

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

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

Quantitative method

***Listeria* PreciTM Enumeration method
for the enumeration of *Listeria* spp
in food products and environmental samples**

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This report contains 76 pages including 44 pages of appendices.
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Preamble

- Protocols of validation:

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

- Reference method:

- EN ISO 11290-2 (June 2017): Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp – Part2: Enumeration method

- Application scope:

- **All human food products** by a validation testing of a broad range of foods, including:
 - meat products,
 - dairy products,
 - seafood products,
 - vegetal products,
 - composite foods
- **Environmental samples.**

- Certification body:

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

Definitions

- **Method comparison study**

The method comparison study is the part of the validation process that is performed in the expert laboratory. It consists of four parts:

- A comparative study of the results of the reference method to the results of the alternative method in a variety of different items (naturally and/or artificially) contaminated samples (so-called relative trueness study).
- A comparative study of the results of the reference method to the results of the alternative method in artificially contaminated samples using replicates of a single item per category. The data are analyzed using the accuracy profile (AP) approach (so-called AP study).
- An inclusivity/exclusivity study of the alternative method.

- **Relative trueness study**

The relative trueness study is a comparative study between the results obtained by the reference method and the results of the alternative method.

The relative trueness is the degree of correspondence between the response obtained by the reference method and the response obtained by the alternative method on identical samples.

- **Accuracy profile study**

The accuracy profile study is a comparative study between the results obtained by the reference method and the results of the alternative method.

The accuracy profile is the graphical representation of the capacity of measurement of the quantitative method, obtained by combining acceptability intervals and β -expectation tolerance intervals, both reported to different levels of the reference value.

- **Inclusivity and exclusivity study**

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

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

- **Interlaboratory study**

The interlaboratory study is a study performed by multiple laboratories testing identical samples at the same time, the results of which are used to estimate alternative-method performance parameters.

The aim of an interlaboratory study is to determine the variability of the results obtained in different laboratories using identical samples.

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Appendices

- Appendix A: Protocol of the alternative method
- Appendix B: Protocol of the reference method
- Appendix C: Artificial contaminations
- Appendix D: Relative trueness study – Raw results
- Appendix E: Relative trueness study – Statistical calculations
- Appendix F: Accuracy profile study – Raw results
- Appendix G: Inclusivity / Exclusivity study – Raw results
- Appendix H: Interlaboratory study – Raw results

1. Introduction

The present document introduces the summary report for the AFNOR Certification validation studies of the Listeria Precis™ enumeration of *Listeria* spp. method according to the ISO 16140-2:2016 standard for a broad range of foods and environmental samples.

For this validation study, Oxoid™ 24 LEB diluent was used and the new formulation of Thermo Scientific™ Oxoid™ *Brilliance*™ Listeria Agar (ISO) media was used.

The scope of this method relates to a broad range of foods and environmental samples.

For the sensitivity study and the accuracy profile study, all the tests were carried out in 2022 according to the ISO 16140-2:2016 standards and to the requirements described in the project version 7 of the AFNOR rules.

For the inclusivity and exclusivity study, the validation data of the Listeria Precis™ detection method of *Listeria* spp were reinterpreted.

For the interlaboratory study, the validation data of the Listeria Precis™ enumeration method for the enumeration of *Listeria monocytogenes* were reinterpreted.

2. Protocols of the methods

2.1. Alternative method

2.1.1. Principle of the method

The *Listeria* Precis™ method is based on the use of a specific chromogenic media: the Brilliance™ *Listeria* Agar.

Brilliance *Listeria* Agar uses the chromogen X-glucoside for presumptive identification of *Listeria* spp. This chromogen is cleaved by β -glucosidase which is common to all *Listeria* species. Other organisms that possess this enzyme, such as enterococci, are inhibited by the selective agents within the medium; lithium chloride, polymyxin B and nalidixic acid, whilst amphotericin inhibits the growth of any yeasts and moulds present in the sample.

Listeria monocytogenes and pathogenic *Listeria ivanovii* are then further differentiated by their ability to produce the phospholipase enzyme, lecithinase. This enzyme hydrolyses the lecithin in the medium, producing an opaque white halo around the colony.

2.1.2. Protocols of the method

The diagram summarizing the method is shown in Appendix A.

1. Dilute the sample in 24 LEB broth supplemented with the buffer or a diluent described in ISO 11290-2. It is as well possible to use the ISO 6887 series technical rules.
2. Three modalities of inoculation are available:
 - Surface spreading protocol 1: inoculate a single Brilliance™ *Listeria* Agar (ISO) plate with 100 μ L and incubate for 45–51 hours at 37 \pm 1°C.
 - Surface spreading protocol 2: inoculate 1 mL across three Brilliance™ *Listeria* Agar (ISO) plates and incubate for 45–51 hours at 37 \pm 1°C.
 - Pour plate protocol: inoculate 1 mL in a Petri dish and add 20 \pm 2 ml of Brilliance™ *Listeria* Agar (ISO) media and incubate for 45–51 hours at 37 \pm 1°C.

It is possible to read the plate at 24 hours, but the final result is considered at the end of the prescribed incubation time.

It is as well possible to store the plates for 72 hours at 2-8°C before reading.

3. Inspect the plate for characteristic blue/green colonies with and without halos and count.
4. Confirm using one of the following options:
 - In the context of NF Validation:
 - Thermo Scientific™ PrecisCheck™ lateral flow *Listeria* species test to get the result in the next quarter,
 - Microgalleries (e.g. Oxoid™ Microbact™ 12L biochemical galleries),
 - A spot on Palcam,
 - The tests described in the ISO 11290-1:2017 reference method after a purification step,

- Molecular hybridization methods (Isothermal or PCR) validated according to the ISO 16140-2 standard and the NF Validation technical rules (for instance, SureTect™ *Listeria* species PCR Assay (Cat. No. PT0200A) and SureTect™ *Listeria monocytogenes* PCR Assay (Cat. No. PT0300A), respectively NF VALIDATION™ certificate UNI 03/08-11/13 and NF VALIDATION™ certificate UNI 03/09-11/13)
- In the context of ISO general rules:
 - An appropriate ISO 16140-6 validated method,
 - The tests described in the ISO 11290-1 reference method after a purification step,
 - Molecular hybridization as described in EN ISO 7218 using, for instance, SureTect™ *Listeria* species PCR Assay (Cat. No. PT0200A) and SureTect™ *Listeria monocytogenes* PCR Assay (Cat. No. PT0300A), that are validated according to the ISO 16140-2 standard (respectively NF VALIDATION™ certificate UNI 03/08-11/13 and NF VALIDATION™ certificate UNI 03/09-11/13).

5. Calculate CFU/g or CFU/ml of sample according to the ISO 7218 rules.

The diluent used for the alternative method is therefore *Listeria* 24 LEB broth, while that used for the reference method is supplemented with half-Fraser. The study design is therefore an unpaired study design.

2.1.3. Restrictions

There are no restrictions on use for the *Listeria* Precis™ enumeration method for *Listeria* spp.

2.1.4. Scope of the method

The scope of the *Listeria* Precis™ enumeration method for *Listeria* spp is a broad range of foods and environmental samples. The following categories were tested:

- Meat products,
- Dairy products,
- Seafood products,
- Vegetal products,
- Composite foods,
- Environmental samples.

2.2. Reference method

The EN ISO 11290-2/A1:2004 standard, Horizontal method for the detection and enumeration of *Listeria monocytogenes* – Part 2: Enumeration of *Listeria monocytogenes* in foods, was used for the initial validation study and for the two renewal studies.

This standard was updated in 2017, that's why the method described in the new standard EN ISO 11290-2:2017 "Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp – Part 2: Enumeration method" has been used as reference method for additional tests.

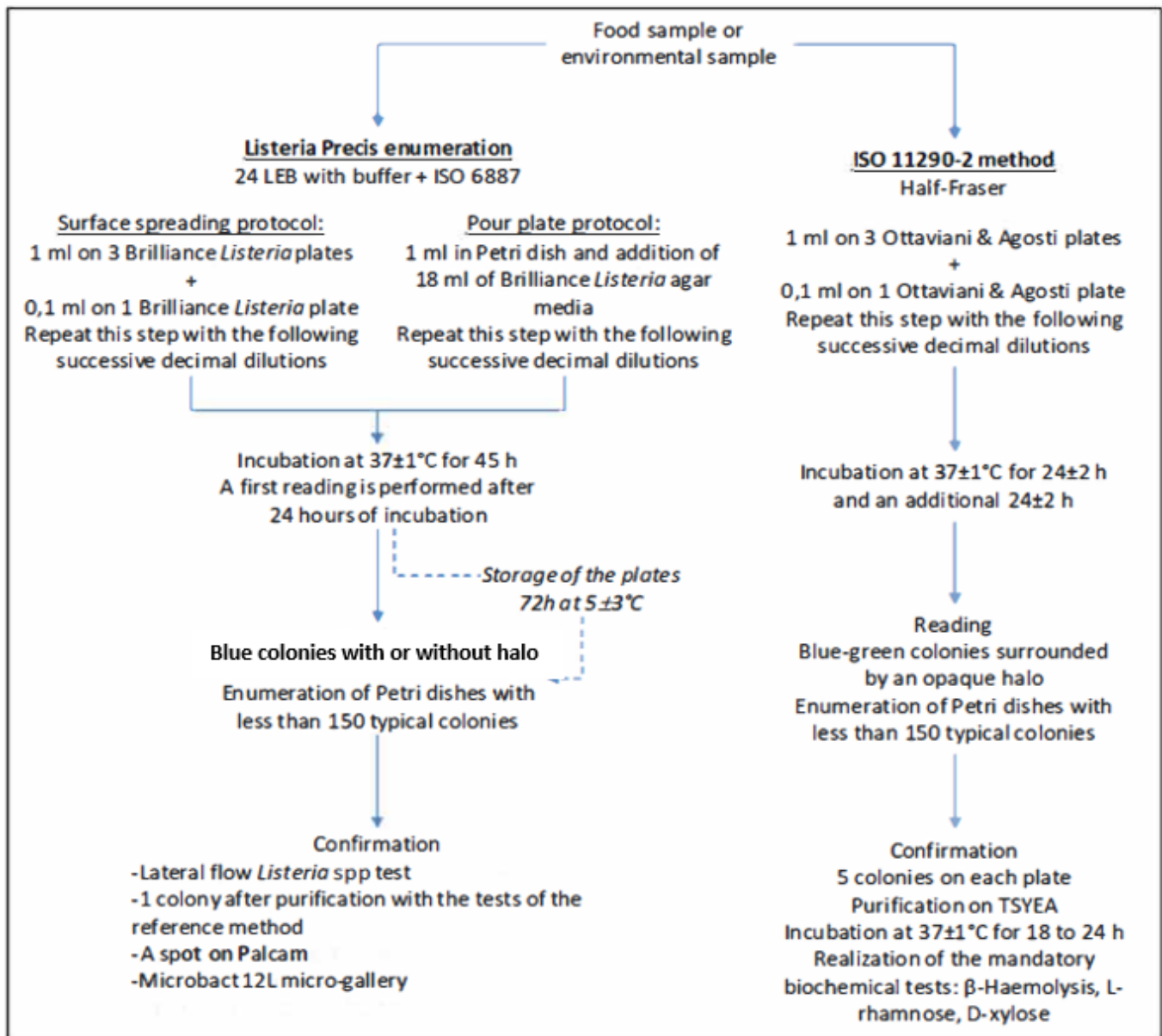
The workflow of the reference method is presented in Appendix B.

3. Method comparison study

3.1. Protocols used as part of the validation study

The protocol of the alternative method, as applied during this extension study by the Expert Laboratory, is presented in Figure 1.

Figure 1: protocols of the methods as applied by the Expert Laboratory



It's important to note that the Listeria Precis enumeration Petri dishes were incubated at the lower limit of the tolerance interval of the alternative method: 45 hours. Petri dishes were read and confirmed after incubation with all the tests presented in the figure 1. In Appendix M, only the final result is noted for more clarity. Petri dishes were stored at 5±3°C for 72 hours and read again.

It's also important to mention that the dilution broths of the two methods are different, the study design of this quantitative ISO 16140-2 validation study is therefore unpaired.

3.2. Relative trueness study

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

3.2.1. Number and nature of the samples

Overall, 120 samples were analyzed giving 104 exploitable results for the surface spreading technique modality and 103 exploitable results for the pour plate modality.

The distribution of the samples per category, type and inoculation technique is given in table 1.

Table 1: number and nature of the samples will be analyzed for the relative trueness study (RTE: ready-to-eat, RTRH: ready-to-reheat)

Category	Type		Analyzed samples		Interpretable results	
			Pour plate protocol	Surface spreading protocol	Pour plate protocol	Surface spreading protocol
Meat products (MP)	a	Raw	9	9	7	7
	b	RTRH and processed	6	6	5	5
	c	Delicatessen	7	7	5	5
	Total		22	22	17	17
Dairy products (DP)	a	Raw milk cheese	7	7	7	7
	b	Other raw milk products	7	7	7	7
	c	Heat processed products	6	6	5	5
	Total		20	20	19	19
Seafood products (SP)	a	Raw	6	6	6	6
	b	Smoked, marinated	7	7	5	5
	c	RTE, RTRH	5	5	5	5
	Total		18	18	16	16
Vegetal products (V)	a	Raw	6	6	6	6
	b	RTE and pre-cooked	7	7	5	5
	c	Processed	8	8	5	5
	Total		21	21	16	16
Composite foods (CF)	a	RTE	5	5	5	5
	b	RTRH	7	7	5	5
	c	Egg products and pastries	7	7	7	7
	Total		19	19	17	17
Environmental samples (ES)	a	Process waters	7	7	5	6
	b	Dusts and residues	7	7	7	7
	c	Surface samplings	6	6	6	6
	Total		20	20	18	19
Total			120	120	103	104

3.2.2. Artificial contaminations

Priority was given to naturally contaminated samples: 13 of them were analyzed that led to the obtention of 8 interpretable results (7.8% for pour plate modality and 7.7% for surface spreading modality).

Artificial contaminations were performed to complete data set using seeding protocol with bulk contamination. The strains used, and the contamination protocols are presented in Appendix C.

3.2.3. Results

Samples were analyzed by the reference and the alternative in order to obtain

- at least 15 interpretable results per category,
- and at least 5 per type.

Raw results are shown in Appendix D.

Three kinds of results are not considered as part of the statistical calculations:

- Those expressed with less than 4 colonies per Petri dish for at least one method or inoculation modality,
- Those lower or higher than the quantification limits,
- Undetermined results.

All results are presented in scatter plots per category and modality of inoculation in figures below:

- Figure 2: scatter plots for the pour plates method for each category,
- Figure 3: scatter plots for the surface spreading technique for each category,
- Figure 4: scatter plots for the pour plates method for all categories.
- Figure 5: scatter plots for the surface spreading technique for all categories.

On scatter plots per category:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c

On all scatter plots:

- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 2: Two-dimensional plots per category, using the pour plate inoculation

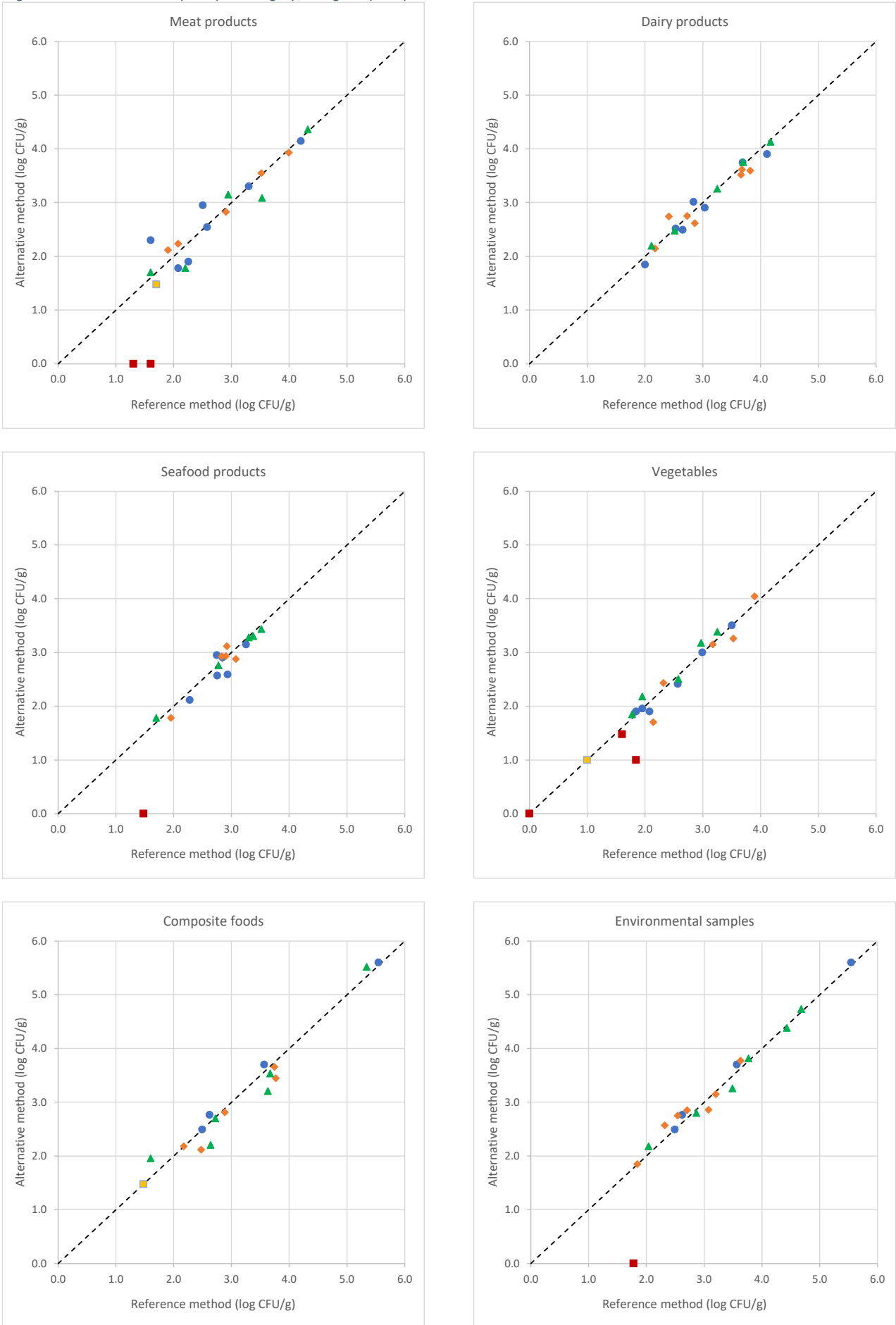


Figure 3: Two-dimensional plots per category, using the pour surface spreading inoculation

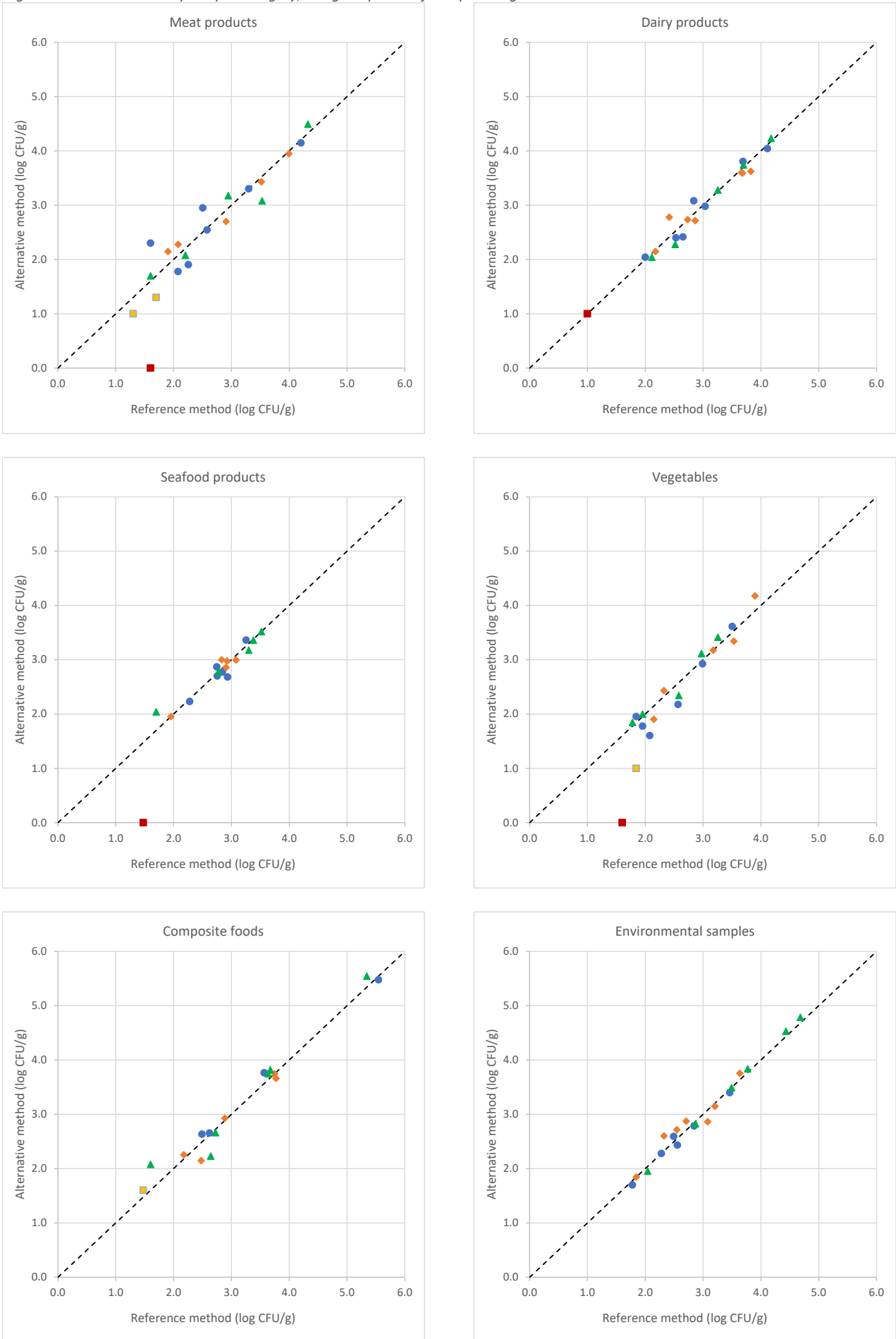


Figure 4: Two-dimensional plots for all categories, using the pour plate inoculation.

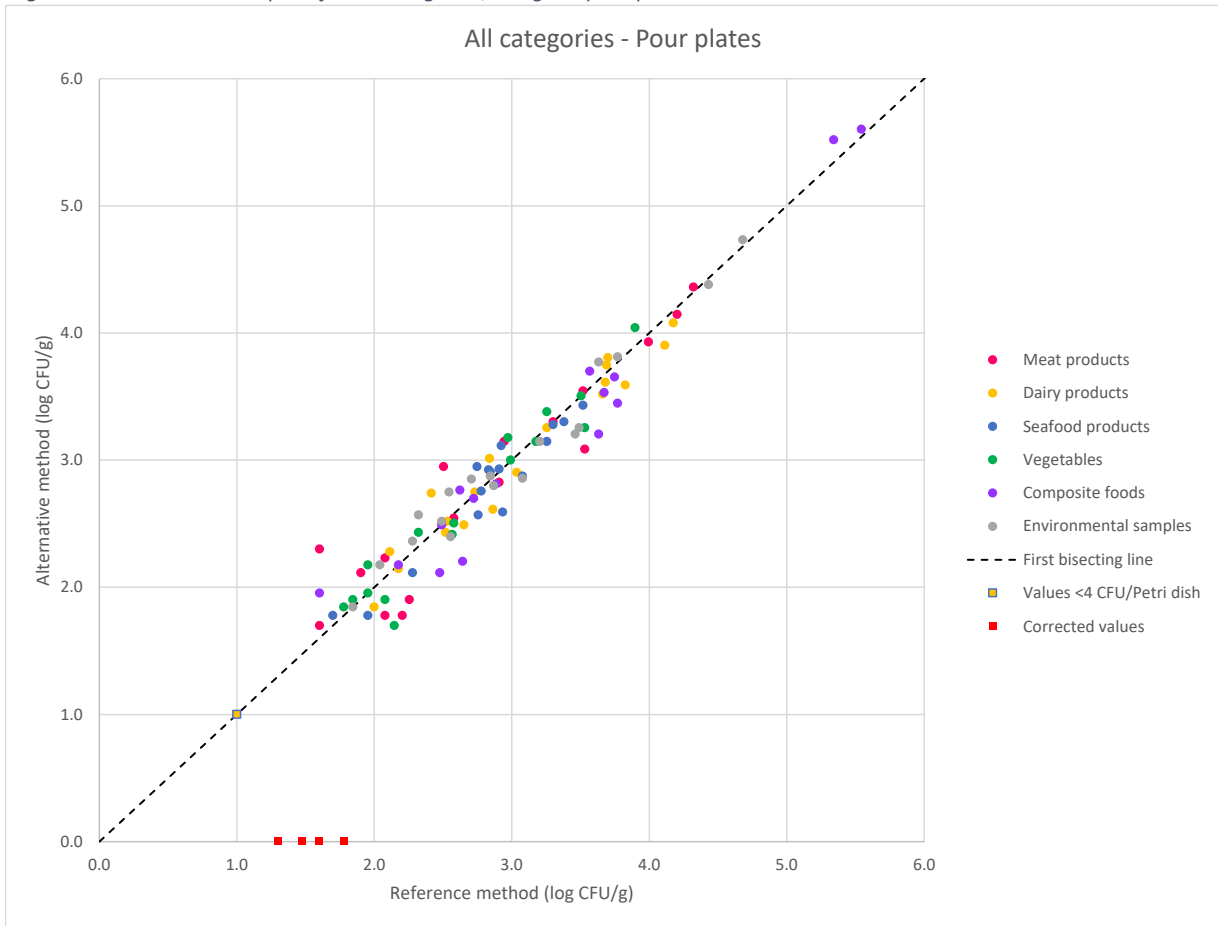
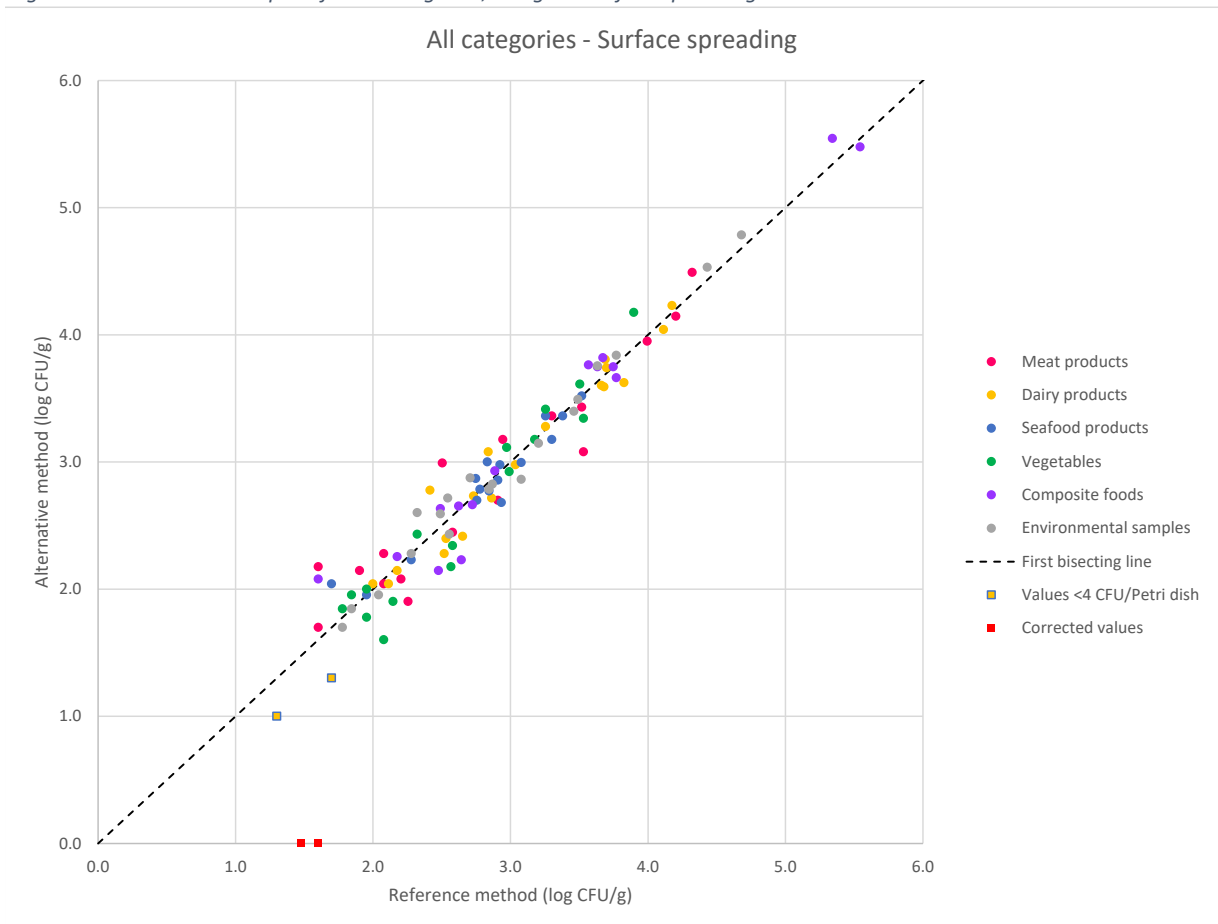


Figure 5: Two-dimensional plots for all categories, using the surface spreading inoculation.



3.2.4. Calculation and interpretation of relative trueness study

The results obtained are analyzed using the Bland-Altman method.

Statistical calculations are presented in Appendix E, as well as the results excluded from the statistical analysis per category, type and modality of inoculation.

Table 2 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 2: values for the Bland-Altman difference plot

Inoculation	Category	n	Average difference (bias)	Standard deviation differences	Lower Confidence Limit	Upper Confidence Limit
Pour plate	MP	17	0.01	0.30	-0.64	0.65
	DP	19	-0.04	0.15	-0.37	0.29
	SP	16	-0.05	0.15	-0.38	0.28
	V	16	-0.01	0.18	-0.41	0.38
	CF	17	-0.06	0.22	-0.54	0.42
	ES	18	0.00	0.15	-0.32	0.33
	All cat.	103	-0.03	0.20	-0.41	0.36
Surface spreading	MP	17	0.03	0.27	-0.55	0.62
	DP	19	-0.02	0.15	-0.35	0.30
	SP	16	0.01	0.14	-0.29	0.30
	V	16	-0.05	0.22	-0.52	0.43
	CF	17	0.03	0.20	-0.41	0.47
	ES	19	0.02	0.12	-0.24	0.28
	All cat.	104	0.00	0.19	-0.37	0.37

Overall, the average difference is equal to -0.03 log CFU/g for the pour plate modality showing a very slight negative bias regarding the reference method.

For the surface spreading modality, this average difference is equal to 0.00 log CFU/g, showing no bias regarding the reference method.

The average difference varies from -0.06 log CFU/g (Composite Foods) to 0.01 log CFU/g (Meat products) for the pour plate modality and from -0.05 log CFU/g (Vegetal products) to 0.03 log CFU/g (Meat products and Composite foods) for the surface spreading modality.

The Bland-Altman difference plots are presented in figures 6 and 7 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square.

The value of these results is corrected according to the EN ISO 16140-2:2016 requirements

Figure 6: Bland-Altman difference plot for all categories with the pour plate inoculation

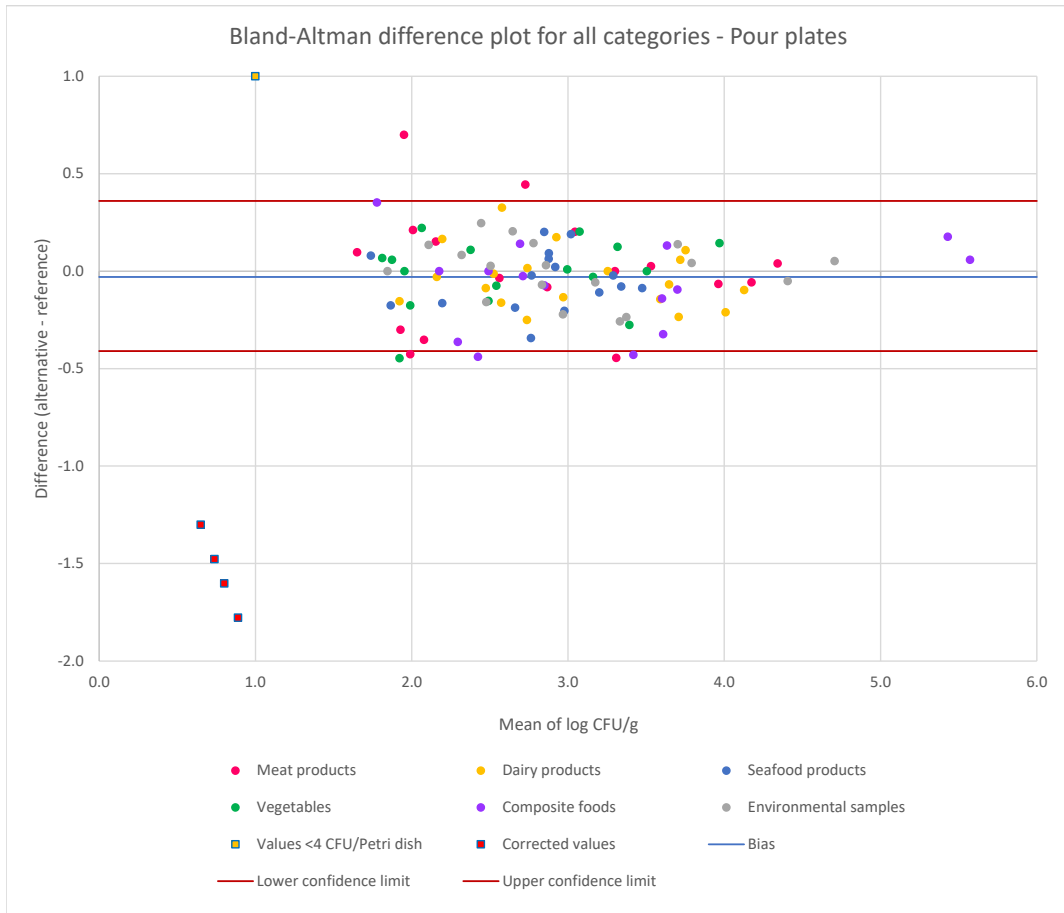
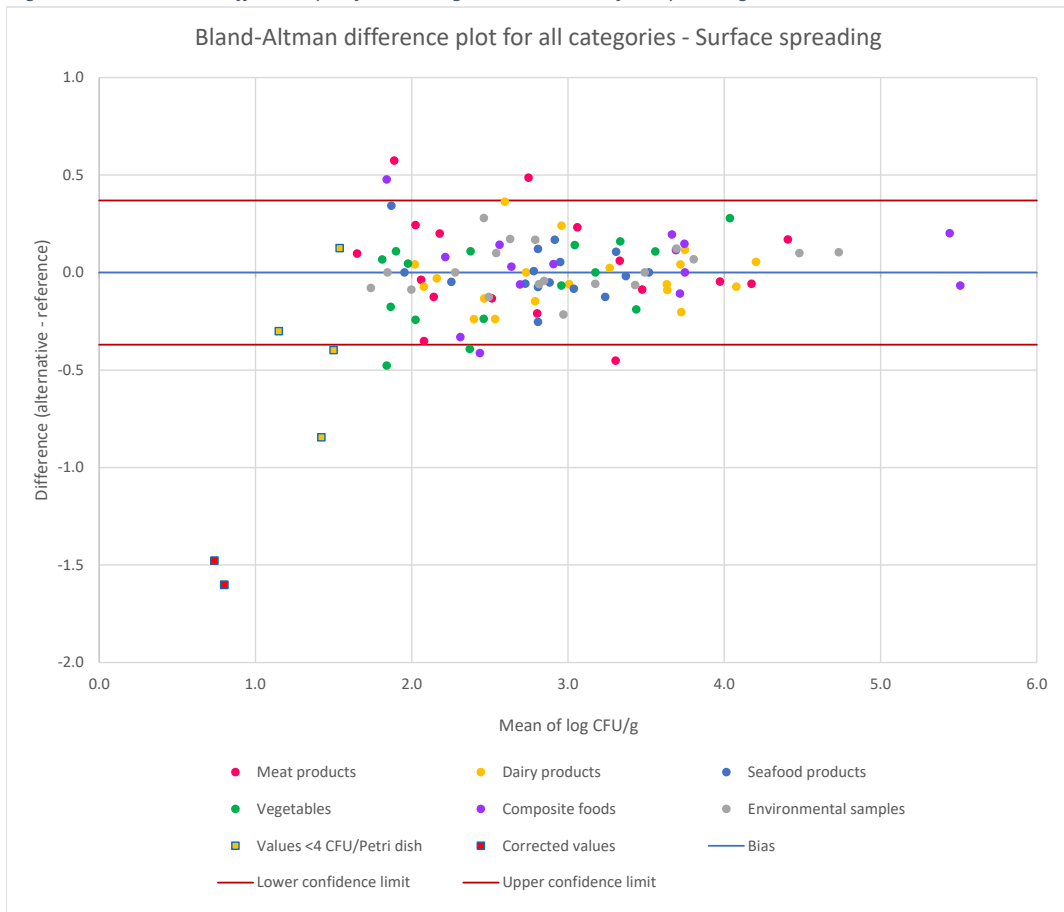


Figure 7: Bland-Altman difference plot for all categories with the surface spreading inoculation



- **Values that lie outside the confidence limits for the pour plate modality:**

Samples for which the average difference is lower or higher than the confidence limits are listed in table 3 for the pour plate modality.

Table 3: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue cases: estimated number) for pour plate inoculation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference LCL: -0.41 UCL:0.36
				CFU/g	CFU/g	log CFU/g	log CFU/g		
MP	a	2347804	Chicken	40	200	1.60	2.30	1.95	0.70
	a	2364235	Ground raw veal	320	890	2.51	2.95	2.73	0.44
	c	2364213	Liver mousse	160	60	2.20	1.78	1.99	-0.43
	c	2364214	Cooked pork tongue	3400	1220	3.53	3.09	3.31	-0.45
DP	a	2347805	Mexican chicken cut	20	<10	1.30	0.00	0.65	-1.30
	c	2347801	Chorizo	40	<10	1.60	0.00	0.80	-1.60
SFP	b	2364194	Smoked mackerel	30	<10	1.48	0.00	0.74	-1.48
VP	b	2333649	Beets	140	50	2.15	1.70	1.92	-0.45
	c	2364201	Compote	70	10	1.85	1.00	1.42	-0.85
CF	c	2364208	Baba with rum and whipped cream	440	160	2.64	2.20	2.42	-0.44
	c	2364256	Ile flottante	4300	1600	3.63	3.20	3.42	-0.43
ES	a	2364264	Fishmonger process water 1	60	<10	1.78	0.00	0.89	-1.78

Twelve values are outside the confidence limits for the pour plate modality:

- 2 values are above the upper confidence limit,
- 10 values are below the lower confidence limit
- 4 values relate to samples for which a corrected value was obtained for a method and a value expressed from Petri dishes with less than 4 CFU or less than 10 CFU for the other method.

- **Values that lie outside the confidence limits for the surface spreading modality:**

Samples for which the average difference is lower or higher than the confidence limits are listed in table 4 for the surface spreading modality.

Table 4: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue cases: estimated number) for surface spreading inoculation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference LCL:-0.37 UCL:0.37
				CFU/g	CFU/g	log CFU/g	log CFU/g		
MP	a	2347804	Chicken	40	150	1.60	2.18	1.89	0.57
	a	2364235	Ground raw veal	320	980	2.51	2.99	2.75	0.49
	c	2364214	Cooked pork tongue	3400	1200	3.53	3.08	3.31	-0.45
	a	2347803	Chicken wings	50	20	1.70	1.30	1.50	-0.40
	c	2347801	Chorizo	40	<10	1.60	0.00	0.80	-1.60
SFP	b	2364194	Smoked mackerel	30	<10	1.48	0.00	0.74	-1.48
VP	a	2347786	Pan-fried fresh mushrooms	120	40	2.08	1.60	1.84	-0.48
	a	2317042	Watermelon	370	150	2.57	2.18	2.37	-0.39
	c	2347789	Soup	40	<10	1.60	0.00	0.80	-1.60
	c	2364201	Compote	70	10	1.85	1.00	1.42	-0.85
CF	c	2316983	Pastry: Baba rhum	40	120	1.60	2.08	1.84	0.48
	c	2364208	Baba with rum and whipped cream	440	170	2.64	2.23	2.44	-0.41

Twelve values are outside the confidence limits for the surface spreading modality:

- 3 values are above the upper confidence limit,
- 9 values are below the lower confidence limit
- 3 values relate to samples for which a corrected value was obtained for a method and a value expressed from Petri dishes with less than 4 CFU.

3.2.5. Conservation of the incubated Listeria Precis Petri dishes at 5±3°C for 3 days

During this extension study, no evolution of the enumerations between the readings realized after 45 hours of incubation at 30°C and after conservation of the incubated Petri dishes for 3 days at 5±3°C was observed.

The conclusions of the observations are therefore the same than after the first reading of the Petri dishes.

3.2.6. Conclusion

The relative trueness study of the alternative method is satisfactory.

3.3. Accuracy profile study

3.3.1. Protocols

Six matrix-strain pairs were tested by both methods. Two batches of a matrix, representative of each category, were inoculated with a *Listeria* species strain at three levels (low, medium and high). For each sample, 5 replicates, represented by 5 different test portions, were tested by each method. This represents a total of 30 analyses per method.

The matrix-strain pairs are presented in table 5.

Table 5: matrix-strain pair for each category for the accuracy profil study

Category	Matrix	Strain	Strain code	Origin of the strain	Target contamination level (log CFU/g)
Meat products	Liver pâté	<i>Listeria ivanovii</i>	APE161	Merguez	2.0
Dairy products	Raw milk	<i>Listeria innocua</i>	XKU847	Raw milk cheese	
Seafood products	Fish terrine	<i>L. monocytogenes 1/2c</i>	PAJ947	Raw swordfish	
Vegetables	Mashed potatoes	<i>L. monocytogenes 1/2a</i>	MEF831	Celery puree	3.5
Composite foods	Mixed salad	<i>L. monocytogenes 4b</i>	ALB748	Salmon tagliatelle	4.5
Environmental samples	Process water	<i>Listeria welshimeri</i>	PNW846	Wipe environment	

3.3.2. Results

Raw data are provided in Appendix F.

The statistical data and the accuracy profiles are shown in figures 8 and 9.

Statistical calculations were done according to the Excel spreadsheet named AP calculation tool MCS (clause 6-1-3-3 Calculation and interpretation of accuracy profile study) ver 27-01-2015.xlsx available at <http://standards.iso.org/iso/16140>.

The probability for the tolerance interval is set at 80% and the central value is the median.

The acceptability limit is set at $AL = 0.5 \log_{10}$ CFU/g or ml.

Figure 8: Accuracy profiles per category, using the pour plate inoculation for *Listeria* Precis enumeration method

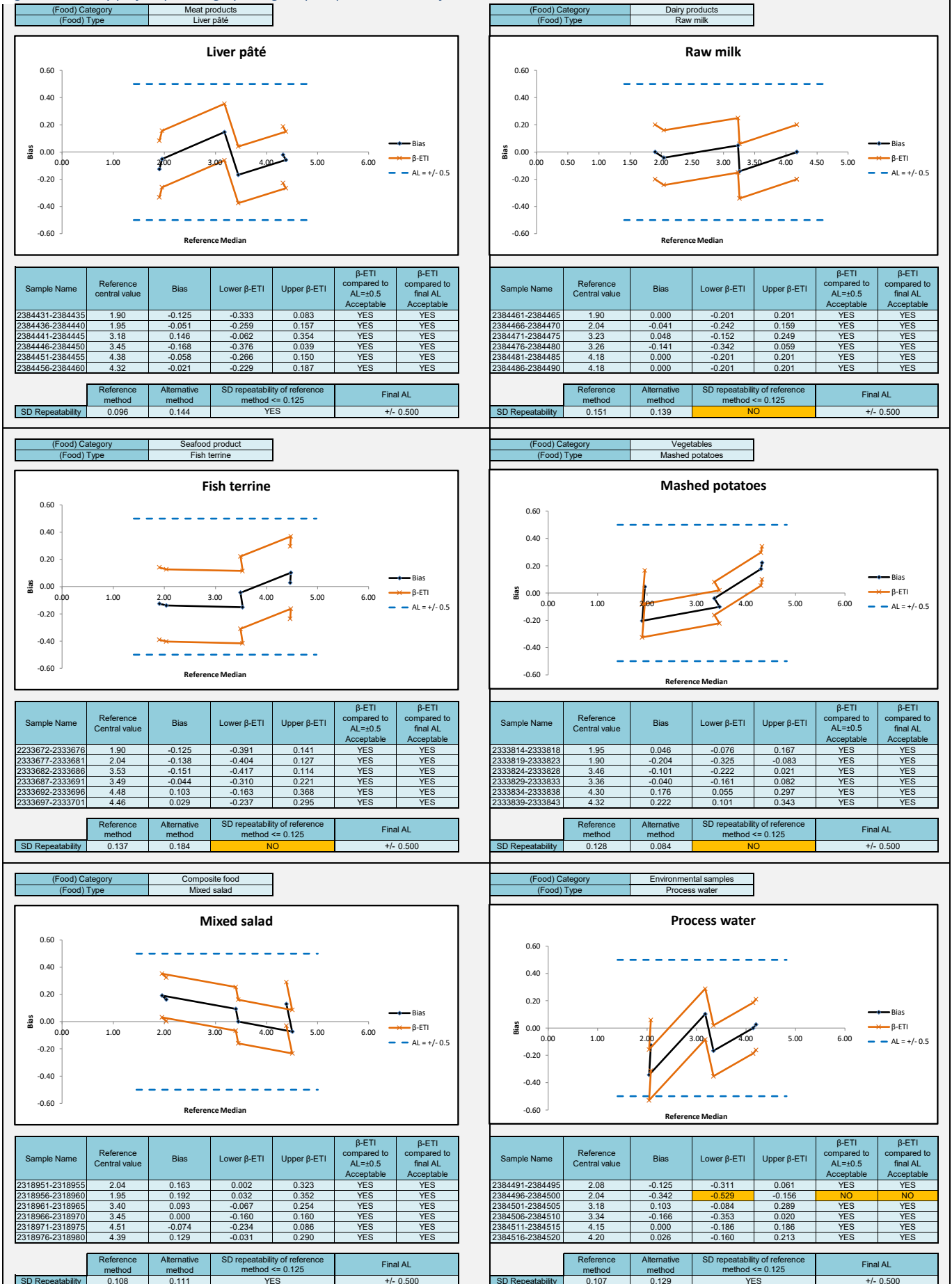
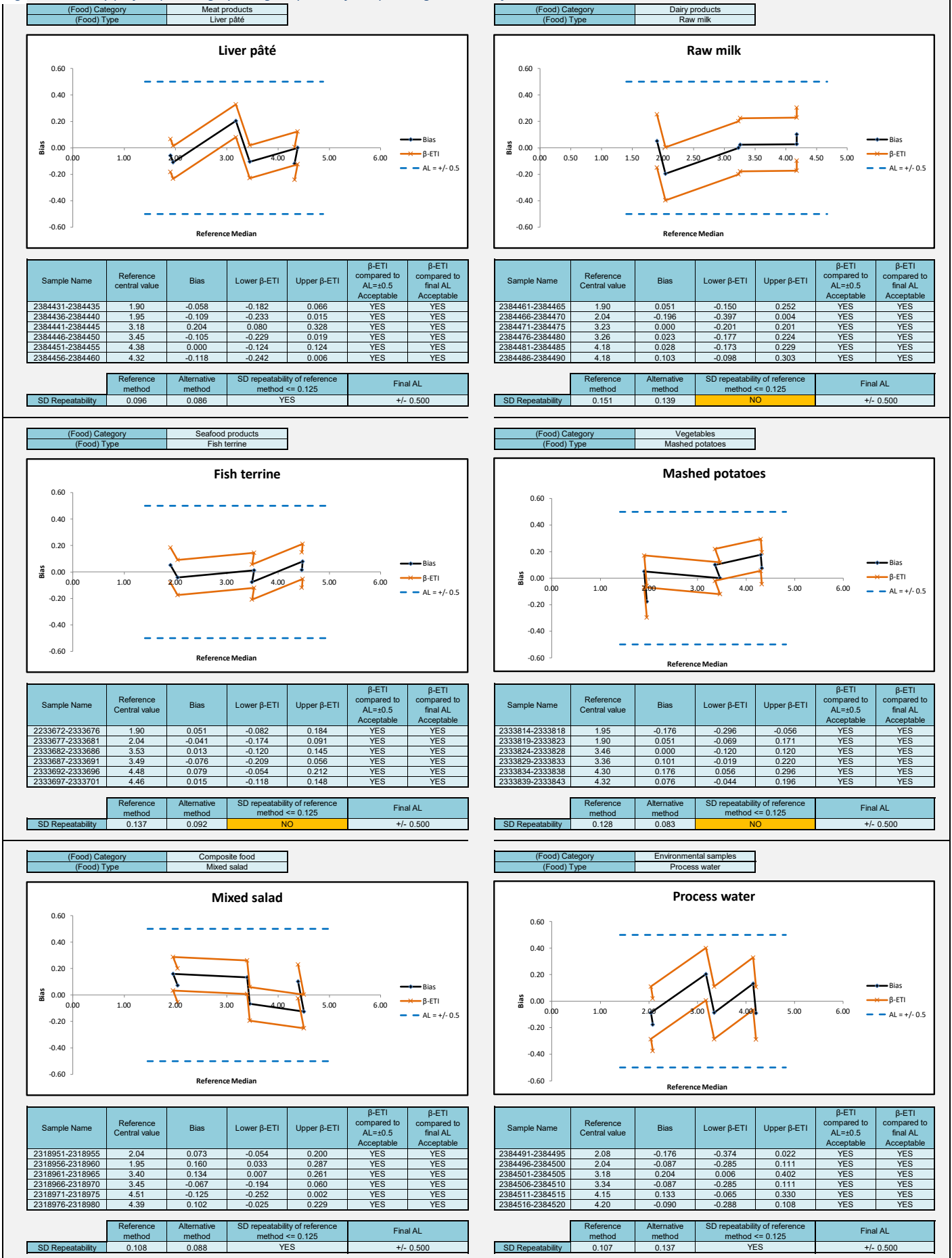


Figure 9: Accuracy profiles per category, using the pour surface spreading inoculation for *Listeria Precis* enumeration method



The tolerance intervals fall into the acceptability limits for all categories with the two modalities of inoculation, except for the lower limit of the interval for one of the two batches of process water at the low level of contamination for poured plate inoculation.

3.3.3. Conclusion

The alternative method is accepted as being equivalent to the reference method.

3.4. Inclusivity and exclusivity study

The aim of this study is to check that all the strains of *Listeria* species are detected, and that no cross-reaction exists with strains from other genera.

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

These parameters were tested during the validation studies of the *Listeria* Precis™ detection of *Listeria* spp method. In accordance with the decision of the Technical Board of June 2022, following a proposition of the Expert Laboratory, the result of this validation is used for the *Listeria* Precis™ enumeration method and no additional testing is performed.

3.4.1. Test protocols

- **Inclusivity**

20 *Listeria monocytogenes* strains data analyzed in the validation of *Listeria* Precis™ method for detection of *Listeria monocytogenes* in 2007 were reinterpreted and 31 other strains of *Listeria* spp were added in 2022.

All *Listeria* cultures were performed in tryptone-soy broth (24 h at 37°C). Dilutions were done in order to inoculate 1 to 100 cells/225 ml ONE Broth *Listeria*. The complete protocol of the alternative method was realized.

- **Exclusivity**

37 non-target strains data analyzed in the validation of *Listeria* Precis™ method for detection of *Listeria monocytogenes* in 2007 were reinterpreted.

All the cultures were performed in tryptone-soy broth (24 h at 37°C). Dilutions were done in order to inoculate 10⁵ cells/ml ONE Broth *Listeria*. The complete protocol of the alternative method was realized.

3.4.2. Results

Raw results are presented in Appendix G.

- **Inclusivity**

The 50 strains of *Listeria* analyzed gave a positive result. However, for the 4 strains of *Listeria grayi*, the addition of powdered milk to the enrichment broth was necessary to allow their growth.

For the strain of *Listeria grayi* RZK366, this addition of powdered milk did not make it possible to obtain growth with the reference method.

Listeria ivanovii which gave colonies with halo on Brilliance™ *Listeria* Agar, but the confirmation tests provided a clear discrimination between *Listeria monocytogenes* and *Listeria ivanovii* species.

- **Exclusivity**

No cross reaction was observed with the non-target strains.

3.4.3. Conclusion

The inclusivity and the exclusivity of the alternative method are satisfactory.

3.5. Practicability

Practicability is studied as a function of the four criteria defined by the Technical Board in comparing the reference method EN ISO 11290-2:2017 with the *Listeria* Precis™ enumeration method.

The criteria defined are informed below:

Packaging Volume of reagents	<ul style="list-style-type: none"> - Oxoid™ 24 LEB base CM1107B, Ready-to-use Oxoid™ 24 LEB BO1205S, FitBag™ 24 LEB DF1107A, B or C, QuickBag™ 24 LEB DQ1107A or B, Dry-Bags™ 24 LEB DQ1107V. - Oxoid™ 24 LEB selective supplement SR0243E - Oxoid™ 24 LEB Buffer supplement BO1339E - Oxoid™ BPW ISO Formulation CM1211B, CM1049B - Oxoid™ Brilliance™ <i>Listeria</i> agar (ISO): PO1298A: pack of 10 plates of Ø 90 mm. - Oxoid™ Brilliance™ <i>Listeria</i> agar (ISO) base: CM1212 + supplements: SR0257 and SR0258. Supplements are prepared for 500 ml of base medium.
Storage conditions and kit	<p>The plates of pre-poured complete medium must be kept at 2-8°C. The expiry date is shown on each plate. The dehydrated medium should be stored at 10-30°C and used before the expiry date on the label. Prepared medium may be stored for up to 2 weeks at 2-8°C.</p>
Use after opening of the kit	<p>The pre-poured complete medium plates must be stored at 2-8°C in their package until the expiry date. The plates poured from flasks can be kept up to 2 weeks at 2-8°C.</p>
Reagents	<p>Reagent supplements are supplied in lyophilized vials to which sterile distilled water is aseptically added. All supplements are added after autoclaving the base aseptically.</p>

Time to result		
Step	Time required (Day)	
	Listeria Precis™ method	EN ISO 11290-2 standard
Realization of first dilution and decimal dilutions	D0	D0
Media inoculation	D0	D0
Plates reading, interpretation and calculation	D1 and D2	D1 and D2
Obtaining negative results (if no characteristic colony)	D2	D2
Obtaining positive results:		
PrecisCheck Listeria	D2	/
Confirmation by reference method test (including purification)	D4	D4
Spot on Palcam	D3	/
Microbact™ 12L micro-gallery	D3	/
Obtaining negative results (after negative confirmations if necessary)	D2	D2 to D4
Common step with reference method	Preparation of initial suspension with BPW only	

3.6. Conclusion of method comparison study

The relative trueness study shows a good correlation between the alternative method and the reference method.

The accuracy profile study illustrates that the performances of the alternative method are comparable to those of the reference method.

The alternative method is specific and selective.

Time-to-result is faster with the alternative method than with the reference method for positive results by using the confirmations of the alternative method.

4. Interlaboratory study

The aim of the interlaboratory study, as described in ISO 16140-2:2016 standard, is to determine the variability of the results obtained in different laboratories using identical samples and to compare these results with those obtained during the methods comparison study.

4.1. Study organization

Thirteen collaborators took part in the interlaboratory study. Pasteurized milk was inoculated with a *Listeria monocytogenes* 1/2a strain, isolated from a dairy product.

Eight samples were prepared per laboratory, representing 4 levels of contamination with 2 samples per level. Samples were sent the 29th May 2006. Collaborators and the Expert Laboratory carried out the analyses with the reference method and the alternative method.

4.2. Control of experimental parameters

4.2.1. Contamination levels obtained after artificial contamination

The four contamination levels are detailed in the following table.

Table 6: Contamination levels of inoculated samples

Level	Sample	Targeted level (CFU/ml)	Real level (CFU/ml)
Level 0 (L_0)	1 and 8	0	0
Level 1 (L_1)	5 and 6	50	45
Level 2 (L_2)	3 and 7	500	440
Level 3 (L_3)	2 and 4	5000	4500

4.2.2. Strain stability during shipping

In order to evaluate the *Listeria monocytogenes* strain variability during shipping, bacterial counts of inoculated milk at different levels were checked at different times, during storage at 6°C.

Enumeration results (CFU/ml) are reported in table 7. No evolution of the strain was observed after storage for 24 h at 2°C - 8°C.

Table 7: Stability of the *Listeria monocytogenes* strain at 6°C (*: day of the analysis)

Level	Day 0	Day 1
L_1	45	60
L_2	440	430
L_3	4500	4900

4.2.3. Shipping conditions

Temperatures registered by the temperature probe during shipping were between 1.4°C and 8.2°C. The temperatures at reception are recorded in the following table.

Table 8: temperatures at reception

Collaborator	Receipt date	Receipt time	Measured temperature at receipt (°C)	Temperature measured by the probe (°C)
A	30/05/2006	10h45	8.2	0.3
B	30/05/2006	10h15	5.5	0.3
C	30/05/2006	11h15	4.5	-1.3
D	30/05/2006	10h00	6.3	0.3
E	30/05/2006	09h30	6.0	0.4
F	30/05/2006	8h30	6.2	-1.4
G	30/05/2006	11h50	8.1	0.5
H	30/05/2006	10h00	3.8	0.4
I	30/05/2006	08h30	4.8	0.1
J	30/05/2006	14h45	/	/
K	30/05/2006	08h30	1.4	0.5
L	30/05/2006	09h45	6.7	-1.3
M	30/05/2006	08h45	7.6	0.4

4.2.4. Conclusion

The temperatures during the transport were correct for all the collaborators, except for Lab J which didn't provide the information.

All the labs received their packages the day after the sending.

Four collaborators (B, D, J and L) received some damaged samples. Collaborators B, D and L proceeded to the analyses, but that was unmanageable for Collaborator J that did not realize the analyses.

All the labs started the analyses at Day 1.

4.3. Results

4.3.1. Aerobic mesophilic flora

The count of aerobic mesophilic flora varied from $9.4 \cdot 10^2$ CFU/ml to $3.3 \cdot 10^3$ CFU/ml.

4.3.2. Expert laboratory results

Results obtained for the Expert Laboratory are presented in table 9.

Table 9: Results of the Expert Laboratory in CFU/ml (en: estimated number)

Level	Reference method		Alternative method	
	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2
L_0	<10	<10	<10	<10
L_1	50 (en)	60 (en)	50 (en)	30 (en)
L_2	470	390	490	500
L_3	4700	5100	5900	3400

Results according to the reference method and according to the alternative method were in agreement.

4.3.3. Results obtained by the Collaborators

Raw results are presented in Appendix I. A summary of the results obtained by the Collaborators is provided in table 10 (CFU/ml).

Table 10: Results in CFU/ml of the collaborators per level of contamination (RM: reference method, AM: alternative method, D: duplicate)

Collaborator	L_1				L_2				L_3			
	RM		AM		RM		AM		RM		AM	
	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2
A	35	40	70	40	480	410	210	340	4900	4600	4900	5100
B	40	15	30	10	350	300	360	450	4100	4700	5100	3700
C	30	20	20	70	440	430	480	450	4600	5400	4600	5000
D	40	65	40	40	490	460	600	540	4900	4900	4400	4600
E	50	35	50	20	490	520	530	560	5400	4500	4100	5400
F	55	20	50	50	370	250	300	130	4400	4700	4900	5900
G	75	35	120	50	440	390	570	370	5000	4500	4000	4400
H	100	40	100	90	520	440	450	540	4200	4700	5600	4800
I	35	30	40	<10	290	290	850	450	3900	4400	3800	3400
K	50	20	10	210	320	340	290	510	3400	4200	600	4100
L	35	60	20	20	390	390	170	380	5300	4600	5600	5900
M	45	45	30	20	450	490	550	410	4900	4900	6400	4800

Two collaborators (I and K) did not respect the workflow of the study, which lead to some inconsistent results. Consequently, the results of these two collaborators are not considered in the statistical analysis of the data.

Moreover, it's important to note that a part of the results of the level L_1 do not fulfill the requirements of the standard EN ISO 7218/A1:2013 for the low counts of colonies (§ 10.3.2.4.1), as the results were obtained before the publication of the standard. Some results are expressed despite of their concentration inferior to 40 CFU/g (less than 4 colonies on Petri dishes for the enumeration of the initial suspension) while they should be noted: "Microorganisms are present but less than 40 per ml". Besides collaborators I and K, 8 results of the reference method and 8 results of the alternative method are concerned, which is well balanced.

4.3.4. Conclusion

The results of three Collaborators are finally not taken onto account for the statistical treatment: I, J and K. Results of 10 Collaborators are finally statistically exploited.

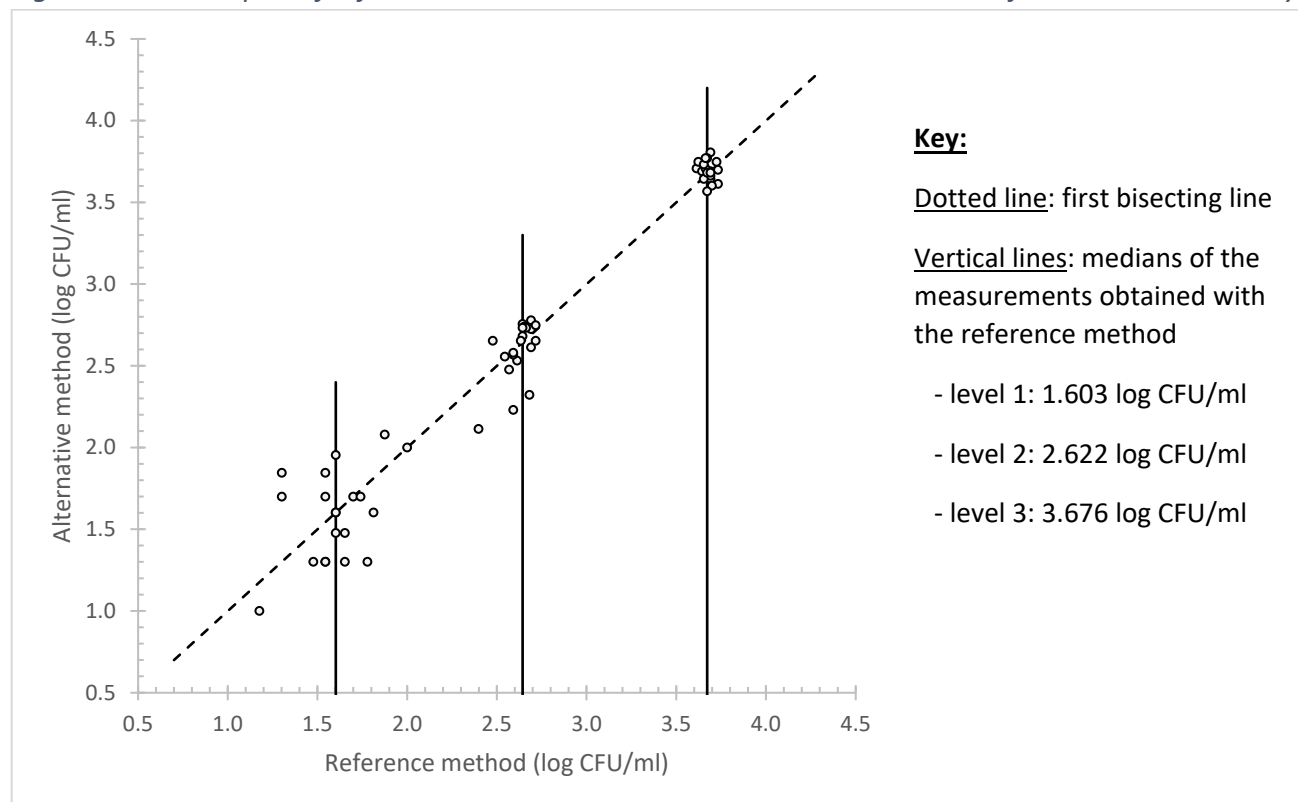
The results obtained by these Collaborators were in agreement with those of the Expert Laboratory.

4.4. Statistical interpretations and calculations

4.4.1. Visual linearity checking

After the \log_{10} transformation of all test results, data are plotted with the results of the reference method on the x-axis and the results of the alternative method on the y-axis. (Figure 11).

Figure 11: Scatter plot of reference-method versus alternative-method results for the interlaboratory study



Data are well balanced around the median values of the reference method for each level.

Concerning the level L_2 , a larger dispersion of the results is observed with the second interpretation.

4.4.2. Calculation of the accuracy profile and interpretation

- **Calculation of the accuracy profile**

An accuracy profile is drawn according to the calculations provided in the Excel spreadsheet named [AP calculation tool ILS \(clause 6-2-3 Calculations summary and interpretation of data\) ver 14-03-2016.xlsx](#), available at: <http://standards.iso.org/iso/16140/-2/ed-1/en>.

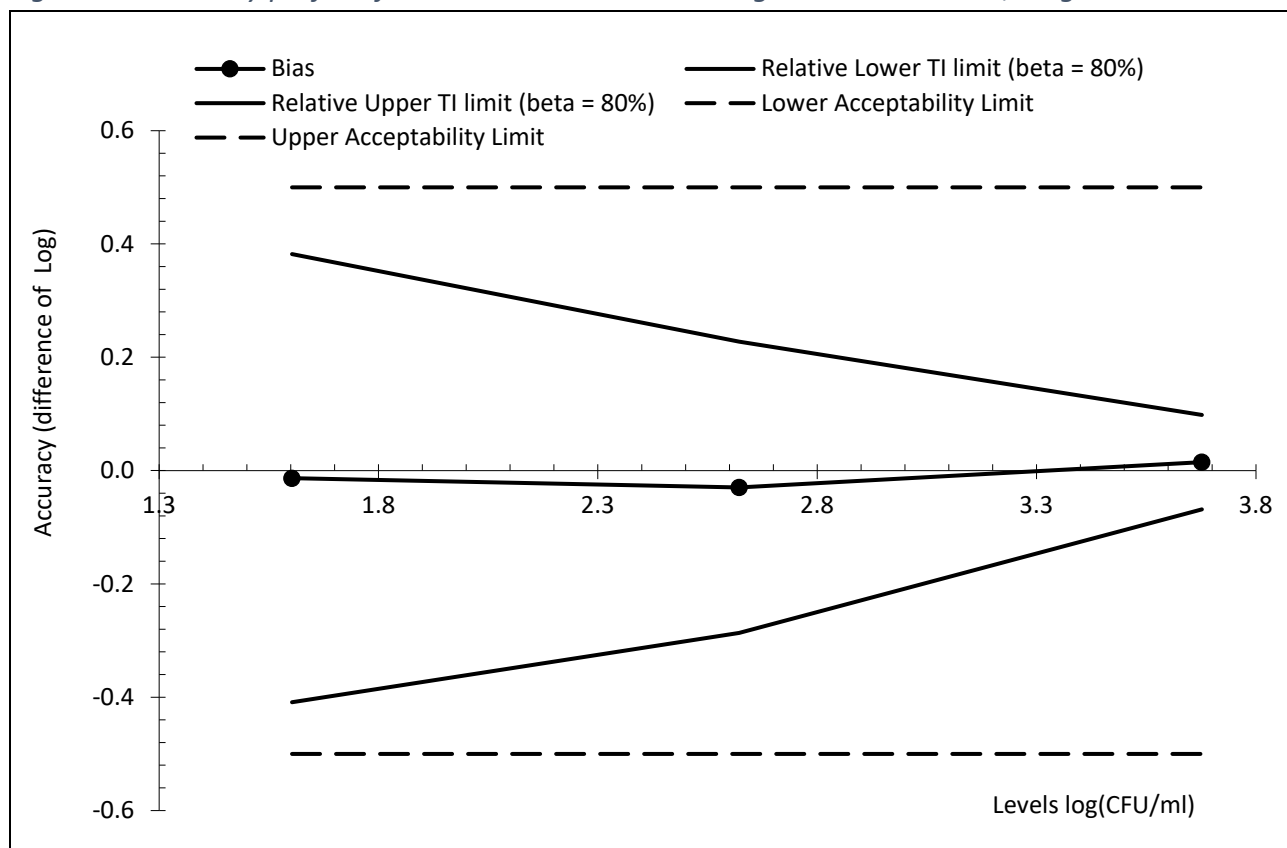
The results of the calculations are provided in table 11.

A graphical representation of the accuracy profile lies in figure 12.

Table 11: Summary of the accuracy profile calculations (AL: acceptability limit, TI: tolerance interval, SD: standard deviation)

Levels	Alternative method			Reference method		
	Low	Medium	High	Low	Medium	High
Tolerance probability (beta)	80%					
Acceptability limit in log (lambda)	0.50					
Target value	1.603	2.622	3.676			
Number of participants (K)	10	10	10	10	10	10
Average for alternative method	1.589	2.592	3.691	1.603	2.622	3.676
Repeatability standard deviation (sr)	0.214	0.136	0.057	0.200	0.050	0.035
Between-labs standard deviation (sL)	0.188	0.126	0.022	0.000	0.065	0.000
Reproducibility standard deviation (sR)	0.285	0.185	0.061	0.200	0.082	0.035
Corrected number of dof	15.343	15.005	18.359	18.947	12.926	18.947
Coverage factor	1.386	1.389	1.367			
Interpolated Student t	1.339	1.341	1.329			
Tolerance interval standard deviation	0.2952	0.1918	0.0627			
Lower TI limit	1.194	2.335	3.608			
Upper TI limit	1.985	2.849	3.775			
Bias	-0.013	-0.030	0.015			
Relative Lower TI limit (beta = 80%)	-0.409	-0.287	-0.068			
Relative Upper TI limit (beta = 80%)	0.382	0.227	0.098			
Lower Acceptability Limit	-0.50	-0.50	-0.50			
Upper Acceptability Limit	0.50	0.50	0.50			

Figure 12: Accuracy profile of the alternative method using $\beta = 80\%$ and $\lambda = 0,5 \log_{10}$ unit



- **Interpretation**

The values for the β -Expectation Tolerance Interval (β -ETI) fall within the Acceptability Limits (AL) for all levels of contamination. The alternative method is thus regarded as being equivalent to the reference method.

Moreover, the bias between the two methods is very low, it varies from -0.030 log CFU/ml to 0.015 log CFU/ml.

4.4.3. Conclusion of the interlaboratory study

The control of experimental parameters showed a good stability of the *Listeria monocytogenes* strain over the time in the matrix. Ten sets of data were statistically interpreted following the participation of the thirteen Collaborators involved in the interlaboratory study.

The accuracy profile showed that the values for the β -ETI fall within the AL for all levels of contamination. This illustrates equivalent performance between the two methods.

5. General conclusion

The data and the interpretation of the method comparison study and the interlaboratory study fulfill the requirements of the standard EN ISO 16140-2:2016. The *Listeria* Precis™ method for the enumeration of *Listeria* species is considered as equivalent to the standard EN ISO 11290-2:2017.

Le Lion d'Angers, January 18th, 2023
François Le Nestour
Head of the Microbiology Department

A handwritten signature in black ink, consisting of a stylized 'F' and 'N' enclosed within a large, sweeping loop.

APPENDICES

APPENDIX A

PROTOCOL OF THE LISTERIA PRECIS METHOD for enumeration of *Listeria* spp

Preparation and dilution of the sample in 24LEB + 24
LEB Buffer or a diluent describe in ISO 11290-2
according to the specifications of the standard EN
ISO 6887



Surface spreading protocol:
1 ml on 3 Brilliance *Listeria* plates
+
0,1 ml on 1 Brilliance *Listeria* plate
Repeat this step with the following
successive decimal dilutions

Pour plate protocol:
1 ml in Petri dish and addition of
18 ml of Brilliance *Listeria* agar
media
Repeat this step with the following
successive decimal dilutions



Incubation at 37±1°C for 48± 3 h
A first reading can be performed after 24 hours of incubation

Possibility to store the plates 72h at 5±3°C



Reading
Blue colonies with and without halo
Enumeration of Petri dishes with less than 150 typical colonies



Confirmation
Lateral flow *Listeria* spp test
A spot on Palcam
1 colony after purification with the tests of the reference method
Microbact 12L micro-gallery of identification (or equivalent)
SureTect™ *Listeria* species PCR Assay (or equivalent) according to the ISO 7218:2007 rules
An appropriate ISO 16140-6:2019 validated methods

APPENDIX B
EN ISO 11290-2:2017

Preparation and dilution of the sample according to the specifications of the standard EN ISO 6887



1 ml on 3 Ottaviani & Agosti plates
+
0,1 ml on 1 Ottaviani & Agosti plate
Repeat this step with the following successive decimal dilutions



Incubation at $37\pm 1^{\circ}\text{C}$ for 24 ± 2 h
and an additional 24 ± 2 h



Reading
Blue-green colonies surrounded by an opaque halo
Enumeration of Petri dishes with less than 150 typical colonies



Confirmation (five colonies on each plate)
Purification on TSYEA
Incubation at $37\pm 1^{\circ}\text{C}$ for 18 to 24 h
Realization of the mandatory biochemical tests: β -Haemolysis, L-rhamnose, D-xylose

APPENDIX C - Artificial contaminations

#	Sample name	Category	Type	Strain				Injury protocol
				Strain	Serovar	Code	Origin	
2347798	Chopped steak	1	a	<i>L.welshimeri</i>	/	YBK185	Raw pork meat	Seeding 72h at 3±2°C
2364209	Beef steak	1	a	<i>L.innocua</i>	/	TPU803	Chopped steak	Seeding 48h at 3±2°C
2364210	Veal chop	1	a	<i>L.innocua</i>	/	TPU803	Chopped steak	Seeding 48h at 3±2°C
2364234	Chicken meat mechanically separated	1	a	<i>L.grayii</i> + <i>L.mono</i>	/	XFG025 + BCS900	Plain poultry sausage + Foie gras puff pastry with figs	Seeding 72h at 3±2°C
2364235	Calf	1	a	<i>L.ivanovii</i>	/	AAZ671	Turkey cutlet scraps	Seeding 72h at 3±2°C
2347799	Lasagna	1	b	<i>L.innocua</i>	/	GZF268	Croque monsieur	Seeding 72h at 3±2°C
2347800	Ballotin of beef	1	b	<i>L.welshimeri</i>	/	DJC260	Pig's feet	Seeding 72h at 3±2°C
2364211	Beef meatball with tomato sauce	1	b	<i>L.welshimeri</i>	/	TLJ742	Vegetables	Seeding 48h at 3±2°C
2364212	Lasagna	1	b	<i>L.innocua</i>	/	XLK507	Tagliatelle	Seeding 48h at 3±2°C
2364236	Caramel pork	1	b	<i>L.grayii</i>	/	XFG025	Plain poultry sausage	Seeding 72h at 3±2°C
2364237	Beef parmentier	1	b	<i>L.ivanovii</i>	/	AAZ671	Turkey cutlet scraps	Seeding 72h at 3±2°C
2364213	Liver mousse	1	c	<i>L.welshimeri</i>	/	RXH463	Delicatessen	Seeding 48h at 3±2°C
2364214	Cooked pork tongue	1	c	<i>L.welshimeri</i>	/	TPU803	Chopped steak	Seeding 48h at 3±2°C
2364238	Rabbit rillettes	1	c	<i>L.innocua</i> + <i>L.mono</i>	/	CLF414 + BCS900	Delicatessen + Foie gras puff pastry with figs	Seeding 72h at 3±2°C
2364239	Andouillette steak	1	c	<i>L.innocua</i>	/	CLF414	Delicatessen	Seeding 72h at 3±2°C
2347773	Raw milk cheese Reblochon	2	a	<i>L.innocua</i>	/	XKU847	Raw milk cheese	Seeding 72h at 3±2°C
2347774	Raw milk cheese Emmental	2	a	<i>L.innocua</i>	/	TQU555	Raw milk cheese	Seeding 72h at 3±2°C
2364185	Raw milk cheese "Morbier"	2	a	<i>L.ivanovii</i>	/	GQD028	Environment	Seeding 48h at 3±2°C
2364186	Raw milk cheese "Tomme de Savoie"	2	a	<i>L.innocua</i>	/	QBB281	Raw milk organic cheese	Seeding 48h at 3±2°C
2333670	Raw milk cheese "Brie"	2	a	<i>L.mono</i>	/	HBP652	Raw milk cheese	Seeding 48h at 3±2°C
2364240	Raw milk goat cheese Rocamadour	2	a	<i>L.welshimeri</i> + <i>L.mono</i>	1/2b	GLX736 + JAR249	Environment + Soft pasteurized milk cheese	Seeding 72h at 3±2°C
2364241	Raw milk cheese Brie de Meaux	2	a	<i>L.innocua</i>	/	TGW734	Pasteurized milk cheese	Seeding 72h at 3±2°C
2347775	Raw cow's milk	2	b	<i>L.innocua</i>	/	XKU847	Raw milk cheese	Seeding 72h at 3±2°C
2347776	Faisselle raw milk sheep	2	b	<i>L.innocua</i>	/	TQU555	Raw milk cheese	Seeding 72h at 3±2°C
2364187	Raw sheep's milk	2	b	<i>L.welshimeri</i>	/	GLX736	Environment	Seeding 48h at 3±2°C
2364188	Raw cream	2	b	<i>L.ivanovii</i>	/	GQD028	Environment	Seeding 48h at 3±2°C
2364242	Raw butter	2	b	<i>L.innocua</i>	/	GPQ140	Dairy environment	Seeding 72h at 3±2°C
2364243	Raw cream	2	b	<i>L.innocua</i>	/	QBB281	Raw milk organic cheese	Seeding 72h at 3±2°C
2316971	Raw milk	2	b	<i>L.mono</i>	/	RKU084	Raw milk cheese	Seeding 72h at 3±2°C
2347778	Sheep's milk yogurt	2	c	<i>L.innocua</i>	/	TQU555	Raw milk cheese	Seeding 72h at 3±2°C
2364189	Pasteurized sheep's milk cheese	2	c	<i>L.innocua</i>	/	BLV059	Pasteurized milk cheese	Seeding 48h at 3±2°C
2364190	Drinkable yogurt	2	c	<i>L.innocua</i>	/	TGW734	Pasteurized milk cheese	Seeding 48h at 3±2°C
2364244	Organic yogurt	2	c	<i>L.ivanovii</i>	/	GQD028	Environment	Seeding 72h at 3±2°C
2364245	Pasteurized milk cheese Brillat Savarin	2	c	<i>L.welshimeri</i> + <i>L.mono</i>	1/2b	GLX736 + JAR249	Environment + Soft pasteurized milk cheese	Seeding 72h at 3±2°C
2347779	Sardine fillet	3	a	<i>L.innocua</i>	/	XEN574	Salmon shell	Seeding 72h at 3±2°C
2347780	Cod fillet	3	a	<i>L.welshimeri</i>	/	XCW614	Salmon shell	Seeding 72h at 3±2°C
2364192	Plaice fillet	3	a	<i>L.welshimeri</i>	/	AJP106	Salmon steak	Seeding 48h at 3±2°C
2364258	Hake fillet	3	a	<i>L.innocua</i>	/	TYA050 +	Raw tuna tataki	Seeding 72h at 3±2°C
2364259	Net Whiting	3	a	<i>L.welshimeri</i>	/	AJP106	Salmon steak	Seeding 72h at 3±2°C
2333638	Sardine	3	a	<i>L.mono</i>	/	ECV704	Hake dice	Seeding 72h at 3±2°C
2347781	Smoked haddock	3	b	<i>L.innocua</i>	/	XEN574	Salmon shell	Seeding 72h at 3±2°C
2347782	Smoked zander	3	b	<i>L.welshimeri</i>	/	XCW614	Salmon shell	Seeding 72h at 3±2°C
2364194	Smoked mackerel	3	b	<i>L.welshimeri</i>	/	TUH443	Smoked arctic char with 5 berries	Seeding 48h at 3±2°C
2364260	Marinated spicy prawns	3	b	<i>L.grayii</i>	/	RZM251	Salmon marinated in dill	Seeding 72h at 3±2°C
2364261	Salmon steak marinated in curry	3	b	<i>L.innocua</i>	/	ABB472	Marinated salmon	Seeding 72h at 3±2°C
2347783	Herring and potato salad	3	c	<i>L.innocua</i>	/	XEN574	Salmon shell	Seeding 72h at 3±2°C
2347784	Salmon and hake gratin	3	c	<i>L.welshimeri</i>	/	XCW614	Salmon shell	Seeding 72h at 3±2°C
2364262	Tuna rillettes	3	c	<i>L.innocua</i>	/	TYA050	Raw tuna tataki	Seeding 72h at 3±2°C
2364263	Surimi	3	c	<i>L.welshimeri</i> + <i>L.mono</i>	/	TUH443 + VTK213	Smoked arctic char with 5 berries + Salmon	Seeding 72h at 3±2°C
2319238	Surimi	3	c	<i>L.mono</i>	/	RJT457	Wrap salmon	Seeding 72h at 3±2°C
2347786	Pan-fried fresh mushrooms	4	a	<i>L.seeligeri</i>	/	ADTW22	Zucchini	Seeding 72h at 3±2°C
2364198	Fennel	4	a	<i>L.innocua</i>	/	TTZ273	Diced onions	Seeding 48h at 3±2°C
2364247	Pineapple mango passion fruit smoothie	4	a	<i>L.innocua</i>	/	TWH478	Mixed vegetables	Seeding 72h at 3±2°C
2317042	Watermelon	4	a	<i>L.mono</i>	1/2 a	MEF831	Celery	Seeding 72h at 3±2°C
2333797	Smooke multifruits	4	a	<i>L.mono</i>	/	BVU991	Mixed salad	Seeding 72h at 3±2°C
2347787	Strawberry puree	4	b	<i>L.seeligeri</i>	/	TJM186	Vegetables - Collection strain	Seeding 72h at 3±2°C
2347788	Carrot celery mix	4	b	<i>L.seeligeri</i>	/	ADTW22	Zucchini	Seeding 72h at 3±2°C
2364199	Stir-fried vegetables	4	b	<i>L.innocua</i>	/	TWH478	Mixed vegetables	Seeding 48h at 3±2°C
2364200	Mayonnaise celery	4	b	<i>L.innocua</i>	/	TTZ273	Diced onions	Seeding 48h at 3±2°C
2364248	Parsley beet salad	4	b	<i>L.grayii</i>	/	RZK366	Green bean	Seeding 72h at 3±2°C
2364249	Flan of vegetables	4	b	<i>L.welshimeri</i> + <i>L.mono</i>	1/2a	TXR109 + FCY076	Chinese noodles with vegetables + Eggplant Gratin	Seeding 72h at 3±2°C
2333649	Beets	4	b	<i>L.mono</i>	/	BVU991	Mixed salad	Seeding 72h at 3±2°C
2347789	Soup	4	c	<i>L.seeligeri</i>	/	TJM186	Vegetables - Collection strain	Seeding 72h at 3±2°C
2347790	Orange juice	4	c	<i>L.seeligeri</i>	/	ADTW22	Zucchini	Seeding 72h at 3±2°C
2364201	Compote	4	c	<i>L.grayii</i>	/	RZK366	Green bean	Seeding 48h at 3±2°C
2364202	Ratatouille	4	c	<i>L.welshimeri</i>	/	TLJ742	Vegetables	Seeding 48h at 3±2°C
2364250	Strawberry Kiwi Pineapple Trio	4	c	<i>L.innocua</i>	/	TWH478	Mixed vegetables	Seeding 72h at 3±2°C
2364251	Butternut pumpkin and carrot puree	4	c	<i>L.innocua</i>	/	TTZ273	Diced onions	Seeding 72h at 3±2°C
2317044	Vegetables soup	4	c	<i>L.mono</i>	/	BAF065	Marinated vegetables	Seeding 48h at 3±2°C
2333652	Ratatouille	4	c	<i>L.mono</i>	1/2a	FCY076	Eggplant gratin (cooked)	Seeding 48h at 3±2°C
2347791	Raw vegetables wrap	5	a	<i>L.welshimeri</i>	/	TXR109	Chinese noodles with vegetables	Seeding 72h at 3±2°C
2347792	Tabbouleh	5	a	<i>L.welshimeri</i>	/	TXR109	Chinese noodles with vegetables	Seeding 72h at 3±2°C
2364204	Piemontese	5	a	<i>L.innocua</i>	/	TWH478	Mixed vegetables	Seeding 48h at 3±2°C
2364252	Surimi salad	5	a	<i>L.welshimeri</i>	/	XCW614	Salmon shell	Seeding 72h at 3±2°C
2364253	Scandinavian pasta	5	a	<i>L.innocua</i>	/	XLK507	Tagliatelle	Seeding 72h at 3±2°C
2347793	Medley of vegetables and spelled	5	b	<i>L.welshimeri</i>	/	TLJ742	Vegetables	Seeding 72h at 3±2°C
2347794	Gratin	5	b	<i>L.innocua</i>	/	GZF268	Croque monsieur	Seeding 72h at 3±2°C
2364205	Tartiflette	5	b	<i>L.innocua</i>	/	BLV059	Pasteurized milk cheese	Seeding 48h at 3±2°C
2364206	Raclette tartlet	5	b	<i>L.innocua</i>	/	GZF268	Croque monsieur	Seeding 48h at 3±2°C
2364254	Carrot pumpkin cheesecake	5	b	<i>L.welshimeri</i>	/	TXR109	Chinese noodles with vegetables	Seeding 72h at 3±2°C
2364255	Salmon bruchetta	5	b	<i>L.welshimeri</i>	/	AJP106	Salmon steak	Seeding 72h at 3±2°C
2333657	Ham and cheese galette	5	b	<i>L.mono</i>	/	BXQ019	Cooked potatoes	Seeding 72h at 3±2°C
2347795	Chocolate mousse	5	c	<i>L.innocua</i>	/	HQM372	Egg product environment swab	Seeding 72h at 3±2°C
2347796	Paris Brest	5	c	<i>L.innocua</i>	/	HQM372	Egg product environment swab	Seeding 72h at 3±2°C
2364207	Cream with psuculos	5	c	<i>L.welshimeri</i>	/	GLX736	Environment	Seeding 48h at 3±2°C
2364208	Baba with rum and whipped cream	5	c	<i>L.welshimeri</i>	/	GLX736	Environment	Seeding 48h at 3±2°C
2364256	Ile flottante	5	c	<i>L.innocua</i>	/	HSU051	Egg product environment swab	Seeding 72h at 3±2°C
2364257	Liquid egg yolk	5	c	<i>L.innocua</i>	/	HSU051	Egg product environment swab	Seeding 72h at 3±2°C
2316983	Pastry "baba rhum"	5	c	<i>L.mono</i>	/	BMX449	Salad, pork, egg, vinaigrette	Seeding 48h at 3±2°C

APPENDIX C - Artificial contaminations

#	Sample name	Category	Type	Strain			Injury protocol	
				Strain	Serovar	Code		
2364218	Cheese process water	6	a	<i>L.ivanovii</i>	/	GQD028	Environment	Seeding 48h at 3±2°C
2364219	Process water food film 1	6	a	<i>L.innocua</i>	/	RVL329	Environment	Seeding 48h at 3±2°C
2364220	Poultry process water	6	a	<i>L.innocua</i> + <i>L.mono</i>	/	PNW846 + BCS900	Wipe poultry environment + Fole gras puff pastry with figs	Seeding 48h at 3±2°C
2364221	Pastry process water	6	a	<i>L.innocua</i>	/	HSU051	Egg product environment swab	Seeding 48h at 3±2°C
2364223	Plant process water	6	a	<i>L.welshimeri</i>	/	TXR109	Chinese noodles with vegetables	Seeding 48h at 3±2°C
2364264	Fishmonger process water 1	6	a	<i>L.welshimeri</i>	/	TUH443	Smoked arctic char with 5 berries	Seeding 72h at 3±2°C
2364265	Fishmonger process water 2	6	a	<i>L.welshimeri</i>	/	TVP191	Salmon puff pastry	Seeding 72h at 3±2°C
2364215	Cheese residues	6	b	<i>L.ivanovii</i>	/	GQD028	Environment	Seeding 48h at 3±2°C
2364216	Salmon residues	6	b	<i>L.welshimeri</i> + <i>L.mono</i>	/	TVP191 + VTK213	Salmon puff pastry + Salmon	Seeding 48h at 3±2°C
2364217	Plant residues	6	b	<i>L.grayii</i>	/	RZK366	Green bean	Seeding 48h at 3±2°C
2364229	Milling dust	6	b	<i>L.innocua</i>	/	XLK507	Tagliatelle	Spiking 30 minutes at 60°C
2364230	Egg product dust 1	6	b	<i>L.innocua</i>	/	HQM372	Egg product environment swab	Spiking 30 minutes at 60°C
2364231	Egg product dust 2	6	b	<i>L.innocua</i>	/	HSU051	Egg product environment swab	Spiking 30 minutes at 60°C
2333668	Pastryindustry residue	6	b	<i>L.mono</i>	1/2a	LCM223	Cold cabinet swab	Seeding 48h at 3±2°C
2364224	Wipe pastry environment	6	c	<i>L.innocua</i>	/	HSU051	Egg product environment swab	Seeding 48h at 3±2°C
2364225	Wipe delicatessen environment 1	6	c	<i>L.ivanovii</i>	/	APE161	Delicatessen	Seeding 48h at 3±2°C
2364226	Wipe bucher environment	6	c	<i>L.welshimeri</i>	/	YBK185	Raw pork meat	Seeding 48h at 3±2°C
2364233	Wipe delicatessen environment 2	6	c	<i>L.ivanovii</i>	/	APE161	Delicatessen	Seeding 48h at 3±2°C

APPENDIX D

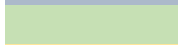
Relative trueness - raw results


Key:

Results are expressed in CFU/g or ml

nc: not countable

 Estimated number

 Microorganisms are present but less than 40 per g or ml

 Results not countable or inferior to the limit of quantification

Meat products

Cat.	Type	Sample code	Sample name	Conta	Strain	Dil.	EN ISO 11290-2					Listeria PRECIS - pour plate							Listeria PRECIS - Surface spreading						
							37°C - 24±2 h		37°C - 48±2 h			37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C		37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C	
							CFU	CFU	Conf.	Ident.	Result	CFU	CFU	Conf.	Ident.	Result	Result	Result	CFU	CFU	Conf.	Ident.	Result	Result	
1	a	2347797	Pork cutlet	nc	/	-1	4	11	+	L.welshimeri	120	5	6	+	L.welshimeri	60	60	2	10	+	L.welshimeri	110	110		
						-2	1	2	+			0	0	/				0	2	+					
1	a	2347798	Chopped steak	ac	YBK185	-2	18	21	+	L.welshimeri	2000	20	22	+	L.welshimeri	2000	2000	0	24	+	L.welshimeri	2300	2300		
						-3	1	1	+			0	0	/				0	1	+					
1	a	2347803	Chicken wings	nc	/	-1	1	5	+	L.innocua	50	1	3	+	L.innocua	30	30	1	2	+	L.innocua	20	20		
						-2	0	0	/			0	0	/				0	0	/					
1	a	2347804	Chicken	nc	/	-1	4	4	+	L.innocua	40	16	18	+	L.innocua	200	200	7	13	+	L.innocua	150	150		
						-2	0	0	/			0	4	+				2	3	+					
1	a	2347805	Mexican chicken cut	nc	/	-1	1	2	+	L.innocua	20	0	0	/	/	<10	<10	0	1	+	L.innocua	10	10		
						-2	0	0	/			0	0	/				0	0	/					
1	a	2364209	Beef steak	ac	TPU803	-1	36	38	+	L.innocua	380	26	29	+	L.innocua	350	350	28	29	+	L.innocua	280	280		
						-2	4	4	+			9	9	+				2	2	+					
1	a	2364210	Veal chop	ac	TPU803	-1	17	17	+	L.innocua	180	6	8	+	L.innocua	80	80	7	8	+	L.innocua	80	80		
						-2	3	3	+			1	1	+				2	2	+					
1	a	2364234	Meat mechanically separated from chicken breasts	ac	XLG025 + BCS900	-3	16 halo	16 halo	+	L.mono	16000	14 halo	14 halo	+	L.mono	14000	14000	12 halo	13 halo	+	L.mono	14000	14000		
						-4	1 halo	1 halo	+			2 halo	2 halo	+				2 halo	2 halo	+					
1	a	2364235	Ground raw veal	ac	AAZ671	-1	6	8 halo + 22 ♂ halo	+	L.ivanovii + L.innocua	320	52 halo + 22 ♂ halo	73 halo + 22 ♂ halo	+	L.ivanovii + L.innocua	890	890	30 halo + 0 ♂ halo	48 halo + 49 ♂ halo	+	L.ivanovii + L.innocua	980	980		
						-2	3	5	+			1 halo + 2 ♂ halo	1 halo + 2 ♂ halo	+			5 halo + 0 ♂ halo	5 halo + 6 ♂ halo	+						
1	b	2347799	Lasagna	ac	GZF268	-1	8	10	+	L.innocua	80	0	11	+	L.innocua	130	130	0	12	+	L.innocua	140	140		
						-2	0	0	/			0	3	+				0	3	+					
1	b	2347800	Ballotin of beef	ac	DJC260	-2	23	33	+	L.welshimeri	3300	32	37	+	L.welshimeri	3500	3500	12	36	+	L.welshimeri	2700	2700		
						-3	2	4	+			1	1	+				1	6	+					
1	b	2364211	Beef meatball with tomato sauce	ac	TUJ742	-1	10	11	+	L.welshimeri	120	15	16	+	L.welshimeri	170	170	11	17	+	L.welshimeri	190	190		
						-2	1	2	+			3	3	+				3	4	+					
1	b	2364212	Lasagna	ac	XLK507	-1	77	83	+	L.innocua	810	55	59	+	L.innocua	670	670	44	48	+	L.innocua	500	500		
						-2	6	6	+			4	4	+				5	7	+					
1	b	2364236	Caramel pork	ac	XLG025	-2	0	0	/	/	<100	0	0	/	/	<100	<100	0	0	/	/	<100	<100		
						-3	0	0	/			0	0	/				0	0	/					
1	b	2364237	Beef parmentier	ac	AAZ671	-2	22 halo + 27 ♂ halo	56 halo + 44 ♂ halo	+	L.ivanovii + L.welshimeri	9900	43 halo + 0 ♂ halo	46 halo + 43	+	L.ivanovii + L.welshimeri	8500	8500	44 halo + 34 ♂ halo	46 halo + 47 ♂ halo	+	L.ivanovii + L.welshimeri	8900	8900		
						-3	3 halo	7 halo + 2 ♂ halo	+			4 halo + 0 ♂ halo	4 halo + 1	+			0 halo + 5 ♂ halo	0 halo + 5 ♂ halo	+						
1	c	2347801	Chorizo	nc	/	-1	1	4	+	L.grayi	40	0	0	/	/	<10	<10	0	0	/	/	<10	<10		
						-2	0	0	/			0	0	/				0	0	/					
1	c	2347802	Lemon thyme pork skewer	nc	/	-1	0	0	/	/	<10	0	0	/	/	<10	<10	0	0	/	/	<10	<10		
						-2	0	0	/			0	0	/				0	0	/					
1	c	2364213	Liver mousse	ac	RYH463	-1	8	12	+	L.welshimeri	160	6	6	+	L.welshimeri	60	60	8	12	+	L.welshimeri	120	120		
						-2	5	6	+			2	2	+				0	1	+					
1	c	2364214	Cooked pork tongue	ac	TPU803	-2	34	36	+	L.innocua	3400	106	113	+	L.innocua	1220	1220	108	119	+	L.innocua	1200	1200		
						-3	1	1	+			18	21	+				13	14	+					
1	c	2364238	Rabbit rillettes	ac	CLF414 + BCS900	-3	15 halo	16 halo + 5 ♂ halo	+	L.mono + L.innocua	21000	19 halo + 0 ♂ halo	20 halo + 2 ♂ halo	+	L.mono + L.innocua	23000	23000	31 halo + 2 ♂ halo	31 halo + 2 ♂ halo	+	L.mono + L.innocua	31000	31000		
						-4	2 halo	2 halo + 0 ♂ halo	+			3 halo + 0 ♂ halo	3 halo + 0 ♂ halo	+			1 halo + 0 ♂ halo	1 halo + 0 ♂ halo	+						
1	c	2364239	Andouillette steak	ac	CLF414	-1	60	95	+	L.innocua	880	123	141	+	L.innocua	1400	1400	137	151	+	L.innocua	1500	1500		
						-2	1	2	+			12	17	+				11	16	+					
1	c	2317060	Cooked shank	nc	/	-1	3	4	+	L.mono	40	4	5	+	L.mono	50	50	1	5	+	L.mono	50	50		
						-2	0	0	/			0	0	/				0	0	/					

Dairy products

Cat.	Type	Sample code	Sample name	Conta	Strain	Dil.	EN ISO 11290-2					Listeria PRECIS - pour plate					Listeria PRECIS - Surface spreading								
							37°C - 24±2 h		37°C - 48±2 h			37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C		37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C	
							CFU	CFU	Conf.	Ident.	Result	CFU	CFU	Conf.	Ident.	Result	Result	Result	CFU	CFU	Conf.	Ident.	Result	Result	
2	a	2347773	Raw milk cheese Reblochon	ac	XKU847	-1	28	30	+	<i>Linnocua</i>	340	22	29	+	<i>Linnocua</i>	330	330	23	22	+	<i>Linnocua</i>	250	250		
						-2	5	7	+			7	7	+				4	7	+					
2	a	2347774	Raw milk cheese Emmental	ac	TQU555	-2	40	50	+	<i>Linnocua</i>	4900	50	56	+	<i>Linnocua</i>	5600	5600	61	50	+	<i>Linnocua</i>	6400	6400		
						-3	4	4	+			3	5	+				9	3	+					
2	a	2364185	Raw milk cheese "Morbier"	ac	GQD028	-1	39	44	+	<i>Livanovii</i>	450	30	33	+	<i>Livanovii</i>	310	310	22	28	+	<i>Livanovii</i>	260	260		
						-2	5	6	+			0	1	+				1	1	+					
2	a	2364186	Raw milk cheese "Tomme de Savoie"	ac	QBB281	-1	99	112	+	<i>Linnocua</i>	1090	81	84	+	<i>Linnocua</i>	800	800	93	97	+	<i>Linnocua</i>	950	950		
						-2	7	8	+			2	4	+				3	8	+					
2	a	2333670	Brie LC	ac	HBP652	-1	9	10	+	<i>Lmono</i>	100	7	7	+	<i>Lmono</i>	70	70	10	11	+	<i>Lmono</i>	110	110		
						-2	1	1	+			0	0	/				0	1	+					
2	a	2364240	Raw milk goat cheese Rocamadour	ac	GLX736 + JAR249	-2	39 halo + 82 ∅ halo	39 halo + 82 ∅ halo	+	<i>L. mono + L. welshimeri</i>	13000	25 halo + 46 ∅ halo	25 halo + 46 ∅ halo	+	<i>L. mono + L. welshimeri</i>	8000	8000	60 halo + 56 ∅ halo	60 halo + 56 ∅ halo	+	<i>L. mono + L. welshimeri</i>	11000	11000		
						-3	7 halo + 7 ∅ halo	7 halo + 12 ∅ halo	+			3 halo + 12 ∅ halo	4 halo + 13 ∅ halo	+				2 halo + 5 ∅ halo	2 halo + 5 ∅ halo	+					
2	a	2364241	Raw milk cheese Brie de Meaux	ac	TGW734	-1	58	69	+	<i>Linnocua</i>	690	100	100	+	<i>Linnocua</i>	1030	1030	117	117	+	<i>Linnocua</i>	1200	1200		
						-2	5	7	+			14	14	+				15	15	+					
2	b	2347775	Raw cow's milk	ac	XKU847	-1	56	58	+	<i>Linnocua</i>	540	58	61	+	<i>Linnocua</i>	560	560	53	58	+	<i>Linnocua</i>	540	540		
						-2	2	2	+			1	1	+				6	1	+					
2	b	2347776	Faiselle raw milk sheep	ac	TQU555	-2	25	48	+	<i>Linnocua</i>	4600	23	33	+	<i>Linnocua</i>	3300	3300	40	23	+	<i>Linnocua</i>	4000	4000		
						-3	1	3	+			2	3	+				4	2	+					
2	b	2364187	Raw sheep's milk	ac	GLX736	-1	69	73	+	<i>Lwelshimeri</i>	730	38	38	+	<i>Lwelshimeri</i>	410	410	41	48	+	<i>Lwelshimeri</i>	520	520		
						-2	7	7	+			7	7	+				9	9	+					
2	b	2364188	Raw cream	ac	GQD028	-1	14	15	+	<i>Livanovii</i>	150	14	14	+	<i>Livanovii</i>	140	140	8	15	+	<i>Livanovii</i>	140	140		
						-2	1	1	+			2	2	+				0	0	+					
2	b	2316971	Raw milk	ac	RKU084	-2	67	67	+	<i>Lmono</i>	6700	39	39	+	<i>Lmono</i>	3900	3900	41	41	+	<i>Lmono</i>	4200	4200		
						-3	6	6	+			4	4	+				5	5	+					
2	b	2364242	Raw butter	ac	GPQ140	-1	21	22	+	<i>Linnocua</i>	260	51	55	+	<i>Linnocua</i>	550	550	59	60	+	<i>Linnocua</i>	600	600		
						-2	6	6	+			5	5	+				4	6	+					
2	b	2364243	Raw cream	ac	QBB281	-2	52	53	+	<i>Linnocua</i>	4800	39	42	+	<i>Linnocua</i>	4100	4100	42	42	+	<i>Linnocua</i>	3900	3900		
						-3	0	0	/			3	3	+				1	1	+					
2	c	2347777	Pasteurised milk cheese "Gorgonzola"	nc	/	-1	0	0	/	/	<10	0	0	/	/	<10	<10	0	0	/	/	<10	<10		
						-2	0	0	/			0	0	/				0	0	/					
2	c	2347778	Sheep's milk yogurt	ac	TQU555	-2	34	52	+	<i>Linnocua</i>	5000	57	64	+	<i>Linnocua</i>	6400	6400	53	57	+	<i>Linnocua</i>	5500	5500		
						-3	1	3	+			5	6	+				7	5	+					
2	c	2364189	Pasteurized sheep's milk cheese	ac	BLV059	-1	28	34	+	<i>Linnocua</i>	330	26	28	+	<i>Linnocua</i>	270	270	15	19	+	<i>Linnocua</i>	190	190		
						-2	1	2	+			1	2	+				1	2	+					
2	c	2364190	Drinkable yogurt	ac	TGW734	-1	9	10	+	<i>Linnocua</i>	130	17	20	+	<i>Linnocua</i>	190	190	7	10	+	<i>Linnocua</i>	110	110		
						-2	4	4	+			1	1	+				1	2	+					
2	c	2364244	Organic yogurt	ac	GQD028	-2	150 halo	150 halo	/	<i>Livanovii</i>	15000	112 halo	112 halo + 8 ∅ halo	+	<i>Livanovii + L. welshimeri</i>	12000	12000	145 halo + 8 ∅ halo	146 halo + 10 ∅ halo	+	<i>Livanovii + L. welshimeri</i>	17000	17000		
						-3	14 halo	14 halo	+			11 halo	14 halo + 0 ∅ halo	+				24 halo + 0 ∅ halo	24 halo + 5 ∅ halo	+					
2	c	2364245	Pasteurized milk cheese Brillat Savarin	ac	GLX736 + JAR249	-2	4 halo + 12 ∅ halo	5 halo + 13 ∅ halo	+	<i>L. mono + L. welshimeri</i>	1800	8 halo + 9 ∅ halo	8 halo + 9 ∅ halo	+	<i>L. mono + L. welshimeri</i>	1800	1800	10 halo + 4 ∅ halo	12 halo + 4 ∅ halo	+	<i>L. mono + L. welshimeri</i>	1900	1900		
						-3	0	0 halo + 2 ∅ halo	+			2 halo + 1 ∅ halo	2 halo + 1 ∅ halo	+				4 halo + 1 ∅ halo	4 halo + 1 ∅ halo	+					

Seafood products

Cat.	Type	Sample code	Sample name	Conta	Strain	Dil.	EN ISO 11290-2					Listeria PRECIS - pour plate					Listeria PRECIS - Surface spreading								
							37°C - 24±2 h		37°C - 48±2 h			37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C		37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C	
							CFU	CFU	Conf.	Ident.	Result	CFU	CFU	Conf.	Ident.	Result	Result	CFU	CFU	Conf.	Ident.	Result	Result		
3	a	2347779	Sardine fillet	ac	XEN574	-1	49	83	+	<i>L.innocua</i>	860	34	38	+	<i>L.innocua</i>	390	390	27	45	+	<i>L.innocua</i>	480	480		
						-2	9	12	+			4	5	+				6	8	+					
3	a	2347780	Cod fillet	ac	XCW614	-1	39	54	+	<i>L.welshimeri</i>	560	86	90	+	<i>L.welshimeri</i>	890	890	21	66	+	<i>L.welshimeri</i>	740	740		
						-2	5	8	+			7	8	+				12	15	+					
3	a	2364192	Plaice fillet	ac	AJP106	-1	51	53	+	<i>L.welshimeri</i>	570	34	35	+	<i>L.welshimeri</i>	370	370	0	48	+	<i>L.welshimeri</i>	500	500		
						-2	8	10	+			5	6	+				0	7	+					
3	a	2364258	Hake fillet	ac	TYA050 + VTK213	-1	1 halo + 37 ∅ halo	1 halo + 67 ∅ halo	+	<i>L.innocua + L.mono</i>	700	15 halo + 52 ∅ halo	15 halo + 63 ∅ halo	+	<i>L.innocua + L.mono</i>	810	810	0 halo + 42 ∅ halo	9 halo + 52 ∅ halo	+	<i>L.innocua + L.mono</i>	590	590		
						-2	0 halo + 6 ∅ halo	0 halo + 9 ∅ halo	+			0 halo + 0 ∅ halo	0 halo + 11 ∅ halo	+				0 halo + 4 ∅ halo	0 halo + 4 ∅ halo	+					
3	a	2364259	Net Whiting	ac	AJP106	-2	19	20	+	<i>L.welshimeri</i>	1800	14	14	+	<i>L.welshimeri</i>	1400	1400	17	21	+	<i>L.welshimeri</i>	2300	2300		
						-3	0	0	/			2	2	+				3	4	+					
3	a	2333638	Sardine	ac	ECV704	-1	19	21	+	<i>L.mono</i>	190	12	12	+	<i>L.mono</i>	130	130	12	17	+	<i>L.mono</i>	170	170		
						-2	0	0	/			2	2	+				1	1	+					
3	b	2347781	Smoked haddock	ac	XEN574	-1	64	82	+	<i>L.innocua</i>	810	83	89	+	<i>L.innocua</i>	850	850	49	73	+	<i>L.innocua</i>	720	720		
						-2	2	7	+			3	4	+				3	6	+					
3	b	2347782	Smoked zander	ac	XCW614	-1	58	71	+	<i>L.welshimeri</i>	680	76	84	+	<i>L.welshimeri</i>	840	840	28	98	+	<i>L.welshimeri</i>	1000	1000		
						-2	1	4	+			7	8	+				1	13	+					
3	b	2364193	Salmon tartare	nc	/	-1	106 ∅ halo + 3 halo	114 ∅ halo + 3 halo	+	<i>L.grayii + L.mono</i>	1200	63 ∅ halo + 1 halo	71 ∅ halo + 1 halo	+	<i>L.grayii + L.mono</i>	750	750	36	86 ∅ halo + 9 halo	+	<i>L.grayii + L.mono</i>	990	990		
						-2	15 ∅ halo	17 ∅ halo	+			8 ∅ halo	10 ∅ halo	+				6	14 ∅ halo	+					
3	b	2364194	Smoked mackerel	ac	TUH443	-1	2	3	+	<i>L.welshimeri</i>	30	0	0	/	/	<10	<10	0	0	/	/	<10	<10		
						-2	0	0	/			0	0	/				0	0	/					
3	b	2364260	Marinated spicy prawns	ac	RZM251	-1	0	0	/	/	<10	0	0	/	/	<10	<10	0	0	/	/	<10	<10		
						-2	0	0	/			0	0	/				0	0	/					
3	b	2364261	Salmon steak marinated in curry	ac	ABB472	-1	78	85	+	<i>L.innocua</i>	840	110	110	+	<i>L.innocua</i>	1300	1300	82	97	+	<i>L.innocua</i>	950	950		
						-2	1	7	+			11	11	+				6	7	+					
3	b	2333795	Smoked herring	nc	/	-1	9	9	+	<i>L.mono</i>	90	6	6	+	<i>L.mono</i>	60	60	8	9	+	<i>L.mono</i>	90	90		
						-2	0	0	+			0	0	/				0	0	/					
3	c	2319238	Surimi	ac	RJT457	-1	4	5	+	<i>L.mono</i>	50	5	6	+	<i>L.mono</i>	60	60	11	12	+	<i>L.mono</i>	110	110		
						-2	1	1	+			1	1	+				0	0	/					
3	c	2347783	Herring and potato salad	ac	XEN574	-1	38	56	+	<i>L.innocua</i>	600	51	55	+	<i>L.innocua</i>	570	570	42	63	+	<i>L.innocua</i>	610	610		
						-2	8	10	+			7	8	+				3	4	+					
3	c	2347784	Salmon and hake gratin	ac	XCW614	-2	33	34	+	<i>L.welshimeri</i>	3300	25	26	+	<i>L.welshimeri</i>	2700	2700	27	32	+	<i>L.welshimeri</i>	3300	3300		
						-3	1	2	+			4	4	+				4	4	+					
3	c	2364262	Tuna rillettes	ac	TYA050	-2	5	21	+	<i>L.innocua</i>	2000	11	19	+	<i>L.innocua</i>	1900	1900	10	15	+	<i>L.innocua</i>	1500	1500		
						-3	0	1	+			1	2	+				1	1	+					
3	c	2364263	Surimi	ac	TUH443 + VTK213	-2	19 halo + 5 ∅ halo	21 halo + 4 ∅ halo	+	<i>L.welshimeri + L.mono</i>	2400	18 halo + 2 ∅ halo	18 halo + 2 ∅ halo	+	<i>L.welshimeri + L.mono</i>	2000	2000	18 halo + 2 ∅ halo	20 halo + 3 ∅ halo	+	<i>L.welshimeri + L.mono</i>	2300	2300		
						-3	2 halo + 0 ∅ halo	2 halo + 0 ∅ halo	+			2 halo + 0 ∅ halo	2 halo + 0 ∅ halo	+				2 halo + 0 ∅ halo	2 halo + 0 ∅ halo	+					

Composite foods

Cat.	Type	Sample code	Sample name	Conta	Strain	Dil.	EN ISO 11290-2					Listeria PRECIS - pour plate					Listeria PRECIS - Surface spreading							
							37°C - 24±2 h		37°C - 48±2 h			37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C		37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C
							CFU	CFU	Conf.	Ident.	Result	CFU	CFU	Conf.	Ident.	Result	Result	CFU	CFU	Conf.	Ident.	Result	Result	
5	a	2347791	Raw vegetables wrap	ac	TXR109	-3	>150	>150	/	<i>L.welshimeri</i>	350000	>150	>150	/	<i>L.welshimeri</i>	400000	400000	>150	>150	/	<i>L.welshimeri</i>	300000	300000	
5	a	2347792	Tabbouleh	ac	TXR109	-3	>150	>150	/	<i>L.welshimeri</i>	1100000	>150	>150	/	<i>L.welshimeri</i>	1200000	1200000	>150	>150	/	<i>L.welshimeri</i>	1200000	1200000	
5	a	2364204	Piedmontese	ac	TWH478	-1	38	42	+	<i>L.innocua</i>	420	50	61	+	<i>L.innocua</i>	580	580	39	44	+	<i>L.innocua</i>	450	450	
5	a	2364252	Surimi salad	ac	XCW614	-2	37	40	+	<i>L.welshimeri</i>	3700	49	49	+	<i>L.welshimeri</i>	5000	5000	60	60	+	<i>L.welshimeri</i>	5800	5800	
5	a	2364253	Scandinavian pasta	ac	XLK507	-1	20	30	+	<i>L.innocua</i>	310	21	27	+	<i>L.innocua</i>	310	310	27	41	+	<i>L.innocua</i>	430	430	
5	b	2347793	Medley of vegetables and spelled	ac	TLJ742	-2	>150	>150	/	<i>L.welshimeri</i>	>15000	>150	>150	/	<i>L.welshimeri</i>	>15000	>15000	>150	>150	/	<i>L.welshimeri</i>	>15000	>15000	
5	b	2347794	Gratin	ac	GZF268	-2	58	63	+	<i>L.innocua</i>	5900	27	28	+	<i>L.innocua</i>	2800	2800	40	45	+	<i>L.innocua</i>	4600	4600	
5	b	2364205	Tartiflette	ac	BLV059	-1	28	28	+	<i>L.innocua</i>	300	14	14	+	<i>L.innocua</i>	130	130	11	11	+	<i>L.innocua</i>	140	140	
5	b	2364206	Raclette tartlet	ac	GZF268	-2	59	62	+	<i>L.innocua</i>	5600	43	45	+	<i>L.innocua</i>	4500	4500	55	55	+	<i>L.innocua</i>	5600	5600	
5	b	2364254	Carrot pumpkin cheesecake	ac	TXR109	-1	1	3	+	<i>L.welshimeri</i>	30	2	3	+	<i>L.welshimeri</i>	30	30	2	4	+	<i>L.welshimeri</i>	40	40	
5	b	2364255	Salmon bruchetta	ac	AJP106	-1	64	81	+	<i>L.welshimeri</i>	770	59	63	+	<i>L.welshimeri</i>	650	650	55	74	+	<i>L.welshimeri</i>	850	850	
5	b	2333657	Ham and cheese galette	ac	BXQ019	-1	15	17	+	<i>L.mono</i>	150	14	14	+	<i>L.mono</i>	150	150	11	14	+	<i>L.mono</i>	180	180	
5	c	2347795	Chocolate mousse	ac	HQM372	-3	>150	>150	/	<i>L.innocua</i>	220000	>150	>150	/	<i>L.innocua</i>	330000	330000	>150	>150	/	<i>L.innocua</i>	350000	350000	
5	c	2347796	Paris Brest	ac	HQM372	-4	>150	>150	/	<i>L.innocua</i>	3500000	>150	>150	/	<i>L.innocua</i>	3200000	3200000	>150	>150	/	<i>L.innocua</i>	3700000	3700000	
5	c	2364207	Cream with pseculos	ac	GLX736	-1	42	49	+	<i>L.welshimeri</i>	530	45	45	+	<i>L.welshimeri</i>	500	500	42	50	+	<i>L.welshimeri</i>	460	460	
5	c	2364208	Baba with rum and whipped cream	ac	GLX736	-1	32	42	+	<i>L.welshimeri</i>	440	12	15	+	<i>L.welshimeri</i>	160	160	3	16	+	<i>L.welshimeri</i>	170	170	
5	c	2364256	Ile flottante	ac	HSU051	-2	40	42	+	<i>L.innocua</i>	4300	17	17	+	<i>L.innocua</i>	1600	1600	53	54	+	<i>L.innocua</i>	5600	5600	
5	c	2364257	Liquid egg yolk	ac	HSU051	-2	43	43	+	<i>L.innocua</i>	4700	31	31	+	<i>L.innocua</i>	3400	3400	69	69	+	<i>L.innocua</i>	6600	6600	
5	c	2316983	Pastry: Baba rhum	ac	BMX	-1	0	4	+	<i>L.mono</i>	40	7	9	+	<i>L.mono</i>	90	90	9	11	+	<i>L.mono</i>	120	120	

Environmental samples

Cat.	Type	Sample code	Sample name	Conta	Strain	Dil.	EN ISO 11290-2				Listeria PRECIS - pour plate					Listeria PRECIS - Surface spreading							
							37°C - 24±2 h		37°C - 48±2 h		37°C - 24±2 h		37°C - 48±3 h		3 days at 4°C	37°C - 24±2 h		37°C - 48±3 h			3 days at 4°C		
							CFU	CFU	Conf.	Ident.	Result	CFU	CFU	Conf.		Ident.	Result	CFU	CFU	Conf.		Ident.	Result
6	a	2364218	Cheese process water	ac	GQD028	-1	16	17	+	<i>L.ivanovii</i>	190	18	19	+	<i>L.ivanovii</i>	230	230	18	18	+	<i>L.ivanovii</i>	190	190
6	a	2364219	Process water food film 1	ac	RVL329	-1	49	69	+	<i>L.innocua</i>	700	51	72	+	<i>L.innocua</i>	750	750	41	60	+	<i>L.innocua</i>	610	610
6	a	2364220	Poultry process water	ac	PNW846 + BCS900	-1	9 ∅ halo + 15 halo	11 ∅ halo + 15 halo	+	<i>L.innocua</i> + <i>L.mono</i>	310	8 ∅ halo + 17 halo	14 ∅ halo + 19 halo	+	<i>L.innocua</i> + <i>L.mono</i>	330	330	11 ∅ halo + 20 halo	16 ∅ halo + 20 halo	+	<i>L.innocua</i> + <i>L.mono</i>	390	390
6	a	2364221	Pastry process water	ac	HSU051	-1	35	36	+	<i>L.innocua</i>	360	21	23	+	<i>L.innocua</i>	250	250	26	27	+	<i>L.innocua</i>	270	270
6	a	2364223	Plant process water	ac	TXR109	-1	16	28	+	<i>L.welshimeri</i>	2900	2	16	+	<i>L.welshimeri</i>	1600	1600	2	25	+	<i>L.welshimeri</i>	2500	2500
6	a	2364264	Fishmonger process water 1	ac	TUH443	-1	6	6	+	<i>L.welshimeri</i>	60	0	0	/	<i>L.welshimeri</i>	<10	<10	5	5	+	<i>L.welshimeri</i>	50	50
6	a	2364265	Fishmonger process water 2	ac	TVP191	-1	0	0	/	<i>L.welshimeri</i>	<10	0	0	/	<i>L.welshimeri</i>	<10	<10	0	0	/	<i>L.welshimeri</i>	<10	<10
6	b	2364215	Cheese residues	ac	GQD028	-1	43	46	+	<i>L.ivanovii</i>	510	62	68	+	<i>L.ivanovii</i>	710	710	61	68	+	<i>L.ivanovii</i>	750	750
6	b	2364216	Salmon residues	ac	TVP191 + VTK213	-1	29 ∅ halo + 51 halo	37 ∅ halo + 122 halo	+	<i>L.welshimeri</i> + <i>L.mono</i>	1600	6 ∅ halo + 113 halo	23 ∅ halo + 117 halo	+	<i>L.welshimeri</i> + <i>L.mono</i>	1400	1400	0 + 74 halo	23 ∅ halo + 112 halo	+	<i>L.welshimeri</i> + <i>L.mono</i>	1400	1400
6	b	2364217	Plant residues	ac	RZK366	-1	97	115	+	<i>L.grayi</i>	1200	48	72	+	<i>L.grayi</i>	720	720	74	75	+	<i>L.grayi</i>	730	730
6	b	2364229	Milling dust	ac	XLK507	-1	6	38	+	<i>L.innocua</i>	350	22	57	+	<i>L.innocua</i>	560	560	16	57	+	<i>L.innocua</i>	520	520
6	b	2364230	Egg product dust 1	ac	HQM372	-1	>150	>150	/	<i>L.innocua</i>	4300	>150	>150	/	<i>L.innocua</i>	5900	5900	>150	>150	/	<i>L.innocua</i>	5700	5700
6	b	2364231	Egg product dust 2	ac	HSU051	-1	8	23	+	<i>L.innocua</i>	210	21	37	+	<i>L.innocua</i>	370	370	14	39	+	<i>L.innocua</i>	400	400
6	b	2333668	Pastry industry residue	ac	KWQ210	-2	7	7	+	<i>L.mono</i>	70	7	7	+	<i>L.mono</i>	70	70	3	7	+	<i>L.mono</i>	70	70
6	c	2364224	Wipe pastry environment	ac	HSU051	-2	67	73	+	<i>L.innocua</i>	740	61	61	+	<i>L.innocua</i>	630	630	66	67	+	<i>L.innocua</i>	670	670
6	c	2364225	Wipe delicatessen environment 1	ac	APE161	-2	18 halo	32 halo	+	<i>L.ivanovii</i>	3100	14 halo	20 halo	+	<i>L.ivanovii</i>	1800	1800	21 halo	33 halo	+	<i>L.ivanovii</i>	3100	3100
6	c	2364226	Wipe bucher environment	ac	YBK185	-2	57	59	+	<i>L.welshimeri</i>	5900	51	67	+	<i>L.welshimeri</i>	6500	6500	57	66	+	<i>L.welshimeri</i>	6900	6900
6	c	2364227	Egg product swab 1	nc	/	-2	>150	>150	/	<i>L.innocua</i>	27000	>150	>150	/	<i>L.innocua</i>	24000	24000	>150	>150	/	<i>L.innocua</i>	34000	34000
6	c	2364228	Egg product swab 2	nc	/	-2	>150	>150	/	<i>L.innocua</i>	48000	>150	>150	/	<i>L.innocua</i>	54000	54000	>150	>150	/	<i>L.innocua</i>	61000	61000
6	c	2364233	Wipe delicatessen environment 2	ac	APE161	-1	0	12 halo	+	<i>L.ivanovii</i>	110	13	15 halo	+	<i>L.ivanovii</i>	150	150	0	10 halo	+	<i>L.ivanovii</i>	90	90

Appendix E - Statistical calculations - Pour plate

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Meat products	a	2347804	Chicken	40	200	1.60	2.30	1.95	0.70	
	a	2347797	Pork cutlet	120	60	2.08	1.78	1.93	-0.30	
	a	2364210	Veal chop	180	80	2.26	1.90	2.08	-0.35	
	a	2364235	Ground raw veal	320	890	2.51	2.95	2.73	0.44	
	a	2364209	Beef steak	380	350	2.58	2.54	2.56	-0.04	
	a	2347798	Chopped steak	2000	2000	3.30	3.30	3.30	0.00	
	a	2364234	Chicken meat mechanically separated	16000	14000	4.20	4.15	4.18	-0.06	
	b	2347799	Lasagna	80	130	1.90	2.11	2.01	0.21	
	b	2364211	Beef meatball with tomato sauce	120	170	2.08	2.23	2.15	0.15	
	b	2364212	Lasagna	810	670	2.91	2.83	2.87	-0.08	
	b	2347800	Ballotin of beef	3300	3500	3.52	3.54	3.53	0.03	
	b	2364237	Beef parmentier	9900	8500	4.00	3.93	3.96	-0.07	
	c	2317060	Cooked shank	40	50	1.60	1.70	1.65	0.10	
	c	2364213	Liver mousse	160	60	2.20	1.78	1.99	-0.43	
	c	2364239	Andouillette steak	880	1400	2.94	3.15	3.05	0.20	
	c	2364214	Cooked pork tongue	3400	1220	3.53	3.09	3.31	-0.45	
	c	2364238	Rabbit rillettes	21000	23000	4.32	4.36	4.34	0.04	
	Average difference of the category									0.01
	Standard deviation of differences									0.30
Dairy products	a	2333670	Brie LC	100	70	2.00	1.85	1.92	-0.15	
	a	2347773	Raw milk cheese Reblochon	340	330	2.53	2.52	2.52	-0.01	
	a	2364185	Raw milk cheese "Morbier"	450	310	2.65	2.49	2.57	-0.16	
	a	2364241	Raw milk cheese Brie de Meaux	690	1030	2.84	3.01	2.93	0.17	
	a	2364186	Raw milk cheese "Tomme de Savoie"	1090	800	3.04	2.90	2.97	-0.13	
	a	2347774	Raw milk cheese Emmental	4900	5600	3.69	3.75	3.72	0.06	
	a	2364240	Raw milk goat cheese Rocamadour	13000	8000	4.11	3.90	4.01	-0.21	
	b	2364188	Raw cream	150	140	2.18	2.15	2.16	-0.03	
	b	2364242	Raw butter	260	550	2.41	2.74	2.58	0.33	
	b	2347775	Raw cow's milk	540	560	2.73	2.75	2.74	0.02	
	b	2364187	Raw sheep's milk	730	410	2.86	2.61	2.74	-0.25	
	b	2347776	Faisselle raw milk sheep	4600	3300	3.66	3.52	3.59	-0.14	
	b	2364243	Raw cream	4800	4100	3.68	3.61	3.65	-0.07	
	b	2316971	Raw milk	6700	3900	3.83	3.59	3.71	-0.24	
	c	2364190	Drinkable yogurt	130	190	2.11	2.28	2.20	0.16	
	c	2364189	Pasteurized sheep's milk cheese	330	270	2.52	2.43	2.47	-0.09	
	c	2364245	Pasteurized milk cheese Brillat Savarin	1800	1800	3.26	3.26	3.26	0.00	
	c	2347778	Sheep's milk yogurt	5000	6400	3.70	3.81	3.75	0.11	
	c	2364244	Organic yogurt	15000	12000	4.18	4.08	4.13	-0.10	
	Average difference of the category									-0.04
Standard deviation of differences									0.15	

Appendix E - Statistical calculations - Pour plate

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Seafood products	a	2333638	Sardine	190	130	2.28	2.11	2.20	-0.16
	a	2347780	Cod fillet	560	890	2.75	2.95	2.85	0.20
	a	2364192	Plaice fillet	570	370	2.76	2.57	2.66	-0.19
	a	2364258	Hake fillet	700	810	2.85	2.91	2.88	0.06
	a	2347779	Sardine fillet	860	390	2.93	2.59	2.76	-0.34
	a	2364259	Net Whiting	1800	1400	3.26	3.15	3.20	-0.11
	b	2333795	Smoked herring	90	60	1.95	1.78	1.87	-0.18
	b	2347782	Smoked zander	680	840	2.83	2.92	2.88	0.09
	b	2347781	Smoked haddock	810	850	2.91	2.93	2.92	0.02
	b	2364261	Salmon steak marinated in curry	840	1300	2.92	3.11	3.02	0.19
	b	2364193	Salmon tartare	1200	750	3.08	2.88	2.98	-0.20
	c	2319238	Surimi	50	60	1.70	1.78	1.74	0.08
	c	2347783	Herring and potato salad	600	570	2.78	2.76	2.77	-0.02
	c	2364262	Tuna rillettes	2000	1900	3.30	3.28	3.29	-0.02
	c	2364263	Surimi	2400	2000	3.38	3.30	3.34	-0.08
	c	2347784	Salmon and hake gratin	3300	2700	3.52	3.43	3.47	-0.09
	Average difference of the category								
Standard deviation of differences									0.15
Vegetables	a	2364246	Zucchini	70	80	1.85	1.90	1.87	0.06
	a	2347786	Pan-fried fresh mushrooms	120	80	2.08	1.90	1.99	-0.18
	a	2333797	Smooke multifruits	90	90	1.95	1.95	1.95	0.00
	a	2317042	Watermelon	370	260	2.57	2.41	2.49	-0.15
	a	2364247	Pineapple mango passion fruit smoothie	980	1000	2.99	3.00	3.00	0.01
	a	2364198	Fennel	3200	3200	3.51	3.51	3.51	0.00
	b	2333649	Beets	140	50	2.15	1.70	1.92	-0.45
	b	2364199	Stir-fried vegetables	210	270	2.32	2.43	2.38	0.11
	b	2364200	Mayonnaise celery	1500	1400	3.18	3.15	3.16	-0.03
	b	2364249	Flan of Vegetables	3400	1800	3.53	3.26	3.39	-0.28
	b	2364248	Parsley beet salad	7900	11000	3.90	4.04	3.97	0.14
	c	2333652	Ratatouille	60	70	1.78	1.85	1.81	0.07
	c	2364250	Strawberry Kiwi Pineapple Trio	90	150	1.95	2.18	2.07	0.22
	c	2317044	Vegetable soup	380	320	2.58	2.51	2.54	-0.07
	c	2364202	Ratatouille	940	1500	2.97	3.18	3.07	0.20
	c	2364251	Butternut pumpkin and carrot puree	1800	2400	3.26	3.38	3.32	0.12
	Average difference of the category								
Standard deviation of differences									0.18

Appendix E - Statistical calculations - Pour plate

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Composite foods	a	2364253	Scandinavian pasta	310	310	2.49	2.49	2.49	0.00
	a	2364204	Piemontese	420	580	2.62	2.76	2.69	0.14
	a	2364252	Surimi salad	3700	5000	3.57	3.70	3.63	0.13
	a	2347791	Raw vegetables wrap	350000	400000	5.54	5.60	5.57	0.06
	a	2347792	Tabbouleh	1100000	1200000	6.04	6.08	6.06	0.04
	b	2333657	Ham and cheese galette	150	150	2.18	2.18	2.18	0.00
	b	2364205	Tartiflette	300	130	2.48	2.11	2.30	-0.36
	b	2364255	Salmon bruchetta	770	650	2.89	2.81	2.85	-0.07
	b	2364206	Raclette tartlet	5600	4500	3.75	3.65	3.70	-0.09
	b	2347794	Gratin	5900	2800	3.77	3.45	3.61	-0.32
	c	2316983	Pastry: Baba rhum	40	90	1.60	1.95	1.78	0.35
	c	2364208	Baba with rum and whipped cream	440	160	2.64	2.20	2.42	-0.44
	c	2364207	Cream with speculos	530	500	2.72	2.70	2.71	-0.03
	c	2364256	Ile flottante	4300	1600	3.63	3.20	3.42	-0.43
	c	2364257	Liquid egg yolk	4700	3400	3.67	3.53	3.60	-0.14
	c	2347795	Chocolate mousse	220000	330000	5.34	5.52	5.43	0.18
	c	2347796	Paris Brest	3500000	3200000	6.54	6.51	6.52	-0.04
	Average difference of the category								
Standard deviation of differences									0.22

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Environmental samples	a	2364218	Cheese process water	190	230	2.28	2.36	2.32	0.08	
	a	2364220	Poultry process water	310	330	2.49	2.52	2.50	0.03	
	a	2364221	Pastry process water	360	250	2.56	2.40	2.48	-0.16	
	a	2364219	Process water food film 1	700	750	2.85	2.88	2.86	0.03	
	a	2364223	Plant process water	2900	1600	3.46	3.20	3.33	-0.26	
	b	2333668	Pastry industry residue	70	70	1.85	1.85	1.85	0.00	
	b	2364231	Egg product dust 2	210	370	2.32	2.57	2.45	0.25	
	b	2364229	Milling dust	350	560	2.54	2.75	2.65	0.20	
	b	2364215	Cheese residues	510	710	2.71	2.85	2.78	0.14	
	b	2364217	Plant residues	1200	720	3.08	2.86	2.97	-0.22	
	b	2364216	Salmon residues	1600	1400	3.20	3.15	3.18	-0.06	
	b	2364230	Egg product dust 1	4300	5900	3.63	3.77	3.70	0.14	
	c	2364233	Wipe delicatessen environment 2	110	150	2.04	2.18	2.11	0.13	
	c	2364224	Wipe pastry environment	740	630	2.87	2.80	2.83	-0.07	
	c	2364225	Wipe delicatessen environment 1	3100	1800	3.49	3.26	3.37	-0.24	
	c	2364226	Wipe bucher environment	5900	6500	3.77	3.81	3.79	0.04	
	c	2364227	Egg product swab 1	27000	24000	4.43	4.38	4.41	-0.05	
	c	2364228	Egg product swab 2	48000	54000	4.68	4.73	4.71	0.05	
	Average difference of the category									0.00
	Standard deviation of differences									0.15
Average difference all categories									-0.03	
Standard deviation of differences									0.20	

Appendix E - Statistical calculations - Pour plate

n = 17 $T(0.025;16) = 2.120$
 n = 19 $T(0.025;18) = 2.101$
 n = 16 $T(0.025;15) = 2.131$
 n = 16 $T(0.025;15) = 2.131$
 n = 17 $T(0.025;16) = 2.120$
 n = 18 $T(0.025;17) = 2.110$
 n = 103 $T(0.025;102) = 1.983$
 $\beta = 95\%$

	Lower confidence limit	Upper confidence limit
MP	-0.64	0.65
DP	-0.37	0.29
SFP	-0.38	0.28
VP	-0.41	0.38
CF	-0.54	0.42
ES	-0.32	0.33
All	-0.41	0.36

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2347803	Chicken wings	50	30	1.70	1.48	1.59	-0.22
	a	2347805	Mexican chicken cut	20	<10	1.30	0.00	0.65	-1.30
	b	2364236	Caramel pork	<100	<100	0.00	0.00	0.00	0.00
	c	2347801	Chorizo	40	<10	1.60	0.00	0.80	-1.60
	c	2347802	Lemon thyme pork skewer	<10	<10	0.00	0.00	0.00	0.00
Dairy products	c	2347777	Pasteurised milk cheese "Gorgonzola"	<10	<10	0.00	0.00	0.00	0.00
Seafood products	b	2364194	Smoked mackerel	30	<10	1.48	0.00	0.74	-1.48
	b	2364260	Marinated spicy prawns	<10	<10	0.00	0.00	0.00	0.00
Vegetables	b	2347787	Strawberry puree	<10	<10	0.00	0.00	0.00	0.00
	b	2347788	Carrot celery mix	<10	<10	0.00	0.00	0.00	0.00
	c	2347789	Soup	40	30	1.60	1.48	1.54	-0.12
	c	2347790	Orange juice	<10	<10	0.00	0.00	0.00	0.00
	c	2364201	Compote	70	10	1.85	1.00	1.42	-0.85
Composite foods	b	2347793	Medley of vegetables and spelled	>15000	>15000	5.17	5.17	5.17	0.00
	b	2364254	Carrot pumpkin cheesecake	30	30	1.48	1.48	1.48	0.00
Environmental samples	a	2364264	Fishmonger process water 1	60	<10	1.78	0.00	0.89	-1.78
	a	2364265	Fishmonger process water 2	<10	<10	0.00	0.00	0.00	0.00

Appendix E - Statistical calculations - Surface spreading

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Meat products	a	2347804	Chicken	40	150	1.60	2.18	1.89	0.57	
	a	2347797	Pork cutlet	120	110	2.08	2.04	2.06	-0.04	
	a	2364210	Veal chop	180	80	2.26	1.90	2.08	-0.35	
	a	2364235	Ground raw veal	320	980	2.51	2.99	2.75	0.49	
	a	2364209	Beef steak	380	280	2.58	2.45	2.51	-0.13	
	a	2347798	Chopped steak	2000	2300	3.30	3.36	3.33	0.06	
	a	2364234	Chicken meat mechanically separated	16000	14000	4.20	4.15	4.18	-0.06	
	b	2347799	Lasagna	80	140	1.90	2.15	2.02	0.24	
	b	2364211	Beef meatball with tomato sauce	120	190	2.08	2.28	2.18	0.20	
	b	2364212	Lasagna	810	500	2.91	2.70	2.80	-0.21	
	b	2347800	Ballotin of beef	3300	2700	3.52	3.43	3.47	-0.09	
	b	2364237	Beef parmentier	9900	8900	4.00	3.95	3.97	-0.05	
	c	2317060	Cooked shank	40	50	1.60	1.70	1.65	0.10	
	c	2364213	Liver mousse	160	120	2.20	2.08	2.14	-0.12	
	c	2364239	Andouillette steak	880	1500	2.94	3.18	3.06	0.23	
	c	2364214	Cooked pork tongue	3400	1200	3.53	3.08	3.31	-0.45	
	c	2364238	Rabbit rillettes	21000	31000	4.32	4.49	4.41	0.17	
	Average difference of the category									0.03
	Standard deviation of differences									0.27
	Dairy products	a	2333670	Brie LC	100	110	2.00	2.04	2.02	0.04
a		2347773	Raw milk cheese Reblochon	340	250	2.53	2.40	2.46	-0.13	
a		2364185	Raw milk cheese "Morbier"	450	260	2.65	2.41	2.53	-0.24	
a		2364241	Raw milk cheese Brie de Meaux	690	1200	2.84	3.08	2.96	0.24	
a		2364186	Raw milk cheese "Tomme de Savoie"	1090	950	3.04	2.98	3.01	-0.06	
a		2347774	Raw milk cheese Emmental	4900	6400	3.69	3.81	3.75	0.12	
a		2364240	Raw milk goat cheese Rocamadour	13000	11000	4.11	4.04	4.08	-0.07	
b		2364188	Raw cream	150	140	2.18	2.15	2.16	-0.03	
b		2364242	Raw butter	260	600	2.41	2.78	2.60	0.36	
b		2347775	Raw cow's milk	540	540	2.73	2.73	2.73	0.00	
b		2364187	Raw sheep's milk	730	520	2.86	2.72	2.79	-0.15	
b		2347776	Faisselle raw milk sheep	4600	4000	3.66	3.60	3.63	-0.06	
b		2364243	Raw cream	4800	3900	3.68	3.59	3.64	-0.09	
b		2316971	Raw milk	6700	4200	3.83	3.62	3.72	-0.20	
c		2364190	Drinkable yogurt	130	110	2.11	2.04	2.08	-0.07	
c		2364189	Pasteurized sheep's milk cheese	330	190	2.52	2.28	2.40	-0.24	
c		2364245	Pasteurized milk cheese Brillat Savarin	1800	1900	3.26	3.28	3.27	0.02	
c		2347778	Sheep's milk yogurt	5000	5500	3.70	3.74	3.72	0.04	
c		2364244	Organic yogurt	15000	17000	4.18	4.23	4.20	0.05	
Average difference of the category									-0.02	
Standard deviation of differences									0.15	

Appendix E - Statistical calculations - Surface spreading

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Seafood products	a	2333638	Sardine	190	170	2.28	2.23	2.25	-0.05	
	a	2347780	Cod fillet	560	740	2.75	2.87	2.81	0.12	
	a	2364192	Plaice fillet	570	500	2.76	2.70	2.73	-0.06	
	a	2364258	Hake fillet	700	590	2.85	2.77	2.81	-0.07	
	a	2347779	Sardine fillet	860	480	2.93	2.68	2.81	-0.25	
	a	2364259	Net Whiting	1800	2300	3.26	3.36	3.31	0.11	
	b	2333795	Smoked herring	90	90	1.95	1.95	1.95	0.00	
	b	2347782	Smoked zander	680	1000	2.83	3.00	2.92	0.17	
	b	2347781	Smoked haddock	810	720	2.91	2.86	2.88	-0.05	
	b	2364261	Salmon steak marinated in curry	840	950	2.92	2.98	2.95	0.05	
	b	2364193	Salmon tartare	1200	990	3.08	3.00	3.04	-0.08	
	c	2319238	Surimi	50	110	1.70	2.04	1.87	0.34	
	c	2347783	Herring and potato salad	600	610	2.78	2.79	2.78	0.01	
	c	2364262	Tuna rillettes	2000	1500	3.30	3.18	3.24	-0.12	
	c	2364263	Surimi	2400	2300	3.38	3.36	3.37	-0.02	
	c	2347784	Salmon and hake gratin	3300	3300	3.52	3.52	3.52	0.00	
	Average difference of the category									0.01
	Standard deviation of differences									0.14
	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Vegetables	a	2364246	Zucchini	70	90	1.85	1.95	1.90	0.11	
	a	2347786	Pan-fried fresh mushrooms	120	40	2.08	1.60	1.84	-0.48	
	a	2317042	Watermelon	370	150	2.57	2.18	2.37	-0.39	
	a	2364247	Pineapple mango passion fruit smoothie	980	840	2.99	2.92	2.96	-0.07	
	a	2364198	Fennel	3200	4100	3.51	3.61	3.56	0.11	
	a	2333797	Smooke multifruits	90	60	1.95	1.78	1.87	-0.18	
	b	2333649	Beets	140	80	2.15	1.90	2.02	-0.24	
	b	2364199	Stir-fried vegetables	210	270	2.32	2.43	2.38	0.11	
	b	2364200	Mayonnaise celery	1500	1500	3.18	3.18	3.18	0.00	
	b	2364249	Flan Of Vegetables	3400	2200	3.53	3.34	3.44	-0.19	
	b	2364248	Parsley beet salad	7900	15000	3.90	4.18	4.04	0.28	
	c	2333652	Ratatouille	60	70	1.78	1.85	1.81	0.07	
	c	2364250	Strawberry Kiwi Pineapple Trio	90	100	1.95	2.00	1.98	0.05	
	c	2317044	Vegetable soup	380	220	2.58	2.34	2.46	-0.24	
	c	2364202	Ratatouille	940	1300	2.97	3.11	3.04	0.14	
	c	2364251	Butternut pumpkin and carrot puree	1800	2600	3.26	3.41	3.34	0.16	
	Average difference of the category									-0.05
	Standard deviation of differences									0.22

Appendix E - Statistical calculations - Surface spreading

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Composite foods	a	2364253	Scandinavian pasta	310	430	2.49	2.63	2.56	0.14	
	a	2364204	Piemontese	420	450	2.62	2.65	2.64	0.03	
	a	2364252	Surimi salad	3700	5800	3.57	3.76	3.67	0.20	
	a	2347791	Raw vegetables wrap	350000	300000	5.54	5.48	5.51	-0.07	
	a	2347792	Tabbouleh	1100000	1200000	6.04	6.08	6.06	0.04	
	b	2333657	Ham and cheese galette	150	180	2.18	2.26	2.22	0.08	
	b	2364205	Tartiflette	300	140	2.48	2.15	2.31	-0.33	
	b	2364255	Salmon bruchetta	770	850	2.89	2.93	2.91	0.04	
	b	2364206	Raclette tartlet	5600	5600	3.75	3.75	3.75	0.00	
	b	2347794	Gratin	5900	4600	3.77	3.66	3.72	-0.11	
	c	2316983	Pastry: Baba rhum	40	120	1.60	2.08	1.84	0.48	
	c	2364208	Baba with rum and whipped cream	440	170	2.64	2.23	2.44	-0.41	
	c	2364207	Cream with speculos	530	460	2.72	2.66	2.69	-0.06	
	c	2364256	Ile flottante	4300	5600	3.63	3.75	3.69	0.11	
	c	2364257	Liquid egg yolk	4700	6600	3.67	3.82	3.75	0.15	
	c	2347795	Chocolate mousse	220000	350000	5.34	5.54	5.44	0.20	
	c	2347796	Paris Brest	3500000	3700000	6.54	6.57	6.56	0.02	
	Average difference of the category									0.03
	Standard deviation of differences									0.20

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Environmental samples	a	2364264	Fishmonger process water 1	60	50	1.78	1.70	1.74	-0.08
	a	2364218	Cheese process water	190	190	2.28	2.28	2.28	0.00
	a	2364220	Poultry process water	310	390	2.49	2.59	2.54	0.10
	a	2364221	Pastry process water	360	270	2.56	2.43	2.49	-0.12
	a	2364219	Process water food film 1	700	610	2.85	2.79	2.82	-0.06
	a	2364223	Plant process water	2900	2500	3.46	3.40	3.43	-0.06
	b	2333668	Pastry industry residue	70	70	1.85	1.85	1.85	0.00
	b	2364231	Egg product dust 2	210	400	2.32	2.60	2.46	0.28
	b	2364229	Milling dust	350	520	2.54	2.72	2.63	0.17
	b	2364215	Cheese residues	510	750	2.71	2.88	2.79	0.17
	b	2364217	Plant residues	1200	730	3.08	2.86	2.97	-0.22
	b	2364216	Salmon residues	1600	1400	3.20	3.15	3.18	-0.06
	b	2364230	Egg product dust 1	4300	5700	3.63	3.76	3.69	0.12
	c	2364233	Wipe delicatessen environment 2	110	90	2.04	1.95	2.00	-0.09
	c	2364224	Wipe pastry environment	740	670	2.87	2.83	2.85	-0.04
	c	2364225	Wipe delicatessen environment 1	3100	3100	3.49	3.49	3.49	0.00
	c	2364226	Wipe bucher environment	5900	6900	3.77	3.84	3.80	0.07
	c	2364227	Egg product swab 1	27000	34000	4.43	4.53	4.48	0.10
	c	2364228	Egg product swab 2	48000	61000	4.68	4.79	4.73	0.10
	Average difference of the category								
Standard deviation of differences									0.12
Average difference all categories									0.00
Standard deviation of differences									0.19

Appendix E - Statistical calculations - Surface spreading

n = 17 $T(0.025;16)= 2.120$
n = 19 $T(0.025;18)= 2.101$
n = 16 $T(0.025;15)= 2.131$
n = 16 $T(0.025;15)= 2.131$
n = 17 $T(0.025;16)= 2.120$
n = 19 $T(0.025;18)= 2.101$
n = 104 $T(0.025;103)= 1.983$
 $\beta = 95\%$

	Lower confidence limit	Upper confidence limit
MP	-0.55	0.62
DP	-0.35	0.30
SFP	-0.29	0.30
VP	-0.52	0.43
CF	-0.41	0.47
ES	-0.24	0.28
All	-0.37	0.37

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2347803	Chicken wings	50	20	1.70	1.30	1.50	-0.40
	a	2347805	Mexican chicken cut	20	10	1.30	1.00	1.15	-0.30
	b	2364236	Caramel pork	<100	<100	0.00	0.00	0.00	0.00
	c	2347801	Chorizo	40	<10	1.60	0.00	0.80	-1.60
	c	2347802	Lemon thyme pork skewer	<10	<10	0.00	0.00	0.00	0.00
Dairy products	c	2347777	Pasteurised milk cheese "Gorgonzola"	<10	<10	0.00	0.00	0.00	0.00
Seafood products	b	2364194	Smoked mackerel	30	<10	1.48	0.00	0.74	-1.48
	b	2364260	Marinated spicy prawns	<10	<10	0.00	0.00	0.00	0.00
Vegetables	b	2347787	Strawberry puree	<10	<10	0.00	0.00	0.00	0.00
	b	2347788	Carrot celery mix	<10	<10	0.00	0.00	0.00	0.00
	c	2347789	Soup	40	<10	1.60	0.00	0.80	-1.60
	c	2347790	Orange juice	<10	<10	0.00	0.00	0.00	0.00
	c	2364201	Compote	70	10	1.85	1.00	1.42	-0.85
Composite foods	b	2347793	Medley of vegetables and spelled	>15000	>15000	5.17	5.17	5.17	0.00
	b	2364254	Carrot pumpkin cheesecake	30	40	1.48	1.60	1.54	0.12
Environmental	a	2364265	Fishmonger process water 2	<10	<10	0.00	0.00	0.00	0.00

Appendix F - Accuracy profiles - Raw data

APPENDIX F - ACCURACY PROFILE - MEAT PRODUCTS

Matrix: Liver pâté

Strain: *Listeria ivanovii* APE161

Enumeration of the microorganisms at 30°C - batch 1: 2.4 10⁷ CFU/g
 Enumeration of the microorganisms at 30°C - batch 2: 2.2 10³ CFU/g

		Reference method: ISO 11290-2 - 24h					Reference method: ISO 11290-2 - 48h					Alternative method: LISTERIA PRECIS- pour plate - 24h					Alternative method: LISTERIA PRECIS- pour plate - 48h					Alternative method: LISTERIA PRECIS- surface spreading - 24h					Alternative method: LISTERIA PRECIS- surface spreading - 48h											
		dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	
Level 1	Batch 1	2384431	-1	4	-2	1	/	40	-2	8	-2	1	+	80	-1	4	-2	1	/	40	-1	5	-2	1	+	50	-1	5	-2	2	/	50	-1	10	-2	1	+	100
		2384432	-1	9	-2	0	/	90	-2	10	-2	0	+	100	-1	8	-2	0	/	80	-1	9	-2	0	+	90	-1	6	-2	1	/	60	-1	9	-2	1	+	90
		2384433	-1	4	-2	2	/	40	-2	6	-2	2	+	60	-1	9	-2	0	/	90	-1	9	-2	0	+	90	-1	5	-2	0	/	50	-1	10	-2	0	+	100
		2384434	-1	7	-2	0	/	70	-2	9	-2	0	+	90	-1	5	-2	0	/	50	-1	6	-2	0	+	60	-1	4	-2	1	/	40	-1	7	-2	1	+	70
		2384435	-1	6	-2	0	/	60	-2	6	-2	0	+	60	-1	6	-2	1	/	60	-1	8	-2	1	+	80	-1	2	-2	0	/	20	-1	6	-2	1	+	60
	Batch 2	2384436	-1	10	-2	1	/	100	-2	13	-2	1	+	130	-1	9	-2	0	/	90	-1	10	-2	0	+	100	-1	7	-2	1	/	70	-1	10	-2	1	+	100
		2384437	-1	8	-2	0	/	80	-2	10	-2	0	+	100	-1	7	-2	0	/	70	-1	8	-2	0	+	80	-1	5	-2	3	/	50	-1	9	-2	0	+	90
		2384438	-1	5	-2	2	/	50	-2	7	-2	2	+	70	-1	6	-2	1	/	60	-1	6	-2	1	+	60	-1	2	-2	1	/	20	-1	8	-2	1	+	80
		2384439	-1	9	-2	1	/	90	-2	9	-2	1	+	90	-1	8	-2	0	/	80	-1	8	-2	0	+	80	-1	4	-2	0	/	40	-1	7	-2	0	+	70
		2384440	-1	5	-2	1	/	50	-2	7	-2	1	+	70	-1	3	-2	0	/	30	-1	4	-2	0	+	40	-1	4	-2	0	/	40	-1	5	-2	0	+	50
Level 2	Batch 1	2384441	-2	12	-3	2	/	1300	-3	15	-3	2	+	1500	-2	36	-3	2	/	3500	-2	39	-3	3	+	3800	-2	34	-3	0	/	3100	-2	44	-3	2	+	4200
		2384442	-2	13	-3	1	/	1300	-3	14	-3	1	+	1400	-2	14	-3	1	/	1400	-2	16	-3	1	+	1500	-2	19	-3	1	/	1800	-2	20	-3	1	+	1900
		2384443	-2	14	-3	2	/	1500	-3	14	-3	2	+	1500	-2	21	-3	3	/	2200	-2	22	-3	3	+	2300	-2	26	-3	0	/	2400	-2	28	-3	0	+	2500
		2384444	-2	27	-3	3	/	2700	-3	27	-3	4	+	2800	-2	19	-3	2	/	1900	-2	20	-3	3	+	2100	-2	20	-3	2	/	2000	-2	23	-3	3	+	2400
		2384445	-2	17	-3	6	/	2100	-3	19	-3	6	+	2300	-2	14	-3	0	/	1300	-2	16	-3	0	+	1500	-2	25	-3	3	/	2500	-2	29	-3	3	+	2900
	Batch 2	2384446	-2	19	-3	3	/	2000	-3	22	-3	3	+	2300	-2	13	-3	5	/	1600	-2	15	-3	6	+	1900	-2	28	-3	0	/	2500	-2	32	-3	1	+	3000
		2384447	-2	21	-3	2	/	2100	-3	23	-3	2	+	2300	-2	16	-3	1	/	1500	-2	19	-3	1	+	1800	-2	20	-3	6	/	2400	-2	20	-3	6	+	2400
		2384448	-2	29	-3	1	/	2700	-3	29	-3	2	+	2800	-2	23	-3	4	/	2500	-2	23	-3	5	+	2500	-2	20	-3	3	/	2100	-2	22	-3	3	+	2300
		2384449	-2	23	-3	3	/	2400	-3	27	-3	4	+	2800	-2	14	-3	4	/	1600	-2	14	-3	4	+	1600	-2	23	-3	1	/	2200	-2	23	-3	1	+	2200
		2384450	-2	27	-3	2	/	2600	-3	30	-3	5	+	3200	-2	19	-3	4	/	2100	-2	19	-3	5	+	2200	-2	17	-3	3	/	1800	-2	19	-3	3	+	2000
Level 3	Batch 1	2384451	-3	23	-4	2	/	23000	-4	23	-4	3	+	24000	-3	20	-4	1	/	19000	-3	22	-4	2	+	22000	-3	22	-4	3	/	23000	-3	27	-4	3	+	27000
		2384452	-3	32	-4	2	/	31000	-4	33	-4	2	+	32000	-3	21	-4	2	/	21000	-3	24	-4	2	+	24000	-3	27	-4	2	/	26000	-3	30	-4	3	+	30000
		2384453	-3	21	-4	1	/	20000	-4	24	-4	1	+	23000	-3	22	-4	4	/	24000	-3	22	-4	6	+	25000	-3	27	-4	5	/	29000	-3	30	-4	5	+	32000
		2384454	-3	24	-4	2	/	24000	-4	26	-4	2	+	25000	-3	19	-4	4	/	21000	-3	19	-4	4	+	21000	-3	19	-4	4	/	21000	-3	21	-4	4	+	23000
		2384455	-3	19	-4	0	/	17000	-4	20	-4	0	+	18000	-3	15	-4	2	/	15000	-3	20	-4	2	+	20000	-3	21	-4	4	/	23000	-3	23	-4	4	+	24000
	Batch 2	2384456	-3	22	-4	3	/	23000	-4	22	-4	3	+	23000	-3	19	-4	2	/	19000	-3	20	-4	2	+	20000	-3	15	-4	5	/	18000	-3	16	-4	5	+	19000
		2384457	-3	19	-4	2	/	19000	-4	21	-4	2	+	21000	-3	25	-4	0	/	23000	-3	29	-4	0	+	26000	-3	16	-4	1	/	15000	-3	19	-4	3	+	20000
		2384458	-3	19	-4	0	/	17000	-4	21	-4	0	+	19000	-3	23	-4	2	/	23000	-3	25	-4	2	+	24000	-3	17	-4	3	/	18000	-3	19	-4	5	+	22000
		2384459	-3	20	-4	5	/	23000	-4	23	-4	5	+	25000	-3	12	-4	0	/	11000	-3	12	-4	1	+	12000	-3	11	-4	1	/	11000	-3	14	-4	1	+	14000
		2384460	-3	15	-4	5	/	18000	-4	16	-4	5	+	19000	-3	22	-4	1	/	21000	-3	25	-4	2	+	24000	-3	18	-4	0	/	16000	-3	18	-4	0	+	16000

APPENDIX F - ACCURACY PROFILE - DAIRY PRODUCTS

Matrix: Raw milk

Strain: *Listeria innocua* XKU847

Enumeration of the microorganisms at 30°C - batch 1: 3.1 10⁵ CFU/g
 Enumeration of the microorganisms at 30°C - batch 2: 6 10⁴ CFU/g

		Reference method: ISO 11290-2 - 24h					Reference method: ISO 11290-2 - 48h					Alternative method: LISTERIA PRECIS- pour plate - 24h					Alternative method: LISTERIA PRECIS- pour plate - 48h					Alternative method: LISTERIA PRECIS- surface spreading - 24h					Alternative method: LISTERIA PRECIS- surface spreading - 48h											
		dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	
Level 1	Batch 1	2384461	-1	6	-2	1	/	60	-1	7	-2	1	+	70	-1	11	-2	2	/	110	-1	11	-2	3	+	130	-1	8	-2	0	/	80	-1	9	-2	0	+	90
		2384462	-1	9	-2	2	/	90	-1	11	-2	2	+	120	-1	10	-2	1	/	100	-1	10	-2	1	+	100	-1	9	-2	1	/	90	-1	9	-2	1	+	90
		2384463	-1	3	-2	1	/	30	-1	8	-2	1	+	80	-1	11	-2	1	/	110	-1	11	-2	1	+	110	-1	9	-2	2	/	90	-1	11	-2	2	+	110
		2384464	-1	3	-2	1	/	30	-1	8	-2	1	+	80	-1	6	-2	1	/	60	-1	8	-2	1	+	80	-1	19	-2	2	/	200	-1	19	-2	2	+	190
		2384465	-1	2	-2	1	/	20	-1	9	-2	1	+	90	-1	3	-2	0	/	30	-1	4	-2	0	+	40	-1	3	-2	0	/	30	-1	7	-2	0	+	70
	Batch 2	2384466	-1	4	-2	1	/	40	-1	4	-2	1	+	40	-1	10	-2	1	/	100	-1	10	-2	1	+	100	-1	16	-2	3	/	170	-1	16	-2	3	+	170
		2384467	-1	4	-2	0	/	40	-1	11	-2	0	+	110	-1	6	-2	0	/	60	-1	7	-2	0	+	70	-1	13	-2	0	/	120	-1	13	-2	0	+	120
		2384468	-1	11	-2	1	/	110	-1	11	-2	1	+	110	-1	7	-2	0	/	70	-1	7	-2	0	+	70	-1	7	-2	1	/	70	-1	7	-2	1	+	70
		2384469	-1	9	-2	1	/	90	-1	10	-2	5	+	100	-1	10	-2	0	/	100	-1	10	-2	0	+	100	-1	3	-2	0	/	30	-1	5	-2	0	+	50
		2384470	-1	11	-2	2	/	110	-1	15	-2	2	+	180	-1	11	-2	1	/	110	-1	12	-2	1	+	120	-1	7	-2	1	/	70	-1	7	-2	1	+	70
Level 2	Batch 1	2384471	-2	18	-3	0	/	1600	-2	18	-3	1	+	1700	-2	17	-3	3	/	1800	-2	18	-3	3	+	1900	-2	22	-3	4	/	2400	-2	22	-3	4	+	2400
		2384472	-2	17	-3	6	/	2100	-2	19	-3	6	+	2300	-2	11	-3	2	/	1200	-2	16	-3	2	+	1600	-2	18	-3	1	/	1700	-2	18	-3	1	+	1700
		2384473	-2	21	-3	0	/	1900	-2	21	-3	0	+	1900	-2	10	-3	3	/	1200	-2	11	-3	3	+	1300	-2	17	-3	1	/	1600	-2	17	-3	1	+	1600
		2384474	-2	9	-3	2	/	1000	-2	10	-3	2	+	1100	-2	16	-3	2	/	1600	-2	16	-3	2	+	1600	-2	16	-3	1	/	1500	-2	16	-3	1	+	1500
		2384475	-2	15	-3	2	/	1500	-2	16	-3	2	+	1600	-2	24	-3	4	/	2500	-2	24	-3	4	+	2500	-2	22	-3	1	/	2100	-2	23	-3	1	+	2200
	Batch 2	2384476	-2	25	-3	5	/	2700	-2	25	-3	5	+	2700	-2	13	-3	0	/	1200	-2	14	-3	0	+	1300	-2	22	-3	4	/	2400	-2	22	-3	4	+	2400
		2384477	-2	7	-3	3	/	900	-2	12	-3	3	+	1400	-2	11	-3	2	/	1200	-2	11	-3	2	+	1200	-2	18	-3	3	/	1900	-2	18	-3	3	+	1900
		2384478	-2	14	-3	1	/	1400	-2	14	-3	1	+	1400	-2	16	-3	1	/	1500	-2	16	-3	1	+	1500	-2	25	-3	0	/	2300	-2	25	-3	0	+	2300
		2384479	-2	15	-3	3	/	1600	-2	17	-3	3	+	1800	-2	11	-3	2	/	1200	-2	11	-3	2	+	1200	-2	17	-3	2	/	1700	-2	17	-3	2	+	1700
		2384480	-2	20	-3	1	/	1900	-2	21	-3	1	+	2000	-2	20	-3	1	/	1900	-2	23	-3	1	+	2200	-2	19	-3	7	/	2400	-2	19	-3	7	+	2400
Level 3	Batch 1	2384481	-3	11	-4	3	/	13000	-3	11	-4	3	+	13000	-3	13	-4	0	/	12000	-3	13	-4	0	+	12000	-3	13	-4	5	/	16000	-3	13	-4	6	+	17000
		2384482	-3	17	-4	2	/	17000	-3	17	-4	2	+	17000	-3	14	-4	2	/	14000	-3	15	-4	2	+	15000	-3	14	-4	3	/	15000	-3	14	-4	3	+	15000
		2384483	-3	14	-4	2	/	14000	-3	15	-4	2	+	15000	-3	22	-4	0	/	20000	-3	22	-4	1	+	21000	-3	11	-4	2	/	12000	-3	11	-4	2	+	12000
		2384484	-3	7	-4	5	/	11000	-3	7	-4	5	+	11000	-3	21	-4	2	/	21000	-3	21	-4	2	+	21000	-3	23	-4	4	/	24000	-3	23	-4	4	+	24000
		2384485	-3	22	-4	0	/	20000	-3	22	-4	0	+	20000	-3	13	-4	4	/	15000	-3	13	-4	4	+	15000	-3	16	-4	2	/	16000	-3	16	-4	2	+	16000
	Batch 2	2384486	-3	19	-4	2	/	19000	-3	19	-4	2	+	19000	-3	14	-4	2	/	14000	-3	14	-4	2	+	14000	-3	17	-4	1	/	16000	-3	17	-4	1	+	16000
		2384487	-3	11	-4	5	/	14000	-3	12	-4	5	+	15000	-3	18	-4	1	/	17000	-3	18	-4	1	+	17000	-3	19	-4	2	/	19000	-3	19	-4	2	+	19000
		2384488	-3	26	-4	3	/	26000	-3	26	-4	3	+	26000	-3	21	-4	1	/	20000	-3	21	-4	1	+	20000	-3	21	-4	8	/	26000	-3	21	-4	3	+	22000
		2384489	-3	24	-4	3	/	24000	-3	25	-4	3	+	15000	-3	6	-4	1	/	6400	-3	16	-4	1	+	15000	-3	14	-4	4	/	16000	-3	14	-4	4	+	16000
		2384490	-3	8	-4	1	/	8200	-3	8	-4	1	+	8200	-3	7	-4	2	/	8200	-3	18	-4	2	+	18000	-3	20	-4	2	/	20000	-3	20	-4	2	+	20000

APPENDIX F - ACCURACY PROFILE - SEAFOOD PRODUCTS

Matrix: Fish terrine

Strain: *Listeria monocytogenes* PAJ947

Enumeration of the microorganisms at 30°C - batch 1: <10 CFU/g
 Enumeration of the microorganisms at 30°C - batch 2: 10 CFU/g

		Reference method: ISO 11290-2 - 24h						Reference method: ISO 11290-2 - 48h						Alternative method: LISTERIA PRECIS- pour plate - 24h						Alternative method: LISTERIA PRECIS- pour plate - 48h						Alternative method: LISTERIA PRECIS- surface spreading - 24h						Alternative method: LISTERIA PRECIS- surface spreading - 48h						
		dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (UFC/g)	
Level 1	Batch 1	R1	-1	12	-2	0	/	110	-1	14	-2	0	+	130	-1	4	-2	1	/	40	-1	6	-2	1		60	-1	8	-2	0	/	80	-1	9	-2	0	+	90
		R2	-1	8	-2	1	/	80	-1	8	-2	1	+	80	-1	10	-2	0	/	90	-1	10	-2	0		90	-1	5	-2	0	/	50	-1	6	-2	0	+	60
		R3	-1	4	-2	1	/	40	-1	5	-2	1	+	50	-1	2	-2	0	/	20	-1	5	-2	0		50	-1	11	-2	0	/	100	-1	11	-2	0	+	100
		R4	-1	8	-2	2	/	80	-1	8	-2	2	+	80	-1	6	-2	1	/	60	-1	6	-2	1		60	-1	10	-2	0	/	90	-1	10	-2	0	+	90
		R5	-1	16	-2	0	/	145	-1	16	-2	0	+	145	-1	13	-2	0	/	120	-1	13	-2	1		130	-1	8	-2	2	/	80	-1	9	-2	2	+	90
	Batch 2	R1	-1	5	-2	1	/	55	-1	5	-2	1	+	50	-1	8	-2	1	/	80	-1	8	-2	1		80	-1	12	-2	3	/	140	-1	13	-2	3	+	145
		R2	-1	6	-2	2	/	60	-1	6	-2	2	+	60	-1	3	-2	1	/	30	-1	9	-2	1		90	-1	12	-2	0	/	110	-1	12	-2	0	+	110
		R3	-1	13	-2	3	/	145	-1	13	-2	3	+	145	-1	10	-2	0	/	90	-1	10	-2	0		90	-1	8	-2	2	/	80	-1	8	-2	2	+	80
		R4	-1	10	-2	2	/	110	-1	10	-2	2	+	110	-1	13	-2	0	/	120	-1	13	-2	1		130	-1	11	-2	0	/	100	-1	11	-2	0	+	100
		R5	-1	7	-2	3	/	70	-1	9	-2	3	+	110	-1	8	-2	1	/	80	-1	8	-2	1		80	-1	7	-2	1	/	70	-1	7	-2	1	+	70
Level 2	Batch 1	R1	-2	31	-3	6	/	3400	-2	31	-3	6	+	3400	-2	15	-3	3	/	1600	-2	33	-3	3		3300	-2	34	-3	5	/	3600	-2	35	-3	5	+	3600
		R2	-2	44	-3	3	/	4300	-2	44	-3	3	+	4300	-2	26	-3	1	/	2500	-2	26	-3	1		2500	-2	31	-3	4	/	3200	-2	31	-3	4	+	3200
		R3	-2	25	-3	7	/	2900	-2	25	-3	7	+	2900	-2	30	-3	1	/	2800	-2	30	-3	1		2800	-2	24	-3	6	/	2700	-2	26	-3	6	+	2900
		R4	-2	25	-3	6	/	2800	-2	26	-3	6	+	2900	-2	22	-3	2	/	2200	-2	23	-3	3		2400	-2	39	-3	3	/	3800	-2	39	-3	3	+	3800
		R5	-2	36	-3	4	/	3600	-2	36	-3	4	+	3600	-2	22	-3	3	/	2300	-2	22	-3	4		2400	-2	36	-3	1	/	3400	-2	36	-3	2	+	3500
	Batch 2	R1	-2	30	-3	0	/	2700	-2	30	-3	1	+	2800	-2	28	-3	2	/	2700	-2	28	-3	3		2800	-2	31	-3	2	/	3000	-2	31	-3	2	+	3000
		R2	-2	10	-3	0	/	900	-2	14	-3	1	+	1400	-2	29	-3	1	/	2700	-2	30	-3	1		2800	-2	24	-3	6	/	2700	-2	24	-3	6	+	2700
		R3	-2	30	-3	0	/	2700	-2	37	-3	4	+	3700	-2	21	-3	3	/	2200	-2	27	-3	3		2700	-2	31	-3	2	/	3000	-2	31	-3	2	+	3000
		R4	-2	30	-3	0	/	2700	-2	35	-3	4	+	3600	-2	27	-3	2	/	2600	-2	30	-3	3		3000	-2	19	-3	1	/	1800	-2	19	-3	2	+	1900
		R5	-2	29	-3	0	/	260	-2	29	-3	5	+	3100	-2	25	-3	3	/	2600	-2	28	-3	3		2800	-2	27	-3	2	/	2600	-2	27	-3	2	+	2600
Level 3	Batch 1	R1	-3	28	-4	5	/	30000	-3	28	-4	5	+	30000	-3	39	-4	2	/	37000	-3	39	-4	3		38000	-3	31	-4	4	/	32000	-3	31	-4	4	+	32000
		R2	-3	30	-4	6	/	33000	-3	30	-4	6	+	33000	-3	34	-4	2	/	33000	-3	34	-4	2		33000	-3	34	-4	5	/	36000	-3	34	-4	5	+	36000
		R3	-3	30	-4	6	/	33000	-3	30	-4	6	+	33000	-3	28	-4	2	/	27000	-3	28	-4	2		27000	-3	23	-4	5	/	26000	-3	23	-4	6	+	26000
		R4	-3	27	-4	1	/	26000	-3	27	-4	4	+	28000	-3	38	-4	5	/	39000	-3	38	-4	5		39000	-3	17	-4	4	/	19000	-3	20	-4	4	+	22000
		R5	-3	25	-4	5	/	27000	-3	25	-4	5	+	27000	-3	26	-4	4	/	27000	-3	26	-4	4		27000	-3	40	-4	5	/	41000	-3	40	-4	5	+	41000
	Batch 2	R1	-3	0	-4	0	/	<1000	-3	25	-4	2	+	25000	-3	36	-4	2	/	35000	-3	36	-4	4		36000	-3	29	-4	2	/	28000	-3	29	-4	2	+	28000
		R2	-3	29	-4	1	/	27000	-3	31	-4	2	+	30000	-3	27	-4	4	/	28000	-3	27	-4	5		29000	-3	31	-4	4	/	32000	-3	31	-4	4	+	32000
		R3	-3	30	-4	0	/	27000	-3	30	-4	1	+	28000	-3	29	-4	3	/	29000	-3	32	-4	5		34000	-3	36	-4	9	/	41000	-3	36	-4	9	+	41000
		R4	-3	0	-4	4	/	<1000	-3	33	-4	4	+	34000	-3	24	-4	5	/	26000	-3	24	-4	5		26000	-3	27	-4	4	/	28000	-3	27	-4	4	+	28000
		R5	-3	29	-4	2	/	28000	-3	30	-4	2	+	29000	-3	31	-4	2	/	30000	-3	31	-4	3		31000	-3	26	-4	7	/	30000	-3	26	-4	7	+	30000

APPENDIX F - ACCURACY PROFILE - COMPOSITE FOODS

Matrix: mixed salad

Strain: *Listeria monocytogenes* ALB748

Enumeration of the microorganisms at 30°C - batch 1: 160 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 2.7 10⁴ CFU/g

		Reference method: ISO 11290-2 - 24h					Reference method: ISO 11290-2 - 48h					Alternative method: LISTERIA PRECIS- pour plate - 24h					Alternative method: LISTERIA PRECIS- pour plate - 48h					Alternative method: LISTERIA PRECIS- surface spreading - 24h					Alternative method: LISTERIA PRECIS- surface spreading - 48h											
		dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	
Level 1	Batch 1	2318951	-1	12	-2	0	/		-1	12	-2	0	+	110	-1	11	-2	1	/		-1	11	-2	1	+	110	-1	15	-2	0	/		-1	15	-2	0	+	140
		2318952	-1	12	-2	1	/		-1	12	-2	1	+	120	-1	13	-2	1	/		-1	13	-2	1	+	130	-1	15	-2	1	/		-1	15	-2	1	+	150
		2318953	-1	13	-2	3	/		-1	13	-2	3	+	150	-1	6	-2	1	/		-1	16	-2	1	+	160	-1	11	-2	3	/		-1	11	-2	3	+	130
		2318954	-1	8	-2	4	/		-1	8	-2	4	+	110	-1	16	-2	1	/		-1	20	-2	2	+	200	-1	10	-2	0	/		-1	10	-2	0	+	90
		2318955	-1	6	-2	1	/		-1	6	-2	1	+	60	-1	14	-2	2	/		-1	15	-2	2	+	160	-1	11	-2	2	/		-1	12	-2	2	+	130
	Batch 2	2318956	-1	10	-2	1	/		-1	7	-2	2	+	70	-1	7	-2	1	/		-1	8	-2	1	+	80	-1	14	-2	1	/		-1	14	-2	1	+	140
		2318957	-1	8	-2	1	/		-1	8	-2	1	+	80	-1	11	-2	1	/		-1	11	-2	1	+	110	-1	11	-2	2	/		-1	12	-2	2	+	130
		2318958	-1	14	-2	0	/		-1	14	-2	0	+	130	-1	14	-2	2	/		-1	14	-2	2	+	150	-1	12	-2	1	/		-1	12	-2	1	+	120
		2318959	-1	5	-2	0	/		-1	9	-2	0	+	90	-1	3	-2	3	/		-1	14	-2	3	+	160	-1	15	-2	2	/		-1	16	-2	2	+	160
		2318960	-1	15	-2	1	/		-1	15	-2	1	+	150	-1	14	-2	1	/		-1	14	-2	1	+	140	-1	8	-2	2	/		-1	9	-2	2	+	90
Level 2	Batch 1	2318961	-2	22	-3	5	/		-2	22	-3	5	+	2500	-2	32	-3	4	/		-2	50	-3	4	+	4900	-2	34	-3	3	/		-2	34	-3	3	+	3400
		2318962	-2	21	-3	5	/		-2	21	-3	5	+	2400	-2	31	-3	4	/		-2	31	-3	4	+	3200	-2	34	-3	3	/		-2	34	-3	3	+	3400
		2318963	-2	34	-3	4	/		-2	34	-3	4	+	3500	-2	19	-3	4	/		-2	19	-3	4	+	2100	-2	30	-3	1	/		-2	30	-3	1	+	2800
		2318964	-2	32	-3	3	/		-2	32	-3	3	+	3200	-2	25	-3	7	/		-2	25	-3	7	+	2900	-2	34	-3	5	/		-2	34	-3	5	+	3500
		2318965	-2	21	-3	1	/		-2	21	-3	1	+	2000	-2	29	-3	5	/		-2	29	-3	5	+	3100	-2	25	-3	6	/		-2	25	-3	6	+	2800
	Batch 2	2318966	-2	26	-3	4	/		-2	27	-3	4	+	2800	-2	24	-3	7	/		-2	24	-3	7	+	2800	-2	30	-3	2	/		-2	30	-3	2	+	2900
		2318967	-2	20	-3	2	/		-2	20	-3	2	+	2000	-2	38	-3	1	/		-2	38	-3	1	+	3600	-2	23	-3	3	/		-2	23	-3	3	+	2400
		2318968	-2	30	-3	1	/		-2	30	-3	1	+	2800	-2	29	-3	3	/		-2	30	-3	3	+	3000	-2	21	-3	4	/		-2	21	-3	4	+	2300
		2318969	-2	26	-3	1	/		-2	26	-3	1	+	2500	-2	22	-3	4	/		-2	22	-3	4	+	2400	-2	24	-3	1	/		-2	24	-3	1	+	2300
		2318970	-2	31	-3	2	/		-2	31	-3	2	+	3000	-2	31	-3	4	/		-2	31	-3	4	+	3200	-2	36	-3	3	/		-2	36	-3	3	+	3500
Level 3	Batch 1	2318971	-3	37	-4	4	/		-3	39	-4	4	+	39000	-3	22	-4	4	/		-3	25	-4	4	+	26000	-3	40	-4	2	/		-3	40	-4	2	+	38000
		2318972	-3	27	-4	0	/		-3	27	-4	0	+	25000	-3	22	-4	0	/		-3	24	-4	4	+	25000	-3	21	-4	2	/		-3	21	-4	2	+	21000
		2318973	-3	33	-4	2	/		-3	33	-4	2	+	32000	-3	18	-4	4	/		-3	18	-4	4	+	20000	-3	21	-4	3	/		-3	23	-4	3	+	24000
		2318974	-3	28	-4	0	/		-3	28	-4	0	+	25500	-3	27	-4	4	/		-3	27	-4	4	+	28000	-3	25	-4	1	/		-3	25	-4	1	+	24000
		2318975	-3	31	-4	4	/		-3	31	-4	4	+	32000	-3	25	-4	5	/		-3	25	-4	5	+	27000	-3	29	-4	0	/		-3	29	-4	0	+	26000
	Batch 2	2318976	-3	20	-4	2	/		-3	20	-4	2	+	20000	-3	31	-4	5	/		-3	31	-4	5	+	33000	-3	34	-4	1	/		-3	34	-4	1	+	32000
		2318977	-3	26	-4	1	/		-3	26	-4	1	+	24500	-3	36	-4	2	/		-3	36	-4	2	+	34000	-3	27	-4	5	/		-3	29	-4	5	+	31000
		2318978	-3	20	-4	3	/		-3	20	-4	3	+	21000	-3	31	-4	4	/		-3	31	-4	4	+	32000	-3	28	-4	1	/		-3	28	-4	1	+	26000
		2318979	-3	29	-4	3	/		-3	29	-4	3	+	30000	-3	29	-4	3	/		-3	49	-4	3	+	47000	-3	29	-4	2	/		-3	29	-4	2	+	28000
		2318980	-3	29	-4	4	/		-3	30	-4	4	+	31000	-3	29	-4	3	/		-3	29	-4	3	+	29000	-3	34	-4	5	/		-3	34	-4	5	+	35000

APPENDIX F - ACCURACY PROFILE - ENVIRONMENTAL SAMPLES

Matrix: Process water

Strain: *Listeria welshimeri* PNW846

Enumeration of the microorganisms at 30°C - batch 1: 30 000 CFU/g
 Enumeration of the microorganisms at 30°C - batch 2: 50 000 CFU/g

		Reference method: ISO 11290-2 - 24h						Reference method: ISO 11290-2 - 48h						Alternative method: LISTERIA PRECIS- pour plate - 24h						Alternative method: LISTERIA PRECIS- pour plate - 48h						Alternative method: LISTERIA PRECIS- surface spreading - 24h						Alternative method: LISTERIA PRECIS- surface spreading - 48h						
		dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	dil 1	nb 1	dil 2	nb 2	Conf.	Result (CFU/g)	
		Level 1	Batch 1	2384491	-1	2	-2	0	/	20	-1	7	-2	2	+	70	-1	0	-2	0	/	<10	-1	9	-2	0	+	90	-1	0	-2	0	/	<10	-1	14	-2	0
2384492	-1			7	-2	2	/	70	-1	11	-2	2	+	120	-1	0	-2	0	/	<10	-1	5	-2	0	+	50	-1	0	-2	0	/	<10	-1	8	-2	1	+	80
2384493	-1			9	-2	0	/	90	-1	15	-2	0	+	140	-1	0	-2	0	/	<10	-1	11	-2	0	+	100	-1	0	-2	0	/	<10	-1	13	-2	3	+	150
2384494	-1			6	-2	1	/	60	-1	13	-2	1	+	130	-1	0	-2	0	/	<10	-1	5	-2	0	+	50	-1	0	-2	0	/	<10	-1	10	-2	1	+	100
2384495	-1			0	-2	0	/	<10	-1	6	-2	0	+	60	-1	0	-2	0	/	<10	-1	9	-2	1	+	90	-1	0	-2	0	/	<10	-1	8	-2	1	+	80
Batch 2	2384496		-1	11	-2	3	/	130	-1	12	-2	4	+	140	-1	0	-2	0	/	<10	-1	11	-2	2	+	120	-1	1	-2	0	/	10	-1	7	-2	0	+	70
	2384497		-1	10	-2	1	/	100	-1	10	-2	1	+	100	-1	0	-2	0	/	<10	-1	9	-2	1	+	90	-1	8	-2	0	/	80	-1	13	-2	5	+	160
	2384498		-1	7	-2	3	/	70	-1	8	-2	3	+	80	-1	0	-2	0	/	<10	-1	10	-2	0	+	100	-1	0	-2	0	/	<10	-1	8	-2	0	+	80
	2384499		-1	14	-2	1	/	140	-1	16	-2	2	+	160	-1	0	-2	0	/	<10	-1	5	-2	0	+	50	-1	0	-2	0	/	<10	-1	9	-2	0	+	90
	2384500		-1	9	-2	0	/	90	-1	12	-2	0	+	110	-1	0	-2	0	/	<10	-1	5	-2	0	+	50	-1	0	-2	0	/	<10	-1	6	-2	0	+	60
Level 2	Batch 1	2384501	-2	14	-3	1	/	1400	-2	19	-3	1	+	1800	-2	17	-3	2	/	1700	-2	19	-3	2	+	1900	-2	24	-3	2	/	2400	-2	28	-3	0	+	2500
		2384502	-2	13	-3	0	/	1200	-2	16	-3	1	+	1500	-2	15	-3	0	/	1400	-2	17	-3	0	+	1500	-2	19	-3	5	/	2200	-2	23	-3	4	+	2400
		2384503	-2	9	-3	2	/	900	-2	15	-3	2	+	1500	-2	21	-3	2	/	2100	-2	25	-3	2	+	2400	-2	18	-3	7	/	2300	-2	22	-3	4	+	2400
		2384504	-2	10	-3	1	/	1000	-2	12	-3	3	+	1400	-2	10	-3	0	/	900	-2	13	-3	0	+	1200	-2	8	-3	0	/	800	-2	10	-3	1	+	1000
		2384505	-2	10	-3	1	/	1000	-2	15	-3	3	+	1600	-2	18	-3	2	/	1800	-2	22	-3	2	+	2200	-2	20	-3	2	/	2000	-2	24	-3	3	+	2500
	Batch 2	2384506	-2	14	-3	0	/	1300	-2	14	-3	1	+	1400	-2	16	-3	3	/	1700	-2	17	-3	3	+	1800	-2	30	-3	3	/	3000	-2	31	-3	5	+	3300
		2384507	-2	20	-3	1	/	1900	-2	23	-3	1	+	2200	-2	14	-3	1	/	1400	-2	16	-3	1	+	1500	-2	20	-3	1	/	1900	-2	23	-3	1	+	2200
		2384508	-2	19	-3	2	/	1900	-2	22	-3	2	+	2200	-2	11	-3	4	/	1400	-2	13	-3	4	+	1500	-2	24	-3	0	/	2200	-2	25	-3	3	+	2500
		2384509	-2	18	-3	1	/	1700	-2	22	-3	1	+	2100	-2	12	-3	2	/	1300	-2	15	-3	2	+	1500	-2	20	-3	0	/	1800	-2	20	-3	0	+	1800
		2384510	-2	26	-3	0	/	2400	-2	29	-3	0	+	2600	-2	10	-3	2	/	1100	-2	13	-3	2	+	1400	-2	13	-3	1	/	1300	-2	13	-3	2	+	1400
Level 3	Batch 1	2384511	-3	6	-4	0	/	6000	-3	9	-4	0	+	9000	-3	12	-4	1	/	12000	-3	17	-4	1	+	16000	-3	15	-4	0	/	14000	-3	16	-4	0	+	14000
		2384512	-3	8	-4	0	/	8000	-3	15	-4	0	+	14000	-3	10	-4	2	/	11000	-3	13	-4	2	+	14000	-3	18	-4	3	/	19000	-3	19	-4	1	+	18000
		2384513	-3	9	-4	0	/	9000	-3	12	-4	2	+	13000	-3	11	-4	1	/	11000	-3	15	-4	1	+	14000	-3	18	-4	2	/	18000	-3	19	-4	1	+	18000
		2384514	-3	15	-4	0	/	14000	-3	19	-4	1	+	18000	-3	8	-4	3	/	10000	-3	9	-4	3	+	11000	-3	10	-4	4	/	13000	-3	16	-4	5	+	19000
		2384515	-3	14	-4	1	/	14000	-3	14	-4	3	+	15000	-3	14	-4	0	/	13000	-3	15	-4	0	+	14000	-3	15	-4	1	/	14000	-3	21	-4	0	+	19000
	Batch 2	2384516	-3	15	-4	1	/	14000	-3	17	-4	1	+	16000	-3	15	-4	1	/	14000	-3	16	-4	3	+	17000	-3	20	-4	0	/	18000	-3	26	-4	0	+	24000
		2384517	-3	13	-4	1	/	13000	-3	15	-4	1	+	15000	-3	17	-4	1	/	16000	-3	18	-4	1	+	17000	-3	9	-4	1	/	9100	-3	10	-4	2	+	11000
		2384518	-3	16	-4	2	/	16000	-3	16	-4	3	+	17000	-3	16	-4	2	/	16000	-3	16	-4	2	+	16000	-3	12	-4	0	/	11000	-3	17	-4	0	+	15000
2384519	-3	16	-4	2	/	16000	-3	18	-4	3	+	19000	-3	15	-4	3	/	16000	-3	17	-4	3	+	18000	-3	13	-4	0	/	12000	-3	14	-4	0	+	13000		
2384520	-3	12	-4	0	/	11000	-3	15	-4	0	+	14000	-3	14	-4	1	/	14000	-3	17	-4	1	+	16000	-3	11	-4	1	/	11000	-3	15	-4	1	+	14000		

#	Strain	Reference	Origin	Reading at 24 h				
				OCLA			TSA	
				Size of halo	Color of the colony	OBIS test	Streaking on O&A	Aspect of the colony Test d'illumination de Henry (ISO 11290-2:1998)
1	<i>Listeria monocytogenes</i>	Lm-P775	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
2	<i>Listeria monocytogenes</i>	Lm-P777	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
3	<i>Listeria monocytogenes</i>	Lm-P778	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
4	<i>Listeria monocytogenes</i>	Lm-P779	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
5	<i>Listeria monocytogenes</i>	Lm-P780	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
6	<i>Listeria monocytogenes</i>	Lm-P781	Poisson	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
7	<i>Listeria monocytogenes</i>	Lm-P782	Rillettes de saumon aux salicornes	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
8	<i>Listeria monocytogenes</i>	Lm-P783	Ecouvillon sur manche d'une pince à désarêter	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
9	<i>Listeria monocytogenes</i>	Lm-P784	Filet de saumon cru à l'arrivage	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
10	<i>Listeria monocytogenes</i>	Lm-P785	Filet de saumon cru à l'arrivage	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
11	<i>Listeria monocytogenes</i>	LM-H170	Pêcheur	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
12	<i>Listeria monocytogenes</i>	LM-H171	Bistrot	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
13	<i>Listeria monocytogenes</i>	LM-H172	Marché	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
14	<i>Listeria monocytogenes</i>	LM-H173	Norvégienne	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
15	<i>Listeria monocytogenes</i>	LM-H174	Chou-fleur	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
16	<i>Listeria monocytogenes</i>	LM-H175	Chou-fleur	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
17	<i>Listeria monocytogenes</i>	LM-I20	Passe-plat n° 2 à 9h30	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
18	<i>Listeria monocytogenes</i>	LM-I21	Passe-plat n° 3 à 6h	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
19	<i>Listeria monocytogenes</i>	LM-I22	Sol emballage	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection
20	<i>Listeria monocytogenes</i>	LM-I23	Tapis avant tunnel S89	<1 mm	Blue / green	- (colorless)	Colonies with halo	Colonies with bluish reflection

#	Strain	Reference	Origin	Number of CFU on TSAYE agar	ISO method				Alternative method <i>Listeria</i> Precis with One Broth									
					ISO method				Brilliance <i>Listeria</i> agar						Confirmation			
					ISO method				Aspect of the colonies				Confirmation					
					OCLA	PALCAM	FRASER	RESULTAT	Colour		Halo		Size		ISO	OBIS + (<i>L.mono</i>) / -(<i>L.spp</i>)		MICROBACT
				24h	48h	24h	48h	24h	48h									
21	<i>Listeria innocua</i>	RXJ222	Fig tartlet	39	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
22	<i>Listeria innocua</i>	KUY776	Egg product environment	93	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
23	<i>Listeria innocua</i>	RYB922	Smoked sausages	71	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
24	<i>Listeria innocua</i>	TYA050	Raw tuna tataki	56	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
25	<i>Listeria innocua</i>	TQU555	Tomme with raw milk	40	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
26	<i>Listeria innocua</i>	TSA557	Pasteurized Milk Brie	62	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
27	<i>Listeria innocua</i>	TTZ273	Diced onions	27	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
28	<i>Listeria innocua</i>	TWH478	Vegetable gardener	69	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	
29	<i>Listeria innocua</i>	XEN574	Salmon shell	38	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>	

#	Strain	Reference	Origin	Number of CFU on TSAYE agar	ISO method				Alternative method <i>Listeria</i> Precis with One Broth								
									Brilliance <i>Listeria</i> agar								
					Aspect of the colonies						Confirmation						
					Colour		Halo		Size		ISO	OBIS + (<i>L.mono</i>) / - (<i>L.spp</i>)	MICROBACT				
24h	48h	24h	48h	24h	48h												
30	<i>Listeria innocua</i>	TET819	Chicken thigh	99	/	/	/	/	Blue	Blue	No	No	1mm	2mm	<i>Listeria innocua</i>	-	<i>Listeria innocua</i>
31	<i>Listeria grayi</i>	SWZ606	Sausage patty	42	∅	∅	∅	/	∅	∅	∅	∅	∅	∅	/	/	/
				31	AM	EM	∅	<i>Listeria grayi</i>	Blue	Blue	No	No	0,5mm	0,5mm	<i>Listeria grayi</i>	-	<i>Listeria grayi</i>
32	<i>Listeria grayi</i>	SWE117	Bayonne ham	55	∅	∅	∅	/	∅	∅	∅	∅	∅	/	/	/	
				43	DM	EL	∅	<i>Listeria grayi</i>	Blue	Blue	No	No	1mm	1mm	<i>Listeria grayi</i>	-	<i>Listeria grayi</i>
33	<i>Listeria grayi</i>	RZM251	Salmon marinated in dill	49	∅	∅	∅	/	∅	∅	∅	∅	∅	/	/	/	
				64	AM	EL	∅	<i>Listeria grayi</i>	Blue	Blue	No	No	1mm	1mm	<i>Listeria grayi</i>	-	<i>Listeria grayi</i>
34	<i>Listeria grayi</i>	RZK366	Green bean	74	∅	∅	∅	/	∅	∅	∅	∅	∅	/	/	/	
				68	∅	∅	∅	/	Blue	Blue	No	No	1mm	1mm	<i>Listeria grayi</i>	-	<i>Listeria grayi</i>
35	<i>Listeria ivanovii</i>	AAZ671	Turkey cutlet scraps	56	/	/	/	/	Blue	Blue	Yes	Yes	0,5 mm	2mm	<i>Listeria ivanovii</i>	-	<i>Listeria ivanovii</i>
36	<i>Listeria ivanovii</i>	APE161	Merguez	132	/	/	/	/	Blue	Blue	Yes	Yes	0,5 mm	2mm	<i>Listeria ivanovii</i>	-	<i>Listeria ivanovii</i>
37	<i>Listeria ivanovii</i>	GJP629	Environment	56	/	/	/	/	∅	Blue	∅	Yes	∅	0,5 mm	<i>Listeria ivanovii</i>	-	<i>Listeria ivanovii</i>
38	<i>Listeria ivanovii</i>	GQD028	Environment dairy products	53	/	/	/	/	Blue	Blue	Yes	Yes	0,5 mm	2mm	<i>Listeria ivanovii</i>	-	<i>Listeria ivanovii</i>
39	<i>Listeria welshimeri</i>	TXR109	Chinese noodles with vegetables	58	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
40	<i>Listeria welshimeri</i>	GLX736	Environment dairy products	10	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
41	<i>Listeria welshimeri</i>	PSX189	Environment meat products	49	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
42	<i>Listeria welshimeri</i>	TDV458	Andouille from Guéméné	85	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
43	<i>Listeria welshimeri</i>	TPR354	Toulouse sausage	64	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
44	<i>Listeria welshimeri</i>	TUH443	Smoked arctic char with 5 berries	35	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
45	<i>Listeria welshimeri</i>	TVP191	Stripped salmon	37	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
46	<i>Listeria welshimeri</i>	XCW614	Salmon shell	38	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
47	<i>Listeria welshimeri</i>	TLJ742	Hotpot	39	/	/	/	/	Blue	Blue	No	No	1 mm	2mm	<i>Listeria welshimeri</i>	-	<i>Listeria welshimeri</i>
48	<i>Listeria seeligeri</i>	DSM20751	Ground	79	/	/	/	/	Blue	Blue	No	No	2 mm	2mm	<i>Listeria seeligeri</i>	-	<i>Listeria seeligeri</i>
49	<i>Listeria seeligeri</i>	LHFB67	Dairy environment	79	/	/	/	/	Blue	Blue	No	No	3 mm	2mm	<i>Listeria seeligeri</i>	-	<i>Listeria seeligeri</i>
50	<i>Listeria marthi</i>	DSM23813	Ground	76	/	/	/	/	Blue	Blue	No	No	4 mm	2mm	/	-	/

#	N°	Code	Strain	Origin	Lecture à 24 h				
					OCLA			TSA	
					Size of halo	Color of the colony	OBIS test	Streaking on O&A	Aspect of the colony
1	B1	BI-R6	<i>B. licheniformis</i>	Ovoproduit	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
2	B2	CIP 5832	<i>Bacillus cereus</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
3	B3	CIP 6624	<i>Bacillus cereus</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
4	B4	CIP 52.75T	<i>Bacillus circulans</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
5	B5	CIP 88264	<i>Candida</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Absence de colonie
6	B7	IND 501	<i>Enterococcus faecalis</i>	Souche clinique	/	Absence de colonie	Non réalisé	Non réalisé	Petite colonie beige
7	B8	IND 502	<i>Enterococcus faecalis</i>	Souche clinique	/	Absence de colonie	Non réalisé	Non réalisé	Petite colonie beige
8	B9	ATCC 19433	<i>Enterococcus faecalis</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Petite colonie beige
9	B10	CIP 5855	<i>Enterococcus faecium</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie beige
10	B11	IND 500	<i>Enterococcus faecium</i>	Produit alimentaire	/	Absence de colonie	Non réalisé	Non réalisé	Colonie beige
11	B12	Ec - U2	<i>Escherichia coli</i>	Camembert	/	Absence de colonie	Non réalisé	Non réalisé	Colonie beige
12	B13	Ec - U5	<i>Escherichia coli</i>	Ovoproduit	/	Absence de colonie	Non réalisé	Non réalisé	Colonie beige
13	B14	ASEPT B 37	<i>Escherichia coli</i>	Ovoproduit	/	Absence de colonie	Non réalisé	Non réalisé	Colonie beige
14	B23	CIP 71.39	<i>Lactobacillus plantarum</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonies
15	B24	CIP 103009 T	<i>Leuconostoc mesenteroides</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Absence de colonie
16	B40	P-P1	<i>Pseudomonas fluorescens</i>	Ovoproduit	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
17	B41	CIP 58.69	<i>Rhodococcus equi</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
18	B42	ASEPT B 38	<i>Salmonella enteritidis</i>	Ovoproduit	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
19	B43	CIP 5710	<i>Staphylococcus aureus</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie jaune
20	B44	CIP 53154	<i>Staphylococcus aureus</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie jaune
21	B45	St-T2	<i>Staphylococcus aureus</i>	Camembert	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
22	B46	ATCC 25953 - St G48	<i>Staphylococcus aureus</i>	Collection	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
23	B90	20060913-	<i>Bacillus cereus</i>	Tortis au surimi	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
24	B91	20060914-	<i>Bacillus cereus</i>	Poivrière	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
25	B92	20061005-41714	<i>Bacillus cereus</i>	Taboulé mexicain	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
26	B93	20060906-36720	<i>Bacillus cereus</i>	Poudre de lait lag	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
27	B94	20060906- 36716	<i>Bacillus cereus</i>	Poudre de lait niro	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
28	B95	20060914- 38085	<i>Bacillus cereus</i>	Poudre de lait lag	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
29	B96	20061005-41648	<i>Bacillus cereus</i>	Poudre de lait niro	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
30	B97	20061005-41651	<i>Bacillus cereus</i>	Poudre de lait lag	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
31	B98	20060801-30997	<i>Bacillus cereus</i>	Poudre d'œuf entier	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
32	B99	20060801-30999	<i>Bacillus cereus</i>	Poudre d'œuf entier	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche étalée
33	B100	20060804-31871	<i>Pseudomonas</i>	Frisée	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
34	B101	200608040-31872	<i>Pseudomonas</i>	Frisée	/	Absence de colonie	Non réalisé	Non réalisé	Petite colonie blanche
35	B102	20060804-31873	<i>Pseudomonas</i>	Mâche	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
36	B103	20060804-31874	<i>Pseudomonas</i>	Mâche	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche
37	B104	20060825-34927	<i>Pseudomonas</i>	Gaze environnement	/	Absence de colonie	Non réalisé	Non réalisé	Colonie blanche

Appendix H

Interlaboratory study – Raw results

Expert Laboratory

Après 48 h d'incubation (ou 24 h pour les échantillons 2 et 4) - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}		Résultats à partir de la dilution au 1/1000 ^{ème}		Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte		
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3						
1	0	0	0	0	0	0	0	<10	
2	>150	>150	>150	>450	60	5	0	5900	
3				44	10	0	0	490	
4	>150	>150	>150	>450	30	7	0	3400	
5				5	0	0	0	50 (Ne)	
6				3	0	0	0	30 (Ne)	
7				46	11	0	0	500	
8	0	0	0	0	0	0	0	<10	

Après 48 h d'incubation (ou 24 h pour les échantillons 2 et 4) - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}		Résultats à partir de la dilution au 1/1000 ^{ème}		Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte		
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3						
1	0	0	0	0	0	0	0	<10	
	0	0	0	0	0	0	0		
2	>150	>150	>150	>450	38	6	0	4700	
	>150	>150	>150	>450	54	6	0		
3				45	2	0	0	470	
				56	2	0	0		
4	>150	>150	>150	>450	59	2	0	5100	
	>150	>150	>150	>450	46	6	0		
5				1	0	0	0	50 (Ne)	
				8	0	0	0		
6				4	0	0	0	60 (Ne)	
				7	0	0	0		
7				39	3	0	0	390	
				39	4	0	0		
8	0	0	0	0	0	0	0	<10	
	0	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile 1400 / ml

LABORATOIRE A

Après 48 h d'incubation (ou 24 h pour les échantillons 2 et 4) - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C					Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	Boîte 1	
1	0	0	0	0	0	0	0	<10
2	52	67	47	166	49	5	0	4900
3	12	5	2	20	3	0	0	210
4	68	63	66	197	49	7	0	5100
5	1	1	5	7	0	0	0	70 (Ne)
6	2	1	1	4	0	0	0	40 (Ne)
7	12	17	5	34	3	0	0	340
8	0	0	0	0	0	0	0	<10

Après 48 h d'incubation (ou 24 h pour les échantillons 2 et 4) - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C					Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	Boîte 1	
1	0	0	0	0	0	0	0	<10
	0	0	0	0	0	0	0	
2	120	99	77	296	45	3	0	4900
	104	135	88	327	59	2	0	
3	15	13	13	41	10	0	0	480
	18	13	13	44	10	0	0	
4	113	97	100	310	48	2	0	4600
	101	84	120	305	49	2	0	
5	1	1	0	2	0	0	0	40 (Ne)
	2	1	2	5	1	0	0	
6	2	1	2	5	0	0	0	40 (Ne)
	0	0	3	3	0	0	0	
7	19	11	14	44	1	1	0	410
	10	12	19	41	5	0	0	
8	0	0	0	0	0	0	0	<10
	0	0	0	0	0	0	0	

Dénombrement de la flore totale aérobie mésophile 940 / ml

LABORATOIRE B

Après 48 h d'incubation - Méthode OCLA (halos peu distincts à 24 h)

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				0,1 ml étalé sur 1 boîte	Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)		
	1 ml étalé sur 3 boîtes				Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées			
	Nombre de colonies comptées		Total sur les 3 boîtes	Nombre de colonies comptées					Nombre de colonies comptées	Nombre de colonies comptées
	Boîte 1	Boîte 2								
1	0	0	0	0	0	0	0	<10		
2				222	52	4	0	5100		
3				32	8	0	0	360		
4				257	46	6	0	4700		
5				3	1	0	0	40 (Ne)		
6				1	1	0	0	20 (Ne)		
7				44	6	0	0	450		
8	0	0	0	0	0	0	0	<10		

Après 48 h d'incubation - Méthode ISO 11290-2 (halos peu distincts à 24 h)

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				0,1 ml étalé sur 1 boîte	Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)		
	1 ml étalé sur 3 boîtes				Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées			
	Nombre de colonies comptées		Total sur les 3 boîtes	Nombre de colonies comptées					Nombre de colonies comptées	Nombre de colonies comptées
	Boîte 1	Boîte 2								
1	0	0	0	0	0	0	0	<10		
	0	0	0	0	0	0	0			
2				294	38	1	0	4100		
				367	46	5	0			
3				38	2	0	0	350		
				33	5	0	0			
4				348	32	2	0	3700		
				377	46	3	0			
5				4	1	0	0	40 (Ne)		
				4	0	0	0			
6				1	0	0	0	15 (Ne)		
				2	0	0	0			
7				18	5	0	0	300		
				36	8	1	0			
8	0	0	0	0	0	0	0	<10		
	0	0	0	0	0	0	0			

Dénombrement de la flore totale aérobie mésophile 2 100 / ml

LABORATOIRE C
Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	95	142	91	328	45	6	4600	
3	18	13	19	50	3	0	480	
4	147	121	154	422	52	3	5000	
5	1	0	1	2	0	0	20 (Ne)	
6	3	2	2	7	0	0	70 (Ne)	
7	12	11	22	45	5	2	450	
8	0	0	0	0	0	0	<10	

Après 24 et 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	124	147	149	420	31	8	4600	
	121	118	128	367	59	4		
3	18	19	14	51	3	0	440	
	13	7	20	40	3	2		
4	120	140	111	371	61	2	5400	
	85	113	114	313	50	7		
5	2	0	1	3	3	0	50 (Ne)	
	1	1	1	3	1	0		
6	1	0	1	2	1	0	20 (Ne)	
	1	0	1	2	0	0		
7	18	12	14	44	8	1	430	
	9	10	20	39	7	0		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile 1 800 / ml

LABORATOIRE D
Après 24 et 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	147	112	98	357	44	5	4400	
3	12	18	30	60	6	0	600	
4	138	>150	>150	>450	44	7	4600	
5	2	2	0	4	0	0	40 (Ne)	
6	2	2	0	4	0	0	40 (Ne)	
7	21	14	15	50	10	0	540	
8	0	0	0	0	0	0	<10	

Après 24 et 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	>150	115	>150	>450	58	5	4900	
	>150	>150	>150	>450	42	3		
3	19	16	25	60	1	1	490	
	15	18	10	43	4	0		
4	142	149	>150	291	50	11	4900	
	148	132	145	425	39	7		
5	1	2	2	5	0	0	40 (Ne)	
	0	0	3	3	0	0		
6	1	6	2	9	0	0	60 (Ne)	
	2	2	0	4	0	0		
7	17	11	20	48	6	0	460	
	16	15	14	45	3	1		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale aérobique mésophile 1 200 / ml

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LABORATOIRE E

Après 48 h d'incubation - Méthode OCLA (Absence de halos après 24 h d'incubation)

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				0,1 ml étalé sur 1 boîte		Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3						
1	0	0	0	0	0	0	0	<10	
2	>150	>150	>150	>450	40	5	0	4100	
3	18	10	26	54	4	0	0	530	
4	>150	>150	>150	>450	58	1	1	5400	
5	2	2	1	5	0	0	0	50 (Ne)	
6	1	1	0	2	0	0	0	20 (Ne)	
7	10	18	32	60	2	0	0	560	
8	0	0	0	0	0	0	0	<10	

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte		Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte		
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3						
1	0	0	0	0	0	0	0	<10	
2	>150	115	>150	>450	54	3	1	5400	
	>150	>150	>150	>450	55	7	0		
3	16	18	12	46	10	1	0	490	
	20	9	17	46	5	0	0		
4	>150	115	>150	>450	46	4	0	4500	
	>150	>150	>150	>450	44	6	1		
5	2	2	2	6	0	0	0	50 (Ne)	
	2	1	1	4	0	0	0		
6	2	1	0	3	0	0	0	40 (Ne)	
	3	1	0	4	1	0	0		
7	17	18	21	56	4	0	0	520	
	6	26	15	47	7	1	0		
8	0	0	0	0	0	0	0	<10	
	0	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile 2 000 / ml

LABORATOIRE F

Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes			0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	
1	0	0	0	0	0	0	<10
2	65	71	90	227	49	0	4900
3	8	8	11	27	6	0	300
4	60	64	82	206	63	2	5900
5	2	1	2	5	2	0	60 (Ne)
6	2	1	2	5	0	0	50 (Ne)
7	2	6	3	11	3	0	130
8	0	0	0	0	0	0	<10

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes			0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	
1	0	0	0	0	0	0	<10
	0	0	0	0	0	0	
2	109	58	63	230	36	1	4400
	68	74	72	>450	48	0	
3	9	10	20	39	2	0	370
	14	8	14	36	4	0	
4	70	90	60	>450	45	0	4700
	60	71	64	>450	47	0	
5	5	1	2	8	0	0	60 (Ne)
	0	0	3	3	0	0	
6	2	0	2	4	0	0	20 (Ne)
	0	0	0	0	1	0	
7	11	8	5	24	5	0	250
	6	9	9	24	2	0	
8	0	0	0	0	0	0	<10
	0	0	0	0	0	0	

Dénombrement de la flore totale aérobie mésophile 1 500 / ml

LABORATOIRE G
Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	126	103	90	319	41	3	4000	
3	14	19	23	56	7	0	570	
4	40	31	21	92	43	6	4400	
5	1	6	5	12	1	0	120 (Ne)	
6	1	1	3	5	0	0	50 (Ne)	
7	11	11	12	34	7	0	370	
8	0	0	0	0	0	0	<10	

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	100	100	120	320	43	2	5000	
	107	142	133	>450	61	3		
3	10	10	16	36	4	0	440	
	11	19	21	51	5	0		
4	90	123	>150	>370	44	4	4500	
	115	131	111	357	44	7		
5	1	2	1	4	2	0	70 (Ne)	
	3	5	3	11	0	0		
6	1	1	2	4	0	0	35 (Ne)	
	0	3	0	3	0	0		
7	9	9	13	31	7	0	390	
	12	19	14	45	4	0		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile 3 300 / ml

LABORATOIRE H
Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C					Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	Boîte 1	
1	0	0	0	0	0	0	0	<10
2	108	126	101	335	55	7	1	5600
3	25	12	10	47	3	0	0	450
4	109	84	81	274	45	8	0	4800
5	3	3	4	10	1	0	0	100 (Ne)
6	4	5	0	9	0	0	0	90 (Ne)
7	25	24	7	56	3	0	0	540
8	0	0	0	0	0	0	0	<10

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C					Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	Boîte 1	
1	0	0	0	0	0	0	0	<10
2	101	107	114	322	42	3	0	4200
	126	116	110	352	40	7	1	
3	27	14	21	62	2	0	0	520
	23	18	8	49	7	0	0	
4	104	108	107	>370	53	0	0	4700
	110	106	100	316	46	4	0	
5	8	3	2	13	0	0	0	120 (Ne)
	7	3	0	10	0	0	0	
6	2	2	0	4	0	0	0	40 (Ne)
	1	1	2	4	1	0	0	
7	18	5	15	38	7	0	0	440
	7	21	18	46	6	1	0	
8	0	0	0	0	0	0	0	<10
	0	0	0	0	0	0	0	

Dénombrement de la flore totale aérobie mésophile 1 600 / ml

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LABORATOIRE 1

Après 24 h d'incubation ou 48 h (échantillons 1, 5 à 8) - Méthode OCLA (halos peu visibles mais lecture impossible à 48 h)

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	59	65	59	186	38	4	3800	
3	29	33	25	87	7	0	850	
4	108	115	112	335	37	1	3400	
5	3	0	1	4	0	0	40 (Ne)	
6	0	0	0	0	0	0	<10	
7	17	10	20	47	3	0	450	
8	0	0	0	0	0	0	<10	

Après 24 et 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	87	89	95	271	40	5	3900	
	97	104	107	308	38	3		
3	10	12	13	35	2	0	290	
	7	10	7	24	4	0		
4	95	105	112	312	49	1	4400	
	80	95	114	289	45	2		
5	0	1	2	3	0	0	35 (Ne)	
	1	0	3	4	0	0		
6	0	1	1	2	0	0	30 (Ne)	
	0	1	3	4	0	0		
7	8	10	8	26	3	0	290	
	9	14	10	33	3	0		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale, aérobie mésophile

Non communiqué

LABORATOIRE K

Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	22	12	35	69	5	0	600	
3	5	11	13	29	3	0	290	
4	40	52	46	138	40	5	4100	
5	0	0	1	1	0	0	10 (Ne)	
6	0	16	5	21	0	0	210	
7	21	18	12	51	5	0	510	
8	0	0	0	0	0	0	<10	

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	42	68	47	157	32	4	3400	
	51	78	58	187	37	3		
3	5	9	10	24	4	0	320	
	6	14	17	37	5	0		
4	71	66	52	>432	37	8	4200	
	55	59	50	>408	44	4		
5	2	0	3	5	0	0	50 (Ne)	
	3	1	1	5	0	0		
6	1	1	2	4	0	0	20 (Ne)	
	0	0	0	0	0	0		
7	10	11	7	28	5	0	340	
	8	17	8	33	3	0		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile Non communiqué

LABORATOIRE L
Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
2	>150	>150	>150	>450	55	7	5300	
3	4	4	3	11	8	0	170	
4	84	80	80	244	61	4	5900	
5	2	0	0	2	0	0	20 (Ne)	
6	1	1	0	2	2	0	40 (Ne)	
7	11	15	14	40	2	1	380	
8	0	0	0	0	0	0	<10	

Après 24 et 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)	
	1 ml étalé sur 3 boîtes				0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte		0,1 ml étalé sur 1 boîte
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées		Nombre de colonies comptées
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1		Boîte 1
1	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		
2	135	100	>150	>385	44	5	5300	
	110	121	133	364	50	3		
3	13	18	11	42	5	1	390	
	11	12	8	31	3	1		
4	>150	132	>150	>432	63	2	4600	
	132	>150	126	>408	38	1		
5	2	1	0	3	0	0	35 (Ne)	
	2	1	1	4	0	0		
6	1	3	1	5	0	0	60 (Ne)	
	3	4	0	7	0	0		
7	8	16	8	32	3	1	390	
	13	22	11	46	4	0		
8	0	0	0	0	0	0	<10	
	0	0	0	0	0	0		

Dénombrement de la flore totale aérobie mésophile 2 100 / ml

LABORATOIRE M
Après 48 h d'incubation - Méthode OCLA

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes			0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	
1	0	0	0	0	0	0	<10
2	135	130	>150	>425	53	0	6400
3	18	14	21	53	8	0	550
4	136	>150	>150	>438	50	3	4800
5	1	1	1	3	0	0	30 (Ne)
6	0	0	2	2	0	0	20 (Ne)
7	12	14	18	44	1	1	410
8	0	0	0	0	0	0	<10

Après 48 h d'incubation - Méthode ISO 11290-2

Code échantillon	Résultats à partir de la suspension mère (au 1/10 ^{ème}) revivifiée 1 h à 20 °C				Résultats à partir de la dilution au 1/100 ^{ème}	Résultats à partir de la dilution au 1/1000 ^{ème}	Résultat (UFC/ml)
	1 ml étalé sur 3 boîtes			0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	0,1 ml étalé sur 1 boîte	
	Nombre de colonies comptées			Total sur les 3 boîtes	Nombre de colonies comptées	Nombre de colonies comptées	
	Boîte 1	Boîte 2	Boîte 3		Boîte 1	Boîte 1	
1	0	0	0	0	0	0	<10
2	120	109	144	373	40	0	4900
	114	118	125	357	61	7	
3	13	12	16	41	2	0	450
	21	9	21	51	9	0	
4	139	132	145	416	48	3	4900
	124	125	117	366	43	10	
5	1	0	3	4	0	0	45 (Ne)
	2	1	2	5	0	0	
6	2	2	0	4	0	0	45 (Ne)
	1	4	0	5	0	0	
7	12	13	23	58	7	1	490
	12	20	14	46	4	0	
8	0	0	0	0	0	0	<10
	0	0	0	0	0	0	

Dénombrement de la flore totale aérobie mésophile 1 700 / ml