

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

Summary report
according to the standard EN ISO 16140-2/A1:2024

Quantitative method

NEOGEN® Petrifilm® Coliform Count (CC) Plate
(certificate # 3M 01/02 – 09/89 A)
for the enumeration of total coliforms
in all human food (except raw shellfish), pet food and
production environmental samples

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This report contains 67 pages including 36 pages of appendices.
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Preamble

- Protocols of validation:

- EN ISO 16140-1:2016 and EN ISO 16140-2/A1 (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.
- AFNOR technical rules (Revision 12).

- Reference method:

- NF ISO 4832 (July 2006): Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coliforms - Colony Count Technique.

- Application scope:

- All human food (except raw shellfish) by performing assays on a broad range of products
- Pet food
- Production environmental samples

- Certification body:

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

Definition

- **Method comparison study**

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

- A comparative study of the results of the reference method to the results of the alternative method in a variety of different items (naturally and/or artificially) contaminated samples (so-called relative trueness study).

- A comparative study of the results of the reference method to the results of the alternative method in artificially contaminated samples using replicates of a single item per category. The data are analyzed using the accuracy profile (AP) approach (so-called AP study).

- An inclusivity/exclusivity study of the alternative method.

- **Relative trueness study**

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

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

- **Accuracy profile study**

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

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

- **Inclusivity and exclusivity study**

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

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

- **Interlaboratory study**

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

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

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Appendix A: Artificial contaminations of samples

Appendix B: Relative trueness study: raw data

Appendix C: Relative trueness study: calculations

Appendix D: Accuracy profile study: raw data

Appendix E: Accuracy profile study: summarized results

Appendix F: Inclusivity / Exclusivity: raw data

Appendix G: Inter-laboratory study: results obtained by the collaborators and the expert laboratory

1. Introduction

The NEOGEN® Petrifilm® Coliform Count (CC) Plate was validated on September 1989 (Certificate number: 3M 01/02 - 09/89 A) for the enumeration of total coliforms in all human food (except raw shellfish) by performing assays on a broad range of products. A summary of the different validation studies is listed below:

Date	Study	Validation standard	ISO method
September 1989	Initial validation	/	ISO 4832 (1991)
September 1993	Renewal study	/	ISO 4832 (1991)
June 1998	Renewal study - ADRIA	/	ISO 4832 (1991)
May 2002	Renewal study - ADRIA	/	ISO 4832 (1991)
June 2006	Renewal study - ADRIA	ISO 4832 (2006)	ISO 4832 (2006)
April 2010	Renewal study - ADRIA	ISO 4832 (2006)	ISO 4832 (2006)
March 2014	Renewal study - ADRIA	ISO 4832 (2006)	ISO 4832 (2006)
February 2015	Extension study for total coliforms enumeration in pet food and environmental samples - ADRIA	ISO 4832 (2006)	ISO 4832 (2006)
June 2018	Renewal study - ADRIA	EN ISO 16140-2 (2016)	ISO 4832 (2006)
April 2022	Renewal study - ADRIA	EN ISO 16140-2 (2016)	ISO 4832 (2006)
April 2026	Renewal study - Laboratoire Microsept	EN ISO 16140-2/A1 (2024)	ISO 4832 (2006)

2. Protocols of the methods

2.1 Alternative method

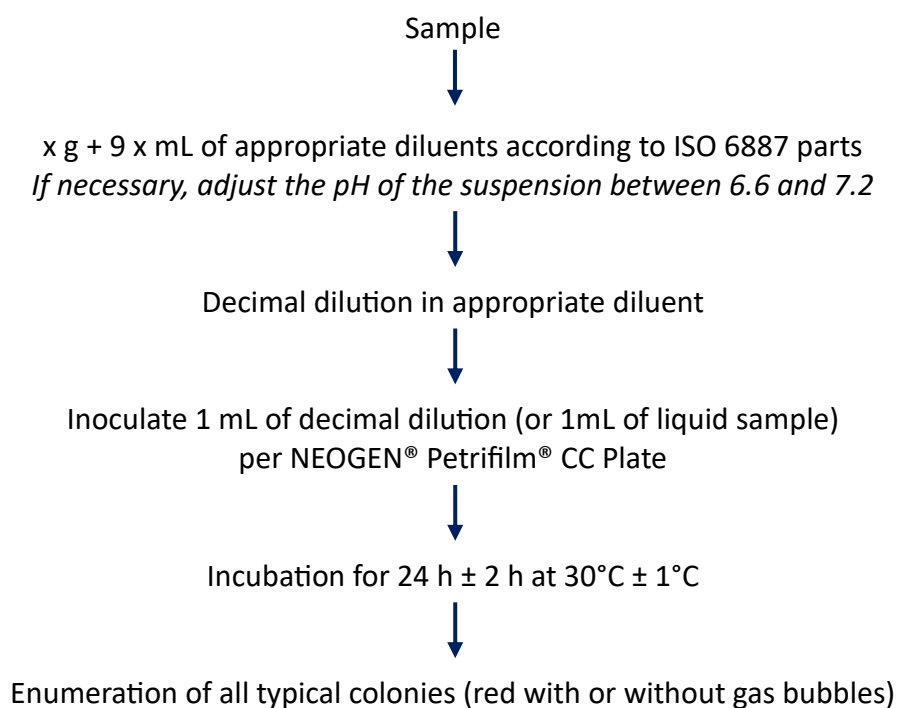
2.1.1 Principle of the method

The NEOGEN® Petrifilm® Coliform Count (CC) Plate is a sample-ready-culture medium system which contains modified Violet Red Bile (VRB), nutrients and selective agents, a cold-water-soluble gelling agent, and a tetrazolium indicator that facilitates colony enumeration.

2.1.2 Protocol of the method

The flow diagram is described Figure 1.

Figure 1: flow diagram of the NEOGEN® Petrifilm® Coliform Count (CC) Plate - Total Coliform enumeration



Note: the analysis at 30°C of raw shellfish is excluded from the scope of the validation.

The method can be used at 30°C and 37°C. The user needs to pay attention on the fact that the results obtained are not necessarily the same at 30°C and 37°C. The NF Validation mark is granted for use at 30°C and 37°C, but the study was run only at 30°C.

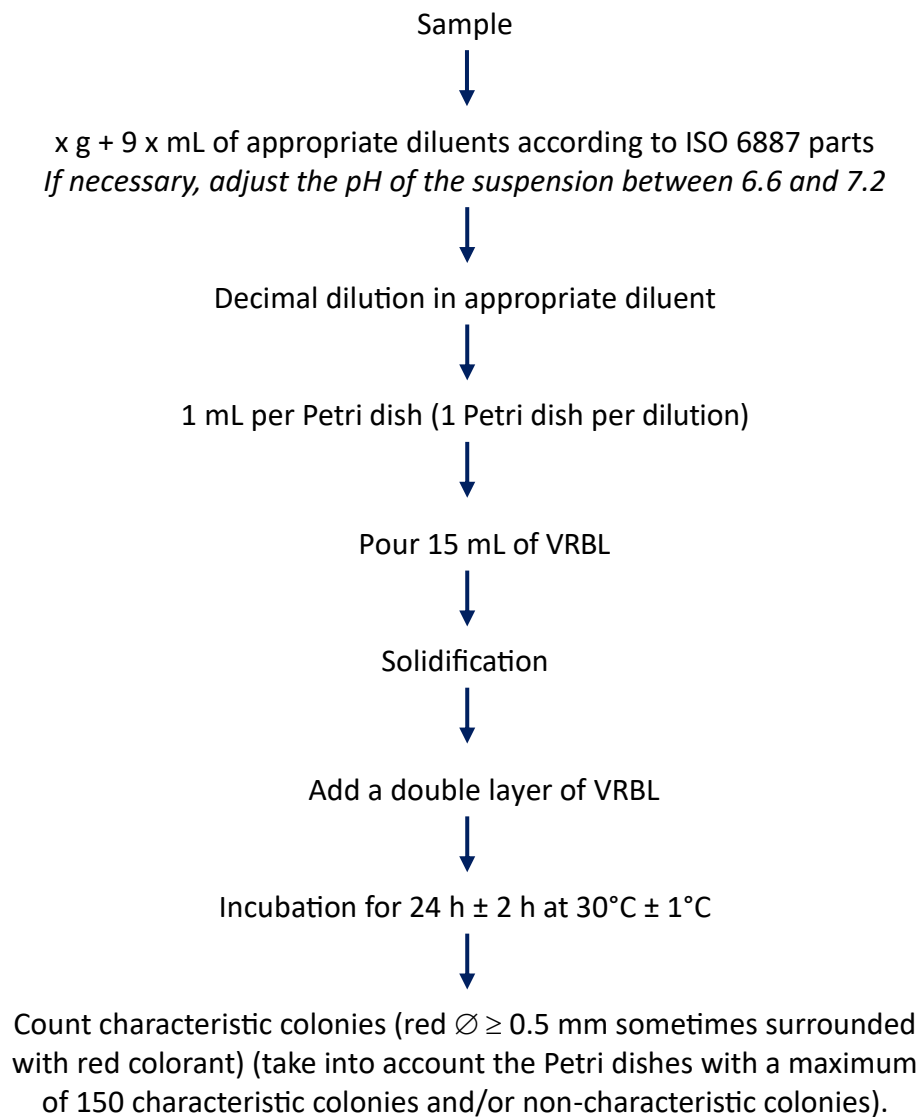
2.1.3 Restrictions

There is no restriction.

2.2 Reference method

The reference method corresponds to the NF ISO 4832 (July 2006) - Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coliforms - Colony Count Technique (See Figure 2).

Figure 2: flow diagram of the reference method: NF EN ISO 4832 - Horizontal method for the enumeration of coliforms - Colony Count Technique



The non-characteristic colonies were confirmed by proceeding to a subculture in BLBVB incubated for 24 h ± 2h at 30°C ± 1°C.

3. Methods comparison study

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

3.1 Relative trueness study

3.1.1 Number and nature of the samples

Seven categories were tested: five food categories, one feed and one production environmental samples categories.

Taking into account all the studies, the repartition of the analyzed samples and interpretable results per category and type is provided in Table 1.

Table 1: categories and types

Category		Types	Number of samples tested	Number of results available
1	Meat products	a Raw meats	12	12
		b Ready to eat, ready to reheat	19	19
		c Delicatessen	19	16
		Total	50	47
2	Dairy products	a Milk	8	6
		b Cheeses	10	10
		c Cream, ice creams	10	6
		Total	28	22
3	Egg products and egg-based products and pastries	a Liquid egg, Mayonnaise, RTE	6	6
		b Pastries	6	5
		c Desserts	5	5
		Total	17	16
4	Seafood products	a Raw fish	5	5
		b RTE	12	10
		c RTRH	10	6
		Total	27	21
5	Vegetables	a Raw and frozen	14	11
		b RTE	8	7
		c RTRH, RTC	7	7
		Total	29	25
6	Pet food	a Dehydrated products (pellets...)	5	5
		b High moisture products (balls, pâtés, sausages...)	7	5
		c Ingredients (dehydrated proteins, dehydrated raw materials...)	14	5
		Total	26	15
7	Production Environmental samples	a Surfaces (wipes, swabs...)	18	5
		b Process water	9	5
		c Dusts (dairy and egg industries...)	9	5
		Total	36	15
All categories			213	161

213 samples were analyzed: 196 samples for the previous validation studies and 17 for the renewal study in 2018, leading to 161 exploitable results.

3.1.2 Artificial contaminations

Artificial contaminations were realized by spiking or seeding protocols. The inoculated strains, the contamination protocols, the injured protocols and the injury evaluation are provided in Appendix A. Injury efficiency was evaluated by enumerating the pure culture on selective (VRBL) and non-selective (TSYEA) agars.

34 samples were artificially contaminated; 21 gave interpretable results with both methods.

140 samples which gave interpretable results by both methods were naturally contaminated.

86.9 % of the samples giving interpretable results by both methods were naturally contaminated.

3.1.3 Raw data

The raw data are provided in Appendix B.

The samples were analyzed by the reference and the alternative methods in order to have 15 interpretable results per category, and 5 interpretable results per type.

The data are classified in three categories (See Table 2):

- 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 (indicated with "*" in the data) 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- 2:2016, 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.

Table 2: classification of the data

Category	Number of samples analyzed	Number of samples providing interpretable results by the reference and the alternative method	Number of samples with less than 4 colonies per plate	Number of samples with results below or above the quantification limit
1 Meat products	50	47	3	0
2 Dairy products	28	22	6	0
3 Egg products and egg-based products and pastries	17	16	1	0
4 Seafood products	27	21	2	4
5 Vegetables	29	25	4	0
6 Pet food	26	15	2	9
7 Production environmental samples	36	15	3	18
All categories	213	161	21	31

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

Table 3: samples which were not used in the calculations

Sample N°	Product	ISO 4832	NEOGEN® Petrifilm® CC TC	Category	Type
13*	RTRH (Beef tongue)	1,70	1,48*	1	b
129	Smoked bacon	1,48*	2,08	1	c
14*	Rillettes	1,30*	1,48*	1	c
32*	Sweet cream	1,00*	1,48*	2	c
90*	Christmas log	1,30*	1,70	2	c
141	Ice nougat	1,60	1,00*	2	c
142	Ice nougat	1,90	1,30*	2	c
151	Raw milk	1,60	1,00*	2	a
152	Raw milk	1,70	1,30*	2	a
123	Pastry	1,30*	1,78	3	b
73	RTE (rice, tuna°)	>5,18	>5,18	4	b
75	Fish rillettes	1,30*	1,78	4	b
18*	RTRH (Curry shrimp)	1,30*	1,85	4	c
66	RTRH (fish meal)	<1,00	<1,00	4	c
69	RTRH (salmon)	<2,00	<2,00	4	c
74	RTRH (fish meal)	>5,18	>5,18	4	c
160	Frozen tomatoes	1,30*	2,16	5	a
75*	Peas	1,00*	1,78	5	a
78*	Ratatouille	1,48*	1,00*	5	a
182	RTE (vegetables salad)	1,00*	1,30*	5	b
420	Sausage for dogs	<1,00	<1,00	6	b

Sample N°	Product	ISO 4832	NEOGEN® Petrifilm® CC TC	Category	Type
421	Sausage for dogs	<1,00	<1,00	6	b
3672	Poultry flour	<1,00	<1,00	6	c
3673	Lamb flour	<1,00	<1,00	6	c
3674	Animal flour	<1,00	<1,00	6	c
3675	Animal flour	<1,00	1,00*	6	c
3842	Lamb flour	1,00*	1,78	6	c
3843	Animal flour	1,00*	1,78	6	c
422	Dehydrated poultry proteins	<1,00	<1,00	6	c
423	Soya	<1,00	<1,00	6	c
424	Ingredients (flour)	<1,00	<1,00	6	c
3844	Wipe (peas industry)	1,30*	1,60	7	a
3903	Wipe (rice industry)	1,30*	2,78	7	a
3904	Wipe (pastry industry)	<2,00	3,38	7	a
3905	Wipe (bechamel sauce)	<2,00	<2,00	7	a
3906	Wipe (cheese industry)	<1,00	<1,00	7	a
4013	Wipe after cleaning (fish industry)	>4,18	>4,18	7	a
4014	Wipe after cleaning (fish industry)	>4,18	>4,18	7	a
4015	Wipe after cleaning (fish industry)	<1,00	<1,00	7	a
4494	Wipe (dishwasher)	>4,18	>4,18	7	a
4495	Wipe (table)	>4,18	>4,18	7	a
4496	Wipe (cutter)	>4,18	>4,18	7	a
4497	Wipe (push-button)	>5,18	>5,18	7	a
425	Wipe (pork slaughterhouse)	<1,00	<1,00	7	a
3841	Process water (peas)	<1,00	<1,00	7	b
3845	Process water (peas)	<1,00	1,78	7	b
3907	Process water (milk industry)	<2,00	<2,00	7	b
4007	Process water (fish industry)	<0,00	<0,00	7	b
3676	Dusts from egg industry	<1,00	<1,00	7	c
3677	Dusts	<1,00	<1,00	7	c
3678	Dusts from dairy industry	1,30*	1,48*	7	c
428	Dusts (fish industry)	<1,00	<1,00	7	c

*< 4 colonies per plate.

3.1.4 Statistical interpretation

The calculations are provided in Appendix C.

The obtained data were analyzed using the scatter plot. The graphs are provided with the line of identity ($y = x$).

The Figures 3 to 9 show the data plotted for each individual category. The Figure 10 shows the data plotted for all the products.

Figure 3: data plotted for the meat products

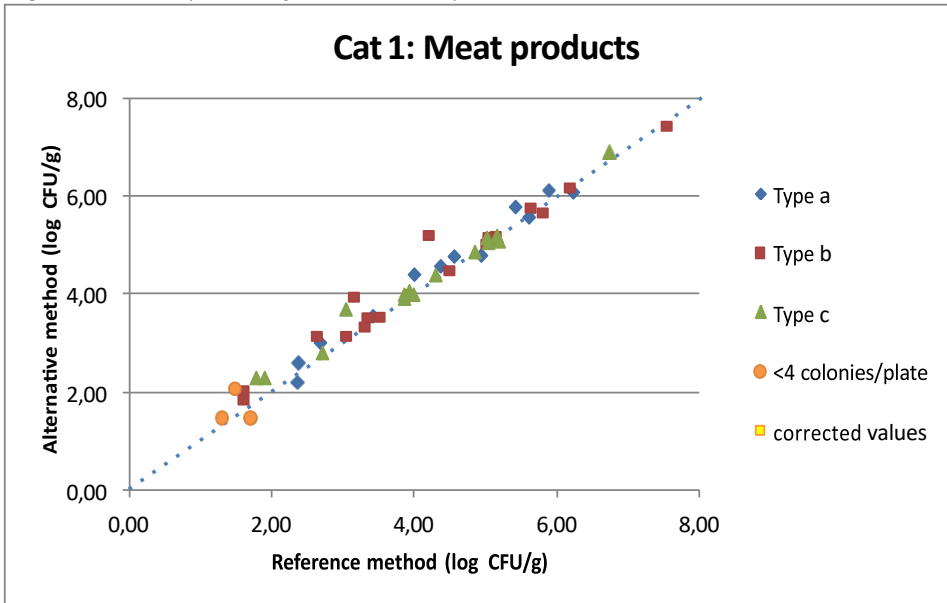


Figure 4: data plotted for dairy products

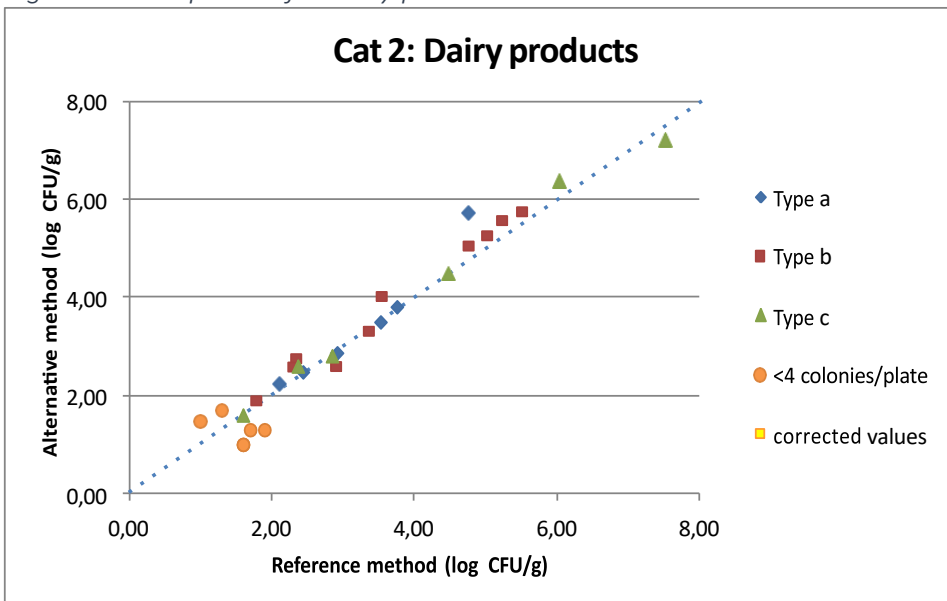


Figure 5: data plotted for egg-based products and pastries

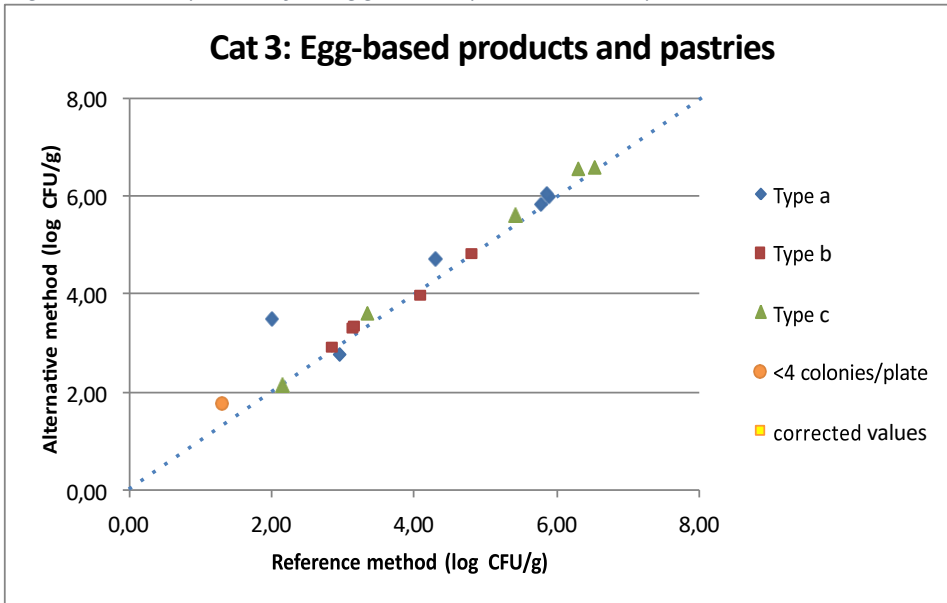


Figure 6: data plotted for seafood products

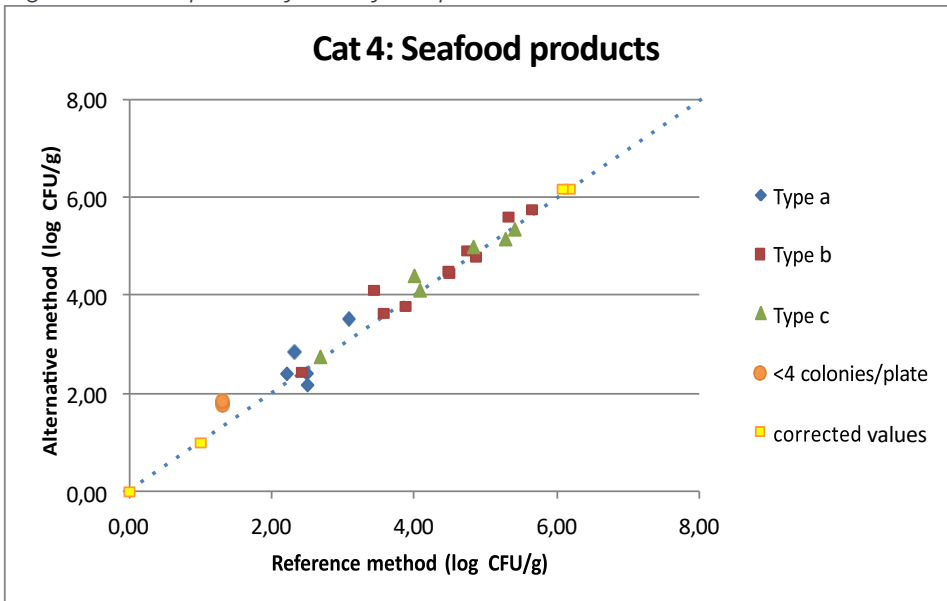


Figure 7: data plotted for vegetables

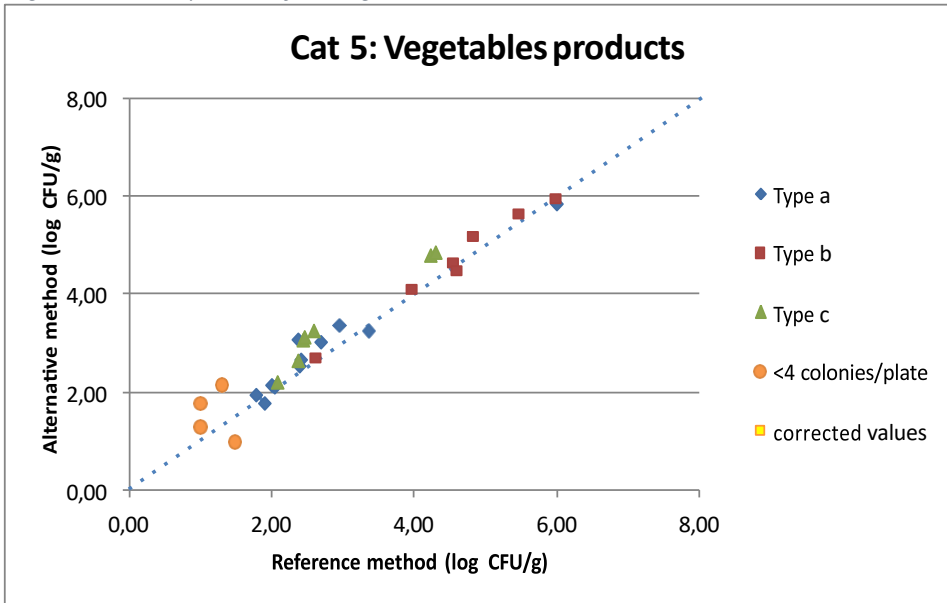


Figure 8: data plotted for pet food

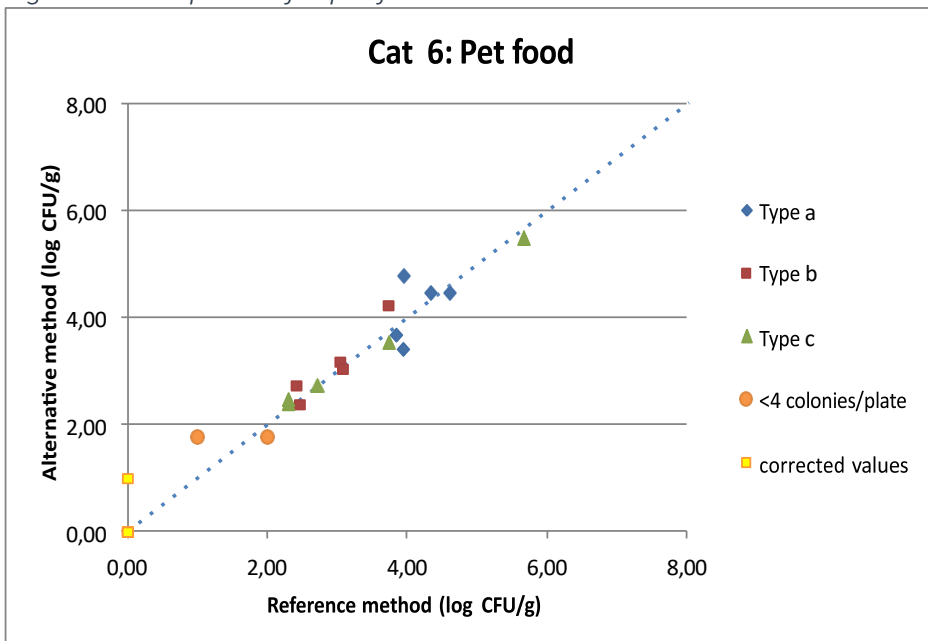


Figure 9: data plotted for production environmental samples

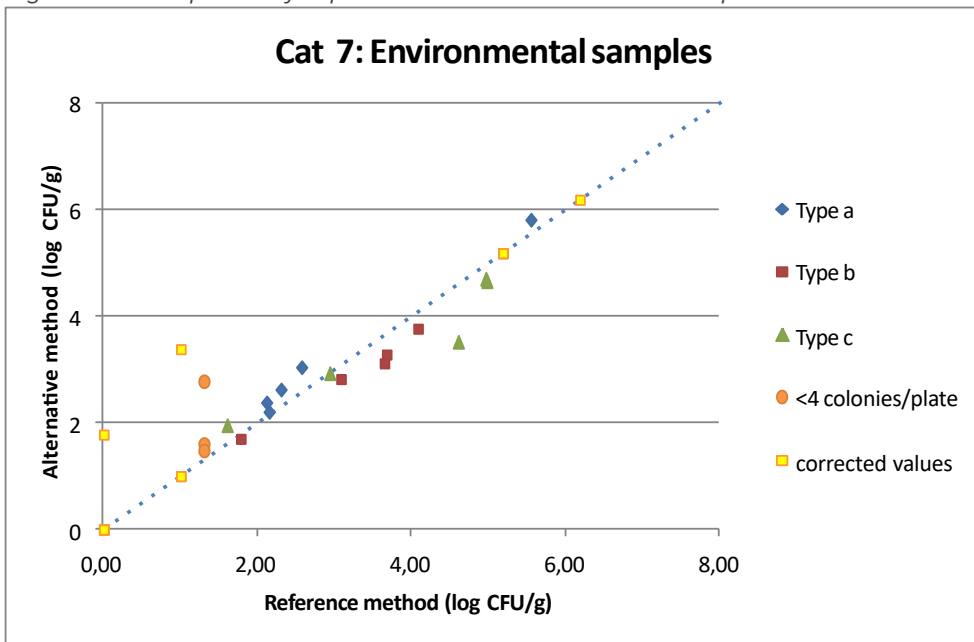
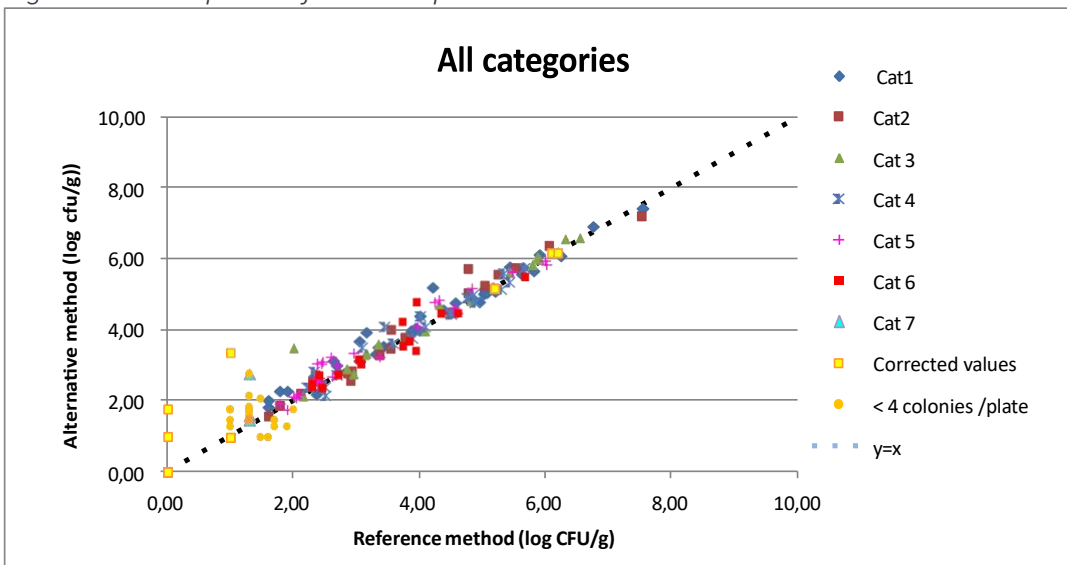


Figure 10: data plotted for all the products



The calculated values for Average difference and Standard deviation differences per category are provided in Table 4.

Table 4: calculated values

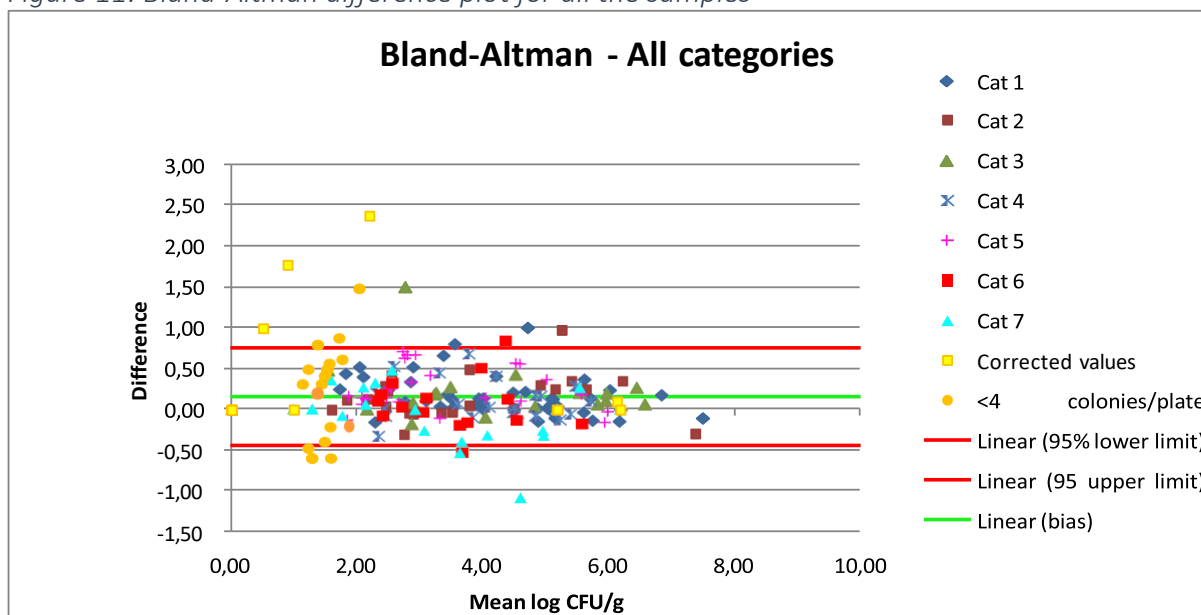
Category		n	D (linear bias)	SD	95% lower limit	95% upper limit
1	Meat products	47	0,17	0,25	-0,33	0,67
2	Dairy products	22	0,16	0,28	-0,43	0,75
3	Egg products and egg-based products and pastries	16	0,23	0,37	-0,58	1,04
4	Seafood products	21	0,12	0,24	-0,40	0,64
5	Vegetable	25	0,25	0,27	-0,31	0,81
6	Pet food	15	0,06	0,32	-0,66	0,78
7	Production environmental samples	17	-0,10	0,41	-1,02	0,82
All categories		161	0,14	0,30	-0,46	0,74

D: average difference. SD: standard deviation of differences.

The bias varies from -0.10 log (production environmental samples) to 0.25 log (vegetables).

The Bland-Altman difference plot for all the samples is given Figure 11.

Figure 11: Bland-Altman difference plot for all the samples



Samples for which the difference between the result observed with the reference and the alternative methods is above or lower than the limits are listed in Table 5.

Table 5: disagreements observed between the reference and the alternative method

Classification of data	Category	Type	N° Sample	ISO 4832	NEOGEN® Petrifilm® CC TC	Values before correction (reference or/and alternative method)	Mean	Difference	Lower / Upper limits	Comments
Interpretable results by both methods	1	b	100*	4,20	5,21	/	4,71	1,01	-0.46 0.74	Higher enumeration by the alternative method
	2	a	119	4,76	5,74	/	5,25	0,98		Higher enumeration by the alternative method
	3	a	104	2,00	3,51	/	2,76	1,51		Higher enumeration by the alternative method
	6	a	431	3,94	3,41	/	3,68	-0,53		Higher enumeration by the reference method
	7	b	4009	3,64	3,11	/	3,38	-0,53		Higher enumeration by the reference method
	7	c	1937	4,60	3,52	/	4,06	-1,08		Higher enumeration by the reference method
	6	a	4102	3,95	4,79	/	4,37	0,83		Higher enumeration by the alternative method (inoculated with <i>E. aerogenes</i> Ad889)
< 4 CFU/plate	5	a	160	1,30	2,16	/	1,73	0,86	Higher enumeration by the alternative method	
	7	a	3903	1,30	2,78	/	2,04	1,48	Higher enumeration by the alternative method (inoculated with <i>C. farmeri</i> Ad1116)	
	2	a	151	1,60	1,00	/	1,30	-0,60	Higher enumeration by the reference method	
	2	c	141	1,60	1,00	/	1,30	-0,60	Higher enumeration by the reference method	
	2	c	142	1,90	1,30	/	1,60	-0,60	Higher enumeration by the reference method	
< or > the quantification limit	6	c	3675	0,00	1,00	1,00	0,50	1,00	Below the quantification limit	
	7	a	3904	1,00	3,38	2,00	2,19	2,38	Higher enumeration by the alternative method (inoculated with <i>Escherichia coli</i> 19)	
	7	b	3845	0,00	1,78	1,00	0,89	1,78	Higher enumeration by the alternative method (inoculated with <i>S. fonticola</i> Ad1376)	

*< 4 colonies per plate.

Values in green: differences in favor of the alternative method. Values in red: differences in favor of the reference method.

	Corrected value
	Results calculated using enumeration lower than 4 CFU/plate

3.1.5 Discordant results

The samples are classified in three categories (See Table 6).

Table 6: classification of the samples

		Number of samples
Interpretable results by both methods	< LCL	4
	> UCL	4
	Total	8
<4 CFU/plate	< LCL	2
	> UCL	2
	Total	4
< or > the quantification limit	< LCL	0
	> UCL	3
	Total	3
Total < LCL		6
Total > UCL		9
TOTAL		15

When taking into account the interpretable results by both methods, there are a greater number of samples giving higher enumeration results with the alternative method than with the reference method. Differences are observed between the two methods for samples for which the enumeration using the ISO method was below the quantification limit. Two of these samples were artificial contaminated samples.

3.1.6 Conclusion

The relative trueness study of the alternative method is satisfying.

The alternative method is reliable when compared to the reference method.

3.2 Accuracy profile study

3.2.1 Matrices

Seven matrices were tested. A minimum of one type per category and two different batches was selected, using six samples per type. Two samples were contaminated at a low level, two at intermediate level, and two at a high level. For each sample, five replicates (five different test portions) were tested. The tested categories, types, matrix and inoculated strains are provided in Table 7.

Table 7: categories, types and matrices

Category		Type	Matrix	Inoculated strain	Origin	Inoculation level (CFU/g)
1	Meat products	a - Raw meat	Ground beef	<i>Enterobacter cloacae</i> 58	Unknown	300 10 000 100 000
2	Dairy products	a - Milk	Pasteurized milk	<i>Cronobacter sakazakii</i> 95	Cheese	
3	Egg products and egg-based products and pastries	a - Liquid egg	Pasteurized liquid whole egg	<i>Klebsiella pneumoniae</i> 89	Wiped cream	
4	Seafood products	a - Raw fish	Raw fish fillet	<i>Escherichia coli</i> Ad228	Fish	
5	Vegetables	a - Raw and frozen	Green peas	<i>Escherichia coli</i> 19	Grated carrots	
6	Pet food	b - High moisture product	Pâté for dog	<i>Citrobacter braakii</i> Ad833	Beef	
7	Environmental samples	b - Process water	Process water	<i>Escherichia coli</i> Ad1828	Beef fact	

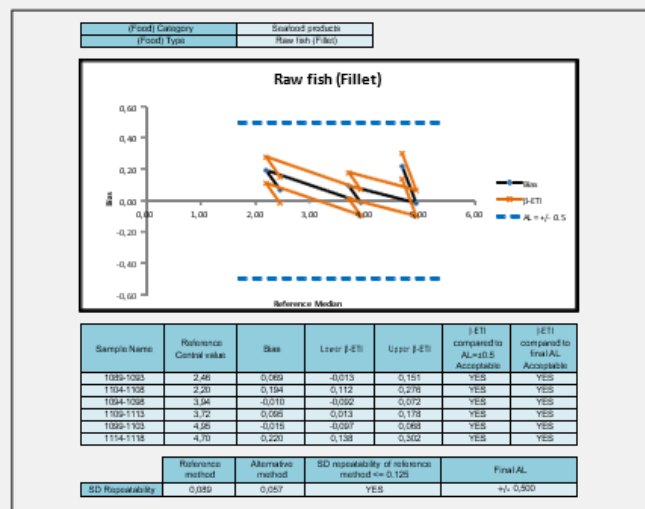
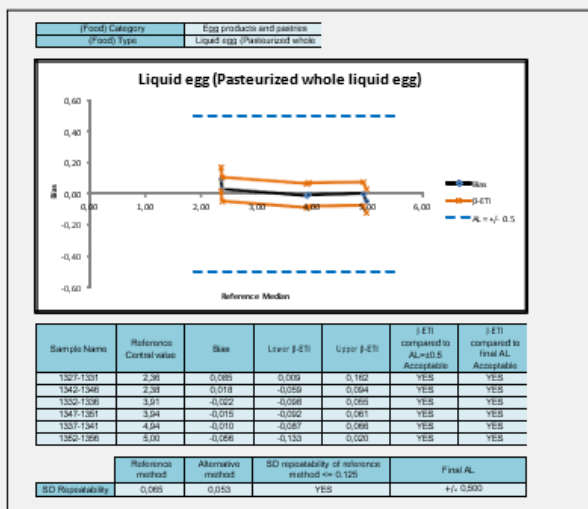
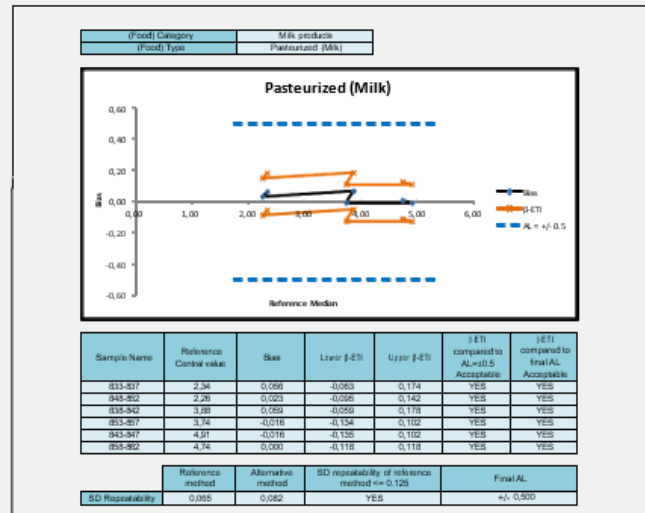
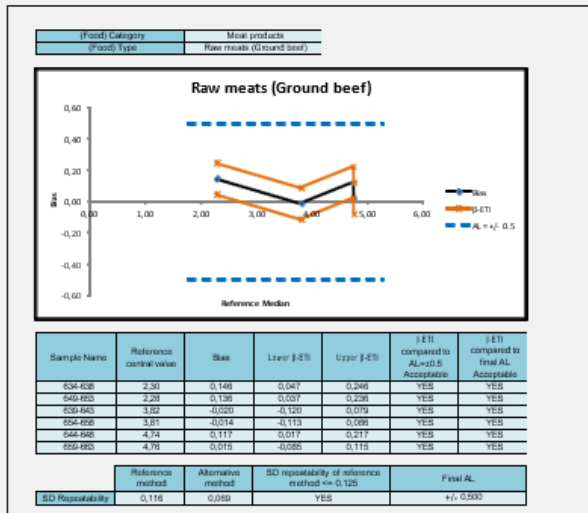
3.2.2 Calculation and interpretation

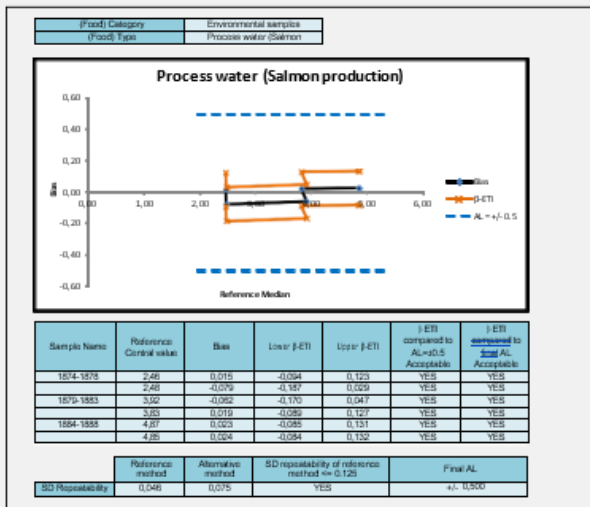
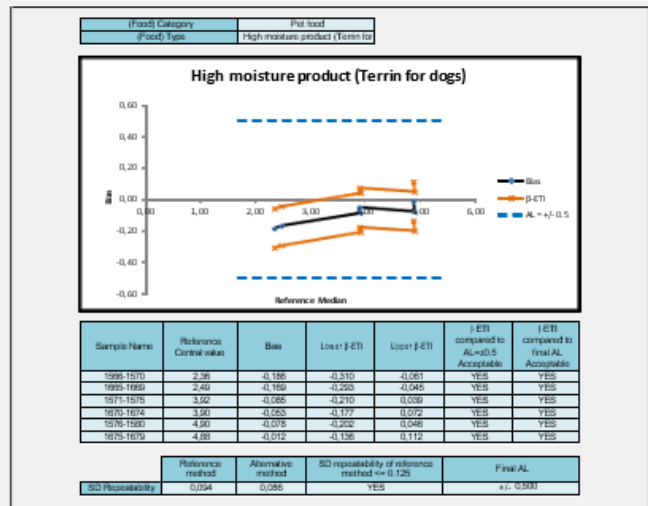
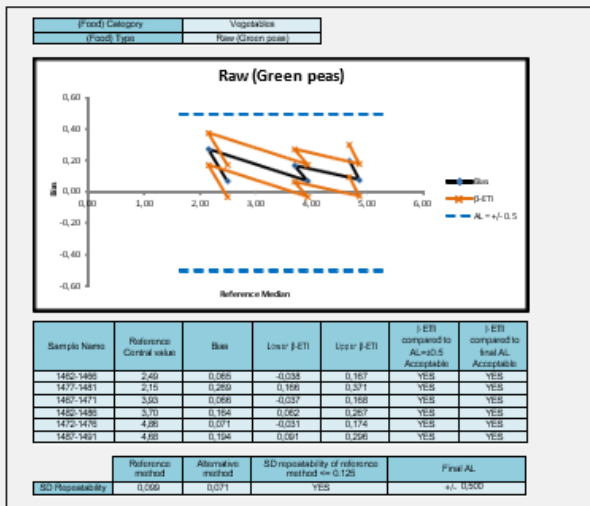
The raw data are provided in Appendix D. The summary tables (in log CFU/g) and calculations are provided in Appendix E. The statistical results and the accuracy profiles are provided Figure 12.

The calculations were done using the AP Calculation Tool MCS (https://standards.iso.org/iso/16140/-2/ed-1/en/AP_calculation%20tool%20MCS%2016140-2_clause%206-1-3-3%20ver_31-07-2018.xlsx).

The accuracy profiles are comprised within the Acceptability Limits fixed at ± 0.5 log for all the tested matrices.

Figure 12: accuracy profile





3.2.3 Conclusion

The observed profiles are comprised within the AL. All the accuracy profiles fulfill the performance criteria.

3.3 Inclusivity and exclusivity studies

3.3.1 Protocols

- Inclusivity**

51 coliform strains were tested: 25 in 1997, 5 in 2006 and 20 additional strains for the renewal study. Each test was performed once with the alternative method, the reference method and a non-selective agar (PCA).

- Exclusivity**

30 negative strains were tested: 21 in 1997, 3 in 2006 and 6 additional strains for the renewal study. Each test was performed once with the alternative method, the reference method and a non-selective agar (PCA).

3.3.2 Results

The raw data are provided in Appendix F.

- **Inclusivity**

Among the 51 target strains tested, 50 gave an equivalent enumeration with the three methods (PCA, VRBL and NEOGEN® Petrifilm® CC). For one strain (*Cronobacter malonaticus* E752), the recovery percentage was very low with both reference and alternative methods (210 000 CFU using VRBL, 260 000 using NEOGEN® Petrifilm® CC and $2.7 \cdot 10^8$ using PCA).

- **Exclusivity**

Three strains gave typical colonies on NEOGEN® Petrifilm® CC while no colony or non- characteristic colonies were enumerated on VRBL (*Edwardsiella tarda* CIP 7861, *Proteus vulgaris* Adria 56 and *Bacillus subtilis* ATCC 6633).

Nine strains gave typical colonies by both methods:

- *Salmonella Typhimurium* CIP 5858
- *Salmonella Typhimurium* Adria 193
- *Salmonella Typhimurium* Adria 472
- *Proteus vulgaris* Adria 43
- *Pseudomonas putida* 11
- *Aeromonas hydrophila* Ad1570
- *Kluyvera ascorbata* Ad229
- *Leclercia adecarboxylata* Ad707
- *Raoultella terrigena* Ad1370

For two strains, typical colonies were observed only on VRBL plates:

- *Providencia rettgeri* 12
- *Providencia stuartii* 46

3.3.3 Conclusion

The NEOGEN® Petrifilm® Coliform Count (CC) Plate is as specific and selective as the reference method.

3.4 Practicability

The criteria described in the AFNOR technical rules were evaluated.

Criteria to be control	Communication on criteria	Expert lab checking procedure
Storage conditions	Store the unopened NEOGEN® Petrifilm® CC pouches at frozen or refrigerated temperature less than or equal to 8°C (46°F)	Mentioned on the instruction for use
Shelf-life and modalities of utilization after first use	Store resealed pouches in a cool dry place for no longer than four weeks	Mentioned in the kit insert
Time to result	24 h ± 2 h	Mentioned in the kit insert
Common step with the reference method	/	Initial suspensions and dilutions

The results are available in one day by both alternative and reference methods.

4. Interlaboratory study

The results of the inter-laboratory studies run in 2006 were interpreted according to the EN ISO 16140-2:2016 standard using the Excel spread sheet [https://standards.iso.org/iso/16140/-2/ed-1/en/AP%20calculation%20tool_ILS_\(clause_6-2-3_Calculations_summary_and_interpretation_of_data\)_ver%2014-03-2016.xlsx](https://standards.iso.org/iso/16140/-2/ed-1/en/AP%20calculation%20tool_ILS_(clause_6-2-3_Calculations_summary_and_interpretation_of_data)_ver%2014-03-2016.xlsx)

4.1 Study organization

14 laboratories participated to this study. Detailed instructions were transmitted to the collaborators by the expert laboratory.

Pasteurized semi-skimmed milk was inoculated by *Escherichia coli* 94, isolated from dairy product.

Inoculation levels targeted were:

- 0 CFU/mL
- 10 – 100 CFU/mL
- 100 – 1 000 CFU/mL
- 1 000 – 10 000 CFU/mL

Each laboratory received eight flasks of 25 mL sample, i.e. two flasks per inoculation level. Furthermore, one non-inoculated sample was added to the package for total viable count microflora (NF ISO 4833 method).

Coded samples (code is only known by the expert laboratory) were placed in isothermal boxes which contained cooling blocks, and express-shipped to the different laboratories.

A temperature control flask containing temperature probe was added to the package in order to record temperature profile during transport and at reception. Samples were shipped in 24 h to laboratories of the collaborative study. Sample temperature should be lower or equal to 8°C during transport, and between 0°C - 8°C at arrival.

Collaborative study laboratories and the expert laboratory carried out the analyses with the alternative and reference methods.

A stability study of the strain inoculated was run in order to verify there is no evolution during the transport.

4.2 Control of experimental parameters

4.2.1 Strain stability during transport

In order to evaluate the *Escherichia coli* 94 strain variability during transport, bacterial count of all inoculated flasks were checked at different times, i.e. inoculation time, after 24 h and 48 h of conservation at 2°C.

Three samples inoculated at a high level (100 CFU/g) were tested for enumeration after 24 h and 48 h storage. Three samples inoculated at a low level were tested for detection after 24 h and 48 h storage (See Table 8).

Table 8: *Escherichia coli* 94 stability in the matrix (in log CFU/mL)

	Level 1		Level 2		Level 3	
	Reference method	Alternative method	Reference method	Alternative method	Reference method	Alternative method
Day 0	73 / 85	55 / 80	720 / 670	450 / 420	6 600 / 6 800	3 500 / 4 900
Day 1	47 / 42	61 / 64	630 / 550	480 / 520	7 000 / 5 700	3 500 / 3 500
Day 2	83 / 91	74 / 68	740 / 610	650 / 810	6 500 / 1 600	4 900 / 6 200

No evolution was observed during storage for 48 h at 5°C ± 3°C.

4.2.2 Logistic conditions

The temperatures measured at reception by the Labs, the temperatures registered by the thermo-probe, and the receipt dates are given in Table 9.

Table 9: sample temperatures at receipt

Laboratories	Temperature measured by the temperature probe (°C)
A	2.2
B	2.0
C	5.3
D	1.7
E	2.7
F	3.3
G	2.8
H	4.9
I	3.5
J	1.5
K	1.8
L	3.9
N	2.5
O	5.0

No problem was encountered during the transport or at receipt for the 14 collaborators. All the samples were delivered on time and in appropriate conditions. Temperatures during shipment and at receipt were all correct.

4.3 Results analysis

The raw data are given in Appendix G.

4.3.1 Results obtained by the expert Lab

The results obtained by the expert Lab. are the following (See Table 10).

Table 10: results obtained by the expert Lab. (log CFU/g)

Level	Targeted rate (log CFU/g)	Reference method		Alternative method	
		Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2
0	0	0	0	0	0
1	1 to 2	1.67	1.62	1.79	1.81
2	2 to 3	2.80	2.74	2.68	2.72
3	3 to 4	3.85	3.76	3.54	3.54

4.3.2 Results obtained by the collaborators

- **Mesophilic aerobic microflora**

The mesophilic aerobic microflora was done on the matrix with ISO 4833 method. The results varied from 70 to 3 600 CFU/mL.

- **Total coliform enumeration**

A summary of the test results is given in Table 11 (CFU/g) and Table 12 (log CFU/g).

Table 11: summary of data (CFU/g)

Labs	Level 0				Level 1				Level 2				Level 3			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
A	0	0	0	0	84	65	60	53	800	600	400	360	9300	5500	5000	3800
B	0	0	0	0	64	63	75	63	690	710	560	650	4600	6500	4200	4700
C	0	0	0	0	38	33	55	57	460	430	540	410	4800	3600	3100	4000
D	0	0	0	0	74	62	85	64	720	690	560	660	5700	6600	3200	3900
E	0	0	0	0	73	84	76	68	620	960	670	650	8700	7700	6900	6200
F	0	0	0	0	66	63	64	76	560	560	550	560	7000	5300	5500	4700
G	0	0	0	0	61	73	77	91	820	750	710	620	7800	9100	6600	6100
H	0	0	0	0	62	73	71	76	690	680	560	560	6500	6700	4200	5100
J	0	0	0	0	56	65	62	44	590	850	490	500	4900	5900	6500	4000
K	0	0	0	0	77	67	76	68	770	750	660	660	5700	5900	5100	5500
L	0	0	0	0	21	33	70	65	380	540	540	600	6400	5900	4800	5300
N	0	0	0	0	76	88	68	87	860	920	680	650	9500	9900	8000	5200

Table 12 - summary of data (log CFU/g)

Labs	Level 0				Level 1				Level 2				Level 3			
	Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method		Reference method		Alternative method	
A	<1	<1	<1	<1	2,362	2,301	2,342	2,204	3,505	3,255	3,362	3,255	4,362	4,342	4,398	4,255
B	<1	<1	<1	<1	2,230	2,279	2,204	2,079	3,255	3,380	3,176	3,204	4,301	4,322	4,041	4,000
C	<1	<1	<1	<1	2,342	2,146	2,176	2,000	3,204	3,279	3,176	3,204	4,398	4,255	4,230	4,301
D	<1	<1	<1	<1	2,342	2,301	2,398	2,301	3,431	3,431	3,279	3,362	4,279	4,362	4,301	4,255
E	<1	<1	<1	<1	2,301	2,230	2,041	2,204	3,146	3,176	3,176	3,079	4,204	3,968	3,886	3,875
F	<1	<1	<1	<1	2,204	2,279	1,903	2,079	3,041	3,146	3,204	3,079	4,431	4,301	4,000	4,041
G	<1	<1	<1	<1	2,146	2,204	2,322	2,176	3,230	3,230	3,176	3,176	4,279	3,991	4,114	4,041
H	<1	<1	<1	<1	2,279	2,230	2,380	2,255	3,255	3,176	3,398	3,230	4,342	4,322	4,380	4,230
I	<1	<1	<1	<1	2,380	2,415	2,322	2,041	3,342	3,301	3,279	3,279	4,204	4,146	4,204	3,940
J	<1	<1	<1	<1	2,204	2,176	2,079	2,204	3,301	3,255	3,301	3,279	4,255	4,114	4,230	4,146
K	<1	<1	<1	<1	2,255	2,279	2,041	2,301	3,301	3,342	3,255	3,279	4,204	4,176	4,255	4,362
L	<1	<1	<1	<1	2,431	2,230	2,301	2,146	3,301	3,255	3,342	3,342	4,204	4,079	4,230	4,176
M	<1	<1	<1	<1	2,301	2,342	2,322	2,114	3,230	3,431	3,342	3,380	4,176	4,204	4,114	4,176
N	<1	<1	<1	<1	2,176	2,204	2,204	2,279	3,230	3,204	3,230	3,146	4,462	4,230	4,301	4,176

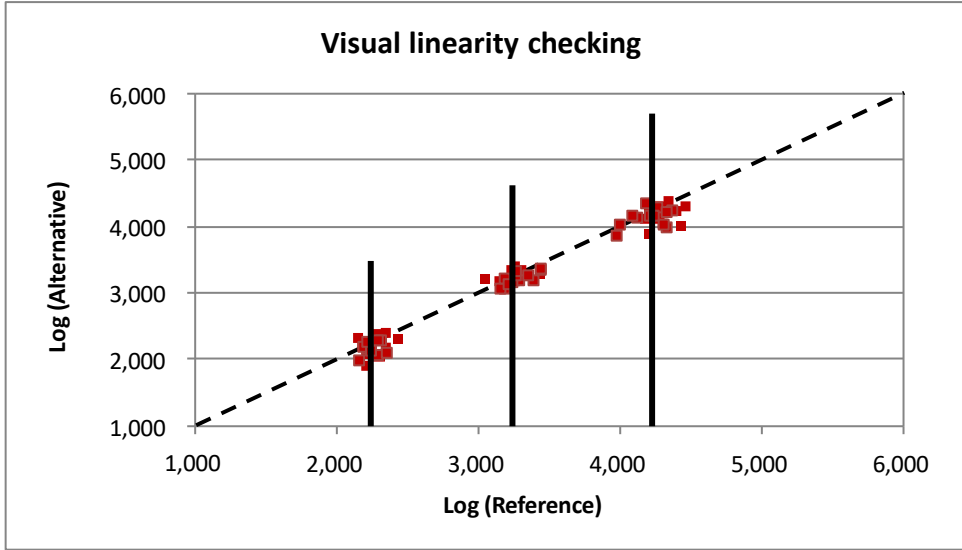
The laboratory A received the package at Day 1, but realized the analyses only at Day 2 and the laboratory I did not realize two successive dilutions. These results were not taken into account for statistical interpretation.

4.4 Statistical interpretations and calculations

4.4.1 Visual linearity checking

The Figure 13 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. The data are distributed closely to the first bisecting lines with a slope equal to 1.

Figure 13: visual linearity checking



4.4.2 Calculation of the accuracy profile and interpretation

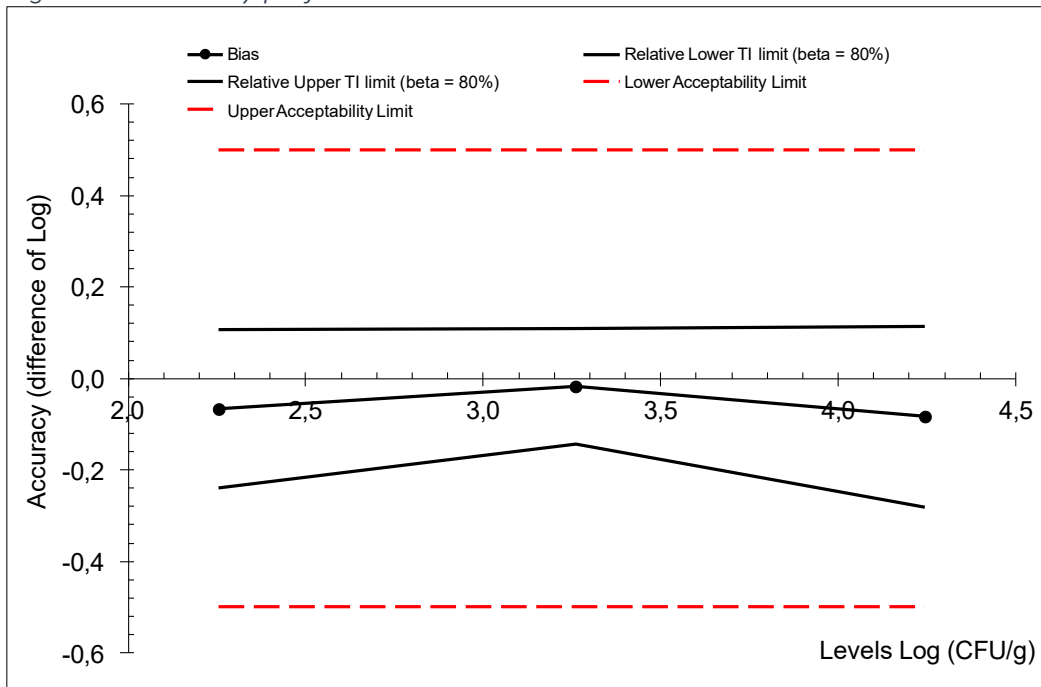
Statistical calculations were done according to the Excel spreadsheet available on <http://standards.iso.org/ISO/16140>. A summary of the statistical test is provided in Table 13.

Table 13: summary of statistical tests

Accuracy profile				0,5		
Study Name	NEOGEN® PETRIFILM® CC			<div style="border: 1px solid black; padding: 5px;"> Application of clause 6.2.3 Step 8: If any of the values for the β-ETI fall outside the acceptability limits, calculate the pooled average reproducibility standard deviation of the reference method. Step 9: Calculate new acceptability limits as a function of this standard deviation. </div>		
Date	2006					
Coordinator	ADRIA Development					
Tolerance probability (beta)	80%	80%	80%			
Acceptability limit in log (lambda)	0,50	0,50	0,50			
Levels	Alternative method			Reference method		
	Low	Medium	High	Low	Medium	High
Target value	2,255	3,260	4,244			
Number of participants (K)	12	12	12	12	12	12
Average for alternative method	2,188	3,242	4,161	2,255	3,260	4,244
Repeatability standard deviation (sr)	0,113	0,054	0,057	0,066	0,060	0,107
Between-labs standard deviation (sL)	0,060	0,073	0,129	0,024	0,077	0,063
Reproducibility standard deviation (sR)	0,128	0,091	0,141	0,070	0,097	0,124
Corrected number of dof	21,531	15,661	12,980	22,403	15,943	21,058
Coverage factor	1,355	1,383	1,401			
Interpolated Student t	1,322	1,338	1,350			
Tolerance interval standard deviation	0,1309	0,0938	0,1464			
Lower TI limit	2,015	3,117	3,963			
Upper TI limit	2,361	3,368	4,359			
Bias	-0,067	-0,017	-0,083			
Relative Lower TI limit (beta = 80%)	-0,240	-0,143	-0,281			
Relative Upper TI limit (beta = 80%)	0,106	0,108	0,114			
Lower Acceptability Limit	-0,50	-0,50	-0,50			
Upper Acceptability Limit	0,50	0,50	0,50			
New acceptability limits may be based on reference method pooled variance						
Pooled repro standard dev of reference	0,100					

These values are collected in a graphical representation together with the acceptability limits (AL). This representation is given Figure 14.

Figure 14: accuracy profile



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

The results obtained with the alternative method are not statically different than those obtained with the reference method.

4.4.3 Conclusion

The alternative method is equivalent to the reference method.

5. General conclusion

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

- 213 samples were tested in the relative trueness study providing 177 interpretable results, which clearly satisfied the required criteria for quantitative method comparison per ISO 16140-2.
- The observed profiles are comprised within the AL actually set at ± 0.5 log CFU/g in the EN ISO 16140-2:2016.
- The inclusivity and exclusivity testing shows satisfying results.
- The quality assurance parameters were verified (i.e., targeted levels, strain stability, logistic conditions, analyses), confirming that the inter-laboratory study was conducted in appropriate conditions.
- For the inter-laboratory study, 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.

Based on the results obtained for the method comparison study and the inter-laboratory study, the NEOGEN® Petrifilm® Coliform Count (CC) Plate is considered equivalent to the reference method.

Le Lion d'Angers, April 10, 2026

Guillaume MESNARD
Method Validation Supervisor



APPENDICES

Appendix A – Artificial contaminations of samples

Analysis date	Sample N°	Product (French name)	Product	Inoculations				Category	Type
				Strain		Injury applied	Injury evaluation		
				Reference	Origin				
2015	3842	Farine d'agneau	Lamb flour	<i>E. coli</i> 13	Ground beef	HT 56°C 30min	0,40	6	c
2015	3843	Creton (farine animale)	Animal flour	<i>E. coli</i> 13	Ground beef	HT 56°C 30min	0,40	6	c
2015	3844	Chiffonnette Microcut petits pois	Wipe (peas industry)	<i>E. coli</i> 19	Grated carrots	HT 56°C 30min	1,20	7	a
2015	3845	Eau de cuisson petits pois	Process water (peas)	<i>E. coli</i> 19	Grated carrots	HT 56°C 30min	1,20	7	b
2015	3846	Eau de rinçage casserole cuisson bechamel	Process water (peas)	<i>E. coli</i> Ad1393	Water source	HT 56°C 30min	0,40	7	b
2015	3903	Chiffonnette balance après désinfection cuisson riz	Wipe (rice industry)	<i>C. farmeri</i> Ad1116	Environment	pH4 for 11 days	1,90	7	a
2015	3904	Chiffonnette plan de travail fabrication madeleine après désinfection	Wipe (pastry industry)	<i>C. farmeri</i> Ad1116	Environment	pH4 for 11 days	1,90	7	a
2015	3905	Chiffonnette table de cuisson bechamel	Wipe (bechamel sauce)	<i>S. fonticola</i> Ad1376	Water	HT 56°C 25 min	3,40	7	a
2015	3906	Chiffonnette table découpe emmenthal	Wipe (cheese industry)	<i>E. coli</i> Ad1395	Water	HT 56°C 25 min	1,44	7	a
2015	3907	Eau de rinçage becher (PDL+eau)	Process water (milk industry)	<i>S. fonticola</i> Ad1376	Water	HT 56°C 25 min	3,40	7	b
2015	4099	Bouchées pour chien bœuf carottes	Pâté for dogs	<i>E. aerogenes</i> Ad889	Meat flour	HT 50°C 5 min	0,44	6	b
2015	4100	Terrine de bœuf pour chat	Pâté for cats	<i>C. diversus</i> 100	Pork liver	HT 50°C 5 min	0,40	6	b
2015	4101	Croquettes pour chien volaille légumes	Pellets for dogs (chicken, vegetables)	<i>C. freundii</i> Ad173	Chicken liver	HT 50°C 10 min	1,39	6	a
2015	4102	Croquettes pour chat au bœuf	Pellets for cats (beef)	<i>E. aerogenes</i> Ad889	Meat flour	HT 50°C 5 min	0,44	6	a
2015	4494	Chiffonnette local vaisselle atelier	Wipe (dishwasher)	<i>E. fergusonii</i> 2876	Environment	16 days pH4	0,42	7	a
2015	4495	Chiffonnette table atelier	Wipe (table)	<i>E. fergusonii</i> 2876	Environment	16 days pH4	0,42	7	a
2015	4496	Chiffonnette cutter	Wipe (cutter)	<i>C. youngae</i> Ad1372	Water	HT 50°C 10 min	0,5	7	a

Analysis date	Sample N°	Product (French name)	Product	Inoculations				Category	Type
				Strain		Injury applied	Injury evaluation		
				Reference	Origin				
2015	4497	Chiffonnette poussoir	Wipe (push-button)	<i>C. youngae</i> Ad1372	Water	HT 50°C 10 min	0,5	7	a
2015	4498	Farine de volaille	Animal flour	<i>C. freundii</i> 104	Ground beef	HT 50°C 10 min	0,4	6	c
2015	4499	Bouchées pour chien	Pâté for dogs	<i>C. freundii</i> 104	Ground beef	HT 50°C 10 min	0,4	6	b
2015	4500	Farine de volaille	Animal flour	<i>E. coli</i> Ad1828	Beef meat	HT 50°C 10 min	0,35	6	c
2015	4501	Creton (farine animale)	Animal flour	<i>E. coli</i> Ad1828	Beef meat	HT 50°C 10 min	0,35	6	c
2015	4562	Chiffonnette table préparation pâte	Wipe	<i>E. coli</i> Ad1828	Water	16 days pH4	0,42	7	a
2015	4563	Chiffonnette cuve broyeur après nettoyage	Wipe after cleaning	<i>E. coli</i> 101	Pork meat	16 days 4°C	1,07	7	a
2015	4564	Chiffonnette grille four fumage après nettoyage	Wipe after cleaning	<i>E. coli</i> Ad1828	Beef meat	HT 50°C 10 min	0,4	7	a
2015	4565	Chiffonnette table découpe après nettoyage	Wipe after cleaning	<i>E. coli</i> Ad1388	Water	16 days pH4	0,42	7	a
2015	4566	Pâté pour chien (veau, carottes)	Pâté for dogs	<i>E. coli</i> 101	Pork meat	16 days 4°C	1,07	6	b
2018	430	Croquettes pour chat au bœuf	Pellets for cats (beef)	<i>E. coli</i> Ad1828	Beef meat	Spiking HT 8min 56°C	0,8	6	a
2018	431	Croquettes pour chat au poulet	Pellets for cats (chicken)	<i>E. coli</i> Ad234	Veal	Spiking HT 8min 56°C	0,8	6	a
2018	1935	Pâté pour chat (saumon)	Terrine for cats (fish)	<i>E. coli</i> Ad1915	Chicken meat	Seeding 48h at 5±3°C	/	6	b
2018	1936	Chiffonnette (laiterie)	Wipe (dairy industry)	<i>E. vulneris</i> Ad2853	(Dairy environment)	Seeding 48h at 5±3°C	/	7	a
2018	1937	Déchets (découpe viande)	Meat dusts	<i>E. cloacae</i> 150	Ground beef	Seeding 48h at 5±3°C	/	7	c
2018	1938	Déchets (découpe viande)	Meat dusts	<i>C. diversus</i> 100	Pork meat	Seeding 48h at 5±3°C	/	7	c
2018	1939	Matière première pour alimentation animale déshydratée	Raw material dehydrated for feed	<i>E. cloacae</i> 150	Ground beef	Spiking HT 10 min 56°C	2,5	6	c

Appendix B - Relative trueness study: raw data

* < 4 colonies per plate

Ne: estimated number

N': arithmetic mean

MEAT PRODUCTS																							Category	Type
Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)									
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g		
1997	116	Minerai	Ground meat	/	/	/	/	/	/	/	/	4,37	4,50	4,37	/	/	/	/	/	4,58	4,53	4,58	1	a
1997	121	Chipolatas	Sausage	/	/	/	/	/	/	/	/	6,18	6,40	6,18	/	/	/	/	/	6,18	6,2	6,18	1	c
1997	125	Rillettes	Rillettes	/	/	/	/	/	/	/	/	1,78	1,90	1,78	/	/	/	/	/	2,30	2,24	2,30	1	c
1997	126	Jambon blanc	Ham	/	/	/	/	/	/	/	/	3,93	3,93	3,93	/	/	/	/	/	4,07	4,12	4,07	1	c
1997	127	Pâté de Tête	Pâté	/	/	/	/	/	/	/	/	1,90	2,04	1,90	/	/	/	/	/	2,30	2,36	2,30	1	c
1997	129	Poitrine fumée	Smoked bacon	/	/	/	/	/	/	/	/	1,48	1,70	1,48*	/	/	/	/	/	2,08	2,34	2,08	1	c
1997	135	Steak haché	Ground beef	/	/	/	/	/	/	/	/	5,89	6,00	5,89	/	/	/	/	/	6,13	6,15	6,13	1	a
1997	136	Escalope viennoise	Schnitzel	/	/	/	/	/	/	/	/	5,04	4,93	5,04	/	/	/	/	/	5,10	5,10	5,10	1	b
1997	137	Foie de veau	Veal liver	/	/	/	/	/	/	/	/	4,56	4,65	4,56	/	/	/	/	/	4,78	4,72	4,78	1	a
1997	145	Steak haché	Ground beef	/	/	/	/	/	/	/	/	4,00	4,12	4,00	/	/	/	/	/	4,41	4,21	4,41	1	a
1997	165	Rognon de veau	Veal kidney	/	/	/	/	/	/	/	/	4,94	4,86	4,94	/	/	/	/	/	4,80	4,77	4,80	1	a
1997	166	Langue de porc	Pork tongue	/	/	/	/	/	/	/	/	6,23	6,00	6,23	/	/	/	/	/	6,09	6,18	6,09	1	a
1997	167	Foies de canard	Duck liver	/	/	/	/	/	/	/	/	5,61	5,61	5,61	/	/	/	/	/	5,58	5,67	5,58	1	a
1997	168	Gésiers de canard	Dick gizzard	/	/	/	/	/	/	/	/	5,42	5,57	5,42	/	/	/	/	/	5,79	5,73	5,79	1	a
1997	169	Saucisses	Sausage	/	/	/	/	/	/	/	/	5,02	5,07	5,02	/	/	/	/	/	5,16	5,180	5,16	1	c
1997	173	Chair à saucisse	Sausage	/	/	/	/	/	/	/	/	5,04	5,18	5,04	/	/	/	/	/	5,06	5,110	5,06	1	c
1997	174	Foie de dinde congelé	Frozen turkey liver	/	/	/	/	/	/	/	/	2,36	2,37	2,36	/	/	/	/	/	2,21	2,15	2,21	1	a
1997	175	Merguez congelée	Frozen merguez	/	/	/	/	/	/	/	/	3,86	3,92	3,86	/	/	/	/	/	3,92	3,900	3,92	1	c
1997	193	Langue de porc	Pork tongue	/	/	/	/	/	/	/	/	6,74	6,74	6,74	/	/	/	/	/	6,92	6,920	6,92	1	c
1998	2*	Jambon blanc	Ham	/	/	/	/	/	/	/	/	3,04	3,21	3,04	/	/	/	/	/	3,70	3,480	3,70	1	c
1998	9*	Mousse de canard	Duck pâté	/	/	/	/	/	/	/	/	5,16	5,06	5,16	/	/	/	/	/	5,20	5,130	5,20	1	c
1998	14*	Rillettes	Rillettes	/	/	/	/	/	/	/	/	1,30	1,00	1,30*	/	/	/	/	/	1,48	1,300	1,48*	1	c
1998	40*	VSM dinde	Turkey meat	/	/	/	/	/	/	/	/	2,68	2,80	2,68	/	/	/	/	/	3,02	3,09	3,02	1	a
1998	41*	VSM dinde	Turkey meat	/	/	/	/	/	/	/	/	2,37	2,32	2,37	/	/	/	/	/	2,61	2,48	2,61	1	a
1998	42*	VSM dinde	Turkey meat	/	/	/	/	/	/	/	/	3,42	3,39	3,42	/	/	/	/	/	3,56	3,56	3,56	1	a
1998	58*	Jambon	Ham	/	/	/	/	/	/	/	/	3,99	4,00	3,99	/	/	/	/	/	4,00	4,050	4,00	1	c
1998	59*	Boudin noir aux pommes	Black pudding with apples	/	/	/	/	/	/	/	/	2,71	2,71	2,71	/	/	/	/	/	2,81	2,790	2,81	1	c
1998	89*	Boudin blanc	RTRH (white pudding)	/	/	/	/	/	/	/	/	5,06	5,11	5,06	/	/	/	/	/	5,06	5,060	5,06	1	b
1998	100*	Emincés de gésiers de canards	Meat minced	/	/	/	/	/	/	/	/	4,20	3,95	4,20	/	/	/	/	/	5,21	5,12	5,21	1	b
1998	105*	Pâté de campagne	Pâté	/	/	/	/	/	/	/	/	4,85	4,85	4,85	/	/	/	/	/	4,87	4,830	4,87	1	c
1998	106*	Museau	Delicatessen	/	/	/	/	/	/	/	/	5,19	5,21	5,19	/	/	/	/	/	5,09	5,020	5,09	1	c
1998	107*	Rôti cuit	Cooked pork meat	/	/	/	/	/	/	/	/	3,86	3,83	3,86	/	/	/	/	/	4,00	4,000	4,00	1	c
1997	101	Bœuf aux carottes	RTRH (beef carrots)	/	/	/	/	/	/	/	/	4,49	4,54	4,49	/	/	/	/	/	4,49	4,45	4,49	1	b
1997	113	Gésiers confits	RTRH (gizzard)	/	/	/	/	/	/	/	/	5,01	4,93	5,01	/	/	/	/	/	5,03	5,08	5,03	1	b
1997	117	Raviolis	RTRH (raviolis)	/	/	/	/	/	/	/	/	3,04	3,10	3,04	/	/	/	/	/	3,15	3,09	3,15	1	b
1997	138	Chou farci	RTRH (Stuffed cabbage)	/	/	/	/	/	/	/	/	5,14	5,16	5,14	/	/	/	/	/	5,19	5,22	5,19	1	b
1997	139	Bœuf aux carottes	RTRH (beef carrots)	/	/	/	/	/	/	/	/	3,92	3,86	3,92	/	/	/	/	/	4,00	3,89	4,00	1	b
1997	190	Tomate farcie	RTRH (cooked tomatoes)	/	/	/	/	/	/	/	/	5,80	5,73	5,80	/	/	/	/	/	5,67	5,65	5,67	1	b
1997	191	Blanquette de veau	RTRH (Cooked veal)	/	/	/	/	/	/	/	/	7,54	7,70	7,54	/	/	/	/	/	7,44	7,45	7,44	1	b
1997	192	Paupiette de veau	RTRH (Cooked veal)	/	/	/	/	/	/	/	/	3,51	3,55	3,51	/	/	/	/	/	3,54	3,65	3,54	1	b
1998	7*	Pizza chèvre-lardons	RTRH (Pizza)	/	/	/	/	/	/	/	/	1,60	2,11	1,60	/	/	/	/	/	2,04	2,18	2,04	1	b
1998	8*	Raviolines aux noix	RTRH (Raviolines)	/	/	/	/	/	/	/	/	3,15	3,04	3,15	/	/	/	/	/	3,95	4,04	3,95	1	b
1998	12*	Bœuf bourguignon	RTRH (Cooked beef)	/	/	/	/	/	/	/	/	1,60	1,00	1,60	/	/	/	/	/	1,85	1,85	1,85	1	b
1998	13*	Langue de bœuf	RTRH (Beef tongue)	/	/	/	/	/	/	/	/	1,70	1,3	1,70	/	/	/	/	/	1,48	1,30	1,48*	1	b
1998	27*	Feuilleté ris de veau	RTRH (Cooked veal)	/	/	/	/	/	/	/	/	5,63	5,58	5,63	/	/	/	/	/	5,77	5,69	5,77	1	b
1998	28*	Feuilleté de volaille	RTRH (Cooked poultry)	/	/	/	/	/	/	/	/	5,04	5,08	5,04	/	/	/	/	/	5,17	5,11	5,17	1	b
1998	29*	Croque ouest	RTRH (Croque-Monsieur)	/	/	/	/	/	/	/	/	3,34	3,34	3,34	/	/	/	/	/	3,53	3,55	3,53	1	b
1998	31*	Pizza jambon	RTRH (Pizza)	/	/	/	/	/	/	/	/	2,63	2,65	2,63	/	/	/	/	/	3,15	3,24	3,15	1	b
1998	49*	Langue de bœuf	RTRH (Beef tongue)	/	/	/	/	/	/	/	/	3,30	3,11	3,30	/	/	/	/	/	3,34	3,49	3,34	1	b
1998	57*	Saucisses cocktail	Sausages	/	/	/	/	/	/	/	/	4,30	4,54	4,30	/	/	/	/	/	4,40	4,53	4,40	1	c

DAIRY PRODUCTS																								
Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)								Category	Type
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g		
1997	106	Crème fraîche	Cream	/	/	/	/	/	/	/	/	6,04	6,49	6,04	/	/	/	/	/	6,39	6,280	6,39	2	c
1997	107	Crème fraîche	Cream	/	/	/	/	/	/	/	/	7,52	7,41	7,52	/	/	/	/	/	7,23	7,560	7,23	2	c
1997	110	Brebis ½ sec	Cheese	/	/	/	/	/	/	/	/	3,54	3,75	3,54	/	/	/	/	/	4,03	4,010	4,03	2	b
1997	111	Tomme Mont D'Arrhé	Cheese	/	/	/	/	/	/	/	/	5,23	5,40	5,23	/	/	/	/	/	5,58	5,680	5,58	2	b
1997	118	Chou chantilly	Whipped cream	/	/	/	/	/	/	/	/	4,48	4,45	4,48	/	/	/	/	/	4,50	4,360	4,50	2	c
1997	119	Lait cru	Raw milk	/	/	/	/	/	/	/	/	4,76	4,95	4,76	/	/	/	/	/	5,74	5,760	5,74	2	a
1997	120	Brie	Cheese	/	/	/	/	/	/	/	/	4,76	4,76	4,76	/	/	/	/	/	5,06	5,090	5,06	2	b
1997	128	Vieux pané	Cheese	/	/	/	/	/	/	/	/	2,34	2,37	2,34	/	/	/	/	/	2,76	2,700	2,76	2	b
1997	131	Livarot	Cheese	/	/	/	/	/	/	/	/	5,02	4,98	5,02	/	/	/	/	/	5,27	5,260	5,27	2	b
1997	132	Munster	Cheese	/	/	/	/	/	/	/	/	5,51	5,40	5,51	/	/	/	/	/	5,76	5,800	5,76	2	b
1997	140	Nougat glacé	Ice nougat	/	/	/	/	/	/	/	/	1,60	1,60	1,60	/	/	/	/	/	1,60	1,300	1,60	2	c
1997	141	Nougat glacé	Ice nougat	/	/	/	/	/	/	/	/	1,60	1,30	1,60	/	/	/	/	/	1,00	1,480	1,00*	2	c
1997	142	Nougat glacé	Ice nougat	/	/	/	/	/	/	/	/	1,90	1,70	1,90	/	/	/	/	/	1,30	2,000	1,30*	2	c
1997	148	Lait cru	Raw milk	/	/	/	/	/	/	/	/	2,92	2,95	2,92	/	/	/	/	/	2,87	2,870	2,87	2	a
1997	149	Lait cru	Raw milk	/	/	/	/	/	/	/	/	2,11	2,04	2,11	/	/	/	/	/	2,24	2,190	2,24	2	a
1997	150	Lait cru	Raw milk	/	/	/	/	/	/	/	/	3,53	3,45	3,53	/	/	/	/	/	3,50	3,500	3,50	2	a
1997	151	Lait cru	Raw milk	/	/	/	/	/	/	/	/	1,60	1,48	1,60	/	/	/	/	/	1,00	1,700	1,00*	2	a
1997	152	Lait cru	Raw milk	/	/	/	/	/	/	/	/	1,70	2,00	1,70	/	/	/	/	/	1,30	1,700	1,30*	2	a
1997	153	Lait cru	Raw milk	/	/	/	/	/	/	/	/	2,44	2,32	2,44	/	/	/	/	/	2,48	2,480	2,48	2	a
1997	195	Bûche glacée	Ice pudding	/	/	/	/	/	/	/	/	2,85	2,88	2,85	/	/	/	/	/	2,81	2,690	2,81	2	c
1998	15*	Lait cru	Raw milk	/	/	/	/	/	/	/	/	3,76	3,76	3,76	/	/	/	/	/	3,81	3,910	3,81	2	a
1998	16*	Bûchette à la poire	Cake with pear	/	/	/	/	/	/	/	/	2,37	2,39	2,37	/	/	/	/	/	2,60	2,530	2,60	2	c
1998	32*	Crème sucre	Sweet cream	/	/	/	/	/	/	/	/	1,00	1,30	1,00*	/	/	/	/	/	1,48	1,000	1,48*	2	c
1998	90*	Bûche de Noël	Christmas log	/	/	/	/	/	/	/	/	1,30	1,60	1,30*	/	/	/	/	/	1,70	1,480	1,70	2	c
1998	93*	Fromage	Cheese	/	/	/	/	/	/	/	/	2,30	2,15	2,30	/	/	/	/	/	2,59	2,710	2,59	2	b
1998	94*	Fromage	Cheese	/	/	/	/	/	/	/	/	2,90	2,48	2,90	/	/	/	/	/	2,60	2,850	2,60	2	b
1998	97*	Fromage	Cheese	/	/	/	/	/	/	/	/	1,78	1,70	1,78	/	/	/	/	/	1,90	1,780	1,90	2	b
1998	98*	Fromage	Cheese	/	/	/	/	/	/	/	/	3,36	3,34	3,36	/	/	/	/	/	3,32	3,190	3,32	2	b

EGG PRODUCTS AND EGG BASED PRODUCTS AND PASTRIES

Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)							Category	Type	
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2			Rep 1 kept for interpretation log CFU/g
1997	104	Mayonnaise	Mayonnaise	/	/	/	/	/	/	/	/	2,00	3,00	2,00	/	/	/	/	/	3,51	3,60	3,51	3	a
1997	112	Coule d'œuf	Liquid egg	/	/	/	/	/	/	/	/	4,30	4,45	4,30	/	/	/	/	/	4,73	4,70	4,73	3	a
1997	123	Millefeuille	Pastry	/	/	/	/	/	/	/	/	1,30	1,60	1,30*	/	/	/	/	/	1,78	1,78	1,78	3	b
1997	177	Mousse au chocolat	Chocolate mousse	/	/	/	/	/	/	/	/	3,34	3,36	3,34	/	/	/	/	/	3,62	3,49	3,62	3	c
1997	178	Religieuse	Pastry	/	/	/	/	/	/	/	/	3,13	3,11	3,13	/	/	/	/	/	3,32	3,00	3,32	3	b
1997	179	Eclair chocolat	Pastry	/	/	/	/	/	/	/	/	2,84	2,78	2,84	/	/	/	/	/	2,93	2,88	2,93	3	b
1997	180	Religieuse	Pastry	/	/	/	/	/	/	/	/	4,08	4,19	4,08	/	/	/	/	/	3,99	4,00	3,99	3	b
1997	187	Ile flottante	Floating Island dessert	/	/	/	/	/	/	/	/	6,30	6,00	6,30	/	/	/	/	/	6,57	6,57	6,57	3	c
1997	188	Crème aux oeufs	Egg cream	/	/	/	/	/	/	/	/	2,15	2,26	2,15	/	/	/	/	/	2,16	2,32	2,16	3	c
1997	196	Coule d'œuf	Liquid egg	/	/	/	/	/	/	/	/	5,78	5,78	5,78	/	/	/	/	/	5,85	6,02	5,85	3	a
1997	197	Coule d'œuf	Liquid egg	/	/	/	/	/	/	/	/	5,89	5,81	5,89	/	/	/	/	/	6,00	6,03	6,00	3	a
1997	198	Coule d'œuf	Liquid egg	/	/	/	/	/	/	/	/	5,86	5,87	5,86	/	/	/	/	/	6,06	6,03	6,06	3	a
1997	199	Ile flottante	Floating Island dessert	/	/	/	/	/	/	/	/	6,53	6,65	6,53	/	/	/	/	/	6,60	6,59	6,60	3	c
1997	200	Crème aux oeufs	Egg cream	/	/	/	/	/	/	/	/	5,42	5,49	5,42	/	/	/	/	/	5,63	5,37	5,63	3	c
1998	46*	Eclair au chocolat	Pastry	/	/	/	/	/	/	/	/	3,15	3,24	3,15	/	/	/	/	/	3,36	3,34	3,36	3	b
1998	102*	Gland	Pastry	/	/	/	/	/	/	/	/	4,80	4,70	4,80	/	/	/	/	/	4,84	4,91	4,84	3	b
1998	104*	Aspic d'œuf dur	Egg based ready to eat product	/	/	/	/	/	/	/	/	2,95	2,95	2,95	/	/	/	/	/	2,78	2,70	2,78	3	a

SEAFOO PRODUCTS																								
Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832									Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)									Category	Type
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g		
1997	147	Poisson en sauce	RTRH (fish meal)	/	/	/	/	/	/	/	/	4,83	4,93	4,83	/	/	/	/	/	5,00	5,04	5,00	4	c
1997	194	Filet de merlan en sauce	RTRH (fish meal)	/	/	/	/	/	/	/	/	5,28	5,3	5,28	/	/	/	/	/	5,16	5,17	5,16	4	c
1998	18*	Crevettes au curry	RTRH (Curry shrimp)	/	/	/	/	/	/	/	/	1,30	1,85	1,30*	/	/	/	/	/	1,85	1,90	1,85	4	c
1997	34*	Croquettes poisson	RTRH (fish meal)	/	/	/	/	/	/	/	/	4,00	3,95	4,00	/	/	/	/	/	4,41	4,36	4,41	4	c
1998	51*	Merlan sauce au vin blanc	RTRH (fish meal)	/	/	/	/	/	/	/	/	5,41	5,28	5,41	/	/	/	/	/	5,36	5,40	5,36	4	c
1997	105	Saumon fumé	Smoked salmon	/	/	/	/	/	/	/	/	5,32	5,39	5,32	/	/	/	/	/	5,61	5,65	5,61	4	b
1997	124	Sardine	Pilchard	/	/	/	/	/	/	/	/	2,32	2,58	2,32	/	/	/	/	/	2,85	2,78	2,85	4	a
1997	144	Saumon fumé	Smoked salmon	/	/	/	/	/	/	/	/	5,65	5,63	5,65	/	/	/	/	/	5,76	5,86	5,76	4	b
1997	186	Filet de truite	Truit fillet	/	/	/	/	/	/	/	/	3,08	3,28	3,08	/	/	/	/	/	3,53	3,50	3,53	4	a
1998	47*	Filet de lieu	Fish fillet	/	/	/	/	/	/	/	/	2,50	2,56	2,50	/	/	/	/	/	2,18	2,16	2,18	4	a
1998	48*	Filet de merlan	Fish fillet	/	/	/	/	/	/	/	/	2,21	2,46	2,21	/	/	/	/	/	2,41	2,28	2,41	4	a
1998	50*	Saumon fumé	Smoked salmon	/	/	/	/	/	/	/	/	4,74	4,7	4,74	/	/	/	/	/	4,92	4,98	4,92	4	b
1998	52*	Saumon fumé	Smoked salmon	/	/	/	/	/	/	/	/	4,49	4,53	4,49	/	/	/	/	/	4,46	4,52	4,46	4	b
1997	185	Salade niçoise	RTE (salad)	/	/	/	/	/	/	/	/	2,42	2,55	2,42	/	/	/	/	/	2,44	2,44	2,44	4	b
17/01/2006	63	Surimi base	Surimi	/	100	74	76	91	99	7500	9800	3,88	3,99	3,88	100	57	63	6100	6300	3,79	3,80	3,79	4	b
					1000	5	9	9	16						1000	10	6						4	
17/01/2006	64	Filet de sandre avec peau	Fish fillet	/	10	29	30	36	41	310	380	2,49	2,58	2,49	10	25	28	260	260	2,41	2,41	2,41	4	a
					100	3	5	1	5						100	3	0						4	
17/01/2006	65	Poisson en sauce	RTRH (fish meal)	/	10	51	46	51	48	480	460	2,68	2,66	2,68	10	54	49	570	480	2,76	2,68	2,76	4	c
					100	2	6	1	1						100	9	4						4	
17/01/2006	66	Hareng au curry	RTRH (fish meal)	/	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	4	c
					100	0	0	0	0						100	0	0						4	
17/01/2006	67	Poisson en sauce	RTRH (fish meal)	/	100	138	105	126	132	12000	13000	4,08	4,11	4,08	100	129	121	13000	12000	4,11	4,08	4,11	4	c
					1000	3	21	8	11						1000	13	9						4	
17/01/2006	68	Salade de riz au crabe	RTE (rice, crab)	/	100	>150	>150	>150	>150	30000	35000	4,48	4,54	4,48	100	>150	>150	32000	29000	4,51	4,46	4,51	4	b
					1000	31	28	31	38						1000	32	29						4	
17/01/2006	69	Feuilleté saumon	RTRH (salmon)	/	100	0	1	0	1	<100	100	<2,00	2,00	<2,00	100	0	0	<100	<100	<2,00	<2,00	<2,00	4	c
																							4	
17/01/2006	70	Terrine de crabe	Crab terrine	/	1000	56	83	60	80	73000	70000	4,86	4,85	4,86	1000	61	69	62000	69000	4,79	4,84	4,79	4	b
					10000	11	11	6	8						10000	7	7						4	
17/01/2006	71	Terrine de saumon	Salmon terrine	/	100	34	33	37	25	3700	3100	3,57	3,49	3,57	100	36	17	4400	1700	3,64	3,23	3,64	4	b
					1000	9	5	3	3						1000	12	2						4	
17/01/2006	72	Terrine de St Jacques	Terrine of Saint Jacques	/	100	14	40	24	24	2700	2300	3,43	3,36	3,43	100	154	167	13000	17000	4,11	4,23	4,11	4	b
					1000	3	3	3	0						1000	13	17						4	
17/01/2006	73	Salade de riz au thon	RTE (rice, tuna)	/	100	>150	>150	>150	>150	>150000	>150000	>5,18	>5,18	>5,18	100	>150	>150	>150000	>150000	>5,18	>5,18	>5,18	4	b
					1000	>150	>150	>150	>150						1000	>150	>150						4	
17/01/2006	74	Brandade de morue	RTRH (fish meal)	/	100	>150	>150	>150	>150	>150000	>150000	>5,18	>5,18	>5,18	100	>150	>150	>150000	>150000	>5,18	>5,18	>5,18	4	c
					1000	>150	>150	>150	>150						1000	>150	>150						4	
17/01/2006	75	Rillettes de maquereau	Fish rillettes	/	10	1	3	3	2	20	25	1,30	1,40	1,30*	10	6	4	60	40	1,78	1,60	1,78	4	b
					100	0	0	0	0						100	0	0						4	

VEGETABLES																							Category	Type
Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)									
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g		
1998	43*	Farce aux marrons	RTRH (Chestnuts)	/	/	/	/	/	/	/	/	5,46	5,61	5,46	/	/	/	/	/	5,65	5,62	5,65	5	b
1998	86*	Farce aux marrons	RTRH (Chestnuts)	/	/	/	/	/	/	/	/	4,54	4,64	4,54	/	/	/	/	/	4,65	4,62	4,65	5	b
1997	102	Salade Primavera	RTE (vegetables salad)	/	/	/	/	/	/	/	/	3,96	4,10	3,96	/	/	/	/	/	4,11	4,04	4,11	5	b
1997	146	Salade de riz, tomate, maïs	RTE (rice, tomatoes)	/	/	/	/	/	/	/	/	5,98	5,9	5,98	/	/	/	/	/	5,96	6,08	5,96	5	b
1997	154	Brocolis surgelés	Frozen broccoli	/	/	/	/	/	/	/	/	1,78	1,78	1,78	/	/	/	/	/	1,95	1,300	1,95	5	a
1997	155	Brocolis surgelés	Frozen broccoli	/	/	/	/	/	/	/	/	2,00	2,19	2,00	/	/	/	/	/	2,15	2,04	2,15	5	a
1997	156	Chou fleur surgelé	Frozen cauliflower	/	/	/	/	/	/	/	/	2,69	2,56	2,69	/	/	/	/	/	3,03	3,05	3,03	5	a
1997	157	Chou fleur surgelé	Frozen cauliflower	/	/	/	/	/	/	/	/	3,36	3,16	3,36	/	/	/	/	/	3,26	3,37	3,26	5	a
1997	158	Chou fleur surgelé	Frozen cauliflower	/	/	/	/	/	/	/	/	2,39	2,04	2,39	/	/	/	/	/	2,54	2,85	2,54	5	a
1997	159	Carottes surgelées	Frozen carrots	/	/	/	/	/	/	/	/	2,95	3,04	2,95	/	/	/	/	/	3,37	3,32	3,37	5	a
1997	160	Tomates surgelées	Frozen tomatoes	/	/	/	/	/	/	/	/	1,30	1,60	1,30*	/	/	/	/	/	2,16	2,26	2,16	5	a
1997	161	Tomates surgelées	Frozen tomatoes	/	/	/	/	/	/	/	/	2,41	2,15	2,41	/	/	/	/	/	2,67	2,63	2,67	5	a
1997	162	Pommes de terre surgelées	Frozen potatoes	/	/	/	/	/	/	/	/	1,90	1,30	1,90	/	/	/	/	/	1,78	1,60	1,78	5	a
1997	181	Salade carotte, poivron, maïs, soja	RTE (vegetables salad)	/	/	/	/	/	/	/	/	4,82	4,85	4,82	/	/	/	/	/	5,19	5,07	5,19	5	b
1997	182	Salade chou ,noix	RTE (vegetables salad)	/	/	/	/	/	/	/	/	1,00	1,30	1,00*	/	/	/	/	/	1,30	1,00	1,30*	5	b
1997	183	Carottes râpées	RTE (grated carrots)	/	/	/	/	/	/	/	/	4,59	4,56	4,59	/	/	/	/	/	4,49	4,66	4,49	5	b
1997	184	Betteraves rouges	RTE (red beets)	/	/	/	/	/	/	/	/	2,61	2,71	2,61	/	/	/	/	/	2,71	2,74	2,71	5	b
1998	72*	Haricots verts	Green beans	/	/	/	/	/	/	/	/	6,00	6,15	6,00	/	/	/	/	/	5,85	5,89	5,85	5	a
1998	75*	Petits pois	Peas	/	/	/	/	/	/	/	/	1,00	1,00	1,00	/	/	/	/	/	1,78	1,48	1,78	5	a
1998	78*	Ratatouille	Ratatouille	/	/	/	/	/	/	/	/	1,48	1,30	1,48*	/	/	/	/	/	1,00	1,78	1,00*	5	a
1998	109*	Haricots plats	Beans	/	/	/	/	/	/	/	/	2,04	2,04	2,04	/	/	/	/	/	2,11	2,16	2,11	5	a
1998	111*	Epinards en branches	Spinach	/	/	/	/	/	/	/	/	2,37	2,58	2,37	/	/	/	/	/	3,08	3,10	3,08	5	a
1998	4*	Farine	Flour	/	/	/	/	/	/	/	/	2,44	2,54	2,44	/	/	/	/	/	3,07	3,09	3,07	5	c
1998	5*	Farine	Flour	/	/	/	/	/	/	/	/	2,08	2,3	2,08	/	/	/	/	/	2,21	3,13	2,21	5	c
1998	20*	Epice chinoise	Spices	/	/	/	/	/	/	/	/	4,23	3,48	4,23	/	/	/	/	/	4,80	4,76	4,80	5	c
1998	21*	Lapacho	Dehydrated herbs	/	/	/	/	/	/	/	/	2,37	2,57	2,37	/	/	/	/	/	2,65	2,72	2,65	5	c
1998	22*	Tilleul	Lime	/	/	/	/	/	/	/	/	4,30	4,36	4,30	/	/	/	/	/	4,86	4,84	4,86	5	c
1998	33*	Farine	Flour	/	/	/	/	/	/	/	/	2,46	2,58	2,46	/	/	/	/	/	3,13	3,11	3,13	5	c
1998	83*	Farine	Flour	/	/	/	/	/	/	/	/	2,59	2,60	2,59	/	/	/	/	/	3,26	3,18	3,26	5	c

PET FOOD																									
Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)									Category	Type
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g			
2015	3672	Farine de volaille	Poultry flour	6,66	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	6	c	
					100	0	/	0	/						100	0	0						6		
2015	3673	Farine d'agneau	Lamb flour	6,92	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	6	c	
					100	0	/	0	/						100	0	0						6		
2015	3674	Creton (farine animale)	Animal flour	6,81	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	6	c	
					100	0	/	0	/						100	0	0						6		
2015	3675	Creton (farine animale)	Animal flour	6,84	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	1	0	10	<10	1,00*	<1,00	1,00*	6	c	
					100	0	/	0	/						100	0	0						6		
2015	3842	Farine d'agneau	Lamb flour	6,78	10	1	/	0	/	10	<10	1,00*	<1,00	1,00*	10	6	7	60	70	1,78	1,85	1,78	6	c	
					100	0	/	0	/						100	0	0			Ne	Ne	Ne	6		
2015	3843	Creton (farine animale)	Animal flour	6,73	10	1	/	0	/	10	<10	1,00*	<1,00	1,00*	10	6	5	60	50	1,78	1,70	1,78	6	c	
					100	0	/	0	/						100	0	1			Ne	Ne	Ne	6		
2015	3898	Brisures de riz pour chien	Broken rice for dog	6,92	100	>150	/	>150	/	22000	22000	4,34	4,34	4,34	100	>150	>150	29000	33000	4,46	4,52	4,46	6	a	
					1000	22	/	22	/			N'	N'	N'	1000	29	33			N'	N'	N'	6		
2015	4099	Bouchées pour chien bœuf carottes	Pâté for dogs	6,95	10	107	/	144	/	1100	1400	3,04	3,15	3,04	100	16	11	1500	1100	3,18	3,04	3,18	6	b	
					100	10	/	9	/						1000	0	1						6		
2015	4100	Terrine de bœuf pour chat	Pâté for cats	6,99	100	55	/	79	/	5400	7500	3,73	3,88	3,73	1000	18	24	17000	25000	4,23	4,40	4,23	6	b	
					1000	4	/	3	/						10000	1	4						6		
2015	4101	Croquettes pour chien volaille légumes	Pellets for dogs (chicken, vegetables)	6,90	1000	43	/	48	/	41000	46000	4,61	4,66	4,61	1000	32	32	30000	33000	4,48	4,52	4,48	6	a	
					10000	2	/	3	/						10000	1	4						6		
2015	4102	Croquettes pour chat au bœuf	Pellets for cats (beef)	7,06	1000	9	/	10	/	9000	11000	3,95	4,04	3,95	1000	61	108	61000	110000	4,79	5,04	4,79	6	a	
					10000	1	/	2	/			Ne	Ne	Ne	10000	6	11						6		
2015	4498	Farine de volaille	Animal flour	6,92	10	53	/	58	/	520	610	2,72	2,79	2,72	10	54	52	550	560	2,74	2,75	2,74	6	c	
					100	4	/	9	/						100	6	9						6		
2015	4499	Bouchées pour chien	Pâté for dogs	7,05	10	116	/	127	/	1200	1300	3,08	3,11	3,08	10	112	115	1100	1200	3,04	3,08	3,04	6	b	
					100	14	/	15	/						100	11	15						6		
2015	4500	Farine de volaille	Animal flour	6,94	10	21	/	11	/	200	120	2,30	2,08	2,30	10	26	14	250	150	2,40	2,18	2,40	6	c	
					100	1	/	2	/						100	1	2						6		
2015	4501	Creton (farine animale)	Animal flour	6,91	10	17	/	23	/	200	230	2,30	2,36	2,30	10	29	26	300	250	2,48	2,40	2,48	6	c	
					100	5	/	2	/						100	4	1						6		
2015	4566	Pâté pour chien (veau, carottes)	Pâté for dogs	7,11	10	24	/	33	/	260	330	2,41	2,52	2,41	10	53	80	540	770	2,73	2,89	2,73	6	b	
					100	4	/	3	/						100	6	5						6		
2018	420	Saucisson pour chien	Sausage for dogs	6,97	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	6	b	
					100	0	/	/	/						100	0	/						6		
2018	421	Saucisson pour chien	Sausage for dogs	6,97	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	6	b	
					100	0	/	/	/						100	0	/						6		
2018	422	Protéines déshydratées de volaille	Dehydrated poultry proteins	6,72	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	6	c	
					100	0	/	/	/						100	0	/						6		
2018	423	Tourteau de soja	Soya	6,69	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	6	c	
					100	0	/	/	/						100	0	/						6		
2018	424	Matière première pour alimentation animale (farine)	Ingredients (flour)	6,78	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	6	c	
					100	0	/	/	/						100	0	/						6		
2018	426	Matière première pour alimentation animale (farine)	Ingredients (flour)	7,05	100	56	/	/	/	5500	/	3,74	/	3,74	100	36	/	3500	/	3,54	/	3,54	6	c	
					1000	4	/	/	/						1000	2	/						6		
2018	430	Croquettes pour chat au bœuf	Pellets for cats (beef)	6,88	100	71	/	/	/	7000	/	3,85	/	3,85	100	44	/	4800	/	3,68	/	3,68	6	a	
					1000	6	/	/	/						1000	9	/						6		
2018	431	Croquettes pour chat au poulet	Pellets for cats (chicken)	6,89	100	87	/	/	/	8800	/	3,94	/	3,94	100	24	/	2600	/	3,41	/	3,41	6	a	
					1000	10	/	/	/						1000	5	/						6		
2018	1935	Pâté pour chat (saumon)	Terrine for cats (fish)	6,98	10	29	/	/	/	290	/	2,46	/	2,46	10	24	/	240	/	2,38	/	2,38	6	b	
					100	3	/	/	/						100	2	/						6		
2018	1939	Matière première pour alimentation animale déshydratée	Raw material dehydrated for feed	6,81	1000	>150	/	/	/	470000	/	5,67	/	5,67	1000	>150	/	310000	/	5,49	/	5,49	6	c	
					10000	47	/	/	/			N'	N'	N'	10000	31	/			N'	N'	N'	6		

PRODUCTION ENVIRONMENTAL SAMPLES

Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)							Category	Type	
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2			Rep 1 kept for interpretation log CFU/g
2015	3676	Poussières industrie ovoproduits	Dusts from egg industry	6,76	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	7	c
					100	0	/	0	/						100	0	0						7	
2015	3677	Poussières d'aspirateur (atelier)	Dusts	6,93	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	7	c
					100	0	/	0	/						100	0	0						7	
2015	3678	Poussières industrie laitière	Dusts from dairy industry	6,36	10	2	/	6	/	20	60	1,30*	1,78 Ne	1,30*	10	3	3	30	30	1,48*	<1,60 Detection	1,48*	7	c
					100	0	/	0	/						100	3	0						7	
2015	3679	Poussières industrie laitière	Dusts from dairy industry	6,48	1000	98	/	102	/	94000	94000	4,97	4,97	4,97	1000	45	50	45000	51000	4,65	4,71	4,65	7	c
					10000	5	/	1	/						10000	5	6						7	
2015	3841	Eau de rinçage n°2 petits pois après cuisson	Process water (peas)	7,01	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	7	b
					100	0	/	0	/						100	0	0						7	
2015	3844	Chiffonnette Microcut petits pois	Wipe (peas industry)	7,00	10	2	/	0	/	20	<10	1,30*	<1,00	1,30*	10	4	9	40	90	1,60	1,95	1,60	7	a
					100	0	/	0	/						100	0	0			Ne	Ne	Ne	7	
2015	3845	Eau de cuisson petits pois	Process water (peas)	7,00	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	6	4	60	40	1,78 Ne	1,60 Ne	1,78 Ne	7	b
					100	0	/	0	/						100	0	1						7	
2015	3846	Eau de rinçage casserole cuisson bechamel	Process water (peas)	7,01	10	6	/	4	/	60	40	1,78 Ne	1,60 Ne	1,78 Ne	10	5	4	50	40	1,70 Ne	1,60 Ne	1,70 Ne	7	b
					100	1	/	0	/						100	1	0						7	
2015	3903	Chiffonnette balance après désinfection cuisson riz	Wipe (rice industry)	7,20	10	2	/	0	/	20	<10	1,30*	<1,00	1,30*	10	62	48	600	460	2,78	2,66	2,78	7	a
					100	0	/	0	/						100	4	3						7	
2015	3904	Chiffonnette plan de travail fabrication madeleine après désinfection	Wipe (pastry industry)	7,16	100	0	/	0	/	<100	<100	<2,00	<1,00	<2,00	100	24	25	2400	2500	3,38	3,40	3,38	7	a
					1000	0	/	0	/						1000	2	3						7	
2015	3905	Chiffonnette table de cuisson bechamel	Wipe (bechamel sauce)	7,00	100	0	/	0	/	<100	<100	<2,00	<1,00	<2,00	100	0	1	<100	100	<2,00	<2,60 Detection	<2,00	7	a
					1000	0	/	0	/						1000	0	0						7	
2015	3906	Chiffonnette table découpe emmenthal	Wipe (cheese industry)	6,97	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	7	a
					100	0	/	0	/						100	0	0						7	
2015	3907	Eau de rinçage becher (PDL+eau)	Process water (milk industry)	6,98	100	0	/	0	/	<100	<100	<2,00	<1,00	<2,00	100	0	0	<100	<100	<2,00	<2,00	<2,00	7	b
					1000	0	/	0	/						1000	0	0						7	
2015	4006	Eau dessalage	Process water (fish industry)	6,95	10	>150	/	>150	/	1200	2600	3,08 N'	3,41 N'	3,08 N'	10	68	89	660	870	2,82	2,94	2,82	7	b
					100	12	/	26	/						100	4	7						7	
2015	4007	Eau peulseuse	Process water (fish industry)	7,20	1	0	/	0	/	<1	<1	<0,00	<0,00	<0,00	1	0	0	<1	<1	<0,00	<0,00	<0,00	7	b
					10	0	/	0	/						10	0	0						7	
2015	4008	Eau pareuse	Process water (fish industry)	7,14	10	>150	/	>150	/	12000	14000	4,08 N'	4,15 N'	4,08 N'	10	>150	>150	5800	6200	3,76	3,79	3,76	7	b
					100	116	/	140	/						100	58	62						7	
2015	4009	Eau laveuse poissons	Process water (fish industry)	7,12	10	>150	/	>150	/	4400	9800	3,64 N'	3,99 N'	3,64 N'	10	133	156	1300	1600	3,11	3,20	3,11	7	b
					100	44	/	98	/						100	5	17						7	
2015	4010	Eau épineuse	Process water (fish industry)	7,20	10	>150	/	>150	/	4700	5700	3,67 N'	3,76 N'	3,67 N'	10	>150	>150	1900	3600	3,28	3,56	3,28	7	b
					100	47	/	57	/						100	19	36						7	
2015	4013	Lingette tapis parage après désinfection	Wipe after cleaning(fish industry)	7,19	10	>150	/	>150	/	>15000	>15000	>4,18	>4,18	>4,18	10	>150	>150	>15000	>15000	>4,18	>4,18	>4,18	7	a
					100	>150	/	>150	/						100	>150	>150						7	
2015	4014	Lingette maille sortie parage après désinfection	Wipe after cleaning(fish industry)	7,19	10	>150	/	>150	/	>15000	>15000	>4,18	>4,18	>4,18	10	>150	>150	>15000	>15000	>4,18	>4,18	>4,18	7	a
					100	>150	/	>150	/						100	>150	>150						7	
2015	4015	Lingette tapis parage après désinfection	Wipe after cleaning(fish industry)	7,18	10	0	/	0	/	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	7	a
					100	0	/	0	/						100	0	0						7	
2015	4494	Chiffonnette local vaisselle atelier	Wipe (dishwasher)	7,01	10	>1500	/	>1500	/	>15000	>15000	>4,18	>4,18	>4,18	10	>1500	>1500	>15000	>15000	>4,18	>4,18	>4,18	7	a
					100	>15000	/	>15000	/						100	>15000	>15000						7	

PRODUCTION ENVIRONMENTAL SAMPLES

Analysis date	Sample N°	Product (French name)	Product	Initial suspension pH	Reference method: ISO 4832										Alternative method: Test NEOGEN® Petrifilm® Coliform Count Plate (24 h)							Category	Type	
					Dilution	Rep 1 (Plate a)	Rep 1 (Plate b)	Rep 2 (Plate a)	Rep 2 (Plate b)	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2	Rep 1 kept for interpretation log CFU/g	Dilution	Rep 1	Rep 2	CFU/g Rep 1	CFU/g Rep 2	log CFU/g Rep 1	log CFU/g Rep 2			Rep 1 kept for interpretation log CFU/g
2015	4495	Chiffonnette table atelier	Wipe (table)	6,97	10	>1500	/	>1500	/	>15000	>15000	>4,18	>4,18	>4,18	10	>1500	>1500	>15000	>15000	>4,18	>4,18	>4,18	7	a
					100	>15000	/	>15000	/					100	>15000	>15000								
2015	4496	Chiffonnette cutter	Wipe (cutter)	7,00	10	>1500	/	>1500	/	>15000	>15000	>4,18	>4,18	>4,18	10	>1500	>1500	>15000	>15000	>4,18	>4,18	>4,18	7	a
					100	>15000	/	>15000	/					100	>15000	>15000								
2015	4497	Chiffonnette pousoir	Wipe (push-button)	7,03	100	>15000	/	>15000	/	>150000	>150000	>5,18	>5,18	>5,18	100	>15000	>15000	>150000	>150000	>5,18	>5,18	>5,18	7	a
					1000	>150000	/	>150000	/					1000	>150000	>150000								
2015	4562	Chiffonnette table préparation pâte	Wipe	7,06	10	14	/	9	/	130	90	2,11	1,95	2,11	10	18	22	240	210	2,38	2,32	2,38	7	a
					100	0	/	1	/					100	8	1								
2015	4563	Chiffonnette cuve broyeur après nettoyage	Wipe after cleaning	7,20	10	33	/	42	/	370	410	2,57	2,61	2,57	10	113	116	1100	1100	3,04	3,04	3,04	7	a
					100	8	/	3	/					100	5	5								
2015	4564	Chiffonnette grille four fumage après nettoyage	Wipe after cleaning	7,12	10	11	/	13	/	140	130	2,15	2,11	2,15	10	17	20	160	210	2,20	2,32	2,20	7	a
					100	4	/	1	/					100	0	3								
2015	4565	Chiffonnette table découpe après nettoyage	Wipe after cleaning	7,20	10	21	/	18	/	200	170	2,30	2,23	2,30	10	43	38	420	370	2,62	2,57	2,62	7	a
					100	1	/	1	/					100	3	3								
2018	425	Chiffonnette (abattoir porc)	Wipe (pork slaughterhouse)	7,02	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	7	a
					100	0	/	/	/					100	0	/								
2018	427	Déchets (usine poisson)	Dusts(fish industry)	6,98	10	4	/	/	/	40	/	1,60	/	1,60	10	9	/	90	/	1,95	/	1,95	7	c
					100	0	/	/	/					100	0	/						Ne	/	Ne
2018	428	Déchets (usine poisson)	Dusts(fish industry)	6,85	10	0	/	/	/	<10	/	<1,00	/	<1,00	10	0	/	<10	/	<1,00	/	<1,00	7	c
					100	0	/	/	/					100	0	/								
2018	429	Déchets (abattoir porc)	Dusts (pork slaughterhouse)	6,90	10	82	/	/	/	860	/	2,93	/	2,93	10	86	/	850	/	2,93	/	2,93	7	c
					100	12	/	/	/					100	7	/								
2018	1936	Chiffonnette (laiterie)	Wipe (dairy industry)	7,06	1000	>150	/	/	/	350000	/	5,54	/	5,54	1000	>150	/	640000	/	5,81	/	5,81	7	a
					10000	35	/	/	/					10000	64	/						N'	/	N'
2018	1937	Déchets (découpe viande)	Meat dusts	7,03	100	>150	/	/	/	40000	/	4,60	/	4,60	100	34	/	3300	/	3,52	/	3,52	7	c
					1000	40	/	/	/					1000	2	/								
2018	1938	Déchets (découpe viande)	Meat dusts	6,98	1000	86	/	/	/	91000	/	4,96	/	4,96	1000	52	/	50000	/	4,70	/	4,70	7	c
					10000	14	/	/	/					10000	3	/								

Appendix C - Relative trueness study: calculations

Category	Type	N° sample	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference Corrected values
			ISO 4832	NEOGEN® Petrifilm® CC TC			<4 CFU/ plate	<or> threshold corrected values				
1	a	116	4,37	4,58	4,48	0,21			#N/A		#N/A	
	a	135	5,89	6,13	6,01	0,24			#N/A		#N/A	
	a	137	4,56	4,78	4,67	0,22			#N/A		#N/A	
	a	145	4,00	4,41	4,21	0,41			#N/A		#N/A	
	a	165	4,94	4,80	4,87	-0,14			#N/A		#N/A	
	a	166	6,23	6,09	6,16	-0,14			#N/A		#N/A	
	a	167	5,61	5,58	5,60	-0,03			#N/A		#N/A	
	a	168	5,42	5,79	5,61	0,37			#N/A		#N/A	
	a	174	2,36	2,21	2,29	-0,15			#N/A		#N/A	
	a	40*	2,68	3,02	2,85	0,34			#N/A		#N/A	
	a	41*	2,37	2,61	2,49	0,24			#N/A		#N/A	
	a	42*	3,42	3,56	3,49	0,14			#N/A		#N/A	
	b	136	5,04	5,10	5,07	0,06			#N/A		#N/A	
	b	89*	5,06	5,06	5,06	0,00			#N/A		#N/A	
	b	100*	4,20	5,21	4,71	1,01			#N/A		#N/A	
	b	101	4,49	4,49	4,49	0,00			#N/A		#N/A	
	b	113	5,01	5,03	5,02	0,02			#N/A		#N/A	
	b	117	3,04	3,15	3,10	0,11			#N/A		#N/A	
	b	138	5,14	5,19	5,17	0,05			#N/A		#N/A	
	b	139	3,92	4,00	3,96	0,08			#N/A		#N/A	
	b	190	5,80	5,67	5,74	-0,13			#N/A		#N/A	
	b	191	7,54	7,44	7,49	-0,10			#N/A		#N/A	
	b	192	3,51	3,54	3,53	0,03			#N/A		#N/A	
	b	7*	1,60	2,04	1,82	0,44			#N/A		#N/A	
	b	8*	3,15	3,95	3,55	0,80			#N/A		#N/A	
	b	12*	1,60	1,85	1,73	0,25			#N/A		#N/A	
	b	13*	1,70		#N/A		1,48		1,59	-0,22	#N/A	
	b	27*	5,63	5,77	5,70	0,14			#N/A		#N/A	
	b	28*	5,04	5,17	5,11	0,13			#N/A		#N/A	
	b	29*	3,34	3,53	3,44	0,19			#N/A		#N/A	
	b	31*	2,63	3,15	2,89	0,52			#N/A		#N/A	
	b	49*	3,30	3,34	3,32	0,04			#N/A		#N/A	
	c	121	6,18	6,18	6,18	0,00			#N/A		#N/A	
	c	125	1,78	2,30	2,04	0,52			#N/A		#N/A	
	c	126	3,93	4,07	4,00	0,14			#N/A		#N/A	
	c	127	1,90	2,30	2,10	0,40			#N/A		#N/A	
	c	129	1,48		#N/A		2,08		1,78	0,60	#N/A	
	c	169	5,02	5,16	5,09	0,14			#N/A		#N/A	
	c	173	5,04	5,06	5,05	0,02			#N/A		#N/A	
	c	175	3,86	3,92	3,89	0,06			#N/A		#N/A	
	c	193	6,74	6,92	6,83	0,18			#N/A		#N/A	
	c	2*	3,04	3,70	3,37	0,66			#N/A		#N/A	
	c	9*	5,16	5,20	5,18	0,04			#N/A		#N/A	
	c	14*	1,30		#N/A		1,48		1,39	0,18	#N/A	
	c	58*	3,99	4,00	4,00	0,01			#N/A		#N/A	
	c	59*	2,71	2,81	2,76	0,10			#N/A		#N/A	
	c	105*	4,85	4,87	4,86	0,02			#N/A		#N/A	
	c	106*	5,19	5,09	5,14	-0,10			#N/A		#N/A	
	c	107*	3,86	4,00	3,93	0,14			#N/A		#N/A	
	c	57*	4,30	4,40	4,35	0,10			#N/A		#N/A	
Average category 1						0,17						
Standard deviation of differences category 1						0,25						

Category	Type	N° sample	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference Corrected values
			ISO 4832	NEOGEN® Petrifilm® CC TC			<4 CFU/ plate	<or> threshold corrected values				
2	a	119	4,76	5,74	5,25	0,98			#N/A		#N/A	
	a	148	2,92	2,87	2,90	-0,05			#N/A		#N/A	
	a	149	2,11	2,24	2,18	0,13			#N/A		#N/A	
	a	150	3,53	3,50	3,52	-0,03			#N/A		#N/A	
	a	151	1,60		#N/A		1,00		1,30	-0,60	#N/A	
	a	152	1,70		#N/A		1,30		1,50	-0,40	#N/A	
	a	153	2,44	2,48	2,46	0,04			#N/A		#N/A	
	a	15*	3,76	3,81	3,79	0,05			#N/A		#N/A	
	b	110	3,54	4,03	3,79	0,49			#N/A		#N/A	
	b	111	5,23	5,58	5,41	0,35			#N/A		#N/A	
	b	120	4,76	5,06	4,91	0,30			#N/A		#N/A	
	b	128	2,34	2,76	2,55	0,42			#N/A		#N/A	
	b	131	5,02	5,27	5,15	0,25			#N/A		#N/A	
	b	132	5,51	5,76	5,64	0,25			#N/A		#N/A	
	b	93*	2,30	2,59	2,45	0,29			#N/A		#N/A	
	b	94*	2,90	2,60	2,75	-0,30			#N/A		#N/A	
	b	97*	1,78	1,90	1,84	0,12			#N/A		#N/A	
	b	98*	3,36	3,32	3,34	-0,04			#N/A		#N/A	
	c	106	6,04	6,39	6,22	0,35			#N/A		#N/A	
	c	107	7,52	7,23	7,38	-0,29			#N/A		#N/A	
c	118	4,48	4,50	4,49	0,02			#N/A		#N/A		
c	140	1,60	1,60	1,60	0,00			#N/A		#N/A		
c	141	1,60		#N/A		1,00		1,30	-0,60	#N/A		
c	142	1,90		#N/A		1,30		1,60	-0,60	#N/A		
c	195	2,85	2,81	2,83	-0,04			#N/A		#N/A		
c	16*	2,37	2,60	2,49	0,23			#N/A		#N/A		
c	32*	1,00		#N/A		1,48		1,24	0,48	#N/A		
c	90*	1,30		#N/A		1,70		1,50	0,40	#N/A		
Average category 2						0,16						
Standard deviation of differences category 2						0,28						
3	a	104	2,00	3,51	2,76	1,51			#N/A		#N/A	
	a	112	4,30	4,73	4,52	0,43			#N/A		#N/A	
	a	196	5,78	5,85	5,82	0,07			#N/A		#N/A	
	a	197	5,89	6,00	5,95	0,11			#N/A		#N/A	
	a	198	5,86	6,06	5,96	0,20			#N/A		#N/A	
	a	104*	2,95	2,78	2,87	-0,17			#N/A		#N/A	
	b	123	1,30		1,54	0,48	1,78		1,54	0,48	#N/A	
	b	178	3,13	3,32	3,23	0,19			#N/A		#N/A	
	b	179	2,84	2,93	2,89	0,09			#N/A		#N/A	
	b	180	4,08	3,99	4,04	-0,09			#N/A		#N/A	
	b	46*	3,15	3,36	3,26	0,21			#N/A		#N/A	
	b	102*	4,80	4,84	4,82	0,04			#N/A		#N/A	
	c	177	3,34	3,62	3,48	0,28			#N/A		#N/A	
	c	187	6,30	6,57	6,44	0,27			#N/A		#N/A	
	c	188	2,15	2,16	2,16	0,01			#N/A		#N/A	
	c	199	6,53	6,60	6,57	0,07			#N/A		#N/A	
c	200	5,42	5,63	5,53	0,21			#N/A		#N/A		
Average category 3						0,23						
Standard deviation of differences category 3						0,37						

Category	Type	N° sample	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference Corrected values
			ISO 4832	NEOGEN® Petrifilm® CC TC			<4 CFU/ plate	<or> threshold corrected values				
4	a	124	2,32	2,85	2,59	0,53			#N/A		#N/A	
	a	186	3,08	3,53	3,31	0,45			#N/A		#N/A	
	a	47*	2,50	2,18	2,34	-0,32			#N/A		#N/A	
	a	48*	2,21	2,41	2,31	0,20			#N/A		#N/A	
	a	64	2,49	2,41	2,45	-0,08			#N/A		#N/A	
	b	105	5,32	5,61	5,47	0,29			#N/A		#N/A	
	b	144	5,65	5,76	5,71	0,11			#N/A		#N/A	
	b	50*	4,74	4,92	4,83	0,18			#N/A		#N/A	
	b	52*	4,49	4,46	4,48	-0,03			#N/A		#N/A	
	b	185	2,42	2,44	2,43	0,02			#N/A		#N/A	
	b	63	3,88	3,79	3,83	-0,09			#N/A		#N/A	
	b	68	4,48	4,51	4,49	0,03			#N/A		#N/A	
	b	70	4,86	4,79	4,83	-0,07			#N/A		#N/A	
	b	71	3,57	3,64	3,61	0,08			#N/A		#N/A	
	b	72	3,43	4,11	3,77	0,68			#N/A		#N/A	
	b	73	6,18		#N/A			6,18	#N/A		6,18	0,00
	b	75	1,30		#N/A		1,78		1,54	0,48	#N/A	
	c	147	4,83	5,00	4,92	0,17			#N/A		#N/A	
	c	194	5,28	5,16	5,22	-0,12			#N/A		#N/A	
	c	18*	1,30		#N/A		1,85		1,58	0,55	#N/A	
c	34*	4,00	4,41	4,21	0,41			#N/A		#N/A		
c	51*	5,41	5,36	5,39	-0,05			#N/A		#N/A		
c	65	2,68	2,76	2,72	0,07			#N/A		#N/A		
c	66	0,00		#N/A			0,00	#N/A		0,00	0,00	
c	67	4,08	4,11	4,10	0,03			#N/A		#N/A		
c	69	1,00		#N/A			1,00	#N/A		1,00	0,00	
c	74	6,08		#N/A			6,18	#N/A		6,13	0,10	
Average category 4												
Standard deviation of differences category 4							0,12					
5	a	154	1,78	1,95	1,87	0,17			#N/A		#N/A	
	a	155	2,00	2,15	2,08	0,15			#N/A		#N/A	
	a	156	2,69	3,03	2,86	0,34			#N/A		#N/A	
	a	157	3,36	3,26	3,31	-0,10			#N/A		#N/A	
	a	158	2,39	2,54	2,47	0,15			#N/A		#N/A	
	a	159	2,95	3,37	3,16	0,42			#N/A		#N/A	
	a	160	1,30		#N/A		2,16		1,73	0,86	#N/A	
	a	161	2,41	2,67	2,54	0,26			#N/A		#N/A	
	a	162	1,90	1,78	1,84	-0,12			#N/A		#N/A	
	a	72*	6,00	5,85	5,93	-0,15			#N/A		#N/A	
	a	75*	1,00		#N/A		1,78		1,39	0,78	#N/A	
	a	78*	1,48		#N/A		1,00		1,24	-0,48	#N/A	
	a	109*	2,04	2,11	2,08	0,07			#N/A		#N/A	
	a	111*	2,37	3,08	2,73	0,71			#N/A		#N/A	
	b	43*	5,46	5,65	5,56	0,19			#N/A		#N/A	
	b	86*	4,54	4,65	4,60	0,11			#N/A		#N/A	
	b	102	3,96	4,11	4,04	0,15			#N/A		#N/A	
	b	146	5,98	5,96	5,97	-0,02			#N/A		#N/A	
	b	181	4,82	5,19	5,01	0,37			#N/A		#N/A	
	b	182	1,00		#N/A		1,30		1,15	0,30	#N/A	
	b	183	4,59	4,49	4,54	-0,10			#N/A		#N/A	
	b	184	2,61	2,71	2,66	0,10			#N/A		#N/A	
	c	4*	2,44	3,07	2,76	0,63			#N/A		#N/A	
	c	5*	2,08	2,21	2,15	0,13			#N/A		#N/A	
	c	20*	4,23	4,80	4,52	0,57			#N/A		#N/A	
	c	21*	2,37	2,65	2,51	0,28			#N/A		#N/A	
	c	22*	4,30	4,86	4,58	0,56			#N/A		#N/A	
c	33*	2,46	3,13	2,80	0,67			#N/A		#N/A		
c	83*	2,59	3,26	2,93	0,67			#N/A		#N/A		
Average category 5							0,25					
Standard deviation of differences category 5							0,27					

Category	Type	N° sample	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference Corrected values
			ISO 4832	NEOGEN® Petrifilm® CC TC			<4 CFU/ plate	<or> threshold corrected values				
6	a	3898	4,34	4,46	4,40	0,12			#N/A		#N/A	
	a	4101	4,61	4,48	4,54	-0,14			#N/A		#N/A	
	a	4102	3,95	4,79	4,37	0,83			#N/A		#N/A	
	a	430	3,85	3,68	3,76	-0,16			#N/A		#N/A	
	a	431	3,94	3,41	3,68	-0,53			#N/A		#N/A	
	b	4099	3,04	3,18	3,11	0,13			#N/A		#N/A	
	b	4100	3,73	4,23	3,98	0,50			#N/A		#N/A	
	b	4499	3,08	3,04	3,06	-0,04			#N/A		#N/A	
	b	4566	2,41	2,73	2,57	0,32			#N/A		#N/A	
	b	420	0,00		#N/A			0,00	#N/A		0,00	0,00
	b	421	0,00		#N/A			0,00	#N/A		0,00	0,00
	b	1935	2,46	2,38	2,42	-0,08			#N/A		#N/A	
	c	3672	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	3673	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	3674	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	3675	0,00		#N/A			1,00	#N/A		0,50	1,00
	c	3842	1,00		#N/A		1,78		1,39	0,78	#N/A	
	c	3843	2,00		#N/A		1,78		1,89	-0,22	#N/A	
	c	4498	2,72	2,74	2,73	0,02			#N/A		#N/A	
	c	4500	2,30	2,40	2,35	0,10			#N/A		#N/A	
	c	4501	2,30	2,48	2,39	0,18			#N/A		#N/A	
	c	422	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	423	0,00		#N/A			0,00	#N/A		0,00	0,00
c	424	0,00		#N/A			0,00	#N/A		0,00	0,00	
c	426	3,74	3,54	3,64	-0,20			#N/A		#N/A		
c	1939	5,67	5,49	5,58	-0,18			#N/A		#N/A		
Average category 6						0,06						
Standard deviation of differences category 6						0,32						

Category	Type	N° sample	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference Corrected values
			ISO 4832	NEOGEN® Petrifilm® CC TC			<4 CFU/ plate	<or> threshold corrected values				
7	a	3844	1,30		#N/A		1,60		1,45	0,30	#N/A	
	a	3903	1,30		#N/A		2,78		2,04	1,48	#N/A	
	a	3904	1,00		#N/A			3,38	#N/A		2,19	2,38
	a	3905	1,00		#N/A			1,00	#N/A		1,00	0,00
	a	3906	0,00		#N/A			0,00	#N/A		0,00	0,00
	a	4013	5,18		#N/A			5,18	#N/A		5,18	0,00
	a	4014	5,18		#N/A			5,18	#N/A		5,18	0,00
	a	4015	0,00		#N/A			0,00	#N/A		0,00	0,00
	a	4494	5,18		#N/A			5,18	#N/A		5,18	0,00
	a	4495	5,18		#N/A			5,18	#N/A		5,18	0,00
	a	4496	5,18		#N/A			5,18	#N/A		5,18	0,00
	a	4497	6,18		#N/A			6,18	#N/A		6,18	0,00
	a	4562	2,11	2,38	2,25	0,27			#N/A		#N/A	
	a	4563	2,57	3,04	2,80	0,47			#N/A		#N/A	
	a	4564	2,15	2,20	2,18	0,06			#N/A		#N/A	
	a	4565	2,30	2,62	2,46	0,32			#N/A		#N/A	
	a	425	0,00		#N/A			0,00	#N/A		0,00	0,00
	a	1936	5,54	5,81	5,68	0,26			#N/A		#N/A	
	b	3841	0,00		#N/A			0,00	#N/A		0,00	0,00
	b	3845	0,00		#N/A			1,78	#N/A		0,89	1,78
	b	3846	1,78	1,70	1,74	-0,08			#N/A		#N/A	
	b	3907	1,00		#N/A			1,00	#N/A		1,00	0,00
	b	4006	3,08	2,82	2,95	-0,26			#N/A		#N/A	
	b	4007	0,00		#N/A			0,00	#N/A		0,00	0,00
	b	4008	4,08	3,76	3,92	-0,32			#N/A		#N/A	
	b	4009	3,64	3,11	3,38	-0,53			#N/A		#N/A	
	b	4010	3,67	3,28	3,48	-0,39			#N/A		#N/A	
	c	3676	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	3677	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	3678	1,30		#N/A		1,48		1,39	0,18	#N/A	
	c	3679	4,97	4,65	4,81	-0,32			#N/A		#N/A	
	c	427	1,60	1,95	1,78	0,35			#N/A		#N/A	
	c	428	0,00		#N/A			0,00	#N/A		0,00	0,00
	c	429	2,93	2,93	2,93	-0,01			#N/A		#N/A	
	c	1937	4,60	3,52	4,06	-1,08			#N/A		#N/A	
	c	1938	4,96	4,70	4,83	-0,26			#N/A		#N/A	
Average category 7												
Standard deviation of differences category 7												
Average all categories						Dall						
Standard deviation of differences all categories						SDAll						

n all 161
 $\beta=95\%$ $T(0,05;70)=$ 1,974901524
0,600863503 Upper limit Lower limit Linear
Average (minimal value) 0,00 0,74 -0,46 0,14
Average (maximale value) 10,00 0,74 -0,46 0,14

Category	n	$T(0,05;70)=$	SD	ISO formula	Bias	Lower limit (95%)	Upper limit (95%)
1	47	2,01	0,25	0,50	0,17	-0,33	0,67
2	22	2,08	0,28	0,59	0,16	-0,43	0,75
3	16	2,13	0,37	0,81	0,23	-0,58	1,04
4	21	2,09	0,24	0,52	0,12	-0,40	0,64
5	25	2,06	0,27	0,56	0,25	-0,31	0,81
6	15	2,14	0,32	0,72	0,06	-0,66	0,78
7	15	2,14	0,41	0,92	-0,10	-1,02	0,82
All categories	161	1,97	0,30	0,60	0,14	-0,46	0,74

Appendix D - Accuracy profile study: raw data

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate - Total coliforms			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Ground beef Batch 2 Aerobic mesophilic flora: 1,1 10 ⁴ CFU/g	<i>Enterobacter cloacae</i> 128	1	634	10	20	200	2,30	10	36	330	2,52
				100	2			100	0		
			635	10	8	80	1,90 Ne	10	23	250	2,40
				100	1			100	4		
			636	10	14	160	2,20	10	28	280	2,45
				100	3			100	3		
		637	10	27	270	2,43	10	20	220	2,34	
			100	3			100	4			
		638	10	31	300	2,48	10	32	330	2,52	
			100	2			100	4			
		2	639	100	66	6600	3,82	100	64	6500	3,81
				1000	7			1000	7		
			640	100	54	5500	3,74	100	60	6300	3,80
				1000	7			1000	9		
			641	100	64	6600	3,82	100	59	6200	3,79
				1000	9			1000	9		
		642	100	69	6700	3,83	100	76	7100	3,85	
			1000	5			1000	2			
		643	100	73	7200	3,86	100	60	6200	3,79	
			1000	6			1000	8			
		3	644	1000	59	55000	4,74	1000	56	57000	4,76
				10000	1			10000	7		
			645	1000	50	50000	4,70	1000	77	75000	4,88
				10000	5			10000	5		
646	1000		62	62000	4,79	1000	64	64000	4,81		
	10000		6			10000	6				
647	1000	49	52000	4,72	1000	70	72000	4,86			
	10000	8			10000	9					
648	1000	65	65000	4,81	1000	76	74000	4,87			
	10000	7			10000	5					
Ground beef Batch 2 Aerobic mesophilic flora: 3,4 10 ³ CFU/g	<i>Enterobacter cloacae</i> 128	1	649	10	25	240	2,38	10	23	240	2,38
				100	1			100	3		
			650	10	10	100	2,00 Ne	10	24	260	2,41
				100	2			100	5		
			651	10	19	190	2,28	10	28	270	2,43
				100	2			100	2		
		652	10	19	180	2,26	10	18	180	2,26	
			100	1			100	2			
		653	10	20	230	2,36	10	35	320	2,51	
			100	5			100	0			
		2	654	100	62	6400	3,81	100	62	6200	3,79
				1000	8			1000	6		
			655	100	60	6400	3,81	100	62	6200	3,79
				1000	10			1000	6		
			656	100	62	6500	3,81	100	64	6500	3,81
				1000	10			1000	8		
		657	100	60	6200	3,79	100	78	7400	3,87	
			1000	8			1000	3			
		658	100	65	6400	3,81	100	55	5700	3,76	
			1000	5			1000	8			
		3	659	1000	51	57000	4,76	1000	67	68000	4,83
				10000	12			10000	8		
			660	1000	59	57000	4,76	1000	40	42000	4,62
				10000	4			10000	6		
661	1000		55	57000	4,76	1000	59	59000	4,77		
	10000		8			10000	6				
662	1000	59	63000	4,80	1000	52	53000	4,72			
	10000	10			10000	6					
663	1000	63	66000	4,82	1000	74	74000	4,87			
	10000	10			10000	7					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Pasteurized whole milk Batch 1 Aerobic mesophilic flora: 20 CFU/g	Cronobacter sakazakii Ad1418	1	833	10	24	250	2,40	10	19	210	2,32
				100	3			100	4		
			834	10	21	220	2,34	10	33	310	2,49
				100	3			100	1		
			835	10	21	200	2,30	10	12	150	2,18
				100	1			100	4		
		836	10	24	220	2,34	10	22	250	2,40	
			100	0			100	5			
		837	10	15	150	2,18	10	30	270	2,43	
			100	1			100	0			
		2	838	100	74	7400	3,87	100	84	8600	3,93
				1000	7			1000	11		
			839	100	74	7800	3,89	100	82	8200	3,91
				1000	12			1000	8		
			840	100	73	7500	3,88	100	87	8900	3,95
				1000	9			1000	11		
		841	100	94	9400	3,97	100	86	9000	3,95	
			1000	9			1000	13			
		842	100	66	6400	3,81	100	68	6900	3,84	
			1000	4			1000	8			
		3	843	1000	93	93000	4,97	1000	74	78000	4,89
10000	9			10000	12						
844	1000		84	81000	4,91	1000	70	71000	4,85		
	10000		5			10000	8				
845	1000		84	84000	4,92	1000	77	78000	4,89		
	10000		8			10000	9				
846	1000	78	77000	4,89	1000	90	89000	4,95			
	10000	7			10000	8					
847	1000	85	81000	4,91	1000	71	73000	4,86			
	10000	4			10000	9					
1	1	848	10	17	160	2,20	10	17	170	2,23	
			100	1			100	2			
		849	10	21	230	2,36	10	19	180	2,26	
			100	4			100	1			
		850	10	23	210	2,32	10	25	260	2,41	
			100	0			100	4			
851	10	14	140	2,15	10	22	210	2,32			
	100	1			100	1					
852	10	17	180	2,26	10	19	190	2,28			
	100	3			100	2					
2	853	100	54	5800	3,76	100	68	6500	3,81		
		1000	10			1000	4				
	854	100	58	5500	3,74	100	51	5300	3,72		
		1000	2			1000	7				
	855	100	56	5500	3,74	100	50	5300	3,72		
		1000	5			1000	8				
856	100	68	6600	3,82	100	39	3600	3,56			
	1000	5			1000	1					
857	100	55	5500	3,74	100	67	6900	3,84			
	1000	6			1000	9					
3	858	1000	62	62000	4,79	1000	61	64000	4,81		
		10000	6			10000	9				
	859	1000	37	40000	4,60	1000	55	55000	4,74		
		10000	7			10000	5				
	860	1000	48	47000	4,67	1000	47	45000	4,65		
		10000	4			10000	3				
861	1000	58	55000	4,74	1000	48	46000	4,66			
	10000	2			10000	3					
862	1000	56	55000	4,74	1000	60	60000	4,78			
	10000	5			10000	6					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	
Pasteurized whole liquid egg Batch 1 Aerobic mesophilic flora: 10 CFU/g	<i>Klebsiella pneumoniae</i> 83	1	1327	10	17	170	2,23	10	22	220	2,34
				100	2			100	2		
			1328	10	22	230	2,36	10	30	280	2,45
				100	3			100	1		
			1329	10	29	260	2,41	10	30	290	2,46
				100	0			100	2		
		1330	10	21	200	2,30	10	30	290	2,46	
			100	1			100	2			
		1331	10	26	240	2,38	10	19	190	2,28	
			100	0			100	2			
		2	1332	100	83	8200	3,91	100	82	8100	3,91
				1000	7			1000	7		
			1333	100	88	9000	3,95	100	77	7500	3,88
				1000	11			1000	6		
			1334	100	87	8800	3,94	100	83	8400	3,92
				1000	10			1000	9		
		1335	100	82	8100	3,91	100	74	7600	3,88	
			1000	7			1000	10			
		1336	100	68	6800	3,83	100	77	7800	3,89	
			1000	7			1000	9			
		3	1337	1000	81	81000	4,91	1000	78	74000	4,87
				10000	8			10000	3		
			1338	1000	88	83000	4,92	1000	100	100000	5,00
				10000	3			10000	10		
1339	1000		91	87000	4,94	1000	93	93000	4,97		
	10000		5			10000	9				
1340	1000	98	95000	4,98	1000	90	85000	4,93			
	10000	6			10000	4					
1341	1000	88	89000	4,95	1000	69	74000	4,87			
	10000	10			10000	12					
Pasteurized whole liquid egg Batch 2 Aerobic mesophilic flora: <10 CFU/g	<i>Klebsiella pneumoniae</i> 83	1	1342	10	19	190	2,28	10	26	250	2,40
				100	2			100	1		
			1343	10	25	240	2,38	10	26	250	2,40
				100	1			100	1		
			1344	10	33	320	2,51	10	23	210	2,32
				100	2			100	0		
		1345	10	23	250	2,40	10	30	290	2,46	
			100	4			100	2			
		1346	10	13	160	2,20	10	30	280	2,45	
			100	4			100	1			
		2	1347	100	91	8800	3,94	100	92	8900	3,95
				1000	6			1000	6		
1348	100		87	8500	3,93	100	89	8500	3,93		
	1000		7			1000	4				
1349	100		90	8900	3,95	100	88	8500	3,93		
	1000		8			1000	5				
1350	100	100	10000	4,00	100	75	7500	3,88			
	1000	11			1000	8					
1351	100	86	8700	3,94	100	74	7200	3,86			
	1000	10			1000	5					
3	1352	1000	89	86000	4,93	1000	78	81000	4,91		
		10000	6			10000	11				
	1353	1000	118	110000	5,04	1000	100	100000	5,00		
		10000	7			10000	11				
	1354	1000	107	110000	5,04	1000	88	87000	4,94		
		10000	10			10000	8				
1355	1000	94	99000	5,00	1000	80	80000	4,90			
	10000	15			10000	8					
1356	1000	86	84000	4,92	1000	93	88000	4,94			
	10000	6			10000	4					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Raw fish fillet Batch 1 Aerobic mesophilic flora: 1,4 10 ³ CFU/g	<i>Escherichia coli</i> Ad228	1	1089	10	29	280	2,45	10	34	370	2,57
				100	2			100	7		
			1090	10	26	250	2,40	10	30	300	2,48
				100	1			100	3		
			1091	10	32	320	2,51	10	32	340	2,53
				100	3			100	5		
		1092	10	28	290	2,46	10	42	400	2,60	
			100	4			100	2			
		1093	10	29	320	2,51	10	32	300	2,48	
			100	6			100	1			
		2	1094	100	93	9500	3,98	100	94	9400	3,97
				1000	12			1000	9		
			1095	100	88	8800	3,94	100	86	8600	3,93
				1000	9			1000	9		
			1096	100	99	9500	3,98	100	96	9700	3,99
				1000	6			1000	11		
		1097	100	70	7000	3,85	100	93	8500	3,93	
			1000	7			1000	1			
		1098	100	48	5100	3,71	100	80	7800	3,89	
			1000	8			1000	6			
		3	1099	1000	71	73000	4,86	1000	86	85000	4,93
				10000	9			10000	8		
			1100	1000	94	95000	4,98	1000	103	110000	5,04
				10000	10			10000	14		
			1101	1000	101	96000	4,98	1000	85	87000	4,94
				10000	5			10000	11		
		1102	1000	86	85000	4,93	1000	95	91000	4,96	
			10000	7			10000	5			
		1103	1000	90	90000	4,95	1000	85	86000	4,93	
			10000	9			10000	10			
1	1104	10	10	110	2,04	10	28	280	2,45		
		100	2			100	3				
		1105	10	17	170	2,23	10	25	230	2,36	
			100	2			100	0			
		1106	10	18	170	2,23	10	28	290	2,46	
			100	1			100	4			
1107	10	15	160	2,20	10	24	230	2,36			
	100	3			100	1					
1108	10	13	160	2,20	10	27	250	2,40			
	100	5			100	0					
2	1109	100	29	2800	3,45	100	54	5200	3,72		
		1000	2			1000	3				
	1110	100	54	5400	3,73	100	58	6200	3,79		
		1000	5			1000	10				
	1111	100	48	5000	3,70	100	63	6700	3,83		
		1000	7			1000	11				
1112	100	52	5300	3,72	100	81	8700	3,94			
	1000	6			1000	15					
1113	100	55	5400	3,73	100	67	6600	3,82			
	1000	4			1000	6					
3	1114	1000	40	44000	4,64	1000	65	64000	4,81		
		10000	8			10000	5				
	1115	1000	50	50000	4,70	1000	81	83000	4,92		
		10000	5			10000	10				
	1116	1000	42	43000	4,63	1000	92	92000	4,96		
		10000	5			10000	9				
1117	1000	65	65000	4,81	1000	85	85000	4,93			
	10000	6			10000	8					
1118	1000	61	65000	4,81	1000	70	70000	4,85			
	10000	10			10000	7					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Green peas Batch 1 Aerobic mesophilic flora: <10 CFU/g	<i>Escherichia coli</i> 19	1	1462	10	38	410	2,61	10	36	360	2,56
				100	7			100	3		
			1463	10	24	280	2,45	10	35	360	2,56
				100	7			100	4		
			1464	10	33	310	2,49	10	27	280	2,45
				100	1			100	4		
		1465	10	27	270	2,43	10	42	450	2,65	
			100	3			100	7			
		1466	10	35	320	2,51	10	43	390	2,59	
			100	0			100	0			
		2	1467	100	87	8900	3,95	100	83	8400	3,92
				1000	11			1000	9		
			1468	100	70	7400	3,87	100	121	12000	4,08
				1000	11			1000	13		
			1469	100	99	9900	4,00	100	100	10000	4,00
				1000	10			1000	13		
		1470	100	83	8600	3,93	100	90	9300	3,97	
			1000	12			1000	12			
		3	1471	100	72	7100	3,85	100	121	13000	4,11
				1000	6			1000	22		
			1472	1000	72	73000	4,86	1000	71	65000	4,81
10000	8			10000	1						
1473	1000		77	77000	4,89	1000	81	81000	4,91		
	10000		8			10000	8				
1474	1000	80	81000	4,91	1000	83	89000	4,95			
	10000	9			10000	15					
1475	1000	61	66000	4,82	1000	87	86000	4,93			
	10000	12			10000	8					
1476	1000	63	65000	4,81	1000	92	89000	4,95			
	10000	8			10000	6					
Green peas Batch 2 Aerobic mesophilic flora: <10 CFU/g	<i>Escherichia coli</i> 19	1	1477	10	11	100	2,00	10	16	160	2,20
				100	0			100	1		
			1478	10	21	190	2,28	10	24	250	2,40
				100	0			100	3		
			1479	10	13	140	2,15	10	34	310	2,49
				100	2			100	0		
		1480	10	16	160	2,20	10	24	280	2,45	
			100	1			100	7			
		1481	10	7	70	1,85 Ne	10	25	260	2,41	
			100	1			100	3			
		2	1482	100	48	4900	3,69	100	71	7400	3,87
				1000	6			1000	10		
			1483	100	52	5000	3,70	100	70	7100	3,85
				1000	3			1000	8		
			1484	100	57	5500	3,74	100	74	6900	3,84
1000	4			1000	2						
1485	100	48	4700	3,67	100	71	7300	3,86			
	1000	4			1000	9					
1486	100	55	5700	3,76	100	72	7500	3,88			
	1000	8			1000	11					
3	1487	1000	34	35000	4,54	1000	66	67000	4,83		
		10000	4			10000	8				
	1488	1000	48	48000	4,68	1000	77	75000	4,88		
		10000	5			10000	5				
	1489	1000	60	66000	4,82	1000	66	69000	4,84		
		10000	13			10000	10				
1490	1000	32	31000	4,49	1000	91	91000	4,96			
	10000	2			10000	9					
1491	1000	51	51000	4,71	1000	83	80000	4,90			
	10000	5			10000	5					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Terrin for dogs Batch 1 Aerobic mesophilic flora: <10 CFU/g	<i>Citrobacter braakii</i> Ad833	1	1566	10	22	230	2,36	10	13	140	2,15
				100	3			100	2		
			1567	10	21	230	2,36	10	15	150	2,18
				100	4			100	1		
			1568	10	28	270	2,43	10	11	110	2,04
				100	2			100	1		
		1569	10	9	90	1,95	10	21	220	2,34	
			100	1			100	3			
		1570	10	24	240	2,38	10	20	200	2,30	
			100	2			100	2			
		2	1571	100	75	7400	3,87	100	50	5200	3,72
				1000	6			1000	7		
			1572	100	94	9300	3,97	100	66	6600	3,82
				1000	8			1000	7		
			1573	100	85	8400	3,92	100	88	9200	3,96
				1000	7			1000	13		
		1574	100	79	8300	3,92	100	68	6900	3,84	
			1000	12			1000	8			
		1575	100	85	8700	3,94	100	77	7500	3,88	
			1000	11			1000	5			
		3	1576	1000	71	74000	4,87	1000	57	61000	4,79
10000	10			10000	10						
1577	1000		77	79000	4,90	1000	71	66000	4,82		
	10000		10			10000	2				
1578	1000		108	110000	5,04	1000	91	92000	4,96		
	10000		10			10000	10				
1579	1000	85	85000	4,93	1000	67	66000	4,82			
	10000	9			10000	6					
1580	1000	77	79000	4,90	1000	70	68000	4,83			
	10000	10			10000	5					
Terrine for dogs Batch 2 Aerobic mesophilic flora: <10 CFU/g	<i>Citrobacter braakii</i> Ad833	1	1665	10	29	300	2,48	10	21	210	2,32
				100	4			100	2		
			1666	10	30	310	2,49	10	23	230	2,36
				100	4			100	2		
			1667	10	28	310	2,49	10	13	150	2,18
				100	6			100	3		
		1668	10	33	330	2,52	10	23	230	2,36	
			100	3			100	2			
		1669	10	26	290	2,46	10	16	170	2,23	
			100	6			100	3			
		2	1670	100	62	6200	3,79	100	57	5500	3,74
				1000	6			1000	3		
			1671	100	73	7300	3,86	100	67	6500	3,81
				1000	7			1000	5		
			1672	100	75	7900	3,90	100	71	7200	3,86
				1000	12			1000	8		
		1673	100	81	9300	3,97	100	72	7000	3,85	
			1000	21			1000	5			
		1674	100	87	8900	3,95	100	100	9600	3,98	
			1000	11			1000	6			
		3	1675	1000	73	75000	4,88	1000	76	75000	4,88
				10000	9			10000	7		
			1676	1000	64	65000	4,81	1000	59	61000	4,79
				10000	7			10000	8		
			1677	1000	55	57000	4,76	1000	73	77000	4,89
				10000	8			10000	12		
		1678	1000	79	76000	4,88	1000	73	73000	4,86	
10000	5		10000	7							
1679	1000	82	84000	4,92	1000	70	68000	4,83			
	10000	10			10000	5					

Batch tested but not retained for interpretation as very few colonies were observed in VRBL plates.

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Rinsed water (Salmon cutting) Batch 1 Aerobic mesophilic flora: 10 CFU/g	<i>Escherichia coli</i> Ad1828	1	1874	10	30	290	2,46	10	21	260	2,41
				100	2			100	8		
			1875	10	28	300	2,48	10	30	300	2,48
				100	5			100	3		
			1876	10	31	310	2,49	10	30	320	2,51
				100	3			100	5		
		1877	10	31	280	2,45	10	21	190	2,28	
			100	0			100	0			
		1878	10	28	290	2,46	10	30	300	2,48	
			100	4			100	3			
		2	1879	100	79	8400	3,92	100	57	5500	3,74
				1000	13			1000	4		
			1880	100	65	6800	3,83	100	70	7000	3,85
				1000	10			1000	7		
			1881	100	68	6500	3,81	100	86	8700	3,94
				1000	4			1000	10		
		1882	100	85	8800	3,94	100	81	7700	3,89	
			1000	12			1000	4			
		3	1883	100	81	8300	3,92	100	65	7200	3,86
				1000	10			1000	14		
			1884	1000	63	65000	4,81	1000	66	61000	4,79
				10000	9			10000	1		
			1885	1000	73	77000	4,89	1000	86	87000	4,94
				10000	12			10000	10		
1886	1000	67	74000	4,87	1000	76	75000	4,88			
	10000	14			10000	7					
1887	1000	70	71000	4,85	1000	80	78000	4,89			
	10000	8			10000	6					
1888	1000	68	74000	4,87	1000	81	79000	4,90			
	10000	13			10000	6					
Rinsed water (Sausage fabrication) Batch 2 Aerobic mesophilic flora: <1 CFU/g	<i>Escherichia coli</i> Ad1828	1	1889	10	1	10	1,00*	10	12	110	2,04
				100	0			100	0		
			1890	10	1	10	1,00*	10	25	240	2,38
				100	0			100	1		
			1891	10	2	20	1,30*	10	4	40	1,60 Ne
				100	0			100	3		
		1892	10	0	<10	<1,00	10	8	80	1,90 Ne	
			100	0			100	2			
		1893	10	1	10	1,00*	10	12	130	2,11	
			100	1			100	2			
		2	1894	100	3	300	2,48*	100	16	2100	3,32
				1000	0			1000	7		
			1895	100	1	100	2,00*	100	23	2300	3,36
				1000	0			1000	2		
			1896	100	2	200	2,30*	100	30	3300	3,52
				1000	0			1000	6		
		1897	100	0	<100	<2,00	100	33	3300	3,52	
			1000	0			1000	3			
		1898	100	5	500	2,70 Ne	100	23	2200	3,34	
			1000	0			1000	1			
		3	1899	1000	0	<1000	<3,00	1000	47	48000	4,68
				10000	0			10000	6		
			1900	1000	0	<1000	<3,00	1000	34	35000	4,54
				10000	0			10000	4		
1901	1000		0	<1000	<3,00	1000	41	42000	4,62		
	10000		0			10000	5				
1902	1000	0	<1000	<3,00	1000	34	35000	4,54			
	10000	0			10000	4					
1903	1000	0	<1000	<3,00	1000	38	35000	4,54			
	10000	0			10000	1					

Matrix	Strain	Level	N°sample	ISO 4832				NEOGEN® Petrifilm® CC Plate			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Rinsed water (Salmon cutting) Batch 3 Aerobic mesophilic flora: 30 CFU/g	<i>Escherichia coli</i> Ad1828	1	2017	10	36	360	2,56	10	24	240	2,38
				100	3			100	2		
			2018	10	28	300	2,48	10	26	250	2,40
				100	5			100	1		
			2019	10	24	260	2,41	10	22	220	2,34
				100	5			100	2		
		2020	10	24	230	2,36	10	27	260	2,41	
			100	1			100	1			
		2021	10	32	320	2,51	10	34	340	2,53	
			100	3			100	3			
		2	2022	100	70	6700	3,83	100	77	7800	3,89
				1000	4			1000	9		
			2023	100	65	7000	3,85	100	69	7000	3,85
				1000	12			1000	8		
			2024	100	67	6700	3,83	100	83	7800	3,89
				1000	7			1000	3		
		2025	100	63	6400	3,81	100	49	4900	3,69	
			1000	7			1000	5			
		2026	100	60	6200	3,79	100	62	6100	3,79	
			1000	8			1000	5			
		3	2027	1000	73	72000	4,86	1000	54	55000	4,74
				10000	6			10000	7		
			2028	1000	64	64000	4,81	1000	75	77000	4,89
				10000	6			10000	10		
2029	1000		64	63000	4,80	1000	82	80000	4,90		
	10000		5			10000	6				
2030	1000		69	71000	4,85	1000	69	68000	4,83		
	10000		9			10000	6				
2031	1000		81	82000	4,91	1000	76	75000	4,88		
	10000		9			10000	7				

Appendix E - Accuracy profile study: summarized results

(Food) Category 1			Meat products									
(Food) Type 1			Raw meats (Ground beef)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
634-638	Ground beef	1	200	80	160	270	300	330	250	280	220	330
649-653	Ground beef	1	240	100	190	180	230	240	260	270	180	320
639-643	Ground beef	2	6600	5500	6600	6700	7200	6500	6300	6200	7100	6200
654-658	Ground beef	2	6400	6400	6500	6200	6400	6200	6200	6500	7400	5700
644-648	Ground beef	3	55000	50000	62000	52000	65000	57000	75000	64000	72000	74000
659-663	Ground beef	3	57000	57000	57000	63000	66000	68000	42000	59000	53000	74000
(Food) Category 3			Egg products and pastries									
(Food) Type 3			Liquid egg (Pasteurized whole liquid egg)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
1327-1331	Pasteurized whole liquid egg	1	170	230	260	200	240	220	280	290	290	190
1342-1346	Pasteurized whole liquid egg	1	190	240	320	250	160	250	250	210	290	280
1332-1336	Pasteurized whole liquid egg	2	8200	9000	8800	8100	6800	8100	7500	8400	7600	7800
1347-1351	Pasteurized whole liquid egg	2	8800	8500	8900	10000	8700	8900	8500	8500	7500	7200
1337-1341	Pasteurized whole liquid egg	3	81000	83000	87000	95000	89000	74000	100000	93000	85000	74000
1352-1356	Pasteurized whole liquid egg	3	86000	110000	110000	99000	84000	81000	100000	87000	80000	88000
(Food) Category 5			Vegetables									
(Food) Type 5			Raw (Green peas)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
1462-1466	Green peas	1	410	280	310	270	320	360	360	280	450	390
1477-1481	Green peas	1	100	190	140	160	70	160	250	310	280	260
1467-1471	Green peas	2	8900	7400	9900	8600	7100	8400	12000	10000	9300	13000
1482-1486	Green peas	2	4900	5000	5500	4700	5700	7400	7100	6900	7300	7500
1472-1476	Green peas	3	73000	77000	81000	66000	65000	65000	81000	89000	86000	89000
1487-1491	Green peas	3	35000	48000	66000	31000	51000	67000	75000	69000	91000	80000
(Food) Category 7			Environmental samples									
(Food) Type 7			Process water (Salmon production)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
1874-1878	Process water	1	290	300	310	280	290	260	300	320	190	300
	Process water	1	360	300	260	230	320	240	250	220	260	340
1879-1883	Process water	2	8400	6800	6500	8800	8300	5500	7000	8700	7700	7200
	Process water	2	6700	7000	6700	6400	6200	7800	7000	7800	4900	6100
1884-1888	Process water	3	65000	77000	74000	71000	74000	61000	87000	75000	78000	79000
	Process water	3	72000	64000	63000	71000	82000	55000	77000	80000	68000	75000

(Food) Category 2			Milk products									
(Food) Type 2			Pasteurized (Milk)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
833-837	Pasteurized milk	1	250	220	200	220	150	210	310	150	250	270
848-852	Pasteurized milk	1	160	230	210	140	180	170	180	260	210	190
838-842	Pasteurized milk	2	7400	7800	7500	9400	6400	8600	8200	8900	9000	6900
853-857	Pasteurized milk	2	5800	5500	5500	6600	5500	6500	5300	5300	3600	6900
843-847	Pasteurized milk	3	93000	81000	84000	77000	81000	78000	71000	78000	89000	73000
858-862	Pasteurized milk	3	62000	40000	47000	55000	55000	64000	55000	45000	46000	60000
(Food) Category 4			Seafood products									
(Food) Type 4			Raw fish (Fillet)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
1089-1093	Raw fish fillet	1	280	250	320	290	320	370	300	340	400	300
1104-1108	Raw fish fillet	1	110	170	170	160	160	280	230	290	230	250
1094-1098	Raw fish fillet	2	9500	8800	9500	7000	5100	9400	8600	9700	8500	7800
1109-1113	Raw fish fillet	2	2800	5400	5000	5300	5400	5200	6200	6700	8700	6600
1099-1103	Raw fish fillet	3	73000	95000	96000	85000	90000	85000	110000	87000	91000	86000
1114-1118	Raw fish fillet	3	44000	50000	43000	65000	65000	64000	83000	92000	85000	70000
(Food) Category 6			Pet food									
(Food) Type 6			High moisture product (Terrin for dogs)									
			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
1566-1570	Terrin for dogs	1	230	230	270	90	240	140	150	110	220	200
1665-1669	Terrin for dogs	1	300	310	310	330	290	210	230	150	230	170
1571-1575	Terrin for dogs	2	7400	9300	8400	8300	8700	5200	6600	9200	6900	7500
1670-1674	Terrin for dogs	2	6200	7300	7900	9300	8900	5500	6500	7200	7000	9600
1576-1580	Terrin for dogs	3	74000	79000	110000	85000	79000	61000	66000	92000	66000	68000
1675-1679	Terrin for dogs	3	75000	65000	57000	76000	84000	75000	61000	77000	73000	68000

Appendix F – Inclusivity / Exclusivity: raw data

INCLUSIVITY									
N°	Strain	Origin	Replicate	PCA (CFU/ ml)	ISO 4832		NEOGEN® Petrifilm® CC Total coliforms		
					Growth	Recovery (%)	Growth	Recovery (%)	
1997	1	<i>Escherichia coli</i> CIP 54127	/	a / b	/	+/+	/	+/+	/
	2	<i>Escherichia coli</i> CIP 54117	/	a / b	/	+/-	/	+/+	/
	3	<i>Escherichia coli</i> adria 1	Sausage	a / b	/	+/+	/	+/+	/
	4	<i>Escherichia coli</i> adria 9	Rillettes	a / b	/	+/+	/	+/+	/
	5	<i>Escherichia coli</i> adria 12	Turkey meat	a / b	/	+/+	/	+/+	/
	6	<i>Escherichia coli</i> O157:H7 CIP 103571	/	a / b	/	+/+	/	+/+	/
	7	<i>Escherichia coli</i> O157:H7 ATCC 43888	Faeces	a / b	/	+/+	/	+/+	/
	8	<i>Klebsiella pneumoniae</i> CIP 8291	/	a / b	/	+/+	/	+/+	/
	9	<i>Klebsiella pneumoniae</i> adria 28	/	a / b	/	+/+	/	+/+	/
	10	<i>Klebsiella oxytoca</i> CIP 7932	Parmaceutical	a / b	/	+/+	/	+/+	/
	11	<i>Klebsiella oxytoca</i> adria 57	/	a / b	/	+/+	/	+/+	/
	12	<i>Enterobacter aerogenes</i> CIP 6086	/	a / b	/	+/+	/	+/+	/
	13	<i>Enterobacter aerogenes</i> CIP 103659	/	a / b	/	+/+	/	+/+	/
	14	<i>Enterobacter cloacae</i> adria 10	Raw milk	a / b	/	+/+	/	+/+	/
	15	<i>Enterobacter cloacae</i> adria 58	/	a / b	/	+/+	/	+/+	/
	16	<i>Cronobacter sakazakii</i> adria 7	/	a / b	/	+/+	/	+/+	/
	17	<i>Cronobacter sakazakii</i> adria 22	/	a / b	/	+/+	/	+/+	/
	18	<i>Enterobacter agglomerans</i> adria 11	Cheese	a / b	/	+/+	/	+/+	/
	19	<i>Citrobacter diversus</i> CIP 8294	/	a / b	/	+/+	/	+/+	/
	20	<i>Citrobacter diversus</i> adria 38	/	a / b	/	+/+	/	+/+	/
	21	<i>Citrobacter freundii</i> CIP 5732	/	a / b	/	+/+	/	+/+	/
	22	<i>Citrobacter freundii</i> adria 59	/	a / b	/	+/+	/	+/+	/
	23	<i>Serratia liquefaciens</i> adria 8	/	a / b	/	+/+	/	+/+	/
	24	<i>Serratia liquefaciens</i> adria 26	/	a / b	/	+/+	/	+/+	/
	25	<i>Hafnia alvei</i> adria 168	Meat	a / b	/	+/+	/	+/+	/

INCLUSIVITY									
N°	Strain	Origin	Replicate	PCA	ISO 4832		NEOGEN®Petrifilm®CC Total coliforms		
				CFU/plate	Growth	CFU/plate	Growth	CFU/plate	
2006	26	<i>Citrobacter freundii</i> 35	Geen beans	a/b	38/30	+/+	28/33	+/+	48/39
	27	<i>Enterobacter agglomerans</i> 74	Cheese	a/b	81/89	+/+	39/49	+/+	97/94
	28	<i>Cronobacter sakazakii</i> 90	Pastry	a/b	112/89	+/+	100/102	+/+	81/76
	29	<i>Enterobacter cloacae</i> Fb2	Food product	a/b	38/76	+/+	43/52	+/+	45/47
	30	<i>Klebsiella oxytoca</i> 42	Food product	a/b	56/75	+/+	48/44	+/+	19/29
	31	<i>Citrobacter freundii</i> 54	Meat	a/b	98	+/+	73/83	+/+	74/79

INCLUSIVITY							
N°	Strain	Origin	PCA CFU/plate	VRBL (30°C) CFU/plate	NEOGEN®Petrifilm®CC Total coliforms CFU/Petrifilm		
2018	32	<i>Escherichia coli</i> Ad2001	Chicken meat	123	70	110	
	33	<i>Escherichiacoli</i> Ad1422	Infant formula	99	10	40	
	34	<i>Escherichia coli</i> Ad228	Fish	54	21	44	
	35	<i>Klebsiella pneumoniae</i> Ad1374	Water	76	80	17	
	36	<i>Klebsiella oxytoca</i> Ad1371	Water	17	16	11	
	37	<i>Enterobacter hormachei</i> Ad1373	Water	111	71	104	
	38	<i>Enterobacter kobei</i> Ad706	Milk powder	73	58	65	
	39	<i>Cronobacter sakazakii</i> Ad2418,	Infant formula	70	42	66	
	40	<i>Cronobacter malonaticus</i> E752	Baby food	27(-7)	21(-5)	26(-5)	
	41	<i>Cronobacter malonaticus</i> E684	/	54	46	44	
	42	<i>Citrobacter braakii</i> Ad833	Beef meat	84	40	79	
	43	<i>Citrobacter farmeri</i> Ad1116	Environment	110	42	117	
	44	<i>Citrobacter freundii</i> Ad1326	Egg product	43	47	41	
	45	<i>Citrobacter koseri</i> Ad2731	Sprouts	93	16	81	
	46	<i>Citrobacter youngae</i> Ad1372	Water	86	67	38	
	47	<i>Escherichia fergusonii</i> Ad1381	Water	30	11	91	
	48	<i>Escherichia vulneris</i> 127	Raw milk	113	29	135	
	49	<i>Escherichia hermannii</i> Ad464	Raw milk	37	21	31	
50	<i>Hafnia alvei</i> Ad2274	Pasteurised cheese	102	79	88		
51	<i>Hafnia alvei</i> Ad1380	Water	63	80	77		

EXCLUSIVITY									
N°	Strain	Origin	Repl-icate	PCA	ISO 4832		NEOGEN® Petrifilm® CC Total coliforms		
					Growth	Recovery (%)	Growth	Recovery (%)	
1997	1	<i>Shigella flexneri</i> CIP 8248	/	a/b	/	+/+	/	+/+	/
	2	<i>Shigella sonnei</i> ATCC 29930	/	a/b	/	+	/	+	/
	3	<i>Salmonella</i> Enteritidis CIP 8297	/	a/b	/	+	/	+	/
	4	<i>Erwinia carotovora</i> CIP 8283	/	a/b	/	+	/	+	/
	5	<i>Erwinia carotovora</i> CIP 103762	/	a/b	/	-	/	-/+	/
	6	<i>Edwardsiella tarda</i> CIP 7861	/	a/b	/	+(NC)	/	+	/
	7	<i>Proteus vulgaris</i> adria 56	/	a/b	/	-	/	+	/
	8	<i>Yersinia enterocolitica</i> CIP 8027	/	a/b	/	+	/	+	/
	9	<i>Aeromonas hydrophila</i> CIP 5750	/	a/b	/	+	/	+	/
	10	<i>Pseudomonas putida</i> 4	Poultry	a/b	/	-	/	-	/
	11	<i>Bacillus subtilis</i> ATCC 6633	/	a/b	/	+(NC)	/	+	/
	12	<i>Lactobacillus plantarum</i> CIP A159	/	a/b	/	-	/	-	/
	13	<i>Enterococcus faecalis</i> ATCC 29212	/	a/b	/	-	/	-	/
	14	<i>Staphylococcus aureus</i> CIP 658	/	a/b	/	-	/	-	/
	15	<i>Pseudomonas fluorescens</i> CIP 5690	/	a/b	2,40E+09	-/-	-	+/+ (very small colonies)	34/23
	16	<i>Pseudomonas fluorescens</i> J2 ADIV	/	a/b	1,60E+08	-/-	-	-/-	-
	17	<i>Pseudomonas fluorescens</i> adria 8	Liquid egg	a/b	1,10E+08	-/-	-	-/+ (µcolonies)	0/3
	18	<i>Salmonella</i> Typhimurium CIP 5858	/	a/b	1,00E+09	+/+	40/40	+/+	59/62
	19	<i>Salmonella</i> Typhimurium ADRIA 193	Sausage	a/b	1,40E+09	+/+	121/121	+/+	78/100
	20	<i>Salmonella</i> Typhimurium ADRIA 472	/	a/b	1,10E+09	+/+	78/64	+/+	49/67
	21	<i>Proteus vulgaris</i> adria 43	Ham	a/b	8,90E+08	+/+	52/53	+/+	57/48

EXCLUSIVITY									
N°	Strain	Origin	Repli- cate	PCA CFU/ plate	ISO 4832		NEOGEN® Petrifilm® CC Plate		
					Growth	CFU/plate	Growth	CFU/ plate	
2006	22	<i>Pseudomonas putida</i> 11	Liquid egg product	a/b	92/74	+/+	84/73	+/+	69/54
	23	<i>Providencia rettgeri</i> 12	Ground tirkey meat	a/b	27/27	+/+	18/19	µcolonies impossible to enumerate	/
	24	<i>Providencia stuartii</i> 46	Turkey meat	a/b	26/26	+/+	7/16	µcolonies impossible to enumerate	/

EXCLUSIVITY								
N°	Strain	Origin	PCA	VRBL (30°C)		NEOGEN® Petrifilm® CC Total Coliforms CFU/Petrifilm plate	Identification	
				CFU/plate	BLBVB			
2018	25	<i>Aeromonas hydrophila</i> Ad1570	River water	137 (-6)	118 (-6)	growth +/ gaz-	129 (-6)	molecular-16S
	26	<i>Ralstonia mannitolilytica</i> Ad1059	Turkey meat	103(-6)	0(-2)	/	7 µcolonies (-1)	/
	27	<i>Acinetobacter calcoaceticus</i> Ad1092	Poultry meat	99(-6)	13NC µcolonies (-4)	growth -/ gaz-	0(0)	/
	28	<i>Kluyvera ascorbata</i> Ad229	Fish	46(-7)	39(-7)	growth +/ gaz +	90(-6)	VITEK
	29	<i>Leclercia adecarboxylata</i> Ad707	Milk powder	102(-6)	75(-6)	growth +/ gaz +	100(-6)	molecular-16S
	30	<i>Raoultella terrigena</i> Ad1370	Water	77(-7)	56(-7)	growth +/ gaz +	49(-7)	molecular-16S

Appendix G - Inter-laboratory study: results obtained by the collaborators and the expert laboratory

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
A	A1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	A6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	A2	1	82	89	84	1,92	1	64	60	1,78
		10	4	9			10	2		
	A7	1	54	70	65	1,81	1	50	53	1,72
		10	8	10			10	8		
	A3	10	75	80	800	2,90	10	42	400	2,60
		100	14	6			100	2		
	A8	10	51	60	600	2,78	10	35	360	2,56
		100	8	13			100	5		
	A4	100	81	124	9300	3,97	100	55	5000	3,70
		1000	0	0			1000	0		
A5	100	48	57	5500	3,74	100	39	3800	3,58	
	1000	10	5			1000	3			
B	B1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	B6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	B2	1	66	64	64	1,81	1	77	75	1,88
		10	9	1			10	5		
	B7	1	60	55	63	1,80	1	64	63	1,80
		10	14	9			10	5		
	B3	10	72	66	690	2,84	10	54	560	2,75
		100	6	8			100	7		
	B8	10	82	57	710	2,85	10	64	650	2,81
		100	5	12			100	7		
	B4	100	52	42	4600	3,66	100	40	4200	3,62
		1000	1	6			1000	6		
B5	100	70	60	6500	3,81	100	46	4700	3,67	
	1000	8	6			1000	6			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
C	C1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	C6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	C2	1	39	37	38	1,58	1	52	55	1,74
		10	3	4			10	8		
	C7	1	32	37	33	1,52	1	56	57	1,76
		10	4	0			10	7		
	C3	10	49	46	460	2,66	10	55	540	2,73
		100	3	4			100	4		
	C8	10	44	46	430	2,63	10	43	410	2,61
		100	3	2			100	2		
	C4	100	55	43	4800	3,68	100	31	3100	3,49
		1000	5	2			1000	3		
C5	100	40	32	3600	3,56	100	39	4000	3,60	
	1000	6	2			1000	5			
D	D1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	D6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	D2	1	68	80	74	1,87	1	93	85	1,93
		10	6	8			10	0		
	D7	1	62	57	62	1,79	1	63	64	1,81
		10	11	7			10	7		
	D3	10	87	61	720	2,86	10	58	560	2,75
		100	4	7			100	4		
	D8	10	64	81	690	2,84	10	67	660	2,82
		100	4	3			100	6		
	D4	100	62	55	5700	3,76	100	31	3200	3,51
		1000	5	4			1000	4		
D5	100	60	70	6600	3,82	100	40	3900	3,59	
	1000	6	10			1000	3			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
E	E1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	E6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	E2	1	81	70	73	1,86	1	80	76	1,88
		10	3	7			10	4		
	E7	1	71	98	84	1,92	1	72	68	1,83
		10	7	9			10	3		
	E3	10	56	55	620	2,79	10	68	670	2,83
		100	8	17			100	6		
	E8	10	104	91	960	2,98	10	68	650	2,81
		100	8	8			100	3		
	E4	100	81	91	8700	3,94	100	70	6900	3,84
		1000	5	14			1000	6		
E5	100	80	79	7700	3,89	100	61	6200	3,79	
	1000	6	5			1000	7			
F	F1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	F6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	F2	1	58	71	66	1,82	1	67	64	1,81
		10	7	10			10	3		
	F7	1	65	58	63	1,80	1	80	76	1,88
		10	8	8			10	4		
	F3	10	53	57	560	2,75	10	59	550	2,74
		100	5	7			100	1		
	F8	10	55	59	560	2,75	10	54	560	2,75
		100	3	5			100	7		
	F4	100	79	61	7000	3,85	100	57	5500	3,74
		1000	7	7			1000	4		
F5	100	52	53	5300	3,72	100	44	4700	3,67	
	1000	9	3			1000	8			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	ufc/boite b	ufc/ml	log ufc/ml	Dilution	ufc/boite	ufc/ml	log ufc/ml
G	G1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	G6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	G2	1	58	61	61	1,79	1	78	77	1,89
		10	10	6			10	7		
	G7	1	84	65	73	1,86	1	88	91	1,96
		10	5	6			10	12		
	G3	10	92	73	820	2,91	10	67	710	2,85
		100	11	5			100	11		
	G8	10	80	60	750	2,88	10	60	620	2,79
		100	11	13			100	8		
	G4	100	76	85	7800	3,89	100	67	6600	3,82
		1000	7	4			1000	6		
G5	100	88	90	9100	3,96	100	61	6100	3,79	
	1000	11	12			1000	6			
H	H1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	H6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	H2	1	69	56	62	1,79	1	73	71	1,85
		10	8	4			10	5		
	H7	1	77	67	73	1,86	1	79	76	1,88
		10	8	8			10	5		
	H3	10	66	71	690	2,84	10	54	560	2,75
		100	8	7			100	7		
	H8	10	65	73	680	2,83	10	55	560	2,75
		100	4	7			100	6		
	H4	100	68	69	6500	3,81	100	44	4200	3,62
		1000	4	1			1000	2		
H5	100	59	81	6700	3,83	100	48	5100	3,71	
	1000	3	5			1000	8			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	ufc/boite b	ufc/ml	log ufc/ml	Dilution	ufc/boite	ufc/ml	log ufc/ml
J	J1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	J6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	J2	1	54	60	56	1,75	1	61	62	1,79
		10	4	5			10	7		
	J7	1	56	71	65	1,81	1	46	44	1,64
		10	4	11			10	2		
	J3	10	59	57	590	2,77	10	49	490	2,69
		100	8	6			100	5		
	J8	10	110	55	850	2,93	10	51	500	2,70
		100	10	11			100	4		
	J4	100	40	48	4900	3,69	100	60	6500	3,81
		1000	9	10			1000	11		
J5	100	56	61	5900	3,77	100	39	4000	3,60	
	1000	6	7			1000	5			
K	K1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	K6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	K2	1	77	76	77	1,89	1	77	76	1,88
		10	8	8			10	7		
	K7	1	66	68	67	1,83	1	68	68	1,83
		10	6	7			10	7		
	K3	10	77	74	770	2,89	10	66	660	2,82
		100	9	9			100	6		
	K8	10	76	75	750	2,88	10	67	660	2,82
		100	7	7			100	6		
	K4	100	58	56	5700	3,76	100	51	5100	3,71
		1000	6	6			1000	5		
K5	100	60	58	5900	3,77	100	54	5500	3,74	
	1000	6	6			1000	6			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
L	L1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	L6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	L2	1	17	11	21	1,32	1	76	70	1,85
		10	11	7			10	1		
	L7	1	38	28	33	1,52	1	68	65	1,81
		10	3	4			10	4		
	L3	10	39	34	380	2,58	10	53	540	2,73
		100	6	4			100	6		
	L8	10	57	53	540	2,73	10	61	600	2,78
		100	5	4			100	5		
	L4	100	68	66	6400	3,81	100	49	4800	3,68
		1000	4	2			1000	4		
L5	100	52	60	5900	3,77	100	52	5300	3,72	
	1000	8	9			1000	6			
N	N1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N2	1	74	81	76	1,88	1	69	68	1,83
		10	4	8			10	6		
	N7	1	96	74	88	1,94	1	90	87	1,94
		10	9	14			10	6		
	N3	10	81	83	860	2,93	10	70	680	2,83
		100	12	12			100	5		
	N8	10	102	76	920	2,96	10	61	650	2,81
		100	8	16			100	10		
	N4	100	91	101	9500	3,98	100	80	8000	3,90
		1000	7	11			1000	8		
N5	100	101	89	9900	4,00	100	51	5200	3,72	
	1000	15	12			1000	6			

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
O	N1	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N6	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N2	1	96	95	92	1,96	1	80	77	1,89
		10	8	3			10	5		
	N7	1	85	80	86	1,93	1	90	89	1,95
		10	14	10			10	8		
	N3	10	88	88	900	2,95	10	63	650	2,81
		100	11	11			100	8		
	N8	10	86	80	880	2,94	10	68	670	2,83
		100	10	17			100	6		
	N4	100	75	75	7800	3,89	100	60	5800	3,76
		1000	11	10			1000	4		
	N5	100	67	66	6500	3,81	100	51	5000	3,70
		1000	5	6			1000	4		

Laboratory	Sample no	Reference method: ISO 4832					Alternative method: Test NEOGEN® Petrifilm® CC			
		Dilution	cfu/plate a	cfu/plate b	cfu/ml	log cfu/ml	Dilution	cfu/plate	cfu/ml	log cfu/ml
ADRIA	450	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	451	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	452	1	46	49	47	1,67	1	64	61	1,79
		10	4	5			10	3		
	453	1	45	36	42	1,62	1	66	64	1,81
		10	4	8			10	4		
	454	10	65	58	630	2,80	10	47	480	2,68
		100	7	9			100	6		
	455	10	63	48	550	2,74	10	52	520	2,72
		100	4	5			100	5		
	456	100	73	71	7000	3,85	100	34	3500	3,54
		1000	4	6			1000	4		
	457	100	49	60	5700	3,76	100	34	3500	3,54
		1000	11	5			1000	4		