

**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

**NEOGEN® Petrifilm® Rapid Aerobic Count Plate (RAC)
(certificate # 3M 01/17 – 11/16)
for the enumeration of mesophilic aerobic flora in all human
food products**

Expert laboratory: Laboratoire MICROSEPT
ZA de la Sablonnière
15 rue Denis Papin
49220 LE LION D'ANGERS
FRANCE

For: NEOGEN
The Dairy School, Auchincruive, Ayr, KA6 5HU
Scotland, UK

This report contains 114 pages including 54 pages of appendices.
The reproduction of this document is only authorized in its entirety.
The accreditation of the COFRAC (Section Laboratory) gives evidence of the expertise of the laboratory for the only tests covered by the accreditation that are specified by the symbol (*).

Version 1

January 2nd, 2026

LABORATOIRE MICROSEPT

ZA de la Sablonnière - 15 rue Denis Papin - 49220 LE LION D'ANGERS

Tél. : 02 41 41 70 70 - Fax : 02 41 41 70 71 - laboratoire@microsept.fr - www.microsept.fr

SAS AU CAPITAL DE 40 000 € - N° SIRET 394 895 304 00035 - RCS ANGERS - APE 7120 B - N° INTRACOMMUNAUTAIRE FR92 394 895 304

Preamble

- Protocols of validation:

- EN ISO 16140-1 and EN ISO 16140-2/A1 (September 2024): 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 12).

- Reference method:

- EN ISO 4833-1: 2013 standard: Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30°C by the pour plate technique

- Application scope:

- Milk powder and dairy products
- Meat products
- Seafood products
- Fruits and vegetables
- Egg products

- 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.

Table of contents

1. Introduction	6
2. Protocols of the methods	7
2.1. Alternative method	7
2.1.1. Scope of the method.....	7
2.1.2. Principle of the method	7
2.1.3. Restrictions	7
2.2. Reference method	7
3. Method comparison study	8
3.1. Relative trueness study.....	8
3.1.1. Number and nature of the samples.....	8
3.1.2. Artificial contamination of the samples.....	8
3.1.3. Results obtained with 2 successive dilutions and manual reading	9
3.1.4. Statistical interpretation with 2 successive dilutions and manual reading.....	12
3.1.5. Storage of the NEOGEN Petrifilm with 2 successive dilutions before manual reading.	14
3.1.6. Conclusion with 2 successive dilutions with manual reading.....	18
3.1.7. Results obtained with 2 successive dilutions (2 plates) and automatic reading (PPRA)	19
3.1.8. Statistical interpretation with 2 successive dilutions and automatic reading.....	21
3.1.9. Storage of the NEOGEN Petrifilm with 2 successive dilutions before automatic PPRA	reading 23
3.1.10. Conclusion with 2 successive dilutions with automatic reading	25
3.1.11. Results obtained with 1 dilution and manual reading.....	26
3.1.12. Statistical interpretation with 1 dilution and manual reading	29
3.1.13. Storage of the NEOGEN Petrifilm with 1 dilution before manual reading	32
3.1.14. Conclusion for one dilution with manual reading	36
3.1.15. Results obtained with 1 dilution and automatic reading (PPRA)	37
3.1.16. Statistical interpretation with 1 dilution and automatic reading.....	39
3.1.17. Storage of the NEOGEN Petrifilm with 1 dilution before automatic PPRA reading	41
3.1.18. Conclusion with 1 dilution with automatic reading.....	43
3.2. Accuracy profiles.....	44
3.2.1. Protocols	44
3.2.2. Results and interpretation	45
3.2.2.1. Two dilutions with manual reading	45

3.2.2.2.	Two dilutions with automatic reading (PPRA)	47
3.2.2.3.	One dilution with manual reading	48
3.2.2.4.	One dilution with automatic reading (PPRA)	49
3.2.3.	Conclusion	50
4.	Praticability	51
5.	Interlaboratory study	52
5.1.	Organization of the study	52
5.2.	Control of the experimental parameters	52
5.2.1.	Contamination levels obtained after artificial contamination	52
5.2.2.	Logistic conditions	53
5.2.3.	Homogeneity of inoculation	54
5.3.	Calculation, interpretation and summary of data	54
5.3.1.	Results obtained by the expert laboratory	55
5.3.2.	Results obtained by the collaborators	55
5.3.3.	Accuracy profil calculation	58
5.4.	Conclusion of the interlaboratory study	59
6.	General conclusion	60

Appendices

Appendix A: Protocol of the alternative method

Appendix B: Protocol of the reference method

Appendix C: Artificial contamination

Appendix D: Relative trueness study – raw data: 2 dilutions

Appendix E: Relative trueness study – results and calculations: 2 dilutions for manual reading

Appendix F: Relative trueness study – results and calculations: 2 dilutions for automatic reading

Appendix G: Relative trueness study – raw data: 1 dilution

Appendix H: Relative trueness study – results and calculations: 1 dilution for manual reading

Appendix I: Relative trueness study – results and calculations: 1 dilution for automatic reading

Appendix J: Accuracy profile study - raw data: 2 dilutions

Appendix K: Accuracy profile study - raw data: 1 dilution

Appendix L: Interlaboratory study – raw data

1. Introduction

The NEOGEN® Petrifilm® Rapid Aerobic Count Plate was validated on the 25th of November 2016 for milk powders & dairy products according to the EN ISO 16140-2:2016 and the AFNOR Certification technical rules (Certificate number 3M 01/17 - 11/16). The alternative method was renewed in October 2020.

Table 1 summarizes the different steps of the validation that occurred since the initial validation.

Table 1: Steps of the validation AFNOR certification

Date	Study	Expert Laboratory	Standards
November 2016	Initial validation	ADRIA Développement	EN ISO 16140-2:2016
October 2020	First renewal	ADRIA Développement	EN ISO 16140-2:2016
October 2024	Second renewal	Laboratoire Microsept	EN ISO 16140-2:2016
February 2025	Extension study results: addition of 4 categories, automatic reader Petrifilm Plate Reader Advanced and interpretation with one Petrifilm plate per dilution	Laboratoire Microsept	EN ISO 16140-2/A1:2024

This document is a summary report of the results of the NF Validation certification of the ISO 16140-2 validation of the NEOGEN® Petrifilm Rapid Aerobic Count Plate for the enumeration of mesophilic aerobic flora in broad range of foods (addition of meat products, seafood products, fruits and vegetables and egg products).

In addition to the extension of the scope realized in February 2025, the introduction of an automatic reader, Petrifilm Plate Reader Advanced (PPRA) was integrated and a double interpretation of the data was carried out to offer the possibility to use one plate and one dilution.

Different interpretations were available in this report:

- interpretation from 2 successive dilutions (2 plates) versus the reference method with manual reading,
- interpretation from 2 successive dilutions (2 plates) versus the reference method with PPRA reading,
- interpretation from a single dilution (One Plate) versus the reference method with manual reading,
- interpretation from a single dilution (One Plate) versus the reference method with automatic reading,

The use of the PPRA automatic reader only applies to the categories tested during the extension i.e. (Meat products, Seafood products, Fruits and vegetables products and Egg-products and egg-based products).

All the results presented in this report for dairy products and milk products were produced during the initial validation tests performed by ADRIA Développement within the framework of the brand NF VALIDATION according to the current requirements.

2. Protocols of the methods

2.1. Alternative method

2.1.1. Scope of the method

NEOGEN® Petrifilm Rapid Aerobic Count Plate was initially validated for one category: milk powder and dairy products.

The method extension scope was completed with 4 categories divided into 3 types:

- Meat products with 3 types: raw meat / Ready-to-eat and ready-to-reheat products / Delicatessen,
- Seafood products with 3 types: fresh products / frozen products / Ready-to-eat and ready-to-reheat products,
- Fruits and vegetables products with 3 types: frozen products / fresh and bagged products / Ready-to-eat and ready-to-reheat products,
- Egg-products and egg-based products with 3 types: mayonnaise, custard / pasteurized egg / pastry.

2.1.2. Principle of the method

The protocols tested for the initial validation study for dairy products are the following:

28 h ± 2 h at 30°C ± 1°C for non-powdered dairy products

48 h ± 3 h at 30°C ± 1°C for milk powders.

The protocol tested during the extension method for all other categories as follows:

28 h ± 2 h at 30°C ± 1°C for meat products, seafood products, fruits and vegetables and egg products.

Only for the categories tested during the extension, an automatic reading by the PPRA was realized in parallel with the manual reading realized by a technician.

The PPRA version used is the current version available on the NEOGEN website i.e. version 4.1.1.

The workflow of the method is set out in Appendix A.

2.1.3. Restrictions

There are no restrictions for use for the Petrifilm Rapid Aerobic Count Plate (RAC) system.

2.2. Reference method

The reference method is the ISO 4833-1:2013 - Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30°C by the pour plate technique. PCA + milk (1 g/l) was used for enumeration.

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

3. Method 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

In total, five food categories were tested.

A total of 132 samples were thus analyzed and 102 exploited.

The distribution of the samples is presented in table 2.

Table 2 : number and nature of the samples analyzed

Category		Type		Analyzed samples	Exploited samples
①	Milk powders and dairy products	a	Milk	6	6
		b	Dairy desserts	12	9
		c	Milk powders	27	21
		Total		45	36
②	Meat products	a	Raw meat	6	5
		b	Ready-to-eat and ready-to-reheat products	6	5
		c	Delicatessen	6	5
		Total		18	15
③	Seafood products	a	Fresh products	5	5
		b	Frozen products	6	5
		c	Ready-to-eat and ready-to-reheat products	10	9
		Total		21	19
④	Fruits and vegetables products	a	Frozen products	7	5
		b	Fresh and bagged products	7	5
		c	Ready-to-eat and ready-to-reheat products	10	7
		Total		24	17
⑤	Egg-products and egg-based products	a	Mayonnaise, custard	8	5
		b	Pasteurized egg	7	5
		c	Pastry	9	5
		Total		24	15
All categories				132	102

3.1.2. Artificial contamination of the samples

For milk powder and dairy products, artificial contaminations were realized by inoculation of lyophilized strain for milk powders. Among exploited results, 28 samples were naturally contaminated, and 8 samples were artificially contaminated.

For the new categories tested during the extension, all samples exploited were naturally contaminated.

For all categories, the percentage of naturally contaminated samples is equal to 92.1%.

The artificial contaminations performed are presented in Appendix C.

3.1.3. Results obtained with 2 successive dilutions and manual reading

The data are classified in three categories (See Table 3):

- Interpretable results with the reference and the alternative methods,
- Results with less than 4 colonies per plate with the reference and/or the alternative method in order to have a more precise result. These results are not included in the calculation.
- Results below or above the quantification limit: according to the ISO 16140- 2/A1:2024, if any result (either reference or alternative method) is below the quantification limit, the data should be plotted using a substituted value of 1 log₁₀ units less than the observed value in case of a lower than value. Similarly, any value greater than the upper limit should be amended by adding 1 log unit. These results are not included in the calculations but also appear on the graphs.

Raw results are shown in Appendix D.

The samples, which were not used in the calculations, are provided in Table 3.

Table 3: samples which were not used in the calculations

Category	Type	#	Sample	RM	AM	RM	AM
				CFU/g	CFU/g	log CFU/g	log CFU/g
Dairy products	b	4465	Panna cotta	10	40	1,00	1,60
	b	4559	Ice cream	40	590	1,60	2,77
	b	4737	Dessert with chantilly	>30000000	>30000000	>7,48	>7,48
	c	4461	Infant formula with probiotics	20	30	1,30	1,48
	c	4462	Infant formula with probiotics	>300	NI	>2,47	>2,47
	c	4566	Infant formula with probiotics	1400	NI	3,15	3,00
	c	4567	Infant formula with probiotics	<10	40	0,00	1,60
	c	5123	Infant formula with probiotics	200	80	2,30	1,90
	c	5124	Infant formula with probiotics	100	130	2,00	2,11
Meat products	a	2939494	Beef steak	>30000000	>30000000	>7,48	>7,48
	b	2976234	Beef parmentier	>3000000	>3000000	>6,48	>6,48
	c	2939498	Sausage	>30000000	>30000000	>7,48	>7,48
Seafood products	b	2976239	Salmon	>30000	>30000	>4,48	>4,48
	c	2896127	Smoked tuna	1,30E+03	2,00E+02	3,11	2,30
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00
	a	2976247	Turnip	>3000000	>3000000	>6,48	>6,48
	b	2976249	mix of beets, white cabbage and	>30000	>30000	>2,47	>2,47
	b	2976250	Bagged salad	>300000000	>300000000	>8,48	>8,48
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00
	c	2939506	Coleslaw with curry cream	4,50E+03	<10	3,65	0,00
	c	2986199	Vegetable soup	<10	<10	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	6,00E+02	2,00	2,78
	a	2976252	Chocolate mousse	<10000	2,00E+04	4,00	4,30
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	>6,48	>6,48
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	>5,48	>5,48
	c	2939513	Flan	<100	<100	2,00	2,00
	c	2939514	Apple pie	<100	<100	2,00	2,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits

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,
- those lower or higher than the quantification limits,
- Undetermined results.

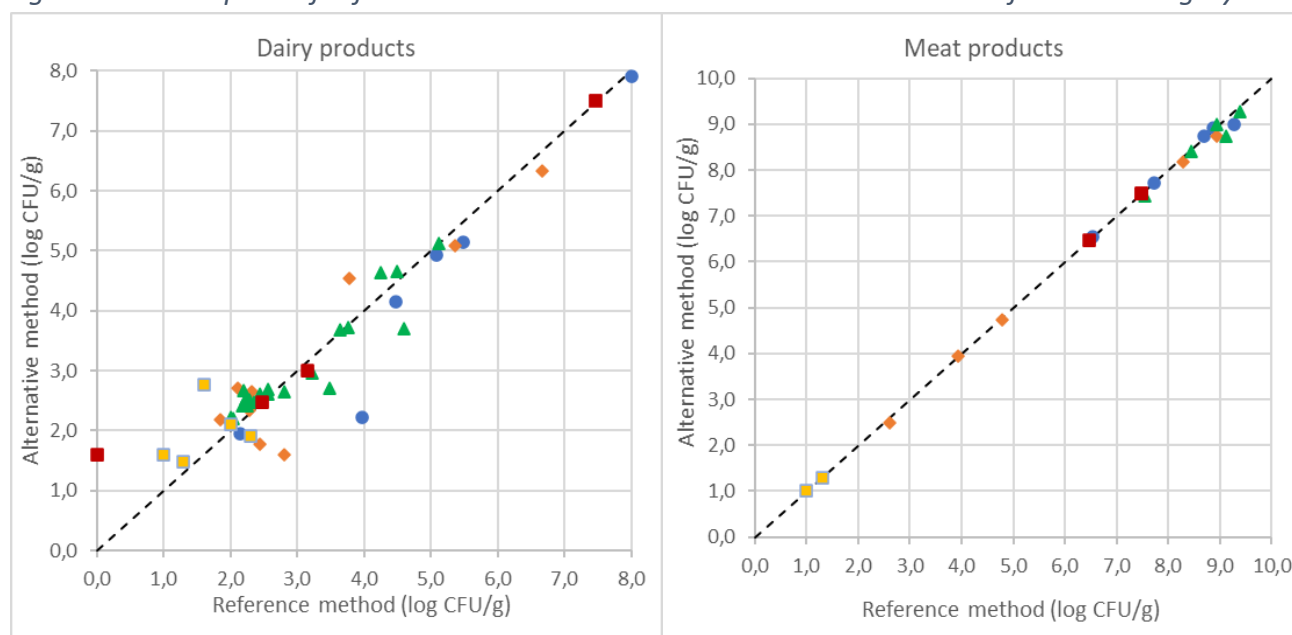
All results are presented in scatter plots per category:

- Figure 1: scatter plots for each category,
- Figure 2: scatter plots for all categories,

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- 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/A1:20124 requirements.

Figure 1: scatter plots of reference-method versus alternative-method results for each category



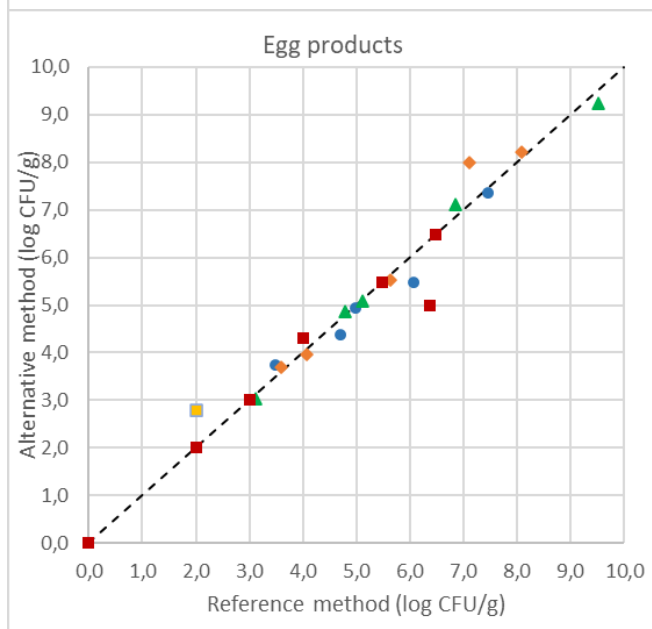
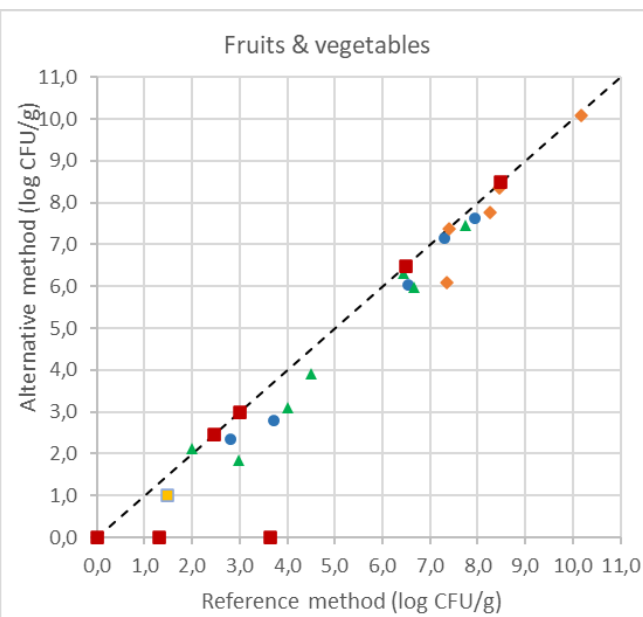
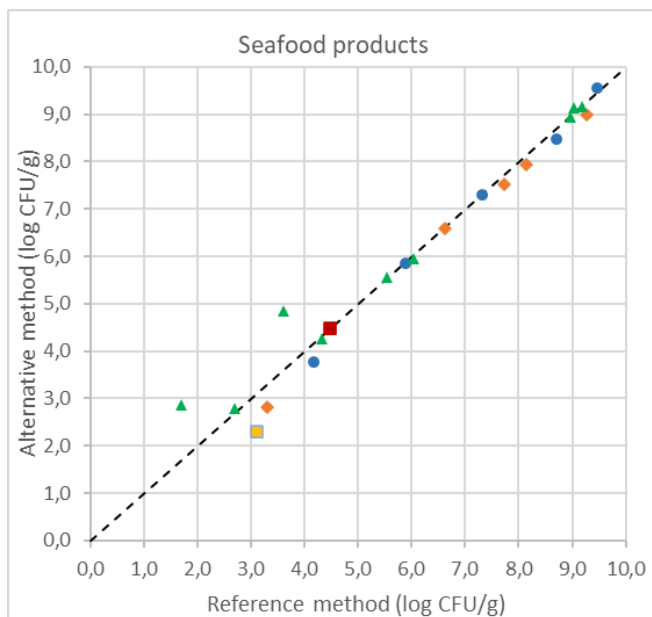
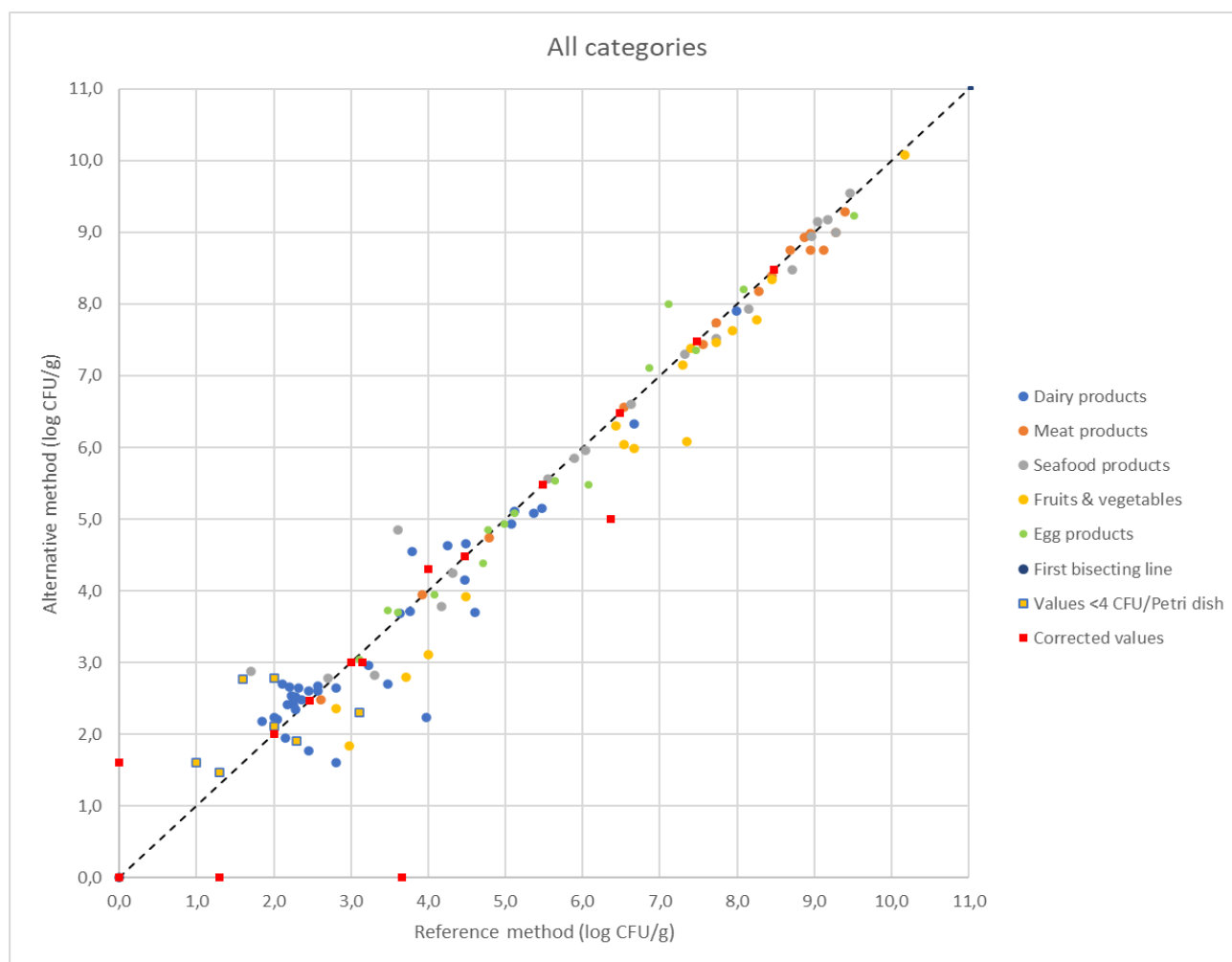


Figure 2: scatter plots of reference-method versus alternative-method results for all categories



3.1.4. Statistical interpretation with 2 successive dilutions and manual reading

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.

Table 4 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 4: values for the Bland-Altman difference plot

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Dairy products	36	0,50	-0,07	-1,09	0,96
Meat products	15	0,13	-0,08	-0,36	0,20
Seafood products	19	0,44	0,03	-0,92	0,13
Fruit & vegetables products	17	0,40	-0,46	-0,94	0,42
Egg products	15	0,33	0,00	-0,73	0,73
All cat.	102	0,44	-0,11	-0,98	0,77

Overall, the average deviation is equal to -0.11, showing a slightly negative bias between the NEOGEN Petrifilm RAC method and the reference method. The average difference varies from -0.46 log CFU/g (fruits & vegetables) to 0.03 CFU/g (seafood products). The upper and lower limits of the 95% confidence interval range from 0.77 to -0.98.

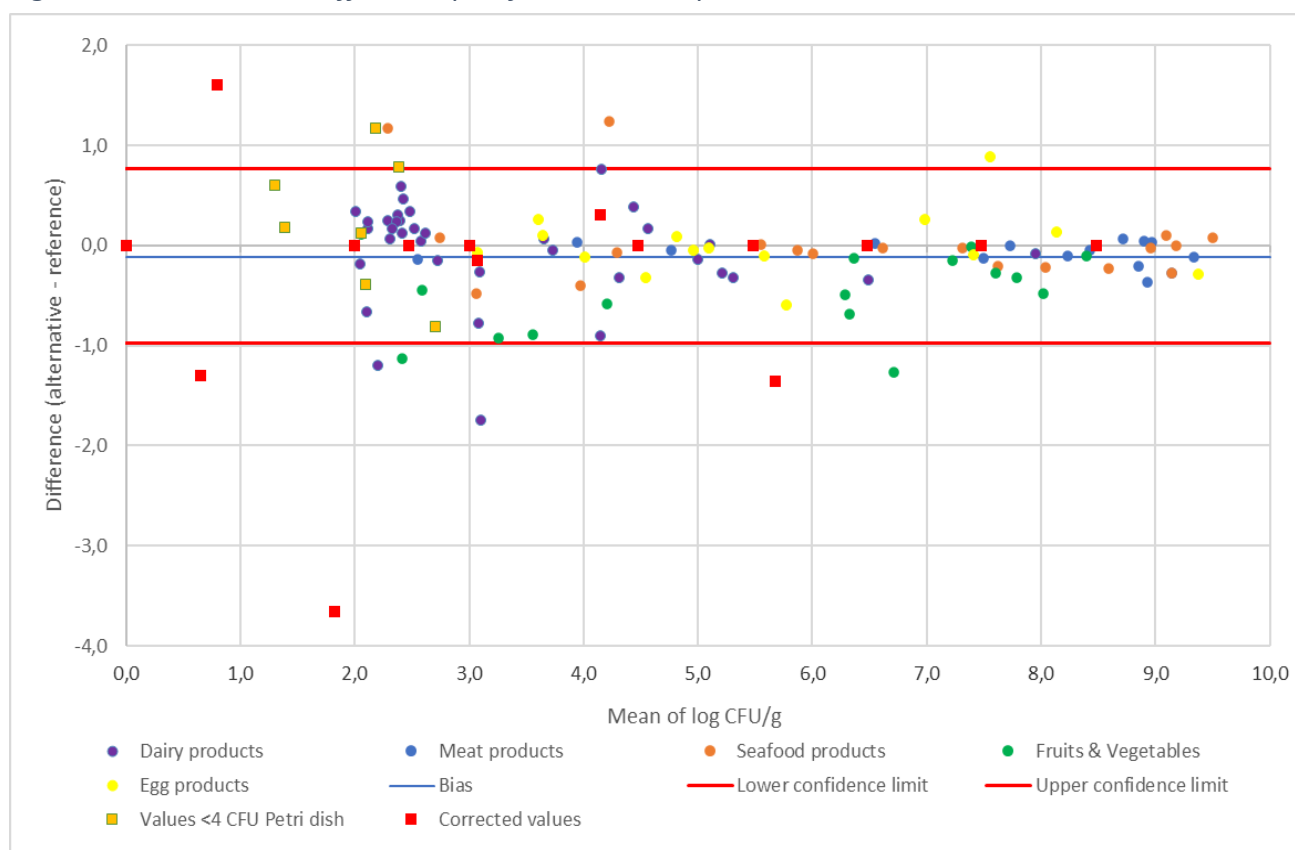
Note: Fruit & vegetables products category presents a bias equal to -0.46.

The Bland-Altman difference plots are presented in figure 3 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2/A1:2024 requirements.

Figure 3: Bland-Altman difference plot for all the samples.



- **Observations:**

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

Table 5: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits)

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.98 UCL: 0.77	Dairy products	a	4562	3,98	2,23	3,10	-1,75
		b	4738	2,81	1,60	2,20	-1,20
		b	4559	1,60	2,77	2,19	1,17
		c	4567	0,00	1,60	0,80	1,60
	Seafood products	c	2939504	3,60	4,85	4,22	1,24
		c	2939502	1,70	2,88	2,29	1,18
	Fruit and vegetables	b	2986130	7,34	6,08	6,71	-1,26
		c	2939508	2,98	1,85	2,41	-1,13
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	0,00	1,83	-3,65
	Egg products	b	2976256	7,11	8,00	7,56	0,89
		a	2976254	2,00	2,78	2,39	0,78
		c	2986203	6,36	5,00	5,68	-1,36

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits

Thirteen samples are out of the confidence limits: 6 concern corrected values or samples with less than 4 CFU/Petri dish, 4 are lower than the lower confidence limit and 3 are higher than the upper confidence limit. For the seven interpretable samples outside the confidence limits, new tests were carried out on similar matrices and all the results obtained were satisfactory.

3.1.5. Storage of the NEOGEN Petrifilm with 2 successive dilutions before manual reading

- **Milk powder and dairy products: storage 1 week at -18°C:**

The following enumerations were done:

- For non-powdered dairy products, 18 samples were analyzed providing 14 interpretable results by the alternative method.
- For powdered dairy products, 27 samples were tested for 23 interpretable results.

A first enumeration was done after incubation for 26 h or 45 h at 30°C ± 1°C. A second enumeration was done after storage of the NEOGEN Petrifilm plates for one week at - 18°C (post incubation). For interpretation, the two reading times were compared.

The scatter plots are presented in Figure 4 and the Bland-Altman graph in Figure 5.

On scatter plots:

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

- 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/A1:20124 requirements.

Figure 4: storage for one week at -18°C for milk powder and dairy products.

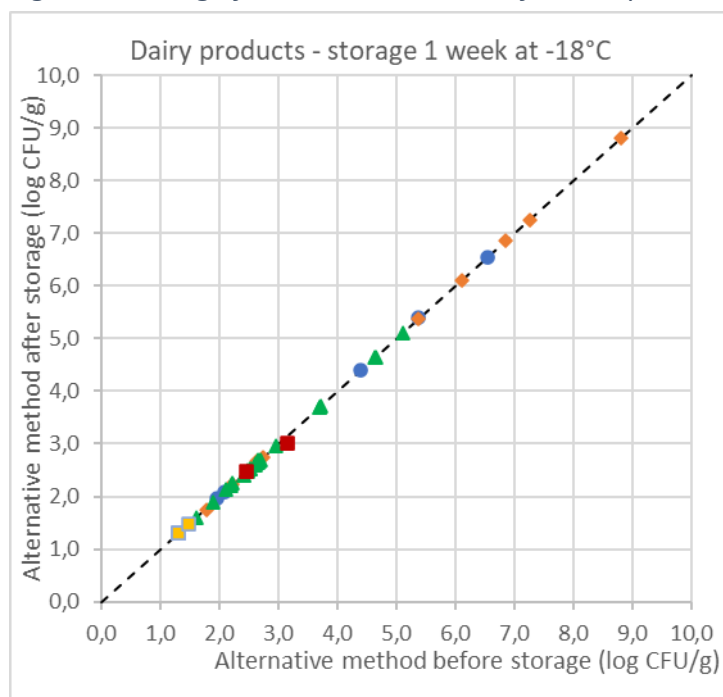
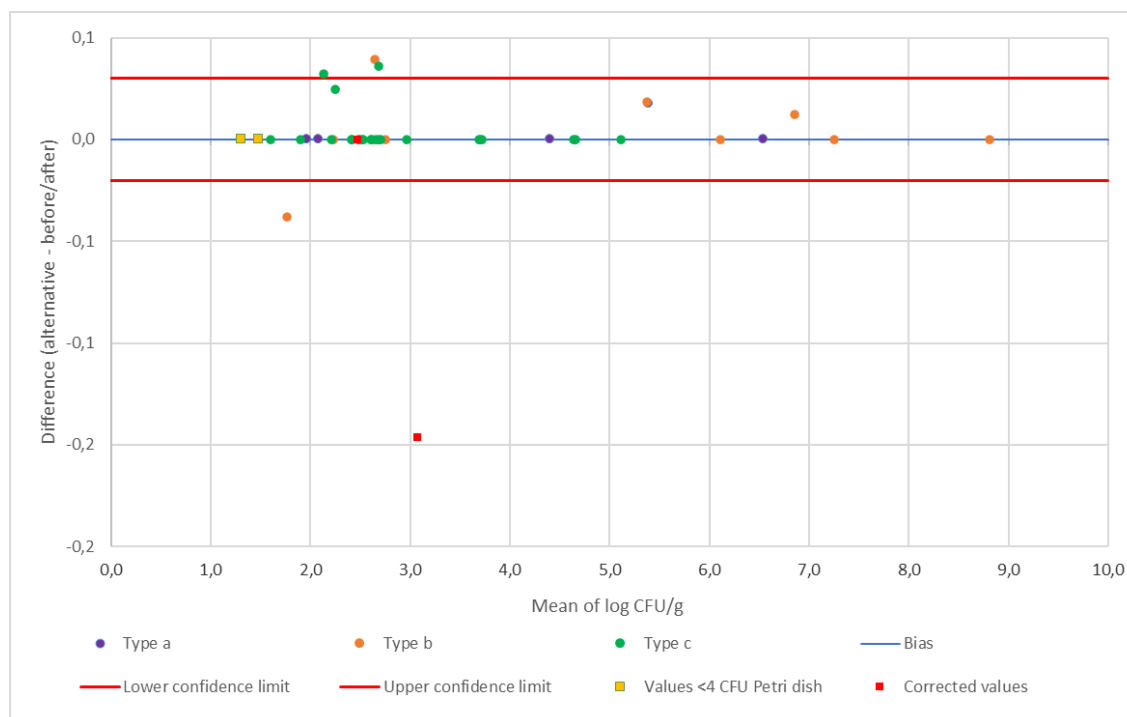


Figure 5: Bland-Altman – all dairy products - Enumeration before and after storage for one week at -18°C.



The calculated values for Average difference and Standard deviation differences are provided in table 6.

Table 6: calculated values.

Types	n	D	SD	95% lower limit	95% upper limit
Non-powdered dairy products and milk powder	37	0.00	0.01	-0.02	0.03
All products	37	0.00	0.01	-0.02	0.03

There were no differences observed in results before or after storage of the NEOGEN Petrifilm plates (post incubation). The calculated CL limits are - 0.02 and + 0.03; which are values closed to 0. Four samples are outside the CL limits (See table 6), the difference observed for the samples outside the CL is very low, as seen in table 7.

Table 7: samples outside the CL

Type	N° Sample	Product	Reference method	Alternative method	Mean	Difference
b	5573	Ice cream	2.62	2.66	2.64	0.04
b	5575	Rice pudding	1.78	1.74	1.76	-0.04
c	3721	Infant formula	2.66	2.70	2.68	0.04
c	5124	Infant formula with probiotics	2.11	2.15	2.13	0.03

- **Meat products, seafood products, fruit and vegetables and egg products: storage 72h at 5±3°C:**

During this extension study, a storage of the NEOGEN Petrifilm RAC was applied for 72h at 5±3°C after the first reading. The results obtained after storage were compared to the reference method.

The scatter plot for the four new categories is presented in Figure 6 and the Bland-Altman graph in Figure 7.

Figure 6: scatter plots of reference-method versus alternative-method manual reading after storage 72h at 5±3°C

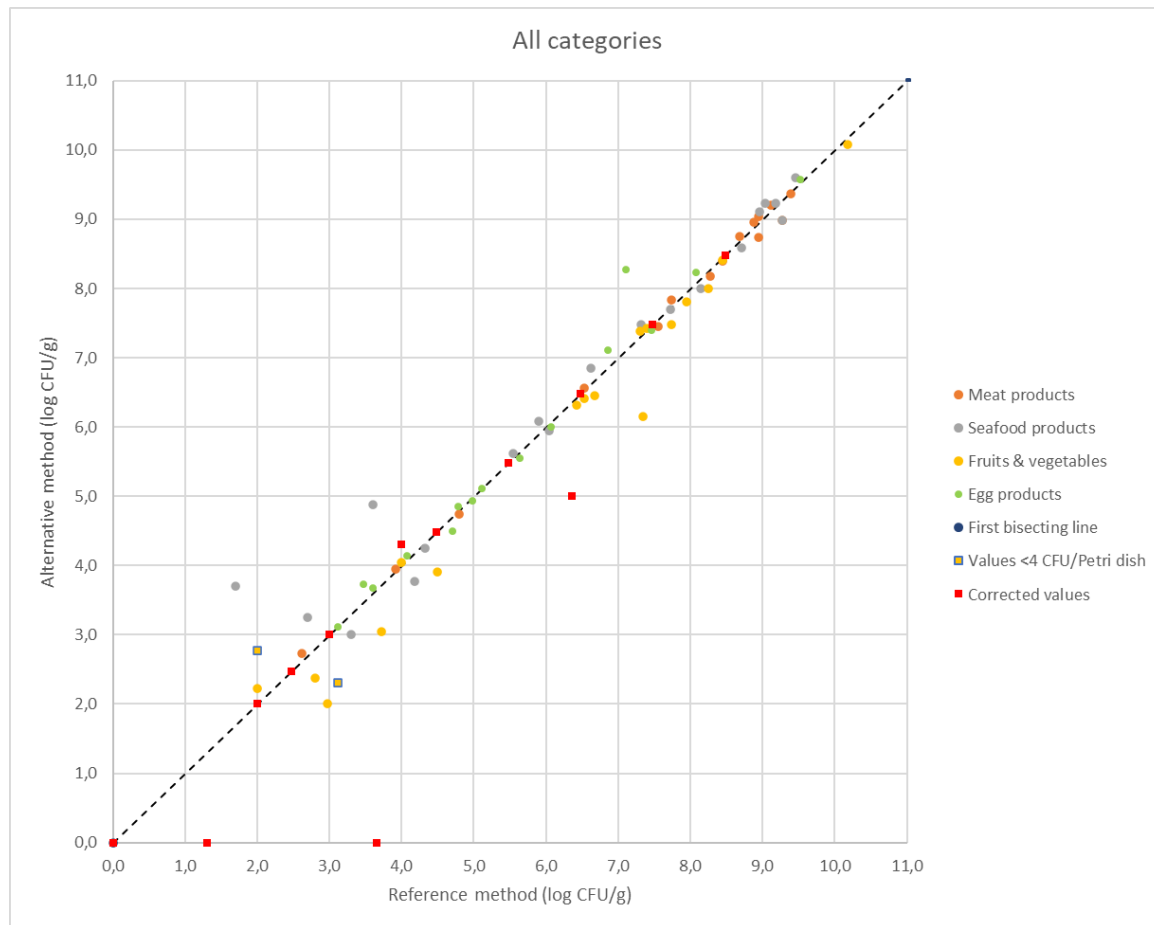
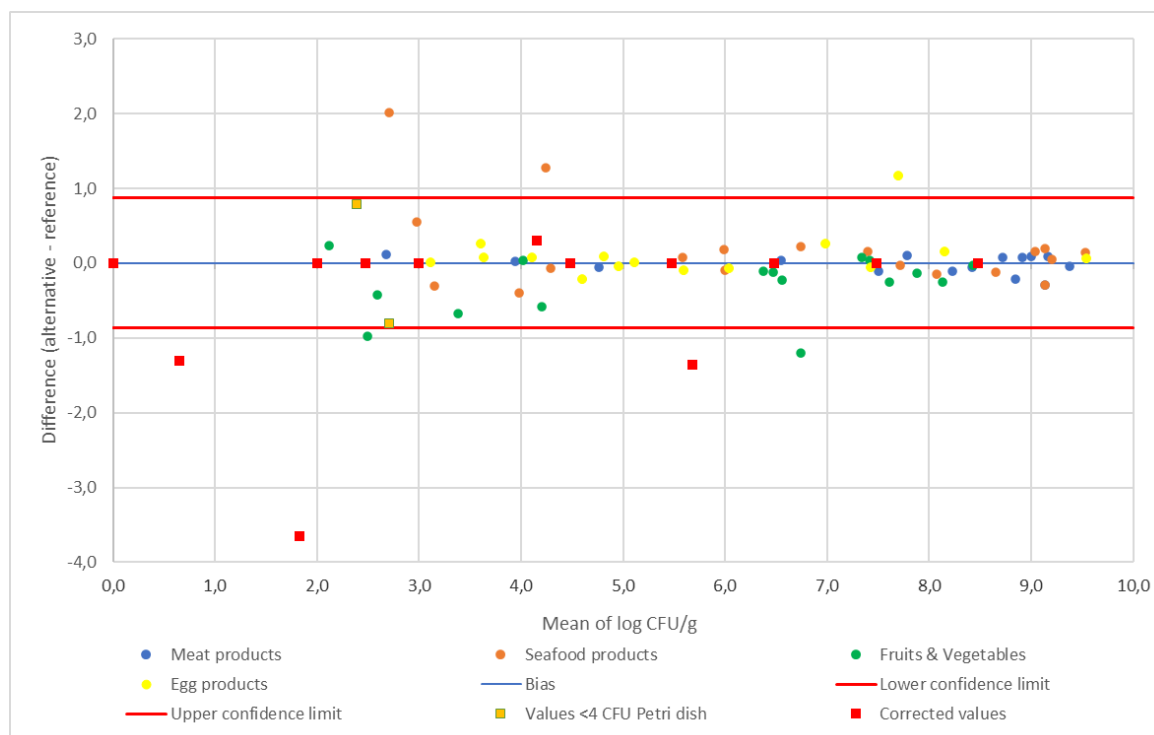


Figure 7: Bland-Altman – Enumeration for manual reading after storage for 72h at 5±3°C.



The calculated values for Average difference and Standard deviation differences are provided in table 8.

Table 8: calculated values after storage.

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,13	-0,02	-0,29	0,26
Seafood products	19	0,44	0,19	-1,04	0,12
Fruit & vegetables products	17	0,40	-0,28	-1,06	0,56
Egg products	15	0,33	0,11	-0,60	0,81
All cat.	66	0,44	0,00	-0,86	0,87

Note: Fruit & vegetables products category presents a bias equal to -0.28.

- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 9.

Table 9: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits) after storage

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.86 UCL: 0.87	Seafood products	c	2939504	3,60	4,88	4,24	1,27
		c	2939502	1,70	3,71	2,70	2,01
	Fruit and vegetables	b	2986130	7,34	6,15	6,74	-1,20
		c	2939508	2,98	2,00	2,49	-0,98
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	0,00	1,83	-3,65
	Egg products	b	2976256	7,11	8,28	7,70	1,16
		c	2986203	6,36	5,00	5,68	-1,36

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits

Eight samples are out of the confidence limits: 3 concern corrected values or samples with less than 4 CFU/Petri dish, 3 are lower than the lower confidence limit and 2 are upper than the upper confidence limit.

3.1.6. Conclusion with 2 successive dilutions with manual reading

The relative trueness study of the alternative method is satisfactory.

It is possible to store the NEOGEN Petrifilm plates for one week at - 18°C (post incubation) before proceeding to enumeration.

It is possible to store the NEOGEN Petrifilm plates for 72 hours at 5±3°C (post incubation) before proceeding to enumeration.

3.1.7. Results obtained with 2 successive dilutions (2 plates) and automatic reading (PPRA)

During this extension, the performance of the PPRA automatic reader was evaluated. A statistical interpretation of the results obtained was carried out in comparison to the results obtained with the reference method.

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,
- those lower or higher than the quantification limits,
- Undetermined results.

The same samples as for manual reading were interpreted.

All results are presented in scatter plots per category:

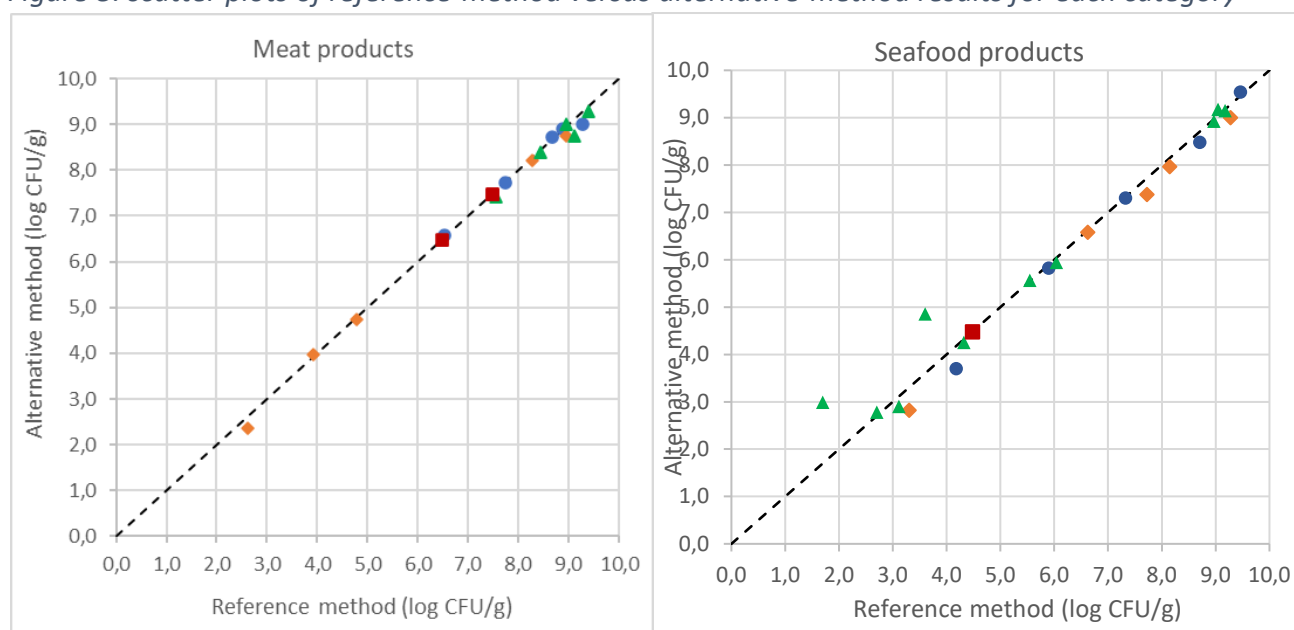
- Figure 8: scatter plots for each category,
- Figure 9: scatter plots for all categories,

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- 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/A1:20124 requirements.

Raw results are shown in Appendix D.

Figure 8: scatter plots of reference-method versus alternative-method results for each category



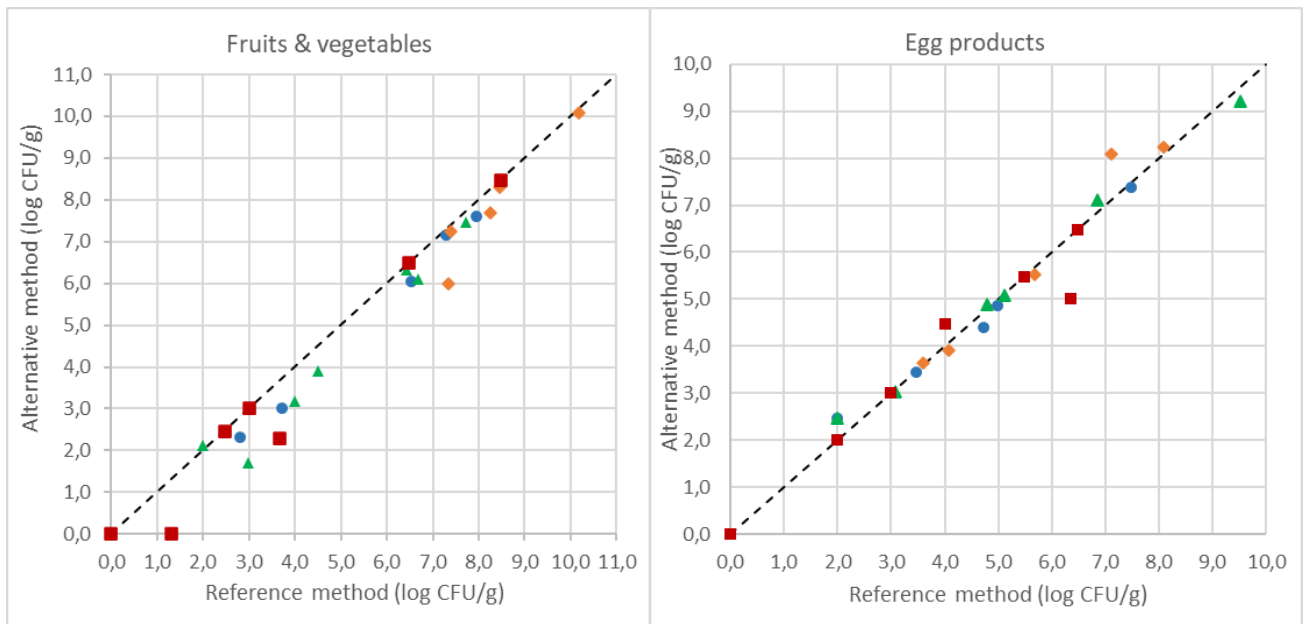
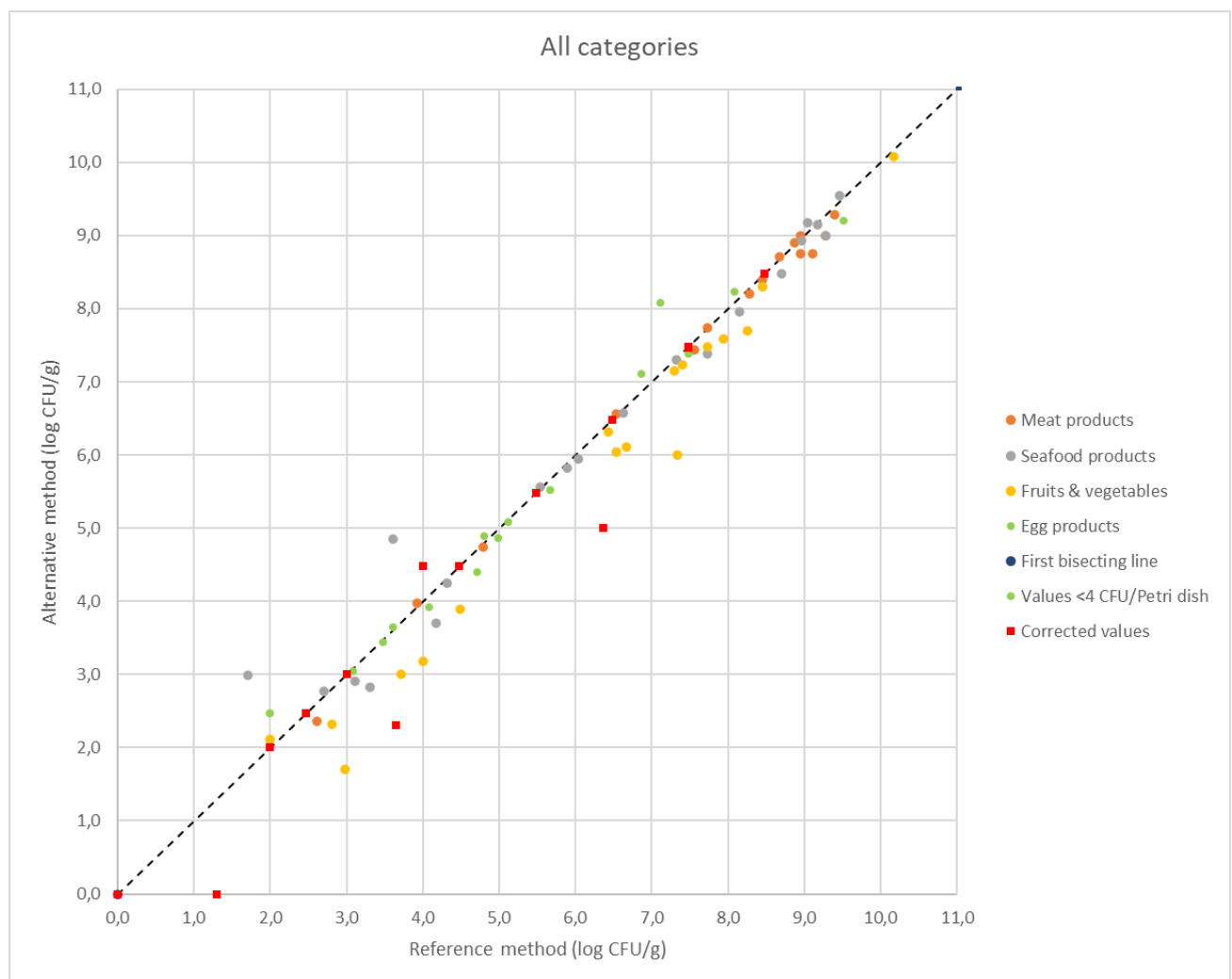


Figure 9: scatter plots of reference-method versus alternative-method results for all categories



3.1.8. Statistical interpretation with 2 successive dilutions and automatic reading

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

Statistical calculations are presented in Appendix F, as well as the results excluded from the statistical analysis per category.

Table 10 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 10: values for the Bland-Altman difference plot

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,13	-0,09	-0,38	0,21
Seafood products	20	0,46	0,01	-0,98	1,01
Fruit & vegetables products	17	0,40	-0,47	-1,35	0,41
Egg products	15	0,33	0,05	-0,68	0,77
All cat.	67	0,41	-0,12	-0,96	0,71

Overall, the average deviation is equal to -0.12, showing a slightly negative bias between the NEOGEN Petrifilm RAC method and the reference method with an automatic reading. The average difference varies from -0.47 log CFU/g (fruits & vegetables) to 0.05 CFU/g (egg products).

The upper and lower limits of the 95% confidence interval range from 0.71 to -0.96.

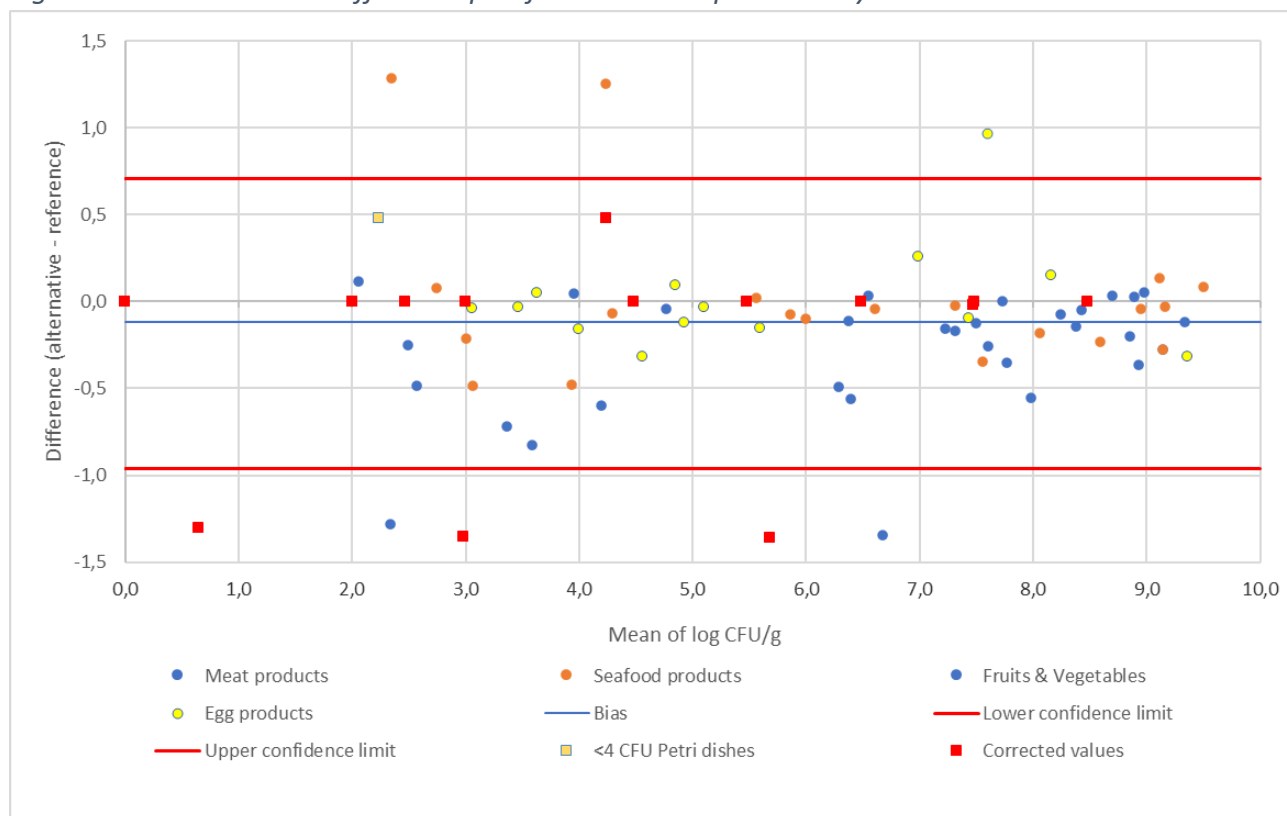
Note: Fruit & vegetables products category presents a bias equal to -0.47.

The Bland-Altman difference plots are presented in figure 10 for all categories tested during the extension.

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/A1:2024 requirements.

Figure 10: Bland-Altman difference plot for all the samples read by automatic PPRA reader



- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 11.

Table 11: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits)

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.96 UCL: 0.71	Seafood products	c	2939504	3,60	4,86	4,23	1,26
		c	2939502	1,70	2,99	2,34	1,29
	Fruit and vegetables	b	2986130	7,34	6,00	6,67	-1,34
		c	2939508	2,98	1,70	2,34	-1,28
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	2,30	2,98	-1,35
	Egg products	b	2976256	7,11	8,08	7,60	0,97
		c	2986203	6,36	5,00	5,68	-1,36

Eight samples are out of the confidence limits: 3 concern corrected values, 3 are lower than the lower confidence limit and 2 are upper than the upper confidence limit.

Table 12 summarizes the different results obtained between manual and automatic reading of the PPRA.

Table 12: comparison of the results obtained between manual reading and automatic reading of the PPRA

Category	Manual reader (2 dilutions)				Automatic PPRA reader (2 dilutions)			
	Bias	SD	Confidence limits	Samples outside the limits	Bias	SD	Confidence limits	Samples outside the limits
MP	-0,08	0,13	[-0,36-0,20]	0	-0,09	0,13	[-0,38-0,21]	0
SFP	0,03	0,44	[-0,92-0,13]	2	0,01	0,46	[-0,98-1,01]	2
F&V P	-0,46	0,40	[-0,94-0,42]	4	-0,47	0,40	[-1,35-0,41]	4
EP	0,00	0,33	[-0,73-0,73]	2	0,05	0,33	[-0,68-0,77]	2
All cat.	-0,13	0,40	[-0,94-0,68]	9	-0,12	0,41	[-0,96-0,71]	8

MP: meat products / SFP: seafood products / F&V P: fruit and vegetables products / EP: egg products

The use of the PPRA automatic reader for reading Petrifilm is equivalent to manual reading.

3.1.9. Storage of the NEOGEN Petrifilm with 2 successive dilutions before automatic PPRA reading

During this extension study, a storage of the NEOGEN Petrifilm RAC was applied for 72h at 5±3°C after the first reading. The results obtained with the automatic reader after storage were compared to the reference method.

The scatter plot for the four new categories is presented in Figure 11 and the Bland-Altman graph in Figure 12.

Figure 11: scatter plots of reference-method versus alternative-method automatic reading after storage 72h at $5\pm 3^{\circ}\text{C}$

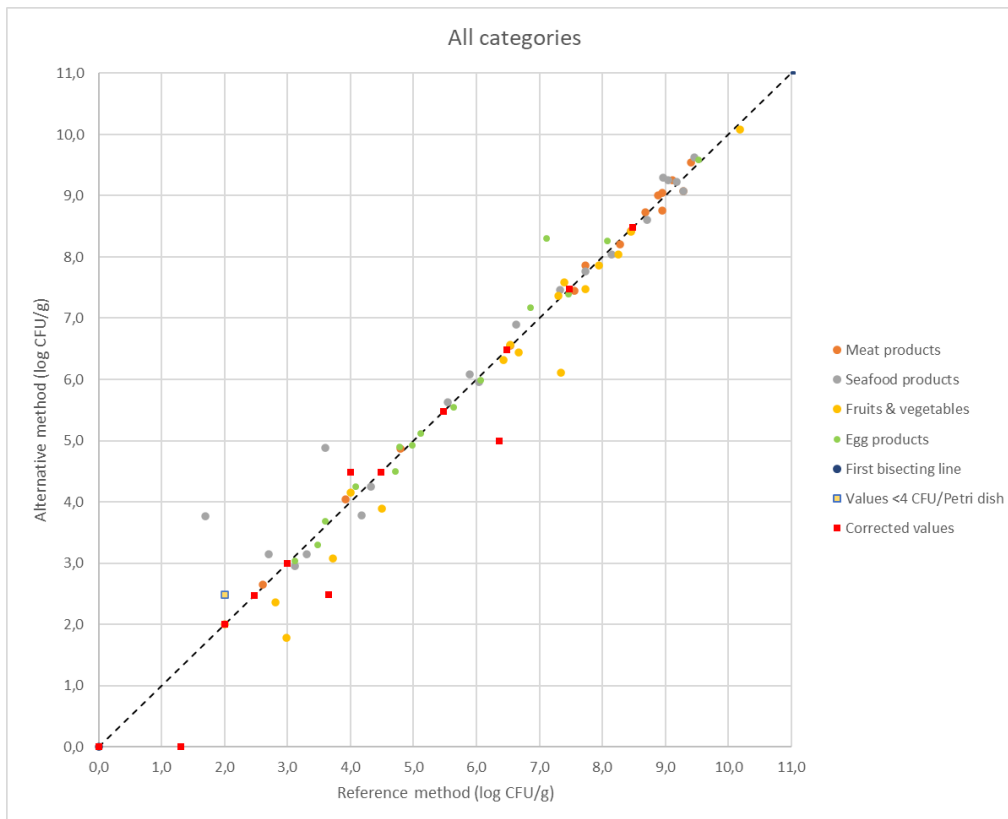
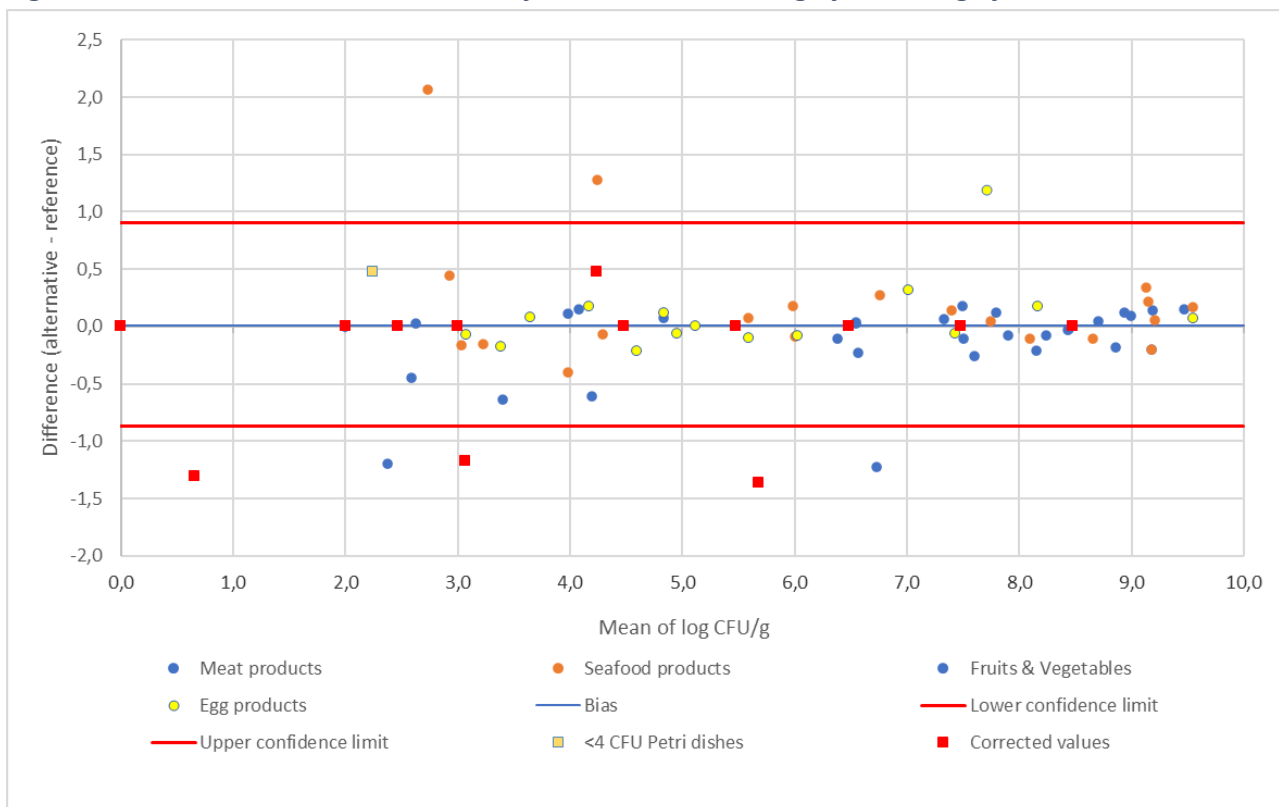


Figure 12: Bland-Altman – Enumeration for automatic reading after storage for 72h at $5\pm 3^{\circ}\text{C}$.



The calculated values for Average difference and Standard deviation differences are provided in table 13.

Table 13: calculated values obtained by automatic reader after storage.

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,12	0,02	-0,23	0,28
Seafood products	19	0,56	0,20	-1,00	1,40
Fruit & vegetables products	17	0,30	-0,28	-1,20	0,65
Egg products	15	0,34	0,09	-0,65	0,83
All cat.	66	0,44	0,01	-0,87	0,90

Note: Fruit & vegetables products category presents a bias equal to -0.28.

- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 14.

Table 14: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits) after storage

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.86 UCL: 0.87	Seafood products	c	2939504	3,60	4,88	4,24	1,28
		c	2939502	1,70	3,76	2,73	2,06
	Fruit and vegetables	b	2986130	7,34	6,11	6,73	-1,23
		c	2939508	2,98	1,78	2,38	-1,20
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	2,48	3,07	-1,18
	Egg products	b	2976256	7,11	8,30	7,71	1,19
		c	2986203	6,36	5,00	5,68	-1,36

Eight samples are out of the confidence limits: 3 concern corrected values or samples with less than 4 CFU/Petri dish, 2 are lower than the lower confidence limit and 3 are upper than the upper confidence limit.

3.1.10. Conclusion with 2 successive dilutions with automatic reading

In comparison to the ISO method, the relative trueness study of the alternative method with automatic reader is satisfactory.

It is possible to store the NEOGEN Petrifilm plates for 72 hours at 5±3°C (post incubation) before proceeding to enumeration. The use of the PPRA automatic reader for reading Petrifilm is equivalent to manual reading.

3.1.11. Results obtained with 1 dilution and manual reading

For this part, the first decimal dilution of the alternative method was retained except in the case where this dilution is greater than the quantification limits of the method.

For the reference method, the 2 successive interpretable dilutions were kept.

The data are classified in three categories:

- Interpretable results with reference and alternative methods,
- Results with less than 4 colonies per plate with the reference and/or the alternative method in order to have a more precise result. These results are not included in the calculation.
- Results below or above the quantification limit: according to the ISO 16140- 2/A1:2024, if any result (either reference or alternative method) is below the quantification limit, the data should be plotted using a substituted value of 1 log₁₀ units less than the observed value in case of a lower than value. Similarly, any value greater than the upper limit should be amended by adding 1 log unit. These results are not included in the calculations but also appear on the graphs.

Raw results are shown in Appendix G.

The samples, which were not used in the calculations, are provided in Table 15.

Table 15: samples which were not used in the calculations

Category	Type	#	Sample	RM	AM
				CFU/g	CFU/g
Dairy products	b	4465	Panna cotta	10	40
	b	4559	Ice cream	40	570
	b	4737	Dessert with chantilly	>30000000	>30000000
	c	4461	Infant formula with probiotics	20	30
	c	4462	Infant formula with probiotics	>300	NI
	c	4566	Infant formula with probiotics	1400	NI
	c	4567	Infant formula with probiotics	<10	40
	c	5123	Infant formula with probiotics	200	80
	c	5124	Infant formula with probiotics	100	120
Meat products	a	2939494	Beef steak	>30000000	>30000000
	b	2976234	Beef parmentier	>3000000	>3000000
	c	2939498	Sausage	>30000000	>30000000
Seafood products	b	2976239	Salmon	>30000	>30000
	c	2896127	Smoked tuna	1,30E+03	2,00E+02
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03
	a	2976247	Turnip	>3000000	>3000000
	b	2976249	Bagged mix of beets, white cabbage and carrots	>30000	>30000
	b	2976250	Bagged salad	>300000000	>300000000
	c	2939505	Carrots with cream	2,00E+01	<10
	c	2939506	Coleslaw with curry cream	4,50E+03	<10
	c	2986199	Vegetable soup	<10	<10
Egg products	a	2976254	Ile flottante	1,00E+02	6,00E+02
	a	2976252	Chocolate mousse	<10000	2,00E+04
	a	2976253	Tiramisu with speculoos	>3000000	>3000000
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000
	c	2939513	Flan	<100	<100
	c	2939514	Apple pie	<100	<100
	c	2939515	Plaisir 3 chocolats	<1000	<1000
	b	2986201	Egg white powder	<10	<10
	c	2986203	Far breton	2,30E+06	<100000

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,
- those lower or higher than the quantification limits,
- Undetermined results.

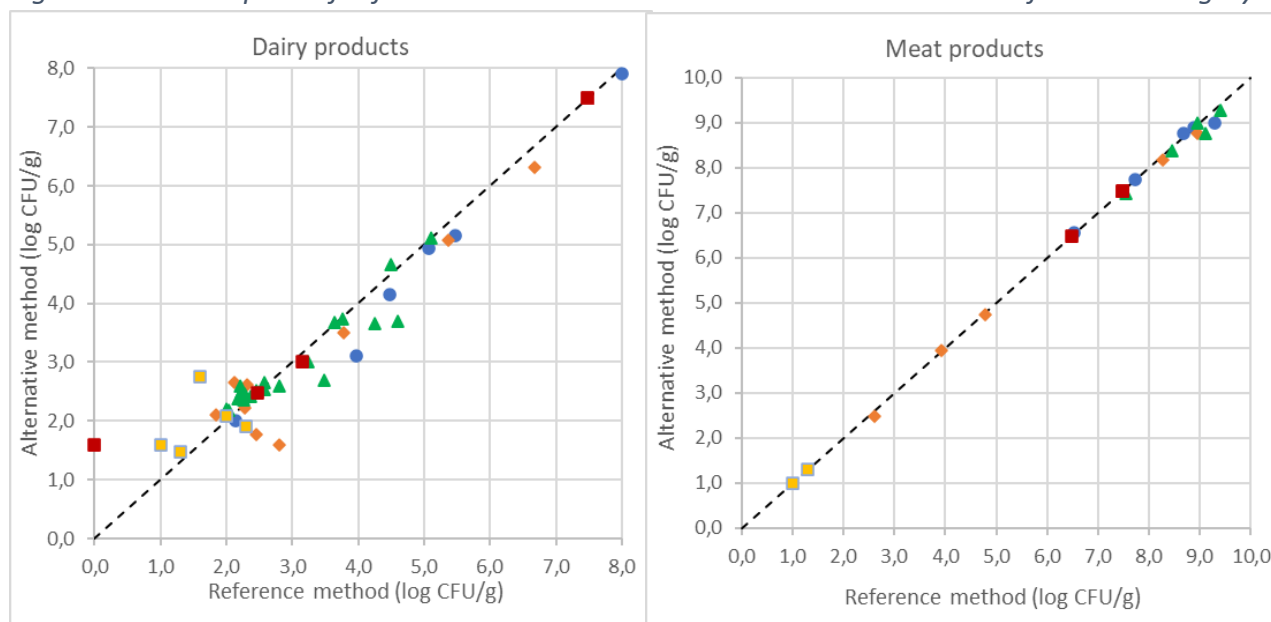
All results are presented in scatter plots per category:

- Figure 13: scatter plots for each category,
- Figure 14: scatter plots for all categories,

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- 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/A1:20124 requirements.

Figure 13: scatter plots of reference-method versus alternative-method results for each category



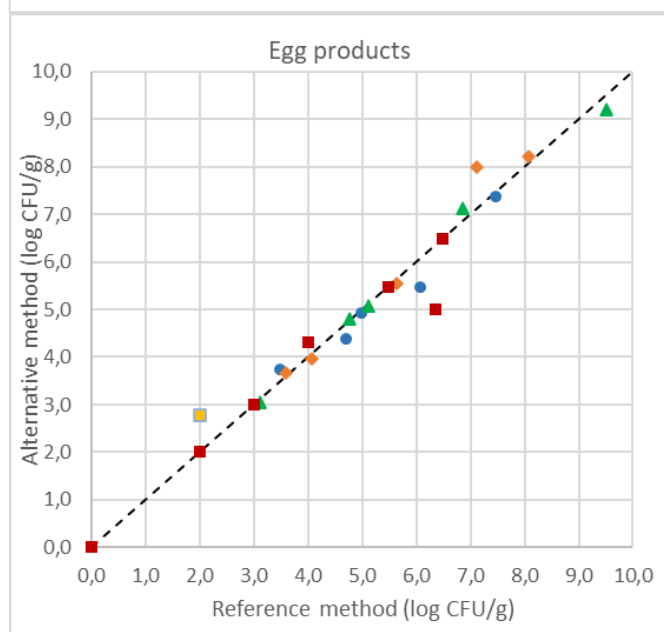
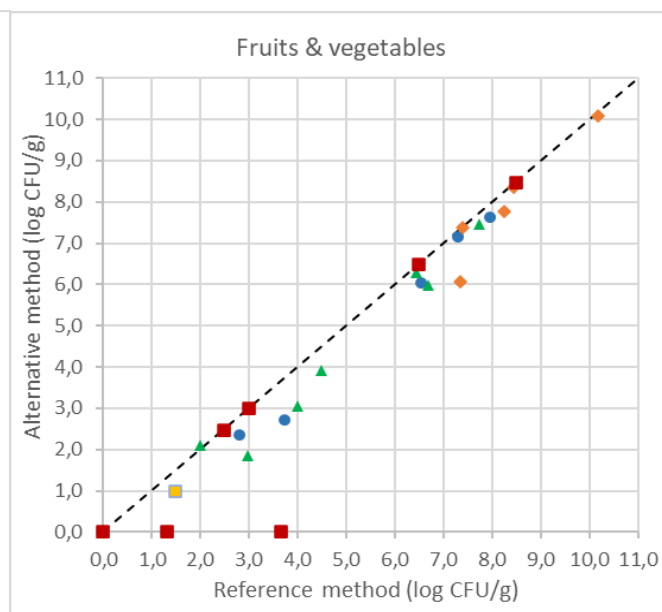
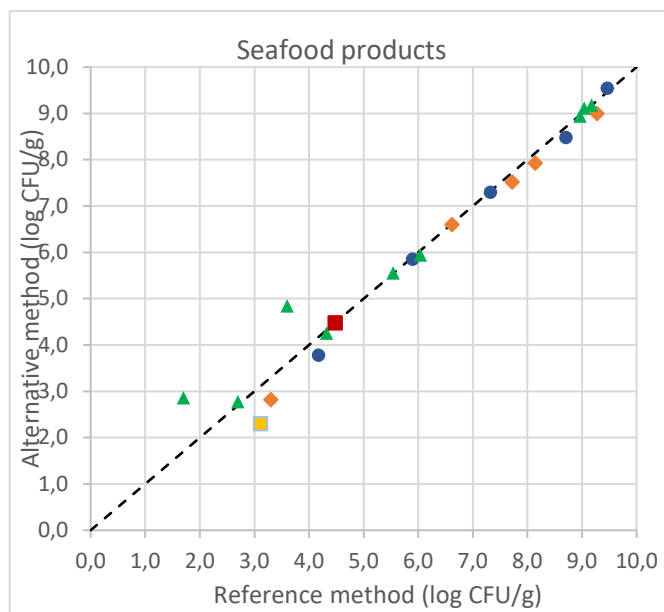
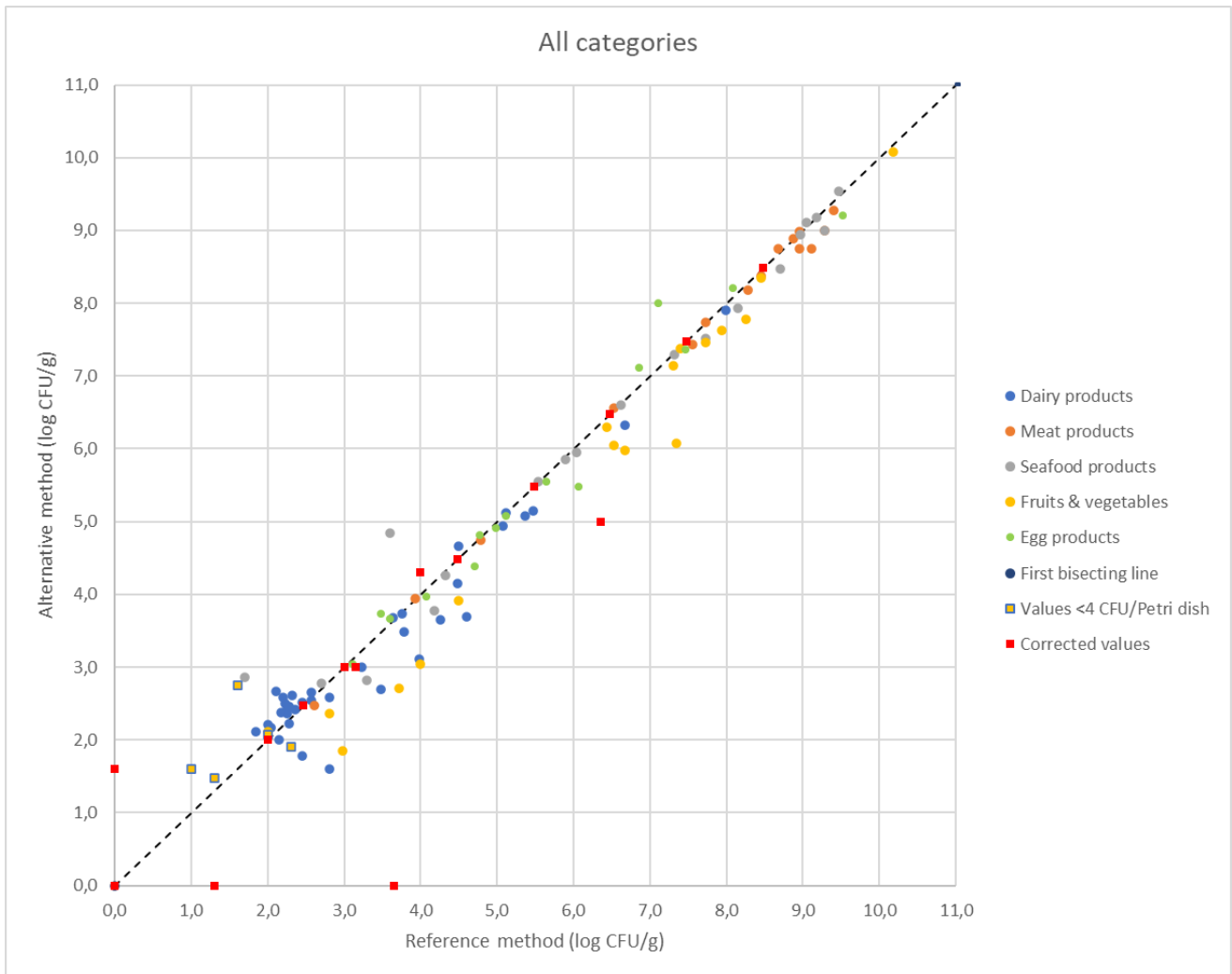


Figure 14: scatter plots of reference-method versus alternative-method results for all categories with one dilution



3.1.12. Statistical interpretation with 1 dilution and manual reading

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

Statistical calculations are presented in Appendix H, as well as the results excluded from the statistical analysis per category.

Table 16 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 16: values for the Bland-Altman difference plot for 1 dilution

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Dairy products	36	0,40	-0,12	-0,93	0,69
Meat products	15	0,12	-0,09	-0,36	0,19
Seafood products	19	0,44	0,03	-0,92	0,12
Fruit & vegetables products	17	0,41	-0,47	-0,94	0,43
Egg products	15	0,33	-0,01	-0,74	0,73
All cat.	102	0,40	-0,13	-0,93	0,67

Overall, the average deviation is equal to -0.13, showing a slightly negative bias between the NEOGEN Petrifilm RAC method (One dilution) and the reference method. The average difference varies from -0.47 log CFU/g (fruits & vegetables) to 0.03 CFU/g (seafood products). The upper and lower limits of the 95% confidence interval range from 0.67 to -0.93.

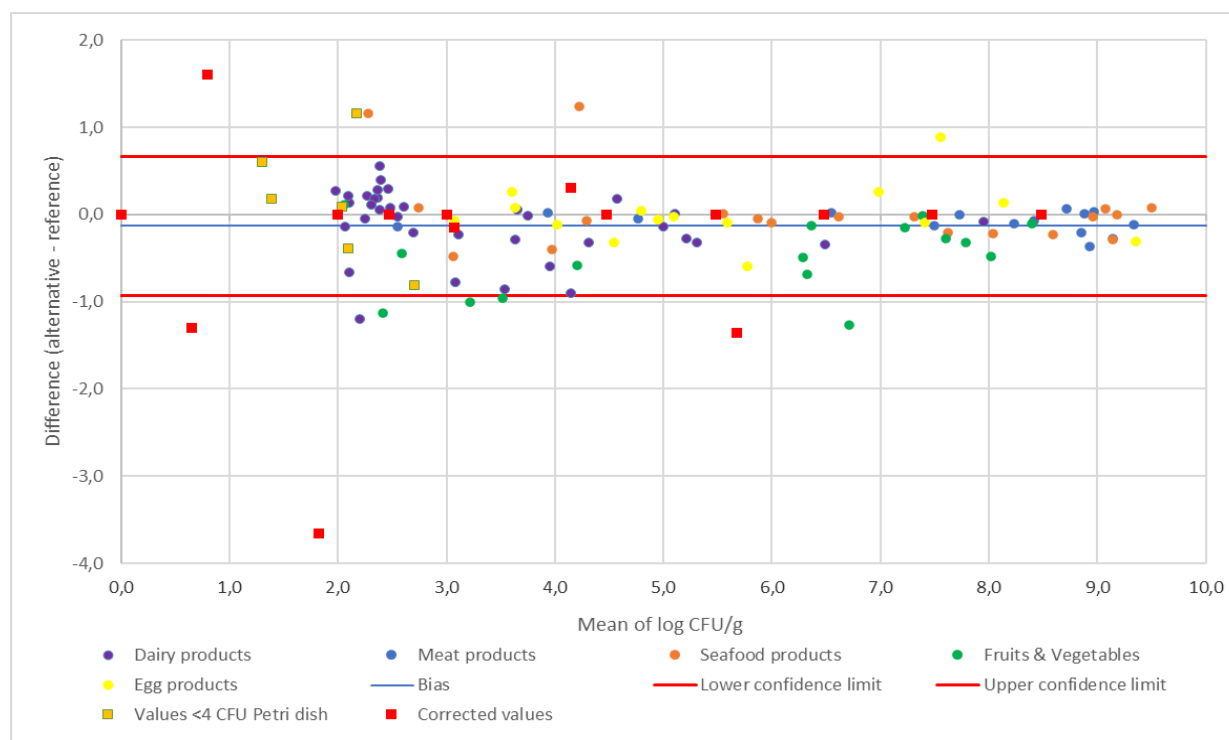
Note: Fruit & vegetables products category presents a bias equal to -0.47.

The Bland-Altman difference plots are presented in figure 15 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2/A1:2024 requirements.

Figure 15: Bland-Altman difference plot for all the samples.



- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 17.

Table 17: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits)

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.93 UCL: 0.67	Dairy products	b	4738	2,81	1,60	2,20	-1,20
		b	4559	1,60	2,76	2,18	1,15
		c	4567	0,00	1,60	0,80	1,60
	Seafood products	c	2939504	3,60	4,85	4,22	1,24
		c	2939502	1,70	2,86	2,28	1,16
	Fruit and vegetables	a	2986196	3,72	2,72	3,22	-1,00
		b	2986130	7,34	6,08	6,71	-1,26
		c	2939508	2,98	1,85	2,41	-1,13
		c	2986198	4,00	3,04	3,52	-0,96
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	0,00	1,83	-3,65
	Egg products	b	2976256	7,11	8,00	7,56	0,89
		a	2976254	2,00	2,78	2,39	0,78
		c	2986203	6,36	5,00	5,68	-1,36

Fourteen samples are out of the confidence limits: 6 concern corrected values or samples with less than 4 CFU/Petri dish, 5 are lower than the lower confidence limit and 3 are higher than the upper confidence limit. For the seven interpretable samples outside the confidence limits, new tests were carried out on similar matrices and all the results obtained were satisfactory.

3.1.13. Storage of the NEOGEN Petrifilm with 1 dilution before manual reading

- **Milk powder and dairy products: storage 1 week at -18°C:**

The following enumerations were done:

- For non-powdered dairy products, 18 samples were analyzed providing 14 interpretable results by the alternative method.
- For powdered dairy products, 27 samples were tested for 23 interpretable results.

A first enumeration was done after incubation for 26 h or 45 h at $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$. A second enumeration was done after storage of the NEOGEN Petrifilm plates for one week at -18°C (post incubation). For interpretation, the two reading times were compared with only one interpreted dilution.

The scatter plots are presented in Figure 16 and the Bland-Altman graph in Figure 17.

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- 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/A1:20124 requirements.

Figure 16: storage for one week at -18°C for milk powder and dairy products.

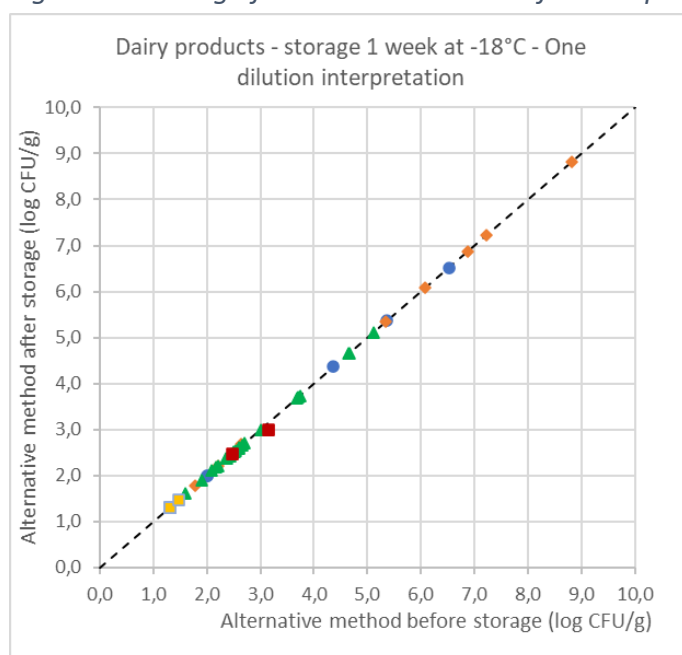
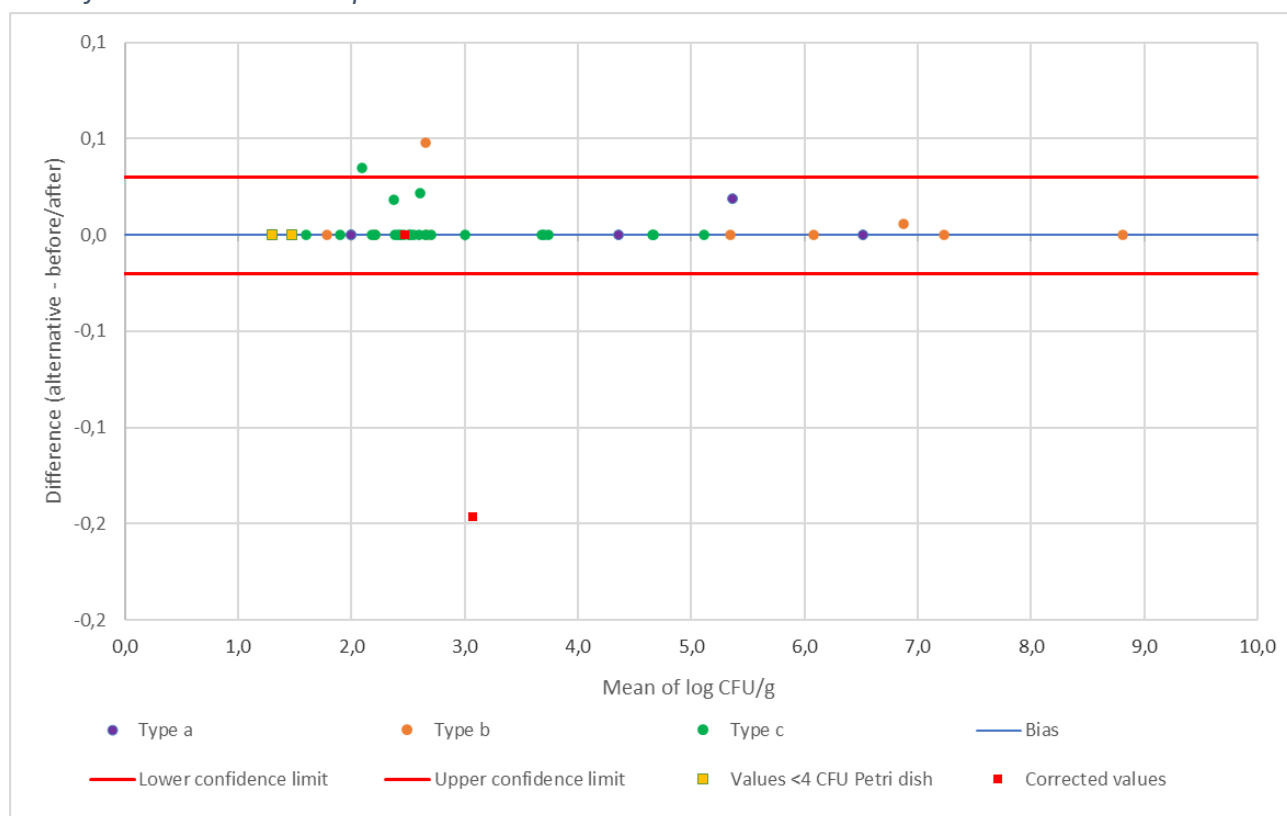


Figure 17: Bland-Altman – all dairy products - Enumeration before and after storage for one week at -18°C for one dilution interpreted.



The calculated values for Average difference and Standard deviation differences are provided in table 18.

Table 18: calculated values.

Types	n	D	SD	95% lower limit	95% upper limit
Non-powdered dairy products and milk powder	37	0.00	0.01	-0.02	0.03
All products	37	0.00	0.01	-0.02	0.03

There were no differences observed in results before or after storage of the NEOGEN Petrifilm plates (post incubation) with interpretation of one dilution. The calculated CL limits are - 0.02 and + 0.03; which are values closed to 0. Three samples are outside the CL limits, the difference observed for the samples outside the CL is very low, as seen in table 19.

Table 19: samples outside the CL

Type	N° Sample	Product	Alternative method before	Alternative method after	Mean	Difference
b	5573	Ice cream	2.63	2.68	2.66	0.05
c	5124	Infant formula with probiotics	2.08	2.11	2.10	0.03
c	4466	Infant formula with probiotics	3,15	3,00	3,07	-0,15

- **Meat products, seafood products, fruit and vegetables and egg products: storage 72h at 5±3°C:**

During this extension study, a storage of the NEOGEN Petrifilm RAC was applied for 72h at 5±3°C after the first reading. The results of one dilution obtained after storage were compared to the reference method.

The scatter plot for the four new categories is presented in Figure 18 and the Bland-Altman graph in Figure 19.

Figure 18: scatter plots of reference-method versus alternative-method manual reading after storage 72h at 5±3°C with one dilution interpreted.

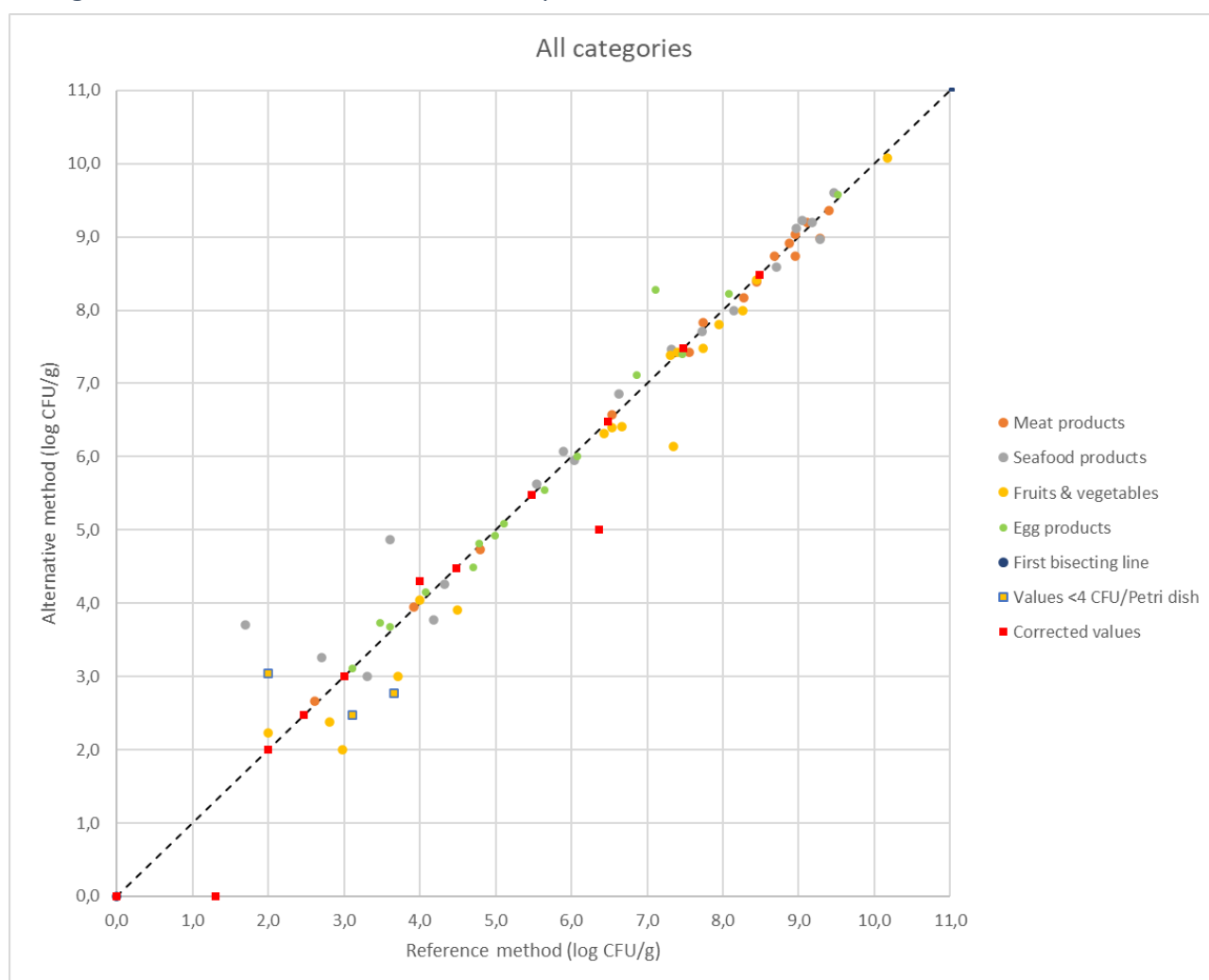
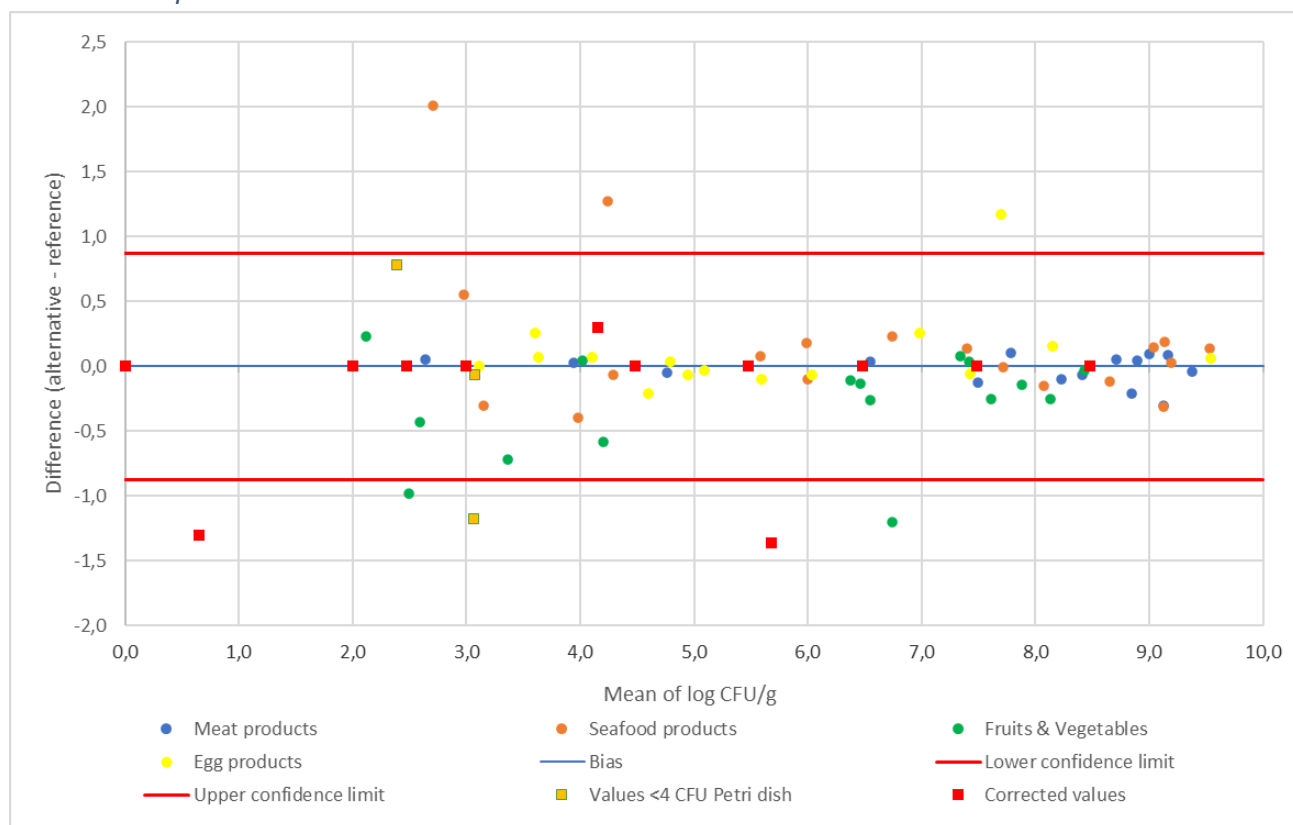


Figure 19: Bland-Altman – Enumeration for manual reading after storage for 72h at 5±3°C with one dilution interpreted.



The calculated values for Average difference and Standard deviation differences are provided in table 20.

Table 20: calculated with one dilution values after storage.

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,12	-0,03	-0,29	0,23
Seafood products	19	0,57	0,19	-1,05	0,12
Fruit & vegetables products	17	0,39	-0,28	-1,06	0,56
Egg products	15	0,32	0,10	-0,61	0,81
All cat.	66	0,43	0,00	-0,87	0,87

Note: Fruit & vegetables products category presents a bias equal to -0.28.

- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 21.

Table 21: values outside the confidence limits on the Bland-Altman difference plot after storage

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.86 UCL: 0.87	Seafood products	c	2939504	3,60	4,88	4,24	1,27
		c	2939502	1,70	3,71	2,70	2,01
	Fruit and vegetables	b	2986130	7,34	6,15	6,74	-1,20
		c	2939508	2,98	2,00	2,49	-0,98
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	2,45	3,07	-1,18
	Egg products	b	2976256	7,11	8,28	7,70	1,16
		c	2986203	6,36	5,00	5,68	-1,36

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits

Eight samples are out of the confidence limits: 3 concern corrected values or samples with less than 4 CFU/Petri dish, 2 are lower than the lower confidence limit and 3 are upper than the upper confidence limit.

3.1.14. Conclusion for one dilution with manual reading

The relative trueness study of the alternative method is satisfactory.

It is possible to store the NEOGEN Petrifilm plates for one week at - 18°C (post incubation) before proceeding to enumeration.

It is possible to store the NEOGEN Petrifilm plates for 72 hours at 5±3°C (post incubation) before proceeding to enumeration.

3.1.15. Results obtained with 1 dilution and automatic reading (PPRA)

During this extension, the performance of the PPRA automatic reader was evaluated. A statistical interpretation of the results obtained with one dilution was carried out in comparison to the results obtained with the reference method.

Note: Dairy products category being already validated, the use of the PPRA could not be carried out. Only the 4 additional categories were tested.

Raw results are presented in Appendix G.

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,
- those lower or higher than the quantification limits,
- Undetermined results.

The same samples as for manual reading were interpreted.

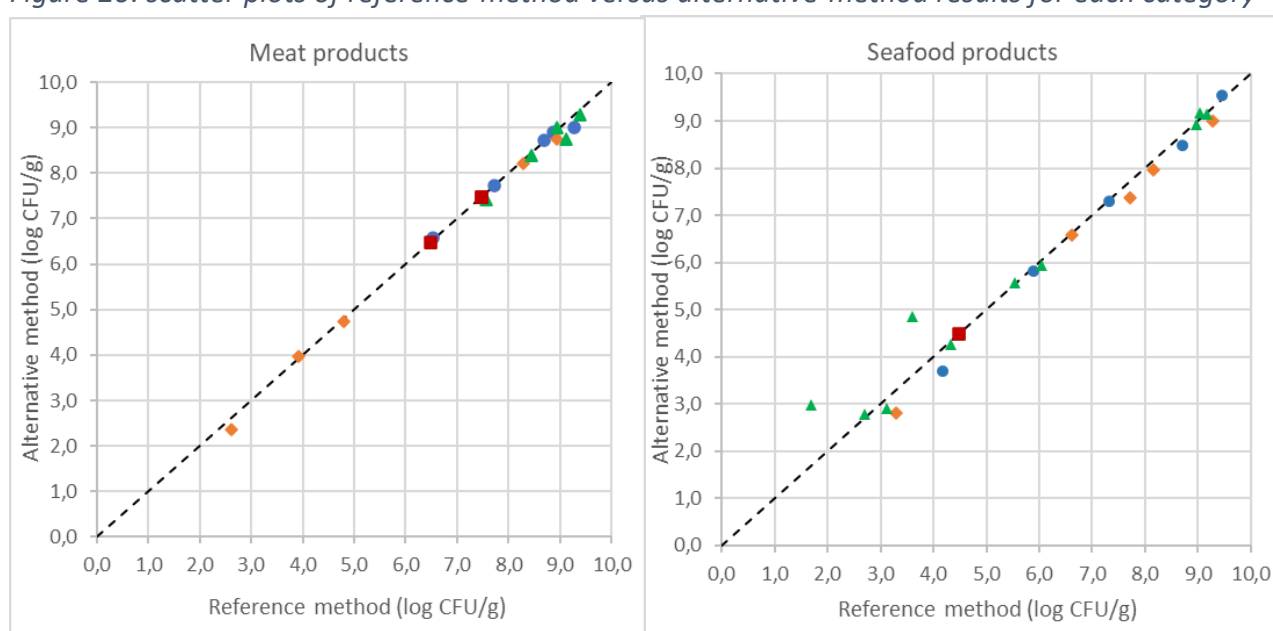
All results are presented in scatter plots per category:

- Figure 20: scatter plots for each category,
- Figure 21: scatter plots for all categories,

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- 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/A1:20124 requirements.

Figure 20: scatter plots of reference-method versus alternative-method results for each category



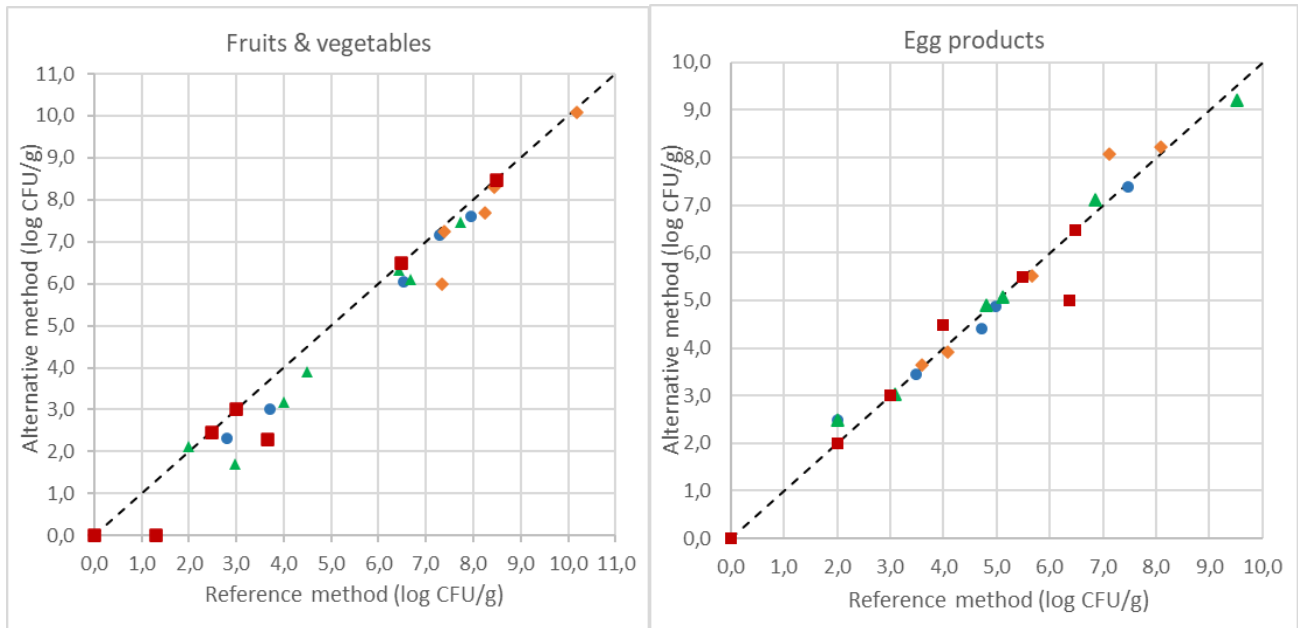
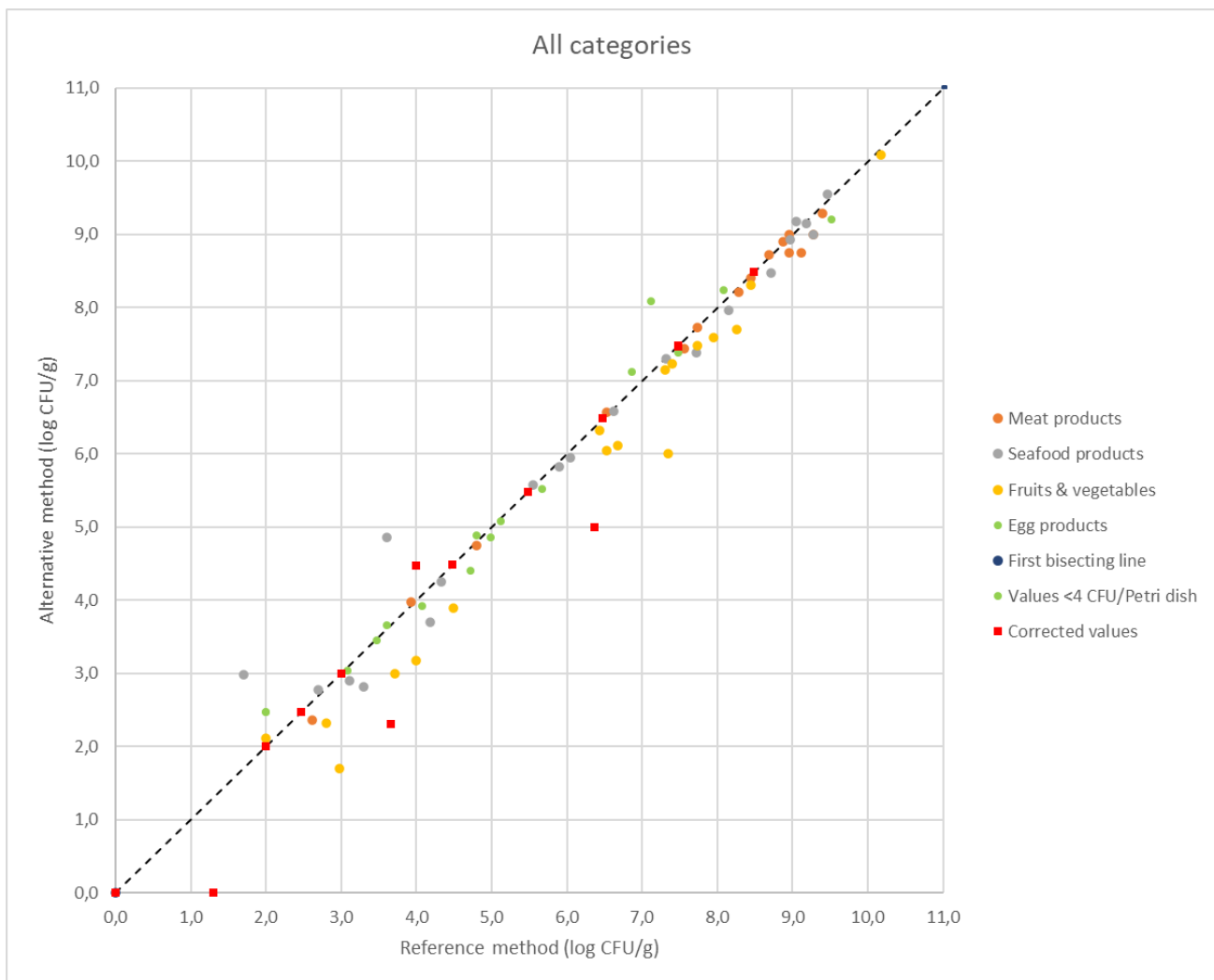


Figure 21: scatter plots of reference-method versus alternative-method results for all categories



3.1.16. Statistical interpretation with 1 dilution and automatic reading

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

Statistical calculations are presented in Appendix I, as well as the results excluded from the statistical analysis per category.

Table 22 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 22: values for the Bland-Altman difference plot

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,13	-0,09	-0,38	0,21
Seafood products	19	0,46	0,01	-0,98	1,01
Fruit & vegetables products	17	0,40	-0,47	-1,35	0,41
Egg products	15	0,33	0,05	-0,68	0,77
All cat.	67	0,41	-0,12	-0,96	0,71

Overall, the average deviation is equal to -0.12, showing a slightly negative bias between the NEOGEN Petrifilm RAC method and the reference method with an automatic reading. The average difference varies from -0.47 log CFU/g (fruits & vegetables) to 0.05 CFU/g (egg products).

The upper and lower limits of the 95% confidence interval range from 0.71 to -0.96.

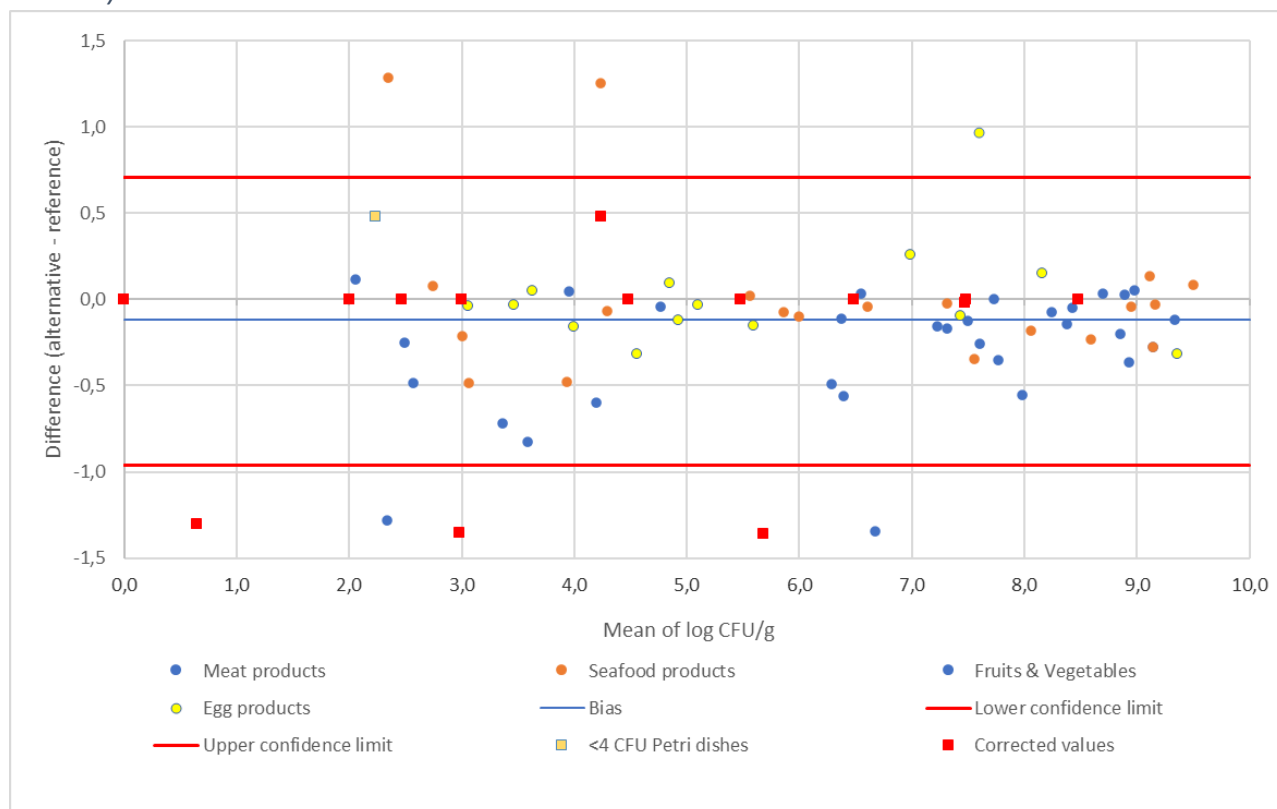
Note: Fruit & vegetables products category presents a bias equal to -0.47.

The Bland-Altman difference plots are presented in figure 22 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2/A1:2024 requirements.

Figure 22: Bland-Altman difference plot for all the samples read by automatic PPRA reader (one dilution)



- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 23.

Table 23: values outside the confidence limits on the Bland-Altman difference plot

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.96 UCL: 0.71	Seafood products	c	2939504	3,60	4,86	4,23	1,26
		c	2939502	1,70	2,99	2,34	1,29
	Fruit and vegetables	b	2986130	7,34	6,00	6,67	-1,34
		c	2939508	2,98	1,70	2,34	-1,28
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	2,30	2,98	-1,35
	Egg products	b	2976256	7,11	8,08	7,60	0,97
		c	2986203	6,36	5,00	5,68	-1,36

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits

Eight samples are out of the confidence limits: 3 concern corrected values, 3 are lower than the lower confidence limit and 2 are higher than the upper confidence limit.

Table 24 summarizes the different results obtained between manual and automatic reading of the PPRA.

Table 24: comparison of the results obtained with one dilution between manual reading and automatic reading of the PPRA

Category	Manual reader (1 dilution)				Automatic PPRA reader (1 dilution)			
	Bias	SD	Confidence limits	Samples outside the limits	Bias	SD	Confidence limits	Samples outside the limits
MP	-0,09	0,12	[-0,36-0,19]	0	-0,09	0,13	[-0,38-0,21]	0
SFP	0,03	0,44	[-0,92-0,12]	2	0,01	0,46	[-0,98-1,01]	2
F&V P	-0,47	0,41	[-0,94-0,43]	6	-0,47	0,40	[-1,35-0,41]	4
EP	0,01	0,33	[-0,74-0,73]	3	0,05	0,33	[-0,68-0,77]	2
All cat.	-0,13	0,40	[-0,93-0,67]	11	-0,12	0,41	[-0,96-0,71]	8

MP: meat products / SFP: seafood products / F&V P: fruit and vegetables products / EP: egg products

The use of the PPRA automatic reader for reading Petrifilm is equivalent to manual reading for an interpretation with one dilution.

3.1.17. Storage of the NEOGEN Petrifilm with 1 dilution before automatic PPRA reading

During this extension study, a storage of the NEOGEN Petrifilm RAC was applied for 72h at 5±3°C after the first reading. The results obtained with the automatic reader after storage were compared to the reference method.

The scatter plot for the four new categories is presented in Figure 23 and the Bland-Altman graph in Figure 24.

Figure 23: scatter plots of reference-method versus alternative-method automatic reading after storage 72h at $5\pm 3^{\circ}\text{C}$ and interpretation with one dilution

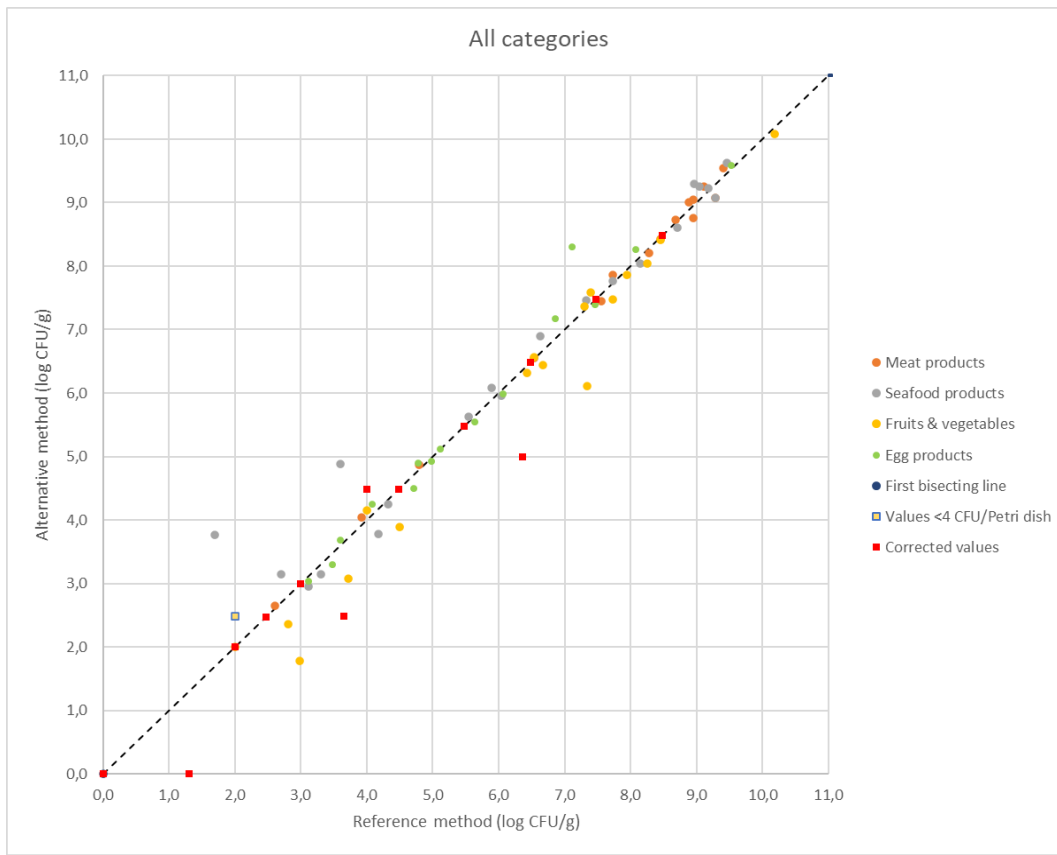
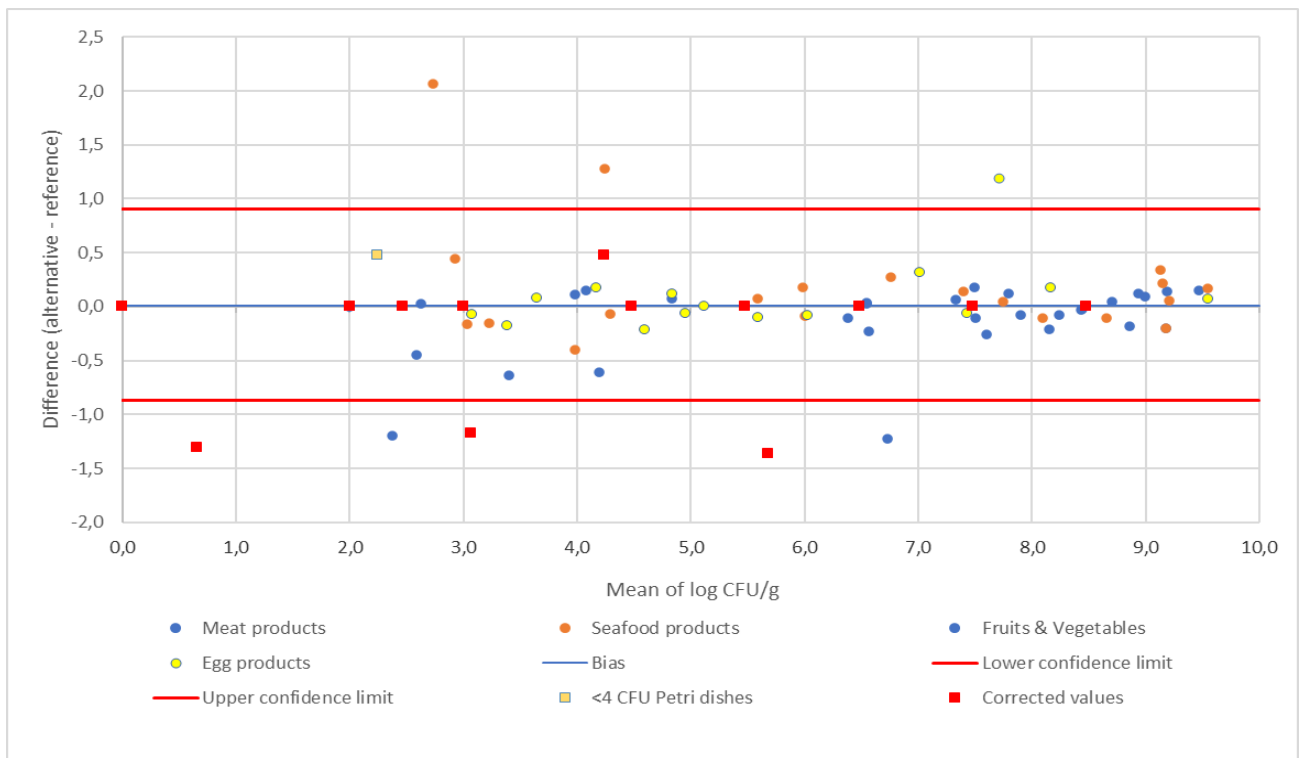


Figure 24: Bland-Altman – Enumeration for automatic reading after storage for 72h at $5\pm 3^{\circ}\text{C}$ and interpretation with one dilution.



The calculated values for Average difference and Standard deviation differences are provided in table 25.

Table 25: calculated values obtained by automatic reader after storage with one dilution.

Category	n	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Meat products	15	0,12	0,02	-0,23	0,28
Seafood products	19	0,56	0,20	-1,00	1,40
Fruit & vegetables products	17	0,42	-0,28	-1,20	0,65
Egg products	15	0,34	0,09	-0,65	0,83
All cat.	66	0,44	0,01	-0,87	0,90

Note: Fruit & vegetables products category presents a bias equal to -0.28.

- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 26.

Table 26: values outside the confidence limits on the Bland-Altman difference plot after storage

Confidence Limits	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
LCL: -0.87 UCL: 0.90	Seafood products	c	2939504	3,60	4,88	4,24	1,28
		c	2939502	1,70	3,76	2,73	2,06
	Fruit and vegetables	b	2986130	7,34	6,11	6,73	-1,23
		c	2939508	2,98	1,78	2,38	-1,20
		c	2939505	1,30	0,00	0,65	-1,30
		c	2939506	3,65	2,48	3,07	-1,18
	Egg products	b	2976256	7,11	8,30	7,71	1,19
		c	2986203	6,36	5,00	5,68	-1,36

green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits

Eight samples are out of the confidence limits: 3 concern corrected values or samples with less than 4 CFU/Petri dish, 2 are lower than the lower confidence limit and 3 are higher than the upper confidence limit.

3.1.18. Conclusion with 1 dilution with automatic reading

In comparison to the ISO method, the relative trueness study of the alternative method interpreted with one dilution and automatic reader is satisfactory.

It is possible to store the NEOGEN Petrifilm plates for 72 hours at 5±3°C (post incubation) before proceeding to enumeration. The use of the PPRA automatic reader for reading Petrifilm is equivalent to manual reading.

3.2. Accuracy profiles

3.2.1. Protocols

Two matrices were tested with two different batches per matrix, using 6 samples per type. Two samples were contaminated at a low level, 2 at intermediate level, 2 at a high level. For each sample, 5 replicates (5 different test portions) were tested. A total of 30 samples were analyzed per matrix. The matrix – strain pairs are presented in table 27 for categories already validated and in table 28 for the new categories tested.

Table 27: matrix – strain pairs and inoculation protocols for the accuracy profile study for dairy products

Matrix	Inoculated strain	Protocol tested	Inoculation level		
Infant formula	<i>Cronobacter sakazakii</i> Ad1446	48 h ± 3 h at 30°C ± 1°C	Lot 1	Level 1 x 5:	300 CFU/g
				Level 2 x 5:	10 ⁴ CFU/g
				Level 3 x 5:	10 ⁶ CFU/g
			Lot 2	Level 1 x 5:	300 CFU/g
				Level 2 x 5:	10 ⁴ CFU/g
				Level 3 x 5:	10 ⁶ CFU/g
Panna cotta	<i>Bacillus cereus</i> Ad2117	28 h ± 2 h at 30°C ± 1°C	Lot 1	Level 1 x 5:	300 CFU/g
				Level 2 x 5:	10 ⁴ CFU/g
				Level 3 x 5:	10 ⁶ CFU/g
			Lot 2	Level 1 x 5:	300 CFU/g
				Level 2 x 5:	10 ⁴ CFU/g
				Level 3 x 5:	10 ⁶ CFU/g

Table 28: matrix – strain pairs and inoculation protocols for the accuracy profile study for new categories tested

Category	Matrix	Strain	Strain code	Origin of the strain	Target contamination level (CFU/g)
Meat products	Pork pâté	<i>Citrobacter youngae</i>	YCF284	Minced beef	300
Seafood products	Fish terrine	<i>Listeria monocytogenes</i>	VCD638	Fish brandade	10 000
Fruit and vegetables	Green beans	<i>Enterococcus innesii</i>	JTTF83	Vegetables	
Egg products	Whole liquid egg	<i>Enterobacter cloacae</i>	PAJ947	Egg product environment	100 000

3.2.2. Results and interpretation

Raw data are provided in Appendix J for 2 interpreted dilutions and in Appendix K for 1 dilution interpreted.

For this part, 2 interpretations were carried out: one with 2 successive dilutions and the other with a single dilution. For each interpretation, a manual and automatic reading was carried out for the 4 new categories tested.

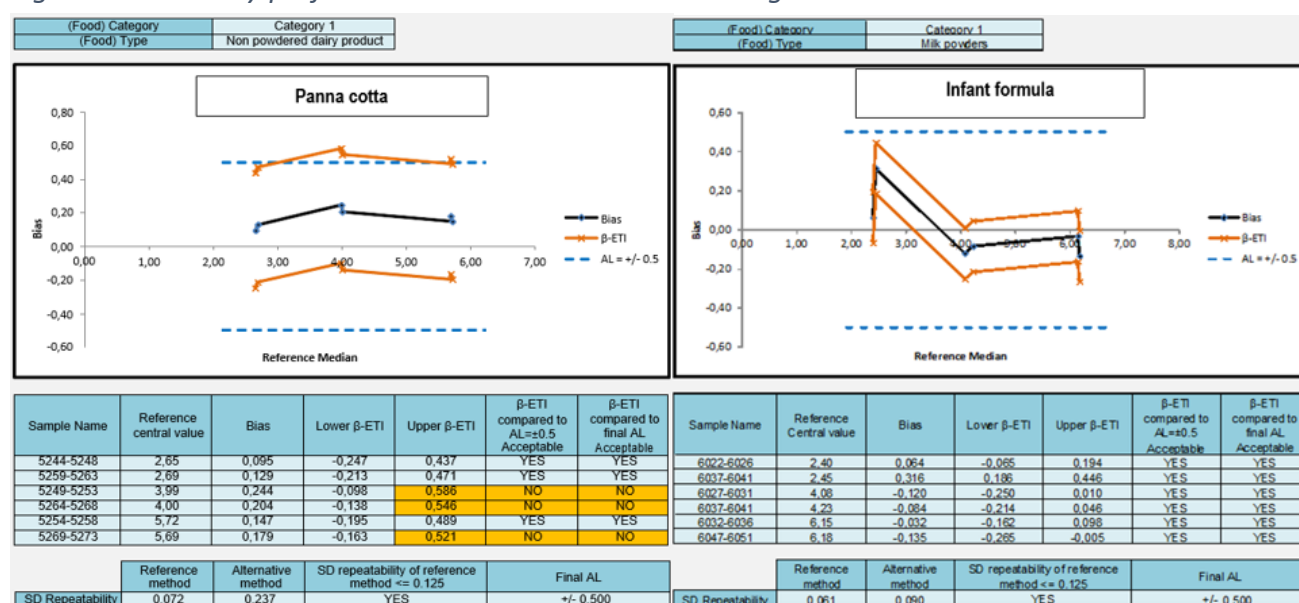
Statistical calculations were done according to the Excel spreadsheet named AP calculation tool_MCS_(clause_6-1-3-3 calculation_and_interpretation_of_accuracy_profile_study) ver. 27-01-2015.xlsx available at <http://standards.iso.org/iso/16140>.

For the accuracy profiles of all the categories, the probability for the tolerance interval β is set at 80% and the acceptability limits at 0.5.

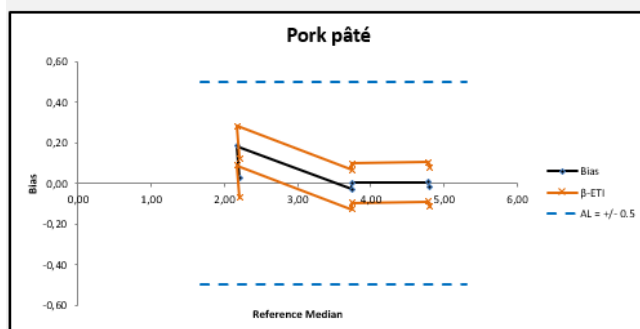
3.2.2.1. Two dilutions with manual reading

Statistical data and the accuracy profiles are shown in figure 25.

Figure 25: accuracy profiles: 2 dilutions and manual reading



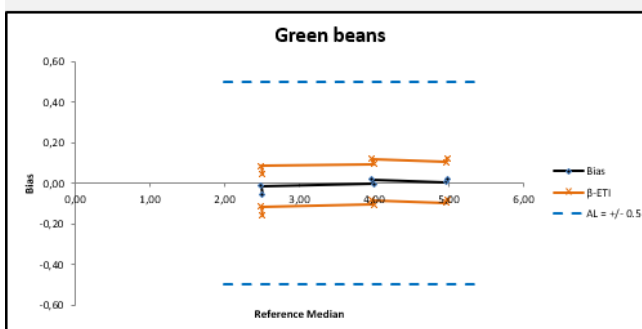
(Food) Category	Meat product
(Food) Type	Pork pâté



Sample Name	Reference central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to $AL \pm 0.5$ Acceptable	β -ETI compared to final AL Acceptable
1to 5	2,20	0,026	-0,070	0,123	YES	YES
1to 5	2,18	0,186	0,089	0,282	YES	YES
1to 5	3,74	-0,030	-0,126	0,067	YES	YES
1to 5	3,74	0,003	-0,094	0,100	YES	YES
1to 5	4,78	0,008	-0,089	0,104	YES	YES
1to 5	4,80	-0,018	-0,115	0,079	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0,083	0,067	YES	± 0.500

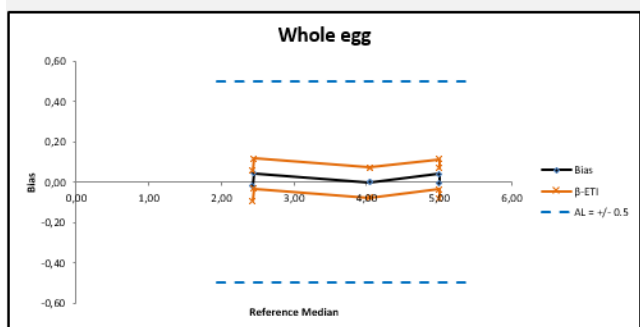
(Food) Category	Vegetables
(Food) Type	Green beans



Sample Name	Reference central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to $AL \pm 0.5$ Acceptable	β -ETI compared to final AL Acceptable
1to 5	2,51	-0,058	-0,159	0,043	YES	YES
1to 5	2,49	-0,014	-0,115	0,087	YES	YES
1to 5	4,00	-0,004	-0,105	0,097	YES	YES
1to 5	3,97	0,018	-0,083	0,119	YES	YES
1to 5	4,96	0,005	-0,096	0,106	YES	YES
1to 5	4,98	0,022	-0,079	0,123	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0,049	0,070	YES	± 0.500

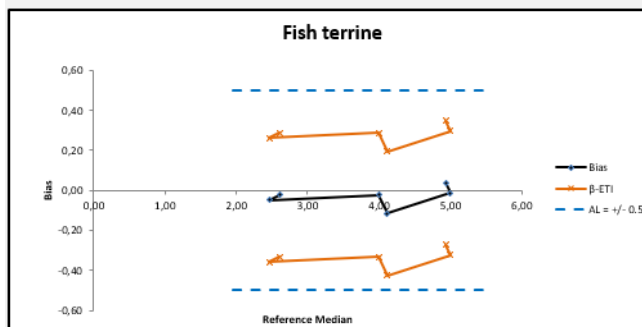
(Food) Category	Egg product
(Food) Type	Whole egg



Sample Name	Reference central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to $AL \pm 0.5$ Acceptable	β -ETI compared to final AL Acceptable
1to 5	2,43	-0,016	-0,091	0,059	YES	YES
1to 5	2,45	0,044	-0,031	0,119	YES	YES
1to 5	4,04	0,000	-0,075	0,075	YES	YES
1to 5	4,04	0,000	-0,075	0,075	YES	YES
1to 5	5,00	0,041	-0,034	0,116	YES	YES
1to 5	5,00	-0,004	-0,079	0,071	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0,052	0,052	YES	± 0.500

(Food) Category	Seafood product
(Food) Type	Fish terrine



Sample Name	Reference central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to $AL \pm 0.5$ Acceptable	β -ETI compared to final AL Acceptable
1to 5	2,61	-0,022	-0,332	0,289	YES	YES
1to 5	2,46	-0,047	-0,358	0,263	YES	YES
1to 5	4,00	-0,022	-0,333	0,288	YES	YES
1to 5	4,11	-0,114	-0,424	0,196	YES	YES
1to 5	5,00	-0,013	-0,324	0,297	YES	YES
1to 5	4,93	0,039	-0,272	0,349	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0,201	0,215	NO	± 0.500

For Panna cotta, the upper limit is just above the acceptability limit for two inoculation levels.

If any of the upper or lower limits exceed the limits and the standard deviation, additional evaluation procedure has to be followed, as described the ISO 16140-2 (2016): new acceptability limits as a function of the standard deviation $AL_5 = 4 \times S_{ref}$ are calculated.

For the panna cotta, $AL_5 = 4 \times 0.072 = 0.288$, the new acceptability limit does not change the result.

The alternative method is not equivalent to the reference method for the non-powdered dairy products but note that the enumeration concerns mesophilic aerobic flora, and the enumeration is higher with the alternative method. For a non-selective enumeration, this result shows that in the experiment the NEOGEN Petrifilm Rapid Aerobic Count Plate gives better recovery than the reference method.

For the infant formula and the new categories added in the scope, no statistical difference was observed between the two methods.

3.2.2.2. Two dilutions with automatic reading (PPRA)

Statistical data and the accuracy profiles are shown in figure 26.

Figure 26: accuracy profiles: 2 dilutions and automatic reading



For the new categories added in the scope, no statistical difference was observed between the two methods.

3.2.2.3. One dilution with manual reading

Statistical data and the accuracy profiles are shown in figure 27.

Figure 27: accuracy profiles: 1 dilution and manual reading



For all categories in the scope, no statistical difference was observed between the two methods with manual reading and interpretation with one dilution.

3.2.2.4. One dilution with automatic reading (PPRA)

Statistical data and the accuracy profiles are shown in figure 28.

Figure 28: accuracy profiles: 1 dilution and automatic reading



For the new categories added in the scope, no statistical difference was observed between the two methods.

3.2.3. Conclusion

- **Interpretation with 2 dilutions:**

For the manual reading, even if the observed profiles are not comprised within the acceptability limits for one tested matrix (upper β -ETI = 0.586, 0.546 and 0.521), it cannot be considered as a concern, as it shows that in those conditions, the NEOGEN Petrifilm plate method tended to recover slightly more microorganisms than the reference method.

For the reading carried out with the automatic PPRA reader, no significant difference was observed compared to manual reading.

The results of the precision profiles obtained from an interpretation at 2 dilutions are satisfactory for the 2 reading modalities.

- **Interpretation with 1 dilution:**

For an interpretation made from a single dilution, all accuracy profiles are within the limits of acceptability.

For the reading carried out with the automatic PPRA reader, no significant difference was observed compared to manual reading.

The results of the precision profiles obtained from an interpretation at one dilution are satisfactory for the 2 reading modalities.

4. Praticability

The alternative method practicability was evaluated according to the AFNOR criteria relative to method comparison study.

<i>Storage conditions, shelf-life and modalities of utilization after first use</i>	Store unopened NEOGEN Petrifilm RAC plates pouches refrigerated or frozen (-20°C to 8°C). After first use, seal the pouch and store in a cool dry place for no longer than one month.			
<i>Time to result</i>	Steps	Reference method	Alternative method	
			All products	Powdered dairy products
	Sampling, analysis	Day 0	Day 0	Day 0
	Enumeration	Day 3	Day 1	Day 2
<i>Common step with the reference method</i>	Initial suspension and dilutions			

5. Interlaboratory study

5.1. Organization of the study

Samples were sent to 14 Collaborators.

A dairy based dessert was inoculated *Enterobacter kobei* Ad706, isolated from milk powder.

Samples were prepared and inoculated on Monday 17 October 2016, as described below:

-8 blind coded samples (10 g) for aerobic mesophilic flora enumeration by the NEOGEN Petrifilm Rapid Aerobic Count Plate method and by the reference method: ISO 4833-1,

-1 water flask labelled "Temperature Control" with a temperature probe for temperature measurement at reception and during sample storage.

The targeted inoculation levels were the following:

- Level 0: 0 CFU/g (samples 2 & 5),
- Level 1: 100 – 1 000 CFU/g (samples 3 & 7),
- Level 2: 1 000 – 10 000 CFU/g (samples 1 & 6),
- Level 3: 100 000 – 1 000 000 CFU/g (samples 4 & 8).

Each laboratory received eight samples of 10 g, i.e. two samples per inoculation level.

Blind coded samples were placed in isothermal boxes, which contained cooling blocks, and express-shipped to the different laboratories.

A temperature control flask containing a sensor was added to the package in order to register the temperature profile during the transport, the package delivery and storage until analyses.

Samples were shipped in 24 h to 48 h to the involved laboratories. The temperature conditions had to stay lower or equal to 8°C during transport, and between 0°C – 8°C in the labs.

The samples were sent on Monday 17 October 2016.

Collaborative study laboratories and the expert laboratory carried out the analyses on Wednesday 19 October 2016 with the alternative and reference methods.

5.2. Control of the experimental parameters

5.2.1. Contamination levels obtained after artificial contamination

In order to evaluate the *Enterobacter kobei* strain viability during transport, bacterial count of samples was checked at different times, i.e. inoculation time and after 24 h and 48 h storage at 2 - 8°C.

Six samples (3 contamination levels x 2 samples) were enumerated at Day 0, Day 1 and Day 2.

Two sets of analyses were run: one before the study (See table 29) and one the same time as the inter-laboratory study (See table 30).

Table 29: strain stability – dataset n°1.

Days of analysis	Enterobacter kobei enumeration (CFU/g)			
	Reference method: ISO 4833		Method alternative: NEOGEN™ Petrifilm™ Rapid Aerobic Count	
	Replicate 1	Replicate 2	Replicate 1	Replicate 2
Day 0	390	550	500	420
	3400	4500	3800	4200
	44000	38000	45000	47000
Day 2	440	400	590	450
	3200	3300	4100	3600
	48000	40000	51000	48000

Table 30: strain stability – dataset °2.

Days of analysis	Enterobacter kobei enumeration (CFU/g)			
	Reference method: ISO 4833		Method alternative: NEOGEN™ Petrifilm™ Rapid Aerobic Count	
	Replicate 1	Replicate 2	Replicate 1	Replicate 2
Day 0	530	530	610	750
	6500	5200	5300	5200
	41000	62000	48000	88000
Day 1	550	490	670	600
	5500	6300	6600	6700
	45000	33000	50000	37000
Day 2	1800	1100	1900	1000
	12000	10000	15000	8300
	53000	76000	66000	81000

For the first dataset, no evolution was observed during storage for 48 h at 2 - 8°C.

For the second dataset, an evolution was observed; the enumerations were increased by a factor 2 between Day 1 and Day 2.

5.2.2. Logistic conditions

The temperatures measured at reception by the Collaborators, the temperatures registered by the thermo-probe, the receipt dates and the analysis date are given in Table 31.

Table 31: sample temperatures at receipt

Collaborator	Temperature measured by the probe (°C)	Temperature measured at receipt (°C)	Receipt date and time	Analysis date
A	4.0	5.5	19/10/2016 12h00	19/10/2016 (Day 2)
B	3.0	7.6	19/10/2016 11h45	19/10/2016 (Day 2)
C	<i>Probe not received</i>	5.8	19/10/2016 10h30	19/10/2016 (Day 2)
D	<i>Probe not found by the lab.</i>	11.7	19/10/2016 17h30	20/10/2016 (Day 3)
E	/	/	19/10/2016 16h26	<i>Not run</i>
F	6.0	9.9	18/10/2016 12h00	19/10/2016 (Day 2)
G	1.5	3.4	18/10/2016 15h00	19/10/2016 (Day 2)
H	2.0	3.5	18/10/2016 11h00	19/10/2016 (Day 2)
I	2.5	3.9	19/10/2016 11h30	19/10/2016 (Day 2)
J	3.5	3.0	19/10/2016 10h00	20/10/2016 (Day 3)
K	3.5	8.0	19/10/2016 11h00	19/10/2016 (Day 2)
L	6.0	7.1	19/10/2016 15h30	19/10/2016 (Day 2)
M	<i>Probe not yet received</i>	6.8	19/10/2016 11h30	19/10/2016 (Day 2)
N	2.5	4.0	19/10/2016 10h45	19/10/2016 (Day 2)

All the samples were delivered in appropriated conditions except for Lab D and F which received their package above 8.4°C. Temperatures during shipment and at receipt were all correct.

-For Lab D, it was impossible to verify the temperature as they did not find the probe in the package. Note that this Lab run the analysis at Day 3.

-For Lab F, the probe indicated a temperature of 6.0°C at receipt. The results of this lab were kept.

No evolution of the strain has been observed after 48 h of storage at 7°C.

5.2.3. Homogeneity of inoculation

Homogeneity tests were conducted according to the ISO/TS 22117. Ten samples per inoculation level were analyzed in duplicate by the reference method. The test concluded to the homogeneity of the inoculation for the three inoculation levels.

5.3. Calculation, interpretation and summary of data

The raw data are given in Appendix L.

5.3.1. Results obtained by the expert laboratory

The results obtained by the expert Lab. are the following (See Table 32).

Table 32: expert laboratory results.

Level		Reference method		Alternative method	
		CFU/g	log CUF/g	CFU/g	log CUF/g
Level 0	Duplicate 1	< 10	< 1.00	< 10	< 1.00
	Duplicate 2	< 10	< 1.00	< 10	< 1.00
Level 1	Duplicate 1	1800	3.26	1900	3.28
	Duplicate 2	1100	3.04	1000	3.00
Level 2	Duplicate 1	12000	4.08	15000	4.18
	Duplicate 2	10000	4.00	8300	3.92
Level 3	Duplicate 1	53000	4.72	66000	4.82
	Duplicate 2	76000	4.88	81000	4.91

5.3.2. Results obtained by the collaborators

Samples were sent to 14 collaborators

- Lab E did not run the analyses,
- Labs D and J run the analyses at Day 3,
- Lab L analyzed only a part of the samples due to late delivery of the samples.

Finally, results from 10 collaborators were kept for interpretation: A, B, C, F, G, H, I, K, M and N.

A summary of the test results is given in Table 33 (CFU/g) and Table 34 (log CFU/g).

Table 33: summary of data (CFU/g)

Collaborators	Blank level				Low level				Medium level				High level			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2
A	<10	<10	<10	<10	730	990	710	970	12000	8600	15000	11000	60000	110000	73000	120000
B	<10	<10	<10	<10	1500	1100	1200	1000	11000	17000	13000	21000	110000	100000	84000	65000
C	70 Ne	<40	50 Ne	<10	1500	1100	1300	1100	9900	20000	11000	21000	81000	85000	120000	400000
F	<10	<10	<10	<10	2300	1700	1700	1500	16000	24000	19000	23000	250000	190000	220000	230000
G	<10	<10	<10	<10	480	1900	660	7800	11000	15000	8200	9200	100000	110000	120000	80000
H	<40	<10	<10	<10	820	1100	1200	1600	9500	6700	11000	12000	66000	6800	160000	76000
I	<10	<10	<10	<10	940	1300	1200	1200	9700	11000	7700	12000	69000	58000	67000	85000
K	<10	<10	<10	<10	690	340	450	300	13000	2700	8100	4000	37000	36000	30000	38000
M	<10	<10	<10	<10	680	660	770	940	9000	8300	8500	8600	77000	61000	96000	88000
N	<10	<10	<10	<10	1000	810	1100	960	10000	15000	16000	15000	91000	89000	120000	100000

Table 34: summary of data (log CFU/g)

Collaborators	Blank level				Low level				Medium level				High level			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2
A	<1.00	<1.00	<1.00	<1.00	2.86	3.00	2.85	2.99	4.08	3.93	4.18	4.04	4.78	5.04	4.86	5.08
B	<1.00	<1.00	<1.00	<1.00	3.18	3.04	3.08	3.00	4.04	4.23	4.11	4.32	5.04	5.00	4.92	4.81
C	1.85	<1.60	1.70	<1.00	3.18	3.04	3.11	3.04	4.00	4.30	4.04	4.32	4.91	4.93	5.08	5.60
F	<1.00	<1.00	<1.00	<1.00	3.36	3.23	3.23	3.18	4.20	4.38	4.28	4.36	5.40	5.28	5.34	5.36
G	<1.00	<1.00	<1.00	<1.00	2.68	3.28	2.82	3.89	4.04	4.18	3.91	3.96	5.00	5.04	5.08	4.90
H	<1.60	<1.00	<1.00	<1.00	2.91	3.04	3.08	3.20	3.98	3.83	4.04	4.08	4.82	3.83	5.20	4.88
I	<1.00	<1.00	<1.00	<1.00	2.97	3.11	3.08	3.08	3.99	4.04	3.89	4.08	4.84	4.76	4.83	4.93
K	<1.00	<1.00	<1.00	<1.00	2.84	2.53	2.65	2.48	4.11	3.43	3.91	3.60	4.57	4.56	4.48	4.58
M	<1.00	<1.00	<1.00	<1.00	2.83	2.82	2.89	2.97	3.95	3.92	3.93	3.93	4.89	4.79	4.98	4.94
N	<1.00	<1.00	<1.00	<1.00	3.00	2.91	3.04	2.98	4.00	4.18	4.20	4.18	4.96	4.95	5.08	5.00

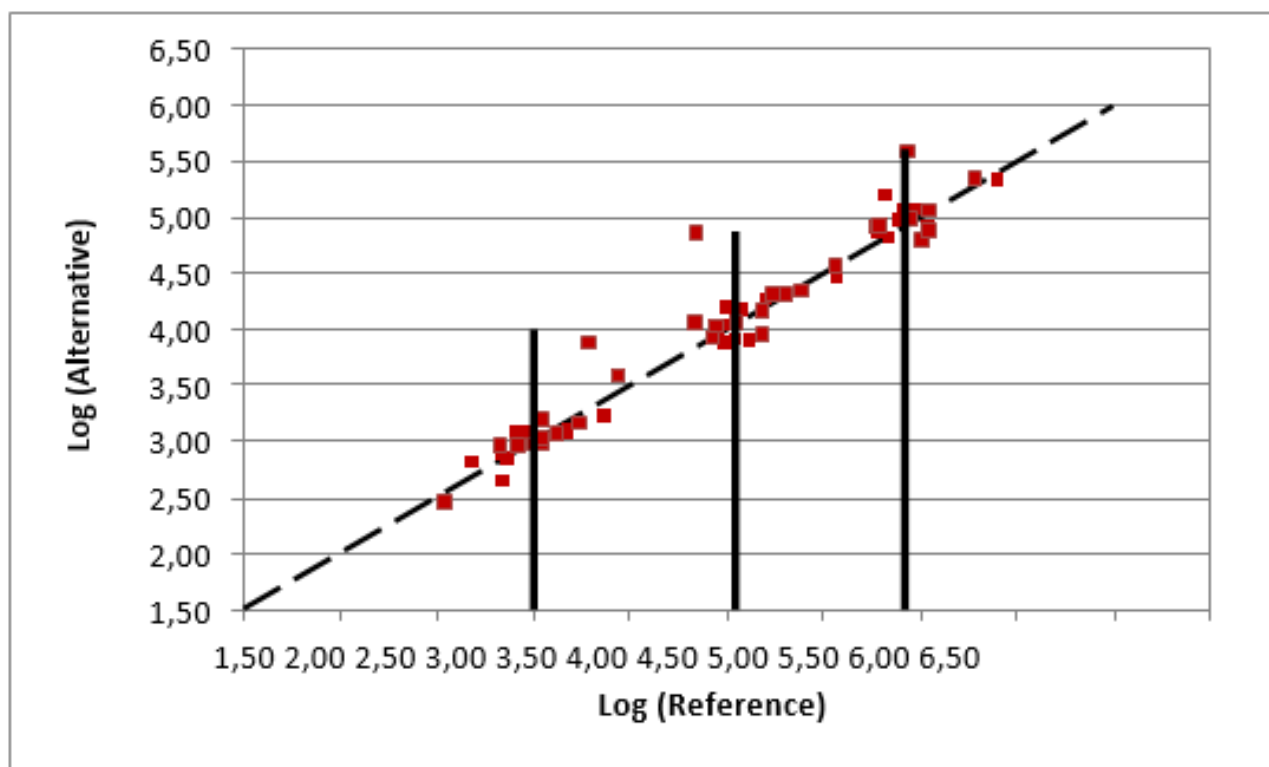
Few contaminations were observed on blank samples for two Labs: C and H.

The Figure 8 shows the data points after log₁₀ transformation. The visual inspection shows that the alternative method gives results, which are proportional to those of the reference method, except for 3 samples for which the enumeration results are the following:

- Lab C (sample 8): ISO 4833: 4.93 log
Alternative method: 5.60 log
- Lab G (sample 7): ISO 4833: 3.28 log
Alternative method: 3.89 log
- Lab H (sample 8): ISO 4833: 3.83 log
Alternative method: 4.88 log

Lab H reported some difficulties for enumeration of the PCA plates due to spreading colonies. For Labs G and H, the result of the alternative method is more closed to the expected enumeration. The data are distributed closely to the first bisecting line with a slope equal to 1.

Figure29: visual linearity checking



5.3.3. Accuracy profile calculation

Statistical calculations were done according to the Excel spreadsheet named AP calculation tool_ILS_(clause_6-2-3_Calculations_summary_and_interpretation_of_data)_ver14-03-2016.xlsx available at <http://standards.iso.org/iso/16140>.

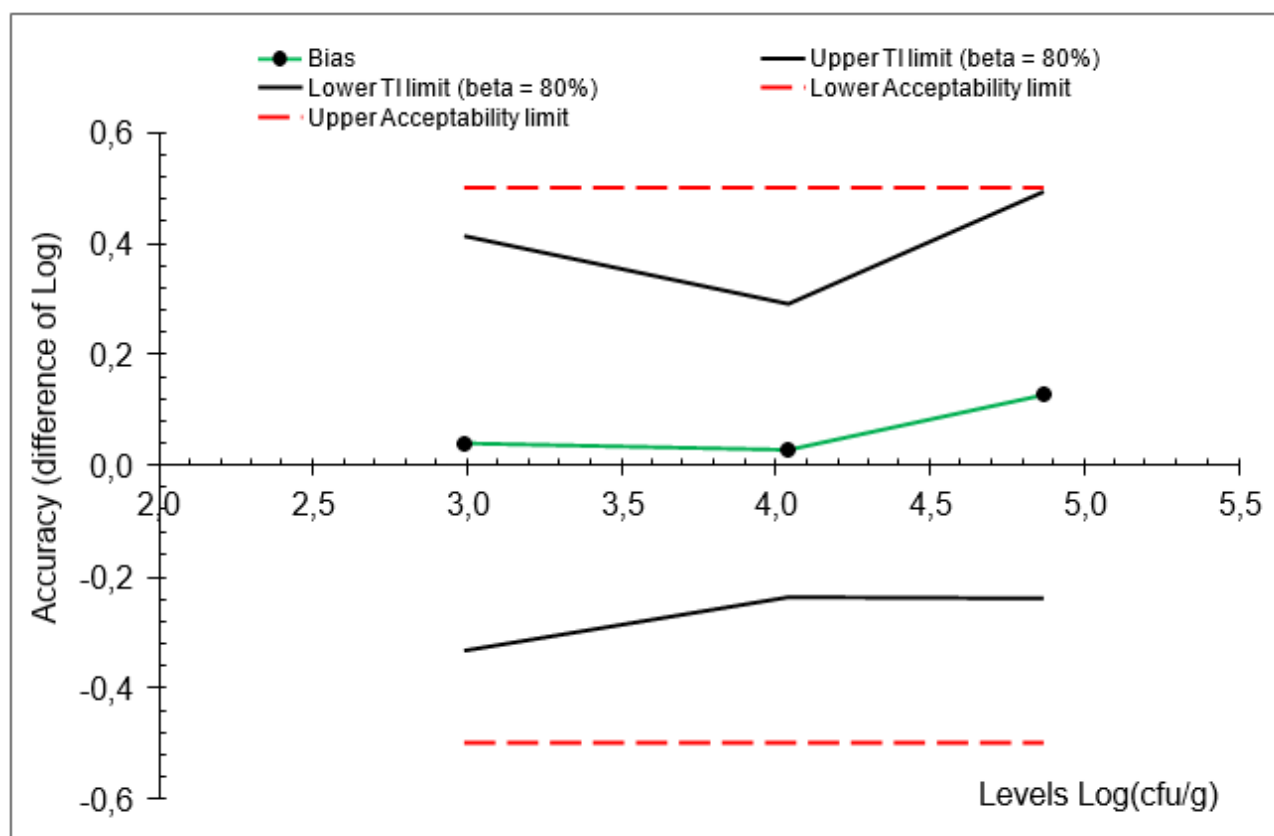
A summary of the parameters calculated is presented in table 35.

Table 35: summary of the statistical test

Accuracy profile						
Study Name	NEOGEN Petrifilm Rapid Aerobic Count Plate					
Date	19 th October 2016					
Coordinator						
Tolerance probability (beta)						
Acceptability limit in log (lambda)	80%	80%	80%			
	0,5	0,5	0,5			
Levels	Alternative method			Reference method		
	Low	Medium	High	Low	Medium	High
Target value	2.991	4.041	4.869			
Number of participants (K)	10	10	10	10	10	10
Average for alternative method	3.032	4.069	4.998	2.991	4.041	4.869
Repeatability standard deviation (sr)	0.249	0.119	0.158	0.168	0.190	0.232
Between-labs standard deviation (sL)	0.112	0.146	0.208	0.116	0.000	0.219
Reproducibility standard deviation (sR)	0.273	0.188	0.261	0.205	0.199	0.319
Corrected number of dof	18.114	13.295	12.896	16.638	18.625	14.917
Coverage factor	1.368	1.402	1.405	Pooled repro standard dev 0.247		
Interpolated Student t	1.330	1.349	1.351			
Tolerance interval standard deviation	0.2810	0.1959	0.2712			
Lower TI limit	2.659	3.805	4.631			
Upper TI limit	3.406	4.333	5.364			
Bias	0.041	0.028	0.129			
Lower TI limit (beta = 80%)	-0.332	-0.236	-0.238			
Upper TI limit (beta = 80%)	0.415	0.292	0.495			
Lower Acceptability limit	-0.50	-0.50	-0.50			
Upper Acceptability limit	0.50	0.50	0.50			

These values are collected in a graphical representation together with the acceptability limits (AL). This representation is given Figure 30.

Figure 30: accuracy profile



It is observed that for all the levels, the tolerance interval limits of the alternative method are within the acceptable limits of 0.5 log.

In those conditions, the results obtained with the alternative method are not statistically different than those obtained with the reference method.

5.4. Conclusion of the interlaboratory study

As the values for the β -ETI fall within the Acceptability Limits for all levels of contamination, the alternative method is regarded as being equivalent to the reference method.

6. General conclusion

The observed data and interpretation confirm the performances of the alternative method:

132 samples were tested in the relative trueness study, which clearly satisfied the required criteria for quantitative method comparison according to the EN ISO 16140-2/A1:2024.

This study confirms the possibility as well to store NEOGEN Petrifilm plates (post incubation) for up to 72h at $5\pm 3^{\circ}\text{C}$ or one week at -18°C before reading.

It is also possible to use the automatic reader, Petrifilm Plate Reader Advanced (PPRA), to read all Petrifilms, including those stored cold.

The results obtained from the interpretations carried out on 2 successive dilutions and a single dilution are equivalent to the reference method.

The observed profiles are comprised within the AL actually set at 0.5 Log CFU/g in the EN ISO 16140-2/A1:2024 standard for the powdered dairy products and is just above the AL for the non-powdered dairy products for an interpretation with 2 dilutions. The method is non-selective, and a slightly better recovery with the NEOGEN Petrifilm Rapid Aerobic Count Plate was demonstrated in those conditions.

For an interpretation made from a single dilution, all the accuracy profiles are within the limits of acceptability.

The quality assurance parameters were verified (i.e. inoculation homogeneity, targeted levels, strain stability, logistic conditions, analyses), confirming that the inter-laboratory study was conducted in appropriate conditions.

The data interpretations were done according to the EN ISO 16140-2:2016. For the three contamination levels, the alternative method is accepted as equivalent to the reference method.

The data and their interpretation produced in this renewal report fulfil the requirements of both the EN ISO 16140-2:2016 standard and the version 12 of the Requirements regarding comparison and interlaboratory studies for implementation of the standard EN ISO 16140-2.

January 2nd, 2026

Guillaume MESNARD
Technical deputy manager



François Le Nestour
Head of the Methods Validation studies and R&D

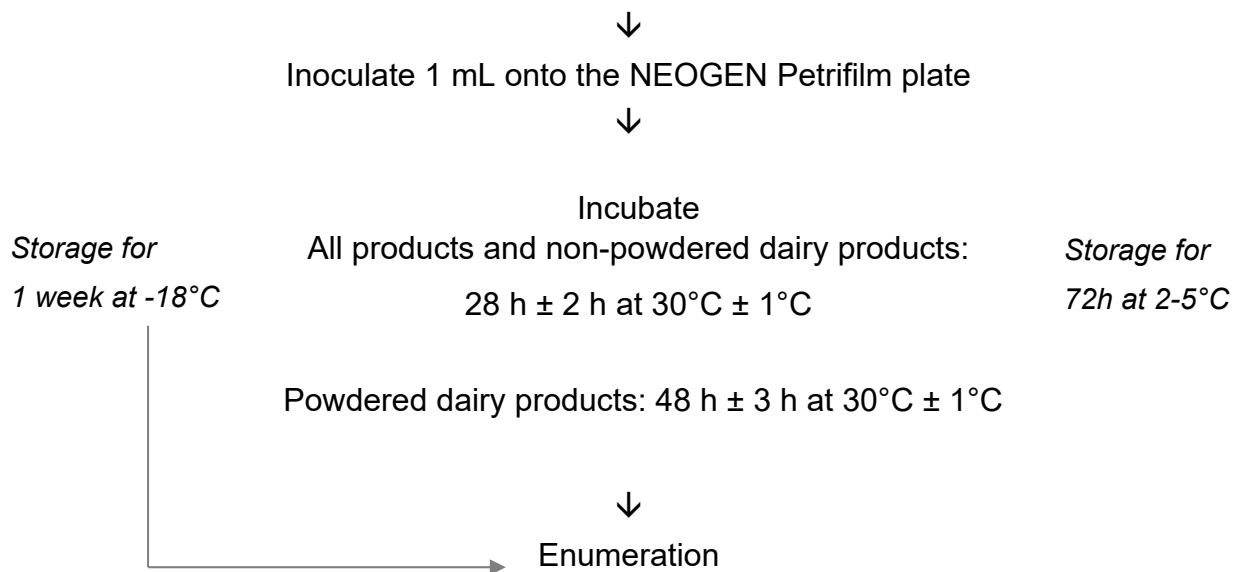


APPENDICES

Appendix A - Flow diagram of the alternative method:

NEOGEN Petrifilm Rapid Aerobic Count Plate

10 g + 90 ml appropriate diluent according to the ISO 6887 parts
Do not use diluents containing citrate, bisulfite or thiosulfate with Neogen Petrifilm RAC Plates; they can inhibit growth.



**Appendix B – Flow diagram of the reference method test
procedure ISO 4833-1:2013 - Microbiology of the food chain —
Horizontal method for the enumeration of microorganisms —
Part 1: Colony count at 30 degrees C by the pour plate technique**

10 g + 90 ml appropriate diluent according to the ISO 6887 parts
and ISO 18593 for environmental samples



Stomach



Inoculate 1 plate per dilution



Pour PCA with 1 g/l of skim milk for dairy product

Pour PCA for other products



Incubate at $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$ for $72\text{ h} \pm 3\text{ h}$



Reading

Appendix C – Artificial contaminations of samples

Sample number	Product	Inoculations			Type
		Strain		Injury protocol	
		Reference	Origin		
5125	Infant formula	<i>C. sakazakii</i> Ad831	Dairy product	Seeding with lyophilized strain-15 days at ambient temperature	c
5126	Infant formula	<i>C. sakazakii</i> Ad1446	Dairy product	Seeding with lyophilized strain-15 days at ambient temperature	c
5127	Milk powder	<i>B. cereus</i> Ad1469	Milk powder	Seeding with Lyophilized strain-15 days at ambient temperature	c
5128	Milk powder	<i>B. cereus</i> Ad1469	Milk powder	Seeding with lyophilized strain-15 days at ambient temperature	c
5129	Milk powder	<i>B. cereus</i> Ad1848	Milk powder	Seeding with lyophilized strain-15 days at ambient temperature	c
5130	Milk powder	<i>B. cereus</i> Ad1848	Milk powder	Seeding with lyophilized strain-15 days at ambient temperature	c
5379	Milk powder	<i>C. sakazakii</i> Ad831	Dairy product	Seeding with lyophilized strain-3 days at ambient temperature	c
5380	Infant formula	<i>B. cereus</i> Ad1469	Milk powder	Seeding with lyophilized strain-3 days at ambient temperature	c

Appendix D

Relative trueness: 2 dilutions

Relative trueness - raw data - interpretation with 2 dilutions

Category	Type	#	Sample	Reference method: ISO 4833-1:2013 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading				
				dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Dairy products	a	4464	Raw milk	-5	>300	-6	99	9,90E+07	-5	>300	-6	81	8,10E+07
	a	4463	Raw milk	-3	278	-4	48	3,00E+05	-3	142	-4	16	1,40E+05
	a	4561	Raw ewe milk	-1	11	-2	4	1,40E+02	-1	10	-2	0	9,00E+01
	a	4562	Raw ewe milk	-2	101	-3	4	9,50E+03	-2	13	-3	6	1,70E+02
	a	4572	Raw milk	-3	30	-4	3	3,00E+04	-3	140	-4	15	1,40E+04
	a	4573	Raw milk	-3	120	-4	15	1,20E+05	-3	86	-4	9	8,60E+04
	b	4466	Rice pudding	-2	50	-3	17	6,10E+03	-2	31	-3	8	3,50E+04
	b	4558	Ice cream	-1	12	-2	2	1,30E+02	-1	46	-2	9	5,00E+02
	b	4560	Ice cream	-1	18	-2	5	2,10E+02	-1	41	-2	8	4,50E+02
	b	4563	Rice pudding	-1	30	-2	1	2,80E+02	-1	6	-2	0	6,00E+01
	b	4564	Vanilla cream	-1	7	-2	1	7,00E+01	-1	13	-2	3	1,50E+02
	b	4565	Cheese preparation	-1	18	-2	3	1,90E+02	-1	17	-2	7	2,20E+02
	b	4735	Cheese preparation	-3	226	-4	31	2,30E+05	-3	121	-4	11	1,20E+05
	b	4738	Pasteurized milk	-1	61	-2	9	6,40E+02	-1	4	-2	1	4,00E+01
	b	4736	Cheese preparation	-4	>300	-5	47	4,70E+06	-4	210	-5	18	2,10E+06
	b	4465	Panna cotta	-1	1	-2	0	1,00E+01	-1	4	-2	1	4,00E+01
	b	4559	Ice cream	-1	4	-2	10	4,00E+01	-1	57	-2	8	5,90E+02
	b	4737	Dessert with chantilly	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000
	c	3717	Milk powder	-1	29	-2	2	2,80E+02	-1	33	-2	12	4,10E+02
	c	3718	Milk powder	-1	68	-2	2	6,40E+02	-1	39	-2	10	4,50E+02
	c	3719	Infant formula	-1	20	-2	5	2,30E+02	-1	26	-2	7	3,00E+02
	c	3720	Infant formula	-1	38	-2	3	3,70E+02	-1	35	-2	9	4,00E+02
	c	3721	Infant formula	-1	15	-2	3	1,60E+02	-1	39	-2	12	4,60E+02
	c	4453	Milk powder	-1	14	-2	2	1,50E+02	-1	24	-2	5	2,60E+02
	c	4454	Milk powder	-1	18	-2	3	1,90E+02	-1	29	-2	7	3,30E+02
	c	4455	Milk powder	-1	31	-2	10	3,70E+02	-1	45	-2	8	4,80E+02
	c	4456	Infant formula	-1	8	-2	4	1,10E+02	-1	15	-2	3	1,60E+02
	c	4457	Infant formula	-1	17	-2	2	1,70E+02	-1	32	-2	5	3,40E+02
	c	4458	Infant formula	-1	16	-2	4	1,80E+02	-1	27	-2	7	3,10E+02
	c	4459	Infant formula	-1	11	-2	0	1,00E+02	-1	16	-2	3	1,70E+02
	c	4460	Infant formula	-1	16	-2	4	1,80E+02	-1	23	-2	5	2,60E+02
	c	5125	Infant formula	-3	39	-4	5	4,00E+04	-3	5	-4	1	5,00E+03
	c	5126	Infant formula	-2	23	-3	10	3,00E+03	-2	5	-3	1	5,00E+02
	c	5127	Milk powder	-2	39	-3	8	4,30E+03	-2	48	-3	6	4,90E+03
	c	5128	Milk powder	-3	29	-4	5	3,10E+04	-3	46	-4	4	4,50E+04
	c	5129	Milk powder	-3	124	-4	14	1,30E+05	-3	131	-4	14	1,30E+05
	c	5130	Milk powder	-2	61	-3	3	5,80E+03	-2	55	-3	2	5,20E+03
	c	5379	Milk powder	-2	19	-3	0	1,70E+03	-2	10	-3	0	9,10E+02
	c	5380	Infant formula	-2	170	-3	27	1,80E+04	-2	45	-3	2	4,30E+04
	c	4461	Infant formula with probiotics	-1	2	-2	1	2,00E+01	-1	3	-2	0	3,00E+01
	c	4462	Infant formula with probiotics	-5	>300	-6	>300	>300	-5	NI	-6	NI	NI
	c	4566	Infant formula with probiotics	-1	NI	-2	14	1,40E+03	-1	NI	-2	0	NI
	c	4567	Infant formula with probiotics	-1	0	-2	0	<10	-1	4	-2	1	4,00E+01
	c	5123	Infant formula with probiotics	-1	NI	-2	2	2,00E+02	-1	8	-2	2	8,00E+01
	c	5124	Infant formula with probiotics	-1	NI	-2	1	1,00E+02	-1	12	-2	2	1,30E+02

Relative trueness - raw data - interpretation with 2 dilutions

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Meat products	a	2939490	Veal paupiette	/	/	-5	>300	-6	54	5,40E+07	-5	>300	-6	54	5,40E+07	-5	>300	-6	54	5,40E+07	-5	>300	-6	68	6,80E+07	-5	>300	-6	72	7,20E+07
	a	2939491	Beef	/	/	-6	>300	-7	48	4,80E+08	-6	>300	-7	56	5,60E+08	-6	>300	-7	52	5,20E+08	-6	>300	-7	54	5,70E+08	-6	>300	-7	53	5,30E+08
	a	2939492	Pork chop	/	/	-7	75	-8	9	7,50E+08	-7	77	-8	15	8,40E+08	-7	73	-8	15	8,00E+08	-7	83	-8	16	9,00E+08	-7	95	-8	19	1,00E+09
	a	2939493	Leg of lamb	/	/	-4	>300	-5	34	3,40E+06	-4	>300	-5	36	3,60E+06	-4	>300	-5	37	3,70E+06	-4	>300	-5	37	3,70E+06	-4	>300	-5	36	3,60E+06
	a	2986192	Guninea fowl	/	/	-7	184	-8	27	1,90E+09	-7	101	-8	8	1,00E+09	-7	101	-8	8	1,00E+09	-7	95	-8	10	9,60E+08	-7	122	-8	13	1,20E+09
	a	2939494	Beef steak	/	/	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	285	2,90E+07	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000
	b	2976234	Beef parmentier	/	/	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000
	b	2976235	Lasagna	/	/	-2	>300	-3	62	6,20E+04	-2	>300	-3	55	5,50E+04	-2	>300	-3	56	5,60E+04	-2	>300	-3	55	5,50E+04	-2	>300	-3	73	7,30E+04
	b	2976236	Cider pork	/	/	-1	41	-2	3	4,10E+02	-1	30	-2	7	3,00E+02	-1	23	-2	8	2,30E+02	-1	46	-2	13	5,40E+02	-1	36	-2	12	4,40E+02
	b	2976237	Tomato beef	/	/	-2	84	-3	5	8,40E+03	-2	89	-3	10	9,00E+03	-2	93	-3	10	9,40E+03	-2	89	-3	10	9,00E+03	-2	114	-3	11	1,10E+04
	b	2976238	Veal blanquette	/	/	-5	>300	-6	191	1,90E+08	-5	>300	-6	153	1,50E+08	-5	>300	-6	158	1,60E+08	-5	>300	-6	149	1,50E+08	-5	>300	-6	162	1,60E+08
	b	2986193	Beef carrots leefs	/	/	-6	>300	-7	89	8,90E+08	-6	>300	-7	56	5,60E+08	-6	>300	-7	57	5,70E+08	-6	>300	-7	55	5,50E+08	-6	>300	-7	58	5,80E+08
	c	2986194	Sausage	/	/	-6	>300	-7	134	1,30E+09	-6	>300	-7	56	5,60E+08	-6	>300	-7	137	1,40E+09	-6	>300	-7	158	1,60E+09	-6	0	-7	177	1,80E+09
	c	2939495	Black pudding	/	/	-7	76	-8	22	8,90E+08	-7	97	-8	3	9,70E+08	-7	103	-8	5	1,00E+09	-7	114	-8	8	1,10E+09	-7	112	-8	8	1,10E+09
	c	2939496	Beer pâté	/	/	-7	265	-8	10	2,50E+09	-7	194	-8	17	1,90E+09	-7	196	-8	17	1,90E+09	-7	225	-8	29	2,30E+09	-7	>300	-8	35	3,50E+09
	c	2939497	Liver mousse	/	/	-5	>300	-6	36	3,60E+07	-5	266	-6	35	2,70E+07	-5	257	-6	37	2,70E+07	-5	268	-6	35	2,80E+07	-5	274	-6	36	2,80E+07
	c	2939499	Mousse forestière	/	/	-6	275	-7	28	2,80E+08	-6	240	-7	37	2,50E+08	-6	240	-7	36	2,50E+08	-6	240	-7	38	2,50E+08	-6	264	-7	38	2,70E+08
	c	2939498	Sausage	/	/	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000

Relative trueness - raw data - interpretation with 2 dilutions

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Seafood products	a	2986121	Salmon fillet	/	/	-4	79	-5	9	7,90E+05	-4	71	-5	4	7,10E+05	-4	67	-5	5	6,70E+05	-4	120	-5	9	1,20E+06	-4	123	-5	10	1,20E+06
	a	2986122	Cod fillet	/	/	-4	>300	-5	208	2,10E+07	-4	>300	-5	203	2,00E+07	-4	>300	-5	201	2,00E+07	-4	>300	-5	294	3,00E+07	-4	0	-5	290	2,90E+07
	a	2986123	Shrimp	/	/	-3	15	-4	3	1,50E+04	-3	6	-4	0	6,00E+03	-3	5	-4	0	5,00E+03	-3	6	-4	1	6,00E+03	-3	6	-4	1	6,00E+03
	a	2986120	Saithe fillet	/	/	-7	51	-8	3	5,10E+08	-7	30	-8	3	3,00E+08	-7	30	-8	1	3,00E+08	-7	39	-8	3	3,90E+08	-7	40	-8	3	4,00E+08
	a	2986124	Sardine	/	/	-8	29	-9	6	2,90E+09	-8	35	-9	3	3,50E+09	-8	35	-9	3	3,50E+09	-8	40	-9	3	4,00E+09	-8	43	-9	3	4,30E+09
	b	2976240	Colin	/	/	-1	201	-2	18	2,00E+03	-1	65	-2	8	6,60E+02	-1	66	-2	8	6,60E+02	-1	101	-2	12	1,00E+03	-1	138	-2	15	1,40E+03
	b	2976241	Whiting	/	/	-5	>300	-6	143	1,40E+08	-5	>300	-6	85	8,50E+07	-5	>300	-6	92	9,20E+07	-5	>300	-6	103	1,00E+08	-5	>300	-6	114	1,10E+08
	b	2976242	Saithe	/	/	-5	>300	-6	53	5,30E+07	-5	>300	-6	33	3,30E+07	-5	229	-6	31	2,40E+07	-5	>300	-6	52	5,00E+07	-5	>300	-6	59	5,90E+07
	b	2976243	Pout	/	/	-5	42	-6	1	4,20E+06	-5	40	-6	9	4,00E+06	-5	38	-6	5	3,80E+06	-5	71	-6	9	7,10E+06	-5	77	-6	10	7,90E+06
	b	2986195	Salmon	/	/	-7	176	-8	34	1,90E+09	-7	99	-8	15	1,00E+09	-7	98	-8	15	1,00E+09	-7	92	-8	15	9,70E+08	-7	118	-8	15	1,20E+09
	b	2976239	Salmon	/	/	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000
	c	2896127	Smoked tuna	/	/	-2	13	-3	2	1,30E+03	-2	2	-3	0	2,00E+02	-2	8	-3	0	8,00E+02	-2	11	-3	1	1,10E+03	-2	9	-3	1	9,00E+02
	c	2939504	Smoked mackerel with pepper	/	/	-3	4	-4	0	4,00E+03	-3	70	-4	6	7,00E+04	-3	72	-4	6	7,20E+04	-3	75	-4	6	7,50E+04	-3	76	-4	6	7,60E+04
	c	2939500	Smoked herring	/	/	-4	35	-5	3	3,50E+05	-4	36	-5	3	3,60E+05	-4	37	-5	3	3,70E+05	-4	42	-5	3	4,20E+05	-4	42	-5	3	4,20E+05
	c	2939501	Smoked salmon	/	/	-6	>300	-7	92	9,20E+08	-6	>300	-7	88	8,80E+08	-6	>300	-7	84	8,40E+08	-6	>300	-7	127	1,30E+09	-6	>300	-7	201	2,00E+09
	c	2939502	Smoked mackerel	/	/	-1	5	-2	1	5,00E+01	-1	72	-2	10	7,50E+02	-1	97	-2	10	9,70E+02	-1	>300	-2	51	5,10E+03	-1	>300	-2	58	5,80E+03
	c	2939503	Fish with American sauce	/	/	-2	5	-3	0	5,00E+02	-2	6	-3	0	6,00E+02	-2	6	-3	0	6,00E+02	-2	18	-3	0	1,80E+03	-2	14	-3	1	1,40E+03
	c	2896125	Smoked mackerel	/	/	-4	102	-5	14	1,10E+06	-4	88	-5	13	9,20E+05	-4	84	-5	13	8,80E+05	-4	88	-5	13	8,80E+05	-4	87	-5	13	9,10E+05
	c	2896126	Smoked mackerel	/	/	-7	143	-8	26	1,50E+09	-7	148	-8	17	1,50E+09	-7	154	-8	20	1,60E+09	-7	162	-8	20	1,70E+09	-7	168	-8	21	1,70E+09
	c	2896129	Smoked haddock	/	/	-7	108	-8	12	1,10E+09	-7	131	-8	18	1,40E+09	-7	132	-8	18	1,40E+09	-7	167	-8	23	1,70E+09	-7	170	-8	24	1,80E+09
	c	2896128	Smoked mackerel with pepper	/	/	-2	203	-3	25	2,10E+04	-2	184	-3	18	1,80E+04	-2	178	-3	18	1,80E+04	-2	182	-3	18	1,80E+04	-2	176	-3	20	1,80E+04

Relative trueness - raw data - interpretation with 2 dilutions

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Fruit & vegetables	a	2976245	Parsley	/	/	-4	>300	-5	34	3,40E+06	-4	109	-5	12	1,10E+06	-4	107	-5	14	1,10E+06	-4	247	-5	33	2,60E+06	-4	>300	-5	37	3,70E+06
	a	2976246	Salad	/	/	-5	>300	-6	88	8,80E+07	-5	>300	-6	42	4,20E+07	-5	>300	-6	39	3,90E+07	-5	>300	-6	64	6,40E+07	-5	>300	-6	73	7,30E+07
	a	3005659	frozen chopped spinach	/	/	-1	64	-2	9	6,40E+02	-1	23	-2	6	2,30E+02	-1	21	-2	5	2,10E+02	-1	24	-2	6	2,40E+02	-1	23	-2	4	2,30E+02
	a	3005676	pan-fry vegetables	/	/	-5	199	-6	20	2,00E+07	-5	136	-6	17	1,40E+07	-5	133	-6	15	1,40E+07	-5	237	-6	24	2,40E+07	-5	230	-6	25	2,30E+07
	a	2986196	Zucchini	/	/	-1	>300	-2	52	5,20E+03	-1	52	-2	16	6,20E+02	-1	96	-2	17	1,00E+03	-1	102	-2	17	1,10E+03	-1	116	-2	19	1,20E+03
	a	2976248	Pineapple	/	/	-3	0	-4	0	<1000	-3	1	-4	0	1,00E+03	-3	1	-4	0	1,00E+03	-3	1	-4	0	1,00E+03	-3	1	-4	0	1,00E+03
	a	2976247	Turnip	/	/	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000
	b	2976249	Bagged mix of beets, white cabbage and carrots	/	/	-2	>300	-3	>300	>30000	-2	>300	-3	>300	>30000	-2	>300	-3	>300	>300000	-6	>300	-7	53	5,30E+07	-6	>300	-7	67	6,70E+08
	b	2976250	Bagged salad	/	/	-5	>300	-6	>300	>300000000	-5	>300	-6	>300	>300000000	-5	>300	-6	>300	>300000000	-5	>300	-6	>300	>300000000	-5	>300	-6	>300	>300000000
	b	2986197	Carrot	/	/	-5	232	-6	44	2,50E+07	-5	239	-6	26	2,40E+07	-5	260	-6	27	1,70E+07	-5	266	-6	35	2,70E+07	-5	>300	-6	38	3,80E+07
	b	2986200	Bagged salad	/	/	-7	18	-8	2	1,80E+08	-7	6	-8	1	6,00E+07	-7	5	-8	0	5,00E+07	-7	10	-8	0	1,00E+08	-7	11	-8	0	1,10E+08
	b	2986131	Beetroot	/	/	-6	279	-7	23	2,80E+08	-6	218	-7	27	2,20E+08	-6	220	-7	25	2,00E+08	-6	257	-7	29	2,60E+08	-6	261	-7	29	2,60E+08
	b	2986132	Mushrooms	/	/	-8	145	-9	19	1,50E+10	-8	120	-9	11	1,20E+10	-8	121	-9	10	1,20E+10	-8	125	-9	10	1,20E+10	-8	123	-9	11	1,20E+10
	b	2986130	Carrot	/	/	-5	214	-6	29	2,20E+07	-5	12	-6	1	1,20E+06	-5	10	-6	1	1,00E+06	-5	14	-6	2	1,40E+06	-5	13	-6	2	1,30E+06
	c	2986198	Lentils and carrots	/	/	-1	>300	-2	103	1,00E+04	-1	112	-2	25	1,30E+03	-1	130	-2	39	1,50E+03	-1	>300	-2	112	1,10E+04	-1	223	-2	136	1,40E+04
	c	3005675	Ratatouille	/	/	-4	284	-5	16	2,70E+06	-4	202	-3	23	2,00E+06	-4	203	-5	23	2,10E+06	-4	205	-5	23	2,10E+06	-4	203	-5	24	2,10E+06
	c	2939507	Zucchini and spinach gratin	/	/	-4	>300	-5	47	4,70E+06	-4	96	-5	10	9,60E+05	-4	126	-5	18	1,30E+06	-4	264	-5	46	2,80E+06	-4	259	-5	51	2,80E+06
	c	2939508	Ratatouille	/	/	-1	88	-2	16	9,50E+02	-1	7	-2	1	7,00E+01	-1	5	-2	2	5,00E+01	-1	10	-2	2	1,00E+02	-1	6	-2	2	6,00E+01
	c	2939509	Sweet potato puree	/	/	-1	10	-2	2	1,00E+02	-1	13	-2	4	1,30E+02	-1	13	-2	5	1,30E+02	-1	17	-2	5	1,70E+02	-1	10	-2	5	1,00E+02
	c	2939510	Kimchi (fermented vegetables)	/	/	-6	54	-7	2	5,40E+07	-6	29	-7	7	2,90E+07	-6	30	-7	7	3,00E+07	-6	30	-7	7	3,00E+07	-6	30	-7	8	3,00E+07
	c	2986135	Tomato tartare	/	/	-2	>300	-3	31	31000	-2	82	-3	7	8,20E+03	-2	78	-3	7	7,80E+03	-2	81	-3	7	8,10E+03	-2	77	-3	7	7,70E+03
	c	2939505	Carrots with cream	/	/	-1	2	-2	0	2,00E+01	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10
	c	2939506	Coleslaw with curry cream	/	/	-2	45	-3	8	4,50E+03	-2	1	-3	0	<10	-2	2	-3	0	2,00E+02	-2	3	-3	0	3,00E+02	-2	3	-3	0	3,00E+02
	c	2986199	Vegetable soup	/	/	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10

Relative trueness - raw data - interpretation with 2 dilutions

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Egg products and egg based products	a	2976251	Mayonnaise	/	/	-1	>300	-2	30	3,00E+03	-1	>300	-2	54	5,40E+03	-1	261	-2	51	2,80E+03	-1	>300	-2	54	5,40E+03	-1	174	-2	50	2,00E+03
	a	3005756	Ile flottante	/	/	-3	>300	-4	118	1,18E+06	-3	>300	-4	30	3,00E+05	-3	>300	-4	24	2,40E+05	-3	>300	-4	101	1,00E+06	-3	>300	-4	98	9,80E+05
	a	2976255	Chocolate marquise	/	/	-3	94	-4	13	9,70E+04	-3	83	-4	11	8,60E+04	-3	69	-4	11	7,30E+04	-3	83	-4	11	8,60E+04	-3	77	-4	15	8,40E+04
	a	3005657	Chocolate mousse	/	/	-4	>300	-5	295	2,90E+07	-4	>300	-5	232	2,30E+07	-4	>300	-5	238	2,40E+07	-4	>300	-5	247	2,50E+07	-4	0	-5	246	2,50E+07
	a	3005658	Tiramisu	/	/	-3	52	-4	4	5,10E+04	-3	24	-4	3	2,40E+04	-3	25	-4	4	2,60E+04	-3	31	-4	4	3,10E+04	-3	31	-4	4	3,10E+04
	a	2976254	Ile flottante	/	/	-2	1	-3	0	1,00E+02	-2	6	-3	0	6,00E+02	-2	3	-3	0	3,00E+02	-2	6	-3	1	6,00E+02	-2	5	-3	1	5,00E+02
	a	2976252	Chocolate mousse	/	/	-4	0	-5	0	<10000	-4	2	-5	0	2,00E+04	-4	3	-5	0	3,00E+04	-4	2	-5	0	2,00E+04	-4	3	-5	0	3,00E+04
	a	2976253	Tiramisu with speculoos	/	/	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000
	b	2986201	Egg white powder	/	/	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10
	b	2976258	Pasteurized liquid egg yolk	/	/	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000
	b	3005663	liquid egg yolks	/	/	-4	47	-5	2	4,40E+05	-4	35	-5	2	3,40E+05	-4	33	-5	3	3,30E+05	-4	35	-5	2	3,50E+05	-4	35	-3	4	3,50E+05
	b	2986137	Pasteurized liquid egg white	/	/	-6	118	-7	14	1,20E+08	-6	157	-7	17	1,60E+08	-6	168	-7	16	1,70E+08	-6	170	-7	19	1,70E+08	-6	174	-7	18	1,80E+08
	b	2976256	Whole egg	/	/	-5	117	-6	24	1,30E+07	-5	>300	-6	103	1,00E+08	-5	>300	-6	115	1,20E+08	-5	>300	-6	186	1,90E+08	-5	>300	-6	197	2,00E+08
	b	2976257	Whole egg powder	/	/	-2	34	-3	10	4,00E+03	-2	47	-3	9	5,00E+03	-2	45	-3	7	4,50E+03	-2	47	-3	9	4,70E+03	-2	48	-3	8	4,80E+03
	b	2976259	Pasteurized liquid egg yolk	/	/	-2	103	-3	27	1,20E+04	-2	92	-3	7	9,00E+03	-2	83	-3	5	8,00E+03	-2	137	-3	10	1,40E+04	-2	175	-3	18	1,80E+04
	c	2986202	Flan	/	/	-8	33	-9	3	3,30E+09	-8	16	-9	3	1,70E+09	-8	15	-9	3	1,60E+09	-8	38	-9	5	3,80E+09	-8	39	-9	5	3,90E+09
	c	2986204	Butter cream buche	/	/	-4	>300	-5	72	7,20E+06	-4	>300	-5	133	1,30E+07	-4	>300	-5	129	1,30E+07	-4	>300	-5	134	1,30E+07	-4	>300	-5	149	1,50E+07
	c	2939511	Donuts	/	/	-2	12	-3	2	1,30E+03	-2	11	-3	1	1,10E+03	-2	11	-3	1	1,10E+03	-2	13	-3	1	1,30E+03	-2	11	-3	1	1,10E+03
	c	3005737	Paris brest	/	/	-3	123	-4	18	1,30E+05	-3	122	-4	14	1,20E+05	-3	122	-4	14	1,20E+05	-3	124	-4	16	1,30E+05	-3	124	-4	15	1,30E+05
	c	2939512	Eclair au chocolat	/	/	-3	63	-4	3	6,00E+04	-3	65	-4	14	7,20E+04	-3	71	-4	15	7,80E+04	-3	65	-4	14	7,20E+04	-3	68	-4	18	7,80E+04
	c	2939513	Flan	/	/	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100
	c	2939514	Apple pie	/	/	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100
	c	2939515	Plaisir 3 chocolats	/	/	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000
	c	2986203	Far breton	/	/	-5	23	-6	2	2,30E+06	-5	0	-6	0	<100000	-5	0	-6	0	<100000	-5	0	-6	0	<100000	-5	0	-6	0	<100000

Appendix E: Relative trueness - Results and calculations 2 dilutions manual reading

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Dairy products	a	4464	Raw milk	99000000	81000000	8,00	7,91	7,95	-0,09	1
	a	4463	Raw milk	300000	140000	5,48	5,15	5,31	-0,33	2
	a	4561	Raw ewe milk	140	90	2,15	1,95	2,05	-0,19	3
	a	4562	Raw ewe milk	9500	170	3,98	2,23	3,10	-1,75	4
	a	4572	Raw milk	30000	14000	4,48	4,15	4,31	-0,33	5
	a	4573	Raw milk	120000	86000	5,08	4,93	5,01	-0,14	6
	b	4466	Rice pudding	6100	35000	3,79	4,54	4,16	0,76	7
	b	4558	Ice cream	130	500	2,11	2,70	2,41	0,59	8
	b	4560	Ice cream	210	450	2,32	2,65	2,49	0,33	9
	b	4563	Rice pudding	280	60	2,45	1,78	2,11	-0,67	10
	b	4564	Vanilla cream	70	150	1,85	2,18	2,01	0,33	11
	b	4565	Cheese preparation	190	220	2,28	2,34	2,31	0,06	12
	b	4735	Cheese preparation	230000	120000	5,36	5,08	5,22	-0,28	13
	b	4738	Pasteurized milk	640	40	2,81	1,60	2,20	-1,20	14
	b	4736	Cheese preparation	4700000	2100000	6,67	6,32	6,50	-0,35	15
	c	3717	Milk powder	280	410	2,45	2,61	2,53	0,17	16
	c	3718	Milk powder	640	450	2,81	2,65	2,73	-0,15	17
	c	3719	Infant formula	230	300	2,36	2,48	2,42	0,12	18
	c	3720	Infant formula	370	400	2,57	2,60	2,59	0,03	19
	c	3721	Infant formula	160	460	2,20	2,66	2,43	0,46	20
	c	4453	Milk powder	150	260	2,18	2,41	2,30	0,24	21
	c	4454	Milk powder	190	330	2,28	2,52	2,40	0,24	22
	c	4455	Milk powder	370	480	2,57	2,68	2,62	0,11	23
	c	4456	Infant formula	110	160	2,04	2,20	2,12	0,16	24
	c	4457	Infant formula	170	340	2,23	2,53	2,38	0,30	25
	c	4458	Infant formula	180	310	2,26	2,49	2,37	0,24	26
	c	4459	Infant formula	100	170	2,00	2,23	2,12	0,23	27
	c	4460	Infant formula	180	260	2,26	2,41	2,34	0,16	28
	c	5125	Infant formula	40000	5000	4,60	3,70	4,15	-0,90	29
	c	5126	Infant formula	3000	500	3,48	2,70	3,09	-0,78	30
	c	5127	Milk powder	4300	4900	3,63	3,69	3,66	0,06	31
	c	5128	Milk powder	31000	45000	4,49	4,65	4,57	0,16	32
	c	5129	Milk powder	130000	130000	5,11	5,11	5,11	0,00	33
	c	5130	Milk powder	5800	5200	3,76	3,72	3,74	-0,05	34
	c	5379	Milk powder	1700	910	3,23	2,96	3,09	-0,27	35
	c	5380	Infant formula	18000	43000	4,26	4,63	4,44	0,38	36
			Average difference of the category						-0,07	
			Standard deviation of differences						0,50	
Meat products	a	2939490	Veal paupiette	54000000	54000000	7,73	7,73	7,73	0,00	1
	a	2939491	Beef	480000000	560000000	8,68	8,75	8,71	0,07	2
	a	2939492	Pork chop	750000000	840000000	8,88	8,92	8,90	0,05	3
	a	2939493	Leg of lamb	3400000	3600000	6,53	6,56	6,54	0,02	4
	a	2986192	Guinea fowl	1900000000	1000000000	9,28	9,00	9,14	-0,28	5
	b	2976235	Lasagna	62000	55000	4,79	4,74	4,77	-0,05	6
	b	2976236	Cider pork	410	300	2,61	2,48	2,54	-0,14	7
	b	2976237	Tomato beef	8400	9000	3,92	3,95	3,94	0,03	8
	b	2976238	Veal blanquette	190000000	150000000	8,28	8,18	8,23	-0,10	9
	b	2986193	Beef carrots leefs	890000000	560000000	8,95	8,75	8,85	-0,20	10
	c	2986194	Sausage	1300000000	560000000	9,11	8,75	8,93	-0,37	11
	c	2939495	Black pudding	890000000	970000000	8,95	8,99	8,97	0,04	12
	c	2939496	Beer pâté	2500000000	1900000000	9,40	9,28	9,34	-0,12	13
	c	2939497	Liver mousse	36000000	27000000	7,56	7,43	7,49	-0,12	14
	c	2939499	Mousse forestière	280000000	250000000	8,45	8,40	8,42	-0,05	15
			Average difference of the category						-0,08	
			Standard deviation of differences						0,13	

Seafood products	a	2986121	Salmon fillet	790 000	710 000	5,90	5,85	5,87	-0,05	1	
	a	2986122	Cod fillet	21 000 000	20 000 000	7,32	7,30	7,31	-0,02	2	
	a	2986123	Shrimp	15 000	6 000	4,18	3,78	3,98	-0,40	3	
	a	2986120	Saithe fillet	510 000 000	300 000 000	8,71	8,48	8,59	-0,23	4	
	a	2986124	Sardine	2 900 000 000	3 500 000 000	9,46	9,54	9,50	0,08	5	
	b	2976240	Colin	2 000	660	3,30	2,82	3,06	-0,48	6	
	b	2976241	Whiting	140 000 000	85 000 000	8,15	7,93	8,04	-0,22	7	
	b	2976242	Saithe	53 000 000	33 000 000	7,72	7,52	7,62	-0,21	8	
	b	2976243	Pout	4200000	4000000	6,62	6,60	6,61	-0,02	9	
	b	2986195	Salmon	1900000000	1000000000	9,28	9,00	9,14	-0,28	10	
	c	2939504	Smoked mackerel with pepper	4000	70000	3,60	4,85	4,22	1,24	11	
	c	2939500	Smoked herring	350000	360000	5,54	5,56	5,55	0,01	12	
	c	2939501	Smoked salmon	920000000	880000000	8,96	8,94	8,95	-0,02	13	
	c	2939502	Smoked mackerel	50	750	1,70	2,88	2,29	1,18	14	
	c	2939503	Fish with American sauce	500	600	2,70	2,78	2,74	0,08	15	
	c	2896125	Smoked mackerel	1100000	920000	6,04	5,96	6,00	-0,08	16	
	c	2896126	Smoked mackerel	1500000000	1500000000	9,18	9,18	9,18	0,00	17	
	c	2896129	Smoked haddock	1100000000	1400000000	9,04	9,15	9,09	0,10	18	
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07	19	
		Average difference of the category								0,03	
		Standard deviation of differences								0,44	
Fruits & vegetables	a	2976245	Parsley	3400000	1100000	6,53	6,04	6,29	-0,49	1	
	a	2976246	Salad	88000000	42000000	7,94	7,62	7,78	-0,32	2	
	a	3005659	frozen chopped spinach	640	230	2,81	2,36	2,58	-0,44	3	
	a	3005676	pan-fry vegetables	20000000	14000000	7,30	7,15	7,22	-0,15	4	
	a	2986196	Zucchini	5200	620	3,72	2,79	3,25	-0,92	5	
	b	2986197	Carrot	25000000	24000000	7,40	7,38	7,39	-0,02	6	
	b	2986200	Bagged salad	180000000	60000000	8,26	7,78	8,02	-0,48	7	
	b	2986131	Beetroot	280000000	220000000	8,45	8,34	8,39	-0,10	8	
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10	9	
	b	2986130	Carrot	22000000	1200000	7,34	6,08	6,71	-1,26	10	
	c	2986198	Lentils and carrots	10000	1300	4,00	3,11	3,56	-0,89	11	
	c	3005675	Ratatouille	2700000	2000000	6,43	6,30	6,37	-0,13	12	
	c	2939507	Zucchini and spinach gratin	4700000	960000	6,67	5,98	6,33	-0,69	13	
	c	2939508	Ratatouille	950	70	2,98	1,85	2,41	-1,13	14	
	c	2939509	Sweet potato puree	100	130	2,00	2,11	2,06	0,11	15	
	c	2939510	Kimchi (fermented vegetables)	54000000	29000000	7,73	7,46	7,60	-0,27	16	
	c	2986135	Tomato tartare	31000	8200	4,49	3,91	4,20	-0,58	17	
		Average difference of the category								-0,46	
		Standard deviation of differences								0,40	
Egg products	a	2976251	Mayonnaise	3000	5400	3,48	3,73	3,60	0,26	1	
	a	3005756	Ile flottante	1180000	300000	6,07	5,48	5,77	-0,59	2	
	a	2976255	Chocolate marquise	97000	86000	4,99	4,93	4,96	-0,05	3	
	a	3005657	Chocolate mousse	29000000	23000000	7,46	7,36	7,41	-0,10	4	
	a	3005658	Tiramisu	51000	24000	4,71	4,38	4,54	-0,33	5	
	b	3005663	liquid egg yolks	440000	340000	5,64	5,53	5,59	-0,11	6	
	b	2986137	Pasteurized liquid egg white	120000000	160000000	8,08	8,20	8,14	0,12	7	
	b	2976256	Whole egg	13000000	10000000	7,11	8,00	7,56	0,89	8	
	b	2976257	Whole egg powder	4000	5000	3,60	3,70	3,65	0,10	9	
	b	2976259	Pasteurized liquid egg yolk	12000	9000	4,08	3,95	4,02	-0,12	10	
	c	2986202	Flan	3300000000	1700000000	9,52	9,23	9,37	-0,29	11	
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26	12	
	c	2939511	Donuts	1300	1100	3,11	3,04	3,08	-0,07	13	
	c	3005737	Paris brest	130000	120000	5,11	5,08	5,10	-0,03	14	
	c	2939512	Eclair au chocolat	60000	72000	4,78	4,86	4,82	0,08	15	
		Average difference of the category								0,00	
		Standard deviation of differences								0,33	
	Average difference all categories									-0,11	102
	Standard deviation of differences									0,44	

n = 102
 $\beta = 95\%$
 $T(0.025;101) = 1,983731003$

Lower confidence limit	Upper confidence limit
-0,98	0,77

n = 36 $T(0.025;35) = 2,030$
n = 15 $T(0.025;14) = 2,145$
n = 19 $T(0.025;18) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
DP	-1,09	0,96
MP	-0,36	0,20
SFP	-0,92	0,13
F&V	-0,94	0,42
EP	-0,73	0,73

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Dairy products	b	4465	Panna cotta	10	40	1,00	1,60	1,30	0,60
	b	4559	Ice cream	40	590	1,60	2,77	2,19	1,17
	b	4737	Dessert with chantilly	>30000000	>30000000	7,48	7,48	7,48	0,00
	c	4461	Infant formula with probiotics	20	30	1,30	1,48	1,39	0,18
	c	4462	Infant formula with probiotics	>300	NI	2,47	2,47	2,47	0,00
	c	4566	Infant formula with probiotics	1400	NI	3,15	3,00	3,07	-0,15
	c	4567	Infant formula with probiotics	<10	40	0,00	1,60	0,80	1,60
	c	5123	Infant formula with probiotics	200	80	2,30	1,90	2,10	-0,40
Meat products	c	5124	Infant formula with probiotics	100	130	2,00	2,11	2,06	0,11
	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976234	Beef parmentier	>30000000	>30000000	6,48	6,48	6,48	0,00
Seafood products	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
Fruits and vegetables	c	2896127	Smoked tuna	1,30E+03	2,00E+02	3,11	2,30	2,71	-0,81
	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	<10	3,65	0,00	1,83	-3,65
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	6,00E+02	2,00	2,78	2,39	0,78
	a	2976252	Chocolate mousse	<10000	2,00E+04	4,00	4,30	4,15	0,30
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Relative trueness - Results and calculations 2 dilutions manual reading after storage

Category	Type	#	Matrix	AM before	AM after	AM before	AM after	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Dairy products	a	5567	Raw ewe milk	120	120	2,08	2,08	2,08	0,00
	a	5568	Raw ewe milk	91	91	1,96	1,96	1,96	0,00
	a	5569	Raw cow milk	3500000	3500000	6,54	6,54	6,54	0,00
	a	5570	Raw cow milk	240000	250000	5,38	5,40	5,39	0,02
	a	5571	Raw cow milk	25000	25000	4,40	4,40	4,40	0,00
	b	5572	Ice cream	560	560	2,75	2,75	2,75	0,00
	b	5573	Ice cream	420	460	2,62	2,66	2,64	0,04
	b	5574	Ice cream	170	170	2,23	2,23	2,23	0,00
	b	5575	Rice pudding	60	55	1,78	1,74	1,76	-0,04
	b	5578	Fermented milk	7100000	7300000	6,85	6,86	6,86	0,01
	b	5579	Fresh cheese	1300000	1300000	6,11	6,11	6,11	0,00
	b	5580	Fermented milk	18000000	18000000	7,26	7,26	7,26	0,00
	b	5581	Pastry	230000	240000	5,36	5,38	5,37	0,02
	b	5582	Pastry	650000000	650000000	8,81	8,81	8,81	0,00
	c	3717	Milk powder	410	410	2,61	2,61	2,61	0,00
	c	3718	Milk powder	450	450	2,65	2,65	2,65	0,00
	c	3719	Infant formula	300	300	2,48	2,48	2,48	0,00
	c	3720	Infant formula	400	400	2,60	2,60	2,60	0,00
	c	3721	Infant formula	460	500	2,66	2,70	2,68	0,04
	c	4453	Milk powder	260	260	2,41	2,41	2,41	0,00
	c	4454	Milk powder	330	330	2,52	2,52	2,52	0,00
	c	4455	Milk powder	480	480	2,68	2,68	2,68	0,00
	c	4456	Infant formula	160	160	2,20	2,20	2,20	0,00
	c	4457	Infant formula	340	340	2,53	2,53	2,53	0,00
	c	4458	Infant formula	310	310	2,49	2,49	2,49	0,00
	c	4459	Infant formula	170	180	2,23	2,26	2,24	0,02
	c	4460	Infant formula	260	260	2,41	2,41	2,41	0,00
	c	4567	Infant formula with probiotics	40	40	1,60	1,60	1,60	0,00
	c	5123	Infant formula	80	80	1,90	1,90	1,90	0,00
	c	5124	Infant formula	130	140	2,11	2,15	2,13	0,03
	c	5125	Infant formula	5000	5000	3,70	3,70	3,70	0,00
	c	5126	Infant formula	500	500	2,70	2,70	2,70	0,00
	c	5127	Milk powder	4900	4900	3,69	3,69	3,69	0,00
	c	5128	Milk powder	45000	45000	4,65	4,65	4,65	0,00
	c	5129	Milk powder	130000	130000	5,11	5,11	5,11	0,00
	c	5130	Milk powder	5200	5200	3,72	3,72	3,72	0,00
	c	5379	Milk powder	910	910	2,96	2,96	2,96	0,00
	c	5380	Infant formula	43000	43000	4,63	4,63	4,63	0,00
	Average difference of the category								0,00
	Standard deviation of differences								0,01
Average difference all categories								0,00	
Standard deviation of differences								0,01	

n = 38
 β = 95%
 $T(0.025;37) = 2,026192463$

Lower confidence limit	Upper confidence limit
-0,02	0,03

n = 37 $T(0.025;36) = 2,030$

	Lower confidence limit	Upper confidence limit
DP	-0,02	0,03

Results not used in the statistical interpretation

Category	Type	#	Sample	AM before	AM after	AM before	AM after	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Dairy products	b	5576	Rice pudding	20	20	1,30	1,30	1,30	0,00
	b	5577	Rice pudding	20	20	1,30	1,30	1,30	0,00
	b	5583	Pasteurized half skimmed milk	20	20	1,30	1,30	1,30	0,00
	b	5584	Pasteurized half skimmed milk	20	20	1,30	1,30	1,30	0,00
	c	4461	Infant formula with probiotics	30	30	1,48	1,48	1,48	0,00
	c	4462	Infant formula with probiotics	>300	>300	2,47	2,47	2,47	0,00
	c	4566	Infant formula with probiotics	1400	NI	3,15	3,00	3,07	-0,15

Relative trueness - Results and calculations 2 dilutions manual reading after storage

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Meat products	a	2939490	Veal paupiette	54000000	68000000	7,73	7,83	7,78	0,10	1
	a	2939491	Beef	480000000	570000000	8,68	8,76	8,72	0,07	2
	a	2939492	Pork chop	750000000	900000000	8,88	8,95	8,91	0,08	3
	a	2939493	Leg of lamb	3400000	3700000	6,53	6,57	6,55	0,04	4
	a	2986192	Guninea fowl	1900000000	960000000	9,28	8,98	9,13	-0,30	5
	b	2976235	Lasagna	62000	55000	4,79	4,74	4,77	-0,05	6
	b	2976236	Cider pork	410	540	2,61	2,73	2,67	0,12	7
	b	2976237	Tomato beef	8400	9000	3,92	3,95	3,94	0,03	8
	b	2976238	Veal blanquette	190000000	150000000	8,28	8,18	8,23	-0,10	9
	b	2986193	Beef carrots leefs	890000000	550000000	8,95	8,74	8,84	-0,21	10
	c	2986194	Sausage	1300000000	1600000000	9,11	9,20	9,16	0,09	11
	c	2939495	Black pudding	890000000	1100000000	8,95	9,04	9,00	0,09	12
	c	2939496	Beer pâté	2500000000	2300000000	9,40	9,36	9,38	-0,04	13
	c	2939497	Liver mousse	36000000	28000000	7,56	7,45	7,50	-0,11	14
	c	2939499	Mousse forestière	280000000	250000000	8,45	8,40	8,42	-0,05	15
Average difference of the category									-0,02	
Standard deviation of differences									0,12	
Seafood products	a	2986121	Salmon fillet	790 000	1 200 000	5,90	6,08	5,99	0,18	1
	a	2986122	Cod fillet	21 000 000	30 000 000	7,32	7,48	7,40	0,15	2
	a	2986123	Shrimp	15 000	6 000	4,18	3,78	3,98	-0,40	3
	a	2986120	Saithe fillet	510 000 000	390 000 000	8,71	8,59	8,65	-0,12	4
	a	2986124	Sardine	2 900 000 000	4 000 000 000	9,46	9,60	9,53	0,14	5
	b	2976240	Colin	2 000	1 000	3,30	3,00	3,15	-0,30	6
	b	2976241	Whiting	140 000 000	100 000 000	8,15	8,00	8,07	-0,15	7
	b	2976242	Saithe	53 000 000	50 000 000	7,72	7,70	7,71	-0,03	8
	b	2976243	Pout	4200000	7100000	6,62	6,85	6,74	0,23	9
	b	2986195	Salmon	1900000000	970000000	9,28	8,99	9,13	-0,29	10
	c	2939504	Smoked mackerel with pepper	4,00E+03	7,50E+04	3,60	4,88	4,24	1,27	11
	c	2939500	Smoked herring	350000	420000	5,54	5,62	5,58	0,08	12
	c	2939501	Smoked salmon	920000000	1300000000	8,96	9,11	9,04	0,15	13
	c	2939502	Smoked mackerel	50	5100	1,70	3,71	2,70	2,01	14
	c	2939503	Fish with American sauce	500	1800	2,70	3,26	2,98	0,56	15
	c	2896125	Smoked mackerel	1100000	880000	6,04	5,94	5,99	-0,10	16
	c	2896126	Smoked mackerel	1500000000	1700000000	9,18	9,23	9,20	0,05	17
	c	2896129	Smoked haddock	1100000000	1700000000	9,04	9,23	9,14	0,19	18
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07	19
Average difference of the category									0,19	
Standard deviation of differences									0,57	
Fruits & vegetables	a	2976245	Parsley	3400000	2600000	6,53	6,41	6,47	-0,12	1
	a	2976246	Salad	88000000	64000000	7,94	7,81	7,88	-0,14	2
	a	3005659	frozen chopped spinach	640	240	2,81	2,38	2,59	-0,43	3
	a	3005676	pan-fry vegetables	20000000	24000000	7,30	7,38	7,34	0,08	4
	a	2986196	Zucchini	5200	1100	3,72	3,04	3,38	-0,67	5
	b	2986197	Carrot	25000000	27000000	7,40	7,43	7,41	0,03	6
	b	2986200	Bagged salad	180000000	100000000	8,26	8,00	8,13	-0,26	7
	b	2986131	Beetroot	280000000	260000000	8,45	8,41	8,43	-0,03	8
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10	9
	b	2986130	Carrot	22000000	1400000	7,34	6,15	6,74	-1,20	10
	c	2986198	Lentils and carrots	10000	11000	4,00	4,04	4,02	0,04	11
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11	12
	c	2939507	Zucchini and spinach gratin	4700000	2800000	6,67	6,45	6,56	-0,22	13
	c	2939508	Ratatouille	950	100	2,98	2,00	2,49	-0,98	14
	c	2939509	Sweet potato puree	100	170	2,00	2,23	2,12	0,23	15
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26	16
	c	2986135	Tomato tartare	31000	8100	4,49	3,91	4,20	-0,58	17
Average difference of the category									-0,28	
Standard deviation of differences									0,38	

Egg products	a	2976251	Mayonnaise	3000	5400	3,48	3,73	3,60	0,26	1
	a	3005756	Ile flottante	1180000	1000000	6,07	6,00	6,04	-0,07	2
	a	2976255	Chocolate marquise	97000	86000	4,99	4,93	4,96	-0,05	3
	a	3005657	Chocolate mousse	29000000	25000000	7,46	7,40	7,43	-0,06	4
	a	3005658	Tiramisu	51000	31000	4,71	4,49	4,60	-0,22	5
	b	3005663	liquid egg yolks	440000	350000	5,64	5,54	5,59	-0,10	6
	b	2986137	Pasteurized liquid egg white	120000000	170000000	8,08	8,23	8,15	0,15	7
	b	2976256	Whole egg	13000000	190000000	7,11	8,28	7,70	1,16	8
	b	2976257	Whole egg powder	4000	4700	3,60	3,67	3,64	0,07	9
	b	2976259	Pasteurized liquid egg yolk	12000	14000	4,08	4,15	4,11	0,07	10
	c	2986202	Flan	3300000000	3800000000	9,52	9,58	9,55	0,06	11
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26	12
	c	2939511	Donuts	1300	1300	3,11	3,11	3,11	0,00	13
	c	3005737	Paris brest	130000	130000	5,11	5,11	5,11	0,00	14
	c	2939512	Eclair au chocolat	60000	72000	4,78	4,86	4,82	0,08	15
Average difference of the category									0,11	
Standard deviation of differences									0,32	
Average difference all categories									0,00	66
Standard deviation of differences									0,43	

n = 66
 $\beta = 95\%$
 $T(0.025;65) = 1,997137908$

Lower confidence limit	Upper confidence limit
-0,86	0,87

n = 15 $T(0.025;14) = 2,145$
n = 19 $T(0.025;18) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,29	0,26
SFP	-1,04	0,12
F&V	-1,06	0,56
EP	-0,60	0,81

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
Seafood products	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
	c	2896127	Smoked tuna	1,30E+03	2,00E+02	3,11	2,30	2,71	-0,81
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	<10	3,65	0,00	1,83	-3,65
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	6,00E+02	2,00	2,78	2,39	0,78
	a	2976252	Chocolate mousse	<10000	2,00E+04	4,00	4,30	4,15	0,30
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Appendix F: Relative trueness - Results and calculations 2 dilutions automatic reading

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939490	Veal paupiette	54000000	54000000	7,73	7,73	7,73	0,00
	a	2939491	Beef	480000000	520000000	8,68	8,72	8,70	0,03
	a	2939492	Pork chop	750000000	800000000	8,88	8,90	8,89	0,03
	a	2939493	Leg of lamb	3400000	3700000	6,53	6,57	6,55	0,04
	a	2986192	Guninea fowl	1900000000	1000000000	9,28	9,00	9,14	-0,28
	b	2976235	Lasagna	62000	56000	4,79	4,75	4,77	-0,04
	b	2976236	Cider pork	410	230	2,61	2,36	2,49	-0,25
	b	2976237	Tomato beef	8400	9400	3,92	3,97	3,95	0,05
	b	2976238	Veal blanquette	190000000	160000000	8,28	8,20	8,24	-0,07
	b	2986193	Beef carrots leefs	890000000	560000000	8,95	8,75	8,85	-0,20
	c	2986194	Sausage	1300000000	560000000	9,11	8,75	8,93	-0,37
	c	2939495	Black pudding	890000000	1000000000	8,95	9,00	8,97	0,05
	c	2939496	Beer pâté	2500000000	1900000000	9,40	9,28	9,34	-0,12
	c	2939497	Liver mousse	36000000	27000000	7,56	7,43	7,49	-0,12
	c	2939499	Mousse forestière	280000000	250000000	8,45	8,40	8,42	-0,05
Average difference of the category									-0,09
Standard deviation of differences									0,13
Seafood products	a	2986121	Salmon fillet	790 000	670 000	5,90	5,83	5,86	-0,07
	a	2986122	Cod fillet	21 000 000	20 000 000	7,32	7,30	7,31	-0,02
	a	2986123	Shrimp	15 000	5 000	4,18	3,70	3,94	-0,48
	a	2986120	Saithe fillet	510 000 000	300 000 000	8,71	8,48	8,59	-0,23
	a	2986124	Sardine	2 900 000 000	3 500 000 000	9,46	9,54	9,50	0,08
	b	2976240	Colin	2 000	660	3,30	2,82	3,06	-0,48
	b	2976241	Whiting	140 000 000	92 000 000	8,15	7,96	8,05	-0,18
	b	2976242	Saithe	53000000	24000000	7,72	7,38	7,55	-0,34
	b	2976243	Pout	4200000	3800000	6,62	6,58	6,60	-0,04
	b	2986195	Salmon	1 900 000 000	1000000000	9,28	9,00	9,14	-0,28
	c	2896129	Smoked haddock	1100000000	1500000000	9,04	9,18	9,11	0,13
	c	2896126	Smoked mackerel	1500000000	1400000000	9,18	9,15	9,16	-0,03
	c	2939500	Smoked herring	350000	370000	5,54	5,57	5,56	0,02
	c	2939501	Smoked salmon	920000000	840000000	8,96	8,92	8,94	-0,04
	c	2939502	Smoked mackerel	50	970	1,70	2,99	2,34	1,29
	c	2939503	Fish with American sauce	500	600	2,70	2,78	2,74	0,08
	c	2939504	Smoked mackerel with pepper	4000	72000	3,60	4,86	4,23	1,26
	c	2896125	Smoked mackerel	1100000	880000	6,04	5,94	5,99	-0,10
	c	2896127	Smoked tuna	1300	800	3,11	2,90	3,01	-0,21
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07
Average difference of the category									0,01
Standard deviation of differences									0,46
Fruits & vegetables	a	2976245	Parsley	3400000	1100000	6,53	6,04	6,29	-0,49
	a	2976246	Salad	88000000	39000000	7,94	7,59	7,77	-0,35
	a	3005659	Frozen chopped spinach	640	210	2,81	2,32	2,56	-0,48
	a	3005676	Pan-fry vegetables	20000000	14000000	7,30	7,15	7,22	-0,15
	a	2986196	Zucchini	5200	1000	3,72	3,00	3,36	-0,72
	b	2986130	Carrot	22000000	1000000	7,34	6,00	6,67	-1,34
	b	2986197	Carrot	25000000	17000000	7,40	7,23	7,31	-0,17
	b	2986200	Bagged salad	180000000	50000000	8,26	7,70	7,98	-0,56
	b	2986131	Beetroot	280000000	200000000	8,45	8,30	8,37	-0,15
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11
	c	2986198	Lentils and carrots	10000	1500	4,00	3,18	3,59	-0,82
	c	2939507	Zucchini and spinach gratin	4700000	1300000	6,67	6,11	6,39	-0,56
	c	2939508	Ratatouille	950	50	2,98	1,70	2,34	-1,28
	c	2939509	Sweet potato puree	100	130	2,00	2,11	2,06	0,11
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26
	c	2986135	Tomato tartare	31000	7800	4,49	3,89	4,19	-0,60
Average difference of the category									-0,47
Standard deviation of differences									0,40
Egg products	a	2976251	Mayonnaise	3000	2800	3,48	3,45	3,46	-0,03
	a	2976254	Ile flottante	100	300	2,00	2,48	2,24	0,48
	a	2976255	Chocolate marquise	97000	73000	4,99	4,86	4,93	-0,12
	a	3005657	Chocolate mousse	30000000	24000000	7,48	7,38	7,43	-0,10
	a	3005658	Tiramisu	52000	25000	4,72	4,40	4,56	-0,32
	b	3005663	Liquid egg yolks	470000	330000	5,67	5,52	5,60	-0,15
	b	2986137	Pasteurized liquid egg white	120000000	170000000	8,08	8,23	8,15	0,15
	b	2976256	Whole egg	13000000	120000000	7,11	8,08	7,60	0,97
	b	2976257	Whole egg powder	4000	4500	3,60	3,65	3,63	0,05
	b	2976259	Pasteurized liquid egg yolk	12000	8300	4,08	3,92	4,00	-0,16
	c	2986202	Flan	3300000000	1600000000	9,52	9,20	9,36	-0,31
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26

c	2939511	Donuts	1200	1100	3,08	3,04	3,06	-0,04	13
c	3005737	Paris brest	130000	120000	5,11	5,08	5,10	-0,03	14
c	2939512	Eclair au chocolat	63000	78000	4,80	4,89	4,85	0,09	15
	Average difference of the category							0,05	67
	Standard deviation of differences							0,33	
Average difference all categories								-0,12	
Standard deviation of differences								0,41	

n = 67
 $\beta = 95\%$
 $T(0.025;66) = 1,996564419$

Lower confidence limit	Upper confidence limit
-0,96	0,71

n = 15 $T(0.025;14) = 2,145$
n = 20 $T(0.025;19) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,38	0,21
SFP	-0,98	1,01
F&V	-1,35	0,41
EP	-0,68	0,77

Results not used in the statistical interpretation

Category	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference	
Meat products	a	2939494	Beef steak	>30000000	2,90E+07	7,48	7,46	7,47	-0,02	corr
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00	corr
Seafood	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00	corr
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00	corr
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00	corr
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00	corr
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30	corr
	c	2939506	Coleslaw with curry cream	4,50E+03	2,00E+02	3,65	2,30	2,98	-1,35	corr
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00	corr
Egg products	a	2976254	Ile flottante	1,00E+02	3,00E+02	2,00	2,48	2,24	0,48	<4
	a	2976252	Chocolate mousse	<10000	3,00E+04	4,00	4,48	4,24	0,48	corr
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00	corr
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00	corr
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00	corr
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00	corr
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00	corr
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36	corr

Relative trueness - Results and calculations 2 dilutions automatic reading after storage

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939490	Veal paupiette	54000000	72000000	7,73	7,86	7,79	0,12
	a	2939491	Beef	480000000	530000000	8,68	8,72	8,70	0,04
	a	2939492	Pork chop	750000000	1000000000	8,88	9,00	8,94	0,12
	a	2939493	Leg of lamb	3400000	3600000	6,53	6,56	6,54	0,02
	a	2986192	Guninea fowl	1900000000	1200000000	9,28	9,08	9,18	-0,20
	b	2976235	Lasagna	62000	73000	4,79	4,86	4,83	0,07
	b	2976236	Cider pork	410	440	2,61	2,64	2,63	0,03
	b	2976237	Tomato beef	8400	11000	3,92	4,04	3,98	0,12
	b	2976238	Veal blanquette	190000000	160000000	8,28	8,20	8,24	-0,07
	b	2986193	Beef carrots leefs	890000000	580000000	8,95	8,76	8,86	-0,19
	c	2986194	Sausage	1300000000	1800000000	9,11	9,26	9,18	0,14
	c	2939495	Black pudding	890000000	1100000000	8,95	9,04	9,00	0,09
	c	2939496	Beer pâté	2500000000	3500000000	9,40	9,54	9,47	0,15
	c	2939497	Liver mousse	36000000	28000000	7,56	7,45	7,50	-0,11
	c	2939499	Mousse forestière	280000000	270000000	8,45	8,43	8,44	-0,02
Average difference of the category									0,02
Standard deviation of differences									0,12
Seafood products	a	2986121	Salmon fillet	790000	1200000	5,90	6,08	5,99	0,18
	a	2986122	Cod fillet	21000000	29000000	7,32	7,46	7,39	0,14
	a	2986123	Shrimp	15000	6000	4,18	3,78	3,98	-0,40
	a	2986120	Saithe fillet	510000000	400000000	8,71	8,60	8,65	-0,11
	a	2986124	Sardine	2900000000	4300000000	9,46	9,63	9,55	0,17
	b	2976240	Colin	2000	1400	3,30	3,15	3,22	-0,15
	b	2976241	Whiting	140000000	110000000	8,15	8,04	8,09	-0,10
	b	2976242	Saithe	53000000	59000000	7,72	7,77	7,75	0,05
	b	2976243	Pout	4200000	7900000	6,62	6,90	6,76	0,27
	b	2986195	Salmon	1900000000	1200000000	9,28	9,08	9,18	-0,20
	c	2896129	Smoked haddock	1100000000	1800000000	9,04	9,26	9,15	0,21
	c	2896126	Smoked mackerel	1500000000	1700000000	9,18	9,23	9,20	0,05
	c	2939500	Smoked herring	350000	420000	5,54	5,62	5,58	0,08
	c	2939501	Smoked salmon	920000000	2000000000	8,96	9,30	9,13	0,34
	c	2939502	Smoked mackerel	50	5800	1,70	3,76	2,73	2,06
	c	2939503	Fish with American sauce	500	1400	2,70	3,15	2,92	0,45
	c	2939504	Smoked mackerel with pepper	4000	76000	3,60	4,88	4,24	1,28
	c	2896125	Smoked mackerel	1100000	910000	6,04	5,96	6,00	-0,08
	c	2896127	Smoked tuna	1300	900	3,11	2,95	3,03	-0,16
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07
Average difference of the category									0,20
Standard deviation of differences									0,56
Fruits & vegetables	a	2976245	Parsley	3400000	3700000	6,53	6,57	6,55	0,04
	a	2976246	Salad	88000000	73000000	7,94	7,86	7,90	-0,08
	a	3005659	Frozen chopped spinach	640	230	2,81	2,36	2,58	-0,44
	a	3005676	Pan-fry vegetables	20000000	23000000	7,30	7,36	7,33	0,06
	a	2986196	Zucchini	5200	1200	3,72	3,08	3,40	-0,64
	b	2986130	Carrot	22000000	1300000	7,34	6,11	6,73	-1,23
	b	2986197	Carrot	25000000	38000000	7,40	7,58	7,49	0,18
	b	2986200	Bagged salad	180000000	110000000	8,26	8,04	8,15	-0,21
	b	2986131	Beetroot	280000000	260000000	8,45	8,41	8,43	-0,03
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11
	c	2986198	Lentils and carrots	10000	14000	4,00	4,15	4,07	0,15
	c	2939507	Zucchini and spinach gratin	4700000	2800000	6,67	6,45	6,56	-0,22
	c	2939508	Ratatouille	950	60	2,98	1,78	2,38	-1,20
	c	2939509	Sweet potato puree	100	100	2,00	2,00	2,00	0,00
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26
	c	2986135	Tomato tartare	31000	7700	4,49	3,89	4,19	-0,60
Average difference of the category									-0,28
Standard deviation of differences									0,42
Egg products	a	2976251	Mayonnaise	3000	2000	3,48	3,30	3,39	-0,18
	a	3005756	Ile flottante	1180000	980000	6,07	5,99	6,03	-0,08
	a	2976255	Chocolate marquise	97000	84000	4,99	4,92	4,96	-0,06
	a	3005657	Chocolate mousse	29000000	25000000	7,46	7,40	7,43	-0,06
	a	3005658	Tiramisu	51000	31000	4,71	4,49	4,60	-0,22
	b	3005663	liquid egg yolks	440000	350000	5,64	5,54	5,59	-0,10
	b	2986137	Pasteurized liquid egg white	120000000	180000000	8,08	8,26	8,17	0,18
	b	2976256	Whole egg	13000000	20000000	7,11	8,30	7,71	1,19
	b	2976257	Whole egg powder	4000	4800	3,60	3,68	3,64	0,08
	b	2976259	Pasteurized liquid egg yolk	12000	18000	4,08	4,26	4,17	0,18
	c	2986202	Flan	3300000000	3900000000	9,52	9,59	9,55	0,07
	c	2986204	Butter cream buche	7200000	15000000	6,86	7,18	7,02	0,32

c	2939511	Donuts	1300	1100	3,11	3,04	3,08	-0,07	13
c	3005737	Paris brest	130000	130000	5,11	5,11	5,11	0,00	14
c	2939512	Eclair au chocolat	60000	78000	4,78	4,89	4,84	0,11	15
	Average difference of the category							0,09	67
	Standard deviation of differences							0,34	
Average difference all categories								0,01	
Standard deviation of differences								0,44	

n = 67
 $\beta = 95\%$
 $T(0.025;66) = 1,996564419$

Lower confidence limit	Upper confidence limit
-0,87	0,90

n = 15 $T(0.025;14) = 2,145$
n = 20 $T(0.025;19) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,23	0,28
SFP	-1,00	1,40
F&V	-1,20	0,65
EP	-0,65	0,83

Results not used in the statistical interpretation

Category	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference	
Meat products	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00	corr
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00	corr
Seafood	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00	corr
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00	corr
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00	corr
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00	corr
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30	corr
	c	2939506	Coleslaw with curry cream	4,50E+03	3,00E+02	3,65	2,48	3,07	-1,18	corr
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00	corr
Egg products	a	2976254	Ile flottante	1,00E+02	3,00E+02	2,00	2,48	2,24	0,48	<4
	a	2976252	Chocolate mousse	<10000	3,00E+04	4,00	4,48	4,24	0,48	corr
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00	corr
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00	corr
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00	corr
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00	corr
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00	corr
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00	corr
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36	corr

Appendix G
Relative trueness: 1 dilution

Relative trueness - raw data - interpretation with 1 dilution

Category	Type	#	Sample	Reference method: ISO 4833-1:2013 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C				
				dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Dairy products	a	4464	Raw milk	-5	>300	-6	99	9,90E+07	-5	>300	-6	81	8,10E+07
	a	4463	Raw milk	-3	278	-4	48	3,00E+05	-3	142	-4	16	1,40E+05
	a	4561	Raw ewe milk	-1	11	-2	4	1,40E+02	-1	10	-2	0	1,00E+02
	a	4562	Raw ewe milk	-2	101	-3	4	9,50E+03	-2	13	-3	8	1,30E+03
	a	4572	Raw milk	-3	30	-4	3	3,00E+04	-3	140	-4	15	1,40E+04
	a	4573	Raw milk	-3	120	-4	15	1,20E+05	-3	86	-4	9	8,60E+04
	b	4466	Rice pudding	-2	50	-3	17	6,10E+03	-2	31	-3	8	3,10E+03
	b	4558	Ice cream	-1	12	-2	2	1,30E+02	-1	46	-2	9	4,60E+02
	b	4560	Ice cream	-1	18	-2	5	2,10E+02	-1	41	-2	8	4,10E+02
	b	4563	Rice pudding	-1	30	-2	1	2,80E+02	-1	6	-2	0	6,00E+01
	b	4564	Vanilla cream	-1	7	-2	1	7,00E+01	-1	13	-2	3	1,30E+02
	b	4565	Cheese preparation	-1	18	-2	3	1,90E+02	-1	17	-2	7	1,70E+02
	b	4735	Cheese preparation	-3	226	-4	31	2,30E+05	-3	121	-4	11	1,20E+05
	b	4738	Pasteurized milk	-1	61	-2	9	6,40E+02	-1	4	-2	1	4,00E+01
	b	4736	Cheese preparation	-4	>300	-5	47	4,70E+06	-4	210	-5	18	2,10E+06
	b	4465	Panna cotta	-1	1	-2	0	1,00E+01	-1	4	-2	1	4,00E+01
	b	4559	Ice cream	-1	4	-2	10	4,00E+01	-1	57	-2	8	5,70E+02
	b	4737	Dessert with chantilly	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000
	c	4461	Infant formula with probiotics	-1	2	-2	1	2,00E+01	-1	3	-2	0	3,00E+01
	c	4462	Infant formula with probiotics	-5	>300	-6	>300	>300	-5	NI	-6	NI	NI
	c	4566	Infant formula with probiotics	-1	NI	-2	14	1,40E+03	-1	NI	-2	0	NI
	c	4567	Infant formula with probiotics	-1	0	-2	0	<10	-1	4	-2	1	4,00E+01
	c	5123	Infant formula with probiotics	-1	NI	-2	2	2,00E+02	-1	8	-2	2	8,00E+01
	c	5124	Infant formula with probiotics	-1	NI	-2	1	1,00E+02	-1	12	-2	2	1,20E+02
	c	3717	Milk powder	-1	29	-2	2	2,80E+02	-1	33	-2	12	3,30E+02
	c	3718	Milk powder	-1	68	-2	2	6,40E+02	-1	39	-2	10	3,90E+02
	c	3719	Infant formula	-1	20	-2	5	2,30E+02	-1	26	-2	7	2,60E+02
	c	3720	Infant formula	-1	38	-2	3	3,70E+02	-1	35	-2	9	3,50E+02
	c	3721	Infant formula	-1	15	-2	3	1,60E+02	-1	39	-2	12	3,90E+02
	c	4453	Milk powder	-1	14	-2	2	1,50E+02	-1	24	-2	5	2,40E+02
	c	4454	Milk powder	-1	18	-2	3	1,90E+02	-1	29	-2	7	2,90E+02
	c	4455	Milk powder	-1	31	-2	10	3,70E+02	-1	45	-2	8	4,50E+02
	c	4456	Infant formula	-1	8	-2	4	1,10E+02	-1	15	-2	3	1,50E+02
	c	4457	Infant formula	-1	17	-2	2	1,70E+02	-1	32	-2	5	3,20E+02
	c	4458	Infant formula	-1	16	-2	4	1,80E+02	-1	27	-2	7	2,70E+02
	c	4459	Infant formula	-1	11	-2	0	1,00E+02	-1	16	-2	3	1,60E+02
	c	4460	Infant formula	-1	16	-2	4	1,80E+02	-1	23	-2	5	2,30E+02
	c	5125	Infant formula	-3	39	-4	5	4,00E+04	-3	5	-4	1	5,00E+03
	c	5126	Infant formula	-2	23	-3	10	3,00E+03	-2	5	-3	1	5,00E+02
	c	5127	Milk powder	-2	39	-3	8	4,30E+03	-2	48	-3	8	4,80E+03
	c	5128	Milk powder	-3	29	-4	5	3,10E+04	-3	46	-4	4	4,60E+04
	c	5129	Milk powder	-3	124	-4	14	1,30E+05	-3	131	-4	14	1,30E+05
	c	5130	Milk powder	-2	61	-3	3	5,80E+03	-2	55	-3	2	5,50E+03
	c	5379	Milk powder	-2	19	-3	0	1,70E+03	-2	10	-3	0	1,00E+03
	c	5380	Infant formula	-2	170	-3	27	1,80E+04	-2	45	-3	2	4,50E+03

Relative trueness - raw data - interpretation with 1 dilution

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Meat products	a	2939490	Veal paupiette	/	/	-5	>300	-6	54	5,40E+07	-5	>300	-6	54	5,40E+07	-5	>300	-6	54	5,40E+07	-5	>300	-6	68	6,80E+07	-5	>300	-6	72	7,20E+07
	a	2939491	Beef	/	/	-6	>300	-7	48	4,80E+08	-6	>300	-7	56	5,60E+08	-6	>300	-7	52	5,20E+08	-6	>300	-7	54	5,40E+08	-6	>300	-7	53	5,30E+08
	a	2939492	Pork chop	/	/	-7	75	-8	9	7,50E+08	-7	77	-8	15	7,70E+08	-7	73	-8	15	8,00E+08	-7	83	-8	16	8,30E+08	-7	95	-8	19	9,50E+08
	a	2939493	Leg of lamb	/	/	-4	>300	-5	34	3,40E+06	-4	>300	-5	36	3,60E+06	-4	>300	-5	37	3,70E+06	-4	>300	-5	37	3,70E+06	-4	>300	-5	36	3,60E+06
	a	2986192	Guinea fowl	/	/	-7	184	-8	27	1,90E+09	-7	101	-8	8	1,00E+09	-7	101	-8	8	1,00E+09	-7	95	-8	10	9,50E+08	-7	122	-8	13	1,20E+09
	a	2939494	Beef steak	/	/	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	285	2,90E+07	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000
	b	2976234	Beef parmentier	/	/	-3	>300	-4	>300	>30000000	-3	>300	-4	>300	>30000000	-3	>300	-4	>300	>30000000	-3	>300	-4	>300	>30000000	-3	>300	-4	>300	>30000000
	b	2976235	Lasagna	/	/	-2	>300	-3	62	6,20E+04	-2	>300	-3	55	5,50E+04	-2	>300	-3	56	5,60E+04	-2	>300	-3	55	5,50E+04	-2	>300	-3	73	7,30E+04
	b	2976236	Cider pork	/	/	-1	41	-2	3	4,10E+02	-1	30	-2	7	3,00E+02	-1	23	-2	8	2,30E+02	-1	46	-2	13	4,60E+02	-1	36	-2	12	3,60E+02
	b	2976237	Tomato beef	/	/	-2	84	-3	5	8,40E+03	-2	89	-3	10	8,90E+03	-2	93	-3	10	9,40E+03	-2	89	-3	10	8,90E+03	-2	114	-3	11	1,10E+04
	b	2976238	Veal blanquette	/	/	-5	>300	-6	191	1,90E+08	-5	>300	-6	153	1,50E+08	-5	>300	-6	158	1,60E+08	-5	>300	-6	149	1,50E+08	-5	>300	-6	162	1,60E+08
	b	2986193	Beef carrots leefs	/	/	-6	>300	-7	89	8,90E+08	-6	>300	-7	56	5,60E+08	-6	>300	-7	57	5,70E+08	-6	>300	-7	55	5,50E+08	-6	>300	-7	58	5,80E+08
	c	2986194	Sausage	/	/	-6	>300	-7	134	1,30E+09	-6	>300	-7	56	5,60E+08	-6	>300	-7	137	1,40E+09	-6	>300	-7	158	1,60E+09	-6	>300	-7	177	1,80E+09
	c	2939495	Black pudding	/	/	-7	76	-8	22	8,90E+08	-7	97	-8	3	9,70E+08	-7	103	-8	5	1,00E+09	-7	114	-8	8	1,10E+09	-7	112	-8	8	1,10E+09
	c	2939496	Beer pâté	/	/	-7	265	-8	10	2,50E+09	-7	194	-8	17	1,90E+09	-7	196	-8	17	1,90E+09	-7	225	-8	29	2,30E+09	-7	>300	-8	35	3,50E+09
	c	2939497	Liver mousse	/	/	-5	>300	-6	36	3,60E+07	-5	266	-6	35	2,70E+07	-5	257	-6	37	2,70E+07	-5	268	-6	35	2,70E+07	-5	274	-6	36	2,70E+07
	c	2939499	Mousse forestière	/	/	-6	275	-7	28	2,80E+08	-6	240	-7	37	2,40E+08	-6	240	-7	36	2,50E+08	-6	240	-7	38	2,40E+08	-6	264	-7	38	2,60E+08
	c	2939498	Sausage	/	/	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000	-4	>300	-5	>300	>30000000

Relative trueness - raw data - interpretation with 1 dilution

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Seafood products	a	2986121	Salmon fillet	/	/	-4	79	-5	9	7,90E+05	-4	71	-5	9	7,10E+05	-4	67	-5	9	6,70E+05	-4	120	-5	9	1,20E+06	-4	123	-5	10	1,20E+06
	a	2986122	Cod fillet	/	/	-4	>300	-5	208	2,10E+07	-4	>300	-5	203	2,00E+07	-4	>300	-5	201	2,00E+07	-4	>300	-5	294	2,90E+07	-4	8	-5	290	2,90E+07
	a	2986123	Shrimp	/	/	-3	15	-4	3	1,50E+04	-3	6	-4	0	6,00E+03	-3	5	-4	0	5,00E+03	-3	6	-4	1	6,00E+03	-3	6	-4	1	6,00E+03
	a	2986120	Saithe fillet	/	/	-7	51	-8	3	5,10E+08	-7	30	-8	3	3,00E+08	-7	30	-8	1	3,00E+08	-7	39	-8	3	3,90E+08	-7	40	-8	3	4,00E+08
	a	2986124	Sardine	/	/	-8	29	-9	6	2,90E+09	-8	35	-9	3	3,50E+09	-8	35	-9	3	3,50E+09	-8	40	-9	3	4,00E+09	-8	43	-9	3	4,30E+09
	b	2976240	Colin	/	/	-1	201	-2	18	2,00E+03	-1	65	-2	8	6,60E+02	-1	66	-2	8	6,60E+02	-1	101	-2	12	1,00E+03	-1	138	-2	15	1,40E+03
	b	2976241	Whiting	/	/	-5	>300	-6	143	1,40E+08	-5	>300	-6	85	8,50E+07	-5	>300	-6	92	9,20E+07	-5	>300	-6	103	1,00E+08	-5	>300	-6	114	1,10E+08
	b	2976242	Saithe	/	/	-5	>300	-6	53	5,30E+07	-5	>300	-6	33	3,30E+07	-5	229	-6	31	2,30E+07	-5	>300	-6	52	5,20E+07	-5	>300	-6	59	5,90E+07
	b	2976243	Pout	/	/	-5	42	-6	1	4,20E+06	-5	40	-6	9	4,00E+06	-5	38	-6	3	3,80E+06	-5	71	-6	9	7,10E+06	-5	77	-6	10	7,70E+06
	b	2986195	Salmon	/	/	-7	176	-8	34	1,90E+09	-7	99	-8	15	9,90E+08	-7	98	-8	15	9,80E+08	-7	92	-8	15	9,20E+08	-7	118	-8	15	1,20E+09
	b	2976239	Salmon	/	/	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000	-1	>300	-2	>300	>30000
	c	2896127	Smoked tuna	/	/	-2	13	-3	2	1,30E+03	-2	2	-3	0	2,00E+02	-2	8	-3	0	8,00E+02	-2	11	-3	1	1,10E+03	-2	9	-3	1	9,00E+02
	c	2939504	Smoked mackerel with pepper	/	/	-3	4	-4	0	4,00E+03	-3	70	-4	8	7,00E+04	-3	72	-4	8	7,20E+04	-3	75	-4	8	7,50E+04	-3	76	-4	8	7,60E+04
	c	2939500	Smoked herring	/	/	-4	35	-5	3	3,50E+05	-4	36	-5	3	3,60E+05	-4	37	-5	3	3,70E+05	-4	42	-5	3	4,20E+05	-4	42	-5	3	4,20E+05
	c	2939501	Smoked salmon	/	/	-6	>300	-7	92	9,20E+08	-6	>300	-7	88	8,80E+08	-6	>300	-7	84	8,40E+08	-6	>300	-7	127	1,30E+09	-6	>300	-7	201	2,00E+09
	c	2939502	Smoked mackerel	/	/	-1	5	-2	1	5,00E+01	-1	72	-2	10	7,20E+02	-1	97	-2	10	9,70E+02	-1	>300	-2	51	5,10E+03	-1	>300	-2	58	5,80E+03
	c	2939503	Fish with American sauce	/	/	-2	5	-3	0	5,00E+02	-2	6	-3	0	6,00E+02	-2	6	-3	0	6,00E+02	-2	18	-3	0	1,80E+03	-2	14	-3	1	1,40E+03
	c	2896125	Smoked mackerel	/	/	-4	102	-5	14	1,10E+06	-4	88	-5	15	8,80E+05	-4	84	-5	15	8,40E+05	-4	88	-5	15	8,80E+05	-4	87	-5	15	8,70E+05
	c	2896126	Smoked mackerel	/	/	-7	143	-8	26	1,50E+09	-7	148	-8	17	1,50E+09	-7	154	-8	20	1,60E+09	-7	162	-8	20	1,60E+09	-7	168	-8	21	1,70E+09
	c	2896129	Smoked haddock	/	/	-7	108	-8	12	1,10E+09	-7	131	-8	18	1,30E+09	-7	132	-8	18	1,30E+09	-7	167	-8	25	1,70E+09	-7	170	-8	24	1,70E+09
	c	2896128	Smoked mackerel with pepper	/	/	-2	203	-3	25	2,10E+04	-2	184	-3	18	1,80E+04	-2	178	-3	18	1,80E+04	-2	182	-3	18	1,80E+04	-2	176	-3	20	1,80E+04

Relative trueness - raw data - interpretation with 1 dilution

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 2	CFU	dil 3	CFU	Result (CFU/g)	dil 2	CFU	dil 3	CFU	Result (CFU/g)
Fruit & vegetables	a	2976245	Parsley	/	/	-4	>300	-5	34	3,40E+06	-4	109	5	12	1,10E+06	-4	107	5	14	1,10E+06	-4	247	5	25	2,50E+06	4	>300	-5	37	3,70E+06
	a	2976246	Salad	/	/	-5	>300	-6	88	8,80E+07	5	>300	-6	42	4,20E+07	5	>300	-6	39	3,90E+07	5	>300	-6	64	6,40E+07	5	>300	-6	73	7,30E+07
	a	3005659	frozen chopped spinach	/	/	-1	64	-2	9	6,40E+02	-1	23	2	8	2,30E+02	-1	21	2	8	2,10E+02	-1	24	2	8	2,40E+02	-1	23	2	8	2,30E+02
	a	3005676	pan-fry vegetables	/	/	-5	199	-6	20	2,00E+07	-5	136	6	17	1,40E+07	-5	133	6	15	1,30E+07	-5	237	6	24	2,40E+07	-5	230	6	25	2,30E+07
	a	2986196	Zucchini	/	/	-1	>300	-2	52	5,20E+03	-1	52	2	16	5,20E+02	-1	96	2	17	9,60E+02	-1	102	2	17	1,00E+03	-1	116	2	19	1,20E+03
	a	2976248	Pineapple	/	/	-3	0	-4	0	<1000	-3	1	4	8	1,00E+03	-3	1	4	8	1,00E+03	-3	1	4	8	1,00E+03	-3	1	4	8	1,00E+03
	a	2976247	Turnip	/	/	-3	>300	-4	>300	>3000000	5	>300	-4	>300	>3000000	5	>300	-4	>300	>3000000	5	>300	-4	>300	>3000000	5	>300	-4	>300	>3000000
	b	2976249	Bagged mix of beets, white cabbage and carrots	/	/	-2	>300	-3	>300	>30000	2	>300	-3	>300	>30000	2	>300	-3	>300	>300000	6	>300	-7	53	5,30E+07	6	>300	-7	67	6,70E+08
	b	2976250	Bagged salad	/	/	-5	>300	-6	>300	>300000000	5	>300	-6	>300	>300000000	5	>300	-6	>300	>300000000	5	>300	-6	>300	>300000000	5	>300	-6	>300	>300000000
	b	2986197	Carrot	/	/	-5	232	-6	44	2,50E+07	-5	239	6	26	2,40E+07	-5	260	6	27	2,60E+07	-5	266	6	25	2,70E+07	5	>300	-6	38	3,80E+07
	b	2986200	Bagged salad	/	/	-7	18	-8	2	1,80E+08	-7	6	8	1	6,00E+07	-7	5	8	8	5,00E+07	-7	10	8	8	1,00E+08	-7	11	8	8	1,10E+08
	b	2986131	Beetroot	/	/	-6	279	-7	23	2,80E+08	-6	218	7	27	2,20E+08	-6	220	7	25	2,20E+08	-6	257	7	29	2,60E+08	-6	261	7	29	2,60E+08
	b	2986132	Mushrooms	/	/	-8	145	-9	19	1,50E+10	-8	120	5	11	1,20E+10	-8	121	5	10	1,20E+10	-8	125	5	10	1,20E+10	-8	123	5	11	1,20E+10
	b	2986130	Carrot	/	/	-5	214	-6	29	2,20E+07	-5	12	6	1	1,20E+06	-5	10	6	1	1,00E+06	-5	14	6	2	1,40E+06	-5	13	6	2	1,30E+06
	c	2986198	Lentils and carrots	/	/	-1	>300	-2	103	1,00E+04	-1	112	2	25	1,10E+03	-1	130	2	29	1,30E+03	2	>300	-2	112	1,10E+04	5	>300	-2	136	1,40E+04
	c	3005675	Ratatouille	/	/	-4	284	-5	16	2,70E+06	-4	202	5	23	2,00E+06	-4	203	5	23	2,00E+06	-4	205	5	23	2,10E+06	-4	203	5	24	2,00E+06
	c	2939507	Zucchini and spinach gratin	/	/	-4	>300	-5	47	4,70E+06	-4	96	5	10	9,60E+05	-4	126	5	18	1,30E+06	-4	264	5	46	2,60E+06	-4	259	5	51	2,60E+06
	c	2939508	Ratatouille	/	/	-1	88	-2	16	9,50E+02	-1	7	2	1	7,00E+01	-1	5	2	2	5,00E+01	-1	10	2	2	1,00E+02	-1	6	2	2	6,00E+01
	c	2939509	Sweet potato puree	/	/	-1	10	-2	2	1,00E+02	-1	13	2	1	1,30E+02	-1	13	2	5	1,30E+02	-1	17	2	5	1,70E+02	-1	10	2	5	1,00E+02
	c	2939510	Kimchi (fermented vegetables)	/	/	-6	54	-7	2	5,40E+07	-6	29	7	7	2,90E+07	-6	30	7	7	3,00E+07	-6	30	7	7	3,00E+07	-6	30	7	8	3,00E+07
	c	2986135	Tomato tartare	/	/	-2	>300	-3	31	31000	-2	82	5	7	8,20E+03	-2	78	5	7	7,80E+03	-2	81	5	7	8,10E+03	-2	77	5	7	7,70E+03
	c	2939505	Carrots with cream	/	/	-1	2	-2	0	2,00E+01	-1	0	2	8	<10	-1	0	2	8	<10	-1	0	2	8	<10	-1	0	2	8	<10
	c	2939506	Coleslaw with curry cream	/	/	-2	45	-3	8	4,50E+03	-2	1	5	8	<10	-2	2	5	8	2,00E+02	-2	3	5	8	3,00E+02	-2	3	5	8	3,00E+02
	c	2986199	Vegetable soup	/	/	-1	0	-2	0	<10	-1	0	2	8	<10	-1	0	2	8	<10	-1	0	2	8	<10	-1	0	2	8	<10

Relative trueness - raw data - interpretation with 1 dilution

Category	Type	#	Sample	Strain	Injury protocol	Reference method: ISO 4833-1:2013* 72h ± 3h - 30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Visual reading 26h -30°C stored 72h - 4°C					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA) 26h -30°C stored 72h - 4°C				
						dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 2	CFU	dil 3	CFU	Result (CFU/g)	dil 2	CFU	dil 3	CFU	Result (CFU/g)
Egg products and egg based products	a	2976251	Mayonnaise	/	/	-1	>300	-2	30	3,00E+03	-1	>300	-2	54	5,40E+03	-1	261	-2	51	2,60E+03	-1	>300	-2	54	5,40E+03	-1	174	-2	50	1,70E+03
	a	3005756	Ile flottante	/	/	-3	>300	-4	118	1,18E+06	-3	>300	-4	30	3,00E+05	-3	>300	-4	24	2,40E+05	-3	>300	-4	101	1,00E+06	-3	>300	-4	98	9,80E+05
	a	2976255	Chocolate marquise	/	/	-3	94	-4	13	9,70E+04	-3	83	-4	11	8,30E+04	-3	69	-4	11	6,90E+04	-3	83	-4	11	8,30E+04	-3	77	-4	15	7,70E+04
	a	3005657	Chocolate mousse	/	/	-4	>300	-5	295	2,90E+07	-4	>300	-5	232	2,30E+07	-4	>300	-5	238	2,40E+07	-4	>300	-5	247	2,50E+07	-4	>300	-5	246	2,50E+07
	a	3005658	Tiramisu	/	/	-3	52	-4	4	5,10E+04	-3	24	-4	3	2,40E+04	-3	25	-4	4	2,50E+04	-3	31	-4	4	3,10E+04	-3	31	-4	4	3,10E+04
	a	2976254	Ile flottante	/	/	-2	1	-3	0	1,00E+02	-2	6	-3	0	6,00E+02	-2	3	-3	0	3,00E+02	-2	6	-3	1	6,00E+02	-2	5	-3	1	5,00E+02
	a	2976252	Chocolate mousse	/	/	-4	0	-5	0	<10000	-4	2	-5	0	2,00E+04	-4	3	-5	0	3,00E+04	-4	2	-5	0	2,00E+04	-4	3	-5	0	3,00E+04
	a	2976253	Tiramisu with speculoos	/	/	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000	-3	>300	-4	>300	>3000000
	b	2976258	Pasteurized liquid egg yolk	/	/	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000	-2	>300	-3	>300	>300000
	b	2986201	Egg white powder	/	/	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10	-1	0	-2	0	<10
	b	3005663	liquid egg yolks	/	/	-4	47	-5	2	4,40E+05	-4	35	-5	2	3,50E+05	-4	33	-5	3	3,30E+05	-4	35	-5	2	3,50E+05	-4	35	-5	4	3,50E+05
	b	2986137	Pasteurized liquid egg white	/	/	-6	118	-7	14	1,20E+08	-6	157	-7	17	1,60E+08	-6	168	-7	16	1,70E+08	-6	170	-7	19	1,70E+08	-6	174	-7	18	1,70E+08
	b	2976256	Whole egg	/	/	-5	117	-6	24	1,30E+07	-5	>300	-6	103	1,00E+08	-5	>300	-6	115	1,20E+08	-5	>300	-6	186	1,90E+08	-5	>300	-6	197	2,00E+08
	b	2976257	Whole egg powder	/	/	-2	34	-3	10	4,00E+03	-2	47	-3	8	4,70E+03	-2	45	-3	7	4,50E+03	-2	47	-3	9	4,70E+03	-2	48	-3	8	4,80E+03
	b	2976259	Pasteurized liquid egg yolk	/	/	-2	103	-3	27	1,20E+04	-2	92	-3	7	9,20E+03	-2	83	-3	5	8,30E+03	-2	137	-3	10	1,40E+04	-2	175	-3	18	1,80E+04
	c	2986202	Flan	/	/	-8	33	-9	3	3,30E+09	-8	16	-9	3	1,60E+09	-8	15	-9	3	1,50E+09	-8	38	-9	5	3,80E+09	-8	39	-9	5	3,90E+09
	c	2986204	Butter cream buche	/	/	-4	>300	-5	72	7,20E+06	-4	>300	-5	133	1,30E+07	-4	>300	-5	129	1,30E+07	-4	>300	-5	134	1,30E+07	-4	>300	-5	149	1,50E+07
	c	2939511	Donuts	/	/	-2	12	-3	2	1,30E+03	-2	11	-3	1	1,10E+03	-2	11	-3	1	1,10E+03	-2	13	-3	1	1,30E+03	-2	11	-3	1	1,10E+03
	c	3005737	Paris brest	/	/	-3	123	-4	18	1,30E+05	-3	122	-4	14	1,20E+05	-3	122	-4	14	1,20E+05	-3	124	-4	16	1,20E+05	-3	124	-4	15	1,20E+05
	c	2939512	Eclair au chocolat	/	/	-3	63	-4	3	6,00E+04	-3	65	-4	14	6,50E+04	-3	71	-4	15	7,10E+04	-3	65	-4	14	6,50E+04	-3	68	-4	18	6,80E+04
	c	2939513	Flan	/	/	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100
	c	2939514	Apple pie	/	/	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100	-2	0	-3	0	<100
	c	2939515	Plaisir 3 chocolats	/	/	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000	-3	0	-4	0	<1000
	c	2986203	Far breton	/	/	-5	23	-6	2	2,30E+06	-5	0	-6	0	<100000	-5	0	-6	0	<100000	-5	0	-6	0	<100000	-5	0	-6	0	<100000

Appendix H: Relative trueness - Results and calculations 1 dilution manual reading

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference	
				CFU/g	CFU/g	log CFU/g	log CFU/g			
Dairy products	a	4464	Raw milk	99000000	81000000	8,00	7,91	7,95	-0,09	1
	a	4463	Raw milk	300000	140000	5,48	5,15	5,31	-0,33	2
	a	4561	Raw ewe milk	140	100	2,15	2,00	2,07	-0,15	3
	a	4562	Raw ewe milk	9500	1300	3,98	3,11	3,55	-0,86	4
	a	4572	Raw milk	30000	14000	4,48	4,15	4,31	-0,33	5
	a	4573	Raw milk	120000	86000	5,08	4,93	5,01	-0,14	6
	b	4466	Rice pudding	6100	3100	3,79	3,49	3,64	-0,29	7
	b	4558	Ice cream	130	460	2,11	2,66	2,39	0,55	8
	b	4560	Ice cream	210	410	2,32	2,61	2,47	0,29	9
	b	4563	Rice pudding	280	60	2,45	1,78	2,11	-0,67	10
	b	4564	Vanilla cream	70	130	1,85	2,11	1,98	0,27	11
	b	4565	Cheese preparation	190	170	2,28	2,23	2,25	-0,05	12
	b	4735	Cheese preparation	230000	120000	5,36	5,08	5,22	-0,28	13
	b	4738	Pasteurized milk	640	40	2,81	1,60	2,20	-1,20	14
	b	4736	Cheese preparation	4700000	2100000	6,67	6,32	6,50	-0,35	15
	c	3717	Milk powder	280	330	2,45	2,52	2,48	0,07	16
	c	3718	Milk powder	640	390	2,81	2,59	2,70	-0,22	17
	c	3719	Infant formula	230	260	2,36	2,41	2,39	0,05	18
	c	3720	Infant formula	370	350	2,57	2,54	2,56	-0,02	19
	c	3721	Infant formula	160	390	2,20	2,59	2,40	0,39	20
	c	4453	Milk powder	150	240	2,18	2,38	2,28	0,20	21
	c	4454	Milk powder	190	290	2,28	2,46	2,37	0,18	22
	c	4455	Milk powder	370	450	2,57	2,65	2,61	0,09	23
	c	4456	Infant formula	110	150	2,04	2,18	2,11	0,13	24
	c	4457	Infant formula	170	320	2,23	2,51	2,37	0,27	25
	c	4458	Infant formula	180	270	2,26	2,43	2,34	0,18	26
	c	4459	Infant formula	100	160	2,00	2,20	2,10	0,20	27
	c	4460	Infant formula	180	230	2,26	2,36	2,31	0,11	28
	c	5125	Infant formula	40000	5000	4,60	3,70	4,15	-0,90	29
	c	5126	Infant formula	3000	500	3,48	2,70	3,09	-0,78	30
	c	5127	Milk powder	4300	4800	3,63	3,68	3,66	0,05	31
	c	5128	Milk powder	31000	46000	4,49	4,66	4,58	0,17	32
	c	5129	Milk powder	130000	130000	5,11	5,11	5,11	0,00	33
	c	5130	Milk powder	5800	5500	3,76	3,74	3,75	-0,02	34
	c	5379	Milk powder	1700	1000	3,23	3,00	3,12	-0,23	35
	c	5380	Infant formula	18000	4500	4,26	3,65	3,95	-0,60	36
	Average difference of the category								-0,12	
	Standard deviation of differences								0,40	
Meat products	a	2939490	Veal paupiette	54000000	54000000	7,73	7,73	7,73	0,00	1
	a	2939491	Beef	480000000	560000000	8,68	8,75	8,71	0,07	2
	a	2939492	Pork chop	750000000	770000000	8,88	8,89	8,88	0,01	3
	a	2939493	Leg of lamb	3400000	3600000	6,53	6,56	6,54	0,02	4
	a	2986192	Guninea fowl	1900000000	1000000000	9,28	9,00	9,14	-0,28	5
	b	2976235	Lasagna	62000	55000	4,79	4,74	4,77	-0,05	6
	b	2976236	Cider pork	410	300	2,61	2,48	2,54	-0,14	7
	b	2976237	Tomato beef	8400	8900	3,92	3,95	3,94	0,03	8
	b	2976238	Veal blanquette	190000000	150000000	8,28	8,18	8,23	-0,10	9
	b	2986193	Beef carrots leefs	890000000	560000000	8,95	8,75	8,85	-0,20	10
	c	2986194	Sausage	1300000000	560000000	9,11	8,75	8,93	-0,37	11
	c	2939495	Black pudding	890000000	970000000	8,95	8,99	8,97	0,04	12
	c	2939496	Beer pâté	2500000000	1900000000	9,40	9,28	9,34	-0,12	13
	c	2939497	Liver mousse	36000000	27000000	7,56	7,43	7,49	-0,12	14
	c	2939499	Mousse forestière	280000000	240000000	8,45	8,38	8,41	-0,07	15
	Average difference of the category								-0,09	
	Standard deviation of differences								0,12	
Seafood products	a	2986121	Salmon fillet	790 000	710 000	5,90	5,85	5,87	-0,05	1
	a	2986122	Cod fillet	21 000 000	20 000 000	7,32	7,30	7,31	-0,02	2
	a	2986123	Shrimp	15 000	6 000	4,18	3,78	3,98	-0,40	3
	a	2986120	Saithe fillet	510 000 000	300 000 000	8,71	8,48	8,59	-0,23	4
	a	2986124	Sardine	2 900 000 000	3 500 000 000	9,46	9,54	9,50	0,08	5
	b	2976240	Colin	2 000	660	3,30	2,82	3,06	-0,48	6
	b	2976241	Whiting	140 000 000	85 000 000	8,15	7,93	8,04	-0,22	7
	b	2976242	Saithe	53 000 000	33 000 000	7,72	7,52	7,62	-0,21	8
	b	2976243	Pout	4200000	4000000	6,62	6,60	6,61	-0,02	9
	b	2986195	Salmon	1900000000	990000000	9,28	9,00	9,14	-0,28	10
	c	2939504	Smoked mackerel with pepper	4000	70000	3,60	4,85	4,22	1,24	11
	c	2939500	Smoked herring	350000	360000	5,54	5,56	5,55	0,01	12
	c	2939501	Smoked salmon	920000000	880000000	8,96	8,94	8,95	-0,02	13
	c	2939502	Smoked mackerel	50	720	1,70	2,86	2,28	1,16	14
	c	2939503	Fish with American sauce	500	600	2,70	2,78	2,74	0,08	15
	c	2896125	Smoked mackerel	1100000	880000	6,04	5,94	5,99	-0,10	16
	c	2896126	Smoked mackerel	1500000000	1500000000	9,18	9,18	9,18	0,00	17
	c	2896129	Smoked haddock	1100000000	1300000000	9,04	9,11	9,08	0,07	18
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07	19
	Average difference of the category								0,03	
	Standard deviation of differences								0,44	

Fruits & vegetables	a	2976245	Parsley	3400000	1100000	6,53	6,04	6,29	-0,49	1
	a	2976246	Salad	88000000	42000000	7,94	7,62	7,78	-0,32	2
	a	3005659	frozen chopped spinach	640	230	2,81	2,36	2,58	-0,44	3
	a	3005676	pan-fry vegetables	20000000	14000000	7,30	7,15	7,22	-0,15	4
	a	2986196	Zucchini	5200	520	3,72	2,72	3,22	-1,00	5
	b	2986197	Carrot	25000000	24000000	7,40	7,38	7,39	-0,02	6
	b	2986200	Bagged salad	180000000	60000000	8,26	7,78	8,02	-0,48	7
	b	2986131	Beetroot	280000000	220000000	8,45	8,34	8,39	-0,10	8
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10	9
	b	2986130	Carrot	22000000	1200000	7,34	6,08	6,71	-1,26	10
	c	2986198	Lentils and carrots	10000	1100	4,00	3,04	3,52	-0,96	11
	c	3005675	Ratatouille	2700000	2000000	6,43	6,30	6,37	-0,13	12
	c	2939507	Zucchini and spinach gratin	4700000	960000	6,67	5,98	6,33	-0,69	13
	c	2939508	Ratatouille	950	70	2,98	1,85	2,41	-1,13	14
	c	2939509	Sweet potato puree	100	130	2,00	2,11	2,06	0,11	15
	c	2939510	Kimchi (fermented vegetables)	54000000	29000000	7,73	7,46	7,60	-0,27	16
	c	2986135	Tomato tartare	31000	8200	4,49	3,91	4,20	-0,58	17
Average difference of the category									-0,47	
Standard deviation of differences									0,41	
Egg products	a	2976251	Mayonnaise	3000	5400	3,48	3,73	3,60	0,26	1
	a	3005756	Ile flottante	1180000	300000	6,07	5,48	5,77	-0,59	2
	a	2976255	Chocolate marquise	97000	83000	4,99	4,92	4,95	-0,07	3
	a	3005657	Chocolate mousse	29000000	23000000	7,46	7,36	7,41	-0,10	4
	a	3005658	Tiramisu	51000	24000	4,71	4,38	4,54	-0,33	5
	b	3005663	liquid egg yolks	440000	350000	5,64	5,54	5,59	-0,10	6
	b	2986137	Pasteurized liquid egg white	120000000	160000000	8,08	8,20	8,14	0,12	7
	b	2976256	Whole egg	13000000	100000000	7,11	8,00	7,56	0,89	8
	b	2976257	Whole egg powder	4000	4700	3,60	3,67	3,64	0,07	9
	b	2976259	Pasteurized liquid egg yolk	12000	9200	4,08	3,96	4,02	-0,12	10
	c	2986202	Flan	3300000000	1600000000	9,52	9,20	9,36	-0,31	11
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26	12
	c	2939511	Donuts	1300	1100	3,11	3,04	3,08	-0,07	13
	c	3005737	Paris brest	130000	120000	5,11	5,08	5,10	-0,03	14
	c	2939512	Eclair au chocolat	60000	65000	4,78	4,81	4,80	0,03	15
Average difference of the category									-0,01	
Standard deviation of differences									0,33	
Average difference all categories									-0,13	102
Standard deviation of differences									0,40	

n = 102
 $\beta = 95\%$
 $T(0.025;101) = 1,983731003$

Lower confidence limit	Upper confidence limit
-0,93	0,67

n = 36 $T(0.025;35) = 2,030$
n = 15 $T(0.025;14) = 2,145$
n = 19 $T(0.025;18) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
DP	-0,93	0,69
MP	-0,36	0,19
SFP	-0,92	0,12
F&V	-0,94	0,43
EP	-0,74	0,73

Results not used in the statistical interpretation

Category	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Dairy products	b	4465	Panna cotta	10	40	1,00	1,60	1,30	0,60
	b	4559	Ice cream	40	570	1,60	2,76	2,18	1,15
	b	4737	Dessert with chantilly	>30000000	>30000000	7,48	7,48	7,48	0,00
	c	4461	Infant formula with probiotics	20	30	1,30	1,48	1,39	0,18
	c	4462	Infant formula with probiotics	>300	NI	2,47	2,47	2,47	0,00
	c	4566	Infant formula with probiotics	1400	NI	3,15	3,00	3,07	-0,15
	c	4567	Infant formula with probiotics	<10	40	0,00	1,60	0,80	1,60
	c	5123	Infant formula with probiotics	200	80	2,30	1,90	2,10	-0,40
Meat products	c	5124	Infant formula with probiotics	100	120	2,00	2,08	2,04	0,08
	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00
Seafood products	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
Fruits and vegetables	c	2896127	Smoked tuna	1,30E+03	2,00E+02	3,11	2,30	2,71	-0,81
	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	Bagged mix of beets, white cabbage and carrots	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	<10	3,65	0,00	1,83	-3,65
Egg products	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
	a	2976254	Ile flottante	1,00E+02	6,00E+02	2,00	2,78	2,39	0,78
	a	2976252	Chocolate mousse	<10000	2,00E+04	4,00	4,30	4,15	0,30
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Relative trueness - Results and calculations 1 dilution manual reading after storage

Category	Type	#	Matrix	AM before	AM after	AM before	AM after	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Dairy products	a	5567	Raw ewe milk	100	100	2,00	2,00	2,00	0,00
	a	5568	Raw ewe milk	100	100	2,00	2,00	2,00	0,00
	a	5569	Raw cow milk	3300000	3300000	6,52	6,52	6,52	0,00
	a	5570	Raw cow milk	230000	240000	5,36	5,38	5,37	0,02
	a	5571	Raw cow milk	23000	23000	4,36	4,36	4,36	0,00
	b	5572	Ice cream	460	460	2,66	2,66	2,66	0,00
	b	5573	Ice cream	430	480	2,63	2,68	2,66	0,05
	b	5574	Ice cream	160	160	2,20	2,20	2,20	0,00
	b	5575	Rice pudding	60	60	1,78	1,78	1,78	0,00
	b	5578	Fermented milk	7400000	7500000	6,87	6,88	6,87	0,01
	b	5579	Fresh cheese	1200000	1200000	6,08	6,08	6,08	0,00
	b	5580	Fermented milk	17000000	17000000	7,23	7,23	7,23	0,00
	b	5581	Pastry	220000	220000	5,34	5,34	5,34	0,00
	b	5582	Pastry	650000000	650000000	8,81	8,81	8,81	0,00
	c	3717	Milk powder	330	330	2,52	2,52	2,52	0,00
	c	3718	Milk powder	390	390	2,59	2,59	2,59	0,00
	c	3719	Infant formula	260	260	2,41	2,41	2,41	0,00
	c	3720	Infant formula	350	350	2,54	2,54	2,54	0,00
	c	3721	Infant formula	390	410	2,59	2,61	2,60	0,02
	c	4453	Milk powder	240	240	2,38	2,38	2,38	0,00
	c	4454	Milk powder	290	290	2,46	2,46	2,46	0,00
	c	4455	Milk powder	450	450	2,65	2,65	2,65	0,00
	c	4456	Infant formula	150	150	2,18	2,18	2,18	0,00
	c	4457	Infant formula	320	320	2,51	2,51	2,51	0,00
	c	4458	Infant formula	270	270	2,43	2,43	2,43	0,00
	c	4459	Infant formula	160	160	2,20	2,20	2,20	0,00
	c	4460	Infant formula	230	240	2,36	2,38	2,37	0,02
	c	4567	Infant formula with probiotics	40	40	1,60	1,60	1,60	0,00
	c	5123	Infant formula	80	80	1,90	1,90	1,90	0,00
	c	5124	Infant formula	120	130	2,08	2,11	2,10	0,03
	c	5125	Infant formula	5000	5000	3,70	3,70	3,70	0,00
	c	5126	Infant formula	500	500	2,70	2,70	2,70	0,00
	c	5127	Milk powder	4800	4800	3,68	3,68	3,68	0,00
	c	5128	Milk powder	46000	46000	4,66	4,66	4,66	0,00
	c	5129	Milk powder	130000	130000	5,11	5,11	5,11	0,00
	c	5130	Milk powder	5500	5500	3,74	3,74	3,74	0,00
	c	5379	Milk powder	1000	1000	3,00	3,00	3,00	0,00
	c	5380	Infant formula	45000	45000	4,65	4,65	4,65	0,00
		Average difference of the category							0,00
		Standard deviation of differences							0,01
Average difference all categories									0,00
Standard deviation of differences									0,01

n = 38
 $\beta = 95\%$
 $T(0.025;37) = 2,026192463$

Lower confidence limit	Upper confidence limit
-0,02	0,03

n = 37 $T(0.025;36) = 2,030$

	Lower confidence limit	Upper confidence limit
DP	-0,02	0,03

Results not used in the statistical interpretation

Category	Type	#	Sample	AM before	AM after	AM before	AM after	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Dairy products	b	5576	Rice pudding	20	20	1,30	1,30	1,30	0,00
	b	5577	Rice pudding	20	20	1,30	1,30	1,30	0,00
	b	5583	Pasteurized half skimmed milk	20	20	1,30	1,30	1,30	0,00
	b	5584	Pasteurized half skimmed milk	20	20	1,30	1,30	1,30	0,00
	c	4461	Infant formula with probiotics	30	30	1,48	1,48	1,48	0,00
	c	4462	Infant formula with probiotics	>300	>300	2,47	2,47	2,47	0,00
	c	4566	Infant formula with probiotics	1400	NI	3,15	3,00	3,07	-0,15

Relative trueness - Results and calculations 1 dilution manual reading after storage

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939490	Veal paupiette	54000000	68000000	7,73	7,83	7,78	0,10
	a	2939491	Beef	480000000	540000000	8,68	8,73	8,71	0,05
	a	2939492	Pork chop	750000000	830000000	8,88	8,92	8,90	0,04
	a	2939493	Leg of lamb	3400000	3700000	6,53	6,57	6,55	0,04
	a	2986192	Guninea fowl	1900000000	950000000	9,28	8,98	9,13	-0,30
	b	2976235	Lasagna	62000	55000	4,79	4,74	4,77	-0,05
	b	2976236	Cider pork	410	460	2,61	2,66	2,64	0,05
	b	2976237	Tomato beef	8400	8900	3,92	3,95	3,94	0,03
	b	2976238	Veal blanquette	190000000	150000000	8,28	8,18	8,23	-0,10
	b	2986193	Beef carrots leefs	890000000	550000000	8,95	8,74	8,84	-0,21
	c	2986194	Sausage	1300000000	1600000000	9,11	9,20	9,16	0,09
	c	2939495	Black pudding	890000000	1100000000	8,95	9,04	9,00	0,09
	c	2939496	Beer pâté	2500000000	2300000000	9,40	9,36	9,38	-0,04
	c	2939497	Liver mousse	360000000	270000000	7,56	7,43	7,49	-0,12
	c	2939499	Mousse forestière	280000000	240000000	8,45	8,38	8,41	-0,07
Average difference of the category									-0,03
Standard deviation of differences									0,12
Seafood products	a	2986121	Salmon fillet	790 000	1 200 000	5,90	6,08	5,99	0,18
	a	2986122	Cod fillet	21 000 000	29 000 000	7,32	7,46	7,39	0,14
	a	2986123	Shrimp	15 000	6 000	4,18	3,78	3,98	-0,40
	a	2986120	Saithe fillet	510 000 000	390 000 000	8,71	8,59	8,65	-0,12
	a	2986124	Sardine	2 900 000 000	4 000 000 000	9,46	9,60	9,53	0,14
	b	2976240	Colin	2 000	1 000	3,30	3,00	3,15	-0,30
	b	2976241	Whiting	140 000 000	100 000 000	8,15	8,00	8,07	-0,15
	b	2976242	Saithe	53 000 000	52 000 000	7,72	7,72	7,72	-0,01
	b	2976243	Pout	4200000	7100000	6,62	6,85	6,74	0,23
	b	2986195	Salmon	1900000000	920000000	9,28	8,96	9,12	-0,31
	c	2939504	Smoked mackerel with pepper	4000	75000	3,60	4,88	4,24	1,27
	c	2939500	Smoked herring	350000	420000	5,54	5,62	5,58	0,08
	c	2939501	Smoked salmon	920000000	1300000000	8,96	9,11	9,04	0,15
	c	2939502	Smoked mackerel	50	5100	1,70	3,71	2,70	2,01
	c	2939503	Fish with American sauce	500	1800	2,70	3,26	2,98	0,56
	c	2896125	Smoked mackerel	1100000	880000	6,04	5,94	5,99	-0,10
	c	2896126	Smoked mackerel	1500000000	1600000000	9,18	9,20	9,19	0,03
	c	2896129	Smoked haddock	1100000000	1700000000	9,04	9,23	9,14	0,19
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07
Average difference of the category									0,19
Standard deviation of differences									0,57
Fruits & vegetables	a	2976245	Parsley	3400000	2500000	6,53	6,40	6,46	-0,13
	a	2976246	Salad	88000000	64000000	7,94	7,81	7,88	-0,14
	a	3005659	frozen chopped spinach	640	240	2,81	2,38	2,59	-0,43
	a	3005676	pan-fry vegetables	20000000	24000000	7,30	7,38	7,34	0,08
	a	2986196	Zucchini	5200	1000	3,72	3,00	3,36	-0,72
	b	2986197	Carrot	25000000	27000000	7,40	7,43	7,41	0,03
	b	2986200	Bagged salad	180000000	100000000	8,26	8,00	8,13	-0,26
	b	2986131	Beetroot	280000000	260000000	8,45	8,41	8,43	-0,03
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10
	b	2986130	Carrot	22000000	1400000	7,34	6,15	6,74	-1,20
	c	2986198	Lentils and carrots	10000	11000	4,00	4,04	4,02	0,04
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11
	c	2939507	Zucchini and spinach gratin	4700000	2600000	6,67	6,41	6,54	-0,26
	c	2939508	Ratatouille	950	100	2,98	2,00	2,49	-0,98
	c	2939509	Sweet potato puree	100	170	2,00	2,23	2,12	0,23
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26
	c	2986135	Tomato tartare	31000	8100	4,49	3,91	4,20	-0,58
Average difference of the category									-0,28
Standard deviation of differences									0,39

Egg products	a	2976251	Mayonnaise	3000	5400	3,48	3,73	3,60	0,26	1
	a	3005756	Ile flottante	1180000	1000000	6,07	6,00	6,04	-0,07	2
	a	2976255	Chocolate marquise	97000	83000	4,99	4,92	4,95	-0,07	3
	a	3005657	Chocolate mousse	29000000	25000000	7,46	7,40	7,43	-0,06	4
	a	3005658	Tiramisu	51000	31000	4,71	4,49	4,60	-0,22	5
	b	3005663	liquid egg yolks	440000	350000	5,64	5,54	5,59	-0,10	6
	b	2986137	Pasteurized liquid egg white	120000000	170000000	8,08	8,23	8,15	0,15	7
	b	2976256	Whole egg	13000000	190000000	7,11	8,28	7,70	1,16	8
	b	2976257	Whole egg powder	4000	4700	3,60	3,67	3,64	0,07	9
	b	2976259	Pasteurized liquid egg yolk	12000	14000	4,08	4,15	4,11	0,07	10
	c	2986202	Flan	3300000000	3800000000	9,52	9,58	9,55	0,06	11
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26	12
	c	2939511	Donuts	1300	1300	3,11	3,11	3,11	0,00	13
	c	3005737	Paris brest	130000	120000	5,11	5,08	5,10	-0,03	14
	c	2939512	Eclair au chocolat	60000	65000	4,78	4,81	4,80	0,03	15
Average difference of the category									0,10	
Standard deviation of differences									0,32	
Average difference all categories									0,00	66
Standard deviation of differences									0,43	

n = 66
 $\beta = 95\%$
 $T(0.025;65) = 1,997137908$

Lower confidence limit	Upper confidence limit
-0,87	0,87

n = 15 $T(0.025;14) = 2,145$
n = 19 $T(0.025;18) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,29	0,23
SFP	-1,05	0,12
F&V	-1,06	0,56
EP	-0,61	0,81

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
Seafood products	b	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
	c	2896127	Smoked tuna	1,30E+03	1,10E+03	3,11	3,04	3,08	-0,07
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>300000000	>300000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	3,00E+02	3,65	2,48	3,07	-1,18
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	6,00E+02	2,00	2,78	2,39	0,78
	a	2976252	Chocolate mousse	<10000	2,00E+04	4,00	4,30	4,15	0,30
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Appendix I: Relative trueness - Results and calculations 1 dilution automatic reading

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939490	Veal paupiette	54000000	54000000	7,73	7,73	7,73	0,00
	a	2939491	Beef	480000000	520000000	8,68	8,72	8,70	0,03
	a	2939492	Pork chop	750000000	800000000	8,88	8,90	8,89	0,03
	a	2939493	Leg of lamb	3400000	3700000	6,53	6,57	6,55	0,04
	a	2986192	Guinea fowl	1900000000	1000000000	9,28	9,00	9,14	-0,28
	b	2976235	Lasagna	62000	56000	4,79	4,75	4,77	-0,04
	b	2976236	Cider pork	410	230	2,61	2,36	2,49	-0,25
	b	2976237	Tomato beef	8400	9400	3,92	3,97	3,95	0,05
	b	2976238	Veal blanquette	190000000	160000000	8,28	8,20	8,24	-0,07
	b	2986193	Beef carrots leefs	890000000	560000000	8,95	8,75	8,85	-0,20
	c	2986194	Sausage	1300000000	560000000	9,11	8,75	8,93	-0,37
	c	2939495	Black pudding	890000000	1000000000	8,95	9,00	8,97	0,05
	c	2939496	Beer pâté	2500000000	1900000000	9,40	9,28	9,34	-0,12
	c	2939497	Liver mousse	36000000	27000000	7,56	7,43	7,49	-0,12
	c	2939499	Mousse forestière	280000000	250000000	8,45	8,40	8,42	-0,05
Average difference of the category									-0,09
Standard deviation of differences									0,13
Seafood products	a	2986121	Salmon fillet	790 000	670 000	5,90	5,83	5,86	-0,07
	a	2986122	Cod fillet	21 000 000	20 000 000	7,32	7,30	7,31	-0,02
	a	2986123	Shrimp	15 000	5 000	4,18	3,70	3,94	-0,48
	a	2986120	Saithe fillet	510 000 000	300 000 000	8,71	8,48	8,59	-0,23
	a	2986124	Sardine	2 900 000 000	3 500 000 000	9,46	9,54	9,50	0,08
	b	2976240	Colin	2 000	660	3,30	2,82	3,06	-0,48
	b	2976241	Whiting	140 000 000	92 000 000	8,15	7,96	8,05	-0,18
	b	2976242	Saithe	53000000	24000000	7,72	7,38	7,55	-0,34
	b	2976243	Pout	4200000	3800000	6,62	6,58	6,60	-0,04
	b	2986195	Salmon	1 900 000 000	1000000000	9,28	9,00	9,14	-0,28
	c	2896129	Smoked haddock	1100000000	1500000000	9,04	9,18	9,11	0,13
	c	2896126	Smoked mackerel	1500000000	1400000000	9,18	9,15	9,16	-0,03
	c	2939500	Smoked herring	350000	370000	5,54	5,57	5,56	0,02
	c	2939501	Smoked salmon	920000000	840000000	8,96	8,92	8,94	-0,04
	c	2939502	Smoked mackerel	50	970	1,70	2,99	2,34	1,29
	c	2939503	Fish with American sauce	500	600	2,70	2,78	2,74	0,08
	c	2939504	Smoked mackerel with pepper	4000	72000	3,60	4,86	4,23	1,26
	c	2896125	Smoked mackerel	1100000	880000	6,04	5,94	5,99	-0,10
	c	2896127	Smoked tuna	1300	800	3,11	2,90	3,01	-0,21
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07
Average difference of the category									0,01
Standard deviation of differences									0,46
Fruits & vegetables	a	2976245	Parsley	3400000	1100000	6,53	6,04	6,29	-0,49
	a	2976246	Salad	88000000	39000000	7,94	7,59	7,77	-0,35
	a	3005659	Frozen chopped spinach	640	210	2,81	2,32	2,56	-0,48
	a	3005676	Pan-fry vegetables	20000000	14000000	7,30	7,15	7,22	-0,15
	a	2986196	Zucchini	5200	1000	3,72	3,00	3,36	-0,72
	b	2986130	Carrot	22000000	1000000	7,34	6,00	6,67	-1,34
	b	2986197	Carrot	25000000	17000000	7,40	7,23	7,31	-0,17
	b	2986200	Bagged salad	180000000	50000000	8,26	7,70	7,98	-0,56
	b	2986131	Beetroot	280000000	200000000	8,45	8,30	8,37	-0,15
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11
	c	2986198	Lentils and carrots	10000	1500	4,00	3,18	3,59	-0,82
	c	2939507	Zucchini and spinach gratin	4700000	1300000	6,67	6,11	6,39	-0,56
	c	2939508	Ratatouille	950	50	2,98	1,70	2,34	-1,28
	c	2939509	Sweet potato puree	100	130	2,00	2,11	2,06	0,11
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26
	c	2986135	Tomato tartare	31000	7800	4,49	3,89	4,19	-0,60
Average difference of the category									-0,47
Standard deviation of differences									0,40

Egg products	a	2976251	Mayonnaise	3000	2800	3,48	3,45	3,46	-0,03	1
	a	2976254	Ile flottante	100	300	2,00	2,48	2,24	0,48	2
	a	2976255	Chocolate marquise	97000	73000	4,99	4,86	4,93	-0,12	3
	a	3005657	Chocolate mousse	30000000	24000000	7,48	7,38	7,43	-0,10	4
	a	3005658	Tiramisu	52000	25000	4,72	4,40	4,56	-0,32	5
	b	3005663	Liquid egg yolks	470000	330000	5,67	5,52	5,60	-0,15	6
	b	2986137	Pasteurized liquid egg white	120000000	170000000	8,08	8,23	8,15	0,15	7
	b	2976256	Whole egg	13000000	120000000	7,11	8,08	7,60	0,97	8
	b	2976257	Whole egg powder	4000	4500	3,60	3,65	3,63	0,05	9
	b	2976259	Pasteurized liquid egg yolk	12000	8300	4,08	3,92	4,00	-0,16	10
	c	2986202	Flan	3300000000	1600000000	9,52	9,20	9,36	-0,31	11
	c	2986204	Butter cream buche	7200000	13000000	6,86	7,11	6,99	0,26	12
	c	2939511	Donuts	1200	1100	3,08	3,04	3,06	-0,04	13
	c	3005737	Paris brest	130000	120000	5,11	5,08	5,10	-0,03	14
	c	2939512	Eclair au chocolat	63000	78000	4,80	4,89	4,85	0,09	15
Average difference of the category									0,05	67
Standard deviation of differences									0,33	
Average difference all categories									-0,12	
Standard deviation of differences									0,41	

n = 67
 $\beta = 95\%$
 $T(0.025;66) = 1,996564419$

Lower confidence limit	Upper confidence limit
-0,96	0,71

n = 15 $T(0.025;14) = 2,145$
n = 20 $T(0.025;19) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,38	0,21
SFP	-0,98	1,01
F&V	-1,35	0,41
EP	-0,68	0,77

Results not used in the statistical interpretation

Category	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	a	2939494	Beef steak	>30000000	2,90E+07	7,48	7,46	7,47	-0,02
	b	2976234	Beef parmentier	>30000000	>30000000	6,48	6,48	6,48	0,00
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
Seafood	a	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>3000000000	>3000000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	2,00E+02	3,65	2,30	2,98	-1,35
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	3,00E+02	2,00	2,48	2,24	0,48
	a	2976252	Chocolate mousse	<10000	3,00E+04	4,00	4,48	4,24	0,48
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>300000	>300000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Relative trueness - Results and calculations 1 dilution automatic reading after storage

Category	Type	#	Matrix	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	a	2939490	Veal paupiette	54000000	72000000	7,73	7,86	7,79	0,12
	a	2939491	Beef	480000000	530000000	8,68	8,72	8,70	0,04
	a	2939492	Pork chop	750000000	1000000000	8,88	9,00	8,94	0,12
	a	2939493	Leg of lamb	3400000	3600000	6,53	6,56	6,54	0,02
	a	2986192	Guinea fowl	1900000000	1200000000	9,28	9,08	9,18	-0,20
	b	2976235	Lasagna	62000	73000	4,79	4,86	4,83	0,07
	b	2976236	Cider pork	410	440	2,61	2,64	2,63	0,03
	b	2976237	Tomato beef	8400	11000	3,92	4,04	3,98	0,12
	b	2976238	Veal blanquette	190000000	160000000	8,28	8,20	8,24	-0,07
	b	2986193	Beef carrots leefs	890000000	580000000	8,95	8,76	8,86	-0,19
	c	2986194	Sausage	1300000000	1800000000	9,11	9,26	9,18	0,14
	c	2939495	Black pudding	890000000	1100000000	8,95	9,04	9,00	0,09
	c	2939496	Beer pâté	2500000000	3500000000	9,40	9,54	9,47	0,15
	c	2939497	Liver mousse	36000000	28000000	7,56	7,45	7,50	-0,11
	c	2939499	Mousse forestière	280000000	270000000	8,45	8,43	8,44	-0,02
Average difference of the category									0,02
Standard deviation of differences									0,12
Seafood products	a	2986121	Salmon fillet	790000	1200000	5,90	6,08	5,99	0,18
	a	2986122	Cod fillet	21000000	29000000	7,32	7,46	7,39	0,14
	a	2986123	Shrimp	15000	6000	4,18	3,78	3,98	-0,40
	a	2986120	Saithe fillet	510000000	400000000	8,71	8,60	8,65	-0,11
	a	2986124	Sardine	2900000000	4300000000	9,46	9,63	9,55	0,17
	b	2976240	Colin	2000	1400	3,30	3,15	3,22	-0,15
	b	2976241	Whiting	140000000	110000000	8,15	8,04	8,09	-0,10
	b	2976242	Saithe	53000000	59000000	7,72	7,77	7,75	0,05
	b	2976243	Pout	4200000	7900000	6,62	6,90	6,76	0,27
	b	2986195	Salmon	1900000000	1200000000	9,28	9,08	9,18	-0,20
	c	2896129	Smoked haddock	1100000000	1800000000	9,04	9,26	9,15	0,21
	c	2896126	Smoked mackerel	1500000000	1700000000	9,18	9,23	9,20	0,05
	c	2939500	Smoked herring	350000	420000	5,54	5,62	5,58	0,08
	c	2939501	Smoked salmon	920000000	2000000000	8,96	9,30	9,13	0,34
	c	2939502	Smoked mackerel	50	5800	1,70	3,76	2,73	2,06
	c	2939503	Fish with American sauce	500	1400	2,70	3,15	2,92	0,45
	c	2939504	Smoked mackerel with pepper	4000	76000	3,60	4,88	4,24	1,28
	c	2896125	Smoked mackerel	1100000	910000	6,04	5,96	6,00	-0,08
	c	2896127	Smoked tuna	1300	900	3,11	2,95	3,03	-0,16
	c	2896128	Smoked mackerel with pepper	21000	18000	4,32	4,26	4,29	-0,07
Average difference of the category									0,20
Standard deviation of differences									0,56
Fruits & vegetables	a	2976245	Parsley	3400000	3700000	6,53	6,57	6,55	0,04
	a	2976246	Salad	88000000	73000000	7,94	7,86	7,90	-0,08
	a	3005659	Frozen chopped spinach	640	230	2,81	2,36	2,58	-0,44
	a	3005676	Pan-fry vegetables	20000000	23000000	7,30	7,36	7,33	0,06
	a	2986196	Zucchini	5200	1200	3,72	3,08	3,40	-0,64
	b	2986130	Carrot	22000000	1300000	7,34	6,11	6,73	-1,23
	b	2986197	Carrot	25000000	38000000	7,40	7,58	7,49	0,18
	b	2986200	Bagged salad	180000000	110000000	8,26	8,04	8,15	-0,21
	b	2986131	Beetroot	280000000	260000000	8,45	8,41	8,43	-0,03
	b	2986132	Mushrooms	15000000000	12000000000	10,18	10,08	10,13	-0,10
	c	3005675	Ratatouille	2700000	2100000	6,43	6,32	6,38	-0,11
	c	2986198	Lentils and carrots	10000	14000	4,00	4,15	4,07	0,15
	c	2939507	Zucchini and spinach gratin	4700000	2800000	6,67	6,45	6,56	-0,22
	c	2939508	Ratatouille	950	60	2,98	1,78	2,38	-1,20
	c	2939509	Sweet potato puree	100	100	2,00	2,00	2,00	0,00
	c	2939510	Kimchi (fermented vegetables)	54000000	30000000	7,73	7,48	7,60	-0,26
	c	2986135	Tomato tartare	31000	7700	4,49	3,89	4,19	-0,60
Average difference of the category									-0,28
Standard deviation of differences									0,42

Egg products	a	2976251	Mayonnaise	3000	2000	3,48	3,30	3,39	-0,18	1
	a	3005756	Ile flottante	1180000	980000	6,07	5,99	6,03	-0,08	2
	a	2976255	Chocolate marquise	97000	84000	4,99	4,92	4,96	-0,06	3
	a	3005657	Chocolate mousse	29000000	25000000	7,46	7,40	7,43	-0,06	4
	a	3005658	Tiramisu	51000	31000	4,71	4,49	4,60	-0,22	5
	b	3005663	liquid egg yolks	440000	350000	5,64	5,54	5,59	-0,10	6
	b	2986137	Pasteurized liquid egg white	120000000	180000000	8,08	8,26	8,17	0,18	7
	b	2976256	Whole egg	13000000	200000000	7,11	8,30	7,71	1,19	8
	b	2976257	Whole egg powder	4000	4800	3,60	3,68	3,64	0,08	9
	b	2976259	Pasteurized liquid egg yolk	12000	18000	4,08	4,26	4,17	0,18	10
	c	2986202	Flan	3300000000	3900000000	9,52	9,59	9,55	0,07	11
	c	2986204	Butter cream buche	7200000	15000000	6,86	7,18	7,02	0,32	12
	c	2939511	Donuts	1300	1100	3,11	3,04	3,08	-0,07	13
	c	3005737	Paris brest	130000	130000	5,11	5,11	5,11	0,00	14
	c	2939512	Eclair au chocolat	60000	78000	4,78	4,89	4,84	0,11	15
Average difference of the category									0,09	
Standard deviation of differences									0,34	67
Average difference all categories									0,01	
Standard deviation of differences									0,44	

n = 67
 $\beta = 95\%$
 $T(0.025;66) = 1,996564419$

Lower confidence limit	Upper confidence limit
-0,87	0,90

n = 15 $T(0.025;14) = 2,145$
n = 20 $T(0.025;19) = 2,101$
n = 17 $T(0.025;16) = 2,120$
n = 15 $T(0.025;14) = 2,145$

	Lower confidence limit	Upper confidence limit
MP	-0,23	0,28
SFP	-1,00	1,40
F&V	-1,20	0,65
EP	-0,65	0,83

Results not used in the statistical interpretation

Category	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products	a	2939494	Beef steak	>30000000	>30000000	7,48	7,48	7,48	0,00
	b	2976234	Beef parmentier	>3000000	>3000000	6,48	6,48	6,48	0,00
	c	2939498	Sausage	>30000000	>30000000	7,48	7,48	7,48	0,00
Seafood	a	2976239	Salmon	>30000	>30000	4,48	4,48	4,48	0,00
Fruits and vegetables	a	2976248	Pineapple	<1000	1,00E+03	3,00	3,00	3,00	0,00
	a	2976247	Turnip	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976249	mix of beets, white cabbage and	>30000	>30000	2,47	2,47	2,47	0,00
	b	2976250	Bagged salad	>3000000000	>3000000000	8,48	8,48	8,48	0,00
	c	2939505	Carrots with cream	2,00E+01	<10	1,30	0,00	0,65	-1,30
	c	2939506	Coleslaw with curry cream	4,50E+03	3,00E+02	3,65	2,48	3,07	-1,18
	c	2986199	Vegetable soup	<10	<10	0,00	0,00	0,00	0,00
Egg products	a	2976254	Ile flottante	1,00E+02	3,00E+02	2,00	2,48	2,24	0,48
	a	2976252	Chocolate mousse	<10000	3,00E+04	4,00	4,48	4,24	0,48
	a	2976253	Tiramisu with speculoos	>3000000	>3000000	6,48	6,48	6,48	0,00
	b	2976258	Pasteurized liquid egg yolk	>3000000	>3000000	5,48	5,48	5,48	0,00
	c	2939513	Flan	<100	<100	2,00	2,00	2,00	0,00
	c	2939514	Apple pie	<100	<100	2,00	2,00	2,00	0,00
	c	2939515	Plaisir 3 chocolats	<1000	<1000	3,00	3,00	3,00	0,00
	b	2986201	Egg white powder	<10	<10	0,00	0,00	0,00	0,00
	c	2986203	Far breton	2,30E+06	<100000	6,36	5,00	5,68	-1,36

Appendix J - Accuracy profile study: raw data - 2 dilutions

Panna cotta

Strain: *Bacillus cereus* Ad2117

Matrix	Target inoculation level(CFU/g)	N° sample	Reference method: ISO 4833-1				NEOGEN Petrifilm Rapid Aerobic Count Plate			
			26h at 30°C ± 1°C				Dilution	CFU/plate	CFU/g	log CFU/g
Panna cotta batch n°1	300	5244	10	36	360	2.56	10	52	540	2.73
			100	4			100	7		
		5245	10	47	450	2.65	10	57	560	2.75
			100	2			100	5		
		5246	10	52	530	2.72	10	79	760	2.88
			100	6			100	4		
		5247	10	43	450	2.65	10	56	560	2.75
			100	6			100	5		
		5248	10	52	490	2.69	10	64	670	2.83
			100	2			100	10		
	10000	5249	100	97	10000	4.00	100	146	14000	4.15
			1000	14			1000	13		
		5250	100	103	10000	4.00	100	182	18000	4.26
			1000	10			1000	18		
		5251	100	93	9700	3.99	100	175	17000	4.23
			1000	14			1000	13		
		5252	100	77	8000	3.90	100	136	14000	4.15
			1000	11			1000	16		
		5253	100	95	9400	3.97	100	173	18000	4.26
			1000	8			1000	23		
	1000000	5254	10000	51	520000	5.72	10000	95	940000	5.97
			100000	6			100000	8		
		5255	10000	38	410000	5.61	10000	73	730000	5.86
			100000	7			100000	7		
		5256	10000	44	470000	5.67	10000	61	590000	5.77
			100000	8			100000	4		
		5257	10000	58	600000	5.78	10000	56	600000	5.78
			100000	8			100000	10		
		5258	10000	52	540000	5.73	10000	74	750000	5.88
			100000	7			100000	8		
Panna cotta batch n°2	300	5259	10	41	450	2.65	10	68	660	2.82
			100	8			100	4		
		5260	10	36	370	2.57	10	69	700	2.85
			100	5			100	8		
		5261	10	48	490	2.69	10	61	650	2.81
			100	6			100	10		
		5262	10	60	580	2.76	10	65	660	2.82
			100	4			100	8		
		5263	10	51	520	2.72	10	55	520	2.72
			100	6			100	2		
	10000	5264	100	87	8800	3.94	100	157	16000	4.20
			1000	10			1000	18		
		5265	100	109	12000	4.08	100	161	16000	4.20
			1000	18			1000	16		
		5266	100	114	11000	4.04	100	178	18000	4.26
			1000	10			1000	16		
		5267	100	100	10000	4.00	100	157	16000	4.20
			1000	11			1000	24		
		5268	100	94	9500	3.98	100	142	14000	4.15
			1000	10			1000	15		
	1000000	5269	10000	44	450000	5.65	10000	65	650000	5.81
			100000	6			100000	7		
		5270	10000	80	770000	5.89	10000	73	760000	5.88
			100000	5			100000	11		
		5271	10000	47	470000	5.67	10000	74	710000	5.85
			100000	5			100000	4		
		5272	10000	48	490000	5.69	10000	80	740000	5.87
			100000	6			100000	1		
		5273	10000	67	750000	5.88	10000	137	1300000	6.11
			100000	16			100000	9		

Infant formula

Strain: *Cronobacter sakazakii* Ad1446

Matrix	Target inoculation level(CFU/g)	N° sample	Reference method: ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
							48h ± 3h at 30°C ± 1°C			
			Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Infant formula batch n°1	300	6022	10	23	240	2.38	10	26	290	2.46
			100	3			100	6		
		6023	10	21	240	2.38	10	29	280	2.45
			100	5			100	2		
		6024	10	20	280	2.45	10	13	140	2.15
			100	11			100	2		
		6025	10	22	250	2.40	10	49	500	2.70
			100	5			100	5		
		6026	10	19	260	2.41	10	37	360	2.56
			100	9			100	3		
	10000	6027	1000	11	12000	4.08	100	81	8500	3.93
			10000	2			1000	12		
		6028	1000	11	12000	4.08	100	100	10000	4.00
			10000	2			1000	12		
		6029	1000	12	13000	4.11	100	81	8400	3.92
			10000	2			1000	11		
		6030	1000	15	15000	4.18	100	87	9100	3.96
			10000	2			1000	13		
		6031	1000	10	12000	4.08	100	88	9200	3.96
			10000	3			1000	13		
	1000000	6032	100000	16	1600000	6.20	10000	115	1200000	6.08
			1000000	2			100000	13		
		6033	100000	14	1500000	6.18	10000	126	1300000	6.11
			1000000	2			100000	19		
		6034	100000	11	1100000	6.04	10000	124	1300000	6.11
			1000000	1			100000	15		
		6035	100000	11	1100000	6.04	10000	124	1300000	6.11
			1000000	1			100000	18		
		6036	100000	11	1400000	6.15	10000	112	1100000	6.04
			1000000	4			100000	14		
Infant formula batch n°2	300	6037	10	22	280	2.45	10	53	550	2.74
			100	9			100	7		
		6038	10	22	250	2.40	10	53	560	2.75
			100	5			100	8		
		6039	10	20	240	2.38	10	63	620	2.79
			100	6			100	5		
		6040	10	30	300	2.48	10	66	680	2.83
			100	3			100	9		
		6041	10	31	330	2.52	10	59	580	2.76
			100	5			100	5		
	10000	6042	1000	14	17000	4.23	100	131	12000	4.08
			10000	5			1000	19		
		6043	1000	18	18000	4.26	100	145	15000	4.18
			10000	2			1000	19		
		6044	1000	12	14000	4.15	100	131	13000	4.11
			10000	3			1000	16		
		6045	1000	15	14000	4.15	100	143	15000	4.18
			10000	0			1000	24		
		6046	1000	21	21000	4.32	100	140	14000	4.15
			10000	2			1000	12		
	1000000	6047	100000	15	1700000	6.23	10000	122	1300000	6.11
			1000000	4			100000	20		
		6048	100000	16	1500000	6.18	10000	110	1100000	6.04
			1000000	1			100000	15		
		6049	100000	12	1300000	6.11	10000	119	1200000	6.08
			1000000	2			100000	17		
		6050	100000	21	2000000	6.30	10000	110	1100000	6.04
			1000000	1			100000	9		
		6051	100000	15	1500000	6.18	10000	101	1000000	6.00
			1000000	2			100000	11		

ACCURACY PROFILE - raw data - 2 dilutions

Matrix: Pork pâté
Strain: *Citrobacter youngae* YCF284

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

Level	Batch	R.	Reference method: ISO 4833-1:2013*					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	12	-2	0	110	-1	19	-2	3	200	-1	19	-2	3	200
		R2	-1	20	-2	2	200	-1	14	-2	6	180	-1	14	-2	6	180
		R3	-1	14	-2	4	160	-1	13	-2	1	130	-1	13	-2	1	130
		R4	-1	13	-2	0	120	-1	18	-2	1	170	-1	18	-2	1	170
		R5	-1	20	-2	1	190	-1	14	-2	0	130	-1	14	-2	0	130
	Batch 2	R1	-1	10	-2	2	110	-1	19	-2	0	170	-1	18	-2	0	160
		R2	-1	9	-2	1	90	-1	28	-2	1	260	-1	26	-2	1	250
		R3	-1	14	-2	2	150	-1	26	-2	0	240	-1	22	-2	2	220
		R4	-1	20	-2	2	200	-1	22	-2	3	230	-1	20	-2	2	200
		R5	-1	18	-2	3	190	-1	19	-2	4	210	-1	19	-2	3	200
Level 2	Batch 1	R1	-2	58	-3	2	5460	-2	41	-3	5	4200	-2	41	-3	5	4200
		R2	-2	57	-3	8	5910	-2	51	-3	5	5100	-2	51	-3	5	5100
		R3	-2	59	-3	5	5820	-2	58	-3	8	6000	-2	62	-3	11	6600
		R4	-2	50	-3	6	5090	-2	56	-3	10	6000	-2	56	-3	10	6000
		R5	-2	51	-3	6	5180	-2	52	-3	3	5000	-2	51	-3	3	4900
	Batch 2	R1	-2	53	-3	7	5460	-2	43	-3	8	4600	-2	43	-3	8	4600
		R2	-2	54	-3	1	5000	-2	59	-3	3	5600	-2	58	-3	3	5500
		R3	-2	49	-3	2	4640	-2	54	-3	7	5500	-2	52	-3	7	5400
		R4	-2	56	-3	5	5550	-2	52	-3	8	5500	-2	49	-3	7	5100
		R5	-2	53	-3	7	5460	-2	64	-3	6	6400	-2	62	-3	6	6200
Level 3	Batch 1	R1	-3	44	-4	12	50900	-3	69	-4	6	68200	-3	70	-4	6	69000
		R2	-3	64	-4	7	64600	-3	57	-4	5	56400	-3	58	-4	5	57000
		R3	-3	55	-4	3	52700	-3	62	-4	6	62000	-3	62	-4	6	62000
		R4	-3	60	-4	8	62800	-3	47	-4	7	49100	-3	46	-4	7	48000
		R5	-3	59	-4	8	60900	-3	69	-4	4	66400	-3	67	-4	4	65000
	Batch 2	R1	-3	55	-4	6	55500	-3	63	-4	4	61000	-3	60	-4	4	58000
		R2	-3	56	-4	5	55500	-3	63	-4	9	65000	-3	61	-4	10	64600
		R3	-3	61	-4	9	63600	-3	47	-4	6	48000	-3	47	-4	3	45000
		R4	-3	64	-4	8	65500	-3	78	-4	2	73000	-3	76	-4	2	71000
		R5	-3	68	-4	4	65500	-3	63	-4	4	61000	-3	63	-4	4	61000

ACCURACY PROFILE - raw data - 2 dilutions

Matrix: Green beans

Strain: *Enterococcus innesii* JTTF83

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

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

Level	Batch	R.	Reference method: ISO 4833-1:2013					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	25	-2	2	250	-1	30	-2	1	280	-1	30	-2	1	280
		R2	-1	30	-2	5	320	-1	40	-2	2	380	-1	38	-2	2	360
		R3	-1	24	-2	4	260	-1	29	-2	5	310	-1	29	-2	4	300
		R4	-1	30	-2	5	320	-1	20	-2	3	210	-1	22	-2	3	230
		R5	-1	29	-2	7	330	-1	22	-2	4	240	-1	21	-2	4	230
	Batch 2	R1	-1	29	-2	2	280	-1	21	-2	8	260	-1	20	-2	9	260
		R2	-1	37	-2	3	360	-1	30	-2	3	300	-1	30	-2	3	300
		R3	-1	32	-2	2	310	-1	25	-2	1	240	-1	25	-2	1	240
		R4	-1	34	-2	2	330	-1	42	-2	0	380	-1	43	-2	0	290
Level 2	Batch 1	R1	-2	87	-3	9	8700	-2	89	-3	6	8600	-2	90	-3	6	8700
		R2	-2	112	-3	10	11000	-2	89	-3	12	9200	-2	89	-3	12	9200
		R3	-2	107	-3	12	11000	-2	115	-3	8	11000	-2	117	-3	8	11000
		R4	-2	97	-3	15	10000	-2	93	-3	16	9900	-2	95	-3	16	10000
		R5	-2	99	-3	15	10000	-2	102	-3	13	10000	-2	105	-3	13	11000
	Batch 2	R1	-2	87	-3	16	9400	-2	115	-3	10	11000	-2	112	-3	10	11000
		R2	-2	78	-3	10	8000	-2	98	-3	10	9800	-2	92	-3	10	9300
		R3	-2	90	-3	14	9400	-2	99	-3	11	10000	-2	98	-3	11	9900
		R4	-2	96	-3	7	9400	-2	85	-3	5	8100	-2	89	-3	6	8600
Level 3	Batch 1	R1	-3	92	-4	9	92000	-3	80	-4	12	84000	-3	79	-4	12	83000
		R2	-3	68	-4	18	78000	-3	62	-4	3	59000	-3	65	-4	3	62000
		R3	-3	106	-4	10	100000	-3	92	-4	10	93000	-3	94	-4	10	95000
		R4	-3	87	-4	9	87000	-3	90	-4	12	93000	-3	93	-4	12	95000
		R5	-3	101	-4	9	100000	-3	99	-4	10	99000	-3	101	-4	10	101000
	Batch 2	R1	-3	84	-4	9	85000	-3	105	-4	9	104000	-3	105	-4	9	104000
		R2	-3	97	-4	8	95000	-3	110	-4	12	110000	-3	110	-4	12	110000
		R3	-3	98	-4	14	102000	-3	94	-4	14	98000	-3	94	-4	14	98000
		R4	-3	120	-4	11	120000	-3	101	-4	9	100000	-3	101	-4	9	100000
		R5	-3	85	-4	8	85000	-3	90	-4	12	93000	-3	87	-4	12	90000

ACCURACY PROFILE - raw data - 2 dilutions

Matrix: Coule d'oeuf

Strain: *Enterobacter cloacae* PAJ947

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

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

Level	Batch	R.	Reference method: ISO 4833-1:2013					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	25	-2	5	270	-1	24	-2	4	260	-1	23	-2	4	250
		R2	-1	25	-2	10	320	-1	28	-2	2	270	-1	28	-2	4	290
		R3	-1	21	-2	3	220	-1	24	-2	2	240	-1	24	-2	3	250
		R4	-1	34	-2	6	360	-1	35	-2	3	350	-1	39	-2	4	290
		R5	-1	26	-2	2	260	-1	27	-2	2	260	-1	27	-2	3	270
	Batch 2	R1	-1	22	-2	3	230	-1	37	-2	2	360	-1	37	-2	2	360
		R2	-1	26	-2	4	270	-1	34	-2	4	350	-1	34	-2	5	360
		R3	-1	23	-2	8	280	-1	30	-2	4	310	-1	28	-2	5	300
		R4	-1	29	-2	7	330	-1	23	-2	2	230	-1	23	-2	2	230
		R5	-1	36	-2	7	390	-1	28	-2	1	260	-1	29	-2	2	280
Level 2	Batch 1	R1	-2	105	-3	14	11000	-2	108	-3	14	12000	-2	108	-3	16	11000
		R2	-2	91	-3	15	9600	-2	103	-3	14	11000	-2	102	-3	15	11000
		R3	-2	107	-3	10	11000	-2	112	-3	10	11000	-2	110	-3	10	11000
		R4	-2	100	-3	11	10000	-2	114	-3	7	11000	-2	116	-3	7	11000
		R5	-2	114	-3	17	12000	-2	103	-3	12	10000	-2	103	-3	12	10000
	Batch 2	R1	-2	126	-3	20	13000	-2	104	-3	24	12000	-2	109	-3	26	12000
		R2	-2	109	-3	15	11000	-2	90	-3	9	9000	-2	90	-3	9	9000
		R3	-2	105	-3	18	11000	-2	131	-3	9	13000	-2	130	-3	9	13000
		R4	-2	108	-3	15	11000	-2	115	-3	8	11000	-2	114	-3	8	11000
		R5	-2	114	-3	15	12000	-2	114	-3	12	11000	-2	115	-3	12	12000
Level 3	Batch 1	R1	-3	115	-4	13	120000	-3	116	-4	14	120000	-3	116	-4	14	120000
		R2	-3	84	-4	6	82000	-3	111	-4	14	110000	-3	115	-4	15	120000
		R3	-3	90	-4	14	95000	-3	108	-4	8	110000	-3	109	-4	9	110000
		R4	-3	105	-4	10	100000	-3	112	-4	8	110000	-3	117	-4	7	110000
		R5	-3	95	-4	15	100000	-3	96	-4	14	100000	-3	102	-4	15	110000
	Batch 2	R1	-3	113	-4	14	120000	-3	101	-4	11	100000	-3	109	-4	11	110000
		R2	-3	95	-4	12	97000	-3	93	-4	9	93000	-3	94	-4	9	94000
		R3	-3	89	-4	8	88000	-3	104	-4	8	100000	-3	108	-4	8	100000
		R4	-3	102	-4	13	100000	-3	95	-4	14	99000	-3	95	-4	14	99000
		R5	-3	105	-4	15	110000	-3	97	-4	12	99000	-3	101	-4	12	103000

ACCURACY PROFILE - raw data - 2 dilutions

Matrix: Fish terrine

Strain: *Listeria monocytogenes* VCD638

Enumeration of the microorganisms at 30°C - batch 1: 80 CFU/g

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

Level	Batch	R.	Reference method: ISO 4833-1:2013					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	104	-2	19	1100	-1	99	-2	19	1000	-1	99	-2	17	1000
		R2	-1	27	-2	6	300	-1	33	-2	4	340	-1	27	-2	4	280
		R3	-1	39	-2	6	410	-1	41	-2	2	390	-1	34	-2	2	330
		R4	-1	41	-2	4	410	-1	52	-2	6	530	-1	51	-2	6	520
		R5	-1	33	-2	4	340	-1	27	-2	2	260	-1	20	-2	2	200
	Batch 2	R1	-1	34	-2	3	340	-1	26	-2	3	260	-1	28	-2	4	300
		R2	-1	30	-2	4	310	-1	30	-2	2	290	-1	260	-2	2	260
		R3	-1	30	-2	2	290	-1	25	-2	3	260	-1	24	-2	3	250
		R4	-1	26	-2	6	290	-1	21	-2	7	260	-1	9	-2	6	140
		R5	-1	27	-2	3	270	-1	28	-2	4	290	-1	13	-2	4	160
Level 2	Batch 1	R1	-2	98	-3	9	9700	-2	88	-3	11	9000	-2	81	-3	10	8300
		R2	-2	99	-3	12	10000	-2	78	-3	13	8300	-2	67	-3	12	7200
		R3	-2	81	-3	10	8300	-2	88	-3	17	9500	-2	80	-3	15	8600
		R4	-2	117	-3	16	12000	-2	121	-3	7	11600	-2	108	-3	7	10000
		R5	-2	278	-3	29	28000	-2	262	-3	32	27000	-2	282	-3	30	28000
	Batch 2	R1	-2	92	-3	11	9400	-2	83	-3	9	8400	-2	78	-3	6	7600
		R2	-2	>300	-3	50	50000	-2	>300	-3	55	55000	-2	>300	-3	56	56000
		R3	-2	219	-3	24	22000	-2	205	-3	23	21000	-2	210	-3	24	21000
		R4	-2	129	-3	16	13000	-2	100	-3	16	10000	-2	93	-3	16	9900
		R5	-2	82	-3	13	8600	-2	90	-3	16	9600	-2	80	-3	16	8700
Level 3	Batch 1	R1	-3	79	-4	13	84000	-3	93	-4	14	97000	-3	84	-4	14	89000
		R2	-3	106	-4	9	100000	-3	132	-4	24	140000	-3	126	-4	23	110000
		R3	-3	266	-4	37	270000	-3	290	-4	28	290000	-3	271	-4	27	270000
		R4	-3	100	-4	11	100000	-3	96	-4	11	97000	-3	87	-4	8	86000
		R5	-3	83	-4	9	84000	-3	63	-4	4	61000	-3	58	-4	2	54000
	Batch 2	R1	-3	82	-4	9	83000	-3	98	-4	7	95000	-3	95	-4	7	93000
		R2	-3	85	-4	10	86000	-3	102	-4	13	104000	-3	104	-4	12	105000
		R3	-3	96	-4	11	97000	-3	90	-4	8	89000	-3	84	-4	8	84000
		R4	-3	75	-4	11	78000	-3	79	-4	7	78000	-3	70	-4	7	70000
		R5	-3	98	-4	11	99000	-3	91	-4	13	94000	-3	87	-4	12	90000

Appendix K - Accuracy profile study: raw data - One Plate

Panna cotta

Strain: *Bacillus cereus* Ad2117

Matrix	Target inoculation level(CFU/g)	N° sample	Reference method: ISO 4833-1				NEOGEN Petrifilm Rapid Aerobic Count Plate			
			Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/plate	CFU/g	log CFU/g
Panna cotta batch n°1	300	5244	10	36	360	2.56	10	52	520	2,72
			100	4			100	7		
		5245	10	47	450	2.65	10	57	570	2,76
			100	2			100	5		
		5246	10	52	530	2.72	10	79	790	2,90
			100	6			100	4		
		5247	10	43	450	2.65	10	56	560	2,75
			100	6			100	5		
		5248	10	52	490	2.69	10	64	640	2,81
			100	2			100	10		
	10000	5249	100	97	10000	4.00	100	146	14000	4,15
			1000	14			1000	13		
		5250	100	103	10000	4.00	100	182	18000	4,26
			1000	10			1000	18		
		5251	100	93	9700	3.99	100	175	17000	4,23
			1000	14			1000	13		
		5252	100	77	8000	3.90	100	136	14000	4,15
			1000	11			1000	16		
		5253	100	95	9400	3.97	100	173	17000	4,23
			1000	8			1000	23		
	1000000	5254	10000	51	520000	5.72	10000	95	950000	5,98
			100000	6			100000	8		
		5255	10000	38	410000	5.61	10000	73	730000	5,86
			100000	7			100000	7		
		5256	10000	44	470000	5.67	10000	61	610000	5,79
			100000	8			100000	4		
		5257	10000	58	600000	5.78	10000	56	560000	5,75
			100000	8			100000	10		
		5258	10000	52	540000	5.73	10000	74	740000	5,87
			100000	7			100000	8		
Panna cotta batch n°2	300	5259	10	41	450	2.65	10	68	680	2,83
			100	8			100	4		
		5260	10	36	370	2.57	10	69	690	2,84
			100	5			100	8		
		5261	10	48	490	2.69	10	61	610	2,79
			100	6			100	10		
		5262	10	60	580	2.76	10	65	650	2,81
			100	4			100	8		
		5263	10	51	520	2.72	10	55	550	2,74
			100	6			100	2		
	10000	5264	100	87	8800	3.94	100	157	16000	4,20
			1000	10			1000	18		
		5265	100	109	12000	4.08	100	161	16000	4,20
			1000	18			1000	16		
		5266	100	114	11000	4.04	100	178	18000	4,26
			1000	10			1000	16		
		5267	100	100	10000	4.00	100	157	16000	4,20
			1000	11			1000	24		
		5268	100	94	9500	3.98	100	142	14000	4,15
			1000	10			1000	15		
	1000000	5269	10000	44	450000	5.65	10000	65	650000	5,81
			100000	6			100000	7		
		5270	10000	80	770000	5.89	10000	73	730000	5,86
			100000	5			100000	11		
		5271	10000	47	470000	5.67	10000	74	740000	5,87
			100000	5			100000	4		
		5272	10000	48	490000	5.69	10000	80	800000	5,90
			100000	6			100000	1		
		5273	10000	67	750000	5.88	10000	137	1400000	6,15
			100000	16			100000	9		

Appendix K - Accuracy profile study: raw data - One Plate

Infant formula

Strain: *Cronobacter sakazakii* Ad1446

Matrix	Target inoculation level(CFU/g)	N° sample	Reference method: ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
							48h ± 3h at 30°C ± 1°C			
			Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Plate	CFU/g	log CFU/g
Infant formula batch n°1	300	6022	10	23	240	2.38	10	26	260	2,41
			100	3			100	8		
		6023	10	21	240	2.38	10	29	290	2,46
			100	5			100	2		
		6024	10	20	280	2.45	10	13	130	2,11
			100	11			100	2		
		6025	10	22	250	2.40	10	49	490	2,69
			100	5			100	5		
		6026	10	19	260	2.41	10	37	370	2,57
			100	9			100	3		
	10000	6027	1000	11	12000	4.08	100	81	8100	3,91
			10000	2			1000	12		
		6028	1000	11	12000	4.08	100	100	10000	4,00
			10000	2			1000	12		
		6029	1000	12	13000	4.11	100	81	8100	3,91
			10000	2			1000	11		
		6030	1000	15	15000	4.18	100	87	8700	3,94
			10000	2			1000	13		
		6031	1000	10	12000	4.08	100	88	8800	3,94
			10000	3			1000	13		
	1000000	6032	100000	16	1600000	6.20	10000	115	1200000	6,08
			1000000	2			100000	13		
		6033	100000	14	1500000	6.18	10000	126	1300000	6,11
			1000000	2			100000	19		
		6034	100000	11	1100000	6.04	10000	124	1200000	6,08
			1000000	1			100000	15		
		6035	100000	11	1100000	6.04	10000	124	1200000	6,08
			1000000	1			100000	18		
		6036	100000	11	1400000	6.15	10000	112	1100000	6,04
			1000000	4			100000	14		
Infant formula batch n°2	300	6037	10	22	280	2.45	10	53	530	2,72
			100	9			100	7		
		6038	10	22	250	2.40	10	53	230	2,36
			100	5			100	8		
		6039	10	20	240	2.38	10	63	630	2,80
			100	6			100	5		
		6040	10	30	300	2.48	10	66	660	2,82
			100	3			100	9		
		6041	10	31	330	2.52	10	59	590	2,77
			100	5			100	5		
	10000	6042	1000	14	17000	4.23	100	131	13000	4,11
			10000	5			1000	19		
		6043	1000	18	18000	4.26	100	145	15000	4,18
			10000	2			1000	19		
		6044	1000	12	14000	4.15	100	131	13000	4,11
			10000	3			1000	18		
		6045	1000	15	14000	4.15	100	143	14000	4,15
			10000	0			1000	24		
		6046	1000	21	21000	4.32	100	140	14000	4,15
			10000	2			1000	12		
	1000000	6047	100000	15	1700000	6.23	10000	122	1200000	6,08
			1000000	4			100000	20		
		6048	100000	16	1500000	6.18	10000	110	1100000	6,04
			1000000	1			100000	15		
		6049	100000	12	1300000	6.11	10000	119	1200000	6,08
			1000000	2			100000	17		
		6050	100000	21	2000000	6.30	10000	110	1100000	6,04
			1000000	1			100000	9		
		6051	100000	15	1500000	6.18	10000	101	1000000	6,00
			1000000	2			100000	11		

ACCURACY PROFILE - raw data - One Plate

Matrix: Pork pâté

Strain: *Citrobacter youngae* YCF284

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

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

Level	Batch	R.	Reference method: ISO 4833-1:2013*					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	12	-2	0	110	-1	19	2	3	190	-1	19	2	3	190
		R2	-1	20	-2	2	200	-1	14	2	6	140	-1	14	2	6	140
		R3	-1	14	-2	4	160	-1	13	2	1	130	-1	13	2	1	130
		R4	-1	13	-2	0	120	-1	18	2	1	180	-1	18	2	1	180
		R5	-1	20	-2	1	190	-1	14	2	0	140	-1	14	2	0	140
	Batch 2	R1	-1	10	-2	2	110	-1	19	2	0	190	-1	18	2	0	180
		R2	-1	9	-2	1	90	-1	28	2	1	280	-1	26	2	1	260
		R3	-1	14	-2	2	150	-1	26	2	0	260	-1	22	2	2	220
		R4	-1	20	-2	2	200	-1	22	2	3	220	-1	20	2	2	200
		R5	-1	18	-2	3	190	-1	19	2	4	190	-1	19	2	3	190
Level 2	Batch 1	R1	-2	58	-3	2	5460	-2	41	3	5	4100	-2	41	3	5	4100
		R2	-2	57	-3	8	5910	-2	51	3	5	5100	-2	51	3	5	5100
		R3	-2	59	-3	5	5820	-2	58	3	8	5800	-2	62	3	11	6200
		R4	-2	50	-3	6	5090	-2	56	3	10	5600	-2	56	3	10	5600
		R5	-2	51	-3	6	5180	-2	52	3	3	5200	-2	51	3	3	5100
	Batch 2	R1	-2	53	-3	7	5460	-2	43	3	8	4300	-2	43	3	8	4300
		R2	-2	54	-3	1	5000	-2	59	3	3	5900	-2	58	3	3	5800
		R3	-2	49	-3	2	4640	-2	54	3	7	5400	-2	52	3	7	5200
		R4	-2	56	-3	5	5550	-2	52	3	8	5200	-2	49	3	7	4900
		R5	-2	53	-3	7	5460	-2	64	3	6	6400	-2	62	3	6	6200
Level 3	Batch 1	R1	-3	44	-4	12	50900	-3	69	4	6	69000	-3	70	4	6	70000
		R2	-3	64	-4	7	64600	-3	57	4	5	57000	-3	58	4	5	58000
		R3	-3	55	-4	3	52700	-3	62	4	6	62000	-3	62	4	6	62000
		R4	-3	60	-4	8	62800	-3	47	4	7	47000	-3	46	4	7	46000
		R5	-3	59	-4	8	60900	-3	69	4	4	69000	-3	67	4	4	67000
	Batch 2	R1	-3	55	-4	6	55500	-3	63	4	4	63000	-3	60	4	4	60000
		R2	-3	56	-4	5	55500	-3	63	4	9	63000	-3	61	4	10	61000
		R3	-3	61	-4	9	63600	-3	47	4	6	47000	-3	47	4	3	47000
		R4	-3	64	-4	8	65500	-3	78	4	2	78000	-3	76	4	2	76000
		R5	-3	68	-4	4	65500	-3	63	4	4	63000	-3	63	4	4	63000

ACCURACY PROFILE - raw data - One Plate

Matrix: Green beans

Strain: *Enterococcus innesii* JTTF83

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

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

Level	Batch	R.	Reference method: ISO 4833-1:2013*					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	25	-2	2	250	-1	30	2	1	300	-1	30	2	1	300
		R2	-1	30	-2	5	320	-1	40	2	2	400	-1	38	2	2	380
		R3	-1	24	-2	4	260	-1	29	2	5	290	-1	29	2	4	290
		R4	-1	30	-2	5	320	-1	20	2	3	200	-1	22	2	3	220
		R5	-1	29	-2	7	330	-1	22	2	4	220	-1	21	2	4	210
	Batch 2	R1	-1	29	-2	2	280	-1	21	2	8	210	-1	20	2	9	200
		R2	-1	37	-2	3	360	-1	30	2	3	300	-1	30	2	3	300
		R3	-1	32	-2	2	310	-1	25	2	1	250	-1	25	2	1	250
		R4	-1	34	-2	2	330	-1	42	2	0	420	-1	43	2	0	430
		R5	-1	25	-2	6	280	-1	31	2	6	310	-1	31	2	6	310
Level 2	Batch 1	R1	-2	87	-3	9	8700	-2	89	3	6	8900	-2	90	3	6	9000
		R2	-2	112	-3	10	11000	-2	89	3	12	8900	-2	89	3	12	8900
		R3	-2	107	-3	12	11000	-2	115	3	8	11500	-2	117	3	8	11700
		R4	-2	97	-3	15	10000	-2	93	3	16	9300	-2	95	3	16	9500
		R5	-2	99	-3	15	10000	-2	102	3	13	10200	-2	105	3	13	10500
	Batch 2	R1	-2	87	-3	16	9400	-2	115	3	10	11500	-2	112	3	10	11200
		R2	-2	78	-3	10	8000	-2	98	3	10	9800	-2	92	3	10	9200
		R3	-2	90	-3	14	9400	-2	99	3	11	9900	-2	98	3	11	9800
		R4	-2	96	-3	7	9400	-2	85	3	5	8500	-2	89	3	6	8900
		R5	-2	93	-3	12	9500	-2	98	3	9	9800	-2	99	3	9	9900
Level 3	Batch 1	R1	-3	92	-4	9	92000	-3	80	4	12	80000	-3	79	4	12	79000
		R2	-3	68	-4	18	78000	-3	62	4	3	62000	-3	65	4	3	65000
		R3	-3	106	-4	10	100000	-3	92	4	10	92000	-3	94	4	10	94000
		R4	-3	87	-4	9	87000	-3	90	4	12	90000	-3	93	4	12	93000
		R5	-3	101	-4	9	100000	-3	99	4	10	99000	-3	101	4	10	101000
	Batch 2	R1	-3	84	-4	9	85000	-3	105	4	9	105000	-3	105	4	9	105000
		R2	-3	97	-4	8	95000	-3	110	4	12	110000	-3	110	4	12	110000
		R3	-3	98	-4	14	102000	-3	94	4	14	94000	-3	94	4	14	94000
		R4	-3	120	-4	11	120000	-3	101	4	9	101000	-3	101	4	9	101000
		R5	-3	85	-4	8	85000	-3	90	4	12	90000	-3	87	4	12	87000

ACCURACY PROFILE - raw data - One Plate

Matrix: Whole egg

Strain: *Enterobacter cloacae* PAJ947

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

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

Level	Batch	R.	Reference method: ISO 4833-1:2013*					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	25	-2	5	270	-1	24	2	4	240	-1	23	2	4	230
		R2	-1	25	-2	10	320	-1	28	2	2	280	-1	28	2	4	280
		R3	-1	21	-2	3	220	-1	24	2	2	240	-1	24	2	3	240
		R4	-1	34	-2	6	360	-1	35	2	3	350	-1	39	2	4	390
		R5	-1	26	-2	2	260	-1	27	2	2	270	-1	27	2	3	270
	Batch 2	R1	-1	22	-2	3	230	-1	37	2	2	370	-1	37	2	2	370
		R2	-1	26	-2	4	270	-1	34	2	4	340	-1	34	2	5	340
		R3	-1	23	-2	8	280	-1	30	2	4	300	-1	28	2	5	280
		R4	-1	29	-2	7	330	-1	23	2	2	230	-1	23	2	2	230
		R5	-1	36	-2	7	390	-1	28	2	1	280	-1	29	2	2	290
Level 2	Batch 1	R1	-2	105	-3	14	11000	-2	108	3	14	10800	-2	108	3	16	10800
		R2	-2	91	-3	15	9600	-2	103	3	14	10300	-2	102	3	15	10200
		R3	-2	107	-3	10	11000	-2	112	3	10	11200	-2	110	3	10	11000
		R4	-2	100	-3	11	10000	-2	114	3	7	11400	-2	116	3	7	11600
		R5	-2	114	-3	17	12000	-2	103	3	12	10300	-2	103	3	12	10300
	Batch 2	R1	-2	126	-3	20	13000	-2	104	3	24	10400	-2	109	3	26	10900
		R2	-2	109	-3	15	11000	-2	90	3	9	9000	-2	90	3	9	9000
		R3	-2	105	-3	18	11000	-2	131	3	9	13100	-2	130	3	9	13000
		R4	-2	108	-3	15	11000	-2	115	3	8	11500	-2	114	3	8	11400
		R5	-2	114	-3	15	12000	-2	114	3	12	11400	-2	115	3	12	11500
Level 3	Batch 1	R1	-3	115	-4	13	120000	-3	116	4	14	116000	-3	116	4	14	116000
		R2	-3	84	-4	6	82000	-3	111	4	14	111000	-3	115	4	15	115000
		R3	-3	90	-4	14	95000	-3	108	4	8	108000	-3	109	4	9	109000
		R4	-3	105	-4	10	100000	-3	112	4	8	112000	-3	117	4	7	117000
		R5	-3	95	-4	15	100000	-3	96	4	14	96000	-3	102	4	15	102000
	Batch 2	R1	-3	113	-4	14	120000	-3	101	4	11	101000	-3	109	4	11	109000
		R2	-3	95	-4	12	97000	-3	93	4	9	93000	-3	94	4	9	94000
		R3	-3	89	-4	8	88000	-3	104	4	8	104000	-3	108	4	8	108000
		R4	-3	102	-4	13	100000	-3	95	4	14	95000	-3	95	4	14	95000
		R5	-3	105	-4	15	110000	-3	97	4	12	97000	-3	101	4	12	101000

ACCURACY PROFILE - raw data - One Plate

Matrix: fish terrine

Enumeration of the microorganisms at 30°C - batch 1: 80 CFU/g

Strain: *Listeria monocytogenes* VCD638

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

Level	Batch	R.	Reference method: ISO 4833-1:2013*					Petrifilm™ Rapid Aerobic Count Plate (RAC) -Visual reading					Petrifilm™ Rapid Aerobic Count Plate (RAC) - Automatic reader (PPRA)				
			dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	104	-2	19	1100	-1	99	2	19	990	-1	99	2	17	990
		R2	-1	27	-2	6	300	-1	33	2	4	330	-1	27	2	4	270
		R3	-1	39	-2	6	410	-1	41	2	2	410	-1	34	2	2	340
		R4	-1	41	-2	4	410	-1	52	2	6	520	-1	51	2	6	510
		R5	-1	33	-2	4	340	-1	27	2	2	270	-1	20	2	2	200
	Batch 2	R1	-1	34	-2	3	340	-1	26	2	3	260	-1	28	2	4	280
		R2	-1	30	-2	4	310	-1	30	2	2	300	-1	26	2	2	260
		R3	-1	30	-2	2	290	-1	25	2	3	250	-1	24	2	3	240
		R4	-1	26	-2	6	290	-1	21	2	7	210	-1	9	2	6	90
		R5	-1	27	-2	3	270	-1	28	2	4	280	-1	13	2	4	130
Level 2	Batch 1	R1	-2	98	-3	9	9700	-2	88	3	11	8800	-2	81	3	10	8100
		R2	-2	99	-3	12	10000	-2	78	3	13	7800	-2	67	3	12	6700
		R3	-2	81	-3	10	8300	-2	88	3	17	8800	-2	80	3	15	8000
		R4	-2	117	-3	16	12000	-2	121	3	7	12100	-2	108	3	7	10800
		R5	-2	278	-3	29	28000	-2	262	3	32	26200	-2	282	3	30	28200
	Batch 2	R1	-2	92	-3	11	9400	-2	83	3	9	8300	-2	90	3	6	9000
		R2	-2	>300	-3	50	50000	2	>300	-3	55	5500	2	>300	-3	56	5600
		R3	-2	219	-3	24	22000	-2	205	3	23	20500	-2	210	3	24	21000
		R4	-2	129	-3	16	13000	-2	100	3	16	10000	-2	93	3	16	9300
		R5	-2	82	-3	13	8600	-2	90	3	16	9000	-2	80	3	16	8000
Level 3	Batch 1	R1	-3	79	-4	13	84000	-3	93	4	14	93000	-3	84	4	14	84000
		R2	-3	106	-4	9	100000	-3	132	4	24	132000	-3	126	4	23	126000
		R3	-3	266	-4	37	270000	-3	290	4	28	290000	-3	271	4	27	271000
		R4	-3	100	-4	11	100000	-3	96	4	11	96000	-3	87	4	8	87000
		R5	-3	83	-4	9	84000	-3	63	4	4	63000	-3	58	4	2	58000
	Batch 2	R1	-3	82	-4	9	83000	-3	98	4	7	98000	-3	95	4	7	95000
		R2	-3	85	-4	10	86000	-3	102	4	13	102000	-3	104	4	12	104000
		R3	-3	96	-4	11	97000	-3	90	4	8	90000	-3	84	4	8	84000
		R4	-3	75	-4	11	78000	-3	79	4	7	79000	-3	70	4	7	70000
		R5	-3	98	-4	11	99000	-3	91	4	13	91000	-3	87	4	12	87000

Microsept

Summary report - v1
NEOGEN Petrifilm RAC

Appendix L - Results obtained by the expert laboratory and the collaborative laboratories

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
ADRIA	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	183	1800	3.26	10	184	1900	3.28
		100	16			100	24		
	7	10	116	1100	3.04	10	99	1000	3.00
		100	9			100	13		
	1	100	117	12000	4.08	100	152	15000	4.18
		1000	10			1000	14		
	6	100	105	10000	4.00	100	81	8300	3.92
		1000	9			1000	10		
	4	1000	51	53000	4.72	1000	67	66000	4.82
		10000	7			10000	6		
	8	1000	74	76000	4.88	1000	82	81000	4.91
		10000	10			10000	7		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
A	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	72	730	2.86	10	72	710	2.85
		100	8			100	6		
	7	10	101	990	3.00	10	98	970	2.99
		100	8			100	9		
	1	100	110	12000	4.08	100	145	15000	4.18
		1000	17			1000	15		
	6	100	82	8600	3.93	100	115	11000	4.04
		1000	13			1000	9		
	4	1000	58	60000	4.78	1000	70	73000	4.86
		10000	8			10000	10		
	8	1000	106	110000	5.04	1000	120	120000	5.08
		10000	14			10000	9		
B	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	100	14	1500	3.18	10	122	1200	3.08
		1000	3			100	15		
	7	100	11	1100	3.04	10	104	1000	3.00
		1000	1			100	10		
	1	100	101	11000	4.04	100	124	13000	4.11
		1000	15			1000	14		
	6	100	173	17000	4.23	1000	20	21000	4.32
		1000	14			10000	3		
	4	1000	111	110000	5.04	1000	85	84000	4.92
		10000	7			10000	7		
	8	1000	98	100000	5.00	1000	64	65000	4.81
		10000	15			10000	7		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
C	2	10	7	70	1.85	10	5	50	1.70
		100	0	Ne	Ne	100	0		
	5	10	1	<40	<1.60	10	0	<10	<1.00
		100	0		detection	100	0		
	3	10	146	1500	3.18	10	122	1300	3.11
		100	17			1000	24		
	7	10	112	1100	3.04	10	108	1100	3.04
		100	9			100	11		
	1	100	105	9900	4.00	100	113	11000	4.04
		1000	3			1000	7		
	6	100	203	20000	4.30	100	211	21000	4.32
		1000	22			1000	19		
	4	1000	82	81000	4.91	1000	122	120000	5.08
		10000	7			10000	12		
	8	1000	83	85000	4.93	10000	39	400000	5.60
		10000	10			100000	5		
D Analyses at Day 3	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	100	27	2600	3.41	10	248	2500	3.40
		1000	2			100	24		
	7	10	175	1800	3.26	10	192	1900	3.28
		100	20			100	16		
	1	1000	53	51000	4.71	1000	46	47000	4.67
		10000	3			10000	6		
	6	1000	49	51000	4.71	1000	35	36000	4.56
		10000	7			10000	5		
	4	1000	272	270000	5.43	1000	258	260000	5.41
		10000	25			10000	31		
	8	10000	32	310000	5.49	1000	258	260000	5.41
		100000	2			10000	24		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
F	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	240	2300	3.36	10	166	1700	3.23
		100	23			100	21		
	7	10	168	1700	3.23	10	143	1500	3.18
		100	14			100	22		
	1	100	161	16000	4.20	100	183	19000	4.28
		1000	13			1000	26		
	6	1000	26	24000	4.38	100	227	23000	4.36
		10000	0			1000	29		
	4	1000	227	250000	5.40	10000	23	220000	5.34
		10000	45			100000	1		
	8	1000	189	190000	5.28	1000	225	230000	5.36
		10000	17			10000	23		
G	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	48	480	2.68	10	65	660	2.82
		100	5			100	8		
	7	100	19	1900	3.28	100	86	7800	3.89
		1000	2			1000	0		
	1	1000	11	11000	4.04	100	80	8200	3.91
		10000	1			1000	10		
	6	1000	13	15000	4.18	100	92	9200	3.96
		10000	3			1000	9		
	4	1000	102	100000	5.00	1000	120	120000	5.08
		10000	13			10000	14		
	8	1000	118	110000	5.04	1000	78	80000	4.90
		10000	3			10000	10		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
H * spreading colonies at (-1)	2	10	3	<40	<1.60 detection	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	100*	9	820	2.91	10	121	1200	3.08
		1000	0	Ne	Ne	100	16		
	7	100*	12	1100	3.04	10	162	1600	3.20
		1000	0			100	16		
	1	100	90	9500	3.98	100	121	11000	4.04
		1000	14			1000	4		
	6	100	68	6700	3.83	100	121	12000	4.08
		1000	6			1000	13		
I	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	1			100	0		
	3	10	95	940	2.97	10	123	1200	3.08
		100	8			100	14		
	7	10	132	1300	3.11	10	120	1200	3.08
		100	9			100	14		
	1	100	98	9700	3.99	100	71	7700	3.89
		1000	9			1000	14		
	6	100	112	11000	4.04	100	113	12000	4.08
		1000	9			1000	15		
	4	1000	65	69000	4.84	1000	64	67000	4.83
		10000	11			10000	10		
	8	1000	57	58000	4.76	1000	82	85000	4.93
		10000	7			10000	11		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
J Analyses at Day 3	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	100	210	22000	4.34	100	200	22000	4.34
		1000	36			1000	40		
	7	100	173	17000	4.23	100	200	23000	4.36
		1000	18			1000	50		
	1	1000	210	210000	5.32	1000	100	120000	5.08
		10000	20			10000	30		
	6	1000	192	200000	5.30	1000	300	280000	5.45
		10000	28			10000	10		
	4	10000	218	2200000	6.34	10000	100	1100000	6.04
		100000	22			100000	20		
	8	100000	42	4200000	6.62	10000	200	2100000	6.32
		1000000	4			100000	30		
K	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	70	690	2.84	10	43	450	2.65
		100	6			100	6		
	7	10	34	340	2.53	10	30	300	2.48
		100	3			100	3		
	1	100	132	13000	4.11	100	82	8100	3.91
		1000	6			1000	7		
	6	10	264	2700	3.43	100	43	4000	3.60
		100	28			1000	1		
	4	1000	35	37000	4.57	1000	29	30000	4.48
		10000	6			10000	4		
	8	1000	38	36000	4.56	1000	41	38000	4.58
		10000	2			10000	1		

Collaborator	N° sample	Reference method : ISO 4833-1				Alternative method: NEOGEN Petrifilm Rapid Aerobic Count Plate			
		Dilution	CFU/ plate	CFU/g	log (CFU/g)	Dilution	CFU/ Petrifilm	CFU/g	log (CFU/g)
L	2	100	20	2800	<1.00	10	0	<10	<1.00
		1000	10			100	0		
	5								
	3	1000	12	20000	4.30	100	95	9600	3.98
		10000	10			1000	10		
	7								
	1	1000	10	11000	4.04	100	100	10000	4.00
		10000	2			1000	10		
	6								
M	2	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	5	10	0	<10	<1.00	10	0	<10	<1.00
		100	0			100	0		
	3	10	62	680	2.83	10	76	770	2.89
		100	13			100	9		
	7	10	64	660	2.82	10	92	940	2.97
		100	8			100	11		
	1	100	87	9000	3.95	100	83	8500	3.93
		1000	12			1000	10		
	6	100	82	8300	3.92	100	87	8600	3.93
		1000	9			1000	8		
	4	1000	77	77000	4.89	1000	96	96000	4.98
		10000	8			10000	10		
	8	1000	56	61000	4.79	1000	85	88000	4.94
		10000	11			10000	12		