



ipl santé,
environnement
durables

Nord
filiale de l'Institut Pasteur de Lille



ACCREDITATION
N°1-0264
PORTEE
DISPONIBLE SUR
WWW.COFRAC.FR

***AFNOR Certification of the
AL Listeria monocytogenes detection method
according to EN ISO 16140 standard***

Certificate number: BRD 07/16 – 01/09

SUMMARY REPORT

<u>Validation date:</u>	26/01/2009
<u>End validation date:</u>	26/01/2013

AL detection – summary 2010 v01

IPL santé, environnement durables Nord – 1 rue du Professeur Calmette –59046 LILLE cedex

*La reproduction de ce document n'est autorisée que sous le format de fac-similé photographique intégral.
L'accréditation COFRAC atteste uniquement de la compétence du laboratoire pour les essais ou les analyses identifiés par un « # »
sur le présent document. Les conclusions et les autres résultats ne sont pas couverts par l'accréditation.*



Study realized by:

IPL santé, environnement durables Nord
Secteur Alimentaire
1 rue du Professeur Calmette
59046 LILLE cedex

for:

BIO-RAD
3, Bd Raymond Poincaré
92430 MARNES-LA-COQUETTE

PLAN

1	INTRODUCTION	2
1.1	CERTIFICATION REFERENCES AND SCOPE	2
1.2	PROTOCOL AND PRINCIPLE OF THE ALTERNATIVE METHOD	2
1.2.1	Protocol	2
1.2.2	Principle of the A.L. medium	2
1.3	REFERENCE METHOD	2
2	COMPARATIVE STUDY OF METHODS	3
2.1	RELATIVE ACCURACY, RELATIVE SPECIFICITY AND RELATIVE SENSITIVITY	3
2.1.1	Number and nature of the samples	3
2.1.2	Artificial contamination of the samples and percentage	3
2.1.3	Results of assays	4
2.1.4	Calculation of relative accuracy (AC), relative specificity (SP) and relative sensitivity (SE) according to EN ISO 16140 standard	4
2.1.5	Analysis of discrepant results	5
2.1.6	Comments on storage of A.L. plates for 72 hours at 2–8 °C	5
2.1.7	Comments on confirmation protocol	5
2.2	RELATIVE DETECTION LEVEL	5
2.3	INCLUSIVITY / EXCLUSIVITY	5
2.3.1	Protocols	5
2.3.2	Results and conclusion	6
3	INTERLABORATORY STUDY	6
3.1	STUDY ORGANIZATION	6
3.2	CONTROL OF EXPERIMENTAL PARAMETERS	6
3.2.1	Contamination levels obtained after artificial contamination	6
3.2.2	Problems of temperature recorded during transport, temperature on reception and reception times	6
3.2.2.1	Analysis of temperature monitoring curves during transport	6
3.2.2.2	Temperatures on reception and reception times	7
3.2.3	Conclusion	7
3.3	RESULTS	7
3.3.1	Results obtained by cooperating laboratories	7
3.3.2	Comments (discordances with expected results, exclusions... for instance)	8
3.4	CALCULATIONS	8
3.4.1	Calculation of specificity percentage (%SP) and sensitivity percentage (%SE) for both methods	8
3.4.2	Calculation of the relative precision (AC)	9
3.4.3	Analysis of discordances	9
3.5	INTERPRETATION	9
3.5.1	Comparison of relative precision (AC), specificity (SP) and sensitivity (SE) values	9
3.5.2	Accordance (DA)	10
3.5.3	Concordance	10
3.5.4	Odds Ratio (COR)	10
4	PRACTICABILITY	10
5	CONCLUSION	11

APPENDICES

1 Introduction

1.1 Certification references and scope

The A.L. detection method has been certified with the certificate number BRD 07/16 – 01/09 in January 2009 for human food products and environmental samples.

1.2 Protocol and principle of the alternative method

1.2.1 Protocol

The diagram summarising the method is shown in appendix A.

The analytical steps are as follows:

- enrichment on ½ Fraser broth for 24 hours +/- 2 heures at 30°C +/- 1°C,
- spreading for isolation of 0.1ml on an A.L. plate, incubated for 24 hours +/- 2 hours at 37°C +/- 1°C,

The characteristic colonies of *Listeria monocytogenes* on A.L. plates (blue with halo) have to be confirmed:

- 1) by the conventional tests described in the methods standardized by the CEN or ISO, including a purification step,
- 2) by the conventional tests described in the methods standardized by the CEN or ISO, without prior purification if the colony is sufficiently isolated,
- 3) by spot sub-culture on RAPID *L.Mono* agar, without prior purification if the colony is sufficiently isolated,
- 4) by PCR assay, specific of *Listeria monocytogenes*, directly from the colony.

The A.L. plates could be interpreted directly after 24 hours incubation, and up to 48 hours incubation.

The A.L. plates could also be stored up to 72 hours at 3°C +/- 2°C before interpretation.

Assays to confirm these possibilities were made during the initial certification study.

1.2.2 Principle of the A.L. medium

The A.L. medium is specific for *Listeria monocytogenes*.

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

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

The formula of the A.L. medium is the same as the reference method.

1.3 Reference method

The validation study was carried out by reference to the EN ISO 11290-1/A1:2004 (#) standard method.

The diagram summarizing the method is shown in appendix A.

2 Comparative study of methods

2.1 Relative accuracy, relative specificity and relative sensitivity

The aim of this study, according to the reference document ISO 16140, was to compare the performances of the A.L. detection method to the the reference EN ISO 11290-1/A1:2004 method on *Listeria monocytogenes* naturally and artificially contaminated samples and uncontaminated samples.

2.1.1 Number and nature of the samples

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

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

Categories	Types	Positive*	Négative	Total
Meat products	Raw meat	17	9	26
	Raw seasoned meat	8	10	18
	Delicatessen and Ready-to-Eat meals	12	11	23
	Total	37	30	67
Dairy products	Raw milk cheese (cow's milk)	10	20	30
	Raw milk cheese (goat's and ewe's milk)	9	17	26
	Milk powders and pastries	11	10	21
	Total	30	47	77
Seafood	Raw fish	12	15	27
	Smoked fish	10	17	27
	Ready-to-eat meals with fish and shellfish	8	7	15
	Total	30	39	69
Vegetables	Frozen	12	11	23
	Raw	9	14	23
	Cooked or seasoned	10	8	18
	Total	31	33	64
Environment	Various waters	10	9	19
	Surface samples	10	10	20
	Residues and scraps	10	13	23
	Total	30	32	62
TOTAL		158	181	339

* these are positive results by one or other of the methods

2.1.2 Artificial contamination of the samples and percentage

Artificial contamination was achieved by using stressed bacterial suspensions, the stress treatment and efficiency of which have been determined according to EN ISO 16140 and AFNOR validation rules.

77 positive results were obtained after artificial contamination.

Finally, 48% of positive results were obtained as a result of artificial contamination.

2.1.3 Results of assays

The analyses were conducted in single using the two methods.
Raw data are presented in appendix B.

- Incubation of A.L. plates for 22 hours at 37°C**

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

- Incubation of A.L. plates for 48 hours at 37°C**

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

Legend:

A+ = positives confirmed

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

* 0 unconfirmed positive result

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

- Incubation of A.L. plates for 22 hours at 37°C**

Category	PA	NA	ND	PD	Sum N	Relative accuracy AC (%) [100x(PA+NA)]/N	N+ PA + ND	Relative sensitivity SE (%) [100xPA]/N+	N- NA + PD	Relative specificity SP (%) [100xNA]/N-
Meat products	35	30	2	0	67	97,0	37	94,6	30	100
Dairy products	29	47	0	1	77	98,7	29	100	48	97,9
Seafood	30	39	0	0	69	100	30	100	39	100
Vegetables	31	33	0	0	64	100	31	100	33	100
Environment	30	32	0	0	62	100	30	100	32	100
TOTAL	155	181	2	1	339	99,1	157	98,7	182	99,5

- Incubation of A.L. plates for 48 hours at 37°C**

Category	PA	NA	ND	PD	Sum N	Relative accuracy AC (%) [100x(PA+NA)]/N	N+ PA + ND	Relative sensitivity SE (%) [100xPA]/N+	N- NA + PD	Relative specificity SP (%) [100xNA]/N-
Meat products	36	30	1	0	67	98,5	37	97,3	30	100
Dairy products	29	47	0	1	77	98,7	29	100	48	97,9
Seafood	30	39	0	0	69	100	30	100	39	100
Vegetables	31	33	0	0	64	100	31	100	33	100
Environment	30	32	0	0	62	100	30	100	32	100
TOTAL	156	181	1	1	339	99,4	157	99,4	182	99,5

	A.L. incubation 22h	A.L. incubation 48h
Relative accuracy: AC	99.1 %	99.4 %
Relative specificity: SP	99.5 %	99.5 %
Relative sensitivity: SE	98.7 %	99.4 %

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

	Alternative method	Reference method
A.L. incubation 22h	(PA + PD) / (PA + PD + ND) = 98.7 %	(PA + ND) / (PA + PD + ND) = 99.4 %
A.L. incubation 48h	(PA + PD) / (PA + PD + ND) = 99.4 %	(PA + ND) / (PA + PD + ND) = 99.4 %

2.1.5 Analysis of discrepant results

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

The statistic test was not performed because the number of discrepancies is less than 6.

The A.L. detection method can be considered equivalent to the reference method (EN ISO 11290-1/A1) for the detection of *Listeria monocytogenes*.

2.1.6 Comments on storage of A.L. plates for 72 hours at 2–8 °C

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

2.1.7 Comments on confirmation protocol

The results obtained by the different ways of confirmation were conform to those expected for all the colodies. However, steps of purification were realized for 10% of the positive samples, because the colonies were not sufficiently isolated (different types of *Listeria* were often present).

2.2 Relative detection level

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

Different 'food strain matrix' couples were studied in parallel with the reference method and the A.L. detection method, for the studied categories.

The artificial contaminations were realized according to EN ISO 16140 and AFNOR validation rules.

The levels of detection, calculated according to the Spearman – Kärber* method (LOD₅₀), obtained for each combination « matrix – strain » are the following:

Matrix	Strain	Relative detection level for the reference method (UFC / 25 g or 25 mL)	Relative detection level for the alternative method (UFC / 25 g or 25 mL)
Rillettes	<i>L.monocytogenes</i> 1/2b	0,7 [0,4 – 1,1]	0,7 [0,4 – 1,1]
Raw milk	<i>L.monocytogenes</i> 4b	0,7 [0,4 – 1,1]	0,7 [0,4 – 1,1]
Raw vegetables	<i>L.monocytogenes</i> 4b	0,4 [0,2 – 0,5]	0,4 [0,2 – 0,5]
Smoked salmon	<i>L.monocytogenes</i> 1/2a	0,4 [0,2 – 0,6]	0,4 [0,2 – 0,6]
Process water	<i>L.monocytogenes</i> 1/2c	0,4 [0,2 – 0,6]	0,4 [0,2 – 0,6]

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

Conclusion:

The level of detection was between 0.2 and 1.1 cells per 25 grams for the A.L. detection method and is the same as the reference method.

2.3 Inclusivity / exclusivity

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

2.3.1 Protocols

Protocol for inclusivity

Each of the *Listeria monocytogenes* strains was tested with the complete A.L. detection protocol.

Protocol for exclusivity

The different negative strains were inoculated in a nutrient broth at a level of about 10⁵ cells per mL. After incubation for 24 hours at 37°C, isolation on A.L. plate was performed for each strain.

2.3.2 Results and conclusion

The results are presented in appendix C.

All the 60 *Listeria monocytogenes* strains were detected with the A.L. detection method (blue colony with halo).

The 19 *Listeria* other than *monocytogenes* strains were blue without halo on A.L. medium, except the *Listeria ivanovii* strains, which gave blue colonies with halo at 24 hours incubation. These *Listeria ivanovii* strains were characteristic when they were tested with the reference method (after 48 hours incubation on PALCAM plates and 24 hours incubation on A.L. plates).

However, the size of halo for the *Listeria ivanovii* strains is smaller than the size of halo for the *Listeria monocytogenes* strains.

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

3 Interlaboratory study

3.1 Study organization

- Number of participating laboratories

16 laboratories received samples.

- Matrix used

Pasteurized milk".

- Strain used

Listeria monocytogenes (origin « raw milk cheese »).

- Number of samples per laboratory

24 samples were prepared per laboratory, for the A.L. detection method and for the reference method. Each set of samples was divided in 3 levels of contamination, with 8 samples per level.

3.2 Control of experimental parameters

3.2.1 Contamination levels obtained after artificial contamination

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

Level	Samples	Targeted theoretical rate (b/25ml)	Real rate (b/25ml sample)	Estimated lower contamination limit per 25ml sample	Estimated upper contamination limit per 25ml sample
Level 0 (L0)	7-8-9-13-14-18-21-24	0	0		
Low level (L1)	3-4-6-11-12-15-19-22	3	3,9	1,1	11,6
High level (L2)	1-2-5-10-16-17-20-23	30	42,3	30	58

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

3.2.2.1 Analysis of temperature monitoring curves during transport

Temperatures registered by thermo button during shipment were comprised between -0,5°C et 7,2°C for all laboratories.

3.2.2.2 *Temperatures on reception and reception times*

The temperatures obtained are recorded in the following tables:

Laboratory	Reception Temperatures (°C)		Comments
	communicated by the laboratory	indicated by the thermo button	
A	8.0	5.7	
B	1.5	1.0	
C	5.0	1.6	
D	3.4	3.5	
E	7.3	5.2	
F	2.4	1.0	
G	1.4	0.0	
H	5.4	1.1	Leakages
I	3.5	1.1	
J	5.4	1.1	
K	1.5	0.1	
L	5.6	1.6	
M	1.5	2.0	
N	7.0	1.5	
O	3.0	1.0	Delivery at D2
P	5.5	1.0	

Among the 13 laboratories, only the laboratory O received the samples at D2. It realized the analyses, but its results were not interpreted.

The laboratory I has informed that some leakages occurred in the package. This parameter should be considered for possible cross-contaminations.

3.2.3 Conclusion

Due to the delivery conditions, the results of 15 laboratories could be considered.

3.3 Results

3.3.1 Results obtained by cooperating laboratories

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

Positive results obtained by the reference method

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

Positive results obtained by the alternative method

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

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

Among the 16 laboratories, the laboratory O received the samples and realized the analyses at Day 2. Its results are presented, in grey in the tables, but they were not considered in the interpretation. However, the results are coherent with those of other laboratories.

The laboratory "I" has informed that some leakages occurred in the package. However, the results are conform for this lab.

The results of the reference method and the alternative method **were in agreement** for the 15 laboratories.

However, among these laboratories, the laboratory H found 4 samples, theoretically contaminated at the highest level, négative with the both methods. Streaking on the different plates was realized again and confirmed the first result. The most probable hypothesis is that these samples were non contaminated by the expert lab and the results were therefore not considered in the interpretation.

3.4 Calculations

The results of 14 laboratories were considered.

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

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

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

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

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

where FP, number of false positives
N₋, total number of tests L0

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

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

where TP, number of true positives
N₊, total number of tests L1 or L2

The results are given in the following table:

Level	Reference method		Alternative method	
	SP/SE	LCL* %	SP/SE	LCL* %
L0	SP% = 100	98	SP% = 100	98
L1	SE% = 100	98	SE% = 100	98
L2	SE% = 100	98	SE% = 100	98
L1+L2	SE% = 100	98	SE% = 100	98

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

3.4.2 Calculation of the relative precision (AC)

The relative precision is calculated using the following formula:

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

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

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

* 0 unconfirmed result

For this study, the relative accuracy is 100%.

3.4.3 Analysis of discordances

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

3.5 Interpretation

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

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

	Interlaboratory study	Etude préliminaire	
		Incubation géloses AL 22h	Incubation géloses AL 48h
Relative accuracy (AC)	100 %	99.1 %	99.4 %
Sensitivity (SE)	100 %	99.5 %	99.5 %
Specificity (SP)	100 %	98.7 %	99.4 %

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

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

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

3.5.2 Accordance (DA)

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

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

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

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

3.5.3 Concordance

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

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

Result tables used to make these calculations are given in appendix F and the concordance for each of the methods and for each of the levels are given in the following table:

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

3.5.4 Odds Ratio (COR)

The concordance odds ratio is calculated using the following formula:

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

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

Level	Alternative method	Reference method
L0	COR % = 1.00	COR % = 1.00
L1	COR % = 1.00	COR % = 1.00
L2	COR % = 1.00	COR % = 1.00

A value of 1.00 for the Odds ratio means that the degree of agreement and the agreement are equal. When the Odds ratio increases, the interlaboratory variation becomes more predominant.

4 Practicability

Practicability is studied according to the 13 criteria defined by the AFNOR technical board, comparing the EN ISO 11290 reference method to the A.L. detection method.

1. Packaging mode of the components of the method (see package insert)	Agar plates are packaged in boxes of 20 boxes of 90 mm
2. Reagent volumes (see package insert and vial packaging)	
3. Storage conditions (see package insert)	The plates must be stored between entre +2°C and +8 °C, protected from light
4. Modalities of use after first use (see package insert)	The conservation outside the boxes, in started cellophane bag, is 1 month at 2–8°C
5. Equipment or necessary specific premises (see package insert)	Among the required equipment, - an air incubator at 30°C ± 1°C - an air incubator at 37°C ± 1°C

6. Ready-to-use reagents or requiring reconstitution (see package insert)	/
7. Training of the operator	For an operator trained in standard techniques of microbiology, training in the technique requires less than 1 day.

8. Real time handling - Flexibility of the technique relative to the number of samples to be analyzed

Steps	Average time for one sample (min)	
	Standard ISO 11290-1	A.L. method
Preparation, weighing, dilution and stomaching	7	7
Transfer to Fraser broth	1	/
Streaking of Half Fraser and Fraser broths, on two selective media	2	/
Streakin of 100 µL on A.L. medium	/	1
Plates reading	2	/
Average total time (per sample)	12 minutes	9 minutes

9. Time-to-result

Steps	Time required A.L. method	Time required ISO 11290-1 reference method
Realization of first enrichment (Half Fraser)	D0	D0
Transfer to selective broths (Fraser)	/	D1
Streaking of selective broths on selective media	D1	D1 and D3
Test result	D2	D4 to D5
Obtaining negative result (if no characteristic colony)		
Confirmation tests on characteristic colonies	D2	D2 to D5
Obtaining negative result (after streaking and negative confirmation if done)	D2 to D9	D5 to D11
Obtaining positive result		
Confirmation by reference method tests (CAMP tests, haemolysis, TSBYE broth), including purification step	D4 to D9	D8 to D11
Confirmation by reference method tests (CAMP tests, haemolysis, sugar fermentation (strip))	D3 to D4	D4 to D7
Confirmation by spot sub-culture on RAPID'L.mono	D3 to D4	

10. Type of qualification of the operator:	level identical to that necessary for the reference method
11. Steps common to the reference method	Enrichment step in Half Fraser broth
12. Traceability of the analysis results	/
13. Maintenance by the laboratory	/

5 Conclusion

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

The **comparative study** allows assessing:

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

The performances of the A.L. detection method are equivalent to those of the reference method EN ISO 11290-1/A1:2004. They were determined by analysis of 339 samples distributed over five categories of products and environmental samples.

The relative accuracy obtained was 99.1%, the relative sensitivity was 98.7% and the relative specificity was 99.5%, according to the calculations required by the EN ISO 16140 standard.

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

- 99.4% for the reference method.
- 98.7% for the alternative method,

The relative detection level of the A.L. detection method and of the reference method was evaluated by artificial contaminations of five different products.

The level of detection was between 0.2 and 1.1 cells per 25 grams for the A.L. detection method and for the reference method.

The inclusivity of the method is good since all the 60 strains of *Listeria monocytogenes* were detected.

No cross reaction was observed, neither with the 19 *Listeria* other than *monocytogenes* strains, nor with the 18 non-*Listeria* strains. Only *Listeria ivanovii* strains show characteristic colonies on A.L. medium, as well as on other Ottaviani and Agosti agar plates.

The **interlaboratory study results** obtained for the 14 selected laboratories show that the alternative method and the reference method have comparable values of relative accuracy, specificity and sensitivity as those obtained during the preliminary study.

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

Set of results led to **AFNOR certification** according to ISO 16140, of the A.L. detection method (certificate n°BRD 07/16 – 01/09), for the detection of *Listeria monocytogenes* in human food product and environmental samples, **for a 4 years period.**

Lille, January 7th 2010



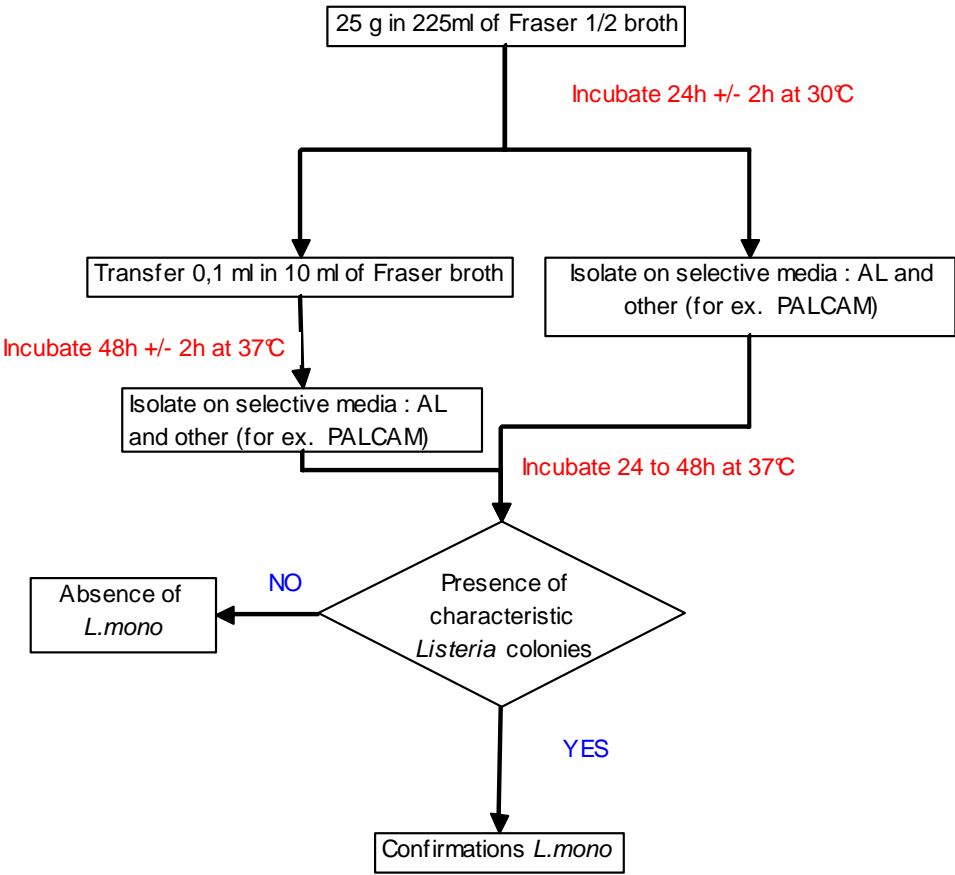
Virginie Ewe
Technical Manager

APPENDICES

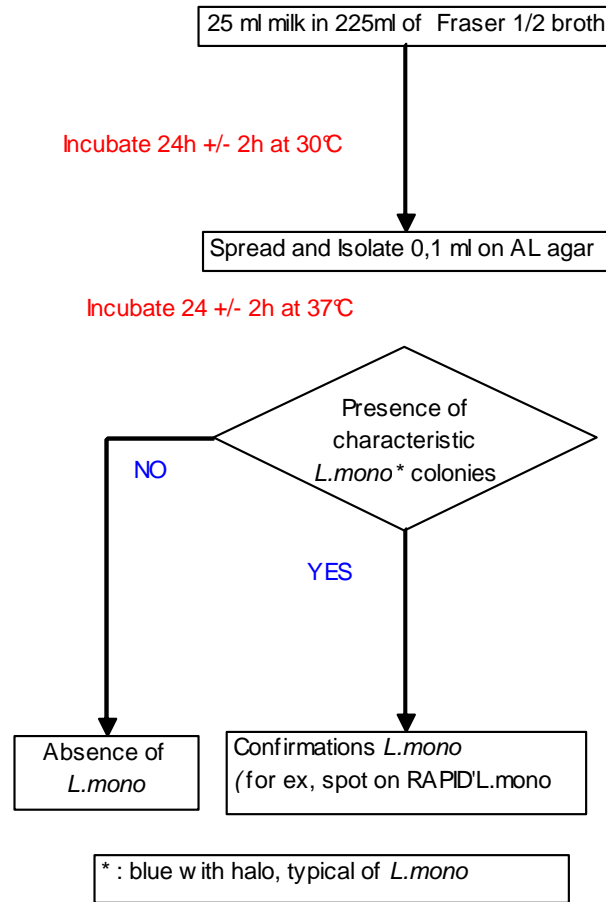
APPENDIX A

ANALYTICAL PROTOCOLS

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



ALTERNATIVE METHOD PROTOCOL



APPENDIX B

RELATIVE ACCURACY, RELATIVE SPECIFICITY,
RELATIVE SENSITIVITY

-

DETAILED RESULTS TABLES
FOR EACH SAMPLE CATEGORY

Legend

Total bacteria growth

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

Distribution of flora

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

+ : presence of halo
- : absence of halo

FN: false negative
PS: additional positive
FP: false positive

Meat products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #					Alternative method AL detection							Comparison (L.monocytogenes)		
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L. mono				Identification	Result
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A6	Choppd beefsteak	MP1	No	∅	-LE	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
A7	Hamburger	MP1	No	-LA	+LA	-MA	+MA	L.welshimeri	-	-MA	-MA	-MA	non	/	/	L.welshimeri	-	=
A15	Beef meat	MP1	No	+LA(1)	∅	+MB	+MB	L.monocytogenes	+	+LB(8)	+LB	+LB	oui	+	+	L.monocytogenes	+	=
A16	Hamburger	MP1	No	+LA	∅	+MA	+MB	L.monocytogenes	+	+LB	+LB	+MB	oui	+	+	L.monocytogenes	+	=
A17	Frozen ground beef	MP1	No	+MB	+MB	+MB	+MB	L.monocytogenes L.innocua	+	+MD	+MB	+MB	oui	+	+	L.monocytogenes L.innocua	+	=
A18	Roast pork	MP1	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
A23	Turkey cutlet	MP1	No	+LA	+LA	+MA	+MB	L.monocytogenes L.innocua	+	+MA	+MA	+MA	non	+	+	L.monocytogenes L.innocua	+	=
A24	Horse meat	MP1	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
A25	Pork chop	MP1	No	+MB	+MB	+LB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
A26	Pork chop	MP1	No	-MA	+MA	-MA	+MA	L.welshimeri	-	-MA	-MA	-MA	non	/	/	L.welshimeri	-	=
B16	Ground beef	MP1	No	+LB	+LB	+HB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
B18	Ground beef	MP1	No	+LA	+LA	+HB	+HB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
B19	Hala beef balls	MP1	No	-ME	-ME	-ME	-ME	/	-	-LE	-LE	-LE	/	/	/	/	-	=
D4	Minced beef	MP1	No	+LA(1)	-LE	+HB	+LB	L.monocytogenes	+	-LE	+LB(3)	+LB	non	+	+	L.monocytogenes	+	FN(24H)
E1	Hamburger	MP1	No	+MB	+MB	+MB	+MB	L.monocytogenes L.welshimeri	+	+HB	+HB	+HB	non	+	+	L.monocytogenes L.welshimeri	+	=
E3	Minced beef	MP1	No	-LA	+LA	+HB	+HA	L.welshimeri L.monocytogenes	+	-LA	-LA	-LA	oui	/	/	L.welshimeri	-	FN
E14	Hamburger	MP1	No	+LA	+LA	+HA	+MB	L.monocytogenes	+	+MB	+MB	+HB	non	+	+	L.monocytogenes	+	=
E15	Ground beef	MP1	No	∅	∅	∅	-LE	/	-	∅	∅	∅	/	/	/	/	-	=
E20	Pork meat	MP1	No	+MB	+MB	+HB	+HB	L.monocytogenes L.innocua	+	+MA	+MA	+MA	non	+	+	L.monocytogenes L.innocua	+	=
F3	Ground beef	MP1	No	+MA	+MA	+HA	+MA	L.monocytogenes	+	+HA	+HA	+HA	non	+	+	L.monocytogenes	+	=
F4	Frozen ground beef	MP1	No	+MB	+MB	+HA	+MA	L.monocytogenes L.innocua	+	+HA	+HA	+HA	non	+	+	L.monocytogenes	+	=
F8	Choppd beefsteak	MP1	No	-LB	-LB	-HB	-MB	L.innocua L.welshimeri	-	-MB	-MB	-MB	non	/	/	L.innocua L.welshimeri	-	=
F10	Turkey lef	MP1	No	+MB	+MB	+HB	+MB	L.monocytogenes L.innocua	+	+HC	+HA	+HB	oui	+	+	L.monocytogenes L.innocua	+	=
F11	Halal ground beef	MP1	No	+MB	+MB	+MB	+MB	L.monocytogenes L.welshimeri	+	+HA	+HA	+HB	non	+	+	L.monocytogenes L.welshimeri	+	=
F14	Halal ground beef	MP1	No	+LB	+LB	+MB	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
N18	Lamb cutlet	MP1	No	-ME	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
A1	Sausage	MP2	No	+LB	+LB	+MB	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
A8	Merguez	MP2	No	+LB(1)	+LD	+MD	+MB	L.welshimeri L.innocua L.monocytogenes	+	+MD(2)	+MD(2)	+MB	non	+	+	L.monocytogenes L.innocua	+	=
A20	Thai Chicken	MP2	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
B15	Chopped beef for bolognese	MP2	No	-LE	∅	-LE	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
B17	Tomato burger	MP2	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
B20	Tomato burger	MP2	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
D1	Merguez	MP2	No	+LB	+LB	+MB	+MB	L.monocytogenes	+	+HB	+HB	+MB	non	+	+	L.monocytogenes	+	=
E10	Burger	MP2	No	+MB	+MB	+HB	+MB	L.monocytogenes L.innocua	+	+HB	+HB	+MB	oui	+	+	L.monocytogenes L.innocua	+	=
E11	Burger	MP2	No	-MB	-MB	-MB	-HB	L.innocua L.grayi	-	-HB	-HB	-HB	non	/	/	L.innocua L.grayi	-	=
E18	Chipolatas	MP2	No	∅	-LE	-LE	-LE	/	-	∅	-LE	-LE	/	/	/	/	-	=
F5	Chipolatas	MP2	No	+MB	+MA	+HC	+HA	L.monocytogenes L.innocua	+	+HD	+HD	+HA	oui	+	+	L.monocytogenes	+	=
H1	Toulouse sausage	MP2	No	-LA	+LB	-MA	-MB	L.welshimeri	-	-MA	-MA	-MA	/	/	/	L.welshimeri	-	=
H2	Toulouse sausage	MP2	No	+LB	+LA	+HB	+HA	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
H3	Chipolatas	MP2	No	-LE	-LE	+MA	+MA	L.monocytogenes	+	+LA(2)	+LA(2)	+LB	non	+	+	L.monocytogenes	+	=
H5	Chipolatas	MP2	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
H7	Merguez	MP2	No	-MB	+MB	-MA	+MB	L.innocua	-	-MB	-MB	/	/	/	/	L.innocua	-	=
M15	Chipolatas	MP2	No	-LE	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	/	-	=
M16	Chipolatas with herbs	MP2	No	+MB	+MB	+MB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=

Meat products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection								Comparison (L.monocytogenes)
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification	Result	
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A4	Chorizo	MP3	No	+LB	+MD	+MB	+MD	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	+MD	+MD	+MB	oui	+	+	<i>L.monocytogenes</i> <i>L.innocua</i>	+	=
A9	Saucisson	MP3	No	+LD	+LB	+MB	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	+MB	+MB	+MB	non	+	+	<i>L.monocytogenes</i> <i>L.innocua</i>	+	=
A30	Ham	MP3	No	Ø	Ø	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D3	Ham	MP3	No	+LA	+MB	+HA	+MA	<i>L.monocytogenes</i>	+	+HA	+HA	+HA	non	+	+	<i>L.monocytogenes</i>	+	=
D18	Pizza	MP3	No	-LE	-ME	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
D19	Pizza with cheese	MP3	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
D20	Pizza	MP3	No	-LE	-LE	-LE	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
E4	Bacon	MP3	No	+MA	+MA	+MA	+MA	<i>L.monocytogenes</i>	+	+HA	+HA	+HA	oui	+	+	<i>L.monocytogenes</i>	+	=
E17	Bacon	MP3	No	-LE	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	/	-	=
F1	Snails pie	MP3	No	+MA	+MA	+MA	+MA	<i>L.monocytogenes</i>	+	+HA	+HA	+HA	oui	+	+	<i>L.monocytogenes</i>	+	=
F9	Shepherd's pie	MP3	No	+LB	+LB	+HB	+MB	<i>L.monocytogenes</i> <i>L.innocua</i>	+	+HB	+HB	+HB	non	+	+	<i>L.monocytogenes</i>	+	=
F13	Shepherd's pie	MP3	No	+LA	+LA	+HA	+HA	<i>L.monocytogenes</i>	+	+MA	+MA	+MA	non	+	+	<i>L.monocytogenes</i>	+	=
F15	Potjevleesch	MP3	No	+LB	+LA	+HC	+HA	<i>L.monocytogenes</i> <i>L.innocua</i> <i>L.welshimeri</i>	+	+MC	+MC	+MC	oui	+	+	<i>L.monocytogenes</i> <i>L.innocua</i> <i>L.welshimeri</i>	+	=
G1	Ham	MP3	No	+LA(3)	+LA(2)	+MA	+MA	<i>L.monocytogenes</i>	+	+LA	+LA	+LA	non	+	+	<i>L.monocytogenes</i>	+	=
G2	Ham	MP3	No	+MB	+LA	+MB	+MA	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	+MB	+MB	+MB	non	+	+	<i>L.monocytogenes</i> <i>L.welshimeri</i>	+	=
G5	Ham	MP3	No	+MA	+MA	+MA	+MA	<i>L.monocytogenes</i>	+	+MA	+MA	+HA	non	+	+	<i>L.monocytogenes</i>	+	=
H4	Saucisson	MP3	No	-LE	-LE	Ø	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
H6	Franfurter	MP3	No	+LA	+LB	+MA	+MB	<i>L.monocytogenes</i>	+	+MA	+MA	+MA	non	+	+	<i>L.monocytogenes</i>	+	=
K16	Shepherd's pie	MP3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
K17	Roasted Chicken	MP3	No	-LE	Ø	Ø	Ø	/	-	Ø	-ME	-ME	/	/	/	/	-	=
K18	Stuffed crepe	MP3	No	-LE	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
K19	Potjevlesch	MP3	No	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
K20	Chicken fillet cooked	MP3	No	Ø	-LE	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=

Dairy products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #					Alternative method AL detection							Comparison (L.monocytogenes)		
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono				Identification	Result
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A14	Gouda cheese	DP1	No	-ME	-ME	-ME	-ME	/	-	-HE	-HE	-HE	/	/	/	/	-	=
B9	Tomette de savoie cheese	DP1	No	-LE	-LE	-HE	-HE	/	-	Ø	-ME	-ME	/	/	/	/	-	=
B10	Reblochon cheese	DP1	No	+MB	+MB	+MB	+MB	L.monocytogenes	+	+HB	+HB	+HB	non	+	+	L.monocytogenes	+	=
F7	Reblochon cheese	DP1	No	-MA	-MA	-MA	-MA	L.innocua L.seeligeri	-	-HA	-HA	-HA	non	/	/	L.innocua	-	=
G7	Tomme cheese	DP1	No	+LB	+LA	+MB	+MA	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
G10	Maroilles cheese	DP1	No	-LE	Ø	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	/	-	=
G12	Munster cheese	DP1	No	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
G13	Maroilles cheese (raw milk)	DP1	No	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
G15	Comté cheese	DP1	No	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
G16	Munster cheese (raw milk)	DP1	No	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	/	-	=
G17	Munster cheese (raw milk)	DP1	No	Ø	Ø	-LE	Ø	/	-	-LE	-ME	-ME	/	/	/	/	-	=
G20	Le Chartreux cheese	DP1	No	-LE	-LE	-ME	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
I1	Salers cheese (raw milk)	DP1	Yes	+LB	+LB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
I3	Munster cheese (raw milk)	DP1	Yes	+LA(5)	Ø	+MA	+MA	L.monocytogenes	+	+LA	+LB	+LB	non	+	+	L.monocytogenes	+	=
I7	Munster cheese (raw milk)	DP1	Yes	+LA	+LB	+MA	+MB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
I9	St Nectaire cheese (raw milk)	DP1	No	+MB	+LB	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MA	non	+	+	L.monocytogenes	+	=
I10	Munster cheese (raw milk)	DP1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
J1	Raw milk cheese	DP1	Yes	-LE	-LE	Ø	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
J2	Reblochon cheese (raw milk)	DP1	Yes	+LB	+LB	+MB	+MB	L.monocytogenes	+	+LA	+MB	+MB	non	+	+	L.monocytogenes	+	=
J6	Tomme de savoie cheese	DP1	Yes	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
J7	Tomme cheese	DP1	Yes	-LE	Ø	-LE	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
J8	Reblochon cheese (raw milk)	DP1	Yes	Ø	-LE	Ø	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M9	Raw milk cheese	DP1	Yes	-LE	-LE	-2LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M11	Tomme de savoie cheese	DP1	Yes	-LE	-LE	-ME	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M12	St Félicien cheese	DP1	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N1	Camembert cheese (raw milk)	DP1	Yes	+LB	+LB	+MB	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
N2	Brie cheese (raw milk)	DP1	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N3	Brie cheese (raw milk)	DP1	Yes	+LB	+LA	+MA	+MA	L.monocytogenes	+	+LA	+LB	+LB	non	+	+	L.monocytogenes	+	=
N4	Tomme de savoie cheese	DP1	Yes	+MA	+MB	+MB	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
P1	Brie cheese (raw milk)	DP1	No	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	/	-	=
F2	Tomme goat's milk cheese	DP2	No	-LE	Ø	-LE	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
G6	Pyrénées goat's milk cheese	DP2	No	+LB	+LB	+MA	+MB	L.monocytogenes	+	+MA	+MA	+MB	non	+	+	L.monocytogenes	+	=
G8	Petit basque ewe's milk cheese	DP2	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
G9	Goat's milk cheese	DP2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
G11	Goat's milk cheese	DP2	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
G14	Goat's milk cheese	DP2	No	-ME	-LE	-ME	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
G18	Goat's milk cheese	DP2	No	-LE	-LE	-LE	-4LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
G19	Roquefort cheese	DP2	No	-LE	Ø	Ø	Ø	/	-	-LE	-LE	-LE	/	/	/	/	-	=
I2	Goat's milk cheese	DP2	Yes	+LB	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
I4	Crotin chavignol cheese	DP2	Yes	Ø	-LE	Ø	-LE	/	-	+LA(2)	+LB(2)	+LB(6)	non	+	+	L.monocytogenes	+	PS
I5	Goat's milk cheese	DP2	Yes	+LA(2)	+LA(2)	+MA	+MB	L.monocytogenes	+	+LA	+LA	+MB	non	+	+	L.monocytogenes	+	=
I6	Goat's milk cheese	DP2	Yes	+LA(3)	+LA	+MA	+MB	L.monocytogenes	+	+LA	+LB	+MB	non	+	+	L.monocytogenes	+	=
I8	Goat's milk cheese	DP2	Yes	+MB	+LB	+MB	+MB	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
I11	Goat's milk cheese	DP2	No	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
I12	Goat's milk cheese	DP2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
J3	Goat's milk cheese	DP2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
J4	Ste Maure cheese	DP2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
J5	Valencay cheese	DP2	Yes	-LE	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
K1	Valencay cheese	DP2	No	Ø	Ø	-LE	Ø	/	-	-LE	-LE	-LE	/	/	/	/	-	=
K2	Ste Maure cheese	DP2	No	Ø	-LE	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
K3	Goat's milk cheese	DP2	No	Ø	Ø	Ø	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M13	Goat's milk cheese	DP2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M14	Goat's milk cheese	DP2	Yes	Ø	Ø	-LE	Ø	/	-	-LE	-LE	-LE	/	/	/	/	-	=
N5	Goat's milk cheese	DP2	Yes	+LB	+LB	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MA	non	+	+	L.monocytogenes	+	=
N6	Goat's milk cheese	DP2	Yes	+LB	+LB	+MB	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
O1	Ste Maure cheese	DP2	Yes	+LB	+LB	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=

Dairy products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection							Comparison (L.monocytogenes)	
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification		Result
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A2	Pastry	DP3	No	∅	-LE	∅	-ME	/	-	∅	∅	∅	/	/	/	/	-	=
A10	Strawberries pastry	DP3	No	+MA	+MA	+MB	+MA	L.monocytogenes L.innocua	+	+HB	+HB	+MB	oui	+	+	L.monocytogenes	+	=
A19	Whipped cream pastry	DP3	No	+MB	+MB	+MB	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	oui	+	+	L.monocytogenes L.innocua	+	=
B8	Pastry	DP3	No	+MB	+MB	+HB	+HB	L.monocytogenes L.innocua	+	+HA	+HB	+HB	non	+	+	L.monocytogenes L.innocua	+	=
F6	Chocolate cream pastry	DP3	No	-HE	-LE	-ME	-ME	/	-	-HE	-HE	-HE	/	/	/	/	-	=
G3	Apple pie	DP3	No	-LA	+LA	-MA	+MA	L.innocua	-	-MA	-MB	-MB	/	/	/	L.innocua	-	=
I13	Chocolate cream pastry	DP3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes	+	+MC	+MC	+MC	non	+	+	L.monocytogenes	+	=
I14	Chocolate cream pastry	DP3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+HB	non	+	+	L.monocytogenes	+	=
I15	Moka	DP3	Yes	+MA	+MB	+MA	+MB	L.monocytogenes	+	+MA	+MA	+HA	non	+	+	L.monocytogenes	+	=
I16	Cake	DP3	Yes	+MB	+MA	+MB	+MA	L.monocytogenes	+	+MB	+MB	+HB	non	+	+	L.monocytogenes	+	=
I17	Butter cream	DP3	No	-MB	+MB	-MB	+MB	L.innocua	-	-MB	-MB	-MA	/	/	/	L.innocua	-	=
I18	Milk powder	DP3	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
I19	Milk powder	DP3	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
I20	Milk powder	DP3	Yes	+MA	+MA	+MB	+MB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
I21	Milk powder	DP3	Yes	+MA	+MA	+MB	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
J17	Light cream	DP3	No	∅	∅	-ME	-ME	/	-	∅	-LE	-LE	/	/	/	/	-	=
J18	Whipped cream pastry	DP3	No	-LE	-LE	∅	-LE	/	-	∅	∅	∅	/	/	/	/	-	=
J19	Millefeuille pastry	DP3	No	-LE	-LE	∅	-ME	/	-	∅	∅	∅	/	/	/	/	-	=
J20	Milk powder	DP3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=
K14	Milk powder	DP3	No	-LE	-LE	-ME	∅	/	-	-LE	-LE	-LE	/	/	/	/	-	=
K15	Milk powder	DP3	No	∅	-LE	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=

Seafood products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection								Comparison (L.monocytogenes)
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification	Result	
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A11	Fish fillet	SF1	No	-MA	+MA	-MA	+MA	L.innocua	-	-HB	-HB	-HB	non	/	/	L.innocua	-	=
A22	Tartar of white fish	SF1	No	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
B14	Crayfish	SF1	No	+HB	+HA	+HB	+HA	L.monocytogenes	+	+HA	+HB	+HA	non	+	+	L.monocytogenes	+	=
C6	Cod fillet	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C7	Cocktail de fruit de mer	SF1	No	-MA	+MA	-HA	+MA	L.innocua	-	-MA	-MA	-MA	non	/	/	L.innocua	-	=
C10	Sushis	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C13	Fish fillet	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C14	Fish brochette	SF1	No	Ø	-LE	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
F16	Shrimps	SF1	No	-MA	-MA	-HA	-MA	L.innocua	-	-HA	-HA	-HA	oui	/	/	L.innocua	-	=
F17	Shrimps	SF1	No	+LB	+LB	+HA	+HA	L.monocytogenes	+	+MA	+MA	+MA	/	+	+	L.monocytogenes	+	=
F18	Shrimps	SF1	No	+MA	+MB	+HB	+HA	L.monocytogenes	+	+HA	+HA	+HA	/	+	+	L.monocytogenes	+	=
F19	Shrimps	SF1	No	+MA	+MA	+HB	+MB	L.monocytogenes	+	+MA	+MA	+MA	/	+	+	L.monocytogenes	+	=
J12	Fish fillet	SF1	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+LA	+LA	+MA	non	+	+	L.monocytogenes	+	=
J13	Perch fillet	SF1	Yes	+LA(3)	+LA(3)	+MA	+MA	L.monocytogenes	+	+LA	+LA	+LA	non	+	+	L.monocytogenes	+	=
J14	Whiting fillet	SF1	Yes	+LA	+LA	+MB	+MA	L.monocytogenes	+	+LA	+LA	+MA	non	+	+	L.monocytogenes	+	=
J15	Saithe fillet	SF1	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
J16	Fish fillet	SF1	Yes	+MA	+MB	+MA	+MB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
K4	Fish fillet	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
K8	Fish fillet	SF1	No	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
K9	Saithe fillet	SF1	No	-LE	-LE	-LE	-LE	/	-	Ø	-ME	-ME	/	/	/	/	-	=
K10	Whiting fillet	SF1	No	Ø	Ø	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	/	-	=
K11	Fish fillet	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
K12	Perch fillet	SF1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
P4	Gurnard fillet	SF1	Yes	+LA	+LA	+MA	+LA	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
P5	Saithe fillet	SF1	Yes	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
P6	Cod fillet	SF1	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
P8	Cod fillet	SF1	Yes	+LA	+LA	+LA	+LA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
B12	Smoked herring	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C2	Smoked salmon Ireland	SF2	No	Ø	-ME	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C8	Smoked haddock	SF2	No	Ø	-LE	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C11	Smoked salmon	SF2	No	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
F12	Smoked salmon	SF2	No	+HB	+HA	-HE	+MA	L.monocytogenes L.innocua	+	+HD	+HB	+HC	oui	+	+	L.monocytogenes L.innocua	+	=
H8	Smoked salmon	SF2	No	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+HA	non	+	+	L.monocytogenes	+	=
H9	Smoked salmon	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H10	Smoked herring	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H11	Smoked salmon	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H12	Smoked salmon	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H13	Smoked salmon Scotland	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H14	Smoked salmon Scotland	SF2	No	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
H15	Kippers	SF2	No	Ø	Ø	-LE	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H16	Smoked herring	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H17	Tartar of smoked salmon	SF2	No	-MA	+LA	-HA	+HA	L.innocua	-	-MA	-MA	-MA	/	/	/	/	-	=
H18	Smoked salmon	SF2	No	+MA	+LB	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
L9	Smoked salmon	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L10	Smoked salmon	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L13	Smoked trout	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L14	Smoked salmon	SF2	No	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L15	Smoked salmon	SF2	No	+LA	+LA	+MA	+LA	L.monocytogenes	+	+LA	+LB	+LB	non	+	+	L.monocytogenes	+	=
L19	Kippers	SF2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
P7	Smoked haddock	SF2	Yes	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
Q11	Smoked salmon	SF2	Yes	+MA	+MA	+MA	+LA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
Q12	Smoked salmon	SF2	Yes	+MA	+MA	+MA	+LA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
Q13	Smoked salmon	SF2	Yes	+MA	+HA	+MA	+LA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
Q14	Smoked salmon	SF2	Yes	+MA	+MA	+MA	+LA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=

Seafood products

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection								Comparison (L.monocytogenes)	
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification	Result		
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono				
C4	Ready-to-eat meal	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
C12	Frozen pre-cooked squids	SF3	No	+MB	+MB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	+HB	non	+	+	L.monocytogenes	+	=
E19	Tuna sandwich	SF3	No	+LB	∅	+MA	+MA	L.monocytogenes	+	+LB	+MB	+MB	+MB	non	+	+	L.monocytogenes	-	=
H20	Salmon salad	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
J9	Fish gratin	SF3	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+LA	+LA	+MA	+MA	non	+	+	L.monocytogenes	+	=
J10	Cooked red mullet fillet	SF3	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+LA	+LA	+MA	+MA	non	+	+	L.monocytogenes	+	=
J11	Cooked salmon	SF3	Yes	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
K5	Cooked salmon	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
K6	Cooked red mullet fillet	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
K7	Fish gratin	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
K13	Salmon brochette	SF3	No	∅	∅	∅	∅	/	-	∅	∅	∅	/	/	/	/	-	=	
L17	Stuffed squids	SF3	No	+LB(2)	+LA(4)	+LB	+LB	L.monocytogenes L.seeligeri	+	+LA	+LB	+MB	non	+	+	L.monocytogenes L.seeligeri	+	=	
Q1	Fish with sauce	SF3	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=	
Q2	Cooked salmon	SF3	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=	
Q3	Fish with vegetables	SF3	Yes	+LA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=	

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection							Comparison (L.monocytogenes)	
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification		Result
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
B1	Frozen french fries	VG1	No	Ø	Ø	-ME	-ME	/	-	-LE	-LE	-LE	/	/	/	/	-	=
B3	Frozen potatoes	VG1	No	-LE	Ø	Ø	Ø	/	-	-ME	-ME	-ME	/	/	/	/	-	=
B4	Frozen french fries	VG1	No	+LB	+LA	+HB	+HB	L.monocytogenes L.seeligeri	+	+MA	+HB	+HB	oui oui	+	+	L.monocytogenes L.seeligeri	+	=
D6	Frozen french fries	VG1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D7	Frozen french fries	VG1	No	+MA	+MA	+HA	+MA	L.monocytogenes	+	+HA	+HA	+HA	non	+	+	L.monocytogenes	+	=
D8	Frozen potatoes	VG1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D9	Frozen potatoes	VG1	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
D10	Frozen french fries	VG1	No	-LA	-LA	-MA	-MA	L.seeligeri	-	-MA	-MA	-MA	non	/	/	L.seeligeri	-	=
D12	Frozen peas	VG1	No	Ø	-LE	-LE	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
D13	Frozen peas	VG1	No	-LE	-LE	-LE	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
D14	Frozen french fries	VG1	No	+MA	+MB	+MB	+MB	L.monocytogenes L.seeligeri	+	+HA	+HA	+HA	non	+	+	L.monocytogenes L.seeligeri	+	=
D15	Frozen french fries	VG1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D16	Frozen french fries	VG1	No	Ø	-LE	-LE	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
D17	Frozen french fries	VG1	No	+MA	+MB	+HA	+MB	L.monocytogenes	+	+HA	+HA	+HA	non	+	+	L.monocytogenes	+	=
E8	Frozen french fries	VG1	No	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
E9	Frozen french fries	VG1	No	Ø	Ø	-ME	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L1	Frozen french fries	VG1	No	-LE	-LE	+MA	+MA	L.monocytogenes	+	+LA(2)	+LC(2)	+LB	non	+	+	L.monocytogenes	+	=
L2	Frozen french fries	VG1	No	+MA	+MB	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
L3	Frozen roasted potatoes	VG1	No	+MA	+MA	+MA	+MB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
L4	Frozen french fries	VG1	No	+LB	+LB	+MB	+MB	L.monocytogenes L.seeligeri	+	+LB	+MB	+MB	non	+	+	L.monocytogenes L.seeligeri	+	=
L5	Cauliflower	VG1	No	+MB	+MA	+MA	+HA	L.monocytogenes	+	+MA	+MB	+MA	non	+	+	L.monocytogenes	+	=
L6	Frozen french fries	VG1	No	+MB	+MA	+MB	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
L7	Frozen french fries	VG1	No	+MB	+MB	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
B5	Peas	VG2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
B7	Broccoli	VG2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C1	Steam vegetables	VG2	No	+MA	+MA	+MA	+HA	L.monocytogenes	+	+MA	+MA	+HA	oui	+	+	L.monocytogenes	+	=
D2	Green beans	VG2	No	Ø	-LE	-ME	-ME	/	-	Ø	Ø	Ø	/	/	/	/	-	=
E6	Broccoli	VG2	No	-ME	-LE	-ME	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
H19	Reddish	VG2	No	-ME	-LE	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	/	-	=
M1	Grated carrots	VG2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M2	Grated carrots	VG2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M3	Cucumber	VG2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M4	Salad	VG2	Yes	-LE	-LE	-ME	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
M5	Grated carrots	VG2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M6	Grated carrots	VG2	No	Ø	Ø	Ø	Ø	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M7	Cucumber	VG2	No	-LE	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M8	Salad	VG2	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
N7	Salad	VG2	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N8	Cucumber	VG2	Yes	+MA	+MA	+MA	+HA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N9	Cucumber	VG2	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MA	non	+	+	L.monocytogenes	+	=
N10	Grated carrots	VG2	Yes	+LA	+LA	+MA	+HA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
O2	Salad	VG2	Yes	+LA	+LA	+LB	+MB	L.monocytogenes	+	+MA	+MA	+MB	non	+	+	L.monocytogenes	+	=
O3	Salad	VG2	Yes	+LB	+MA	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MA	non	+	+	L.monocytogenes	+	=
O4	Grated carrots and celeri	VG2	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
O5	Grated carrots and celeri	VG2	Yes	Ø	+LA(1)	+MA	+MA	L.monocytogenes	+	+LA	+LA	+MA	non	+	+	L.monocytogenes	+	=
O6	Salad	VG2	Yes	+LA	-LE	+MA	+LB	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=

Vegetables

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection							Comparison (L.monocytogenes)	
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification		Result
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A3	Tomato salad	VG3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
A21	Thai salad	VG3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
B2	Fried vegetables	VG3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D5	Tagliatelles carbonara	VG3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
D11	Fried vegetables	VG3	No	Ø	-LE	-ME	-LE	/	-	Ø	-ME	-ME	/	/	/	/	-	=
E2	Tabouleh	VG3	No	+LA	+LA	+MA	+MB	L.monocytogenes	+	+HA	+HA	+HA	non	+	+	L.monocytogenes	+	=
E5	Fried vegetables and mushrooms	VG3	No	-LE	-LE	-LE	-LE	/	-	-ME	-ME	-ME	/	/	/	/	-	=
E12	Tabouleh	VG3	No	-LE	-LE	-LE	-LE	/	-	-LE	-ME	-ME	/	/	/	/	-	=
E13	Paëlla	VG3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
H21	Pasta and chicken salad	VG3	No	+MB	+MB	+MC	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
O7	Fried vegetables	VG3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
O8	Fried vegetables	VG3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
O9	Ratatouille	VG3	Yes	+MB	+MB	+LB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
O10	Fried vegetables	VG3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes L.innocua	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.innocua	+	=
O11	Fried vegetables	VG3	Yes	+MA	+MB	+MA	+LA	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
O12	Fried vegetables	VG3	Yes	+MA	+MB	+LA	+LB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
O13	Fried vegetables	VG3	Yes	+MB	+MB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
O14	Ratatouille	VG3	Yes	+MA	+MB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=

Code	Sample	Cat.	Artif.	Reference method NF EN ISO 11290-1 #						Alternative method AL detection								Comparison (L.monocytogenes)
				Fraser 1/2		Fraser		Identification	Result	Reading after 22h	Reading after 48h	Storage 72H at +2-8°C	Confirmation L.mono			Identification	Result	
				AL	PALCAM	AL	PALCAM						Purif	Spot RLM	iQ Lmono			
A27	Rinsing water	EN1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
E7	Rinsing water vegetables	EN1	No	-LE	Ø	Ø	Ø	/	-	-LE	-ME	-ME	/	/	/	/	-	=
F20	Washing water mushrooms	EN1	No	-LE	-LE	-ME	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
M19	Process water	EN1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M20	Rinsing water fish retail	EN1	Yes	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N11	Process water	EN1	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N12	Process water	EN1	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N13	Process water	EN1	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N14	Process water	EN1	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N19	Process water	EN1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N20	Process water	EN1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N21	Process water	EN1	No	-ME	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
N22	Process water	EN1	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
Q5	Process water	EN1	Yes	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
Q6	Process water	EN1	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
Q7	Process water	EN1	Yes	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
Q8	Process water	EN1	Yes	+MA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
Q9	Process water	EN1	Yes	+LA	+LA	+MA	+LA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
Q10	Process water	EN1	Yes	+LA	+LA	+LA	+LA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
A5	Surface butchry retail	EN2	No	+LB	+LB	+MB	+MB	L.monocytogenes L.welshimeri	+	+MB	+MB	+MB	non	+	+	L.monocytogenes L.welshimeri	+	=
A31	Surface cutting table	EN2	No	Ø	-ME	-LE	-LE	/	-	Ø	-LE	-LE	/	/	/	/	-	=
L11	Surface fish retail	EN2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L16	Surface fish retail	EN2	No	+LA(1)	Ø	+MA	+LA	L.monocytogenes	+	+LA(3)	+LA(3)	+LA	non	+	+	L.monocytogenes	+	=
L18	Cutting board fish retail	EN2	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M18	Ladle catering retail	EN2	No	+LB	+LB	+MB	+MB	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
O15	Floor delicatessen retail	EN2	No	-ME	-LE	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	/	-	=
O16	Doorknob	EN2	No	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
O17	Area Workshop	EN2	No	-LE	-ME	-ME	-ME	/	-	-ME	-ME	-ME	/	/	/	/	-	=
O18	Interior door refrigerator	EN2	No	Ø	Ø	-LE	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
O19	Wall small fridge	EN2	No	-LE	-LE	-LE	-ME	/	-	-ME	-ME	-ME	/	/	/	/	-	=
O20	Shelves cold room	EN2	No	-LE	-LE	-LE	-LE	/	-	-LE	-LE	-LE	/	/	/	/	-	=
P3	Knife Cheese retail	EN2	No	+MB	+LB	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
P10	Cutting knife for pâté	EN2	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
P11	Blade Slicer	EN2	Yes	+MA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MB	+MA	non	+	+	L.monocytogenes	+	=
P12	Balance surface	EN2	Yes	+MB	+MB	+MA	+MA	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
P13	Floor delicatessen retail	EN2	Yes	+MB	+LB	+MB	+MB	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
P14	Floor colf room	EN2	Yes	-ME	-LE	-ME	-LE	/	-	-ME	-HE	-HE	/	/	/	/	-	=
P15	Shelves cold room	EN2	Yes	+LA	+LA	+MA	+LB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
P16	Trolley surface	EN2	Yes	+MB	+LB	+MA	+LB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
A13	Scraps from delicatessen retail outlet	EN3	No	-LB	+LB	+MB	+MA	L.welshimeri Linnocua L.monocytogenes	+	+MD(3)	+MD	+MB	non	+	+	L.monocytogenes	+	=
A28	Scraps from smoked salmon	EN3	No	Ø	Ø	Ø	-LE	/	-	Ø	Ø	Ø	/	/	/	/	-	=
A29	Scraps from ham	EN3	No	Ø	-LE	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
B6	Scraps from delicatessen retail outlet	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
B13	Scraps from smoked salmon	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C3	Scraps from smoked salmon	EN3	No	Ø	Ø	+MA	+MA	L.monocytogenes	+	+LA(6)	+LA(4)	+LA	non	+	+	L.monocytogenes	+	=
C5	Résidus stand poissonnerie	EN3	No	+LA	+LA	+HA	+MA	L.monocytogenes	+	+LA	+LA	+MA	non	+	+	L.monocytogenes	+	=
C9	Scraps from smoked salmon	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
C15	Scraps from fish cutting line	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
E16	Scraps from butchery retail outlet	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
G4	Scraps from butchery retail outlet	EN3	No	-LA	+LA	-MA	+MA	L.welshimeri	-	-MA	-MA	-MA	/	/	/	L.welshimeri	-	=
H22	Scraps from sausages retail outlet	EN3	No	-LA	+LA	-MA	-MA	L.welshimeri	-	-MA	-MA	-MA	/	/	/	L.welshimeri	-	=
H23	Scraps from smoked salmon	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L8	Scraps from smoked salmon	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L12	Scraps from smoked trout	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
L20	Scraps from fish cutting line	EN3	No	Ø	Ø	Ø	Ø	/	-	Ø	Ø	Ø	/	/	/	/	-	=
M17	Scraps from delicatessen retail outlet	EN3	No	+LB(3)	-LE	+MB	+MA	L.monocytogenes	+	+LA	+MB	+MB	non	+	+	L.monocytogenes	+	=
N15	Meat scraps	EN3	Yes	+LA	+LA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=
N16	Salad scraps	EN3	Yes	+LA(2)	Ø	+MA	+MA	L.monocytogenes	+	+LA	+LA	+LA	non	+	+	L.monocytogenes	+	=
N17	Cheese scraps	EN3	Yes	+MB	+MA	+MB	+MB	L.monocytogenes	+	+MB	+MB	+MB	non	+	+	L.monocytogenes	+	=
P2	Cheese scraps	EN3	No	+LC(1)	-LE	+MA	+MA	L.monocytogenes	+	+LA(6)	+LA(6)	+LB(4)	non	+	+	L.monocytogenes	+	=
P9	Cheese scraps	EN3	Yes	+MA	+LA	+MA	+LA	L.monocytogenes	+	+MA	+MB	+MB	non	+	+	L.monocytogenes	+	=
Q4	Cooked fish scraps	EN3	Yes	+LA	+MA	+MA	+MA	L.monocytogenes	+	+MA	+MA	+MA	non	+	+	L.monocytogenes	+	=

APPENDIX C

INCLUSIVITY / EXCLUSIVITY

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

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

APPENDIX D

INTERLABORATORY STUDY

-

DETAILED RESULTS OF
PARTICIPANT LABORATORIES

Laboratory A

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

Laboratory B

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

Laboratory C

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

Laboratory D

Reference	Reference method				Result	Comparison / expected results	Alternative method				Comparison / expected results
	Fraser 1/2		Fraser				blue colonies with halo		Confirmation on RLM	Result	
	AL	PALCAM	AL	PALCAM			24H	48H			
1	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
2	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
3	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
4	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
5	-	-	-	-	-	=	-	-	/	-	=
6	-	-	-	-	-	=	-	-	/	-	=
7	-	-	-	-	-	=	-	-	/	-	=
8	-	-	-	-	-	=	-	-	/	-	=
9	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
10	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
11	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
12	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
13	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
14	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
15	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
16	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
17	-	-	-	-	-	=	-	-	/	-	=
18	-	-	-	-	-	=	-	-	/	-	=
19	-	-	-	-	-	=	-	-	/	-	=
20	-	-	-	-	-	=	-	-	/	-	=
21	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
22	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
23	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
24	+	+	+	+	<i>L.monocytogenes</i>	=	+	/	+	<i>L.monocytogenes</i>	=
Total flora of milk (UFC/ml):				30							

Laboratory E

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

Laboratory F

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

Laboratory G

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

Laboratory H

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

Laboratory I

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

Laboratory J

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

Total flora of milk (UFC/ml): 20

Laboratory K

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

Total flora of milk (UFC/ml): 1

Laboratory L

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

Total flora of milk (UFC/ml): NC

Laboratory M

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

Total flora of milk (UFC/ml): <1

Laboratory N

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

Total flora of milk (UFC/ml): 2

Laboratory O

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

Total flora of milk (UFC/ml): 1

Laboratory P

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

APPENDIX E
INTERLABORATORY STUDY
-
ACCORDANCE

ALTERNATIVE METHOD

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negative pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negatives pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negatives pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

REFERENCE METHOD

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negative pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negatives pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negatives pairs	Probability of identical result pairs
Laboratory A	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory B	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory C	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory D	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory E	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory F	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory G	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory I	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory J	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory K	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory L	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory M	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory N	8	8	1,00	1,00	0,00	0,00	1,00
Laboratory P	8	8	1,00	1,00	0,00	0,00	1,00
Mean:							1,00
Accordance:							100%

APPENDIX F

INTERLABORATORY STUDY - CONCORDANCE

ALTERNATIVE METHOD

Number of laboratories 14

Number of negatives per laboratory 8

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			

Number of laboratories 14

Number of positives per laboratory 8

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			

Number of laboratories 14

Number of positives per laboratory 8

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			

REFERENCE METHOD

Number of laboratories 14

Number of negatives per laboratory 8

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			

Number of laboratories 14

Number of positives per laboratory 8

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			

Number of laboratories 14

Number of positives per laboratory 8

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
Laboratory A	8	8	832	832
Laboratory B	8	8	832	832
Laboratory C	8	8	832	832
Laboratory D	8	8	832	832
Laboratory E	8	8	832	832
Laboratory F	8	8	832	832
Laboratory G	8	8	832	832
Laboratory I	8	8	832	832
Laboratory J	8	8	832	832
Laboratory K	8	8	832	832
Laboratory L	8	8	832	832
Laboratory M	8	8	832	832
Laboratory N	8	8	832	832
Laboratory P	8	8	832	832
Total			11648	11648
Concordance	100,00%			