottante	+	No growth	/	-	No growth	/	/
5	*Bacillus*	*cereus*	16	seafood spaghetti	+	No growth	/	+	No growth	/	+
6	*Bacillus*	*cereus*	17	rice pudding	+	No growth	/	+	No growth	/	+
7	*Bacillus*	*cereus*	20	chicken-carrot sauce	+	No growth	/	+	No growth	/	+ at inoculation rate
8	*Bacillus*	*cereus*	21	curried rice	+	No growth	/	-	No growth	/	+ at inoculation rate
9	*Bacillus*	*cereus*	22	wheat flour	+	White spread out, blue centre	>2	+	White spread out, blue centre	>2	+
10	*Bacillus*	*cereus*	26	raw cow's milk	+	No growth	/	+	No growth	/	+
11	*Bacillus*	*cereus*	30	peeled raw shrimp ionised at 3 kGy	+	No growth	/	+ at inoculation point	No growth	/	+ at inoculation rate
12	*Bacillus*	*cereus*	31	powdered butter	+	No growth	/	+	No growth	/	+
13	*Bacillus*	*cereus*	Ad420	caseinate powder	+	White spread out, blue centre	>2	+	White spread out, blue centre	>2	+
14	*Bacillus*	*cereus*	Ad465	salmon terrine	+	No growth	/	-	No growth	/	-
15	*Bacillus*	*cereus*	Ad483	Punch	+	No growth	/	+	No growth	/	+
16	*Bacillus*	*cereus*	Ad495	rice flour	+	white spread out, green centre	>2	+	White spread out, green centre	>2	+

NEGATIVE STRAINS											
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo
17	*Bacillus*	*cereus*	INRA104	refrigerated purée	+	No growth	/	-	No growth	/	-
18	*Bacillus*	*cereus*	Ad608	baguette dough	+	white spread out, blue-turquoise centre	>2	+	White spread out, turquoise blue centre	>2	+
19	*Bacillus*	*cereus*	54	dairy product	+	No growth	/	-	A few white spread out colonies	>2	-
20	*Bacillus*	*cereus*	Ad607	environment	+	Turquoise spread out	>2	+	Turquoise spread out	>2	+
21	*Bacillus*	*cereus*	Ad609	swab - drain, dairy product workshop	+	White, green centre	>2	-	White, green centre	>2	-
22	*Bacillus*	*weihenstephanensis*	N12	egg product	+	No growth	/	-	No growth	/	-
23	*Bacillus*	*weihenstephanensis*	INRA87	refrigerated purée	+	No growth	/	-	No growth	/	-
24	*Bacillus*	*weihenstephanensis*	INRA140	ready-cooked dish	+	No growth	/	-	No growth	/	-
25	*Bacillus*	*weihenstephanensis*	INRA171	pasteurised vegetable	+	No growth	/	-	No growth	/	-
26	*Bacillus*	*weihenstephanensis*	A1	egg product	+	No growth	/	-	No growth	/	+ at inoculation rate
27	*Bacillus*	*weihenstephanensis*	SDA NFFE640	dairy product	+	No growth	/	-	No growth	/	+ at inoculation rate
28	*Bacillus*	*thuringiensis*	IEBC T31	vegetables	+	No growth	/	-	No growth	/	-
29	*Bacillus*	*licheniformis*	7600	dairy product	+	White spread out	>2	-	White spread out	>2	-
30	*Bacillus*	*licheniformis*	LMSA 049	egg product	+	white spread out, green centre	>2	-	White spread out, green centre	>2	-
31	*Bacillus*	*pumilus*	7572	dairy product	+	White	01-0.5	-	Blue spread out, runny	1-2	-
32	*Bacillus*	*pumilus*	INRA 260	quiche	+	Pale green	1-2	-	White spread out, blue centre	>2	-
33	*Bacillus*	*circulans*	B8	dairy product	+	Turquoise	1	-	Blue	1-2	Opaque clarifying
34	*Bacillus*	*coagulans*	7179	dairy product	+	No growth	/	-	No growth	/	-
35	*Bacillus*	*sphaericus*	/	dairy product	+	White	1	-	Brown spread out	>2	-
36	*Bacillus*	*subtilis*	7750	dairy product	+	No growth	/	-	No growth	/	-

NEGATIVE STRAINS											
No.	Genus	Species	Reference	Origin	TSYEA	COMPASS® *Listeria* Agar 24H			COMPASS® *Listeria* Agar 48H		
						Colour of the colony	Size	Opaque halo	Colour of the colony	Size	Opaque halo
37	*Bacillus*	*subtilis*	LMSA 092	egg product	+	No growth	/	-	No growth	/	-
38	*Bacillus*	*mycoides*	NFSO60	milk	+	No growth	/	-	No growth	/	-
39	*Bacillus*	*pseudomycoides*	W38	vegetables	+	No growth	/	-	No growth	/	-
40	*Enterococcus*	*durans*	Ad 149	cooked ham	+	No growth	/	-	No growth	/	-
41	*Enterococcus*	*durans*	Ad181	pasteurised liquid egg portion	+	No growth	/	-	No growth	/	-
42	*Enterococcus*	*faecalis*	89L326	Vacherin	+	No growth	/	-	No growth	/	-
43	*Enterococcus*	*faecalis*	89L333	Appenzel	+	No growth	/	-	No growth	/	-
44	*Enterococcus*	*faecalis*	F4	Cheese	+	No growth	/	-	No growth	/	-
45	*Enterococcus*	*faecalis*	25	chicken thigh	+	No growth	/	-	No growth	/	-
46	*Enterococcus*	*faecalis*	Ad289	ready-cooked dish	+	No growth	/	-	Turquoise	Trace	-
47	*Enterococcus*	*faecium*	Ad180	pasteurised liquid egg portion	+	Green	µcolonies	-	Pale turquoise	<1	-
48	*Enterococcus*	*faecium*	CNRZ1391	cheese	+	No growth	/	-	Turquoise	Trace	-
49	*Enterococcus*	*hirae*	CNRZ1380	cheese	+	Green	µcolonies	-	Pale turquoise	<1	-
50	*Enterococcus*	*avium*	Ad183	raw liquid egg portion	+	No growth	/	-	No growth	/	-
51	*Lactococcus*	*lactis cremoris*	91G030	gros lait	+	No growth	/	-	No growth	/	-
52	*Lactococcus*	*lactis*	89L335	Reblochon	+	No growth	/	-	No growth	/	-
53	*Streptococcus*	*salivarius*	Ad441	Milk	+	No growth	/	-	No growth	/	-
54	*Streptococcus*	*bovis*	92L613	cheese	+	No growth	/	-	No growth	/	-

Appendix 10 - Extension study (2013): Raw inclusivity and exclusivity results

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
1	*Listeria*	*monocytogenes*	153	Munster	VI b	H+	+	+	+	+	+
2	*Listeria*	*monocytogenes*	909	milk		H+	+	+	+	+	+
3	*Listeria*	*monocytogenes*	910	milk		H+	+	+	+	+	+
4	*Listeria*	*monocytogenes*	917	milk		H+ (small colonies)	+	+	+	+	+
5	*Listeria*	*monocytogenes*	17501	milk		H+	+	+	+	+	+
6	*Listeria*	*monocytogenes*	18023	milk		H+	+	+	+	+	+
7	*Listeria*	*monocytogenes*	18024	milk		H+	+	+	+	+	+
8	*Listeria*	*monocytogenes*	1011/1410	frozen broccoli	II a	H+	+	+	+	+	+
9	*Listeria*	*monocytogenes*	1016/1413	frozen broccoli		H+	+	+	+	+	+
10	*Listeria*	*monocytogenes*	1972/2399	mushroom pie	VI b	H+	+	+	+	+	+
11	*Listeria*	*monocytogenes*	1973/2400	quiche Lorraine	VI b	H+	+	+	+	+	+
12	*Listeria*	*monocytogenes*	2407/3139	tripe in tomato sauce	IV b	H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
							CONFIRM'*L.mono*			CONFIRM'*L.mono*	
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	6 h at 37 °C	24 h at 37 °C	Growth	6 h at 37 °C	24 h at 37 °C
13	*Listeria*	*monocytogenes*	2760/3145	breast trimmings	II a	H+	+	+	+	+	+
14	*Listeria*	*monocytogenes*	32.183	toastie	II b	H+	+	+	+	+	+
15	*Listeria*	*monocytogenes*	38/181	Toulouse sausages	II a	H+	+	+	+	+	+
16	*Listeria*	*monocytogenes*	5721/6179	smoked lardoons	IV b	H+	+	+	+	+	+
17	*Listeria*	*monocytogenes*	7111/7516	rillettes	IV b	H+	+/-	+/-	+	+/-	+/-
18	*Listeria*	*monocytogenes*	850/109	Nordic dish	II a	H+	+	+	+	+	+
19	*Listeria*	*monocytogenes*	86/690	food		H+ (weak halo)	+	+	+	+	+
20	*Listeria*	*monocytogenes*	87/6172	food		H+	+	+	+	+	+
21	*Listeria*	*monocytogenes*	877/113	glazing tunnel belt swab	II a	H+	+	+	+	+	+
22	*Listeria*	*monocytogenes*	88/7137	food		H+	+	+	+	+	+
23	*Listeria*	*monocytogenes*	913/1,048	black pudding	IV b	H+	+	+	+	+	+
24	*Listeria*	*monocytogenes*	A00C014	chipolatas	II a	H+	+	+	+	+	+
25	*Listeria*	*monocytogenes*	A00C015	chipolatas		H+	+	+	+	+	+
26	*Listeria*	*monocytogenes*	A00C022	merguez	II a	H+	+	+	+	+	+
27	*Listeria*	*monocytogenes*	A00C024	chipolatas with herbs	II a	H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
28	*Listeria*	*monocytogenes*	A00C036	guinea fowl	II a	H+	+/-	+	+	+	+
29	*Listeria*	*monocytogenes*	A00C039	Savoie diots	II a	H+	+	+	+	+	+
30	*Listeria*	*monocytogenes*	A00C040	Pâté	IV b	H+	+	+	+	+	+
31	*Listeria*	*monocytogenes*	A00C041	sausage meat	La	H+	+	+	+	+	+
32	*Listeria*	*monocytogenes*	A00C042	Toulouse sausages	IV b	H+	+	+	+	+	+
33	*Listeria*	*monocytogenes*	A00C043	smoked bacon	II a	H+	+	+	+	+	+
34	*Listeria*	*monocytogenes*	A00C044	Muscovy duckling	II b	H+	+	+	+	+	+
35	*Listeria*	*monocytogenes*	A00C052	turkey osso bucco	II b	H+	+	+	+	+	+
36	*Listeria*	*monocytogenes*	A00C053	gizzards	II a	H+	+	+	+	+	+
37	*Listeria*	*monocytogenes*	A00C054	beef heart	IV b	H+	+/-	+/-	+	+/-	+/-
38	*Listeria*	*monocytogenes*	A00C055	Toulouse sausages	II a	H+	+	+	+	+	+
39	*Listeria*	*monocytogenes*	A00E008	reconstitution belt	II a	H+	+	+	+	+	+
40	*Listeria*	*monocytogenes*	A00E033	slicer		H+	+	+	+	+	+
41	*Listeria*	*monocytogenes*	A00E049	filleter belt support	II a	H+	+	+	+	+	+
42	*Listeria*	*monocytogenes*	A00E082	smoked salmon environment	II a	H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
43	*Listeria*	*monocytogenes*	A00L097	milk	II a	H+	+	+	+	+	+
44	*Listeria*	*monocytogenes*	A00L101	milk		H+	+	+	+	+	+
45	*Listeria*	*monocytogenes*	A00L107	milk		H+	+	+	+	+	+
46	*Listeria*	*monocytogenes*	A00M009	smoked salmon	II a	H+	+	+	+	+	+
47	*Listeria*	*monocytogenes*	A00M019	smoked salmon		H+	+	+	+	+	+
48	*Listeria*	*monocytogenes*	A00M020	smoked salmon		H+	+	+	+	+	+
49	*Listeria*	*monocytogenes*	A00M021	smoked salmon		H+	+	+	+	+	+
50	*Listeria*	*monocytogenes*	A00M023	smoked salmon		H+	+	+	+	+	+
51	*Listeria*	*monocytogenes*	A00M029	norv SF raw mat.		H+	+	+	+	+	+
52	*Listeria*	*monocytogenes*	A00M030	smoked salmon raw material		H+	+	+	+	+	+
53	*Listeria*	*monocytogenes*	A00M032	Norwegian salmon	IV b	H+	+	+	+	+	+
54	*Listeria*	*monocytogenes*	A00M045	smoked salmon	II a	H+	+	+	+	+	+
55	*Listeria*	*monocytogenes*	A00M050	swordfish raw material		H+	+	+	+	+	+
56	*Listeria*	*monocytogenes*	A00M051	norv SF raw mat.		H+	+	+	+	+	+
57	*Listeria*	*monocytogenes*	A00M080	salmon raw material		H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
58	*Listeria*	*monocytogenes*	A00M081	smoked salmon		H+	+	+	+	+	+
59	*Listeria*	*monocytogenes*	A00M088	smoked Irish salmon	II a	H+	+	+	+	+	+
60	*Listeria*	*monocytogenes*	A00M089	smoked Norwegian salmon		H+	+	+	+	+	+
61	*Listeria*	*monocytogenes*	A00M096	smoked Scottish salmon		H+	+	+	+	+	+
62	*Listeria*	*monocytogenes*	A00M111	smoked Scottish salmon		H+	+	+	+	+	+
63	*Listeria*	*monocytogenes*	A00M112	smoked Norwegian salmon		H+	+	+	+	+	+
64	*Listeria*	*monocytogenes*	A00M113	smoked Irish salmon		H+	+	+	+	+	+
65	*Listeria*	*monocytogenes*	A00M123	smoked salmon		H+	+	+	+	+	+
66	*Listeria*	*monocytogenes*	Ad 664	unripened cheese made with raw milk		H+	+	+	+	+	+
67	*Listeria*	*monocytogenes*	Ad 665	raw milk		H+	+	+	+	+	+
68	*Listeria*	*monocytogenes*	Ad 666	cockerel		H+	+	+	+	+	+
69	*Listeria*	*monocytogenes*	Ad 667	chicken thigh		H+ (microscopic colonies)	+	+	+	+	+
70	*Listeria*	*monocytogenes*	Ad 668	chicken wing		H+	+	+	+	+	+
71	*Listeria*	*monocytogenes*	Ad 669	rillettes		H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY												
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method						
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)			
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*		
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C	
72	*Listeria*	*monocytogenes*	Ad148	seafood		H+	+	+	+	+	+	
73	*Listeria*	*monocytogenes*	Ad235	poultry	II b	H+ (microscopic colonies)	+/-	+	+	+	+	
74	*Listeria*	*monocytogenes*	Ad249	meat product environment	II b	H+	+	+	+	+	+	
75	*Listeria*	*monocytogenes*	Ad252	dairy product		H+	+	+	+	+	+	
76	*Listeria*	*monocytogenes*	Ad253	cooked pressed cheese	II b	H- (H+ at 48h)	+	+	+	+	+	
77	*Listeria*	*monocytogenes*	Ad255	dairy product		H+	+	+	+	+	+	
78	*Listeria*	*monocytogenes*	Ad258	dairy product		H+	+	+	+	+	+	
79	*Listeria*	*monocytogenes*	Ad260	pressed cheese	II a	H+	+	+	+	+	+	
80	*Listeria*	*monocytogenes*	Ad262	dairy product		H+	+	+	+	+	+	
81	*Listeria*	*monocytogenes*	Ad265	tongue	II b	H+	+	+	+	+	+	
82	*Listeria*	*monocytogenes*	Ad266	chicken	II a	H+	+	+	+	+	+	
83	*Listeria*	*monocytogenes*	Ad267	dried sausage	II b	H+	+	+	+	+	+	
84	*Listeria*	*monocytogenes*	Ad268	Vendée ham	IV b	H+	+	+	+	+	+	
85	*Listeria*	*monocytogenes*	Ad270	sausage	IV b	H+	+	+	+	+	+	

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
86	*Listeria*	*monocytogenes*	Ad270	Lyon rosette	IV b	H+	+	+	+	+	+
87	*Listeria*	*monocytogenes*	Ad271	bacon fillet		H+	+	+	+	+	+
88	*Listeria*	*monocytogenes*	Ad272	dried Auvergne sausage	IV b	H+	+	+	+	+	+
89	*Listeria*	*monocytogenes*	Ad273	dried Savoie ham	II b	H+	+	+	+	+	+
90	*Listeria*	*monocytogenes*	Ad274	Asian assortment	II a	H+	+	+	+	+	+
91	*Listeria*	*monocytogenes*	Ad275	Lyon pistachio saveloy		H+	+	+	+	+	+
92	*Listeria*	*monocytogenes*	Ad276	Strasbourg sausage		H+	+	+	+	+	+
93	*Listeria*	*monocytogenes*	Ad277	mild chorizo		H+	+	+	+	+	+
94	*Listeria*	*monocytogenes*	Ad278	smoked belly		H+	+	+	+	+	+
95	*Listeria*	*monocytogenes*	Ad279	cooked Parisian stir-fry		H+	+	+	+	+	+
96	*Listeria*	*monocytogenes*	Ad280	Plain lardoons		H+	+	+	+	+	+
97	*Listeria*	*monocytogenes*	Ad281	raviolines with Roquefort		H+	+	+	+	+	+
98	*Listeria*	*monocytogenes*	Ad285	green peppers	La	H+	+	+	+	+	+
99	*Listeria*	*monocytogenes*	Ad291	smoked lardoons		H+	+	+	+	+	+
100	*Listeria*	*monocytogenes*	Ad292	knacky		H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
101	*Listeria*	*monocytogenes*	Ad293	sliced coppa		H+	+	+	+	+	+
102	*Listeria*	*monocytogenes*	Ad294	clinical		H+	+	+	+	+	+
103	*Listeria*	*monocytogenes*	Ad295	clinical		H+	+	+	+	+	+
104	*Listeria*	*monocytogenes*	Ad299	cockles		H+	+	+	+	+	+
105	*Listeria*	*monocytogenes*	Ad470	cheese		H+ (weak halo)	+	+	+	+	+
106	*Listeria*	*monocytogenes*	Ad474	smoked salmon		H+	+	+	+	+	+
107	*Listeria*	*monocytogenes*	Ad494	piémontaise	II a	H+	+	+	+	+	+
108	*Listeria*	*monocytogenes*	Ad523	raclette cheese		H+	+	+	+	+	+
109	*Listeria*	*monocytogenes*	Ad532	fruit		H+	+	+	+	+	+
110	*Listeria*	*monocytogenes*	Ad534	Fruit	II b	H+	+	+	+	+	+
111	*Listeria*	*monocytogenes*	Ad543	sliced pepper		H+	+	+	+	+	+
112	*Listeria*	*monocytogenes*	Ad544	pre-fried onion	II a	H+	+	+	+	+	+
113	*Listeria*	*monocytogenes*	Ad545	cabbage and carrot salad		H+	+	+	+	+	+
114	*Listeria*	*monocytogenes*	Ad546	buckwheat flour	II a	H+	+	+	+	+	+
115	*Listeria*	*monocytogenes*	Ad548	boning room	II a	H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
116	*Listeria*	*monocytogenes*	Ad549	fish cuts workshop		H+	+	+	+	+	+
117	*Listeria*	*monocytogenes*	Ad550	outdoor drain		H+	+	+	+	+	+
118	*Listeria*	*monocytogenes*	Ad551	sole bath	II a	H+	+	+	+	+	+
119	*Listeria*	*monocytogenes*	Ad610	milk		H+	+	+	+	+	+
120	*Listeria*	*monocytogenes*	Ad611	milk		H+	+	+	+	+	+
121	*Listeria*	*monocytogenes*	Ad613	Munster		H+	+	+	+	+	+
122	*Listeria*	*monocytogenes*	Ad614	dairy environment		H+	+	+	+	+	+
123	*Listeria*	*monocytogenes*	Ad617	dairy environment		H+	+	+	+	+	+
124	*Listeria*	*monocytogenes*	Ad618	Munster	IV b	H+	+	+	+	+	+
125	*Listeria*	*monocytogenes*	Ad619	cheese		H+	+	+	+	+	+
126	*Listeria*	*monocytogenes*	Ad620	dairy environment		H+	+	+	+	+	+
127	*Listeria*	*monocytogenes*	Ad621	dairy environment (floor)		H+	+	+	+	+	+
128	*Listeria*	*monocytogenes*	Ad622	cheese		H+	+	+	+	+	+
129	*Listeria*	*monocytogenes*	Ad623	breadcrumbs (dairy)	II b	H+	+	+	+	+	+
130	*Listeria*	*monocytogenes*	Ad624	dairy environment		H+	+	+	+	+	+
131	*Listeria*	*monocytogenes*	Ad625	dairy environment	IV b	H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY											
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method					
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)		
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C
132	*Listeria*	*monocytogenes*	Ad626	Gorgonzola	II a	H+ (microscopic and pale colonies)	+/-	+	+	+	+
133	*Listeria*	*monocytogenes*	Ad627	dairy product packaging		H+	+	+	+	+	+
134	*Listeria*	*monocytogenes*	Ad629	Cantal		H+	+	+	+	+	+
135	*Listeria*	*monocytogenes*	Ad630	Cantal	II a	H+	+	+	+	+	+
136	*Listeria*	*monocytogenes*	Ad631	dairy environment		H+	+	+	+	+	+
137	*Listeria*	*monocytogenes*	Ad632	milk		H+	+	+	+	+	+
138	*Listeria*	*monocytogenes*	Ad634	dairy environment (floor)		H+	+	+	+	+	+
139	*Listeria*	*monocytogenes*	Ad665	milk	II a	H+	+	+	+	+	+
140	*Listeria*	*monocytogenes*	A00M047	smoked salmon		H+	+	+	+	+	+
141	*Listeria*	*monocytogenes*	AER100	chicken		H+	+	+	+	+	+
142	*Listeria*	*monocytogenes*	AER101	milk		H+	+	+	+	+	+
143	*Listeria*	*monocytogenes*	AER102	brine		H+	+	+	+	+	+
144	*Listeria*	*monocytogenes*	AER103	poultry		H+	+	+	+	+	+
145	*Listeria*	*monocytogenes*	BR32	trout		H+	+	+	+	+	+

st: sterile H-: typical blue colonies, no halo H+: typical blue colonies with opaque halo
+: CONFIRM'Lmono broth: yellow colour +/-: CONFIRM'Lmono broth: questionable result (brown colour)

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

INCLUSIVITY												
POSITIVE STRAINS						COMPASS *Listeria* Agar alternative method						
						COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA (22 h at 37 °C)			
No.	Strain	Species	Reference	Origin	Molecular serotypes	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*		
							6 h at 37 °C	24 h at 37 °C		6 h at 37 °C	24 h at 37 °C	
146	*Listeria*	*monocytogenes*	CL3:29	meat product environment		H+	+	+	+	+	+	
147	*Listeria*	*monocytogenes*	LMH180	freshness salad		H+	+	+	+	+	+	
148	*Listeria*	*monocytogenes*	V2/124	pork		H+	+	+	+	+	+	
149	*Listeria*	*monocytogenes*	V5/126	beef		H+	+	+	+	+	+	
150	*Listeria*	*monocytogenes*	V8/127	beef		H+	+	+	+	+	+	

st: sterile
H-: typical blue colonies, no halo

+/-: weak growth
H+: typical colonies with opaque halo

Strains tested in the context of renewal of the COMPASS® *Listeria* Agar Enumeration method

EXCLUSIVITY										
NEGATIVE STRAINS					COMPASS *Listeria* Agar alternative method					
					COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA		
No.	Strain	Species	Reference	Origin	Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
						6 h at 37 °C	24h at 37 °C		6 h at 37 °C	24 h at 37 °C
1	*Bacillus*	*cereus*	1	liquid egg portion	st	/	/	+	-	-
2	*Bacillus*	*cereus*	8	pasta Spanish style	st	/	/	+	-	-
3	*Bacillus*	*cereus*	11	rice-purée side dish	st	/	/	+	-	-
4	*Bacillus*	*cereus*	14.2	île flottante	st	/	/	+	-	-
5	*Bacillus*	*cereus*	16	seafood spaghetti	st	/	/	+	-	-
6	*Bacillus*	*cereus*	17	rice pudding	st	/	/	+	-	-
7	*Bacillus*	*cereus*	20	chicken-carrot sauce	st	/	/	+	-	-
8	*Bacillus*	*cereus*	21	curried rice	st	/	/	+	-	-
9	*Bacillus*	*cereus*	22	wheat flour	st	/	/	+	-	-
10	*Bacillus*	*cereus*	26	raw cow's milk	st	/	/	+	-	-
11	*Bacillus*	*cereus*	30	raw peeled shrimps	st	/	/	+	-	-
12	*Bacillus*	*cereus*	31	powdered butter	st	/	/	+	-	-
13	*Bacillus*	*cereus*	Ad1681	dairy product	st	/	/	+	/	/
14	*Bacillus*	*cereus*	Ad420	caseinate powder	st	/	/	+	-	-
15	*Bacillus*	*cereus*	Ad465	salmon terrine	st	/	/	+	-	-
16	*Bacillus*	*cereus*	Ad483	Punch	st	/	/	+	-	-
17	*Bacillus*	*cereus*	Ad495	rice flour	st	/	/	+	-	-
18	*Bacillus*	*cereus*	Ad758	environment	st	/	/	+	-	-
19	*Bacillus*	*cereus*	Ad608	baguette dough	st	/	/	+	-	-
20	*Bacillus*	*cereus*	Ad609	swab - drain, dairy product workshop	st	/	/	+	/	/
21	*Bacillus*	*circulans*	Ad734	dairy product	st	/	/	+	-	-

EXCLUSIVITY										
NEGATIVE STRAINS					COMPASS *Listeria* Agar alternative method					
No.	Strain	Species	Reference	Origin	COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA		
					Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
						6 h at 37 °C	24h at 37 °C		6 h at 37 °C	24 h at 37 °C
22	*Bacillus*	*coagulans*	Ad732	dairy product	st	/	/	st	/	/
23	*Bacillus*	*licheniformis*	Ad741	dairy product	st	/	/	+	/	/
24	*Bacillus*	*licheniformis*	Ad798	egg product	st	/	/	+	-	-
25	*Bacillus*	*mycoides*	Ad762	milk	st	/	/	st	/	/
26	*Bacillus*	*pseudomycoides*	Ad767	/	st	/	/	+	/	/
27	*Bacillus*	*pumilus*	Ad733	dairy product	st	/	/	+	-	-
28	*Bacillus*	*pumilus*	Ad768	quiche	st	/	/	+	-	-
29	*Bacillus*	*sphaericus*	Ad872	dairy product	st	/	/	+	-	-
30	*Bacillus*	*subtilis*	Ad736	dairy product	st	/	/	+	-	-
31	*Bacillus*	*subtilis*	Ad786	egg product	st	/	/	+	-	-
32	*Bacillus*	*thuringiensis*	Ad773	vegetables	st	/	/	+	/	/
33	*Bacillus*	*weihenstephanensis*	Ad726	egg product	st	/	/	+	/	/
34	*Bacillus*	*weihenstephanensis*	Ad727	egg product	st	/	/	+	-	-
35	*Bacillus*	*weihenstephanensis*	Ad778	refrigerated purée	st	/	/	+	-	-
36	*Bacillus*	*weihenstephanensis*	Ad780	ready-cooked dish	st	/	/	+	-	-
37	*Bacillus*	*weihenstephanensis*	Ad781	pasteurised vegetable	st	/	/	+	-	-
38	*Bacillus*	*weihenstephanensis*	Ad782	dairy product	st	/	/	+	-	-
39	*Enterococcus*	*avium*	Ad 183	raw liquid egg portion	green zone at inoculation point	/	/	+	/	/
40	*Enterococcus*	*durans*	Ad 149	cooked ham	st	/	/	+/-	-	-
41	*Enterococcus*	*durans*	Ad 181	pasteurised liquid egg portion	st	/	/	+	/	/
42	*Enterococcus*	*faecalis*	Ad 602	raw milk	st	/	/	+	/	/
43	*Enterococcus*	*faecalis*	25	chicken thigh	st	/	/	+	-	-
44	*Enterococcus*	*faecalis*	Ad 289	ready-cooked dish	st	/	/	+	-	-
45	*Enterococcus*	*faecium*	Ad 180	pasteurised liquid egg portion	Green colonies	/	/	+	/	/
46	*Enterococcus*	*hirae*	CNRZ1380	cheese	green zone at inoculation point	/	/	+	-	-
47	*Lactococcus*	*lactis*	Ad 425	ferment	st	/	/	+		

EXCLUSIVITY										
NEGATIVE STRAINS					COMPASS *Listeria* Agar alternative method					
No.	Strain	Species	Reference	Origin	COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA		
					Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
						6 h at 37 °C	24h at 37 °C		6 h at 37 °C	24 h at 37 °C
48	*Lactococcus*	*lactis cremoris*	91G030	gros lait	st	/	/	st	/	/
49	*Listeria*	*grayi*	Ad 1295	spinach branch	st	/	/	+	/	/
50	*Listeria*	*grayi*	Ad 1504	salmon terrine	green zone at inoculation point	/	/	+	/	/
51	*Listeria*	*innocua*	Ad 643	veal roll	H-	/	/	+	+	+
52	*Listeria*	*innocua*	Ad 644	raw baguette	H-	/	/	+	-	-
53	*Listeria*	*innocua*	Ad 653	environment	H-	/	/	+	+	+
54	*Listeria*	*innocua*	Ad 654	dairy product	H-	/	/	+	+	+
55	*Listeria*	*innocua*	Ad 655	brine	H-	/	/	+	+	+
56	*Listeria*	*innocua*	Ad 656	raw milk cheese	H-	/	/	+	+	+
57	*Listeria*	*innocua*	Ad 657	Cantal	H-	/	/	+	-	-
58	*Listeria*	*innocua*	Ad 660	breadcrumbs	H-	/	/	+	+	+
59	*Listeria*	*innocua*	Ad 661	Pont L'Evêque	H-	/	/	+	/	/
60	*Listeria*	*innocua*	Ad 663	ripening cellars	H-	/	/	+	+	+
61	*Listeria*	*innocua*	Ad 671	smoked lardoons	H-	/	/	+	+	+
62	*Listeria*	*innocua*	Ad 1176	spinach	H-	/	/	+	+	+
63	*Listeria*	*innocua*	Ad 1177	mushrooms	H-	/	/	+	+	+
64	*Listeria*	*innocua*	Ad 1233	breaded cod fillet	H-	/	/	+	+	+
65	*Listeria*	*innocua*	Ad 1230	scallops and prawns	H-	/	/	+	/	/
66	*Listeria*	*ivanovii*	Ad 466	veal kidneys	H+	-	-	+	/	/
67	*Listeria*	*ivanovii*	Ad 616	dairy environment (floor)	H+	-	-	+	/	/
68	*Listeria*	*ivanovii*	Ad 648	Collection	H+	-	-	+	-	-
69	*Listeria*	*ivanovii*	Ad 662	packaging	H+	-	-	+	-	-
70	*Listeria*	*ivanovii*	Ad 675	veined cheese	H+	-	-	+	-	-
71	*Listeria*	*ivanovii*	Ad 676	pork cheek	H+	-	-	+	/	/
72	*Listeria*	*ivanovii*	Ad 677	shrimp	H+	-	-	+	/	/
73	*Listeria*	*ivanovii*	Ad 991	Roquefort	H+	-	-	+	-	-
74	*Listeria*	*ivanovii*	Ad 1288	ewe's milk	H+	-	-	+	/	/

EXCLUSIVITY										
NEGATIVE STRAINS					COMPASS *Listeria* Agar alternative method					
No.	Strain	Species	Reference	Origin	COMPASS *Listeria* Agar (22 h at 37 °C)			TSYEA		
					Appearance of colonies	CONFIRM'*L.mono*		Growth	CONFIRM'*L.mono*	
						6 h at 37 °C	24h at 37 °C		6 h at 37 °C	24 h at 37 °C
75	*Listeria*	*ivanovii*	Ad 1289	raw milk cheese	H+	-	-	+	-	-
76	*Listeria*	*ivanovii*	Ad 1290	powdered milk	H+	-	-	+	/	/
77	*Listeria*	*ivanovii*	Ad 1291	poultry	H+	-	-	+	-	-
78	*Listeria*	*ivanovii*	Ad 1292	merguez	H+	-	-	+	/	/
79	*Listeria*	*ivanovii*	Ad 1308	lean mutton	H+	-	-	+	/	/
80	*Listeria*	*ivanovii*	Ad 1748	goat's milk	H+	-	-	+	-	-
81	*Listeria*	*ivanovii*	Ad 1752	merguez	H+	-	-	+	-	-
82	*Listeria*	*ivanovii*	Ad 1768	ewe's milk	H+	-	-	+	-	-
83	*Listeria*	*ivanovii*	BR15	fish farm environment, pond wall	H+	-	-	+	-	-
84	*Listeria*	*ivanovii*	L41	raw milk	H+	-	-	+	-	-
85	*Listeria*	*ivanovii sps londoniensis*	CIP103505	/	H+	-	-	+	-	-
86	*Listeria*	*seeligeri*	Ad 649	cheese	H-	/	/	+	/	/
87	*Listeria*	*seeligeri*	Ad 651	environment	H-	/	/	+	-	-
88	*Listeria*	*seeligeri*	Ad 652	foot bath	H-	/	/	+	-	-
89	*Listeria*	*seeligeri*	Ad 674	Munster	H-	/	/	+	-	-
90	*Listeria*	*seeligeri*	Ad 1237	raw cow's milk	H-	/	/	+	-	-
91	*Listeria*	*seeligeri*	Ad 1293	parsley	H-	/	/	+	/	/
92	*Listeria*	*seeligeri*	BR1	trout	H-	/	/	+	-	-
93	*Listeria*	*seeligeri*	BR18	fish farm environment, pond wall	H-	/	/	+	-	-
94	*Listeria*	*seeligeri*	BR4	fish	H-	/	/	+	-	-
95	*Listeria*	*welshimeri*	Ad 1221	sausages seasoned with herbs	H-	/	/	+	/	/
96	*Listeria*	*welshimeri*	Ad 1175	fried rice	H-	/	/	+	+	+
97	*Listeria*	*welshimeri*	Ad 1194	sausage seasoned with herbs	H-	/	/	+	+	+
98	*Listeria*	*welshimeri*	Ad 1669	pollock steak	H-	/	/	+	/	/
99	*Streptococcus*	*bovis*	92L613	cheese	st	/	/	st	/	/
100	*Streptococcus*	*salivarius*	Ad 441	milk	st	/	/	st	/	/

Appendix 11 - Degree of agreement

Reference method

Level L0							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	0	0	0	8	1	1	1
B	0	0	0	8	1	1	1
C	0	0	0	8	1	1	1
D	0	0	0	8	1	1	1
F	0	0	0	8	1	1	1
G	0	0	0	8	1	1	1
H	0	0	0	8	1	1	1
I	0	0	0	8	1	1	1
J	0	0	0	8	1	1	1
K	0	0	0	8	1	1	1
L	0	0	0	8	1	1	1
M	0	0	0	8	1	1	1
						Mean	1
						Degree of agreement	100%

Level L1							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
F	7	0.875	0.766	1	0.125	0.0156	0.781
G	7	0.875	0.766	1	0.125	0.0156	0.781
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	7	0.875	0.766	1	0.125	0.0156	0.781
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Mean	0.945
						Degree of agreement	95%

Level L2							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100%

Alternative method

Level L0							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	0	0	0	8	1	1	1
B	0	0	0	8	1	1	1
C	0	0	0	8	1	1	1
D	0	0	0	8	1	1	1
F	0	0	0	8	1	1	1
G	0	0	0	8	1	1	1
H	0	0	0	8	1	1	1
I	0	0	0	8	1	1	1
J	0	0	0	8	1	1	1
K	0	0	0	8	1	1	1
L	0	0	0	8	1	1	1
M	0	0	0	8	1	1	1
						Mean	1
						Degree of agreement	100%

Level L1							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
F	7	0.875	0.766	1	0.125	0.0156	0.781
G	7	0.875	0.766	1	0.125	0.0156	0.781
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	7	0.875	0.766	1	0.125	0.0156	0.781
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Mean	0.9453
						Degree of agreement	95%

Level L2							
Laboratory	Number of positives obtained	Probability of positives	Probability of pairs of positives	Number of negatives obtained	Probability of negatives	Probability of pairs of negatives	Probability of pairs of identical results
A	8	1	1	0	0	0	1
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100%

Appendix 12 - Calculation of fit

Reference method

Level L0

Number of laboratories: 12

Number of negatives per laboratory: 8

Laboratory	Number of negatives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	704	704
B	8	704	704
C	8	704	704
D	8	704	704
F	8	704	704
G	8	704	704
H	8	704	704
I	8	704	704
J	8	704	704
K	8	704	704
L	8	704	704
M	8	704	704
Total		8,448	8,448
Fit		100.0%	

Total + 0

Total - 96

Level L1

Number of laboratories: 12

Number of positives per laboratory: 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	680	704
B	8	680	704
C	8	680	704
D	8	680	704
F	7	604	704
G	7	604	704
H	8	680	704
I	8	680	704
J	7	604	704
K	8	680	704
L	8	680	704
M	8	680	704
Total		7,932	8,448
Fit		93.9%	

Total + 93

Total - 3

Level L2

Number of laboratories: 12

Number of positives per laboratory: 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	704	704
B	8	704	704
C	8	704	704
D	8	704	704
F	8	704	704
G	8	704	704
H	8	704	704
I	8	704	704
J	8	704	704
K	8	704	704
L	8	704	704
M	8	704	704
Total		8,448	8,448
Fit		100.0%	

Total + 96

Total - 0

Alternative method

Level L0

Number of laboratories: 12

Number of negatives per laboratory: 8

Laboratory	Number of negatives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	704	704
B	8	704	704
C	8	704	704
D	8	704	704
F	8	704	704
G	8	704	704
H	8	704	704
I	8	704	704
J	8	704	704
K	8	704	704
L	8	704	704
M	8	704	704
Total		8,448	8,448
Fit		100.0%	

Total + 0

Total - 96

Level L1

Number of laboratories: 12

Number of positives per laboratory: 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	680	704
B	8	680	704
C	8	680	704
D	8	680	704
F	7	604	704
G	7	604	704
H	8	680	704
I	8	680	704
J	7	604	704
K	8	680	704
L	8	680	704
M	8	680	704
Total		7,932	8,448
Fit		93.9%	

Total + 93

Total - 3

Level L2

Number of laboratories: 12

Number of positives per laboratory: 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
A	8	704	704
B	8	704	704
C	8	704	704
D	8	704	704
F	8	704	704
G	8	704	704
H	8	704	704
I	8	704	704
J	8	704	704
K	8	704	704
L	8	704	704
M	8	704	704
Total		8,448	8,448
Fit		100.0%	

Total + 96

Total - 0