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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

RAPID'*E. coli* 2 (REC2)
Certificate # BRD 07/08 – 12/04
for the enumeration at 37°C of coliforms
in human food products, environmental samples
and animal feed

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This report contains 95 pages, including 64 pages of appendices.

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Version 0 April 28, 2023

Preamble

- **Protocols of validation :**

- **EN ISO 16140-1 and NF 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:**

- **NF ISO 4832 (July 2006):** Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms

- **Application scope:**

- **All human food products** by a validation testing of a broad range of foods, including:
  - meat products,
  - dairy and egg products,
  - seafood products,
  - vegetal products,
  - ready-to-eat and ready-to-reheat products,
  - environmental samples,
  - animal feed.

- **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

1. Introduction

The RAPID'*E. coli* 2 method is validated by AFNOR Certification under the NF VALIDATION mark with the certification number BRD 07/08 – 12/04 according to the ISO 16140-2:2016 standard for the enumeration of coliforms at 37°C. The method is intended for all human food products since its initial validation.

Table 1 summarizes the different steps of the validation.

Table 1: Steps of the validation AFNOR certification

Study	Date	Standards	Expert Laboratory	Observation
Initial validation	December 2004	ISO 16140:2003 ISO 4832:1991	Eurofins IPL Nord	/
First renewal	November 2008	ISO 16140:2003 ISO 4832:2006	Eurofins IPL Nord	/
Second renewal	November 2012	ISO 16140/A1:2011 ISO 4832:2006	Eurofins IPL Nord	New statistical analysis of the interlaboratory study data
Third renewal	November 2017	ISO 16140-2:2016 ISO 4832:2006	Institut Scientifique d'hygiène et d'Analyse	Additional tests to fulfill the updated validation standard and reinterpretation
Fourth renewal	October 2020	ISO 16140-2:2016 ISO 4832:2006	Microsept	/
Extension study results	December 2022	ISO 16140-2:2016 ISO 4832:2006	Microsept	Addition of environmental samples category
Extension study results	April 2023	ISO 16140-2:2016 ISO 4832:2006	Microsept	Addition of Animal Feed category

This document is the summary report of validation study of NF Validation certification of the RAPID'*E. coli* 2 method according to the ISO 16140-2:2016 standard. This method is validated for a broad range of foods, environmental samples and animal feed.

During the Technical Board of December 2022, it was decided to reclassify certain samples from previous validations. This new classification was applied, and some new samples had to be generated during the extension for animal feed in 2023.

The results set out in this report were produced during validation tests carried out by Eurofins IPL Nord and by the Institut Scientifique d'Hygiène et d'Analyse as part of NF Validation, in accordance with prevailing requirements.

2. Protocols of the methods

2.1. Alternative method

2.1.1. Principle of the method

The method uses a chromogenic agar media for the enumeration of coliform.
The principle of the agar media relies on the simultaneous revelation of two enzymatic activities: the β-D-glucuronidase (GLUC) and the β-D-galactosidase (GAL).

The agar media contains two chromogenic substrates:

- a specific substrate of the GAL which leads to a blue coloration of the colonies positive for this enzyme,
- a specific substrate of the GLUC which leads to a pink coloration of the colonies positive for this enzyme.

E. coli (GAL+/GLUC+) form violet to pink colonies. Non-*E. coli* coliforms (GAL+/GLUC-) form blue colonies.

2.1.2. Protocol of the method

The diagram summarizing the method is shown in Appendix A.

From an initial suspension ten-times diluted or directly from the samples if it's liquid, volumes of 1 mL are inoculated in Petri dishes. Several decimal dilutions can also be realized and poured.
The melted RAPID'*E. coli* 2 agar media at 44-47°C is then poured in Petri dishes. The medium is used in single layer to enhance readability and practicability.
The RAPID'*E. coli* 2 agar media are incubated at 37±1°C for 21±3 hours.
After incubation, the violet to pink colonies and the blue colonies are enumerated as β-glucuronidase *Escherichia coli* and coliforms.

2.1.3. Restrictions

There are no restrictions on use for the RAPID'*E. coli* 2 method.

2.2. Reference method

The ISO 4832:2006 standard, Horizontal method for the enumeration of coliforms, is used since the first renewal study.

The two incubation temperatures described in the reference method were tested during the validation studies: 30°C and 37°C.

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

3. Methods comparison 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/***.

3.1. Relative trueness study

3.1.1. Number and nature of the samples

Considering all the validation studies, 179 samples were analyzed giving 135 exploitable results for incubation times at 30°C of the reference method and 109 exploitable results for incubation times at 37°C of the reference method.
The distribution of the samples per category, type and inoculation technique is given in table 2.

Table 2: number and nature of the samples analysed for the relative trueness study for the two incubation temperatures of the reference method

Category	Type		Samples analyzed	Interpretable results 30°C	Interpretable results 37°C
Meats products	a	Raw products	22	10	10
	b	Ready-to-reheat products	6	6	6
	c	Smoked and cured products	5	5	5
	Total		**33**	**21**	**21**
Dairy & egg products	a	Pasteurized and dehydrated products	5	5	/
	b	Raw milk products	10	8	/
	c	Desserts and egg products	16	12	/
	Total		**31**	**25**	**/**
Seafood products	a	Raw products	8	5	5
	b	Marinated and smoked products	10	9	9
	c	Ready-to-reheat products	6	6	6
	Total		**24**	**20**	**20**
Vegetal products	a	Raw products	6	5	5
	b	Pre-cut and pre-cooked products	7	5	5
	c	Processed products	5	5	5
	Total		**18**	**15**	**15**
Ready-to-eat & ready-to-reheat products	a	Ready-to-eat products	7	5	5
	b	Ready-to-reheat products	9	5	5
	c	Smoked and marinated products	6	5	5
	Total		**22**	**15**	**15**
Environmental samples	a	Surface	10	7	7
	b	Process water	6	6	6
	c	Dusts and residues	10	9	9
	Total		**26**	**22**	**22**
Animal Feed	a	Pet food	10	5	5
	b	Animal feed (cereals and flour)	7	7	6
	c	Ingredients	8	5	5
	Total		**25**	**17**	**16**
Total			**179**	**135**	**109**

3.1.2. Artificial contaminations

Naturally contaminated samples were analyzed preferably.
However, artificially contaminated samples were still analyzed, using seeding or spiking protocols as described in the standard NF EN ISO 16140-2:2016.

Among the interpretable results at 30°C, sixty correspond to naturally contaminated samples and seventy-five to artificially contaminated samples.
Among the interpretable results at 37°C, thirty-nine correspond to naturally contaminated samples and seventy to artificially contaminated samples.

The artificial contaminations performed are presented in the Appendix C.

3.1.3. Protocols used during the study

The samples were analyzed by the reference and the alternative method. For the alternative method, the minimum incubation time of the Petri dishes was applied, namely 18 hours.

The ISO 4832 standard not allowing an incubation temperature of 37°C for the VRBL Petri dishes for milk and milk products, the results of the "Dairy and egg products" category were only interpreted for an incubation temperature of 30°C for the reference method.

3.1.4. Results

Samples were analyzed by the reference and the alternative method to obtain at least 15 interpretable results per category and at least 5 per type.

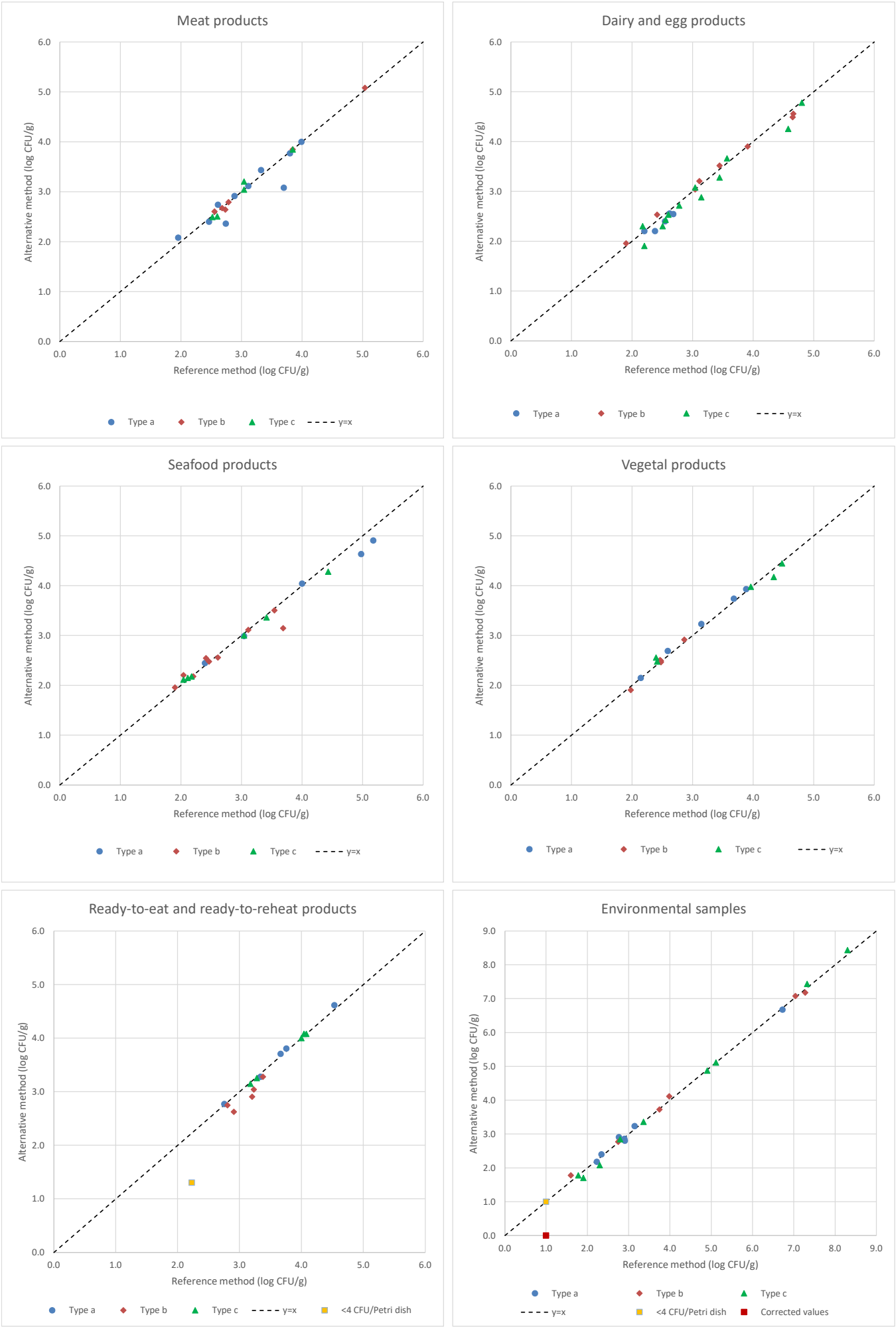
Raw results are shown in Appendix D.

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 in figure 1 for an incubation of the Petri dishes of the reference method at 30°C and in figure 3 for an incubation of the Petri dishes of the reference method at 37°C.
All results are presented in scatter plots for all categories in figure 2 for an incubation of the Petri dishes of the reference method at 30°C and in figure 4 for an incubation of the Petri dishes of the reference method at 37°C.

Figure 1: Two-dimensional plots per category and for all categories (reference method at 30°C)



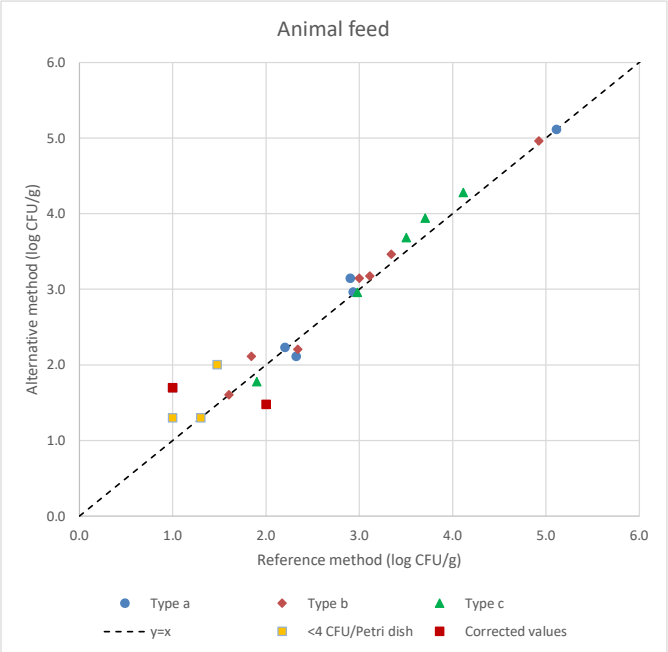


Figure 2: Two-dimensional plots per category and for all categories (reference method at 30°C)

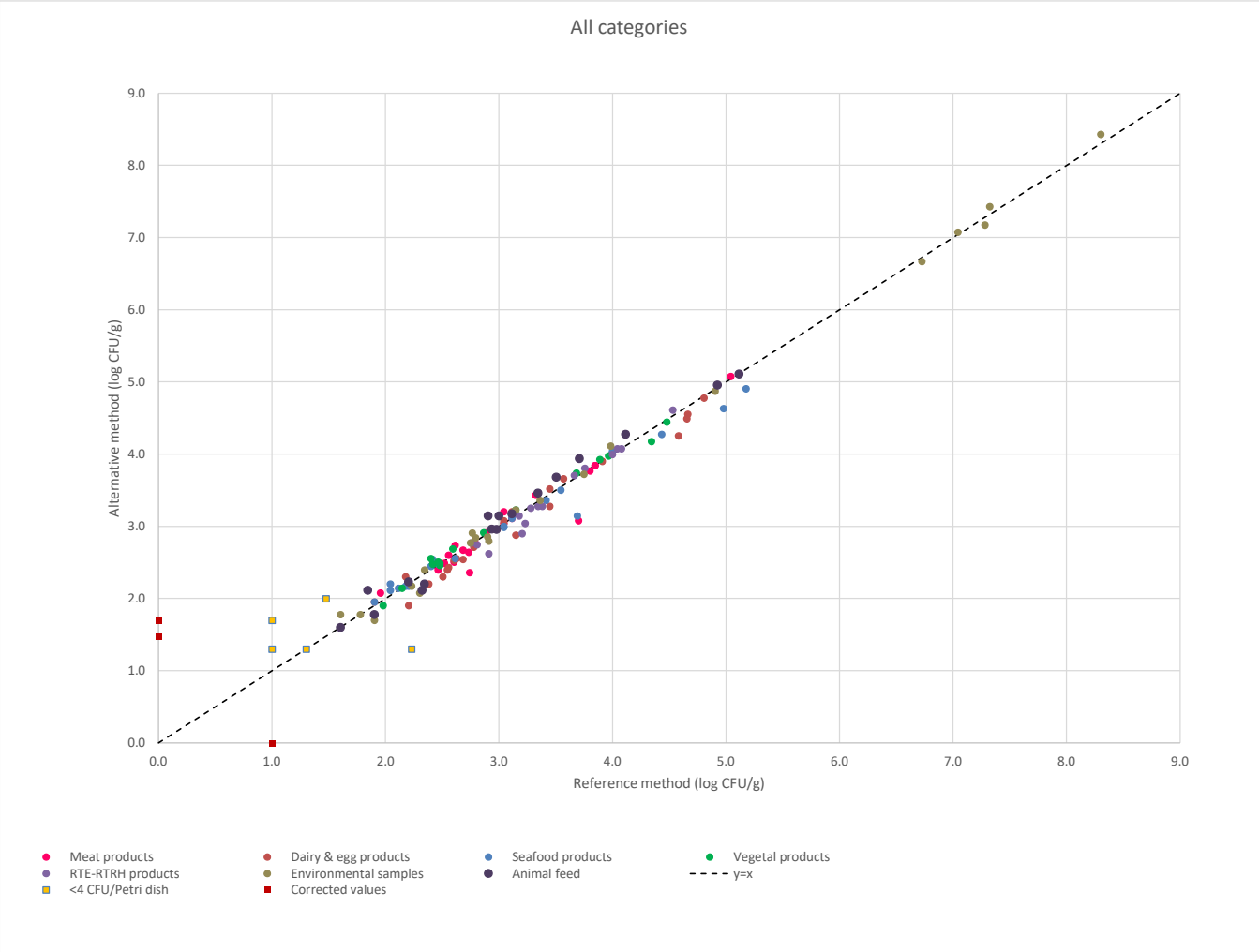


Figure 3: Two-dimensional plots per category and for all categories (reference method at 37°C)

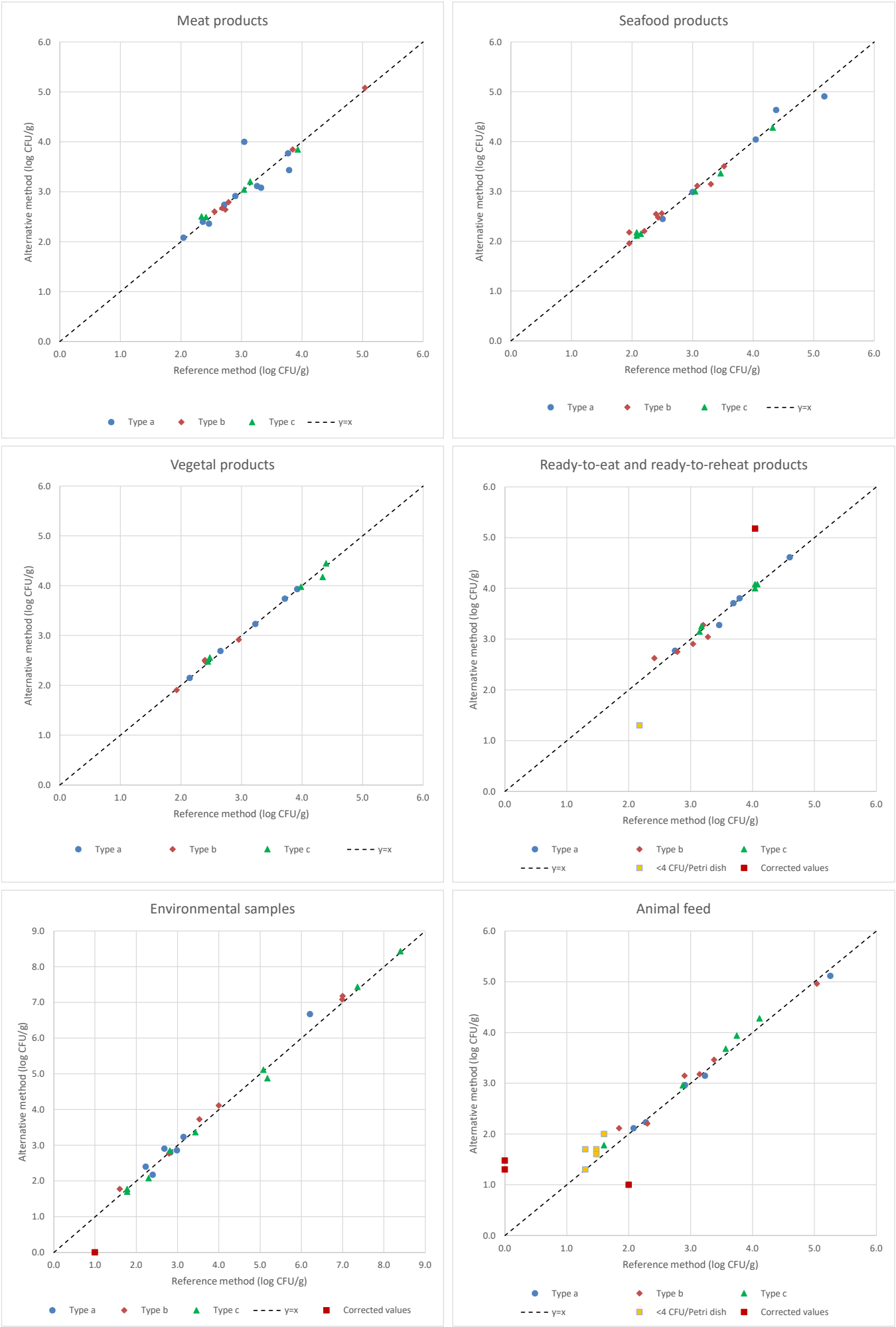
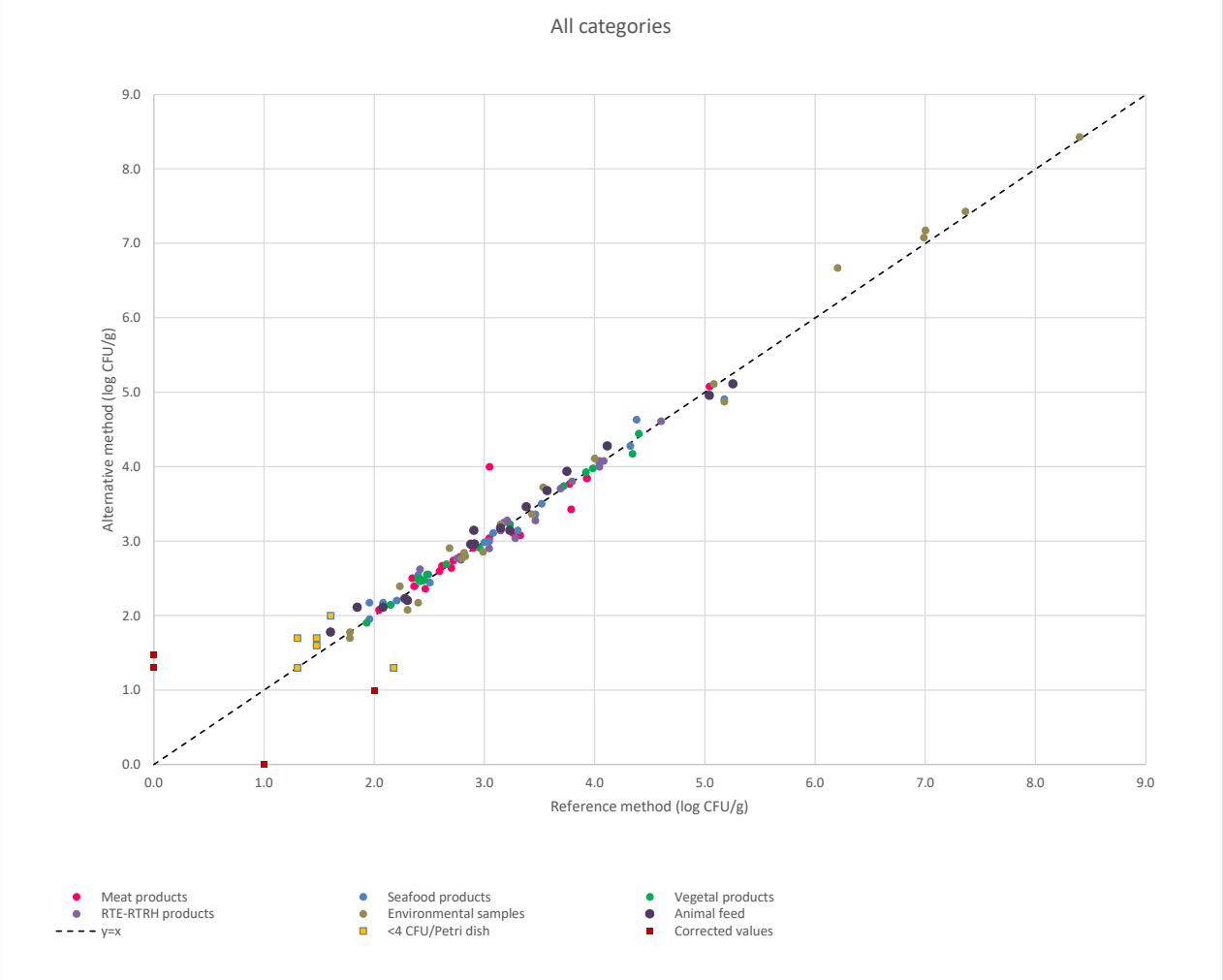


Figure 4: Two-dimensional plots per category and for all categories (reference method at 37°C)



3.1.5. 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.

Tables 3 and 4 present the summary of the average differences and standard deviation differences per category and for all categories for the two incubation temperatures of the reference method.

Table 3: values for the Bland-Altman difference plot for an incubation at 30°C for the reference method

Category	n	Average difference	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	21	-0.03	0.18	-0.03	-0.42	0.36
Dairy products	25	-0.07	0.13	-0.07	-0.34	0.20
Seafood products	20	-0.05	0.17	-0.05	-0.41	0.30
Vegetal products	15	0.02	0.08	0.02	-0.15	0.19
Ready-to-eat & ready-to-reheat products	15	-0.05	0.12	-0.07	-0.31	0.20
Environmental samples	22	0.00	0.11	0.00	-0.22	0.23
Animal feed	17	0.06	0.14	0.06	-0.24	0.36
All categories	**135**	**-0.02**	**0.14**	**-0.02**	**-0.30**	**0.26**

Table 4: values for the Bland-Altman difference plot for an incubation at 37°C for the reference method

Category	n	Average difference	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	21	0.02	0.24	0.02	-0.50	0.54
Seafood products	20	0.01	0.12	0.01	-0.24	0.27
Vegetal products	15	0.02	0.07	0.02	-0.13	0.16
Ready-to-eat & ready-to-reheat products	15	-0.01	0.11	-0.03	-0.25	0.23
Environmental samples	22	0.04	0.17	0.04	-0.33	0.40
Animal feed	16	0.06	0.13	0.06	-0.22	0.34
All categories	**109**	**0.01**	**0.16**	**0.01**	**-0.31**	**0.33**

Overall, the average difference is equal to -0,02 when compared at the reference method at 30°C and 0.01 when compared at the reference method at 37°C, showing no bias between the RAPID'*E. coli* 2 method and the reference method.

The average difference varies:

- for an incubation of the Petri dishes of the reference method at 30°C: from -0.07 log CFU/g (Dairy and egg products) to 0.06 CFU/g (Animal feed),
- for an incubation of the Petri dishes of the reference method at 37°C: from -0.01 log CFU/g (Ready-to-eat & ready-to-reheat products) to 0.06 CFU/g (Animal feed).

Upper and lower 95% confidence interval limits are lower than 0.5 log showing a good correlation between the two methods.

The Bland-Altman difference plots are presented for all categories in figure 5 and 6.

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.

Samples for which the average difference is lower or higher than the confidence limits are listed in tables 5 and 6.

Figure 5: Bland-Altman difference plot for all categories (reference method at 30°C)

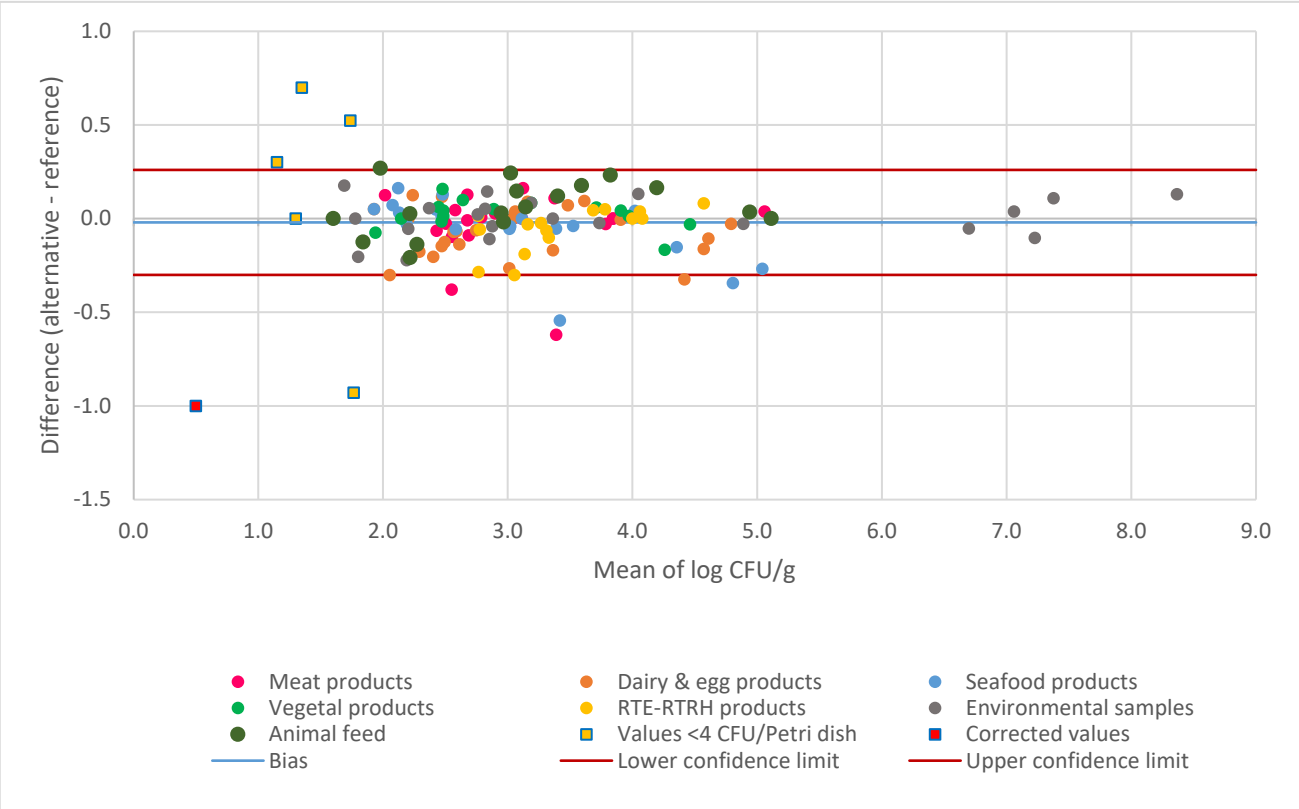


Table 5: values outside the confidence limits on the Bland-Altman difference plot for an incubation of the Petri dishes of the reference method at 30°C (green cases: values <4 CFU/Petri dish)

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	C	3	IVS	Merguez	5000	1200	3.70	3.08	3.39	-0.62
	C	4	IVS	Sausage of veal	550	230	2.74	2.36	2.55	-0.38
D&Egg	C	23	IVS	Chocolate cream	38000	18000	4.58	4.26	4.42	-0.32
	C	ISHA 34C	R2017	Omelette (CA)	160	80	2.20	1.90	2.05	-0.30
Seafood products	A	ISHA 7C	R2017	Julienne fillet	95000	43000	4.98	4.63	4.81	-0.34
	B	ISHA 48C	R2017	Smoked salmon (CA)	4900	1400	3.69	3.15	3.42	-0.54
RTE-RTRH	B	ISHA 53C	R2017	Beef vegetables (CA)	1600	800	3.20	2.90	3.05	-0.30
	B	ISHA 37C	R2017	Gratin (CA)	170	20	2.23	1.30	1.77	-0.93
Env samples	c	2347764	Ext.2022	Residue animal feed	10	<10	1.00	0.00	0.50	-1.00
Animal feed	b	2364278	Ext 2023	Oats	70	130	1.85	2.11	1.98	0.27

Ten values are outside the confidence limits: 1 relates to a sample with less than 4 CFU/Petri dish for the alternative method and another a sample below the quantification limit for the alternative method. Nine values are lower than the lower confidence limit and one value is upper than the upper confidence limit.

Figure 6: Bland-Altman difference plot for all categories (reference method at 37°C)

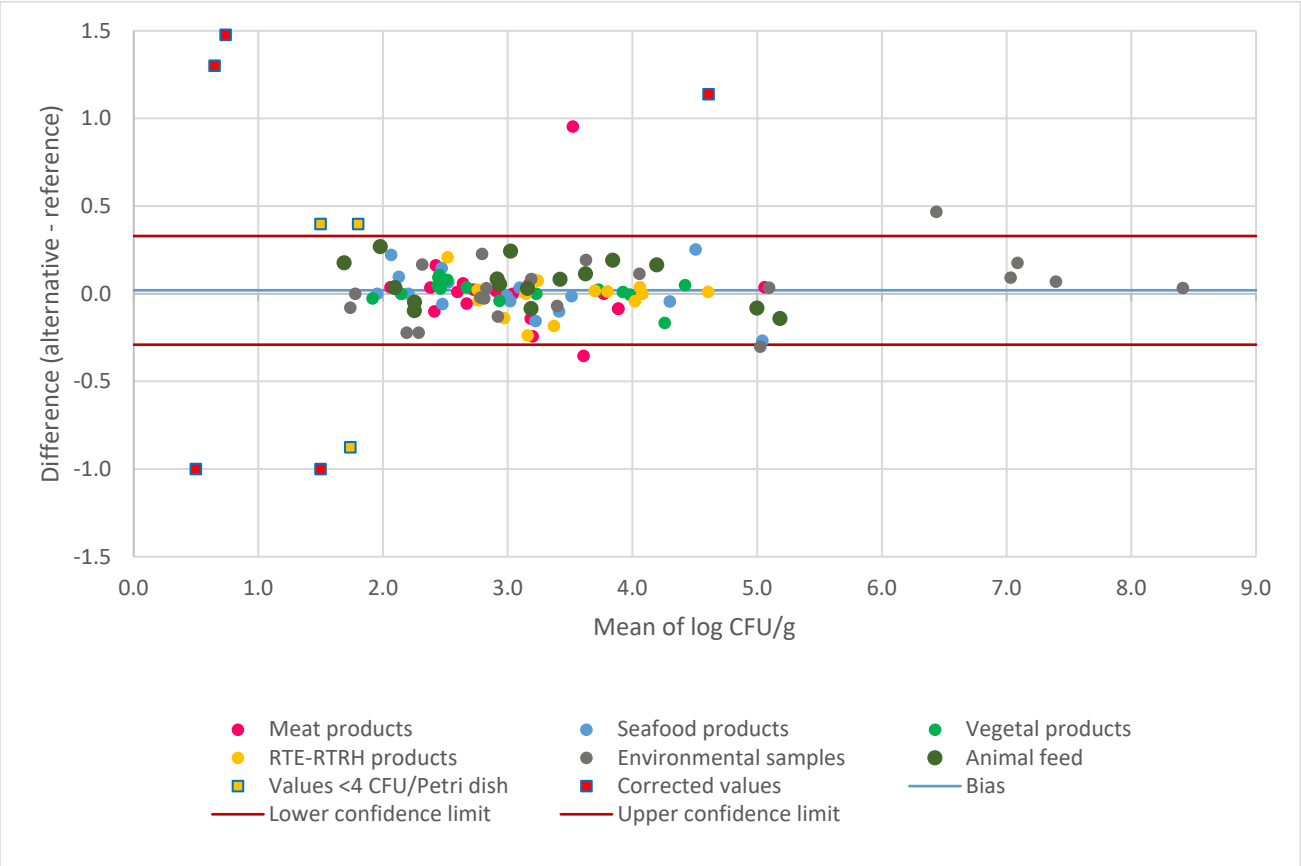


Table 6: values outside the confidence limits on the Bland-Altman difference plot for an incubation of the Petri dishes of the reference method at 37°C (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits)

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	A	33	IVS	Ground beef	6100	2700	3.79	3.43	3.61	-0.35
	A	84	IVS	Steak horse	1110	10000	3.05	4.00	3.52	0.95
RTE-RTRH	A	15	IVS	Tabbouleh	11000	> 15000	4.04	5.18	4.61	1.14
	B	ISHA 37C	R2017	Gratin (CA)	150	20	2.18	1.30	1.74	-0.88
Env samples	a	2347715	Ext.2022	Wipe pastry & bakery	1 600 000	4 700 000	6.20	6.67	6.44	0.47
	c	2333893	Ext.2022	Egg product residue	150 000	75 000	5.18	4.88	5.03	-0.30
	c	2347764	Ext2022	Residue animal feed	10	<10	1.00	0.00	0.50	-1.00
Animal feed	a	2364268	Ext 2023	Beef Cat Pate	100	<100	2.00	1.00	1.50	-1.00
	a	2392518	Ext 2023	Salmon cat kibble	20	50	1.30	1.70	1.50	0.40
	a	2392520	Ext 2023	Rabbit pellets	<10	20	0.00	1.30	0.65	1.30
	c	2392522	Ext 2023	Chicken flour	<10	30	0.00	1.48	0.74	1.48
	c	2392526	Ext 2023	Salmon flour	40	100	1.60	2.00	1.80	0.40

Twelve are outside the confidence limits: 2 relates a sample with less than 4 CFU/Petri dish for the alternative method, 4 relates samples above the quantification limit for the alternative method and

another a sample below the quantification limit for the alternative method. Five values are lower than the lower confidence limit and seven values are upper than the upper confidence limit.

3.1.6. Conservation of the incubated Rapid E.coli2 Petri dishes at 5±3°C for 3 days

Storage of REC2 Petri dishes followed by a new reading only applied to the Environmental samples and Animal feed categories.
For Environmental samples category, evolutions were observed for 3 interpreted samples (2333887, 2333888 and 2347714).
During this extension study, evolutions were observed for 8 samples. Among these samples, 2 were not interpreted (2364266 and 2364273) and 3 were interpreted (2364272, 2392504, 2364275, 2364276, 2364278 and 2392621).
A new statistical interpretation for the categories environmental samples and Animal feed was realized.

Table 7: interpretation after storage for an incubation of the Petri dishes of the reference method at 30°C

Category	Storage	n	Average difference	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Environmental samples	Before	22	0.00	0.11	0.00	-0.22	0.23
	After	22	0.01	0.11	0.00	-0.22	0.23
Animal feed	Before	17	0.06	0.14	0.06	-0.24	0.36
	After	17	0.07	0.14	0.07	-0.23	0.38

Table 8: interpretation after storage for an incubation of the Petri dishes of the reference method at 37°C

Category	Storage	n	Average difference	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Environmental samples	Before	22	0.04	0.17	0.04	-0.33	0.40
	After	22	0.04	0.17	0.00	-0.33	0.40
Animal feed	Before	17	0.06	0.13	0.06	-0.22	0.34
	After	17	0.08	0.12	0.08	-0.19	0.34

3.1.7. Conclusion

The relative trueness study of the alternative method is satisfactory.

3.2. Accuracy profile study

3.2.1. Protocols

Five matrix-strain pairs were tested by both methods. Two batches of a matrix, representative of each category, were inoculated with a strain of coliform 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 couples are presented in table 9.

Table 9: matrix-strain pairs for the accuracy profile study

Category	Matrix	Strain	Origin of the strain	Contamination Level (log CFU/g)
Meat products	Ground beef	*Citrobacter freundii* (CIT.1.6)	Beef	2.5 3.5 5.0
Dairy products	Raw milk cheese	*Enterobacter gergoviae* (ENTB.1.1)	Milk	
Seafood products	Fish fillet	*Serratia marcescens* (SER.3.3)	Seafood product	
Vegetal products	Grated carrots	*Klebsiella oxytoca* (KLE.1.1)	Salad	
Composite foods	Piemontese salad	*Hafnia alvei* (HAF.1.1)	Tabbouleh	
Environmental samples	Process water	*Escherichia coli* YMJ695	Tap water	
Animal Feed	Dog pâté	*Escherichia coli* GQRP82	Raw turkey meat	

3.2.2. Results

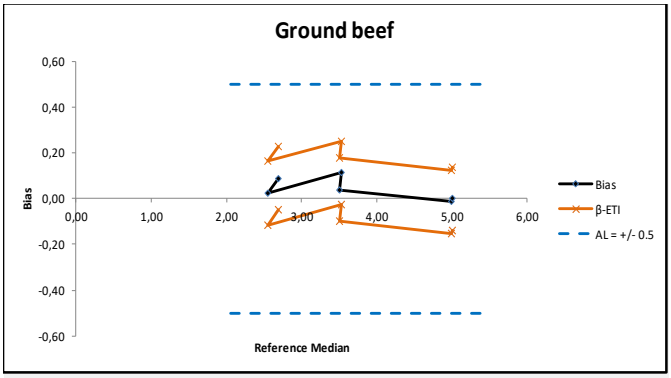
Raw data are provided in Appendix F.

The statistical data and the accuracy profiles are shown in figures 7 and 8.

Statistical calculations were done according to the Excel spreadsheet named AP_calculation_tool MCS 16140-2_clause 6-1-3-3 ver_31-07-2018.xlsx available at http://standards.iso.org/iso/16140.

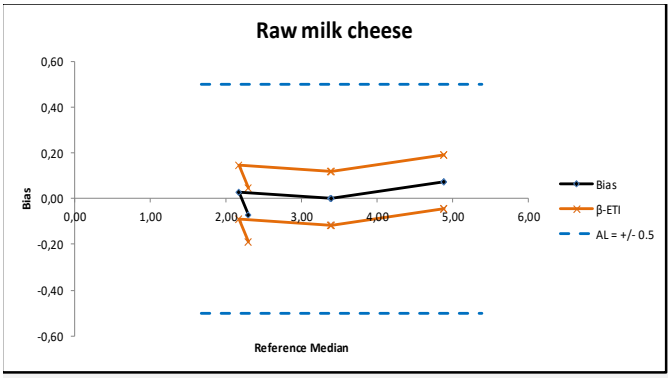
The probability for the tolerance interval is set at 80% and the central value is the median.
The acceptability limit is set at AL = 0.5 $\log_{10}$ CFU/g or ml.

Figure 7: Accuracy profiles per category (reference method at 30°C)



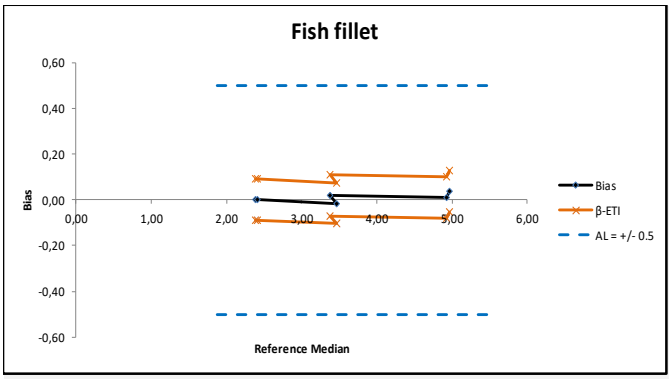
Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,69	0,088	-0,051	0,227	YES	YES
	2,56	0,023	-0,115	0,162	YES	YES
	3,53	0,112	-0,027	0,251	YES	YES
	3,51	0,039	-0,100	0,178	YES	YES
	4,99	-0,014	-0,152	0,125	YES	YES
	5,00	0,000	-0,139	0,139	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,060	0,096	YES	+/- 0,500



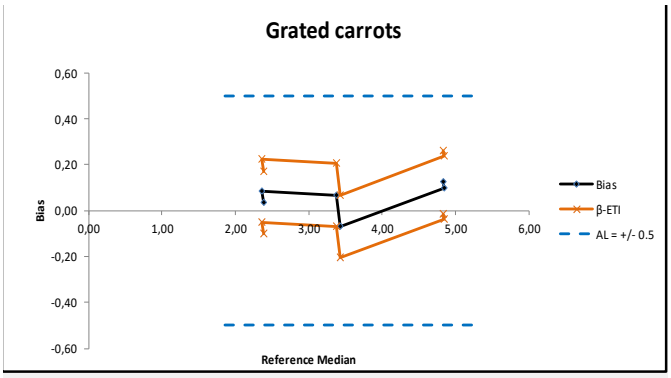
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,30	-0,071	-0,188	0,046	YES	YES
	2,18	0,028	-0,089	0,145	YES	YES
	3,38	0,000	-0,117	0,117	YES	YES
	3,40	0,000	-0,117	0,117	YES	YES
	4,89	0,073	-0,044	0,189	YES	YES
	4,89	0,073	-0,044	0,189	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,123	0,081	YES	+/- 0,500



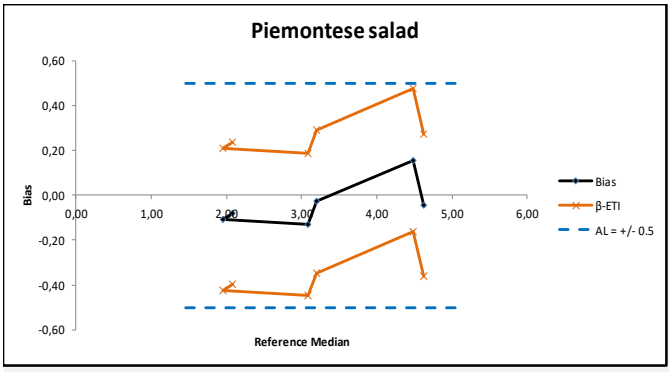
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,38	0,000	-0,090	0,090	YES	YES
	2,41	0,000	-0,090	0,090	YES	YES
	3,46	-0,015	-0,105	0,074	YES	YES
	3,38	0,018	-0,072	0,107	YES	YES
	4,93	0,010	-0,079	0,100	YES	YES
	4,96	0,036	-0,053	0,126	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,078	0,062	YES	+/- 0,500



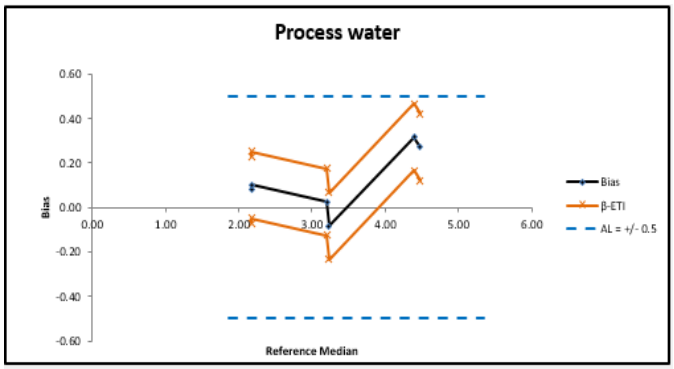
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,38	0,035	-0,102	0,172	YES	YES
	2,36	0,085	-0,052	0,223	YES	YES
	3,38	0,067	-0,070	0,204	YES	YES
	3,43	-0,070	-0,207	0,068	YES	YES
	4,85	0,099	-0,038	0,237	YES	YES
	4,83	0,123	-0,014	0,260	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,059	0,095	YES	+/- 0,500



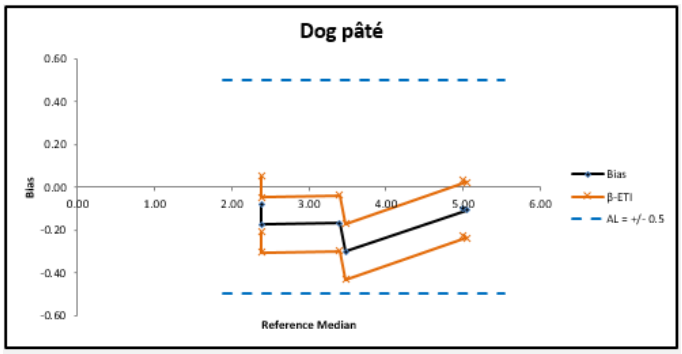
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,08	-0,079	-0,397	0,238	YES	YES
	1,95	-0,109	-0,427	0,208	YES	YES
	3,08	-0,130	-0,447	0,188	YES	YES
	3,20	-0,028	-0,346	0,290	YES	YES
	4,48	0,156	-0,161	0,474	YES	YES
	4,62	-0,043	-0,361	0,274	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,215	0,220	NO	+/- 0,500



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.18	0.079	-0.071	0.229	YES	YES
	2.18	0.103	-0.047	0.253	YES	YES
	3.20	0.026	-0.124	0.176	YES	YES
	3.23	-0.084	-0.234	0.066	YES	YES
	4.40	0.318	0.168	0.468	YES	YES
	4.48	0.271	0.121	0.421	YES	YES

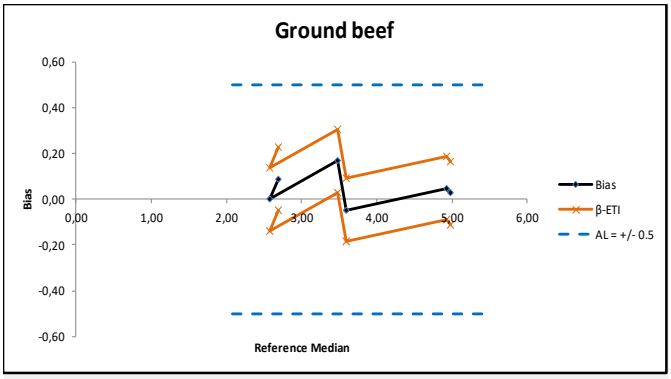
	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.072	0.104	YES	+/- 0.500



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.38	-0.079	-0.209	0.051	YES	YES
	2.38	-0.176	-0.306	-0.046	YES	YES
	3.40	-0.167	-0.297	-0.038	YES	YES
	3.48	-0.301	-0.431	-0.171	YES	YES
	5.04	-0.107	-0.237	0.023	YES	YES
	5.00	-0.097	-0.227	0.033	YES	YES

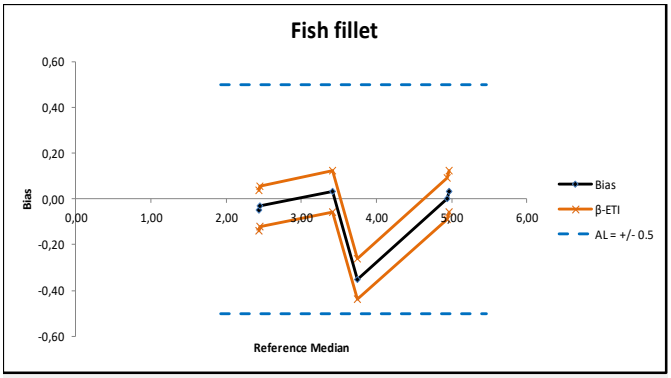
	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.103	0.090	YES	+/- 0.500

Figure 8: Accuracy profiles per category (reference method at 37°C)



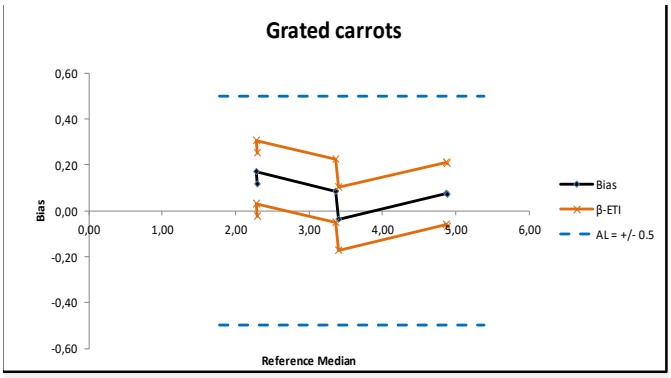
Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,69	0,088	-0,051	0,227	YES	YES
	2,58	0,000	-0,139	0,139	YES	YES
	3,48	0,166	0,028	0,305	YES	YES
	3,59	-0,047	-0,186	0,092	YES	YES
	4,93	0,048	-0,090	0,187	YES	YES
	4,97	0,027	-0,112	0,165	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,074	0,096	YES	+/- 0,500



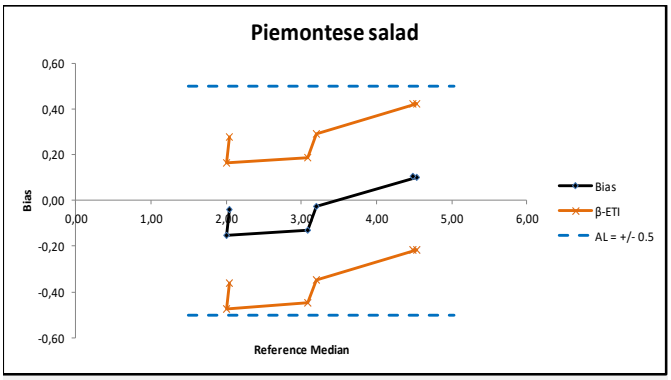
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,43	-0,051	-0,141	0,038	YES	YES
	2,45	-0,032	-0,122	0,057	YES	YES
	3,41	0,032	-0,057	0,122	YES	YES
	3,75	-0,350	-0,440	-0,261	YES	YES
	4,94	0,000	-0,090	0,090	YES	YES
	4,97	0,032	-0,058	0,121	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,099	0,062	YES	+/- 0,500



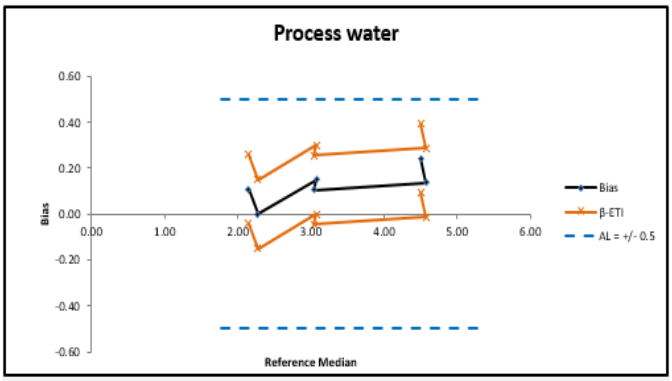
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,30	0,114	-0,023	0,251	YES	YES
	2,28	0,168	0,031	0,306	YES	YES
	3,36	0,085	-0,052	0,223	YES	YES
	3,40	-0,036	-0,173	0,101	YES	YES
	4,87	0,075	-0,062	0,212	YES	YES
	4,88	0,069	-0,069	0,206	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,068	0,095	YES	+/- 0,500



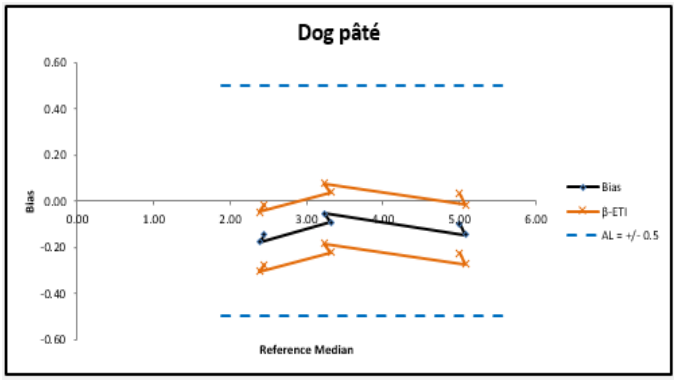
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2,04	-0,041	-0,359	0,276	YES	YES
	2,00	-0,155	-0,472	0,163	YES	YES
	3,08	-0,130	-0,447	0,188	YES	YES
	3,20	-0,028	-0,346	0,290	YES	YES
	4,53	0,102	-0,216	0,420	YES	YES
	4,48	0,103	-0,215	0,420	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,184	0,220	NO	+/- 0,500



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.15	0.109	-0.041	0.259	YES	YES
	2.28	0.000	-0.150	0.150	YES	YES
	3.08	0.151	0.001	0.301	YES	YES
	3.04	0.105	-0.045	0.255	YES	YES
	4.58	0.136	-0.014	0.286	YES	YES
	4.51	0.243	0.093	0.393	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.090	0.104	YES	+/- 0.500



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.45	-0.146	-0.276	-0.016	YES	YES
	2.38	-0.176	-0.306	-0.046	YES	YES
	3.32	-0.092	-0.222	0.038	YES	YES
	3.23	-0.054	-0.184	0.076	YES	YES
	5.08	-0.145	-0.275	-0.015	YES	YES
	5.00	-0.097	-0.227	0.033	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.104	0.090	YES	+/- 0.500

The tolerance intervals fall into the acceptability limits for all categories.

3.2.3. Conclusion

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

3.3. Specificity / selectivity

3.3.1. Protocols

Sixty-nine (69) positive strains and thirty (30) negative strains were tested in duplicate by the alternative method.
Results are shown in Appendix G.

3.3.2. Results

All coliform strains were cultivated on media and showed characteristic colonies, except for some *Hafnia alvei* strain which showed white colonies. These strains were ONPG negative, that's explained the non-characteristic aspect of the colonies. Two ONPG-negative strains were tested with the reference method (with VRBL incubated at 30°C and at 37°C). One strain gave non characteristic colonies on VRBL and the other didn't grow.

All the non-target strains, when they cultivated on the agar media of the alternative method, showed a non-typical aspect, except for a strain of *Shigella sonnei* (β-glucuronidase positive) and two strains of *Salmonella arizonae* (lactose positive).
These three strains were tested with the reference method (with VRBL incubated at 30°C and at 37°C). They gave a typical aspect on the VRBL media.

3.3.3. Conclusion

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

3.4. Practicability

The following criteria are precised:

- Storage conditions of the elements (+ time limit for unopened products):

The RAPID'*E. coli* 2 is available in:
- ready-to-use vials of 100 mL,
- dehydrated powder vials of 500 g.

The storage temperature is indicated on the packages and in the user guides.
The storage temperature is 2-8°C for the ready-to-use agar media and 15–25°C for the dehydrated media.
The validity of the media is 14 months for the ready-to-use agar media and 39 months for the dehydrated agar media.
The expiry date is indicated on the vials.

- Methods of use after first use (particularly existence of limit dates):

For the dehydrated agar media, it is necessary to shake the products before every use.

- Time-to-result:

The results are obtained in 18 to 24 hours for the two methods: the EN ISO 4832 method and the RAPID'*E. coli* 2method.

- Common steps with the reference method

The alternative method and the reference method have one common step: the dilution of the sample in an appropriate diluent.

3.5. General conclusion for the methods 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 equivalent to that of the reference method (one day).

3.6. Interlaboratory study

3.6.1. Study organization

The interlaboratory study has been realized in November 2004. The samples were sent to 16 collaborators.

The collaborators received 8 samples of pasteurized milk (2 vials per contamination level; 4 contamination levels) to perform the analyses with the reference method NF ISO 4832 at 30°C and with the alternative method REC2.

The two strains used for the contamination of the samples were:

- a β-glucuronidase positive *Escherichia coli* isolated from a pastry,
- an *Enterobacter cloacae* isolated from milk powder.

3.6.2. Control of experimental parameters

3.6.2.1. Contamination levels obtained after artificial contamination

The four contamination levels are detailed in the following table.

Table 10: Contamination levels of inoculated samples

Level	Targeted level (CFU/ml) Coliforms	Real level (CFU/ml) *E. cloacae*	Real level (CFU/ml) *E. coli*	Real level (CFU/ml) *E.coli*
Level 0 (L_0)	0	0	0	0
Level 1 (L_1)	100	40	47	87
Level 2 (L_2)	1000	485	455	940
Level 3 (L_3)	10 000	4700	5800	10 500

3.6.2.2. Temperatures during shipping and at reception, delivery times

Among the 16 collaborators, 5 didn't realize the analyses (A, D, I, J, N).

The temperatures recorded at reception of the packages for the 11 remaining collaborators confirm that the samples were stored at correct temperatures (between 0.5°C and 5.4°C).

These 11 collaborators realized the analyses the day following the sending of the samples, except for collaborator G which realized the analyses 48 hours after reception.

3.6.2.3. Conclusion

Among the 16 collaborators, only 11 realized the analyses.

The results obtained by the collaborator G were not taken into account because it realized the analyses 48 hours after reception of the samples.

Finally, regarding the conditions of the delivery of the samples, the results of ten collaborators were kept.

3.6.3. Results

3.6.3.1. Expert laboratory

The results obtained by the expert laboratory are shown in the table below.

Table 11: Results of the Expert Laboratory (in CFU/ml)

Level	Reference method		Alternative method	
	R1	R2	R1	R2
L_0	<1	<1	<1	<1
L_1	88	74	71	66
L_2	750	790	690	570
L_3	7700	10 000	5600	5500

Results according to the ISO 4832 standard and according to the alternative method were in agreement.

3.6.3.2. Results obtained by the collaborators

The results of the 10 laboratories which realized the analysis are summarized in the tables 12 and 13 for the three levels of contamination.

Table 12: results of the collaborators (CFU/g)

Collaborator	Level 0				Level 1				Level 2				Level 3			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
B	<1	<1	<1	<1	84	98	72	95	820	940	940	930	10000	8300	9400	11000
C	<1	<1	<1	<1	101	89	100	120	1100	1200	1200	1200	13000	14000	16000	13000
E	<1	<1	<1	<1	89	85	98	99	1000	1200	1200	1200	11000	12000	12000	11000
F	<1	<1	<1	<1	86	67	90	110	1000	870	870	1030	9200	8300	8100	8900
H	<1	<1	<1	<1	69	74	87	84	990	930	930	1100	9500	9300	10000	8500
K	<1	<1	<1	<1	81	84	82	97	790	1100	1100	980	8600	11000	12000	12000
L	<1	<1	<1	<1	68	58	62	120	630	720	720	850	8100	5600	9400	7800
M	<1	<1	<1	<1	64	51	74	80	900	830	830	730	6800	6900	11000	9600
O	<1	<1	<1	<1	46	57	66	90	660	740	740	840	5600	8500	8700	11000
P	<1	<1	<1	<1	93	78	92	92	980	970	970	860	10000	13000	10000	12000

Table 13: results of the collaborators (log CFU/g)

Collaborator	Level 0				Level 1				Level 2				Level 3			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
	R1	R1	R1	R1	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
B	0	0	0	0	1,92	1,99	1,86	1,98	2,91	2,97	2,97	2,97	4,00	3,92	3,97	4,04
C	0	0	0	0	2,00	1,95	2,00	2,08	3,04	3,08	3,08	3,08	4,11	4,15	4,20	4,11
E	0	0	0	0	1,95	1,93	1,99	2,00	3,00	3,08	3,08	3,08	4,04	4,08	4,08	4,04
F	0	0	0	0	1,93	1,82	1,95	2,04	3,00	2,94	2,94	3,01	3,96	3,92	3,91	3,95
H	0	0	0	0	1,84	1,87	1,94	1,92	3,00	2,97	2,97	3,04	3,98	3,97	4,00	3,93
K	0	0	0	0	1,91	1,92	1,91	1,99	2,90	3,04	3,04	2,99	3,93	4,04	4,08	4,08
L	0	0	0	0	1,83	1,76	1,79	2,08	2,80	2,86	2,86	2,93	3,91	3,75	3,97	3,89
M	0	0	0	0	1,81	1,71	1,87	1,90	2,95	2,92	2,92	2,86	3,83	3,84	4,04	3,98
O	0	0	0	0	1,67	1,75	1,82	1,95	2,82	2,87	2,87	2,92	3,75	3,93	3,94	4,04
P	0	0	0	0	1,97	1,89	1,96	1,96	2,99	2,99	2,99	2,93	4,00	4,11	4,00	4,08

3.6.3.3. Conclusion

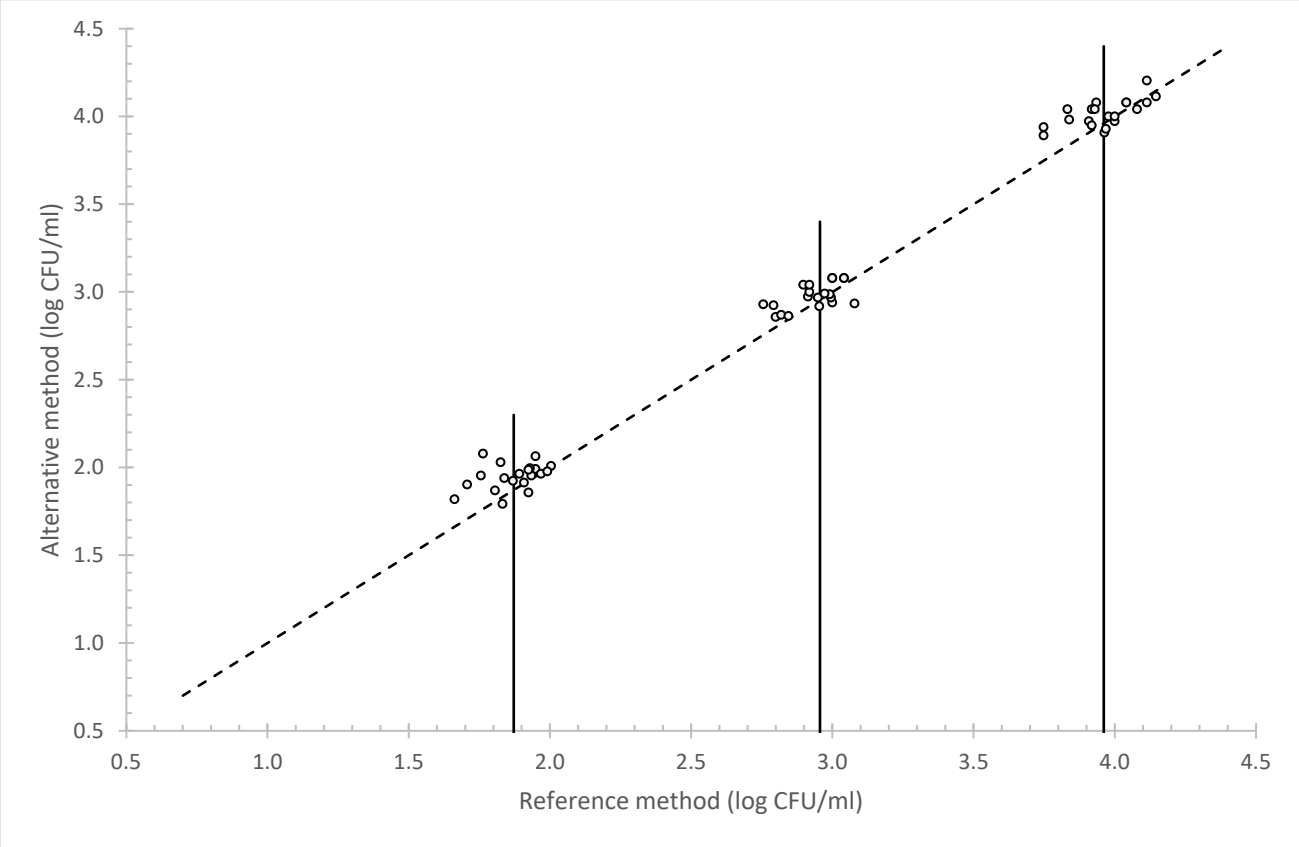
The results obtained by the collaborators were in agreement with those of the Expert Laboratory. The statistical interpretation has been realized with the results of 10 laboratories.

3.6.4. Statistical interpretations and calculations

3.6.4.1. Visual linearity checking

After the log10 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 9).

Figure 9: Scatter plot of reference-method versus alternative-method results for the interlaboratory study (dotted line: first bisecting line, vertical lines: medians of the measurements obtained with the reference method)



Data are well balanced around the median values of the reference method for each level, and a very slight positive bias is observed for the alternative method at all levels.

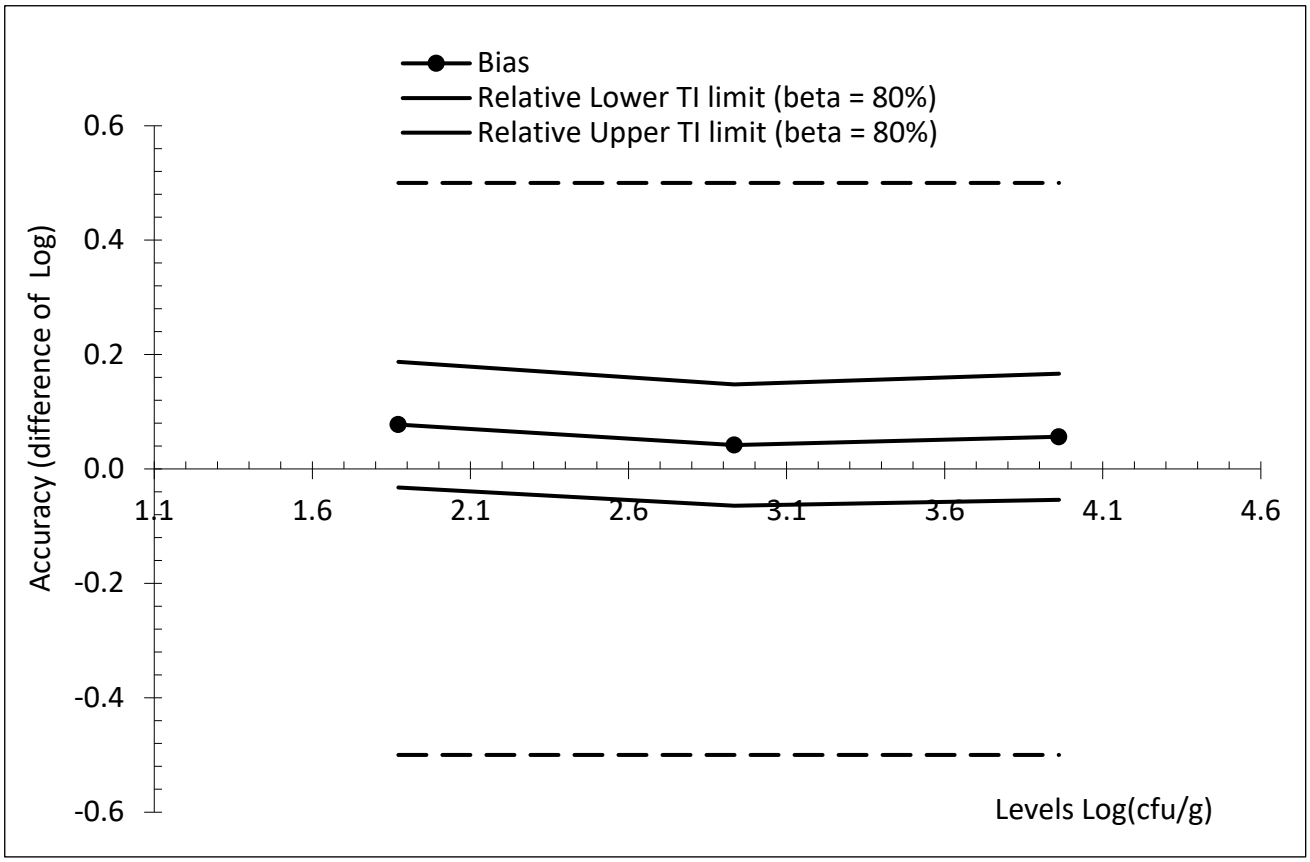
3.6.4.2. Calculation of the accuracy profile and interpretation

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 14.
The graphical representation of the accuracy profile lies in figure 10.

Table 14: Summary of the accuracy profile calculations (AL: acceptability limit, TI: tolerance interval, SD: standard deviation)

Tolerance probability (beta)	80%	80%	80%			
Acceptability limit in log (lambda)	0,50	0,50	0,50			
	Alternative method			**Reference method**		
Levels	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
Target value	**1,872**	**2,934**	**3,961**			
Number of participants (K)	10	10	10	10	10	10
Average for alternative method	1,949	2,976	4,017	1,872	2,934	3,961
Repeatability standard deviation (sr)	0,081	0,036	0,049	0,050	0,046	0,069
Between-labs standard deviation (sL)	0,000	0,065	0,062	0,083	0,082	0,092
Reproducibility standard deviation (sR)	0,081	0,075	0,079	0,097	0,094	0,115
Corrected number of dof	18,947	11,316	13,135	11,697	11,409	12,803
Coverage factor	1,361	1,420	1,403			
Interpolated Student t	1,328	1,361	1,349			
Tolerance interval standard deviation	0,0827	0,0778	0,0817			
Lower TI limit	1,840	2,870	3,907			
Upper TI limit	2,059	3,082	4,128			
Bias	**0,077**	**0,042**	**0,056**			
Relative Lower TI limit (beta = 80%)	**-0,032**	**-0,064**	**-0,054**			
Relative Upper TI limit (beta = 80%)	**0,187**	**0,148**	**0,166**			
Lower Acceptability Limit	**-0,50**	**-0,50**	**-0,50**			
Upper Acceptability Limit	**0,50**	**0,50**	**0,50**			
Pooled repro standard dev of reference	0,102					

Figure 10: Accuracy profile of the alternative method using β = 80% and λ = 0,50 log_{10} unit



The AL is met for all the contamination levels: the tolerance interval limits of the alternative method are within the acceptability limits of 0.5 log CFU/g

3.6.5. General conclusion for the interlaboratory study

The tolerance intervals of all levels of contamination fall within the default acceptability limits (±0.5 log CFU/ml).
The alternative method is regarded as being equivalent to the reference method.

4. General conclusion

The data and the interpretation of the methods comparison study and of the interlaboratory study fulfilled the requirements of the EN ISO 16140-2:2016 standard. The RAPID'*E. coli* 2 method is considered as equivalent to the reference method described in the ISO 4832 standard for all food categories, environmental samples and animal feed.

Le Lion d'Angers, April 28, 2023
François Le Nestour
Head of the Microbiology Department

APPENDICES

APPENDIX A

RAPID'*E. coli* 2 METHOD for the enumeration of coliforms

TECHNICAL PROCEDURE

Preparation and dilution of the sample according to EN ISO 6887

↓

1 ml in a sterile Petri dish
Pouring of about 15 ml of the molten RAPID'*E. coli* 2 agar medium
Mix the inoculum with the culture medium
Repeat this step with the following decimal dilutions

↓

Incubation at 37±1°C for 21±3 h

↓

Reading of the Petri dishes
Blue and purple to pink colonies
Enumeration of the Petri dishes with less than 150 characteristic colonies

APPENDIX B

ISO 4832
TECHNICAL PROCEDURE

Preparation and dilution of the sample according to EN ISO 6887

↓

1 ml in a sterile Petri dish
Addition of the VRBL medium (around 15 ml) at 44°C to 47°C
Mix the inoculum with the medium and allow the mixture to solidify
After solidification, pour about 4 ml of the VRBL medium at 44°C to 47°C at the surface of the inoculated medium
Repeat this step with the following decimal dilutions

↓

Incubation at 30±1°C or at 37±1°C for 24±2 h

↓

Reading

Purplish red colonies with a diameter of at least 0.5 mm (sometimes surronded by a reddish zone of precipitated bile)
Enumeration of the Petri dishes with less than 150 characteristic colonies
This kind of colonies do not require further confirmation

Also count and confirm atypical colonies and all colonies from milk products that contains sugars other than lactose immediately after the incubation period

↓

Confirmation

Inoculate five colonies of each atypical type into brilliant green lactose bile broth
Incubate the tubes at 30°C to 37°C for 24±2 h
Consider as coliforms colonies that show gas formation in the Durham tube

↓

Expression of the results according to the ISO 7218 standard

Appendix C - Artificial contaminations

N° sample	Analysis date	Sample	Artificial contamination				
			Strain	Code	Origin	Injury protocol	Mesured stress
61	Previous validation	Shrimps (CA)					/
62	Previous validation	Molds (CA)					/
63	Previous validation	Shrimps (CA)					/
75	Previous validation	Squid (CA)					/
76	Previous validation	Squid (CA)					/
80	Previous validation	Cod fillet (CA)					/
81	Previous validation	Marlin fillet (CA)					/
ISHA 6C	ISHA 2017	Parsnip puree (CA)	*Klebsiella oxytoca*	KLE.1.1	Soja salad	Seeding : 4 °C/ 72h	/
ISHA 13C	ISHA 2017	Tomata salad dressing (CA)	*Escherichia coli*	ESC.1.6	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 14C	ISHA 2017	Tagliatelle with salmon (CA)	*Serratia liquefaciens*	SER.1.1	Ling fillet	Seeding : 4 °C/ 72h	/
ISHA 15C	ISHA 2017	Carrots in a bag (CA)	*Klebsiella oxytoca*	KLE.1.1	Soja salad	Seeding : 4 °C/ 72h	/
ISHA 16C	ISHA 2017	Cauliflower in a bag (CA)	*Klebsiella oxytoca*	KLE.1.1	Soja salad	Seeding : 4 °C/ 72h	/
ISHA 17C	ISHA 2017	Marinated salmon (CA)	*Serratia liquefaciens*	SER.1.1	Ling fillet	Seeding : 4 °C/ 72h	/
ISHA 22C	ISHA 2017	Roquette in bag (CA)	*Klebsiella oxytoca*	KLE.1.1	Soja salad	Seeding : 4 °C/ 72h	/
ISHA 23C	ISHA 2017	Shredded carrots (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 24C	ISHA 2017	Royal Noodles (CA)	*Escherichia coli*	ESC.1.6	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 25C	ISHA 2017	Halal Meatballs (CA)	*Citrobacter freundii*	CIT.1.6	Beef	Seeding : 4 °C/ 72h	/
ISHA 26C	ISHA 2017	Carpacio of beef (CA)	*Escherichia coli*	ESC.1.9	Ground beef 15 % fat	Seeding : 4 °C/ 72h	/
ISHA 28C	ISHA 2017	Cod balles (CA)	*Serratia liquefaciens*	SER.1.1	Ling fillet	Seeding : 4 °C/ 72h	/
ISHA 30C	ISHA 2017	Ravioli Poultry (CA)	*Hafnia alvei*	HAF.1.1	Tabbouleh	Seeding : 4 °C/ 72h	/
ISHA 31C	ISHA 2017	Smoked salmon (CA)	*Serratia liquefaciens*	SER.1.1	Ling fillet	Seeding : 4 °C/ 72h	/
ISHA 32C	ISHA 2017	Parmentier of duck (CA)	*Escherichia coli*	ESC.1.9	Ground beef 15 % fat	Seeding : 4 °C/ 72h	/
ISHA 33C	ISHA 2017	Croque monsieur (CA)	*Escherichia coli*	ESC.1.6	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 34C	ISHA 2017	Omelette (CA)	*Hafnia alvei*	HAF.1.3	Dairy product	Seeding : 4 °C/ 72h	/
ISHA 35C	ISHA 2017	Smoked chicken (CA)	*Escherichia coli*	ESC.1.9	Ground beef 15 % fat	Seeding : 4 °C/ 72h	/
ISHA 36C	ISHA 2017	Smoked calf (CA)	*Citrobacter diversus*	CIT.4.1	Smoked haddock	Seeding : 4 °C/ 72h	/
ISHA 37C	ISHA 2017	Gratin (CA)	*Hafnia alvei*	HAF.1.1	Tabbouleh	Seeding : 4 °C/ 72h	/
ISHA 38C	ISHA 2017	Smoked herring fillet (CA)	*Hafnia alvei*	HAF.1.2	Smoked salmon	Seeding : 4 °C/ 72h	/
ISHA 39C	ISHA 2017	Smoked herring fillet (CA)	*Hafnia alvei*	HAF.1.2	Smoked salmon	Seeding : 4 °C/ 72h	/
ISHA 40C	ISHA 2017	Egg cream (CA)	*Escherichia coli*	ESC.1.5	Camembert	Seeding : 4 °C/ 72h	/
ISHA 42C	ISHA 2017	Goat cheese (CA)	*Escherichia coli*	ESC.1.5	Camembert	Seeding : 4 °C/ 72h	/
ISHA 43C	ISHA 2017	Emmental (CA)	*Escherichia coli*	ESC.1.5	Camembert	Seeding : 4 °C/ 72h	/
ISHA 44C	ISHA 2017	Filet of haddock (CA)	*Hafnia alvei*	HAF.1.2	Smoked salmon	Seeding : 4 °C/ 72h	/
ISHA 45C	ISHA 2017	Ling fillet (CA)	*Serratia liquefaciens*	SER.1.1	Ling fillet	Seeding : 4 °C/ 72h	/
ISHA 46C	ISHA 2017	Pickled mackerel (CA)	*Citrobacter diversus*	CIT.4.1	Smoked haddock	Seeding : 4 °C/ 72h	/
ISHA 47C	ISHA 2017	Smoked trout (CA)	*Hafnia alvei*	HAF.1.2	Smoked salmon	Seeding : 4 °C/ 72h	/
ISHA 48C	ISHA 2017	Smoked salmon (CA)	*Hafnia alvei*	HAF.1.2	Smoked salmon	Seeding : 4 °C/ 72h	/
ISHA 49C	ISHA 2017	Hanchois (CA)	*Citrobacter diversus*	CIT.4.1	Smoked haddock	Seeding : 4 °C/ 72h	/
ISHA 50C	ISHA 2017	Haddock (CA)	*Citrobacter diversus*	CIT.4.1	Smoked haddock	Seeding : 4 °C/ 72h	/
ISHA 51C	ISHA 2017	Smoked maqueraux (CA)	*Citrobacter diversus*	CIT.4.1	Smoked haddock	Seeding : 4 °C/ 72h	/
ISHA 52C	ISHA 2017	Quiche Lorraine (CA)	*Hafnia alvei*	HAF.1.1	Tabbouleh	Seeding : 4 °C/ 72h	/
ISHA 53C	ISHA 2017	Beef vegetables (CA)	*Serratia liquefaciens*	SER.1.2	Couscous	Seeding : 4 °C/ 72h	/
ISHA 54C	ISHA 2017	Salad mix (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 55C	ISHA 2017	Grated carrot (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 56C	ISHA 2017	Salade sachet (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 58C	ISHA 2017	Chipolata (CA)	*Klebsiella planticola*	KLE.3.1	Sausage	Seeding : 4 °C/ 72h	/
ISHA 59C	ISHA 2017	Lasagna 3 meats (CA)	*Klebsiella planticola*	KLE.3.1	Sausage	Seeding : 4 °C/ 72h	/
ISHA 60C	ISHA 2017	Chicken with pea (CA)	*Hafnia alvei*	HAF.1.1	Tabbouleh	Seeding : 4 °C/ 72h	/
ISHA 61C	ISHA 2017	Grilled sausage (CA)	*Klebsiella planticola*	KLE.3.1	Sausage	Seeding : 4 °C/ 72h	/
ISHA 62C	ISHA 2017	Parmentier with ham (CA)	*Klebsiella planticola*	KLE.3.1	Sausage	Seeding : 4 °C/ 72h	/
ISHA-63	ISHA 2017	Cod with sorrel sauce (CA)	*Escherichia coli*	ESC.1.31	Scallops	Seeding : 4 °C/ 72h	/
ISHA-64	ISHA 2017	Cod with tomato sauce (CA)	*Escherichia coli*	ESC.1.31	Scallops	Seeding : 4 °C/ 72h	/
ISHA-65	ISHA 2017	Salmon with sorrel sauce (CA)	*Escherichia coli*	ESC.1.31	Scallops	Seeding : 4 °C/ 72h	/
ISHA 66	ISHA 2017	Cucumber (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 67	ISHA 2017	Tomato (CA)	*Escherichia coli*	ESC.1.2	Grated carrot	Seeding : 4 °C/ 72h	/
ISHA 68	ISHA 2017	Apple (CA)	*Escherichia coli*	ESC.1.147	Cucumber	Seeding : 4 °C/ 72h	/
ISHA 69	ISHA 2017	Grape (CA)	*Escherichia coli*	ESC.1.147	Cucumber	Seeding : 4 °C/ 72h	/
ISHA 70	ISHA 2017	Red cabbage (CA)	*Escherichia coli*	ESC.1.147	Cucumber	Seeding : 4 °C/ 72h	/
ISHA 71	ISHA 2017	Tabbouleh (CA)	*Escherichia coli*	ESC.1.17	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 73	ISHA 2017	Smoked breast of duck (CA)	*Escherichia coli*	ESC.1.17	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 74	ISHA 2017	Beef carpaccio (CA)	*Escherichia coli*	ESC.1.17	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 75	ISHA 2017	Beef marinated (CA)	*Escherichia coli*	ESC.1.17	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 76	ISHA 2017	Parmentier of beef (CA)	*Escherichia coli*	ESC.1.6	Chicken ravioli	Seeding : 4 °C/ 72h	/
ISHA 77	ISHA 2017	Basil condiment (CA)	*Escherichia coli*	ESC.1.147	Cucumber	Seeding : 4 °C/ 72h	/
ISHA 78	ISHA 2017	Apple compote (CA)	*Escherichia coli*	ESC.1.147	Cucumber	Seeding : 4 °C/ 72h	/
2347746	Ext 2022	Wipe seafood cold room shelf	*Enterobacter mori*	JKJ301	Environment	Seeding : 4 °C/ 72h	/
2347747	Ext 2022	Wipe cheese cold room shelf	*Enterobacter pyrinus + E coli*	JLE580 + CJG405	Environment + Sage	Seeding : 4 °C/ 72h	/
2347748	Ext 2022	Wipe refrigerated delicatessen display shelf	*Klebsiella oxytoca + E. coli*	UNG158 + FRAU26	Environment + Organic thyme	Seeding : 4 °C/ 72h	/
2347752	Ext 2022	Process water pastry industry	*Enterobacter cloacae*	NGU837	Main river	Seeding : 4 °C/ 72h	/
2347753	Ext 2022	Process water cheese industry	*Hafnia alvei + E. coli*	SRZ676 + YMJ695	Main water + Main water	Seeding : 4 °C/ 72h	/
2347754	Ext 2022	Process water seafood environment	*Hafnia alvei*	SRZ676	Main river	Seeding : 4 °C/ 72h	/
2347755	Ext 2022	Process water poultry packaging workshop	*Enterobacter cloacae*	NGU837	Main river	Seeding : 4 °C/ 72h	/
2347760	Ext 2022	Flour dust	*Enterobacter cloacae*	VBT249	Dairy environment	Seeding : 4 °C/ 72h	/
2347761	Ext 2022	Flour dust	*E.coli*	FBV114	Dairy environment	Seeding : 4 °C/ 72h	/
2364266	Ext 2023	Salmon cat kibble	*E.coli + Cronobacter Sakazakii*	AZD018 + AKUY55	Fish + Cat food	Spiking 10 minutes at 56°C + Spiking 10 minutes at 56°C	1.48 / 1.52
2364267	Ext 2023	Terrine dog poultry	*E.coli + Enterobacter Cloacae*	GQRP82 + HVJ654	Turkey + Environment	Seeding 4°C/72h	/
2364268	Ext 2023	Beef Cat Pate	*E.coli + Citrobacter Youngae*	BHXK78 + RAX819A	Organic chicken liver + Minced beef	Seeding 4°C/72h	/
2364273	Ext 2023	Terrine dog beef	*Citrobacter Youngae*	RAX819A	Minced beef	Seeding 4°C/72h	/
2392504	Ext 2023	Beef Cat Pate	*E.coli + Serratia Marcescens*	GQRP82 + BJK3652	Turkey + Food	Seeding 4°C/72h	/
2392518	Ext 2023	Salmon cat kibble	*E.coli*	AZD018	Fish	Spiking 8 minutes at 56°C	0.84
2392520	Ext 2023	Rabbit pellets	*E.coli*	HMLZ85	Environment	Spiking 5 minutes at 56°C	0.72
2392586	Ext 2023	Cat kibble	*E.coli*	TZP821	Plants	Spiking 8 minutes at 56°C	1.31
2364274	Ext 2023	Ewes pellets	*E.coli*	HMLZ85	Environment	Spiking 15 minutes at 56°C	1.08
2364277	Ext 2023	Soy Cattle cake	*E.coli*	HMLZ85	Environment	Spiking 15 minutes at 56°C	1.08

Appendix C - Artificial contaminations

N° sample	Analysis date	Sample	Artificial contamination				
			Strain	Code	Origin	Injury protocol	Mesured stress
2364278	Ext 2023	Oats	*Cronobacter Sakazakii*	AWX553	Plants	Spiking 15 minutes at 56°C	0.50
2392571	Ext 2023	Corn	*Enterobacter Cloacae*	HVJ654	Environment	Spiking 10 minutes at 56°C	1.08
2392591	Ext 2023	Wheat	*E.coli* + *Enterobacter Cloacae*	TZP821 + EBJ453	Plants + Meat product	Spiking 8 minutes at 56°C + Spiking 10 minutes at 56°C	1.31 / 1.33
2392522	Ext 2023	Chicken flour	*E.coli*	BHXK78	Organic chicken liver	Spiking 10 minutes at 56°C	0.90
2392526	Ext 2023	Salmon flour	*E.coli*	AZD018	Fish	Spiking 8 minutes at 56°C	0.84
2319052	Ext 2023	Beef flour	*E.coli*	GQRP82	Turkey	Spiking 8 minutes at 56°C	0.63
2392573	Ext 2023	Soy protein	*Cronobacter Malonaticus*	HSE385	Bird seed	Spiking 15 minutes at 56°C	0.58
2392581	Ext 2023	Insect flour	*Serratia liquefaciens*	FAG655	Raw beef	Spiking 5 minutes at 56°C	0.83
2392582	Ext 2023	Beef flour	*Serratia liquefaciens*	FAG655	Raw beef	Spiking 5 minutes at 56°C	0.83

Appendix D

Relative trueness study – Raw results

Caption:

Results are expressed in CFU/g or ml

ND: not determined

/ : information not available

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

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	NCC	Conf.	CC	NCC	Conf.			CC	NCC	Conf.	CC	NCC	Conf.				
A	11	IVS	Leg of lamb	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	12	IVS	Turkey "blanquette"	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	14	IVS	Turkey escalope	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	26	IVS	Turkey steak	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	27	IVS	Chicken fillet	/	/	/	/	/	/	/	770	/	/	/	/	/	/	/	790	/	/	820
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	28	IVS	Turkey fillet	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	29	IVS	Beef kidney	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	32	IVS	Turkey escalope	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	33	IVS	Ground beef	/	/	/	/	/	/	/	2100	/	/	/	/	/	/	/	6100	/	/	2700
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	35	IVS	Veal cutlet	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	38	IVS	Turkey escalope	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	39	IVS	Turkey steak	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	64	IVS	Minced meat	/	/	/	/	/	/	/	290	/	/	/	/	/	/	/	230	/	/	250
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	65	IVS	Minced meat	/	/	/	/	/	/	/	6300	/	/	/	/	/	/	/	5900	/	/	5900
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	82	IVS	Ground beef	/	/	/	/	/	/	/	90	/	/	/	/	/	/	/	110	/	/	120
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	84	IVS	Steak horse	/	/	/	/	/	/	/	9800	/	/	/	/	/	/	/	1110	/	/	10000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 25C	R2017	Halal Meatballs (CA)	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
A	ISHA 58C	R2017	Chipolata (CA)	10	49	/	/	35	/	/	410	10	57	/	/	46	/	/	520	10	38	550
				100	4	/	/	3	/	/		100	4	/	/	7	/	/		100	3	
A	3	IVS	Merguez	/	/	/	/	/	/	/	5000	/	/	/	/	/	/	/	2100	/	/	1200
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	4	IVS	Sausage of veal	/	/	/	/	/	/	/	550	/	/	/	/	/	/	/	290	/	/	230
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	13	IVS	Merguez	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	34	IVS	Chipolata	/	/	/	/	/	/	/	1300	/	/	/	/	/	/	/	1800	/	/	1300
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	ISHA 2C	R2017	Bites of poultry	1000	6	/	/	8	/	/	7000	1000	7	/	/	10	/	/	8500	1000	7	7000
				10000	1	/	/	2	/	/		10000	1	/	/	1	/	/		10000	0	
B	ISHA 59C	R2017	Lasagna 3 meats (CA)	10	58	/	/	50	/	/	540	10	48	/	/	53	/	/	500	10	30	440
				100	5	/	/	6	/	/		100	5	/	/	3	/	/		100	1	
B	ISHA 32C	R2017	Parmentier of duck (CA)	10	38	/	/	36	/	/	360	10	46	/	/	30	/	/	390	10	39	400
				100	3	/	/	2	/	/		100	5	/	/	4	/	/		100	5	
B	ISHA 76	R2017	Parmentier of beef (CA)	1000	112	/	/	107	/	/	110000	1000	103	/	/	111	/	/	110000	1000	115	120000
				10000	12	/	/	9	/	/		10000	10	/	/	12	/	/		10000	13	
B	ISHA 61C	R2017	Grilled sausage (CA)	10	62	/	/	63	/	/	610	10	63	/	/	54	/	/	600	10	49	620
				100	5	/	/	5	/	/		100	10	/	/	4	/	/		100	4	
B	ISHA 62C	R2017	Parmentier with ham (CA)	10	51	/	/	48	/	/	480	10	32	/	/	49	/	/	410	10	38	470
				100	4	/	/	3	/	/		100	6	/	/	4	/	/		100	2	
C	83	IVS	Smoked ham	/	/	/	/	/	/	/	1100	/	/	/	/	/	/	/	1100	/	/	1100
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	

Meat products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	NCC	Conf.	CC	NCC	Conf.			CC	NCC	Conf.	CC	NCC	Conf.				
C	ISHA 35C	R2017	Smoked chicken (CA)	100	12	/	/	11	/	/	1100	100	20	/	/	7	/	/	1400	100	15	1600
				1000	1	/	/	1	/	/		1000	3	/	/	1	/	/		1000	3	
C	ISHA 36C	R2017	Smoked calf (CA)	1000	6	/	/	8	/	/	7000	1000	7	/	/	10	/	/	8500	1000	7	7000
				10000	1	/	/	2	/	/		10000	1	/	/	1	/	/		10000	0	

Type	#	Study	Sample	Reference method: ISO 4832* (VRBL 30°C)								Reference method: ISO 4832* (VRBL 37°C)								Alternative method: REC2 37°C					Alternative method: REC2 after storage 72h at 2-8°C				
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g)	Dilution	CFU/plate		Result (CFU/g)	Background microflora	Dilution	CFU/plate		Result (CFU/g)	Background microflora
					CC	NCC	Conf.	CC	NCC	Conf.			CC	NCC	Conf.	CC	NCC	Conf.			Purple C	Blue C				Purple C	Blue C		
C	2392606	Ext.2023	Dry ham	-1	33	0	/	/	/	/	330	-1	27	0	/	/	/	/	260	-1	31	0	310	0	-1	31	0	310	0
				-2	3	0	/	/	/	/		-2	1	0	/	/	/	/		-2	3	0		0	-2	3	0		0
C	2392607	Ext.2023	Smoked bacon	-1	40	0	/	/	/	/	400	-1	23	0	/	/	/	/	220	-1	34	0	320	0	-1	34	0	320	0
				-2	4	0	/	/	/	/		-2	1	0	/	/	/	/		-2	1	0		0	-2	1	0		0

Dairy and egg products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
?	37	IVS	Tomme	/	/	/	/	/	/	/	270	/	/	/	/	/	/	/	250	/	/	240
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	77	IVS	Brie	/	/	/	/	/	/	/	1500	/	/	/	/	/	/	/	1400	/	/	1500
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 18	R2017	Brie with pasteurized milk	10	48	/	/	48	/	/	480	10	50	/	/	46	/	/	490	10	35	350
				100	5	/	/	4	/	/		100	7	/	/	5	/	/		100	4	
A	ISHA 19	R2017	Brie with pasteurized milk	10	36	/	/	33	/	/	350	10	36	/	/	50	/	/	450	10	25	250
				100	4	/	/	3	/	/		100	4	/	/	8	/	/		100	3	
A	ISHA 20	R2017	Brie with pasteurized milk	10	50	/	/	38	/	/	420	10	62	/	/	47	/	/	520	10	36	360
				100	4	/	/	1	/	/		100	3	/	/	3	/	/		100	4	
A	ISHA 42C	R2017	Goat cheese (CA)	10	20	/	/	25	/	/	240	10	31	/	/	23	/	/	260	10	48	160
				100	5	/	/	3	/	/		100	0	/	/	4	/	/		100	4	
A	ISHA 43C	R2017	Emmental (CA)	10	15	/	/	15	/	/	160	10	15	/	/	9	/	/	130	10	32	160
				100	2	/	/	4	/	/		100	3	/	/	2	/	/		100	5	
B	5	IVS	Raw milk	/	/	/	/	/	/	/	46000	/	/	/	/	/	/	/	39000	/	/	36000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	10	IVS	Reblochon	/	/	/	/	/	/	/	45000	/	/	/	/	/	/	/	32000	/	/	31000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	24	IVS	Reblochon	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	25	IVS	Roquefort	/	/	/	/	/	/	/	1300	/	/	/	/	/	/	/	1300	/	/	1600
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	36	IVS	Raw milk cheese	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	78	IVS	Reblochon	/	/	/	/	/	/	/	8100	/	/	/	/	/	/	/	8100	/	/	8000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	85	IVS	Raw milk cheese	/	/	/	/	/	/	/	80	/	/	/	/	/	/	/	100	/	/	90
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	86	IVS	Raw milk cheese	/	/	/	/	/	/	/	260	/	/	/	/	/	/	/	310	/	/	340
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	87	IVS	Raw milk cheese	/	/	/	/	/	/	/	1100	/	/	/	/	/	/	/	1100	/	/	1100
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	88	IVS	Raw milk cheese	/	/	/	/	/	/	/	2800	/	/	/	/	/	/	/	2900	/	/	3300
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	L3	IVS	Nougat ice cream	/	/	/	/	/	/	/	<1	/	/	/	/	/	/	/	<1	/	/	<1
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	L4	IVS	Chocolate ice cream	/	/	/	/	/	/	/	<1	/	/	/	/	/	/	/	<1	/	/	<1
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	18	IVS	"Eclair" with cream	/	/	/	/	/	/	/	1400	/	/	/	/	/	/	/	710	/	/	760
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	

Dairy and egg products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
C	20	IVS	Coffee "éclair"	/	/	/	/	/	/	/	360	/	/	/	/	/	/	/	120	/	/	270
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	23	IVS	Chocolate cream	/	/	/	/	/	/	/	38000	/	/	/	/	/	/	/	25000	/	/	18000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	40	IVS	Cream with banana	/	/	/	/	/	/	/	64000	/	/	/	/	/	/	/	48000	/	/	60000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	17	IVS	Savarin choco	/	/	/	/	/	/	/	2800	/	/	/	/	/	/	/	2500	/	/	1900
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	51	IVS	Apple pie	/	/	/	/	/	/	/	320	/	/	/	/	/	/	/	360	/	/	200
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	57	IVS	Strawberries cake	/	/	/	/	/	/	/	1100	/	/	/	/	/	/	/	860	/	/	1200
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	60	IVS	Apricot cake	/	/	/	/	/	/	/	400	/	/	/	/	/	/	/	340	/	/	340
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	70	IVS	Coffee "éclair"	/	/	/	/	/	/	/	600	/	/	/	/	/	/	/	560	/	/	520
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	72	IVS	Peach cake	/	/	/	/	/	/	/	3700	/	/	/	/	/	/	/	4200	/	/	4600
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	ISHA 40C	R2017	Egg cream (CA)	10	9	/	/	19	/	/	150	10	15	/	/	4	/	/	110	10	39	200
				100	3	/	/	1	/	/		100	3	/	/	1	/	/		100	2	
C	ISHA 34C	R2017	Omelette (CA)	10	17	/	/	15	/	/	160	10	19	/	/	11	/	/	150	10	8	80
				100	2	/	/	1	/	/		100	2	/	/	1	/	/		100	1	
C	66	IVS	Cream puff	/	/	/	/	/	/	/	< 10	/	/	/	/	/	/	/	< 10	/	/	< 10
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	73	IVS	Cream puff	/	/	/	/	/	/	/	< 10	/	/	/	/	/	/	/	< 10	/	/	< 10
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	

Seafood products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
A	7	IVS	Fish	/	/	/	/	/	/	/	> 150000	/	/	/	/	/	/	/	> 150000	/	/	> 150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	8	IVS	Fish	/	/	/	/	/	/	/	> 150000	/	/	/	/	/	/	/	> 150000	/	/	> 150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	9	IVS	Fish	/	/	/	/	/	/	/	> 150000	/	/	/	/	/	/	/	> 150000	/	/	> 150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	22	IVS	Tuna	/	/	/	/	/	/	/	150000	/	/	/	/	/	/	/	150000	/	/	81000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	80	IVS	Cod fillet (CA)	/	/	/	/	/	/	/	1100	/	/	/	/	/	/	/	1000	/	/	970
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	81	IVS	Marlin fillet (CA)	/	/	/	/	/	/	/	10000	/	/	/	/	/	/	/	11000	/	/	11000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 7C	R2017	Julienne fillet	10000	0	40	1/5	0	53	1/5	95000	1000	20	/	/	25	/	/	24000	1000	44	43000
				100000	0	6		0	6			10000	5	/	/	2	/	/		10000	3	
A	ISHA 27C	R2017	Scallop	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
A	ISHA 29-1C	R2017	Fillet of sole	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
A	ISHA 45C	R2017	Ling fillet (CA)	10	22	/	/	25	/	/	250	10	35	/	/	28	/	/	320	10	28	280
				100	3	/	/	4	/	/		100	4	/	/	3	/	/		100	3	
B	ISHA 44C	R2017	Filet of haddock (CA)	10	27	/	/	27	/	/	260	10	22	/	/	23	/	/	250	10	36	350
				100	2	/	/	1	/	/		100	4	/	/	5	/	/		100	2	
B	79	IVS	Smoked salmon	/	/	/	/	/	/	/	80	/	/	/	/	/	/	/	90	/	/	90
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	ISHA 17C	R2017	Marinated salmon (CA)	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
B	ISHA 31C	R2017	Smoked salmon (CA)	10	42	/	/	46	/	/	410	10	34	/	/	28	/	/	310	10	36	360
				100	1	/	/	0	/	/		100	3	/	/	3	/	/		100	3	
B	ISHA 38C	R2017	Smoked herring fillet (CA)	10	19	/	/	12	/	/	160	10	11	/	/	7	/	/	90	10	13	150
				100	2	/	/	1	/	/		100	1	/	/	0	/	/		100	3	
B	ISHA 39C	R2017	Smoked herring fillet (CA)	10	10	/	/	12	/	/	110	10	19	/	/	12	/	/	160	10	17	160
				100	2	/	/	1	/	/		100	3	/	/	1	/	/		100	1	
B	ISHA 47C	R2017	Smoked trout (CA)	100	12	/	/	13	/	/	1300	100	15	/	/	9	/	/	1200	100	13	1300
				1000	3	/	/	0	/	/		1000	2	/	/	1	/	/		1000	1	
B	ISHA 51C	R2017	Smoked maqueraux (CA)	100	35	/	/	36	/	/	3500	100	31	/	/	34	/	/	3300	100	34	3200
				1000	2	/	/	3	/	/		1000	5	/	/	2	/	/		1000	1	
B	ISHA 48C	R2017	Smoked salmon (CA)	100	48	/	/	51	/	/	4900	100	24	/	/	18	/	/	2000	100	14	1400
				1000	3	/	/	5	/	/		1000	3	/	/	0	/	/		1000	1	
B	ISHA 46C	R2017	Pickled mackerel (CA)	10	28	/	/	33	/	/	290	10	27	/	/	24	/	/	270	10	30	300
				100	1	/	/	1	/	/		100	5	/	/	4	/	/		100	3	

Seafood products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
?	42	IVS	Molds	/	/	/	/	/	/	/	5000	/	/	/	/	/	/	/	2100	/	/	970
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	61	IVS	Shrimps (CA)	/	/	/	/	/	/	/	2600	/	/	/	/	/	/	/	2900	/	/	2300
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	62	IVS	Molds (CA)	/	/	/	/	/	/	/	500	/	/	/	/	/	/	/	440	/	/	470
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	63	IVS	Shrimps (CA)	/	/	/	/	/	/	/	1100	/	/	/	/	/	/	/	1100	/	/	1000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	75	IVS	Squid (CA)	/	/	/	/	/	/	/	950	/	/	/	/	/	/	/	1100	/	/	980
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	76	IVS	Squid (CA)	/	/	/	/	/	/	/	3400	/	/	/	/	/	/	/	3300	/	/	3000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	ISHA-63	R2017	Cod with sorrel sauce (CA)	10	11	/	/	10	/	/	110	10	12	/	/	12	/	/	120	10	13	130
				100	2	/	/	1	/	/		100	2	/	/	1	/	/		100	1	
C	ISHA-64	R2017	Cod with tomato sauce (CA)	10	14	/	/	15	/	/	150	10	11	/	/	12	/	/	120	10	15	150
				100	2	/	/	2	/	/		100	1	/	/	2	/	/		100	2	
C	ISHA-65	R2017	Salmon with sorrel sauce (CA)	10	13	/	/	11	/	/	130	10	13	/	/	14	/	/	140	10	13	140
				100	3	/	/	1	/	/		100	2	/	/	2	/	/		100	2	
C	ISHA 29-2C	R2017	Cod brandade	100	>150	/	/	>150	/	/	27000	100	>150	/	/	>150	/	/	21000	100	184	19000
				1000	24	/	/	29	/	/		1000	20	/	/	21	/	/		1000	23	

Vegetal products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
?	16	IVS	Cucumber	/	/	/	/	/	/	/	> 15000	/	/	/	/	/	/	/	> 15000	/	/	> 15000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	47	IVS	Beetroot	/	/	/	/	/	/	/	900	/	/	/	/	/	/	/	880	/	/	1100
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	58	IVS	Red cabbage	/	/	/	/	/	/	/	5200	/	/	/	/	/	/	/	3400	/	/	4100
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	67	IVS	Red cabbage	/	/	/	/	/	/	/	220	/	/	/	/	/	/	/	210	/	/	180
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	68	IVS	Red cabbage	/	/	/	/	/	/	/	6100	/	/	/	/	/	/	/	5500	/	/	5600
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
?	69	IVS	Potatoes	/	/	/	/	/	/	/	50000	/	/	/	/	/	/	/	44000	/	/	43000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 66	R2017	Cucumber (CA)	100	47	/	/	48	/	/	4800	100	52	/	/	49	/	/	5200	100	55	5500
				1000	6	/	/	5	/	/		1000	6	/	/	7	/	/		1000	5	
A	ISHA 67	R2017	Tomato (CA)	100	79	/	/	75	/	/	7700	100	82	/	/	84	/	/	8300	100	87	8500
				1000	8	/	/	7	/	/		1000	9	/	/	8	/	/		1000	7	
A	ISHA 68	R2017	Apple (CA)	100	16	/	/	14	/	/	1400	100	17	/	/	19	/	/	1700	100	17	1700
				1000	1	/	/	0	/	/		1000	0	/	/	1	/	/		1000	1	
A	ISHA 69	R2017	Grape (CA)	10	13	/	/	15	/	/	140	10	16	/	/	12	/	/	140	10	13	140
				100	1	/	/	2	/	/		100	1	/	/	1	/	/		100	2	
A	ISHA 70	R2017	Red cabbage (CA)	10	37	/	/	40	/	/	390	10	43	/	/	47	/	/	450	10	49	490
				100	4	/	/	5	/	/		100	5	/	/	5	/	/		100	5	
B	ISHA 15C	R2017	Carrots in a bag (CA)	10	76	/	/	87	/	/	730	10	92	/	/	86	/	/	900	10	82	820
				100	8	/	/	8	/	/		100	7	/	/	12	/	/		100	8	
B	ISHA 16C	R2017	Cauliflower in a bag (CA)	10	12	/	/	6	/	/	95	10	7	/	/	10	/	/	85	10	8	80
				100	2	/	/	2	/	/		100	0	/	/	1	/	/		100	2	
B	ISHA 22C	R2017	Roquette in bag (CA)	100	0	/	/	0	/	/	<10	100	0	/	/	0	/	/	<10	10	0	<10
				1000	0	/	/	0	/	/		1000	0	/	/	0	/	/		100	0	
B	ISHA 54C	R2017	Salad mix (CA)	10	34	/	/	32	/	/	300	10	28	/	/	28	/	/	260	10	29	290
				100	2	/	/	1	/	/		100	1	/	/	1	/	/		100	3	
B	ISHA 55C	R2017	Grated carrot (CA)	10	33	/	/	28	/	/	300	10	25	/	/	26	/	/	250	10	32	310
				100	2	/	/	2	/	/		100	1	/	/	2	/	/		100	2	
B	ISHA 56C	R2017	Salade sachet (CA)	10	32	/	/	28	/	/	290	10	25	/	/	26	/	/	250	10	34	320
				100	2	/	/	1	/	/		100	3	/	/	1	/	/		100	1	
C	ISHA 78	R2017	Apple compote (CA)	10	26	/	/	29	/	/	260	10	29	/	/	27	/	/	280	10	31	300
				100	1	/	/	2	/	/		100	3	/	/	2	/	/		100	2	
C	ISHA 77	R2017	Basil condiment (CA)	100	89	/	/	92	/	/	9200	100	96	/	/	94	/	/	9600	100	93	9500
				1000	10	/	/	11	/	/		1000	11	/	/	10	/	/		1000	11	
C	50	IVS	Macédoine	/	/	/	/	/	/	/	30000	/	/	/	/	/	/	/	25000	/	/	28000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	

Vegetal products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
C	56	IVS	Fruit compote	/	/	/	/	/	/	/	22000	/	/	/	/	/	/	/	22000	/	/	15000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
C	ISHA 4C	R2017	Coconut pearl	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
C	ISHA 6C	R2017	Parsnip puree (CA)	10	23	/	/	23	/	/	250	10	30	/	/	26	/	/	300	10	34	360
				100	2	/	/	6	/	/		100	5	/	/	5	/	/		100	5	
C	ISHA 23C	R2017	Shredded carrots (CA)	100	0	/	/	0	/	/	<10	100	0	/	/	0	/	/	<10	100	0	<10
				1000	0	/	/	0	/	/		1000	0	/	/	0	/	/		1000	0	

Ready-to-eat ready-to-reheat products

Type	#	Study	Sample	Reference method: ISO 4832 (VRBL 30°C)								Reference method: ISO 4832 (VRBL 37°C)								Alternative method: REC2 37°C		
				Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/ plate 1			CFU/ plate 2			Result (CFU/g or mL)	Dilution	CFU/plate	Result (CFU/g or mL)
					CC	CNC	Conf.	CC	CNC	Conf.			CC	CNC	Conf.	CC	CNC	Conf.				
A	15	IVS	Tabbouleh	/	/	/	/	/	/	/	> 15000	/	/	/	/	/	/	/	11000	/	/	> 15000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 13C	R2017	Tomata salad dressing (CA)	100	46	/	/	48	/	/	4600	100	47	/	/	53	/	/	4900	100	52	5100
				1000	5	/	/	3	/	/		1000	3	/	/	4	/	/		1000	4	
A	30	IVS	Bettrave spinach	/	/	/	/	/	/	/	5700	/	/	/	/	/	/	/	6200	/	/	6400
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	21	IVS	Tomato salad	/	/	/	/	/	/	/	34000	/	/	/	/	/	/	/	40000	/	/	41000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	71	IVS	Tomato with tuna	/	/	/	/	/	/	/	2200	/	/	/	/	/	/	/	2900	/	/	1900
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
A	ISHA 71	R2017	Tabbouleh (CA)	10	54	/	/	61	/	/	570	10	58	/	/	55	/	/	560	10	60	590
				100	4	/	/	6	/	/		100	7	/	/	4	/	/		100	5	
A	19	IVS	Pasta salad	/	/	/	/	/	/	/	>150000	/	/	/	/	/	/	/	>150000	/	/	>150000
				/	/	/	/	/	/	/		/	/	/	/	/	/	/		/	/	
B	ISHA 60C	R2017	Chicken with pea (CA)	10	57	/	/	69	/	/	640	10	66	/	/	55	/	/	610	10	49	560
				100	10	/	/	4	/	/		100	6	/	/	8	/	/		100	2	
B	ISHA 14C	R2017	Tagliatelle with salmon (CA)	10	76	/	/	87	/	/	810	10	24	/	/	27	/	/	260	10	44	420
				100	8	/	/	8	/	/		100	5	/	/	1	/	/		100	2	
B	ISHA 24C	R2017	Royal Noodles (CA)	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
B	ISHA 28C	R2017	Cod balles (CA)	10	0	/	/	0	/	/	<10	10	0	/	/	0	/	/	<10	10	0	<10
				100	0	/	/	0	/	/		100	0	/	/	0	/	/		100	0	
B	ISHA 30C	R2017	Ravioli Poultry (CA)	100	>150	/	/	>150	/	/	>150	100	>150	/	/	>150	/	/	>150	100	>150	>150
				1000	>150	/	/	>150	/	/		1000	>150	/	/	>150	/	/		1000	>150	
B	ISHA 33C	R2017	Croque monsieur (CA)	100	16	/	/	18	/	/	1700	100	23	/	/	17	/	/	1900	100	10	1100
				1000	2	/	/	1	/	/		1000	1	/	/	0	/	/		1000	2	
B	ISHA 37C	R2017	Gratin (CA)	10	18	/	/	17	/	/	170	10	13	/	/	16	/	/	150	10	2	20
				100	2	/	/	1	/	/		100	2	/	/	1	/	/		100	0	
B	ISHA 52C	R2017	Quiche Lorraine (CA)	100	21	/	/	29	/	/	2400	100	16	/	/	18	/	/	1600	100	19	1900
				1000	1	/	/	1	/	/		1000	2	/	/	0	/	/		1000	2	
B	ISHA 53C	R2017	Beef vegetables (CA)	100	20	/	/	13	/	/	1600	100	12	/	/	8	/	/	1100	100	8	800
				1000	2	/	/	0	/	/		1000	3	/	/	2	/	/		1000	3	
C	ISHA 73	R2017	Smoked breast of duck (CA)	100	118	/	/	121	/	/	12000	100	123	/	/	122	/	/	12000	100	118	12000
				1000	17	/	/	18	/	/		1000	11	/	/	10	/	/		1000	13	
C	ISHA 74	R2017	Beef carpaccio (CA)	100	98	/	/	101	/	/	10000	100	103	/	/	118	/	/	11000	100	100	10000
				1000	9	/	/	10	/	/		1000	12	/	/	12	/	/		1000	10	
C	ISHA 49C	R2017	Hanchois (CA)	100	19	/	/	14	/	/	1900	100	14	/	/	17	/	/	1500	100	18	1800
				1000	5	/	/	3	/	/		1000	1	/	/	0	/	/		1000	2	
C	ISHA 50C	R2017	Haddock (CA)	100	12	/	/	17	/	/	1500	100	12	/	/	16	/	/	1400	100	14	1400
				1000	2	/	/	1	/	/		1000	1	/	/	2	/	/		1000	1	
C	ISHA 75	R2017	Beef marinated (CA)	100	110	/	/	106	/	/	11000	100	112	/	/	109	/	/	11000	100	116	12000
				1000	9	/	/	10	/	/		1000	11	/	/	10	/	/		1000	13	
C	ISHA 26C	R2017	Carpacio of beef (CA)	100	0	/	/	0	/	/	<10	100	0	/	/	0	/	/	<10	100	0	<10
				1000	0	/	/	0	/	/		1000	0	/	/	0	/	/		1000	0	

Env. samples

Type	#	Study	Sample	Conta	Reference method: ISO 4832 (VRBL 30°C)					Reference method: ISO 4832 (VRBL 37°C)					Alternative method: REC2 37°C					Alternative method: REC2 after storage 72h at 2-8°C				
					Dilution	CFU/ plate			Result (CFU/g or mL)	Dilution	CFU/ plate			Result (CFU/g or mL)	Dilution	CFU/plate		Result (CFU/g or mL)	Background microflora	Dilution	CFU/plate		Result (CFU/g or mL)	Background microflora
						CC	NCC	Conf.			CC	NCC	Conf.			Purple C	Blue C				Purple C	Blue C		
a	2333887	Ext 2022	Swab environment egg product	nc	-1	76	34	5-/5	810	-1	67	21	5-/5	670	-1	0	64	630	30	-1	0	65	640	30
					-2	14	5	5-/5		-2	7	2	2-/2		-2	0	5		4	-2	0	5		4
a	2333888	Ext 2022	Swab environment egg product	nc	-1	17	78	5-/5	170	-1	25	87	5-/5	250	-1	0	15	150	>150	-1	0	15	160	>150
					-2	1	7	5-/5		-2	2	7	5-/5		-2	0	1		27	-2	0	3		27
a	2347710	Ext 2022	Wipe pastry industry environment	nc	-1	0	0	/	<10	-1	0	0	/	<10	-1	0	0	<10	0	-1	0	0	<10	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2347711	Ext 2022	Wipe butcher environment	nc	-1	0	0	/	<10	-1	0	0	/	<10	-1	0	0	<10	0	-1	0	0	<10	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2347713	Ext 2022	Wipe seafood environment	nc	-1	0	0	/	<10	-1	0	0	/	<10	-1	0	0	<10	0	-1	0	0	<10	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2347714	Ext 2022	Wipe butcher environment	nc	-1	58	>150	/	580	-1	50	0	/	480	-1	0	80	810	>150	-1	0	83	850	>150
					-2	6	45	5-/5		-2	3	0	/		-2	0	10		56	-2	0	10		56
a	2347715	Ext 2022	Wipe pastry & bakery	nc	-5	44	>150	/	5 300 000	-5	15	>150	/	1 600 000	-5	0	47	4 700 000	>150	-5	0	47	4 700 000	>150
					-6	14	>150	5-/5		-6	3	30	5-/5		-6	0	5		>150	-6	0	5		>150
a	2347746	Ext 2022	Wipe seafood cold room shelf	ac	-1	22	>150	5-/5	220	-1	17	0	/	170	-1	0	27	250	0	-1	0	27	250	0
					-2	2	>150	5-/5		-2	2	0	/		-2	0	0		0	-2	0	0		0
a	2347747	Ext 2022	Wipe cheese cold room shelf	ac/cc	-1	77	0	/	790	-1	92	0	/	970	-1	55	16	720	64	-1	55	16	720	64
					-2	10	0	/		-2	15	0	/		-2	8	0		0	-2	8	0		0
a	2347748	Ext 2022	Wipe refrigerated delicatessen display shelf	ac/cc	-2	15	0	/	1400	-2	14	0	/	1400	-2	8	10	1700	0	-2	8	10	1700	0
					-3	0	0	/		-3	1	0	/		-3	1	0		0	-3	1	0		0
b	2333890	Ext 2022	Process water poultry industry	nc/cc	-5	>150	>150	/	19 000 000	-5	>150	>150	/	10 000 000	-5	111	38	15 000 000	>150	-5	111	38	15 000 000	>150
					-6	19	50	5-/5		-6	10	39	5-/5		-6	8	8		10	-6	8	8		10
b	2333891	Ext 2022	Process water poultry industry	nc/cc	-5	109	0	/	11 000 000	-5	98	0	/	9 700 000	-5	118	0	12 000 000	0	-5	118	0	12 000 000	0
					-6	7	0	/		-6	9	0	/		-6	11	0		0	-6	11	0		0
b	2347752	Ext 2022	Process water pastry industry	ac	-1	4	0	/	40	-1	4	0	/	40	-1	0	6	60	0	-1	0	6	60	0
					-2	0	0	/		-2	0	0	/		-2	0	1		0	-2	0	1		0
b	2347753	Ext 2022	Process water cheese industry	ac/cc	-2	97	0	/	9600	-2	96	0	/	10000	-2	37	117	13000	50	-2	37	117	13000	50
					-3	9	0	/		-3	14	0	/		-3	6	23		6	-3	6	23		6
b	2347754	Ext 2022	Process water seafood environment	ac	-1	48	0	/	560	-1	61	0	/	620	-1	0	61	590	18	-1	0	61	590	18
					-2	13	0	/		-2	7	0	/		-2	0	4		0	-2	0	4		0
b	2347755	Ext 2022	Process water poultry packaging workshop	ac	-2	57	0	/	5600	-2	37	0	/	3400	-2	0	53	5300	0	-2	0	53	5300	0
					-3	4	0	/		-3	0	0	/		-3	0	5		0	-3	0	5		0
c	2333892	Ext 2022	Pastry residue	nc	-1	58	0	/	620	-1	65	0	/	650	-1	0	73	700	26	-1	0	73	700	26
					-2	10	0	/		-2	7	0	/		-2	0	4		2	-2	0	4		2
c	2333893	Ext 2022	Egg product residue	nc	-2	>150	>150	/	80 000	-2	>150	0	/	150 000	-2	0	>150	75 000	>150	-2	0	>150	75 000	>150
					-3	80	20	5-/5		-3	145	0	/		-3	0	75		71	-3	0	75		71
c	2333894	Ext 2022	Poultry industry residue	nc/cc	-5	>150	>150	/	21 000 000	-5	>150	>150	/	23 000 000	-5	35	>150	27 000 000	>150	-5	35	>150	27 000 000	>150
					-6	21	>150	5-/5		-6	23	>150	5-/5		-6	7	23		>150	-6	7	23		>150
c	2333896	Ext 2022	Cheese industry residue area 1	nc	-6	>150	>150	/	200 000 000	-6	>150	>150	/	250 000 000	-1	0	>150	270 000 000	>150	-1	0	>150	270 000 000	>150
					-7	20	>150	5-/5		-7	25	>150	5-/5		-2	0	27		>150	-2	0	27		>150

Env. samples

Type	#	Study	Sample	Conta	Reference method: ISO 4832 (VRBL 30°C)					Reference method: ISO 4832 (VRBL 37°C)					Alternative method: REC2 37°C					Alternative method: REC2 after storage 72h at 2-8°C				
					Dilutio	CFU/ plate			Result (CFU/g or	Dilutio	CFU/ plate			Result (CFU/g	Dilutio	CFU/plate		Result (CFU/g	Backgroun	Dilutio	CFU/plate		Result (CFU/g	Backgroun
c	2347708	Ext 2022	Cheese industry residue area 2	nc/cc	-2	>150	>150	/	130 000	-2	>150	0	/	120 000	-2	17	>150	130 000	>150	-2	17	>150	130 000	>150
					-3	126	>150	5-/5		-3	119	0	/		-3	2	134		24	-3	2	134		24
c	2347709	Ext 2022	Fish industry residue	nc	-1	>150	>150	/	2300	-1	>150	>150	/	2700	-1	0	>150	2300	>150	-1	0	>150	2300	>150
					-2	23	>150	5-/5		-2	27	>150	5-/5		-2	0	23		30	-2	0	23		30
c	2347760	Ext 2022	Flour dust	ac	-1	18	>150	/	200	-1	20	>150	/	200	-1	0	13	120	>150	-1	0	13	120	>150
					-2	4	30	5-/5		-2	2	30	5-/5		-2	0	0		50	-2	0	0		50
c	2347761	Ext 2022	Flour dust	nc+ac	-1	6	20	5-/5	60	-1	6	30	5-/5	60	-1	6	0	60	15	-1	6	0	60	15
					-2	1	3	3-/3		-2	0	2	2-/2		-2	0	0		1	-2	0	0		1
c	2347764	Ext 2022	Residue animal feed	nc	-1	1	>150	/	10	-1	1	>150	/	10	-1	0	0	<10	>150	-1	0	0	<10	>150
					-2	0	30	5-/5		-2	0	22	5-/5		-2	0	0		>150	-2	0	0		>150
c	2347765	Ext 2022	Residue animal feed	nc	-1	8	>150	5-/5	80	-1	6	>150	5-/5	60	-1	0	5	50	>150	-1	0	5	50	>150
					-2	1	>150	5-/5		-2	1	>150	5-/5		-2	0	1		>150	-2	0	1		>150

Animal feed

Type	#	Study	Sample	Conta	Reference method: ISO 4832* (VRBL 30°C)					Reference method: ISO 4832* (VRBL 37°C)					Alternative method: REC2 37°C					Alternative method: REC2 after storage 72h at 2-8°C				
					Dilution	CFU/ plate			Result (CFU/g)	Dilution	CFU/ plate			Result (CFU/g)	Dilution	CFU/plate		Result (CFU/g)	Background microflora	Dilution	CFU/plate		Result (CFU/g)	Background microflora
						CC	NCC	Conf.			CC	NCC	Conf.			Purple C	Blue C				Purple C	Blue C		
a	2364266	Ext 2023	Salmon cat kibble	ac	-1	1	1	1+/1	20	-1	1	1	+	20	-1	0	2	20	0	-1	0	3	30	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2364267	Ext 2023	Terrine dog poultry	ac	-2	7	1	1+/1	800	-2	14	3	3+/3	1700	-2	13	1	1400	0	-2	13	1	1400	0
					-3	1	0	/		-3	0	0	/		-3	0	0		0	-3	0	0		0
a	2364268	Ext 2023	Beef Cat Pate	ac	-2	0	0	/	<100	-2	1	0	/	100	-2	0	0	<100	0	-2	0	0	<100	0
					-3	0	0	/		-3	0	0	/		-3	0	0		0	-3	0	0		0
a	2364271	Ext 2023	Bird seed	ac	-1	18	5	4+/5	210	-1	10	2	2+/2	120	-1	0	12	130	0	-1	0	12	130	0
					-2	1	0	/		-2	1	0	/		-2	0	2		0	-2	0	2		0
a	2364272	Ext 2023	Poultry seed	nc	-3	130	15	5-/5	130 000	-3	>150	4	4-/4	180 000	-3	18	117	130 000	0	-3	18	129	150 000	0
					-4	15	0	/		-4	18	0	/		-4	1	13		0	-4	1	15		0
a	2364273	Ext 2023	Terrine dog beef	ac	-1	1	0	/	10	-1	3	1	1-/1	30	-1	5	0	50	0	-1	6	0	60	0
					-2	0	0	/		-2	1	0	/		-2	0	0		0	-2	0	0		0
a	2392504	Ext 2023	Beef Cat Pate	ac	-1	14	3	3-/3	160	-1	20	0	/	190	-1	16	1	170	0	-1	16	2	180	0
					-2	3	0	0		-2	1	0	/		-2	2	0		0	-2	2	0		0
a	2392518	Ext 2023	Salmon cat kibble	ac	-1	0	0	/	<10	-1	0	2	2+/2	20	-1	5	0	50	0	-1	5	0	50	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2392520	Ext 2023	Rabbit pellets	ac	-1	0	1	1+	10	-1	0	1	-	<10	-1	2	0	20	0	-1	2	0	20	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
a	2392586	Ext 2023	Cat kibble	ac	-1	88	0	/	860	-1	79	0	/	810	-1	91	0	920	0	-1	91	0	920	0
					-2	7	0	/		-2	10	0	/		-2	10	0		0	-2	10	0		0
b	2364274	Ext 2023	Ewes pellets	ac	-1	4	0	/	40	-1	3	0	/	30	-1	4	0	40	0	-1	4	0	40	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
b	2364275	Ext 2023	Horse pellets	nc	-2	>150	76	/	84 000	-2	>150	70	5-/5	110 000	-2	0	>150	91 000	0	-2	0	>150	100 000	0
					-3	84	9	5-/5		-3	113	6	5-/5		-3	0	91		0	-3	0	100		0
b	2364276	Ext 2023	Lamb pellets	nc	-1	125	17	5-/5	1300	-1	145	1	1-/1	1400	-1	0	149	1500	0	-1	0	168	1 800	0
					-2	16	5	5-/5		-2	12	0	/		-2	0	16		0	-2	0	27		0
b	2364277	Ext 2023	Soy Cattle cake	ac	-2	10	0	/	1 000	-2	8	0	/	800	-2	14	0	1 400	0	-2	14	0	1 400	0
					-3	1	0	/		-3	1	0	/		-3	1	0		0	-3	1	0		0
b	2364278	Ext 2023	Oats	ac	-1	6	1	1+/1	70	-1	5	2	2+/2	70	-1	0	13	130	0	-1	0	14	140	0
					-2	1	1	1+/1		-2	0	0	/		-2	0	1		0	-2	0	1		0
b	2392571	Ext 2023	Corn	ac	-2	20	>150	/	2200	-2	22	88	5-/5	2400	-2	0	29	2 900	50	-2	0	29	2 900	50
					-3	4	9	5-/5		-3	4	13	5-/5		-3	0	2		19	-3	0	2		19
b	2392591	Ext 2023	Wheat	ac	-1	21	>150	/	220	-1	19	>150	/	200	-1	5	10	160	>150	-1	5	10	160	>150
					-2	3	29	5-/5		-2	3	25	5-/5		-2	0	2		21	-2	0	2		21
c	2392522	Ext 2023	Chicken flour	ac	-1	0	0	/	<10	-1	0	1	-	<10	-1	3	0	30	0	-1	3	0	30	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
c	2392526	Ext 2023	Salmon flour	ac	-1	3	0	/	30	-1	4	0	/	40	-1	10	0	100	0	-1	10	0	100	0
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
c	2319052	Ext 2023	Beef flour	ac	-2	0	0	/	<100	-2	0	0	/	<100	-2	0	0	<100	0	-2	0	0	<100	0
					-3	0	0	/		-3	0	0	/		-3	0	0		0	-3	0	0		0
c	2392573	Ext 2023	Soy protein	ac	-1	8	0	/	80	-1	4	3	3-/3	40	-1	0	6	60	2	-1	0	6	60	2
					-2	0	0	/		-2	0	0	/		-2	0	0		0	-2	0	0		0
c	2392621	Ext 2023	Fresh beef meat	nc	-1	94	0	/	950	-1	73	0	/	750	-1	60	30	910	0	-1	61	30	930	0
					-2	12	0	/		-2	9	0	/		-2	8	2		0	-2	8	2		0
c	2392622	Ext 2023	Raw animal by-product (offal)	nc	-2	135	5	5-/5	13 000	-2	130	0	/	13 000	-2	101	80	19 000	0	-2	103	80	19 000	2
					-3	11	3	3-/3		-3	13	0	/		-3	15	14		0	-3	15	14		1
c	2392581	Ext 2023	Insect flour	ac	-2	48	4	4-/4	5 100	-2	54	4	4-/4	5 600	-2	0	85	8 700	0	-2	0	85	8 700	0
					-3	8	0	/		-3	4	0	/		-3	0	11		0	-3	0	11		0
c	2392582	Ext 2023	Beef flour	ac	-2	29	2	2+/2	3 200	-2	38	0	/	3 700	-2	0	50	4 800	0	-2	0	50	4 800	0
					-3	5	0	/		-3	3	0	/		-3	0	3		0	-3	0	3		0

Appendix E

Relative trueness study – Statistical calculations

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	A	27	IVS	Chicken fillet	770	820	2.89	2.91	2.90	0.03
	A	33	IVS	Ground beef	2100	2700	3.32	3.43	3.38	0.11
	A	64	IVS	Minced meat	290	250	2.46	2.40	2.43	-0.06
	A	65	IVS	Minced meat	6300	5900	3.80	3.77	3.79	-0.03
	A	82	IVS	Ground beef	90	120	1.95	2.08	2.02	0.12
	A	84	IVS	Steak horse	9800	10000	3.99	4.00	4.00	0.01
	A	ISHA 58C	R2017	Chipolata (CA)	410	550	2.61	2.74	2.68	0.13
	A	3	IVS	Merguez	5000	1200	3.70	3.08	3.39	-0.62
	A	4	IVS	Sausage of veal	550	230	2.74	2.36	2.55	-0.38
	A	34	IVS	Chipolata	1300	1300	3.11	3.11	3.11	0.00
	B	ISHA 2C	R2017	Bites of poultry	7000	7000	3.85	3.85	3.85	0.00
	B	ISHA 59C	R2017	Lasagna 3 meats (CA)	540	440	2.73	2.64	2.69	-0.09
	B	ISHA 32C	R2017	Parmentier of duck (CA)	360	400	2.56	2.60	2.58	0.05
	B	ISHA 76	R2017	Parmentier of beef (CA)	110000	120000	5.04	5.08	5.06	0.04
	B	ISHA 61C	R2017	Grilled sausage (CA)	610	620	2.79	2.79	2.79	0.01
	B	ISHA 62C	R2017	Parmentier with ham (CA)	480	470	2.68	2.67	2.68	-0.01
	C	83	IVS	Smoked ham	1100	1100	3.04	3.04	3.04	0.00
	C	ISHA 35C	R2017	Smoked chicken (CA)	1100	1600	3.04	3.20	3.12	0.16
	C	ISHA 36C	R2017	Smoked calf (CA)	7000	7000	3.85	3.85	3.85	0.00
	C	2392606	Ext.2023	Dry ham	330	310	2.52	2.49	2.50	-0.03
	C	2392607	Ext.2023	Smoked bacon	400	320	2.60	2.51	2.55	-0.10
	Average difference of the category									-0.03
	Standard deviation of differences									0.18

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Dairy and egg products	A	ISHA 18	R2017	Brie with pasteurized milk	480	350	2.68	2.54	2.61	-0.14
	A	ISHA 19	R2017	Brie with pasteurized milk	350	250	2.54	2.40	2.47	-0.15
	A	ISHA 20	R2017	Brie with pasteurized milk	420	360	2.62	2.56	2.59	-0.07
	A	ISHA 42C	R2017	Goat cheese (CA)	240	160	2.38	2.20	2.29	-0.18
	A	ISHA 43C	R2017	Emmental (CA)	160	160	2.20	2.20	2.20	0.00
	B	5	IVS	Raw milk	46000	36000	4.66	4.56	4.61	-0.11
	B	10	IVS	Reblochon	45000	31000	4.65	4.49	4.57	-0.16
	B	25	IVS	Roquefort	1300	1600	3.11	3.20	3.16	0.09
	B	78	IVS	Reblochon	8100	8000	3.91	3.90	3.91	-0.01
	B	85	IVS	Raw milk cheese	80	90	1.90	1.95	1.93	0.05
	B	86	IVS	Raw milk cheese	260	340	2.41	2.53	2.47	0.12
	B	87	IVS	Raw milk cheese	1100	1100	3.04	3.04	3.04	0.00
	B	88	IVS	Raw milk cheese	2800	3300	3.45	3.52	3.48	0.07
	C	18	IVS	"Eclair" with cream	1400	760	3.15	2.88	3.01	-0.27
	C	20	IVS	Coffee "éclair"	360	270	2.56	2.43	2.49	-0.12
	C	23	IVS	Chocolate cream	38000	18000	4.58	4.26	4.42	-0.32
	C	40	IVS	Cream with banana	64000	60000	4.81	4.78	4.79	-0.03
	C	17	IVS	Savarin choco	2800	1900	3.45	3.28	3.36	-0.17
	C	51	IVS	Apple pie	320	200	2.51	2.30	2.40	-0.20
	C	57	IVS	Strawberries cake	1100	1200	3.04	3.08	3.06	0.04
	C	60	IVS	Apricot cake	400	340	2.60	2.53	2.57	-0.07
	C	70	IVS	Coffee "éclair"	600	520	2.78	2.72	2.75	-0.06
	C	72	IVS	Peach cake	3700	4600	3.57	3.66	3.62	0.09
	C	ISHA 40C	R2017	Egg cream (CA)	150	200	2.18	2.30	2.24	0.12
	C	ISHA 34C	R2017	Omelette (CA)	160	80	2.20	1.90	2.05	-0.30
	Average difference of the category									-0.07
	Standard deviation of differences									0.13

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Seafood products	A	22	IVS	Tuna	150000	81000	5.18	4.91	5.04	-0.27
	A	80	IVS	Cod fillet (CA)	1100	970	3.04	2.99	3.01	-0.05
	A	81	IVS	Marlin fillet (CA)	10000	11000	4.00	4.04	4.02	0.04
	A	ISHA 7C	R2017	Julienne fillet	95000	43000	4.98	4.63	4.81	-0.34
	A	ISHA 45C	R2017	Ling fillet (CA)	250	280	2.40	2.45	2.42	0.05
	B	79	IVS	Smoked salmon	80	90	1.90	1.95	1.93	0.05
	B	ISHA 31C	R2017	Smoked salmon (CA)	410	360	2.61	2.56	2.58	-0.06
	B	ISHA 38C	R2017	Smoked herring fillet (CA)	160	150	2.20	2.18	2.19	-0.03
	B	ISHA 39C	R2017	Smoked herring fillet (CA)	110	160	2.04	2.20	2.12	0.16
	B	ISHA 47C	R2017	Smoked trout (CA)	1300	1300	3.11	3.11	3.11	0.00
	B	ISHA 51C	R2017	Smoked maqueraux (CA)	3500	3200	3.54	3.51	3.52	-0.04
	B	ISHA 48C	R2017	Smoked salmon (CA)	4900	1400	3.69	3.15	3.42	-0.54
	B	ISHA 46C	R2017	Pickled mackerel (CA)	290	300	2.46	2.48	2.47	0.01
	B	ISHA 44C	R2017	Filet of haddock (CA)	260	350	2.41	2.54	2.48	0.13
	C	61	IVS	Shrimps (CA)	2600	2300	3.41	3.36	3.39	-0.05
	C	63	IVS	Shrimps (CA)	1100	1000	3.04	3.00	3.02	-0.04
	C	ISHA-63	R2017	Cod with sorrel sauce (CA)	110	130	2.04	2.11	2.08	0.07
	C	ISHA-64	R2017	Cod with tomato sauce (CA)	150	150	2.18	2.18	2.18	0.00
	C	ISHA-65	R2017	Salmon with sorrel sauce (CA)	130	140	2.11	2.15	2.13	0.03
	C	ISHA 29-2C	R2017	Cod brandade	27000	19000	4.43	4.28	4.36	-0.15
	Average difference of the category									-0.05
	Standard deviation of differences									0.17

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Vegetal products	A	ISHA 66	R2017	Cucumber (CA)	4800	5500	3.68	3.74	3.71	0.06
	A	ISHA 67	R2017	Tomato (CA)	7700	8500	3.89	3.93	3.91	0.04
	A	ISHA 68	R2017	Apple (CA)	1400	1700	3.15	3.23	3.19	0.08
	A	ISHA 69	R2017	Grape (CA)	140	140	2.15	2.15	2.15	0.00
	A	ISHA 70	R2017	Red cabbage (CA)	390	490	2.59	2.69	2.64	0.10
	B	ISHA 15C	R2017	Carrots in a bag (CA)	730	820	2.86	2.91	2.89	0.05
	B	ISHA 16C	R2017	Cauliflower in a bag (CA)	95	80	1.98	1.90	1.94	-0.07
	B	ISHA 54C	R2017	Salad mix (CA)	300	290	2.48	2.46	2.47	-0.01
	B	ISHA 55C	R2017	Grated carrot (CA)	300	310	2.48	2.49	2.48	0.01
	B	ISHA 56C	R2017	Salade sachet (CA)	290	320	2.46	2.51	2.48	0.04
	C	ISHA 78	R2017	Apple compote (CA)	260	300	2.41	2.48	2.45	0.06
	C	ISHA 77	R2017	Basil condiment (CA)	9200	9500	3.96	3.98	3.97	0.01
	C	50	IVS	Macédoine	30000	28000	4.48	4.45	4.46	-0.03
	C	56	IVS	Fruit compote	22000	15000	4.34	4.18	4.26	-0.17
	C	ISHA 6C	R2017	Parsnip puree (CA)	250	360	2.40	2.56	2.48	0.16
	Average difference of the category									0.02
	Standard deviation of differences									0.08

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Ready-to-eat and ready-to-reheat products	A	ISHA 13C	R2017	Tomata salad dressing (CA)	4600	5100	3.66	3.71	3.69	0.04
	A	30	IVS	Bettrave spinach	5700	6400	3.76	3.81	3.78	0.05
	A	21	IVS	Tomato salad	34000	41000	4.53	4.61	4.57	0.08
	A	71	IVS	Tomato with tuna	2200	1900	3.34	3.28	3.31	-0.06
	A	ISHA 71	R2017	Tabbouleh (CA)	570	590	2.76	2.77	2.76	0.01
	B	ISHA 60C	R2017	Chicken with pea (CA)	640	560	2.81	2.75	2.78	-0.06
	B	ISHA 14C	R2017	Tagliatelle with salmon (CA)	810	420	2.91	2.62	2.77	-0.29
	B	ISHA 33C	R2017	Croque monsieur (CA)	1700	1100	3.23	3.04	3.14	-0.19
	B	ISHA 52C	R2017	Quiche Lorraine (CA)	2400	1900	3.38	3.28	3.33	-0.10
	B	ISHA 53C	R2017	Beef vegetables (CA)	1600	800	3.20	2.90	3.05	-0.30
	C	ISHA 73	R2017	Smoked breast of duck (CA)	12000	12000	4.08	4.08	4.08	0.00
	C	ISHA 74	R2017	Beef carpaccio (CA)	10000	10000	4.00	4.00	4.00	0.00
	C	ISHA 49C	R2017	Hanchois (CA)	1900	1800	3.28	3.26	3.27	-0.02
	C	ISHA 50C	R2017	Haddock (CA)	1500	1400	3.18	3.15	3.16	-0.03
	C	ISHA 75	R2017	Beef marinated (CA)	11000	12000	4.04	4.08	4.06	0.04
	Average difference of the category									-0.05
	Standard deviation of differences									0.12

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Environmental samples	a	2333888	Ext.2022	Swab environment egg product	170	150	2.23	2.18	2.20	-0.05
	a	2347746	Ext.2022	Wipe seafood cold room shelf	220	250	2.34	2.40	2.37	0.06
	a	2347714	Ext.2022	Wipe butcher environment	580	810	2.76	2.91	2.84	0.15
	a	2347747	Ext.2022	Wipe cheese cold room shelf	790	720	2.90	2.86	2.88	-0.04
	a	2333887	Ext.2022	Swab environment egg product	810	630	2.91	2.80	2.85	-0.11
	a	2347748	Ext.2022	Wipe refrigerated delicatessen display shelf	1400	1700	3.15	3.23	3.19	0.08
	a	2347715	Ext.2022	Wipe pastry & bakery	5 300 000	4 700 000	6.72	6.67	6.70	-0.05
	b	2347752	Ext.2022	Process water pastry industry	40	60	1.60	1.78	1.69	0.18
	b	2347754	Ext.2022	Process water seafood	560	590	2.75	2.77	2.76	0.02
	b	2347755	Ext.2022	Process water poultry packaging workshop	5600	5300	3.75	3.72	3.74	-0.02
	b	2347753	Ext.2022	Process water cheese industry	9600	13000	3.98	4.11	4.05	0.13
	b	2333891	Ext.2022	Process water poultry industry	11 000 000	12 000 000	7.04	7.08	7.06	0.04
	b	2333890	Ext.2022	Process water poultry industry	19 000 000	15 000 000	7.28	7.18	7.23	-0.10
	c	2347761	Ext.2022	Flour dust	60	60	1.78	1.78	1.78	0.00
	c	2347765	Ext.2022	Residue animal feed	80	50	1.90	1.70	1.80	-0.20
	c	2347760	Ext.2022	Flour dust	200	120	2.30	2.08	2.19	-0.22
	c	2333892	Ext.2022	Pastry residue	620	700	2.79	2.85	2.82	0.05
	c	2347709	Ext.2022	Fish industry residue	2300	2300	3.36	3.36	3.36	0.00
	c	2333893	Ext.2022	Egg product residue	80 000	75 000	4.90	4.88	4.89	-0.03
	c	2347708	Ext.2022	Cheese industry residue area 2	130 000	130 000	5.11	5.11	5.11	0.00
	c	2333894	Ext.2022	Poultry industry residue	21 000 000	27 000 000	7.32	7.43	7.38	0.11
	c	2333896	Ext.2022	Cheese industry residue area 1	200 000 000	270 000 000	8.30	8.43	8.37	0.13
	Average difference of the category									0.00
	Standard deviation of differences									0.11

Statistical calculations
Reference method 30°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Animal feed	a	2392504	Ext 2023	Beef Cat Pate	160	170	2.20	2.23	2.22	0.03
	a	2364271	Ext 2023	Bird seed	210	130	2.32	2.11	2.22	-0.21
	a	2364267	Ext 2023	Terrine dog poultry	800	1400	2.90	3.15	3.02	0.24
	a	2392586	Ext 2023	Cat kibble	860	920	2.93	2.96	2.95	0.03
	a	2364272	Ext 2023	Poultry seed	130 000	130 000	5.11	5.11	5.11	0.00
	b	2364274	Ext 2023	Ewes pellets	40	40	1.60	1.60	1.60	0.00
	b	2364278	Ext 2023	Oats	70	130	1.85	2.11	1.98	0.27
	b	2392591	Ext 2023	Wheat	220	160	2.34	2.20	2.27	-0.14
	b	2364277	Ext 2023	Soy Cattle cake	1 000	1 400	3.00	3.15	3.07	0.15
	b	2364276	Ext 2023	Lamb pellets	1300	1500	3.11	3.18	3.15	0.06
	b	2392571	Ext 2023	Corn	2200	2 900	3.34	3.46	3.40	0.12
	b	2364275	Ext 2023	Horse pellets	84 000	91 000	4.92	4.96	4.94	0.03
	c	2392573	Ext 2023	Soy protein	80	60	1.90	1.78	1.84	-0.12
	c	2392621	Ext 2023	Fresh beef meat	950	910	2.98	2.96	2.97	-0.02
	c	2392582	Ext 2023	Beef flour	3 200	4 800	3.51	3.68	3.59	0.18
	c	2392581	Ext 2023	Insect flour	5 100	8 700	3.71	3.94	3.82	0.23
	c	2392622	Ext 2023	Raw animal by-product (offal)	13 000	19 000	4.11	4.28	4.20	0.16
	Average difference of the category									0.06
	Standard deviation of differences									0.14
Average difference of all categories										-0.02
Standard deviation of differences										0.14

n =	**135**		
β =	**0.95**	**Lower confidence limit**	**Upper confidence limit**
T(0.025;115)=	**1.98**	**-0.30**	**0.26**

Statistical calculations
Reference method 30°C / Alternative method

Results not used in the statistical interpretation

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	A	11	IVS	Leg of lamb	>150000	>150000	6.20	6.20	6.20	0.00
	A	12	IVS	Turkey "blanquette"	>150000	>150000	6.20	6.20	6.20	0.00
	A	14	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	26	IVS	Turkey steak	>150000	>150000	6.20	6.20	6.20	0.00
	A	28	IVS	Turkey fillet	>150000	>150000	6.20	6.20	6.20	0.00
	A	29	IVS	Beef kidney	>150000	>150000	6.20	6.20	6.20	0.00
	A	32	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	35	IVS	Veal cutlet	>150000	>150000	6.20	6.20	6.20	0.00
	A	38	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	39	IVS	Turkey steak	>150000	>150000	6.20	6.20	6.20	0.00
	A	ISHA 25C	R2017	Halal Meatballs (CA)	<10	<10	0.00	0.00	0.00	0.00
	A	13	IVS	Merguez	>150000	>150000	6.20	6.20	6.20	0.00
Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Dairy & egg products	B	24	IVS	Reblochon	>150000	>150000	6.20	6.20	6.20	0.00
	B	36	IVS	Raw milk cheese	>150000	>150000	6.20	6.20	6.20	0.00
	C	66	IVS	Cream puff	< 10	< 10	0.00	0.00	0.00	0.00
	C	73	IVS	Cream puff	< 10	< 10	0.00	0.00	0.00	0.00
	C	L3	IVS	Nougat ice cream	<1	<1	0.00	0.00	0.00	0.00
	C	L4	IVS	Chocolate ice cream	<1	<1	0.00	0.00	0.00	0.00

Statistical calculations
Reference method 30°C / Alternative method

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Seafood products	A	7	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	8	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	9	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	ISHA 27C	R2017	Scallop	<10	<10	0.00	0.00	0.00	0.00
	A	ISHA 29-1C	R2017	Fillet of sole	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 17C	R2017	Marinated salmon (CA)	<10	<10	0.00	0.00	0.00	0.00
Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Vegetal products	B	ISHA 22C	R2017	Roquette in bag (CA)	<10	<10	0.00	0.00	0.00	0.00
	C	ISHA 4C	R2017	Coconut pearl	<10	<10	0.00	0.00	0.00	0.00
	C	ISHA 23C	R2017	Shredded carrots (CA)	<10	<10	0.00	0.00	0.00	0.00
Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
RTE, RTRH	A	15	IVS	Tabbouleh	> 15000	> 15000	5.20	5.20	5.20	0.00
	A	19	IVS	Pasta salad	>150000	>150000	6.20	6.20	6.20	0.00
	B	ISHA 24C	R2017	Royal Noodles (CA)	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 28C	R2017	Cod balles (CA)	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 30C	R2017	Ravioli Poultry (CA)	>150	>150	2.20	2.20	2.20	0.00
	B	ISHA 37C	R2017	Gratin (CA)	170	20	2.23	1.30	1.77	-0.93
	C	ISHA 26C	R2017	Carpacio of beef (CA)	<10	<10	0.00	0.00	0.00	0.00

Statistical calculations
Reference method 30°C / Alternative method

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Environmental samples	a	2347710	Ext 2022	Wipe pastry industry environment	<10	<10	0.00	0.00	0.00	0.00
	a	2347711	Ext 2022	Wipe butcher environment	<10	<10	0.00	0.00	0.00	0.00
	a	2347713	Ext 2022	Wipe seafood environment	<10	<10	0.00	0.00	0.00	0.00
	c	2347764	Ext 2022	Residue animal feed	10	<10	1.00	0.00	0.50	-1.00
Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Animal feed	a	2364266	Ext 2023	Salmon cat kibble	20	20	1.30	1.30	1.30	0.00
	a	2364268	Ext 2023	Beef Cat Pate	<100	<100	1.00	1.00	1.00	0.00
	a	2364273	Ext 2023	Terrine dog beef	10	50	1.00	1.70	1.35	0.70
	a	2392518	Ext 2023	Salmon cat kibble	<10	50	0.00	1.70	0.85	1.70
	a	2392520	Ext 2023	Rabbit pellets	10	20	1.00	1.30	1.15	0.30
	c	2392522	Ext 2023	Chicken flour	<10	30	0.00	1.48	0.74	1.48
	c	2392526	Ext 2023	Salmon flour	30	100	1.48	2.00	1.74	0.52
	c	2319052	Ext 2023	Beef flour	<100	<100	1.00	1.00	1.00	0.00

Statistical calculations
Reference method 37°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	A	27	IVS	Chicken fillet	790	820	2.90	2.91	2.91	0.02
	A	33	IVS	Ground beef	6100	2700	3.79	3.43	3.61	-0.35
	A	64	IVS	Minced meat	230	250	2.36	2.40	2.38	0.04
	A	65	IVS	Minced meat	5900	5900	3.77	3.77	3.77	0.00
	A	82	IVS	Ground beef	110	120	2.04	2.08	2.06	0.04
	A	84	IVS	Steak horse	1110	10000	3.05	4.00	3.52	0.95
	A	ISHA 58C	R2017	Chipolata (CA)	520	550	2.72	2.74	2.73	0.02
	A	3	IVS	Merguez	2100	1200	3.32	3.08	3.20	-0.24
	A	4	IVS	Sausage of veal	290	230	2.46	2.36	2.41	-0.10
	A	34	IVS	Chipolata	1800	1300	3.26	3.11	3.18	-0.14
	B	ISHA 2C	R2017	Bites of poultry	8500	7000	3.93	3.85	3.89	-0.08
	B	ISHA 59C	R2017	Lasagna 3 meats (CA)	500	440	2.70	2.64	2.67	-0.06
	B	ISHA 32C	R2017	Parmentier of duck (CA)	390	400	2.59	2.60	2.60	0.01
	B	ISHA 76	R2017	Parmentier of beef (CA)	110000	120000	5.04	5.08	5.06	0.04
	B	ISHA 61C	R2017	Grilled sausage (CA)	600	620	2.78	2.79	2.79	0.01
	B	ISHA 62C	R2017	Parmentier with ham (CA)	410	470	2.61	2.67	2.64	0.06
	C	2392606	Ext.2023	Dry ham	260	310	2.41	2.49	2.45	0.08
	C	2392607	Ext.2023	Smoked bacon	220	320	2.34	2.51	2.42	0.16
	C	83	IVS	Smoked ham	1100	1100	3.04	3.04	3.04	0.00
	C	ISHA 35C	R2017	Smoked chicken (CA)	1400	1600	3.15	3.20	3.18	0.06
	C	ISHA 36C	R2017	Smoked calf (CA)	8500	7000	3.93	3.85	3.89	-0.08
	Average difference of the category									0.02
	Standard deviation of differences									0.24

Statistical calculations
Reference method 37°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Seafood products	A	22	IVS	Tuna	150000	81000	5.18	4.91	5.04	-0.27
	A	80	IVS	Cod fillet (CA)	1000	970	3.00	2.99	2.99	-0.01
	A	81	IVS	Marlin fillet (CA)	11000	11000	4.04	4.04	4.04	0.00
	A	ISHA 7C	R2017	Julienne fillet	24000	43000	4.38	4.63	4.51	0.25
	A	ISHA 45C	R2017	Ling fillet (CA)	320	280	2.51	2.45	2.48	-0.06
	B	79	IVS	Smoked salmon	90	90	1.95	1.95	1.95	0.00
	B	ISHA 31C	R2017	Smoked salmon (CA)	310	360	2.49	2.56	2.52	0.06
	B	ISHA 38C	R2017	Smoked herring fillet (CA)	90	150	1.95	2.18	2.07	0.22
	B	ISHA 39C	R2017	Smoked herring fillet (CA)	160	160	2.20	2.20	2.20	0.00
	B	ISHA 47C	R2017	Smoked trout (CA)	1200	1300	3.08	3.11	3.10	0.03
	B	ISHA 51C	R2017	Smoked maqueraux (CA)	3300	3200	3.52	3.51	3.51	-0.01
	B	ISHA 48C	R2017	Smoked salmon (CA)	2000	1400	3.30	3.15	3.22	-0.15
	B	ISHA 46C	R2017	Pickled mackerel (CA)	270	300	2.43	2.48	2.45	0.05
	B	ISHA 44C	R2017	Filet of haddock (CA)	250	350	2.40	2.54	2.47	0.15
	C	61	IVS	Shrimps (CA)	2900	2300	3.46	3.36	3.41	-0.10
	C	63	IVS	Shrimps (CA)	1100	1000	3.04	3.00	3.02	-0.04
	C	ISHA-63	R2017	Cod with sorrel sauce (CA)	120	130	2.08	2.11	2.10	0.03
	C	ISHA-64	R2017	Cod with tomato sauce (CA)	120	150	2.08	2.18	2.13	0.10
	C	ISHA-65	R2017	Salmon with sorrel sauce (CA)	140	140	2.15	2.15	2.15	0.00
	C	ISHA 29-2C	R2017	Cod brandade	21000	19000	4.32	4.28	4.30	-0.04
	Average difference of the category									0.01
	Standard deviation of differences									0.12

Statistical calculations
Reference method 37°C / Alternative method

	Type	#	Study	Sample	RM	AM	RM	AM	Mean	Difference
					CFU/g	CFU/g	log CFU/g	log CFU/g		
Vegetal products	A	ISHA 66	R2017	Cucumber (CA)	5200	5500	3.72	3.74	3.73	0.02
	A	ISHA 67	R2017	Tomato (CA)	8300	8500	3.92	3.93	3.92	0.01
	A	ISHA 68	R2017	Apple (CA)	1700	1700	3.23	3.23	3.23	0.00
	A	ISHA 69	R2017	Grape (CA)	140	140	2.15	2.15	2.15	0.00
	A	ISHA 70	R2017	Red cabbage (CA)	450	490	2.65	2.69	2.67	0.04
	B	ISHA 15C	R2017	Carrots in a bag (CA)	900	820	2.95	2.91	2.93	-0.04
	B	ISHA 16C	R2017	Cauliflower in a bag (CA)	85	80	1.93	1.90	1.92	-0.03
	B	ISHA 54C	R2017	Salad mix (CA)	260	290	2.41	2.46	2.44	0.05
	B	ISHA 55C	R2017	Grated carrot (CA)	250	310	2.40	2.49	2.44	0.09
	B	ISHA 56C	R2017	Salade sachet (CA)	250	320	2.40	2.51	2.45	0.11
	C	ISHA 78	R2017	Apple compote (CA)	280	300	2.45	2.48	2.46	0.03
	C	ISHA 77	R2017	Basil condiment (CA)	9600	9500	3.98	3.98	3.98	0.00
	C	50	IVS	Macédoine	25000	28000	4.40	4.45	4.42	0.05
	C	56	IVS	Fruit compote	22000	15000	4.34	4.18	4.26	-0.17
	C	ISHA 6C	R2017	Parsnip puree (CA)	300	360	2.48	2.56	2.52	0.08
	Average difference of the category									0.02
	Standard deviation of differences									0.07

Statistical calculations
Reference method 37°C / Alternative method

	Type	#	Study	Sample	RM	AM	RM	AM	Mean	Difference
					CFU/g	CFU/g	log CFU/g	log CFU/g		
Ready-to-eat and ready-to-reheat products	A	ISHA 13C	R2017	Tomata salad dressing (CA)	4900	5100	3.69	3.71	3.70	0.02
	A	30	IVS	Bettrave spinach	6200	6400	3.79	3.81	3.80	0.01
	A	21	IVS	Tomato salad	40000	41000	4.60	4.61	4.61	0.01
	A	71	IVS	Tomato with tuna	2900	1900	3.46	3.28	3.37	-0.18
	A	ISHA 71	R2017	Tabbouleh (CA)	560	590	2.75	2.77	2.76	0.02
	B	ISHA 60C	R2017	Chicken with pea (CA)	610	560	2.79	2.75	2.77	-0.04
	B	ISHA 14C	R2017	Tagliatelle with salmon (CA)	260	420	2.41	2.62	2.52	0.21
	B	ISHA 33C	R2017	Croque monsieur (CA)	1900	1100	3.28	3.04	3.16	-0.24
	B	ISHA 52C	R2017	Quiche Lorraine (CA)	1600	1900	3.20	3.28	3.24	0.07
	B	ISHA 53C	R2017	Beef vegetables (CA)	1100	800	3.04	2.90	2.97	-0.14
	C	ISHA 73	R2017	Smoked breast of duck (CA)	12000	12000	4.08	4.08	4.08	0.00
	C	ISHA 74	R2017	Beef carpaccio (CA)	11000	10000	4.04	4.00	4.02	-0.04
	C	ISHA 49C	R2017	Hanchois (CA)	1500	1800	3.18	3.26	3.22	0.08
	C	ISHA 50C	R2017	Haddock (CA)	1400	1400	3.15	3.15	3.15	0.00
	C	ISHA 75	R2017	Beef marinated (CA)	11000	12000	4.04	4.08	4.06	0.04
	Average difference of the category									-0.01
	Standard deviation of differences									0.11

Statistical calculations
Reference method 37°C / Alternative method

	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Environmental samples	a	2347746	Ext.2022	Wipe seafood cold room shelf	170	250	2.23	2.40	2.31	0.17
	a	2333888	Ext.2022	Swab environment egg product	250	150	2.40	2.18	2.29	-0.22
	a	2347714	Ext.2022	Wipe butcher environment	480	810	2.68	2.91	2.79	0.23
	a	2333887	Ext.2022	Swab environment egg product	670	630	2.83	2.80	2.81	-0.03
	a	2347747	Ext.2022	Wipe cheese cold room shelf	970	720	2.99	2.86	2.92	-0.13
	a	2347748	Ext.2022	Wipe refrigerated delicatessen display shelf	1400	1700	3.15	3.23	3.19	0.08
	a	2347715	Ext.2022	Wipe pastry & bakery	1 600 000	4 700 000	6.20	6.67	6.44	0.47
	b	2347752	Ext.2022	Process water pastry industry	40	60	1.60	1.78	1.69	0.18
	b	2347754	Ext.2022	Process water seafood environment	620	590	2.79	2.77	2.78	-0.02
	b	2347755	Ext.2022	Process water poultry packaging workshop	3400	5300	3.53	3.72	3.63	0.19
	b	2347753	Ext.2022	Process water cheese industry	10000	13000	4.00	4.11	4.06	0.11
	b	2333891	Ext.2022	Process water poultry industry	9 700 000	12 000 000	6.99	7.08	7.03	0.09
	b	2333890	Ext.2022	Process water poultry industry	10 000 000	15 000 000	7.00	7.18	7.09	0.18
	c	2347761	Ext.2022	Flour dust	60	60	1.78	1.78	1.78	0.00
	c	2347765	Ext.2022	Residue animal feed	60	50	1.78	1.70	1.74	-0.08
	c	2347760	Ext.2022	Flour dust	200	120	2.30	2.08	2.19	-0.22
	c	2333892	Ext.2022	Pastry residue	650	700	2.81	2.85	2.83	0.03
	c	2347709	Ext.2022	Fish industry residue	2700	2300	3.43	3.36	3.40	-0.07
	c	2347708	Ext.2022	Cheese industry residue area 2	120 000	130 000	5.08	5.11	5.10	0.03
	c	2333893	Ext.2022	Egg product residue	150 000	75 000	5.18	4.88	5.03	-0.30
	c	2333894	Ext.2022	Poultry industry residue	23 000 000	27 000 000	7.36	7.43	7.40	0.07
	c	2333896	Ext.2022	Cheese industry residue area 1	250 000 000	270 000 000	8.40	8.43	8.41	0.03
	Average difference of the category									0.04
	Standard deviation of differences									0.17

Statistical calculations
Reference method 37°C / Alternative method

Animal feed	a	2364271	Ext 2023	Bird seed	120	130	2.08	2.11	2.10	0.03
	a	2392504	Ext 2023	Beef Cat Pate	190	170	2.28	2.23	2.25	-0.05
	a	2392586	Ext 2023	Cat kibble	810	920	2.91	2.96	2.94	0.06
	a	2364267	Ext 2023	Terrine dog poultry	1700	1400	3.23	3.15	3.19	-0.08
	a	2364272	Ext 2023	Poultry seed	180 000	130 000	5.26	5.11	5.18	-0.14
	b	2364278	Ext 2023	Oats	70	130	1.85	2.11	1.98	0.27
	b	2392591	Ext 2023	Wheat	200	160	2.30	2.20	2.25	-0.10
	b	2364277	Ext 2023	Soy Cattle cake	800	1 400	2.90	3.15	3.02	0.24
	b	2364276	Ext 2023	Lamb pellets	1400	1500	3.15	3.18	3.16	0.03
	b	2392571	Ext 2023	Corn	2400	2 900	3.38	3.46	3.42	0.08
	b	2364275	Ext 2023	Horse pellets	110 000	91 000	5.04	4.96	5.00	-0.08
	c	2392573	Ext 2023	Soy protein	40	60	1.60	1.78	1.69	0.18
	c	2392621	Ext 2023	Fresh beef meat	750	910	2.88	2.96	2.92	0.08
	c	2392582	Ext 2023	Beef flour	3 700	4 800	3.57	3.68	3.62	0.11
	c	2392581	Ext 2023	Insect flour	5 600	8 700	3.75	3.94	3.84	0.19
	c	2392622	Ext 2023	Raw animal by-product (offal)	13 000	19 000	4.11	4.28	4.20	0.16
	Average difference of the category									0.06
	Standard deviation of differences									0.13
Average difference of all categories										0.02
Standard deviation of differences										0.15

n =	**109**		
β =	**0.95**	**Lower confidence limit**	**Upper confidence limit**
T(0.025;92)=	**1.98**	**-0.29**	**0.33**

Statistical calculations
Reference method 37°C / Alternative method

Results not used in the statistical interpretation

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	A	11	IVS	Leg of lamb	>150000	>150000	6.20	6.20	6.20	0.00
	A	12	IVS	Turkey "blanquette"	>150000	>150000	6.20	6.20	6.20	0.00
	A	14	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	26	IVS	Turkey steak	>150000	>150000	6.20	6.20	6.20	0.00
	A	28	IVS	Turkey fillet	>150000	>150000	6.20	6.20	6.20	0.00
	A	29	IVS	Beef kidney	>150000	>150000	6.20	6.20	6.20	0.00
	A	32	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	35	IVS	Veal cutlet	>150000	>150000	6.20	6.20	6.20	0.00
	A	38	IVS	Turkey escalope	>150000	>150000	6.20	6.20	6.20	0.00
	A	39	IVS	Turkey steak	>150000	>150000	6.20	6.20	6.20	0.00
	A	ISHA 25C	R2017	Halal Meatballs (CA)	<10	<10	0.00	0.00	0.00	0.00
	A	13	IVS	Merguez	>150000	>150000	6.20	6.20	6.20	0.00
Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Dairy & egg products	B	24	IVS	Reblochon	>150000	>150000	6.20	6.20	6.20	0.00
	B	36	IVS	Raw milk cheese	>150000	>150000	6.20	6.20	6.20	0.00
	C	L3	IVS	Nougat ice cream	<1	<1	0.00	0.00	0.00	0.00
	C	L4	IVS	Chocolate ice cream	<1	<1	0.00	0.00	0.00	0.00
	C	66	IVS	Cream puff	< 10	< 10	0.00	0.00	0.00	0.00
	C	73	IVS	Cream puff	< 10	< 10	0.00	0.00	0.00	0.00

Statistical calculations
Reference method 37°C / Alternative method

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Seafood products	A	7	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	8	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	9	IVS	Fish	> 150000	> 150000	6.20	6.20	6.20	0.00
	A	ISHA 27C	R2017	Scallop	<10	<10	0.00	0.00	0.00	0.00
	A	ISHA 29-1C	R2017	Fillet of sole	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 17C	R2017	Marinated salmon (CA)	<10	<10	0.00	0.00	0.00	0.00
Category	**Type**	**#**	**Study**	**Sample**	**RM CFU/g**	**AM CFU/g**	**RM log CFU/g**	**AM log CFU/g**	**Mean**	**Difference**
Vegetal products	B	ISHA 22C	R2017	Roquette in bag (CA)	<10	<10	0.00	0.00	0.00	0.00
	C	ISHA 4C	R2017	Coconut pearl	<10	<10	0.00	0.00	0.00	0.00
	C	ISHA 23C	R2017	Shredded carrots (CA)	<10	<10	0.00	0.00	0.00	0.00
Category	**Type**	**#**	**Study**	**Sample**	**RM CFU/g**	**AM CFU/g**	**RM log CFU/g**	**AM log CFU/g**	**Mean**	**Difference**
RTE, RTRH	A	15	IVS	Tabbouleh	11000	> 15000	4.04	5.18	4.61	1.14
	A	19	IVS	Pasta salad	>150000	>150000	6.20	6.20	6.20	0.00
	B	ISHA 24C	R2017	Royal Noodles (CA)	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 28C	R2017	Cod balles (CA)	<10	<10	0.00	0.00	0.00	0.00
	B	ISHA 30C	R2017	Ravioli Poultry (CA)	>150	>150	2.20	2.20	2.20	0.00
	B	ISHA 37C	R2017	Gratin (CA)	150	20	2.18	1.30	1.74	-0.88
	C	ISHA 26C	R2017	Carpacio of beef (CA)	<10	<10	0.00	0.00	0.00	0.00
Category	**Type**	**#**	**Study**	**Sample**	**RM CFU/g**	**AM CFU/g**	**RM log CFU/g**	**AM log CFU/g**	**Mean**	**Difference**
Environmental samples	a	2347710	Ext2022	Wipe pastry industry environment	<10	<10	0.00	0.00	0.00	0.00
	a	2347711	Ext2022	Wipe butcher environment	<10	<10	0.00	0.00	0.00	0.00
	a	2347713	Ext2022	Wipe seafood environment	<10	<10	0.00	0.00	0.00	0.00
	c	2347764	Ext2022	Residue animal feed	10	<10	1.00	0.00	0.50	-1.00

Statistical calculations
Reference method 37°C / Alternative method

Category	Type	#	Study	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Animal feed	a	2364266	Ext 2023	Salmon cat kibble	20	20	1.30	1.30	1.30	0.00
	a	2364268	Ext 2023	Beef Cat Pate	100	<100	2.00	1.00	1.50	-1.00
	a	2364273	Ext 2023	Terrine dog beef	30	50	1.48	1.70	1.59	0.22
	a	2392518	Ext 2023	Salmon cat kibble	20	50	1.30	1.70	1.50	0.40
	a	2392520	Ext 2023	Rabbit pellets	<10	20	0.00	1.30	0.65	1.30
	b	2364274	Ext 2023	Ewes pellets	30	40	1.48	1.60	1.54	0.12
	c	2392522	Ext 2023	Chicken flour	<10	30	0.00	1.48	0.74	1.48
	c	2392526	Ext 2023	Salmon flour	40	100	1.60	2.00	1.80	0.40
	c	2319052	Ext 2023	Beef flour	<100	<100	1.00	1.00	1.00	0.00

Appendix F

Accuracy profiles – Raw results

Meat products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Ground beef - Batch 1 - TVC result: 4*10.3CFU/g	CIT.1.6	300 CFU/g	L1T1R1	-1	60	-1	66	610	2.79	-1	61	-1	61	560	2.75	-1	69	650	2.81
				-2	6	-2	3			-2	5	-2	2			-2	3		
			L1T1R2	-1	46	-1	52	500	2.70	-1	51	-1	48	470	2.67	-1	56	560	2.75
				-2	5	-2	8			-2	2	-2	3			-2	6		
			L1T1R3	-1	43	-1	43	490	2.69	-1	34	-1	32	320	2.51	-1	61	600	2.78
				-2	7	-2	14			-2	3	-2	2			-2	5		
			L1T1R4	-1	50	-1	48	480	2.68	-1	62	-1	66	620	2.79	-1	63	600	2.78
				-2	6	-2	1			-2	5	-2	3			-2	3		
			L1T1R5	-1	48	-1	41	450	2.65	-1	52	-1	50	490	2.69	-1	67	620	2.79
				-2	5	-2	5			-2	5	-2	0			-2	1		
		3000 CFU/g	L1T2R1	-2	38	-1	28	3300	3.52	-2	30	-2	27	2800	3.45	-2	31	3 100	3.49
				-3	4	-2	2			-3	2	-3	3			-3	3		
			L1T2R2	-2	42	-1	31	3500	3.54	-2	22	-2	38	2900	3.46	-2	26	2 500	3.40
				-3	3	-2	2			-3	1	-3	3			-3	1		
			L1T2R3	-2	21	-1	45	3400	3.53	-2	43	-2	50	4600	3.66	-2	45	4 400	3.64
				-3	4	-2	4			-3	4	-3	5			-3	3		
			L1T2R4	-2	32	-1	36	3400	3.53	-2	39	-2	22	3000	3.48	-2	47	4 600	3.66
				-3	3	-2	3			-3	2	-3	2			-3	4		
			L1T2R5	-2	43	-1	56	4900	3.69	-2	48	-2	32	3900	3.59	-2	50	5 000	3.70
				-3	3	-2	5			-3	3	-3	3			-3	5		
		100000 CFU/g	L1T3R1	-3	88	-3	89	89000	4.95	-3	77	-3	65	77000	4.89	-3	95	95000	4.98
				-4	7	-4	6			-4	7	-4	6			-4	9		
			L1T3R2	-3	92	-3	100	96000	4.98	-3	88	-3	76	88000	4.94	-3	101	100000	5.00
				-4	8	-4	9			-4	8	-4	8			-4	8		
			L1T3R3	-3	100	-3	95	98000	4.99	-3	91	-3	78	85000	4.93	-3	89	89000	4.95
				-4	11	-4	8			-4	9	-4	6			-4	9		
			L1T3R4	-3	106	-3	89	98000	4.99	-3	91	-3	78	82000	4.91	-3	81	81000	4.91
				-4	9	-4	9			-4	7	-4	5			-4	8		
			L1T3R5	-3	126	-3	137	140000	5.15	-3	110	-3	100	100000	5.00	-3	103	100000	5.00
				-4	10	-4	10			-4	10	-4	9			-4	10		

Meat products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Ground beef - Batch 2 - TVC result: 2*10.3CFU/g	CIT.1.6	300 CFU/g	L2T1R1	-1	30	-1	45	380	2.58	-1	36	-1	34	360	2.56	-1	39	400	2.60
				-2	3	-2	6			-2	4	-2	5			-2	5		
			L2T1R2	-1	31	-1	34	310	2.49	-1	46	-1	55	490	2.69	-1	41	380	2.58
				-2	1	-2	3			-2	2	-2	5			-2	1		
			L2T1R3	-1	32	-1	39	360	2.56	-1	41	-1	43	400	2.60	-1	41	380	2.58
				-2	3	-2	4			-2	1	-2	2			-2	1		
			L2T1R4	-1	34	-1	40	370	2.57	-1	37	-1	36	350	2.54	-1	36	370	2.57
				-2	2	-2	6			-2	3	-2	0			-2	5		
			L2T1R5	-1	33	-1	32	330	2.52	-1	41	-1	37	380	2.58	-1	42	390	2.59
				-2	6	-2	1			-2	1	-2	5			-2	1		
		3000 CFU/g	L2T2R1	-2	30	-2	29	2900	3.46	-2	32	-2	26	2900	3.46	-2	39	3 700	3.57
				-3	4	-3	0			-3	4	-3	1			-3	2		
			L2T2R2	-2	29	-2	35	3100	3.49	-2	32	-2	40	3800	3.58	-2	16	1 600	3.20
				-3	2	-3	3			-3	6	-3	6			-3	2		
			L2T2R3	-2	27	-2	37	3200	3.51	-2	44	-2	36	4100	3.61	-2	36	3 400	3.53
				-3	3	-3	4			-3	2	-3	9			-3	1		
			L2T2R4	-2	34	-2	30	3200	3.51	-2	46	-2	40	4200	3.62	-2	52	5 100	3.71
				-3	5	-3	2			-3	2	-3	4			-3	4		
			L2T2R5	-2	37	-2	51	4200	3.62	-2	40	-2	41	3900	3.59	-2	34	3 500	3.54
				-3	2	-3	3			-3	3	-3	2			-3	4		
		100000 CFU/g	L2T3R1	-3	94	-3	97	93000	4.97	-3	80	-3	87	85000	4.93	-3	94	92 000	4.96
				-4	8	-4	6			-4	14	-4	6			-4	7		
			L2T3R2	-3	98	-3	94	100000	5.00	-3	92	-3	100	94000	4.97	-3	106	110 000	5.04
				-4	17	-4	16			-4	8	-4	7			-4	15		
			L2T3R3	-3	120	-3	98	110000	5.04	-3	70	-3	85	80000	4.90	-3	121	120 000	5.08
				-4	12	-4	6			-4	10	-4	10			-4	8		
			L2T3R4	-3	110	-3	92	100000	5.00	-3	96	-3	117	110000	5.04	-3	98	100 000	5.00
				-4	11	-4	12			-4	9	-4	13			-4	12		
			L2T3R5	-3	150	-3	128	130000	5.11	-3	102	-3	92	99000	5.00	-3	92	91 000	4.96
				-4	8	-4	8			-4	7	-4	16			-4	8		

Dairy products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Raw milk cheese - Batch 1 - TVC result: 5,6*10.4 CFU/g	ESC.1.5	300 CFU/g	L1T1R1	-1	23	-1	12	200	2.30	-1	12	-1	14	150	2.18	-1	15	160	2.20
				-2	4	-2	6			-2	3	-2	3			-2	3		
			L1T1R2	-1	11	-1	6	55	1.74	-1	16	-1	13	140	2.15	-1	15	170	2.23
				-2	1	-2	0			-2	0	-2	2			-2	4		
			L1T1R3	-1	12	-1	13	160	2.20	-1	9	-1	8	85	1.93	-1	18	170	2.23
				-2	1	-2	2			-2	4	-2	4			-2	1		
			L1T1R4	-1	18	-1	19	220	2.34	-1	21	-1	22	220	2.34	-1	20	190	2.28
				-2	4	-2	3			-2	5	-2	1			-2	1		
			L1T1R5	-1	22	-1	17	200	2.30	-1	24	-1	13	190	2.28	-1	10	110	2.04
				-2	1	-2	3			-2	2	-2	2			-2	2		
		3000 CFU/g	L1T2R1	-2	28	-2	24	2800	3.45	-2	37	-2	24	3000	3.48	-2	20	2 200	3.34
				-3	4	-3	6			-3	2	-3	2			-3	4		
			L1T2R2	-2	21	-2	19	2100	3.32	-2	24	-2	20	2100	3.32	-2	28	2 600	3.41
				-3	4	-3	2			-3	2	-3	1			-3	1		
			L1T2R3	-2	17	-2	18	1800	3.26	-2	20	-2	23	2400	3.38	-2	21	2 100	3.32
				-3	2	-3	2			-3	6	-3	4			-3	2		
			L1T2R4	-2	34	-2	20	2700	3.43	-2	27	-2	28	2600	3.41	-2	26	2 400	3.38
				-3	3	-3	2			-3	1	-3	1			-3	0		
			L1T2R5	-2	25	-2	25	2400	3.38	-2	25	-2	21	2200	3.34	-2	26	2 700	3.43
				-3	3	-3	0			-3	3	-3	0			-3	4		
		100000 CFU/g	L1T3R1	-3	75	-3	77	74000	4.87	-3	77	-3	72	75000	4.88	-3	86	94 000	4.97
				-4	3	-4	7			-4	6	-4	10			-4	17		
			L1T3R2	-3	75	-3	88	77000	4.89	-3	87	-3	69	78000	4.89	-3	85	85 000	4.93
				-4	6	-4	1			-4	10	-4	6			-4	8		
			L1T3R3	-3	87	-3	86	85000	4.93	-3	67	-3	91	81000	4.91	-3	81	82 000	4.91
				-4	8	-4	5			-4	10	-4	10			-4	9		
			L1T3R4	-3	87	-3	77	81000	4.91	-3	97	-3	70	82000	4.91	-3	97	92 000	4.96
				-4	11	-4	3			-4	5	-4	9			-4	4		
			L1T3R5	-3	73	-3	78	77000	4.89	-3	84	-3	53	71000	4.85	-3	90	91 000	4.96
				-4	10	-4	9			-4	5	-4	15			-4	10		

Dairy products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Raw milk cheese - Batch 2 - TVC result: >300 CFU/g	ESC.1.5	300 CFU/g	L2T1R1	-1	12	-1	11	120	2.08	-1	13	-1	16	150	2.18	-1	15	150	2.18
				-2	1	-2	2			-2	1	-2	3			-2	1		
			L2T1R2	-1	8	-1	8	80	1.90	-1	15	-1	13	160	2.20	-1	21	220	2.34
				-2	3	-2	3			-2	5	-2	3			-2	3		
			L2T1R3	-1	15	-1	18	160	2.20	-1	10	-1	10	120	2.08	-1	13	130	2.11
				-2	1	-2	2			-2	3	-2	3			-2	1		
			L2T1R4	-1	13	-1	17	150	2.18	-1	13	-1	14	140	2.15	-1	17	160	2.20
				-2	1	-2	1			-2	0	-2	3			-2	1		
			L2T1R5	-1	18	-1	17	180	2.26	-1	18	-1	16	170	2.23	-1	24	240	2.38
				-2	1	-2	3			-2	3	-2	1			-2	2		
		3000 CFU/g	L2T2R1	-2	26	-2	21	2200	3.34	-2	13	-2	23	2000	3.30	-2	16	1 600	3.20
				-3	1	-3	0			-3	5	-3	2			-3	2		
			L2T2R2	-2	17	-2	31	2500	3.40	-2	20	-2	26	2300	3.36	-2	24	2 500	3.40
				-3	5	-3	1			-3	2	-3	3			-3	3		
			L2T2R3	-2	23	-2	22	2500	3.40	-2	25	-2	27	2500	3.40	-2	24	2 500	3.40
				-3	4	-3	5			-3	2	-3	0			-3	3		
			L2T2R4	-2	24	-2	27	2500	3.40	-2	27	-2	30	2800	3.45	-2	32	3 300	3.52
				-3	2	-3	3			-3	3	-3	1			-3	4		
			L2T2R5	-2	30	-2	24	2600	3.41	-2	28	-2	31	3000	3.48	-2	21	2 200	3.34
				-3	3	-3	0			-3	3	-3	5			-3	3		
		100000 CFU/g	L2T3R1	-3	76	-3	60	69000	4.84	-3	95	-3	80	87000	4.94	-3	90	91 000	4.96
				-4	6	-4	10			-4	7	-4	10			-4	10		
			L2T3R2	-3	70	-3	80	74000	4.87	-3	78	-3	85	82000	4.91	-3	89	88 000	4.94
				-4	4	-4	9			-4	5	-4	12			-4	8		
			L2T3R3	-3	90	-3	77	81000	4.91	-3	111	-3	84	95000	4.98	-3	84	85 000	4.93
				-4	5	-4	7			-4	8	-4	5			-4	9		
			L2T3R4	-3	87	-3	70	77000	4.89	-3	80	-3	83	84000	4.92	-3	103	100 000	5.00
				-4	6	-4	7			-4	13	-4	8			-4	12		
			L2T3R5	-3	83	-3	78	83000	4.92	-3	80	-3	80	82000	4.91	-3	101	110 000	5.04
				-4	7	-4	14			-4	7	-4	14			-4	15		

Seafood products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Raw fish fillet - Batch 1 - TVC result: 2,5*10.7 CFU/g	SER.3.3	300 CFU/g	L1T1R1	-1	39	-1	27	330	2.52	-1	27	-1	28	270	2.43	-1	23	230	2.36
				-2	5	-2	2			-2	2	-2	3			-2	2		
			L1T1R2	-1	24	-1	17	200	2.30	-1	21	-1	30	560	2.75	-1	23	220	2.34
				-2	2	-2	1			-2	4	-2	1			-2	1		
			L1T1R3	-1	23	-1	21	200	2.30	-1	26	-1	28	260	2.41	-1	24	240	2.38
				-2	0	-2	0			-2	0	-2	3			-2	2		
			L1T1R4	-1	26	-1	20	240	2.38	-1	30	-1	21	260	2.41	-1	25	270	2.43
				-2	3	-2	3			-2	3	-2	2			-2	5		
			L1T1R5	-1	32	-1	33	340	2.53	-1	29	-1	30	290	2.46	-1	33	310	2.49
				-2	4	-2	5			-2	2	-2	3			-2	1		
		3000 CFU/g	L1T2R1	-2	39	-2	26	3300	3.52	-2	29	-2	30	2900	3.46	-2	28	2 800	3.45
				-3	2	-3	5			-3	1	-3	3			-3	3		
			L1T2R2	-2	23	-2	30	3000	3.48	-2	25	-2	24	2500	3.40	-2	23	2 300	3.36
				-3	8	-3	4			-3	3	-3	2			-3	2		
			L1T2R3	-2	24	-2	23	2400	3.38	-2	15	-2	24	2000	3.30	-2	29	2 800	3.45
				-3	5	-3	1			-3	2	-3	3			-3	2		
			L1T2R4	-2	30	-2	29	2900	3.46	-2	33	-2	40	3700	3.57	-2	29	3 200	3.51
				-3	2	-3	2			-3	4	-3	4			-3	6		
			L1T2R5	-2	32	-2	22	2800	3.45	-2	28	-2	19	2600	3.41	-2	27	2 700	3.43
				-3	5	-3	2			-3	5	-3	5			-3	3		
		100000 CFU/g	L1T3R1	-3	89	-3	96	94000	4.97	-3	103	-3	87	94000	4.97	-3	106	110000	5.04
				-4	9	-4	12			-4	10	-4	7			-4	13		
			L1T3R2	-3	88	-3	78	82000	4.91	-3	78	-3	75	80000	4.90	-3	90	87000	4.94
				-4	6	-4	8			-4	10	-4	12			-4	6		
			L1T3R3	-3	91	-3	110	98000	4.99	-3	115	-3	104	110000	5.04	-3	108	100000	5.00
				-4	4	-4	10			-4	9	-4	16			-4	6		
			L1T3R4	-3	72	-3	88	79000	4.90	-3	87	-3	81	85000	4.93	-3	80	80000	4.90
				-4	6	-4	7			-4	9	-4	11			-4	8		
			L1T3R5	-3	69	-3	94	85000	4.93	-3	102	-3	76	87000	4.94	-3	74	75000	4.88
				-4	15	-4	8			-4	7	-4	6			-4	8		

Seafood products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Raw fish fillet - Batch 2 - TVC result: 2,5*10.7 CFU/g	SER.3.3	300 CFU/g	L2T1R1	-1	25	-1	31	280	2.45	-1	21	-1	37	350	2.54	-1	26	260	2.41
				-2	3	-2	2			-2	0	-2	4			-2	2		
			L2T1R2	-1	21	-1	28	240	2.38	-1	26	-1	24	260	2.41	-1	27	260	2.41
				-2	2	-2	1			-2	4	-2	1			-2	1		
			L2T1R3	-1	26	-1	27	280	2.45	-1	35	-1	24	280	2.45	-1	28	290	2.46
				-2	4	-2	4			-2	4	-2	1			-2	4		
			L2T1R4	-1	19	-1	19	180	2.26	-1	19	-1	16	150	2.18	-1	19	190	2.28
				-2	2	-2	0			-2	5	-2	1			-2	2		
			L2T1R5	-1	24	-1	26	260	2.41	-1	31	-1	27	290	2.46	-1	23	260	2.41
				-2	3	-2	3			-2	3	-2	2			-2	5		
		3000 CFU/g	L2T2R1	-2	26	-2	23	2400	3.38	-2	32	-2	35	5600	3.75	-2	27	2 600	3.41
				-3	3	-3	1			-3	4	-3	1			-3	2		
			L2T2R2	-2	33	-2	23	2700	3.43	-2	32	-2	38	7300	3.86	-2	18	1 800	3.26
				-3	2	-3	1			-3	0	-3	4			-3	2		
			L2T2R3	-2	23	-2	22	2300	3.36	-2	32	-2	24	5000	3.70	-2	26	2 500	3.40
				-3	4	-3	2			-3	4	-3	3			-3	2		
			L2T2R4	-2	10	-2	23	1700	3.23	-2	14	-2	27	6300	3.80	-2	24	2 300	3.36
				-3	1	-3	3			-3	1	-3	2			-3	1		
			L2T2R5	-2	27	-2	21	3400	3.53	-2	31	-2	23	5600	3.75	-2	28	2 700	3.43
				-3	5	-3	21			-3	3	-3	2			-3	2		
		100000 CFU/g	L2T3R1	-3	100	-3	82	92000	4.96	-3	71	-3	86	82000	4.91	-3	84	91000	4.96
				-4	11	-4	10			-4	17	-4	6			-4	16		
			L2T3R2	-3	93	-3	88	99000	5.00	-3	107	-3	106	110000	5.04	-3	101	100000	5.00
				-4	26	-4	11			-4	12	-4	11			-4	14		
			L2T3R3	-3	76	-3	88	86000	4.93	-3	70	-3	82	82000	4.91	-3	90	88000	4.94
				-4	15	-4	11			-4	14	-4	15			-4	7		
			L2T3R4	-3	103	-3	92	97000	4.99	-3	103	-3	100	100000	5.00	-3	110	110000	5.04
				-4	11	-4	7			-4	6	-4	10			-4	14		
			L2T3R5	-3	94	-3	80	86000	4.93	-3	90	-3	95	93000	4.97	-3	104	110000	5.04
				-4	12	-4	3			-4	8	-4	11			-4	14		

Vegetal products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Grated carots - Batch 1 - TVC result: 2,1*102 CFU/g	KLE.1.1	300 CFU/g	L1T1R1	-1	21	-1	20	220	2.34	-1	17	-1	19	170	2.23	-1	28	260	2.41
				-2	4	-2	3			-2	0	-2	1			-2	0		
			L1T1R2	-1	28	-1	18	240	2.38	-1	15	-1	19	180	2.26	-1	23	260	2.41
				-2	5	-2	2			-2	2	-2	3			-2	5		
			L1T1R3	-1	24	-1	20	210	2.32	-1	23	-1	18	200	2.30	-1	16	160	2.20
				-2	3	-2	0			-2	0	-2	2			-2	1		
			L1T1R4	-1	19	-1	14	280	2.45	-1	32	-1	26	280	2.45	-1	29	280	2.45
				-2	3	-2	3			-2	3	-2	0			-2	2		
			L1T1R5	-1	24	-1	24	240	2.38	-1	22	-1	18	210	2.32	-1	25	250	2.40
				-2	2	-2	2			-2	1	-2	5			-2	2		
		3000 CFU/g	L1T2R1	-2	23	-2	24	2300	3.36	-2	25	-2	29	2500	3.40	-2	34	3 200	3.51
				-3	2	-3	1			-3	2	-3	0			-3	1		
			L1T2R2	-2	29	-2	24	2500	3.40	-2	15	-2	16	1500	3.18	-2	26	2 600	3.41
				-3	2	-3	1			-3	2	-3	1			-3	3		
			L1T2R3	-2	20	-2	21	2100	3.32	-2	26	-2	26	2500	3.40	-2	31	3 200	3.51
				-3	2	-3	3			-3	1	-3	1			-3	4		
			L1T2R4	-2	23	-2	29	2700	3.43	-2	23	-2	23	2300	3.36	-2	25	2 800	3.45
				-3	4	-3	3			-3	2	-3	2			-3	6		
			L1T2R5	-2	27	-2	22	2400	3.38	-2	23	-2	13	1900	3.28	-2	15	1 500	3.18
				-3	0	-3	3			-3	3	-3	3			-3	1		
		100000 CFU/g	L1T3R1	-3	71	-3	73	70000	4.85	-3	68	-3	68	69000	4.84	-3	96	92000	4.96
				-4	6	-4	3			-4	9	-4	7			-4	5		
			L1T3R2	-3	57	-3	51	54000	4.73	-3	65	-3	72	73000	4.86	-3	87	88000	4.94
				-4	6	-4	5			-4	14	-4	10			-4	10		
			L1T3R3	-3	54	-3	68	61000	4.79	-3	74	-3	66	74000	4.87	-3	80	82000	4.91
				-4	9	-4	3			-4	9	-4	13			-4	10		
			L1T3R4	-3	77	-3	69	72000	4.86	-3	71	-3	85	75000	4.88	-3	86	84000	4.92
				-4	7	-4	5			-4	5	-4	5			-4	6		
			L1T3R5	-3	80	-3	82	78000	4.89	-3	79	-3	92	85000	4.93	-3	86	89000	4.95
				-4	3	-4	7			-4	8	-4	9			-4	12		

Vegetal products

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Grated carots- Batch 2 - TVC result: 1*103 CFU/g	KLE.1.1	300 CFU/g	L1T1R1	-1	26	-1	17	210	2.32	-1	14	-1	22	190	2.28	-1	28	280	2.45
				-2	2	-2	1			-2	3	-2	2			-2	3		
			L1T1R2	-1	19	-1	30	250	2.40	-1	19	-1	30	250	2.40	-1	28	290	2.46
				-2	5	-2	0			-2	1	-2	4			-2	4		
			L1T1R3	-1	18	-1	21	190	2.28	-1	20	-1	17	180	2.26	-1	28	260	2.41
				-2	1	-2	2			-2	2	-2	1			-2	1		
			L1T1R4	-1	23	-1	34	270	2.43	-1	19	-1	17	170	2.23	-1	17	160	2.20
				-2	3	-2	0			-2	1	-2	1			-2	1		
			L1T1R5	-1	22	-1	24	230	2.36	-1	20	-1	23	220	2.34	-1	30	310	2.49
				-2	1	-2	4			-2	2	-2	3			-2	4		
		3000 CFU/g	L1T2R1	-2	25	-2	33	2800	3.45	-2	25	-2	25	2500	3.40	-2	21	2 300	3.36
				-3	2	-3	2			-3	2	-3	2			-3	4		
			L1T2R2	-2	20	-2	35	2700	3.43	-2	19	-2	25	2200	3.34	-2	23	2 300	3.36
				-3	2	-3	3			-3	0	-3	5			-3	2		
			L1T2R3	-2	26	-2	30	2700	3.43	-2	25	-2	28	2500	3.40	-2	17	2 000	3.30
				-3	2	-3	2			-3	3	-3	0			-3	5		
			L1T2R4	-2	22	-2	22	2200	3.34	-2	28	-2	22	2500	3.40	-2	17	1 700	3.23
				-3	3	-3	2			-3	2	-3	2			-3	2		
			L1T2R5	-2	32	-2	31	3100	3.49	-2	16	-2	23	1900	3.28	-2	32	3 200	3.51
				-3	3	-3	2			-3	0	-3	2			-3	3		
		100000 CFU/g	L1T3R1	-3	64	-3	70	67000	4.83	-3	67	-3	65	63000	4.80	-3	90	89 000	4.95
				-4	9	-4	4			-4	2	-4	4			-4	8		
			L1T3R2	-3	70	-3	51	58000	4.76	-3	62	-3	65	64000	4.81	-3	86	86 000	4.93
				-4	1	-4	5			-4	7	-4	7			-4	9		
			L1T3R3	-3	82	-3	72	74000	4.87	-3	81	-3	83	82000	4.91	-3	96	96 000	4.98
				-4	3	-4	6			-4	6	-4	10			-4	10		
			L1T3R4	-3	62	-3	76	66000	4.82	-3	73	-3	81	76000	4.88	-3	76	74 000	4.87
				-4	3	-4	4			-4	7	-4	7			-4	5		
			L1T3R5	-3	86	-3	106	96000	4.98	-3	84	-3	80	82000	4.91	-3	108	100000	5.00
				-4	9	-4	9			-4	7	-4	9			-4	6		

Ready to eat, ready to reheat

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Piemontese salad - Batch 1 - TVC result: 1*10.3 CFU/g	HAF1.1	300 CFU/g	L1T1R1	-1	25	-1	10	170	2.23	-1	15	-1	13	140	2.15	-1	11	100	2.00
				-2	2	-2	0			-2	1	-2	1			-2	0		
			L1T1R2	-1	14	-1	11	120	2.08	-1	11	-1	18	140	2.15	-1	10	90	1.95
				-2	1	-2	0			-2	0	-2	2			-2	0		
			L1T1R3	-1	10	-1	10	100	2.00	-1	9	-1	10	100	2.00	-1	10	90	1.95
				-2	1	-2	1			-2	2	-2	2			-2	0		
			L1T1R4	-1	6	-1	10	90	1.95	-1	10	-1	8	95	1.98	-1	14	150	2.18
				-2	0	-2	3			-2	2	-2	1			-2	2		
			L1T1R5	-1	14	-1	16	160	2.20	-1	10	-1	9	110	2.04	-1	17	160	2.20
				-2	2	-2	2			-2	3	-2	1			-2	0		
		3000 CFU/g	L1T2R1	-1	152	-1	152	1600	3.20	-1	150	-1	180	1600	3.20	-1	123	1 200	3.08
				-2	16	-2	7			-2	15	-2	12			-2	10		
			L1T2R2	-1	146	-1	124	1200	3.08	-1	130	-1	116	1200	3.08	-1	77	850	2.93
				-2	10	-2	8			-2	9	-2	7			-2	16		
			L1T2R3	-1	45	-1	44	380	2.58	-1	33	-1	46	380	2.58	-1	41	400	2.60
				-2	3	-2	5			-2	3	-2	2			-2	3		
			L1T2R4	-1	160	-1	145	1200	3.08	-1	120	-1	127	1200	3.08	-1	142	1 400	3.15
				-2	18	-2	20			-2	11	-2	12			-2	13		
			L1T2R5	-1	104	-1	115	1100	3.04	-1	106	-1	110	1100	3.04	-1	88	890	2.95
				-2	15	-2	4			-2	10	-2	12			-2	10		
		100000 CFU/g	L1T3R1	-3	9	-4	14	11000	4.04	-3	20	-3	14	21000	4.32	-3	12	11000	4.04
				-4	0	-5	2			-4	1	-4	10			-4	0		
			L1T3R2	-3	28	-4	29	29000	4.46	-3	32	-3	36	35000	4.54	-3	63	31000	4.49
				-4	6	-5	1			-4	4	-4	4			-4	4		
			L1T3R3	-3	46	-4	34	40000	4.60	-3	23	-3	28	26000	4.41	-3	68	66000	4.82
				-4	7	-5	2			-4	2	-4	5			-4	5		
			L1T3R4	-3	46	-4	35	42000	4.62	-3	34	-3	39	38000	4.58	-3	40	43000	4.63
				-4	7	-5	5			-4	6	-4	5			-4	7		
			L1T3R5	-3	24	-4	31	30000	4.48	-3	34	-3	36	34000	4.53	-3	41	44000	4.64
				-4	4	-5	7			-4	1	-4	4			-4	7		

Ready to eat, ready to reheat

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C						Reference method ISO 4832 -37°C						Alternative method REC2 37°C			
				Replicate 1		Replicate 2		CFU/g	log CFU/g	Replicate 1		Replicate 2		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Piemontese salad - Batch 2 - TVC result: 1,5*10.2 CFU/g	HAF1.1	300 CFU/g	L2T1R1	-1	8	-1	5	65	1.81	-1	11	-1	11	100	2.00	-1	15	140	2.15
				-2	0	-2	0			-2	0	-2	0			-2	0		
			L2T1R2	-1	10	-1	9	90	1.95	-1	6	-1	13	95	1.98	-1	4	40	1.60
				-2	0	-2	0			-2	0	-2	1			-2	3		
			L2T1R3	-1	10	-1	11	100	2.00	-1	8	-1	7	75	1.88	-1	16	160	2.20
				-2	0	-2	1			-2	2	-2	0			-2	1		
			L2T1R4	-1	6	-1	10	80	1.90	-1	8	-1	12	100	2.00	-1	7	70	1.85
				-2	0	-2	1			-2	0	-2	1			-2	1		
			L2T1R5	-1	12	-1	10	120	2.08	-1	11	-1	9	110	2.04	-1	7	70	1.85
				-2	2	-2	2			-2	3	-2	0			-2	2		
		3000 CFU/g	L2T2R1	-1	180	-1	172	1700	3.23	-1	160	-1	153	1600	3.20	-1	144	1 500	3.18
				-2	15	-2	13			-2	14	-2	16			-2	15		
			L2T2R2	-1	117	-1	107	1100	3.04	-1	108	-1	112	1100	3.04	-1	124	1 300	3.11
				-2	13	-2	10			-2	9	-2	16			-2	14		
			L2T2R3	-1	50	-1	54	520	2.72	-1	46	-1	54	490	2.69	-1	61	630	2.80
				-2	5	-2	5			-2	4	-2	4			-2	8		
			L2T2R4	-1	150	-1	168	1600	3.20	-1	182	-1	170	1700	3.23	-1	146	1 500	3.18
				-2	11	-2	20			-2	15	-2	11			-2	18		
			L2T2R5	-1	184	-1	165	1700	3.23	-1	180	-1	164	1700	3.23	-1	153	1 600	3.20
				-2	10	-2	11			-2	18	-2	11			-2	23		
		100000 CFU/g	L2T3R1	-3	66	-3	45	56000	4.75	-3	58	-3	55	56000	4.75	-3	56	58 000	4.76
				-4	6	-4	5			-4	8	-4	3			-4	8		
			L2T3R2	-3	59	-3	44	50000	4.70	-3	45	-3	46	46000	4.66	-3	42	43 000	4.63
				-4	3	-4	3			-4	3	-4	7			-4	5		
			L2T3R3	-3	14	-3	12	14000	4.15	-3	16	-3	20	17000	4.23	-3	16	15 000	4.18
				-4	2	-4	2			-4	0	-4	1			-4	1		
			L2T3R4	-3	14	-3	13	14000	4.15	-3	15	-3	14	14000	4.15	-3	22	23 000	4.36
				-4	0	-4	3			-4	2	-4	0			-4	3		
			L2T3R5	-3	42	-3	45	42000	4.62	-3	10	-3	47	30000	4.48	-3	38	38 000	4.58
				-4	4	-4	1			-4	4	-4	4			-4	4		

Environmental samples

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C				Reference method ISO 4832 -37°C				Alternative method REC2 37°C			
				Dilution	CFU/Petri dish	CFU/g	log CFU/g	Dilution	CFU/Petri dish	CFU/g	log CFU/g	Dilution	CFU/Petri dish	CFU/g	log CFU/g
Process water - Batch 1 - TVC result: 2.1 $10.^{3}$ CFU/g	YMI695	300 CFU/g	2347716	-1	13	140	2.15	-1	17	160	2.20	-1	17	180	2.26
				-2	2			-2	0			-2	3		
			2347717	-1	16	150	2.18	-1	20	210	2.32	-1	22	200	2.30
				-2	0			-2	3			-2	0		
			2347718	-1	13	130	2.11	-1	15	140	2.15	-1	26	250	2.40
				-2	1			-2	0			-2	1		
			2347719	-1	17	160	2.20	-1	11	110	2.04	-1	11	130	2.11
				-2	0			-2	1			-2	3		
			2347720	-1	16	160	2.20	-1	13	130	2.11	-1	12	130	2.11
				-2	1			-2	1			-2	2		
		3000 CFU/g	2347721	-2	17	1600	3.20	-2	13	1200	3.08	-2	26	2600	3.41
				-3	1			-3	0			-3	2		
			2347722	-2	12	1500	3.18	-2	12	1200	3.08	-2	14	1400	3.15
				-3	4			-3	1			-3	1		
			2347723	-2	18	1800	3.26	-2	13	1300	3.11	-2	16	1700	3.23
				-3	2			-3	1			-3	3		
			2347724	-2	13	1400	3.15	-2	9	900	2.95	-2	20	1900	3.28
				-3	2			-3	1			-3	1		
			2347725	-2	20	1900	3.28	-2	9	900	2.95	-2	14	1400	3.15
				-3	1			-3	0			-3	1		
		100000 CFU/g	2347726	-3	29	29000	4.46	-3	39	38000	4.58	-3	71	68000	4.83
				-4	3			-4	3			-4	4		
			2347727	-3	25	25000	4.40	-3	41	42000	4.62	-3	48	49000	4.69
				-4	3			-4	5			-4	6		
			2347728	-3	26	25000	4.40	-3	31	31000	4.49	-3	51	52000	4.72
				-4	1			-4	3			-4	6		
			2347729	-3	39	37000	4.57	-3	39	37000	4.57	-3	51	52000	4.72
				-4	2			-4	2			-4	6		
			2347730	-3	21	20000	4.30	-3	39	38000	4.58	-3	48	52000	4.72
				-4	1			-4	3			-4	9		

Environmental samples

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C				Reference method ISO 4832 -37°C				Alternative method REC2 37°C			
				Replicate 1		CFU/g	log CFU/g	Replicate 1		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish			Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Process water - Batch 2 - TVC result: 9.5 10^3 CFU/g	YMI695	300 CFU/g	2347731	-1	15	150	2.18	-1	20	190	2.28	-1	24	250	2.40
				-2	1			-2	1			-2	3		
			2347732	-1	11	120	2.08	-1	17	170	2.23	-1	12	130	2.11
				-2	2			-2	2			-2	2		
			2347733	-1	17	160	2.20	-1	20	210	2.32	-1	15	140	2.15
				-2	1			-2	3			-2	0		
			2347734	-1	11	120	2.08	-1	20	200	2.30	-1	19	190	2.28
				-2	2			-2	2			-2	2		
			2347735	-1	21	200	2.30	-1	16	150	2.18	-1	19	190	2.28
				-2	1			-2	0			-2	2		
		3000 CFU/g	2347736	-2	19	1900	3.28	-2	16	1600	3.20	-2	14	1500	3.18
				-3	1			-3	2			-3	2		
			2347737	-2	17	1700	3.23	-2	18	1700	3.23	-2	26	2500	3.40
				-3	2			-3	1			-3	1		
			2347738	-2	12	1300	3.11	-2	11	1100	3.04	-2	10	1100	3.04
				-3	2			-3	1			-3	2		
			2347739	-2	15	1500	3.18	-2	12	1100	3.04	-2	15	1400	3.15
				-3	1			-3	0			-3	0		
			2347740	-2	17	1700	3.23	-2	7	700	2.85	-2	12	1300	3.11
				-3	2			-3	0			-3	2		
		100000 CFU/g	2347741	-3	38	36000	4.56	-3	35	32000	4.51	-3	58	56000	4.75
				-4	2			-4	0			-4	4		
			2347742	-3	31	30000	4.48	-3	30	31000	4.49	-3	61	64000	4.81
				-4	2			-4	4			-4	9		
			2347743	-3	26	27000	4.43	-3	31	31000	4.49	-3	60	61000	4.79
				-4	4			-4	3			-4	7		
			2347744	-3	32	33000	4.52	-3	42	40000	4.60	-3	45	46000	4.66
				-4	4			-4	2			-4	6		
			2347745	-3	24	25000	4.40	-3	37	36000	4.56	-3	50	50000	4.70
				-4	3			-4	2			-4	5		

Animal feed

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C				Reference method ISO 4832 -37°C				Alternative method REC2 37°C			
				Dilution	CFU/Petri dish	CFU/g	log CFU/g	Dilution	CFU/Petri dish	CFU/g	log CFU/g	Dilution	CFU/Petri dish	CFU/g	log CFU/g
Dog pâté - Batch 1 - TVC result: <10 CFU/g	GQRP82	300 CFU/g	2392426	-1	22	240	2.38	-1	29	280	2.45	-1	21	200	2.30
				-2	4			-2	2			-2	1		
			2392427	-1	30	280	2.45	-1	39	380	2.58	-1	21	240	2.38
				-2	1			-2	3			-2	5		
			2392428	-1	26	260	2.41	-1	30	290	2.46	-1	31	300	2.48
				-2	3			-2	2			-2	2		
			2392429	-1	22	210	2.32	-1	10	120	2.08	-1	14	140	2.15
				-2	1			-2	3			-2	1		
			2392430	-1	23	220	2.34	-1	26	280	2.45	-1	18	170	2.23
				-2	1			-2	5			-2	1		
		3000 CFU/g	2392431	-2	24	2500	3.40	-2	19	1800	3.26	-2	23	2200	3.34
				-3	3			-3	1			-3	1		
			2392432	-2	35	2500	3.40	-2	24	2500	3.40	-2	13	1400	3.15
				-3	4			-3	4			-3	2		
			2392433	-2	32	3100	3.49	-2	17	2000	3.30	-2	23	2100	3.32
				-3	2			-3	5			-3	0		
			2392434	-2	13	1200	3.08	-2	23	2500	3.40	-2	19	1700	3.23
				-3	0			-3	5			-3	0		
			2392435	-2	15	1700	3.23	-2	22	2100	3.32	-2	14	1500	3.18
				-3	4			-3	1			-3	2		
		100000 CFU/g	2392436	-3	91	91000	4.96	-3	124	130000	5.11	-3	94	89000	4.95
				-4	9			-4	17			-4	4		
			2392437	-3	112	120000	5.08	-3	122	120000	5.08	-3	96	100000	5.00
				-4	18			-4	9			-4	15		
			2392438	-3	112	110000	5.04	-3	105	110000	5.04	-3	82	81000	4.91
				-4	13			-4	12			-4	7		
			2392439	-3	106	110000	5.04	-3	136	130000	5.11	-3	75	80000	4.90
				-4	18			-4	13			-4	13		
			2392440	-3	95	98000	4.99	-3	94	94000	4.97	-3	83	86000	4.93
				-4	12			-4	10			-4	12		

Animal feed

Matrix	Strain	Level	Sample number	Reference method ISO 4832 -30°C				Reference method ISO 4832 -37°C				Alternative method REC2 37°C			
				Replicate 1		CFU/g	log CFU/g	Replicate 1		CFU/g	log CFU/g				
				Dilution	CFU/Petri dish			Dilution	CFU/Petri dish			Dilution	CFU/Petri dish	CFU/g	log CFU/g
Dog pâté - Batch 2 - TVC result: <10 CFU/g	GQRP82	300 CFU/g	2392441	-1	15	140	2.15	-1	18	190	2.28	-1	19	190	2.28
				-2	1			-2	3			-2	1		
			2392442	-1	25	240	2.38	-1	35	330	2.52	-1	13	140	2.15
				-2	2			-2	1			-2	3		
			2392443	-1	24	290	2.46	-1	27	300	2.48	-1	11	110	2.04
				-2	8			-2	6			-2	1		
			2392444	-1	32	320	2.51	-1	23	240	2.38	-1	21	190	2.28
				-2	3			-2	3			-2	0		
			2392445	-1	17	160	2.20	-1	19	210	2.32	-1	15	160	2.20
				-2	1			-2	4			-2	3		
		3000 CFU/g	2392446	-2	25	2300	3.36	-2	15	1700	3.23	-2	23	2400	3.38
				-3	0			-3	4			-3	5		
			2392447	-2	29	2600	3.41	-2	18	1700	3.23	-2	15	1500	3.18
				-3	0			-3	1			-3	2		
			2392448	-2	29	3000	3.48	-2	17	1700	3.23	-2	19	1800	3.26
				-3	4			-3	2			-3	1		
			2392449	-2	33	3100	3.49	-2	15	1400	3.15	-2	17	1500	3.18
				-3	1			-3	0			-3	0		
			2392450	-2	33	3400	3.53	-2	23	2500	3.40	-2	13	1300	3.11
				-3	4			-3	4			-3	1		
		100000 CFU/g	2392451	-3	115	120000	5.08	-3	89	85000	4.93	-3	59	64000	4.81
				-4	22			-4	5			-4	11		
			2392452	-3	105	100000	5.00	-3	107	100000	5.00	-3	83	84000	4.92
				-4	8			-4	9			-4	9		
			2392453	-3	99	100000	5.00	-3	108	110000	5.04	-3	75	79000	4.90
				-4	13			-4	10			-4	12		
			2392454	-3	129	130000	5.11	-3	105	100000	5.00	-3	81	80000	4.90
				-4	16			-4	9			-4	7		
			2392455	-3	107	100000	5.00	-3	121	120000	5.08	-3	80	85000	4.93
				-4	9			-4	9			-4	13		

Appendix G

Inclusivity/Exclusivity – Raw results

Exclusivity 2017

Strain	Reference	Origin	NF ISO 4832 [6] at 30°C (CFU/mL)			NF ISO 4832 [6] at 37°C (CFU/mL)			REC2 at 37°C (CFU/mL)		
			R1	R2	Color	R1	R2	Color	R1	R2	Color
Enterococcus faecium	ENTC.2.1	Dairy industry	54	48	White	56	55	White	52	55	Grey
Proteus vulgaris	PRO.2.2	Viande	82	75	White	83	75	White	80	75	White
Shigella sonnei	SHI.2.2	Ground beef	82	79	Grey	82	79	Grey	78	86	Grey
Staphylococcus epidermidis	STA.2.1	Dairy product	94	78	White	87	85	White	88	81	White
Bacillus circulans	BAC.2.1	Dairy industry	52	51	White	48	57	White	53	50	White
Bacillus subtilis	BAC.4.1	Cream dessert	25	31	White	27	29	White	31	24	White
Pseudomonas fluorescens	PSE.2.4	Raw milk cheese	78	81	Grey	84	81	Grey	83	83	Grey
Pseudomonas fragi	PSE.7.1	Raw milk	47	52	Grey	61	58	Grey	49	56	Grey
Pseudomonas lundensis	PSE.8.1	Raw milk	87	91	Grey	93	85	Grey	86	84	Grey
Yersinia enterocolitica	YER.1.3	Chicken	27	31	Grey	18	27	Grey	35	30	Grey

Selectivity previous validation

Souche	Origine	PCA à 30°C		REC2 à 37°C	
		Culture	Nombre de colonies	Couleur	Nombre de colonies
Citrobacter diversus	Aliments animaux	Positive	146	bleu	120
		Positive	132	bleu	112
Citrobacter diversus	Herbes séchées	Positive	136	bleu	152
		Positive	143	bleu	140
Citrobacter diversus	Levure	Positive	164	bleu	123
		Positive	112	bleu	99
Citrobacter freundii	Produit carné	Positive	39	bleu	40
		Positive	55	bleu	58
Citrobacter freundii	Végétaux	Positive	38	bleu	44
		Positive	59	bleu	56
Citrobacter freundii	Poisson	Positive	33	bleu	46
		Positive	51	bleu	50
Citrobacter freundii	Lait	Positive	66	bleu	67
		Positive	90	bleu	93
Enterobacter amnigenus	Brochette de poisson	Positive	96	bleu	87
		Positive	71	bleu	76
Enterobacter amnigenus	Jambon	Positive	60	bleu	70
		Positive	67	bleu	73
Enterobacter cloacae	Produit laitier	Positive	86	bleu	91
		Positive	81	bleu	75
Enterobacter cloacae	Produit laitier	Positive	48	bleu	50
		Positive	63	bleu	42
Enterobacter cloacae	Produit laitier	Positive	118	bleu	127
		Positive	110	bleu	124
Enterobacter cloacae	Produit laitier	Positive	88	bleu	105
		Positive	91	bleu	86
Enterobacter sakazakii	Aliments animaux	Positive	135	bleu	140
		Positive	113	bleu	104
Enterobacter sakazakii	Pâtisserie	Positive	75	bleu	85
		Positive	59	bleu	51
Escherichia coli O157	Collection	Positive	36	bleu	35
		Positive	103	bleu	89
Escherichia hermanii	Aliments animaux	Positive	56	bleu-gris	44
		Positive	102	bleu-gris	67
Escherichia hermanii	Produit carné	Positive	50	bleu	56
		Positive	143	bleu	124
Escherichia hermanii	Produit laitier	Positive	22	bleu	19
		Positive	89	bleu	78
Escherichia vulneris	Produit carné	Positive	31	bleu	14
		Positive	112	bleu	86
Hafnia alvei	Foie de porc	Positive	90	bleu très clair	90
		Positive	82	bleu-gris	69
Hafnia alvei	Reblochon	Positive	80	blanc	95
		Positive	75	blanc	71
Hafnia alvei	Persil	Positive	75	blanc	90
		Positive	76	bleu-gris	81

Hafnia alvei	Flétan	Positive	84	blanc	75
		Positive	50	bleu-gris	65
Hafnia alvei	Viande hachée	Positive	127	bleu-gris	134
		Positive	119	bleu-gris	124
Hafnia alvei	Lait cru	Positive	109	bleu	90
		Positive	134	bleu	132
Hafnia alvei	Echine de porc	Positive	126	bleu-gris	118
		Positive	97	bleu-gris	94
Hafnia alvei	Rognons de porc	Positive	150	blanc	132
		Positive	101	blanc	99
Hafnia alvei	Persil	Positive	123	bleu-gris	135
		Positive	59	bleu-gris	59
Hafnia alvei	Brochette de poisson	Positive	134	bleu-gris	115
		Positive	128	bleu-gris	109
Hafnia alvei	Concombre	Positive	121	bleu-gris	121
		Positive	107	bleu-gris	100
Hafnia alvei	Tomate	Positive	150	bleu-gris	147
		Positive	89	bleu-gris	82
Klebsiella oxytoca	Aliments animaux	Positive	40	bleu	54
		Positive	134	bleu	133
Klebsiella oxytoca	Poisson	Positive	62	bleu	65
		Positive	36	bleu	41
Klebsiella pneumoniae	Poudre de lait	Positive	42	bleu	40
		Positive	36	bleu	42
Klebsiella pneumoniae	Macédoine	Positive	55	bleu	58
		Positive	38	bleu	37
Moellerella wisconsensis	Andouillette	Positive	45	bleu	80
		Positive	46	bleu	56
Serratia marcescens	Lait cru	Positive	45	bleu	33
		Positive	55	bleu	34
Serratia liquefaciens	Andouillette	Positive	63	bleu	51
		Positive	45	bleu-gris	35
Escherichia coli	Rognons de porc	Positive	60	violet	45
		Positive	74	violet	71
Escherichia coli	Chou rouge	Positive	47	violet	41
		Positive	70	violet	72
Escherichia coli	Persil	Positive	89	violet	88
		Positive	88	violet	78
Escherichia coli	Pâtisserie	Positive	123	violet	121
		Positive	122	violet	109
Escherichia coli	Crépinette	Positive	56	violet	53
		Positive	106	violet	98
Escherichia coli	Crépinette	Positive	111	violet	114
		Positive	145	violet	137
Escherichia coli	Chair à saucisse	Positive	134	violet	123
		Positive	98	violet	94
Escherichia coli	Tomate	Positive	87	violet	69
		Positive	84	violet	99
Escherichia coli	Céleri rémoulade	Positive	79	violet	78
		Positive	105	violet	111
Escherichia coli	Crème vanille	Positive	65	violet	60
		Positive	126	violet	120
Escherichia coli	Merguez	Positive	143	violet	141
		Positive	96	violet	98
Escherichia coli	Foie de porc	Positive	54	violet	56

		Positive	107	violet	110
Escherichia coli	Lait cru	Positive	67	violet	66
		Positive	122	violet	121
Escherichia coli	Fromage au lait cru	Positive	132	violet	142
		Positive	141	violet	129
Escherichia coli	Moules	Positive	128	violet	108
		Positive	109	violet	100
Escherichia coli	Chair à saucisse	Positive	76	violet	71
		Positive	56	violet	59
Escherichia coli	Carottes râpées	Positive	97	violet	89
		Positive	89	violet	81
Escherichia coli	Pâtisserie	Positive	104	violet	100
		Positive	76	violet	77
Escherichia coli	Chou à la crème	Positive	57	violet	61
		Positive	98	violet	91
Escherichia coli	Crème pâtissière	Positive	113	violet	101
		Positive	73	violet	77
Escherichia coli	Taboulé	Positive	93	violet	91
		Positive	91	violet	84
Escherichia coli	Crème chantilly	Positive	71	violet	67
		Positive	107	violet	100
Escherichia coli	Lardons	Positive	132	violet	129
		Positive	99	violet	94
Escherichia coli	Saumon fumé	Positive	96	violet	91
		Positive	141	violet	136
Escherichia coli	Filet de rouget	Positive	153	violet	152
		Positive	38	violet	30
Escherichia coli	Sandwich	Positive	49	violet	46
		Positive	99	violet	91
Escherichia coli	Pâtisserie	Positive	100	violet	99
		Positive	116	violet	109
Escherichia coli	Foie de porc	Positive	113	violet	111
		Positive	125	violet	123
Escherichia coli	Rognons de porc	Positive	88	violet	85
		Positive	94	violet	93
Escherichia coli	Lait cru	Positive	111	violet	100
		Positive	114	violet	109
Erwinia spp.	Collection	Positive	23	blanc-gris	22
		Positive	112	blanc-gris	98
Proteus mirabilis	Produit carné	Positive	93	gris	72
		Positive	145	gris	132
Proteus mirabilis	Foies de volaille	Positive	115	blanc	93
		Positive	102	blanc	100
Providencia	Collection	Positive	132	blanc	98
		Positive	114	blanc	75
Providencia	Collection	Positive	156	blanc	121
		Positive	103	blanc	89
Pseudomonas aeruginosa	Filet de rouget	Positive	30	blanc	26
		Positive	87	blanc	77
Pseudomonas aeruginosa	Poitrine de porc	Positive	59	blanc	54
		Positive	85	blanc	82
Salmonella arizonae IIIb 61:-:-	Dinde	Positive	66	violet	72
		Positive	45	violet	32
		Positive	66	violet	72
		Positive	45	violet	32
Salmonella arizonae IIIa	Elevage d'oie	Positive	116	bleu	115

VRBL à 30°C		VRBL à 37°C	
Couleur	Nombre de colonies	Couleur	Nombre de colonies
violet	70	violet	70
violet	38	violet	35

48:24:223		Positive	76	bleu	79	**VRBL à 30°C**		**VRBL à 37°C**	
Salmonella arizonae IIIb 61:i:z53	Cuisse de poulet	Positive	96	violet	90	Couleur	Nombre de colonies	Couleur	Nombre de colonies
		Positive	97	violet	90				
		Positive	96	violet	90	violet	95	violet	93
		Positive	97	violet	90	violet	85	violet	30
Salmonella Enteritidis	Ovoproduit	Positive	121	blanc-gris	103				
		Positive	105	blanc-gris	100				
Salmonella Typhimurium	Foie de porc	Positive	83	blanc-gris	70				
		Positive	103	blanc-gris	79				
Shigella flexneri	Collection	Positive	25	blanc-gris	22				
		Positive	56	blanc-gris	44				
Shigella flexneri	Collection	Positive	30	bleu-gris	41				
		Positive	35	bleu-gris	40	**VRBL à 30°C**		**VRBL à 37°C**	
Shigella sonnei	Collection	Positive	26	violet	30	Couleur	Nombre de colonies	Couleur	Nombre de colonies
		Positive	33	violet	27				
		Positive	26	violet	30	violet	28	violet	33
		Positive	33	violet	27	violet	25	violet	30
Yersinia kristensenii	Collection	Positive	27	blanc	16				
		Positive	67	blanc	46				
Yersinia enteritidis	Ovoproduit	Positive	12	blanc	0				
		Positive	34	blanc	0				
Yersinia enterocolitica	Ovoproduit	Positive	28	blanc	20				
		Positive	45	blanc	43				
Staphylococcus aureus	Produit laitier	Positive	46		0				
		Positive	103		0				
Bacillus cereus	Betteraves	Positive	28		0				
		Positive	45		0				

Appendix H

Interlaboratory study – Raw results

RESULTATS BRUTS (COLIFORMES)

Niveau 0

NOMBRE DE COLONIES CARACTERISTIQUES COMPTEES APRES 24 HEURES D'INCUBATION

Laboratoires (i)	Méthode de référence (VRBL à 30°C)																	
	Echantillon 4									Echantillon 7								
	pur		-1		-2		-3		Résultat	pur		-1		-2		-3		Résultat
	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)
B	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
C	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
E	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
F	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
G	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
H	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
K	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
L	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
M	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
O	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
P	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1
Laboratoire expert	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	<1

Laboratoires (i)	Méthode alternative (RAPID'*E.coli*)																										
	Echantillon 4																										
	pur			-1			-2			-3			Résultat	pur			-1			-2			-3			Résultat
	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)
B	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
C	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
E	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
F	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
G	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
H	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
K	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
L	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
M	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
O	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
P	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1
Laboratoire expert	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	<1

bl. : colonies bleues
v. : colonies violettes
ND : boites incomptables

RESULTATS BRUTS (COLIFORMES)

Niveau 1

NOMBRE DE COLONIES CARACTERISTIQUES COMPTEES APRES 24 HEURES D'INCUBATION

Laboratoires (i)	Méthode de référence (VRBL à 30°C)																	
	Echantillon 1									Echantillon 6								
	pur		-1		-2		-3		Résultat	pur		-1		-2		-3		Résultat
	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)
B	85	87	6	6	0	0	0	0	84	100	101	6	8	0	0	0	0	98
C	111	91	11	9	2	0	1	0	101	90	92	4	9	0	0	0	0	89
E	93	85	11	7	0	2	0	0	89	82	87	11	7	2	0	0	0	85
F	92	77	9	11	1	0	0	0	86	65	68	5	9	1	0	0	0	67
G	13	9	1	0	0	0	0	0	10	38	41	6	6	0	0	0	0	41
H	67	68	9	8	2	1	0	0	69	76	70	10	6	1	0	0	0	74
K	79	79	13	7	1	0	0	0	81	94	80	7	4	0	0	0	0	84
L	69	64	10	7	0	0	0	0	68	59	59	4	6	0	1	0	0	58
M	61	63	9	8	0	0	0	0	64	47	60	3	3	0	0	0	0	51
O	47	47	4	4	0	0	0	0	46	63	52	6	4	0	0	0	0	57
P	91	84	12	18	0	2	0	0	93	77	75	10	9	0	0	0	0	78
Laboratoire expert	79	80	9	8	0	0	0	0	80	69	74	13	6	0	0	0	0	74

Laboratoires (i)	Méthode alternative (RAPID'*E.coli*)																										
	Echantillon 1																										
	pur			-1			-2			-3			Résultat	pur			-1			-2			-3			Résultat
	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)
B	24	51	75	1	3	4	0	0	0	0	0	0	72	52	40	92	8	4	12	0	0	0	0	0	0	95
C	49	53	102	5	5	10	1	0	1	0	0	0	102	58	57	115	5	8	13	1	0	1	0	0	0	116
E	35	61	96	4	8	12	0	1	1	0	0	0	98	43	54	97	5	7	12	0	1	1	0	0	0	99
F	29	57	86	9	4	13	0	0	0	0	0	0	90	41	70	111	4	3	7	0	0	0	0	0	0	107
G	15	4	19	0	0	0	0	0	0	0	0	0	17	34	4	38	1	1	2	0	0	0	0	0	0	36
H	35	52	87	4	5	9	0	0	0	0	0	0	87	31	52	83	1	8	9	0	0	0	0	0	0	84
K	29	55	84	1	5	6	0	2	2	0	0	0	82	40	53	93	6	8	14	1	0	1	0	0	0	97
L	20	41	61	2	5	7	0	0	0	0	0	0	62	29	93	122	4	6	10	0	0	0	0	0	0	120
M	29	41	70	5	6	11	0	0	0	0	0	0	74	31	48	79	2	7	9	0	0	0	0	0	0	80
O	26	41	67	2	4	6	0	0	0	0	0	0	66	24	64	88	3	8	11	0	0	0	0	0	0	90
P	40	45	85	7	9	16	0	0	0	0	0	0	92	48	41	89	6	6	12	0	0	0	0	0	0	92
Laboratoire expert	28	51	79	1	3	4	0	0	0	0	0	0	75	23	53	76	2	6	8	0	0	0	0	0	0	76

bl. : colonies bleues
v. : colonies violettes
ND : boites incomptables

RESULTATS BRUTS (COLIFORMES)

Niveau 2

NOMBRE DE COLONIES CARACTERISTIQUES COMPTEES APRES 24 HEURES D'INCUBATION

Laboratoires (i)	Méthode de référence (VRBL à 30°C)																	
	Echantillon 2									Echantillon 5								
	pur		-1		-2		-3		Résultat	pur		-1		-2		-3		Résultat
	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)
B	>150	>150	84	78	6	12	0	0	820	>150	>150	103	77	6	10	0	0	890
C	>150	>150	108	102	15	16	1	1	1100	>150	>150	96	122	5	19	1	0	1100
E	>150	>150	98	102	6	18	0	0	1000	>150	>150	107	100	6	9	0	0	1000
F	>150	>150	103	97	12	10	0	2	1000	>150	>150	78	88	7	9	2	3	830
G	122	97	8	14	2	0	0	0	110	110	105	7	11	2	0	0	0	110
H	>150	>150	109	91	8	10	0	0	990	>150	>150	77	89	8	8	0	0	830
K	>150	>150	88	70	6	10	2	1	790	>150	>150	94	90	13	9	1	0	940
L	>150	>150	68	55	7	8	1	0	630	>150	>150	67	48	6	5	1	0	570
M	>150	>150	99	92	3	5	0	0	900	>150	>150	74	73	2	4	0	0	700
O	>150	>150	77	57	5	6	0	0	660	>150	>150	75	50	6	5	0	0	620
P	>150	>150	105	87	10	13	2	0	980	>150	>150	130	125	8	11	0	0	1200
Laboratoire expert	>150	>150	84	72	4	5	0	0	750	>150	>150	80	75	13	6	0	0	790

Laboratoires (i)	Méthode alternative (RAPID'*E.coli*)																										
	Echantillon 2																										
	pur			-1			-2			-3			Résultat	pur			-1			-2			-3			Résultat
	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)
B	ND	>150	ND	42	54	96	3	4	7	0	0	0	940	ND	>150	ND	41	56	97	2	3	5	1	0	1	930
C	>150	>150	ND	61	61	122	10	5	15	1	2	3	1200	>150	>150	ND	57	61	118	5	10	15	0	0	0	1200
E	>150	>150	ND	62	61	123	3	9	12	0	1	1	1200	>150	>150	ND	61	57	118	6	5	11	0	0	0	1200
F	>150	>150	ND	42	47	89	2	5	7	0	0	0	870	>150	>150	ND	45	61	106	4	3	7	1	0	1	1000
G	>150	60	ND	14	4	18	0	1	1	0	0	0	170	147	58	205	10	13	23	0	0	0	0	0	0	210
H	>150	>150	ND	30	60	90	5	7	12	0	0	0	930	>150	>150	ND	26	80	106	3	7	10	0	0	0	1100
K	>150	>150	ND	50	51	101	8	11	19	1	1	2	1100	>150	>150	ND	46	47	93	7	8	15	2	2	4	980
L	>150	>150	ND	33	39	72	3	4	7	0	0	0	720	>150	>150	ND	47	42	89	0	4	4	0	0	0	850
M	>150	>150	ND	33	47	80	5	6	11	0	0	0	830	>150	>150	ND	26	48	74	2	4	6	0	0	0	730
O	>150	>150	ND	30	44	74	3	4	7	0	0	0	740	>150	>150	ND	29	50	79	6	7	13	0	0	0	840
P	>150	>150	ND	50	42	92	11	4	15	0	0	0	970	>150	>150	ND	48	42	90	4	1	5	0	0	0	860
Laboratoire expert	>150	>150	ND	43	55	98	3	4	7	0	0	0	950	>150	>150	ND	32	53	85	3	2	5	0	0	0	820

bl. : colonies bleues
v. : colonies violettes
ND : boites incomptables

RESULTATS BRUTS (COLIFORMES)

Niveau 3

NOMBRE DE COLONIES CARACTERISTIQUES COMPTEES APRES 24 HEURES D'INCUBATION

Laboratoires (i)	Méthode de référence (VRBL à 30°C)																	
	Echantillon 3									Echantillon 8								
	pur		-1		-2		-3		Résultat	pur		-1		-2		-3		Résultat
	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	boite 1	boite 2	(UFC/ml)
B	>150	>150	>150	>150	103	96	15	8	10000	>150	>150	>150	>150	88	83	5	7	8300
C	>150	>150	>150	>150	131	137	14	13	13000	>150	>150	>150	>150	144	142	12	14	14000
E	>150	>150	>150	>150	98	105	18	13	11000	>150	>150	>150	>150	110	132	9	10	12000
F	>150	>150	>150	>150	93	100	7	3	9200	>150	>150	>150	>150	90	76	6	10	8300
G	>150	>150	>150	>150	>150	>150	>150	>150	ND	>150	>150	119	111	9	17	3	2	1400
H	>150	>150	>150	>150	100	95	6	8	9500	>150	>150	>150	>150	107	88	7	2	9300
K	>150	>150	>150	>150	100	76	6	7	8600	>150	>150	>150	>150	102	110	18	18	11000
L	>150	>150	>150	>150	83	82	6	8	8100	>150	>150	>150	>150	49	64	4	7	5600
M	>150	>150	>150	>150	67	71	7	5	6800	>150	>150	>150	>150	74	63	8	7	6900
O	>150	>150	>150	>150	65	47	5	7	5600	>150	>150	>150	>150	85	85	10	7	8500
P	>150	>150	>150	>150	109	105	5	5	10000	>150	>150	>150	>150	125	140	14	15	13000
Laboratoire expert	>150	>150	>150	>150	74	77	11	8	7700	>150	>150	>150	>150	96	101	14	8	10000

Laboratoires (i)	Méthode alternative (RAPID'*E.coli*)																											
	Echantillon 3													Echantillon 8														
	pur			-1			-2			-3			Résultat	pur			-1			-2			-3			Résultat
	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	bl.	v.	Total	(UFC/ml)
B	ND	>150	ND	ND	>150	ND	42	48	90	4	9	13	9400	ND	ND	ND	ND	>150	ND	55	50	105	5	7	12	11000
C	>150	>150	ND	>150	>150	ND	88	71	159	7	9	16	16000	>150	>150	ND	>150	>150	ND	53	76	129	8	3	11	13000
E	>150	>150	ND	>150	>150	ND	46	79	125	3	7	10	12000	>150	>150	ND	>150	>150	ND	49	62	111	4	4	8	11000
F	>150	>150	ND	>150	>150	ND	38	47	85	2	2	4	8100	>150	>150	ND	>150	>150	ND	41	48	89	4	5	9	8900
G	>150	>150	ND	>150	41	ND	>150	5	ND	50	0	50	5000	>150	>150	ND	53	60	113	6	10	16	0	0	0	1500
H	>150	>150	ND	>150	>150	ND	23	79	102	9	2	11	10000	>150	>150	ND	>150	>150	ND	31	50	81	5	7	12	8500
K	>150	>150	ND	>150	>150	ND	64	53	117	10	10	20	12000	>150	>150	ND	>150	>150	ND	58	50	108	13	10	23	12000
L	>150	>150	ND	>150	>150	ND	43	55	98	3	2	5	9400	>150	>150	ND	>150	>150	ND	23	55	78	2	6	8	7800
M	>150	>150	ND	>150	>150	ND	48	58	106	6	12	18	11000	>150	>150	ND	>150	>150	ND	43	54	97	5	4	9	9600
O	>150	>150	ND	>150	>150	ND	36	49	85	5	6	11	8700	>150	>150	ND	>150	>150	ND	41	70	111	7	5	12	11000
P	>150	>150	ND	>150	>150	ND	45	59	104	6	4	10	10000	>150	>150	ND	>150	>150	ND	63	58	121	6	6	12	12000
Laboratoire expert	>150	>150	ND	>150	>150	ND	41	54	95	3	6	9	9500	>150	>150	ND	>150	>150	ND	40	66	106	2	8	10	11000

bl. : colonies bleues
v. : colonies violettes
ND : boites incomptables