

**NF VALIDATION**  
**Validation of alternative analytical methods**  
*Application in food microbiology*

**Summary report**  
**Validation study according to EN ISO 16140-2:2016**

**3M™ Petrifilm™ Select *E. coli* Count (SEC) Plate**  
(Certificate number: 3M 01/08 - 06/01)  
for the enumeration of  $\beta$ -glucuronidase positive  
*Escherichia coli* in all human food products, pet food and  
production environmental samples

**Quantitative method**

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This report consists of 72 pages, including 8 appendices.

Only copies including the totality of this report are authorised.

Competencies of the laboratory are certified by COFRAC accreditation for the analyses marked with the symbol♦.

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Quality Assurance documents related to this study can be consulted upon request from **3M**.

Measurement uncertainty on the reference method results is not taken into account to provide the conclusion in this report; this measurement uncertainty is however available.

The technical protocol and the result interpretation were carried out according to the EN ISO 16140-2:2016 and the AFNOR technical rules (PR Revision 7).

<b>Validation protocols</b>	<ul style="list-style-type: none"> <li>▪ EN ISO 16140-1 (June 2016): Microbiology of the food chain - Method validation - <i>Part 1: Vocabulary</i></li> <li>▪ EN ISO 16140-2 (June 2016): Microbiology of the food chain - Method validation - <i>Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method</i></li> <li>▪ AFNOR Technical Rules (PR Revision n° 7)</li> </ul>
<b>Reference method<sup>♦</sup></b>	ISO 16649-2 (July 2001). Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of B-glucuronidase-positive <i>Escherichia coli</i> - Part 2: colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl B-D-glucuronate
<b>Alternative method</b>	<b>3M™ Petrifilm™ Select <i>E. coli</i> Count (SEC) Plate</b>
<b>Scope</b>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>All human food products</b></li> <li><input checked="" type="checkbox"/> <b>Pet food</b></li> <li><input checked="" type="checkbox"/> <b>Production environmental samples</b></li> </ul>
<b>Certification organism</b>	AFNOR Certification ( <a href="http://nf-validation.afnor.org/">http://nf-validation.afnor.org/</a> )

♦ Analyses performed according to the COFRAC accreditation

## 1 INTRODUCTION

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The **3M™ Petrifilm™ Select *E. coli* Count (SEC) Plate** was validated on the 14<sup>th</sup> of June 2001 according to the EN ISO 16140:2003 and the AFNOR technical rules (Certificate number 3M 01/08 - 06/01).

<b>June 2001</b>	Initial validation
<b>2005</b>	Renewal: interpretation of the data according to ISO 16140:2003
<b>2009</b>	Renewal: interpretation of the data from the inter-laboratory study according to ISO 16140/A1
<b>2013</b>	Renewal
<b>February 2015</b>	Extension study for pet food and environmental samples
<b>June 2016</b>	Renewal according to the ISO 16140 (2003)
<b>October 2021</b>	Renewal according to the ISO 16140-2 (2016)

All the validations have been performed by ADRIA.

## 2 METHODS DESCRIPTION

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### 2.1 Alternative method

#### 2.1.1 Principle

The 3M™ Petrifilm™ Select *E. coli* Count (SEC) Plate is a sample-ready-culture medium system which contains selective agents, nutrients, a cold-water-soluble gelling agent, and an indicator of glucuronidase activity, 5-bromo-4-chloro-3-indolyl-D-glucuronide (BCIG), which facilitates colony enumeration. Most *E. coli* strains are thermotolerant and produce beta-glucuronidase, an enzyme that reacts with BCIG indicator in 3M Petrifilm SEC Plates to produce dark green to blue-green colonies. 3M Petrifilm SEC Plate components are decontaminated though not sterilized.

The enumeration of *Escherichia coli* is obtained after 24 h ± 2h incubation at 42.0°C ± 1°C.

#### 2.1.2 Protocol

The flow diagram of the alternative method is provided in **Appendix 1**.

### 2.1.3 Restrictions

There is no restriction for use.

## 2.2 Reference method♦

The standard method is the ISO 16649-2 (July 2001): Horizontal method for the enumeration of  $\beta$  glucuronidase positive *Escherichia coli* – Part 2: colony-count technique at 44°C using 5-bromo-4-chloro-3 indoly  $\beta$ -D-glucuronate.

The protocol of the reference method is given in **Appendix 2**.

## 2.3 Protocols applied during the initial validation and the renewal study

The minimum incubation time was applied during the validation studies: 22 h at 42.0°C.

# 3 INITIAL VALIDATION, EXTENSION/RENEWAL STUDIES: RESULTS

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## 3.1 Method comparison study

**The method comparison study is a study performed by the expert laboratory to compare the alternative method with the reference method.**

*The study was carried out on a diversity of samples and strains representative of agri-food products. This does not constitute an exhaustive list of the different matrices included in the scope.*

*For any comment on the alternative method, please contact AFNOR Certification at <http://nf-validation.afnor.org/contact-2/>.*

### 3.1.1 Relative trueness study

*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.*

### 3.1.1.1 Number and nature of the samples

Seven categories were tested. Taking into account all the studies, the repartition per tested category and type is provided in Table 1

**Table 1 – Categories and types**

Category	Type	Number of tested samples	Number of samples with interpretable results by both methods	
1	Meat products	a Raw meat	25	10
		b Delicatessen	20	8
		c RTE, RTRH	9	5
		Total	54	23
2	Dairy products	a Milk	11	6
		b Cheeses	17	8
		c Soft cheese, fermented products, cream ...	6	6
		Total	34	20
3	Seafood	a Raw seafood	20	6
		b Processed	6	5
		c RTE, RTRH	5	5
		Total	31	16
4	Vegetables	a Raw	15	11
		b Processed	17	11
		c RTE, RTRH	6	6
		Total	38	28
5	Egg products and composite food	a Egg products	25	14
		b Pastries	5	5
		c Composite meals	11	7
		Total	41	26
6	Pet food	a Low moisture products	9	6
		b Pâtés, terrines	6	6
		c Raw material	11	7
		Total	26	19
7	Environmental samples	a Surfaces	12	6
		b Process water	12	7
		c Dusts	11	7
		Total	35	20
<b>ALL CATEGORIES</b>		<b>259</b>	<b>152</b>	

259 samples were analyzed, leading to 152 exploitable results by both the alternative and the reference methods.

### 3.1.1.2 Artificial and natural contamination of the samples

All the samples tested for the initial validation study were naturally contaminated. Artificial contaminations, using spiking or seeding protocols, were applied for pet food and environmental categories extension study and for this renewal study.

The inoculated strains, the contamination protocols, the injured protocols of the inoculated cells and the injury evaluation are provided in **Appendix 3**. Injury efficiency was evaluated by enumerating the pure culture on selective (TBX) and non-selective (PCA) agars

Combining all the studies, 182 non-spiked samples and 77 spiked samples were tested; 152 gave interpretable results by both methods. 53% of the samples giving interpretable results by both methods were naturally contaminated.

### 3.1.1.3 Raw data

The raw data are provided in **Appendix 4**.

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 tested type.

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

- Interpretable results with the reference and the alternative methods;
- Results with less than 4 colonies per plate with the reference and/or the alternative method (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 log<sub>10</sub> 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		Type	Number of tested samples	Number of samples with interpretable results by both methods	Number of samples with less than 4 colonies/plate	Number of samples below or above the quantification limit
1	Meat products	a Raw meat	25	10	9	6
		b Delicatessen	20	8	4	8
		c RTE, RTRH	9	5	4	0
		Total	54	23	17	14
2	Dairy products	a Milk	11	6	5	0
		b Cheeses	17	8	5	4
		c Soft cheese, fermented products, cream...	6	6	0	0
		Total	34	20	10	4
3	Seafood	a Raw seafood	20	6	4	10
		b Processed	6	5	0	1
		c RTE, RTRH	5	5	0	0
		Total	31	16	4	11
4	Vegetables	a Raw	15	11	2	2
		b Processed	17	11	2	4
		c RTE, RTRH	6	6	0	0
		Total	38	28	4	6
5	Egg products and composite food	a Egg products	25	14	11	0
		b Pastries	5	5	0	0
		c Composite meals	11	7	2	2
		Total	41	26	13	2
6	Pet food	a Low moisture products	9	6	2	1
		b Pâtés, terrines	6	6	0	0
		c Raw material	11	7	0	4
		Total	26	19	2	5
7	Environmental samples	a Surfaces	12	6	0	6
		b Process water	12	7	0	5
		c Dusts	11	7	0	4
		Total	35	20	0	15
<b>ALL CATEGORIES</b>			<b>259</b>	<b>152</b>	<b>50</b>	<b>57</b>

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

**Table 3 - Samples which were not used in the calculations**

\*: less than 4 colonies on the plate

Year of analysis	Sample n°	Product	Reference method (log CFU/g)	Alternative method (log CFU/g)	Category	Type
2000	A5	Frozen breast of chicken	1.40*	1.70	1	a
2000	A6	Frozen breast of chicken	1.30*	1.95	1	a
2000	A10	Meat cutlet	1.18*	<1.00	1	a
2000	A19	Pork tongue	1.30*	1.78	1	a
2000	A24	Chicken gizzards	1.00*	<1	1	a
2000	A27	Chicken heart	<1.00	1.95	1	a
2000	A30	Cockerel	1.00*	2.13	1	a
2000	A31	chicken	1.40*	1.78	1	a
2000	A32	Cockerel	1.00*	1.70	1	a
2000	A33	Chicken legs	1.18*	2.13	1	a
2000	A90	Cockerel	1.48*	2.32	1	a
2000	A91	Chicken cutlet	1.18*	<1.00	1	a
2000	A111	Guineafowl	<1.00	2.19	1	a
2000	A113	Turkey cutlet	1.30*	1.70	1	a
2000	A114	Chicken cutlet	<1.00	<1.00	1	a
2000	A2	Toulouse sausages	<1.00	<1.00	1	b
2000	A40	Sausage meat	<1.00	<1.00	1	b
2000	A54	Sausage meat preparation	<1.00	<1.00	1	b
2000	A55	Sausage meat preparation	0.66*	1.00*	1	b
2000	A56	Sausage meat preparation	<1.00	1.30*	1	b
2000	A57	Chipolatas	0.66*	<1.00	1	b
2000	A58	Chipolatas with aromatic herbs	<1.00	1.48*	1	b
2000	A66	Merguez	0.66*	1.30*	1	b
2000	A67	Sausage meat preparation	<1.00	1.00*	1	b
2000	A68	Toulouse sausages	0.66*	1.30*	1	b
2000	A69	Chipolatas	<1.00	1.00*	1	b
2000	A75	Chipolatas with aromatic herbs	1.18*	1.48	1	b
2000	A3	Stuffed roast	1.00*	1.70	1	c
2000	A38	Veal olive	0.66*	1.70	1	c
2000	A39	Veal olive	1.13*	1.95	1	c
2000	A73	Chicken gizzards	1.00*	1.00	1	c
2000	A62	Raw milk	-0.04*	0.48*	2	a
2000	A63	Raw milk	0.70*	0.70*	2	a
2000	A85	Raw milk	0.94*	1.26*	2	a
2000	A87	Raw milk	1.827839	1.00*	2	a
2000	A88	Raw milk	0.50*	0.66*	2	a
2000	A7	Bethmal	1.00*	1.70	2	b
2000	A13	Cheese (Crottin de Chavignol)	1.6532125	1.48*	2	b
2000	A21	Cheese (Crottin de Chavignol)	1.00*	1.00*	2	b

Year of analysis	Sample n°	Product	Reference method (log CFU/g)	Alternative method (log CFU/g)	Category	Type
2000	A23	Cheese (Tomme du Nevet)	<1.00	<1.00	2	b
2000	A46	Munster	1.00*	<1.00	2	b
2000	A59	Camembert	1.56*	1.60	2	b
2000	A61	Bethmal	0.70*	<1.00	2	b
2000	A64	Reblochon	1.00*	1.00*	2	b
2000	A98	Ewe's raw milk cheese	<1.00	1.00*	2	b
2000	A25	Frozen sardines	1.00*	1.30*	3	a
2000	A35	Frozen shells	<1.00	<1.00	3	a
2000	A127	Cockles	<1.00	1.30*	3	a
2000	A128	Cockles	<1.00	<1.00	3	a
2000	A133	Sea almond	<1.00	<1.00	3	a
2000	A134	Clams	<1.00	<1.00	3	a
2000	A135	Cockles	<1.00	<1.00	3	a
2000	A136	Oysters	<1.00	<1.00	3	a
2000	A145	Clams	<1.00	<1.00	3	a
2000	A146	Pilchards	<1.00	<1.00	3	a
2000	A147	Mackerel	<1.00	<1.00	3	a
2000	A152	Mackerel	1.48*	1.30*	3	a
2000	A153	Cockles	1.18*	1.30*	3	a
2000	A154	Mussels	0.66*	1.00*	3	a
2000	A132	Smoked salmon	<1.00	<1.00	3	b
2000	A65	Red pepper	1.00*	1.60	4	a
2000	A70	Soya bean sprouts	<1.00	<1.00	4	a
2000	A129	Buckwheat seeds	<1.00	<1.00	4	a
2000	A131	Red peppers	1.18*	1.60	4	a
2000	A48	Frozen spinach puree	<1	<1	4	b
2000	A97	Frozen spinaches	1.48*	2.20	4	b
2000	A106	Frozen vegetable preparation for couscous	1.18*	1.48*	4	b
2000	A107	Frozen sti-fry vegetable assortment	<1.00	1.00*	4	b
2000	A109	Frozen vegetable preparation for ratatouille	<1.00	<1.00	4	b
2000	A130	Frozen spinaches	<1.00	1.60	4	b
2000	A115	Liquid egg product	1.54*	1.60	5	a
2000	A116	Liquid egg product	0.70*	1.60	5	a
2000	A117	Liquid egg product	1.54*	1.30*	5	a
2000	A118	Liquid egg product	1.18*	1.60	5	a
2000	A119	Liquid egg product	1.00*	1.30*	5	a
2000	A120	Liquid egg product	1.30*	1.78	5	a
2000	A121	Liquid egg product	1.18*	1.48*	5	a
2000	A122	Liquid egg product	1.60206	1.30*	5	a
2000	A123	Liquid egg product	1.00*	1.48*	5	a
2000	A124	Liquid egg product	1.18*	1.30*	5	a
2000	A126	Liquid egg product	1.40*	1.60	5	a

Year of analysis	Sample n°	Product	Reference method (log CFU/g)	Alternative method (log CFU/g)	Category	Type
2000	A9	Dehydrated chicken cream	<1.00	<1.00	5	c
2000	A36	Frozen goat's milk cheese pizza	<1.00	<1.00	5	c
2000	A41	Toasted cheese sandwich with ham	1.48*	1.60	5	c
2021	3976	Paella with meat and seafood	3.00*	5.40	5	c
2021	4290	Pellets for cat (beef/chicken meat)	2.04	1.30*	6	a
2015	4718	Pellets for dog (poultry)	1.60	<1.00	6	a
2015	4719	Pellets for cat (poultry)	1.00*	1.00*	6	a
2015	3672	Poultry flour	<1.00	<1.00	6	c
2015	3673	Lamb flour	<1.00	<1.00	6	c
2015	3674	Animal flour	<1.00	<1.00	6	c
2015	3675	Animal flour	<1.00	<1.60	6	c
2015	3906	Wipe (cheese industry)	<1.00	1.00*	7	a
2015	4011	Swab after cleaning (fish industry)	<1.00	<1.00	7	a
2015	4012	Swab after cleaning (fish industry)	<1.00	<1.00	7	a
2015	4013	Wipe after cleaning (fish industry)	<1.00	<1.00	7	a
2015	4014	Wipe after cleaning (fish industry)	<1.00	<1.00	7	a
2015	4015	Wipe after cleaning (fish industry)	<1.00	<1.00	7	a
2015	4006	Process water (fish industry)	<0.00	<0.00	7	b
2015	4007	Process water (fish industry)	<0.00	<0.00	7	b
2015	4008	Process water (fish industry)	<0.00	<0.00	7	b
2015	4009	Process water (fish industry)	<0.00	<0.00	7	b
2015	4010	Process water (fish industry)	<0.00	<0.00	7	b
2015	3676	Dusts from egg industry	<1.00	<1.00	7	c
2015	3677	Dusts	<1.00	<1.00	7	c
2015	3678	Dusts from dairy industry	<1.00	2.08	7	c
2015	3679	Dusts from dairy industry	<1.00	<1.00	7	c

### 3.1.1.4 Statistical interpretation

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

The Figures 1 to 7 show the data plotted for each individual category.

The Figure 8 shows the data plotted for all the products.

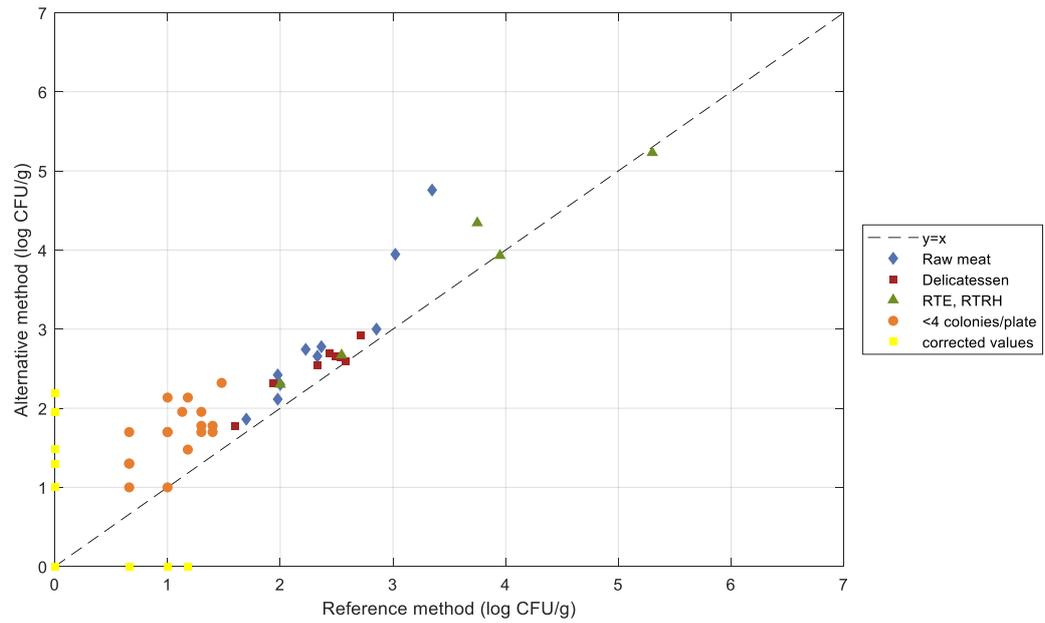
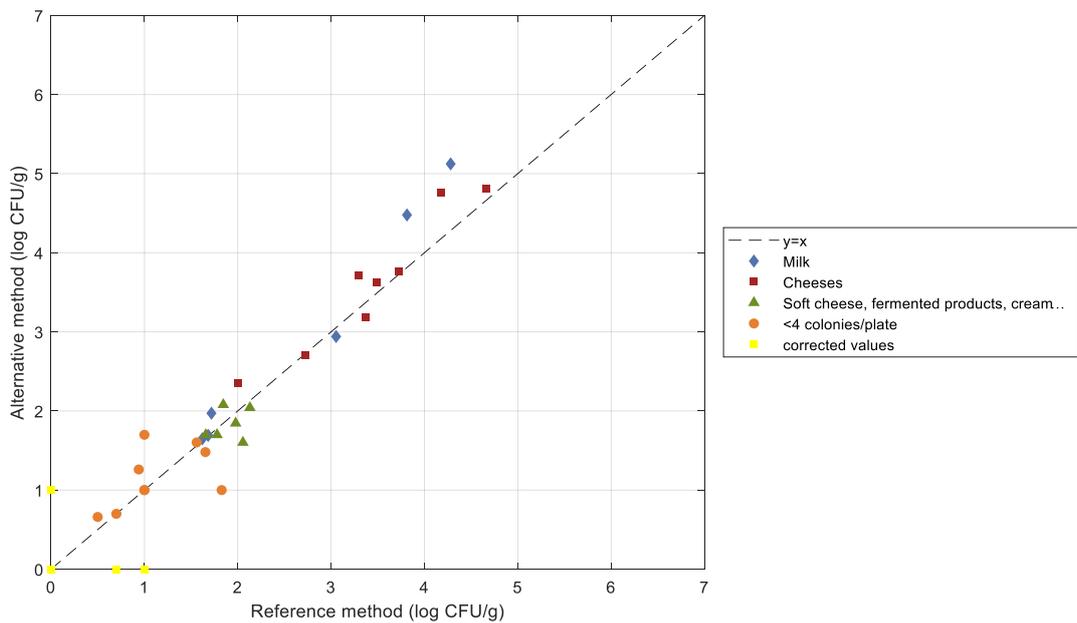
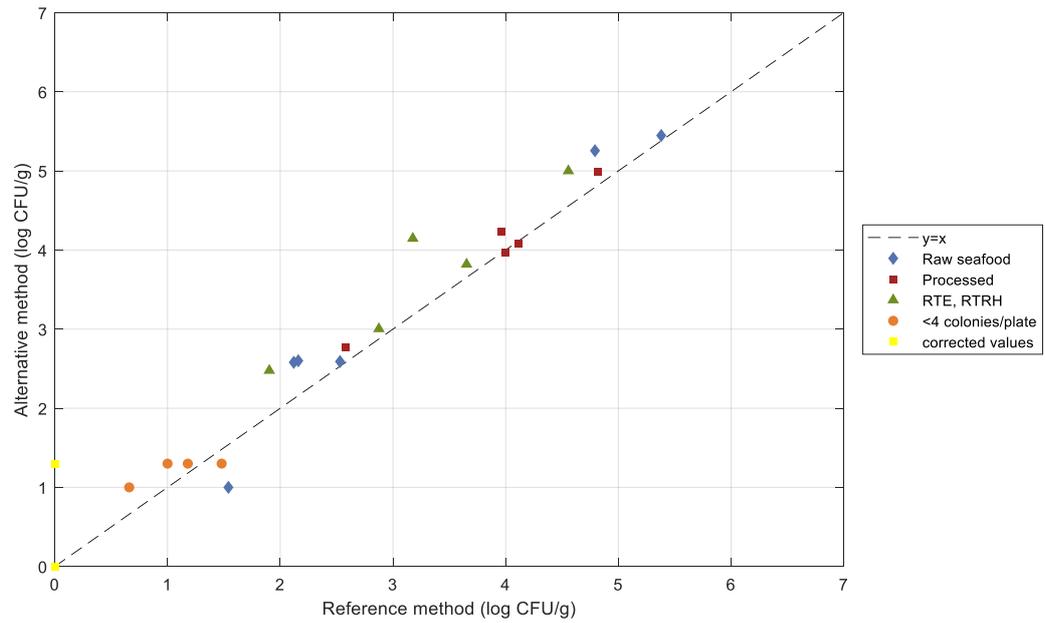
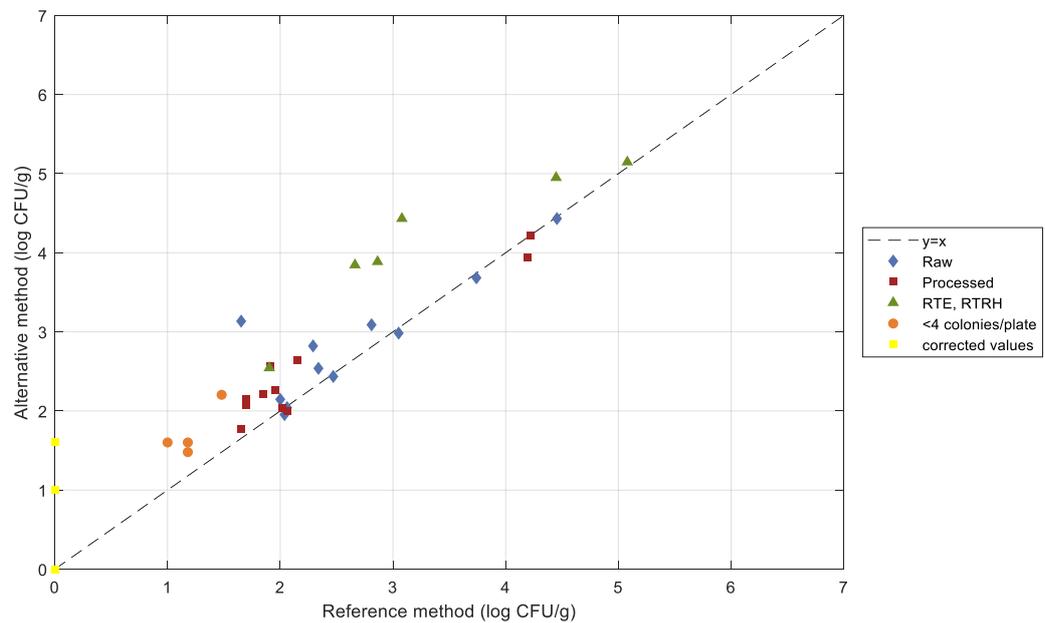
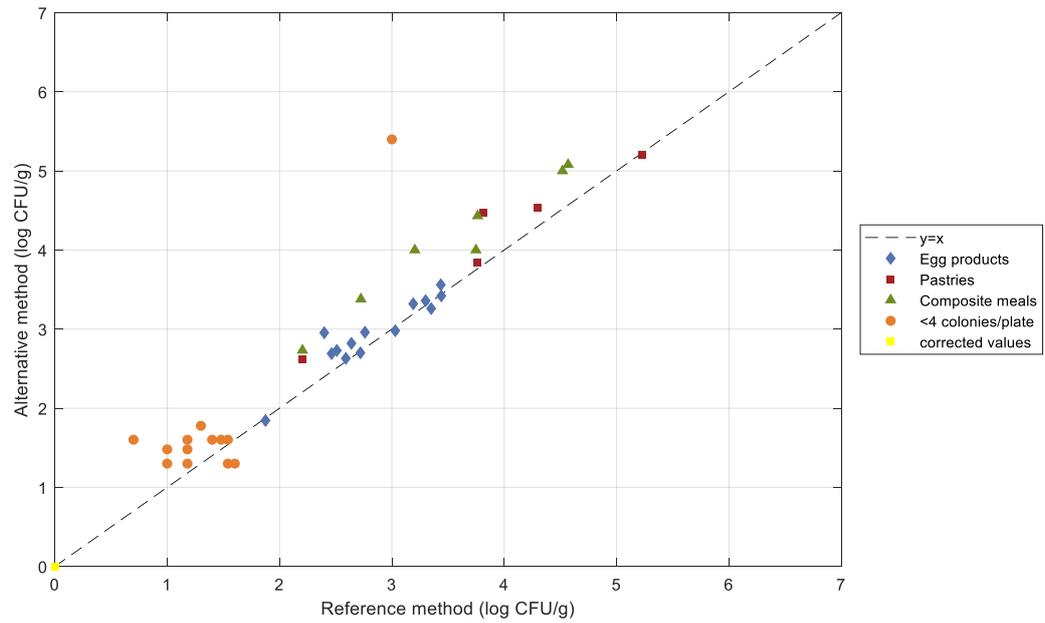
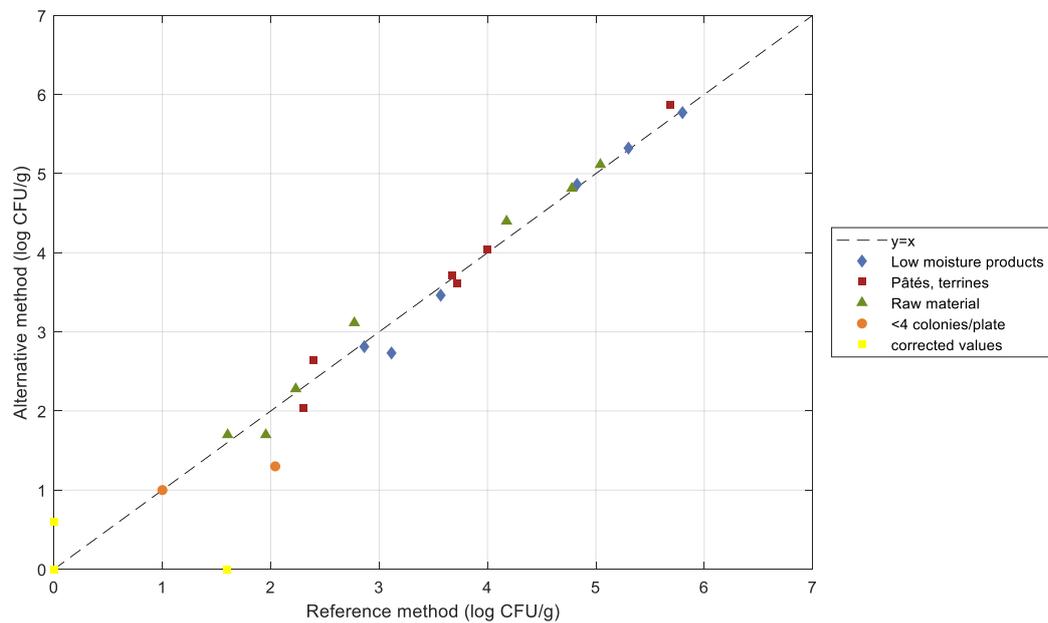
Figure 1 - Data plotted for the **Meat products**Figure 2 - Data plotted for **Dairy products**

Figure 3 - Data plotted for **Seafood**Figure 4 - Data plotted for **Vegetables**

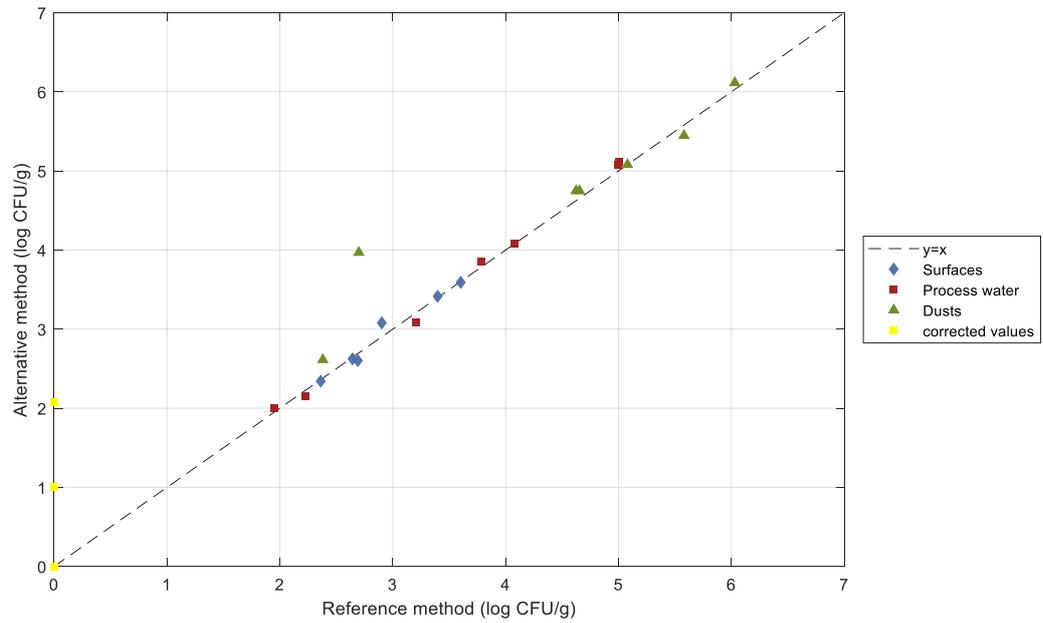
**Figure 5 - Data plotted for Egg products and composite foods**



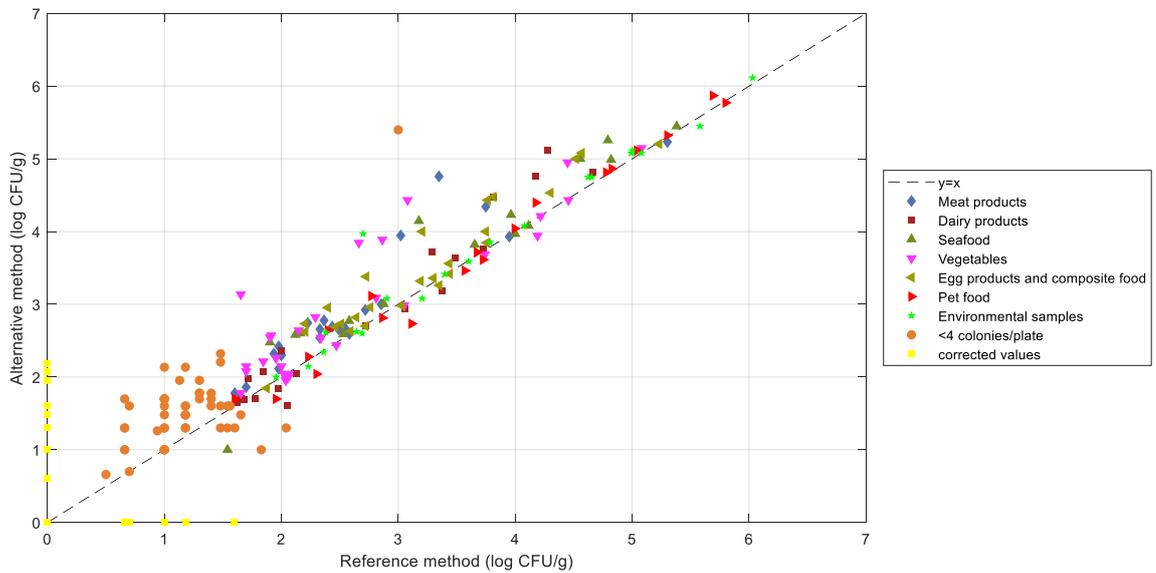
**Figure 6 - Data plotted for Pet food**



**Figure 7 - Data plotted for Environmental samples**



**Figure 8 - 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	Average difference $\bar{D}$ (Bias)	Standard deviation of differences SD	95% lower limit	95% upper limit
1 Meat products	23	0,31	0,32	-0,37	1,00
2 Dairy products	20	0,13	0,32	-0,54	0,81
3 Seafood	16	0,24	0,33	-0,50	0,97
4 Vegetables	28	0,34	0,46	-0,61	1,29
5 Egg products and composite food	26	0,26	0,27	-0,30	0,82
6 Pet food	19	0,01	0,18	-0,38	0,40
7 Environmental samples	20	0,09	0,29	-0,54	0,72
<b>All categories</b>	<b>152</b>	<b>0,21</b>	<b>0,34</b>	<b>-0,46</b>	<b>0,89</b>

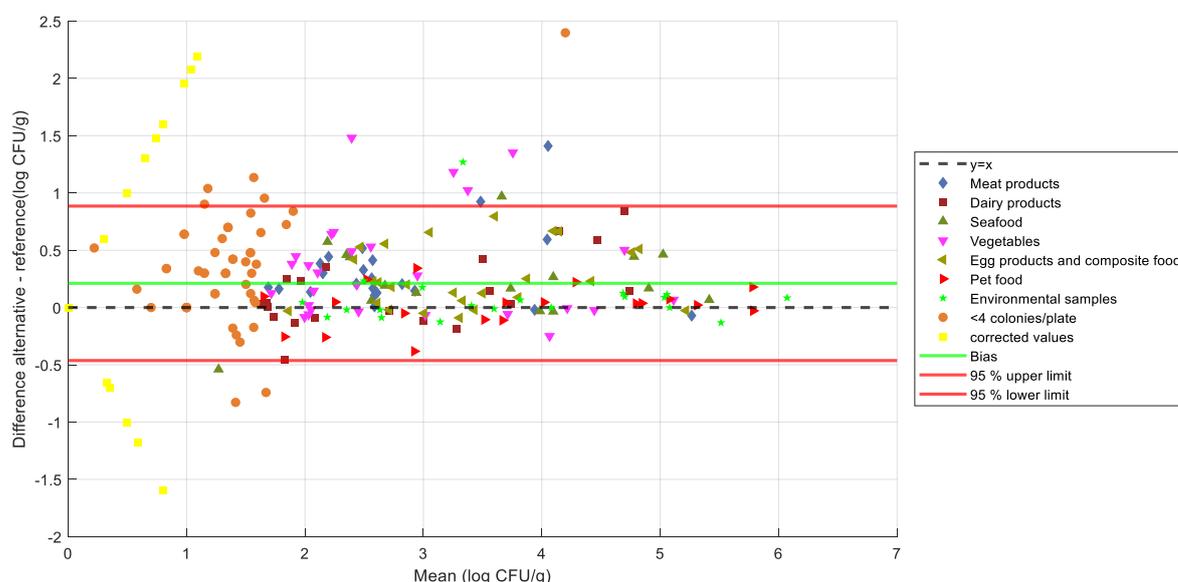
$\bar{D}$ : Average difference (Bias)

SD: Standard deviation of differences

A positive bias is obtained for all the categories tested and varies from 0.01 log CFU (Pet food) to 0,34 log CFU (vegetables). For all categories combined, the bias is 0.21 log CFU. This bias is probably linked to the high selectivity of the TBX medium used in the ISO 16649-2 method and the best performances of the Petrifilm tests.

The Bland-Altman difference plot for all the samples is given Figure 9.

Figure 9 – 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 - Analysis of the data out of the confidence limits**

Values in **green**: differences in favour of the alternative method

Values in **red**: differences in favour of the reference method

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

Categories	
1	Meat products
2	Dairy products
3	Seafood
4	Vegetables
5	Egg products and composite foods
6	Pet food
7	Environmental samples

Classification of the data	Category	Type	Sample No	Product	Reference method	Alternative method	Values before correction (Reference or/and alternative method)	Mean	Difference	Lower/Upper/limits
Interpretable results by both method	1	a	A26	Cockerel	3,02	3,95	/	3,48	0,92	-0.46 / 0.49
	1	a	A95	Chicken liver	3,35	4,76	/	4,05	1,41	
	3	a	A150	Pilchards	1,54	1,00	/	1,27	-0,54	
	3	c	2697	Salmon steak from Scotland	3,18	4,15	/	3,66	0,97	
	4	a	A76	Cabbage	1,65	3,13	/	2,39	1,48	
	4	c	2700	Potato purée	2,66	3,85	/	3,25	1,18	
	4	c	2701	RTE radish	2,86	3,89	/	3,37	1,02	
	4	c	2702	RTE carrot	3,08	4,43	/	3,76	1,35	
7	c	4303	Vacuum dusts (from dairy industry)	2,70	3,97	/	3,33	1,27		

Classification of the data	Category	Type	Sample No	Product	Reference method	Alternative method	Values before correction (Reference or/and alternative method)	Mean	Difference	Lower/Upper/limits
< 4 CFU/plate	1	a	A30	Cockerel	1,00	2,13	/	1,57	1,13	
	1	a	A33	Chicken legs	1,18	2,13	/	1,66	0,95	
	1	c	A38	Veal olive	0,66	1,70	/	1,18	1,04	
	2	a	A87	Raw milk	1,83	1,00	/	1,41	-0,83	
	5	a	A116	Liquid egg product	0,70	1,60	/	1,15	0,90	
	5	c	3976	Paella with meat and seafood	3,00	5,40	/	4,20	2,40	
	6	a	4290	Pellets for cat (beef/chicken meat)	2,04	1,30	/	1,67	-0,74	
< or > quantification limit	1	a	A10	Meat cutlet	1,18	0,00	1,00	0,59	-1,18	
	1	a	A24	Chicken gizzards	1,00	0,00	1,00	0,50	-1,00	
	1	a	A27	Chicken heart	0,00	1,95	1,00	0,98	1,95	
	1	a	A91	Chicken cutlet	1,18	0,00	1,00	0,59	-1,18	
	1	a	A111	Guinea fowl	0,00	2,19	1,00	1,09	2,19	
	1	b	A56	Sausage meat preparation	0,00	1,30	1,00	0,65	1,30	
	1	b	A57	Chipolatas	0,66	0,00	1,00	0,33	-0,66	
	1	b	A58	Chipolatas with aromatic herbs	0,00	1,48	1,00	0,74	1,48	
	1	b	A67	Sausage meat preparation	0,00	1,00	1,00	0,50	1,00	
	1	b	A69	Chipolatas	0,00	1,00	1,00	0,50	1,00	
	2	b	A46	Munster	1,00	0,00	1,00	0,50	-1,00	
	2	b	A61	Bethmal	0,70	0,00	1,00	0,35	-0,70	
	2	b	A98	Ewe's raw milk cheese	0,00	1,00	1,00	0,50	1,00	
	3	a	A127	Cockles	0,00	1,30	1,00	0,65	1,30	
	4	b	A107	Frozen sti-fry vegetable assortment	0,00	1,00	1,00	0,50	1,00	
	4	b	A130	Frozen spinaches	0,00	1,60	1,00	0,80	1,60	
	6	a	4718	Pellets for dog (poultry)	1,60	0,00	1,00	0,80	-1,60	
	7	a	3906	Wipe (cheese industry)	0,00	1,00	1,00	0,50	1,00	
7	c	3678	Dusts from dairy industry	0,00	2,08	1,00	1,04	2,08		

### 3.1.1.5 Discordant results

35 samples are outside of the 95% confidence limits. 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	1
	>UCL	8
	Total	9
<4 CFU/plate	<LCL	2
	>UCL	5
	Total	7
< or > quantification limits	<LCL	7
	>UCL	12
	Total	19
Total <LCL		10
Total >UCL		25
TOTAL		35

### 3.1.1.6 Conclusion

In all cases, except for environmental samples and pet food, there is a bias between the alternative method and the reference method, reflecting a better recovery of *E. coli* cells by the Petrifilm Select *E. coli* method.

**The relative trueness study of the alternative method is satisfying for all categories tested even if a positive bias is observed for the 3M Petrifilm Select *E. coli* method.**

### 3.1.2 Accuracy profile study

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

### 3.1.2.1 Matrices

Seven matrices were tested. A minimum of one type per category, and therefore 2 different batches, was selected, using 6 samples per type. 2 samples are contaminated at a low level, 2 at intermediate level, 2 at a high level. For each sample, 5 replicates (5 different test portions) were tested. The tested categories, types, matrices, 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	b- Delicatessen	Rillettes	<i>E. coli</i> 9	Goose rillettes	300 10 000 100 000
2	Dairy products	b- Cheese	Pasteurized cheese (Camembert)	<i>E. coli</i> 14	Raw milk	
3	Seafood	c- RTE, RTRH	Fish terrine	<i>E. coli</i> Ad228	Raw fish	
4	Vegetables	b- Processed	Grated carrots	<i>E. coli</i> 19	Grated carrots	
5	Egg products and composite food	b- Pastry	Pastry	<i>E. coli</i> 142	Liquid egg product	
6	Pet food	a- Low moisture product	Pellet for cat	<i>E. coli</i> 1	Pork meat	
7	Environmental samples	b- Process water	Process water	<i>E. coli</i> Ad1396	Tap water	

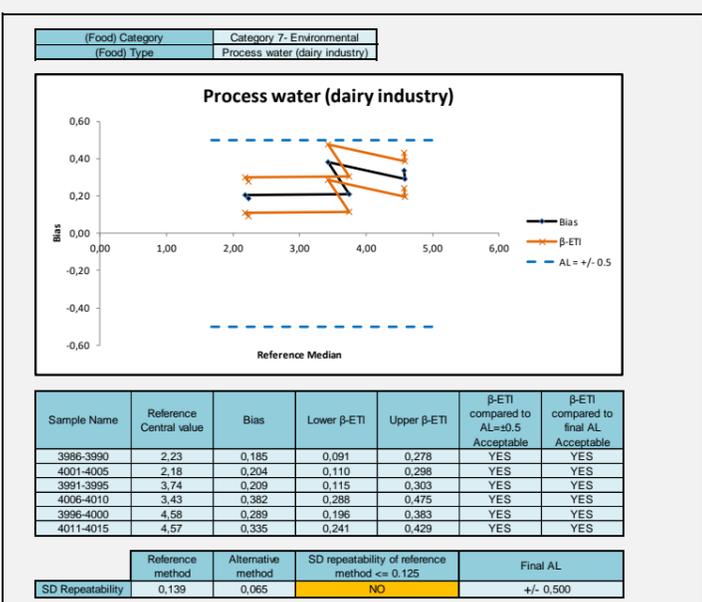
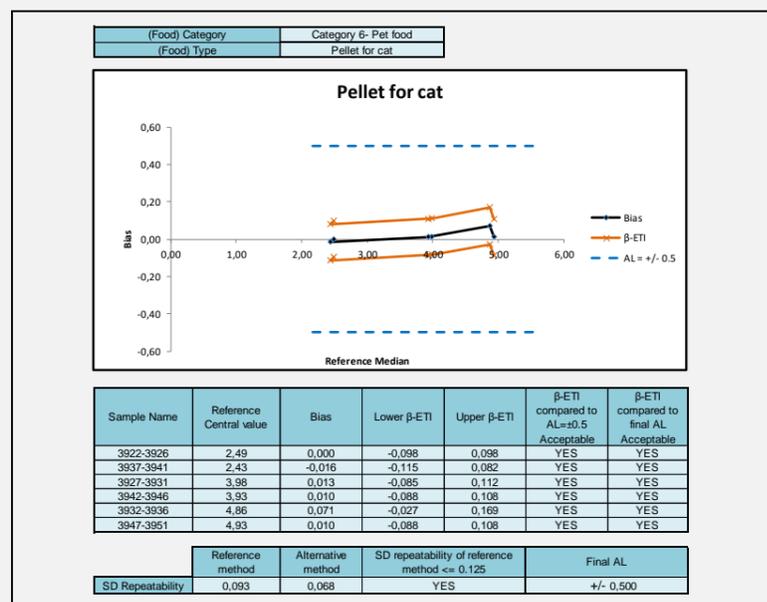
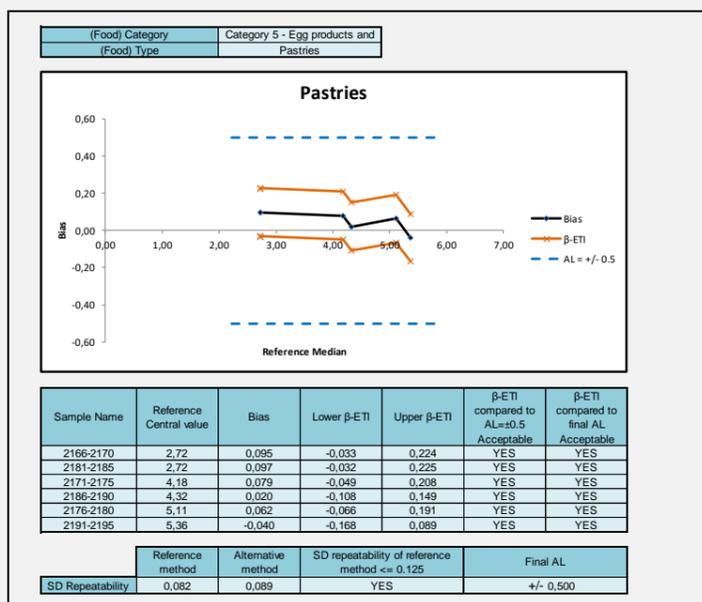
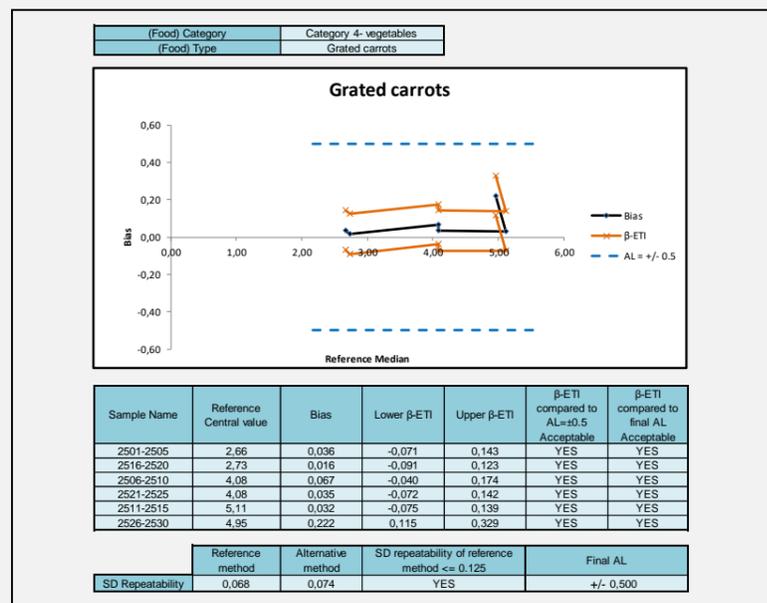
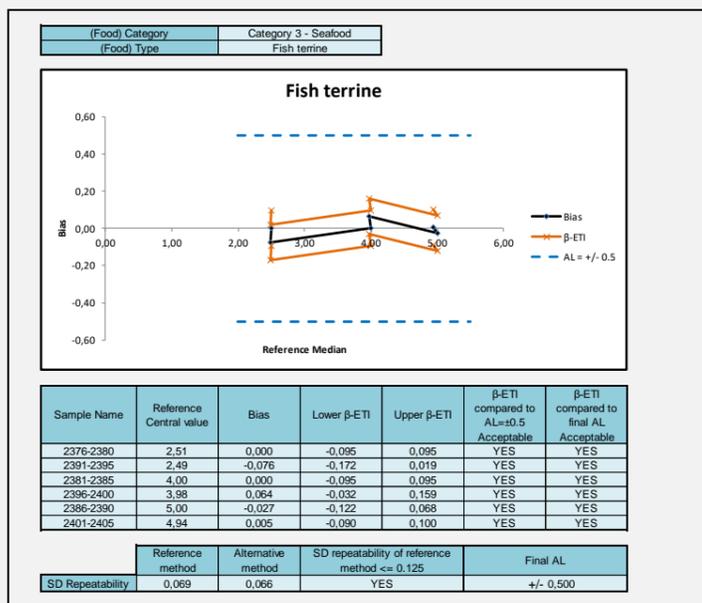
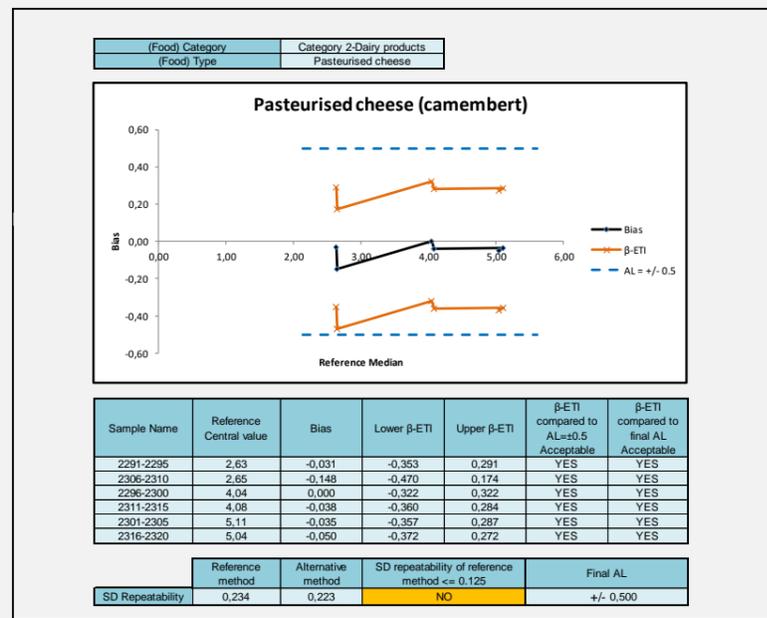
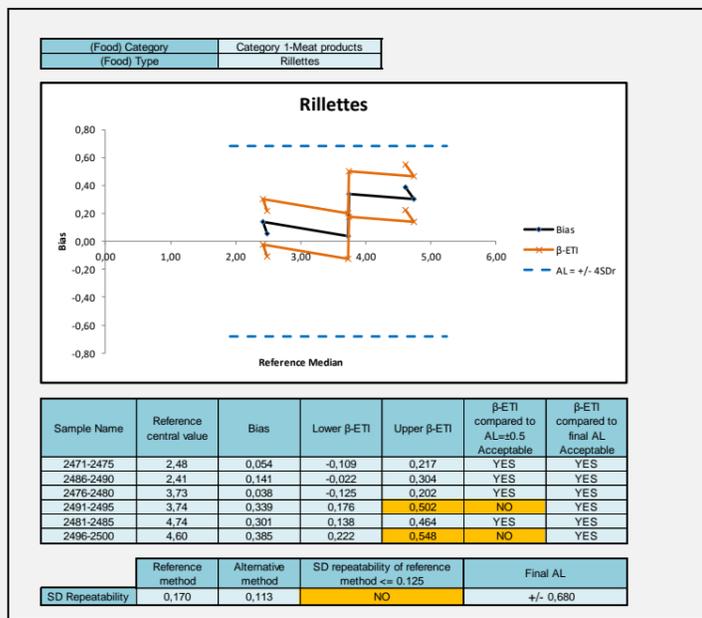
### 3.1.2.2 Calculation and interpretation

The raw data are provided in **Appendix 5**. The summary tables (in log CFU/g) and calculations are provided in **Appendix 6**. The statistical results and the accuracy profiles are provided Figure 10.

The calculations were done using the AP Calculation Tool MCS (Clause 6-1-3-3 calculation and interpretation of accuracy profile study) ver 31-07-2018 available on <http://standards.iso.org/iso/16140>.

The accuracy profiles are comprised within the Acceptability Limits fixed at  $\pm 0,5$  log CFU for all the tested matrices, except for rillettes for which the AL value is  $\pm 0.680$  log CFU.

Figure 10 – Accuracy profile



### 3.1.2.3 Conclusion

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

### 3.1.3 Inclusivity and exclusivity studies

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.

#### 3.1.3.1 Protocol

- **Inclusivity**: combining all the studies, 50 *E. coli* strains were tested. 31 *E. coli* strains were tested in duplicate (previous validation studies, and 19 *E. coli* strains were tested in simplicate (renewal study 2021) using the Petrifilm Select *E. coli* tests, the TBX and PCA media.
- **Exclusivity**: combining all the studies 30 non-target strains were tested. 21 strains were tested in duplicate and 9 in simplicate (renewal study 2021) using the Petrifilm Select *E. coli* tests, TBX and PCA media.

#### 3.1.3.2 Results

The raw data are provided in **Appendix 7**.

- **Inclusivity**: among the 50 target strains tested, 7 strains gave atypical white colonies (*E. coli* CIP 43888, *E. coli* 12, *E. coli* 91, *E. coli* Ad1383, *E. coli* Ad1386, *E. coli* Ad1999 and *E. coli* Ad1391) on both the Petrifilm Select *E. coli* tests and TBX. Four of the *E. coli* strains (*E. coli* Ad1383, *E. coli* Ad1386, *E. coli* Ad1999 and *E. coli* Ad1391) were confirmed as *E. coli* O157 using latex test, this serotype is known to be  $\beta$  glucuronidase negative and explains the fact that white colonies were observed on both medium. This also explains the result observed for the *E. coli* CIP 43888 strain. Additionally, 2 strains (*E. coli* 142 et *E. coli* 144) gave pale blue colonies on TBX and one strain (*E. coli* 118) was not able to grow on this media.

- **Exclusivity:** no growth was observed on Petrifilm Select *E. coli* tests with the non-target strains tested except for 6 strains: *Shigella flexneri* CIP 8248, *Escherichia fergusonii* Ad1381, *Enterobacter cloacae* Ad2851, *Cronobacter sakazakii* Ad2428, *Cronobacter condimentii* LMG2848 and *Citrobacter braakii* Ad2701 which showed atypical white colonies. Same result was observed on TBX for these strains. Four additional strains gave atypical white colonies (*Citrobacter freundii* 23, *Citrobacter diversus* 140, *Klebsiella pneumoniae* 114 et *Buttiauxella agrestis* 115) while no growth was observed on Petrifilm Select *E. coli* tests.

These results show a higher selectivity of the 3M Petrifilm SEC tests and could explain the positive bias observed for the relative trueness study.

**Based on these results the 3M Petrifilm Select *E. coli* method can be considered as specific and selective.**

### 3.1.4 Practicability

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

<b>Storage conditions, shelf-life and modalities of utilisation after first use</b>	The storage conditions and the expiration data are mentioned on the package. The modalities of utilization are described in the technical data sheet.		
<b>Time to result</b>	Steps	<b>Reference method</b>	<b>Alternative method</b>
	<b>Negative samples</b>		
	Analysis	Day 0	Day 0
	Enumeration	Day 1	Day 1
	<b>Presumptive positive or positive results</b>		
	Analysis	Day 0	Day 0
	Enumeration	Day 1	Day 1
<b>Common step with the reference method</b>	Initial suspension preparation		

The negative and positive results are available in one day for both the alternative and the reference methods.

## 3.2 Inter-laboratory study

*The inter-laboratory 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.*

### 3.2.1 Study organisation

The results of the inter-laboratory study run in January 2000 with pasteurized half-skimmed milk inoculated with *Escherichia coli* 94 were interpreted according to the EN ISO 16140-2:2016 standard using the Excel spread sheet available at <http://standards.iso.org/iso/16140> (AP Calculation tool ILS (clause 6.2.3 Calculation summary and interpretations of data) ver 14.03.2016). 14 collaborators were involved in the study.

### 3.2.2 Experimental parameters controls

#### 3.2.2.1 Sample stability

In order to evaluate the *Escherichia coli* strain behaviour during transport, bacterial counts were done at different time, i.e. inoculation time, after 24 h and 48 h of storage at 2°C. Results are reported in Table 8.

**Table 8 - *E. coli* count with the ISO 16649-2 method**  
(in log CFU/g)

	Level 1		Level 2		Level 3	
	Petrifilm Select <i>E. coli</i>	NF ISO 16649-2	Petrifilm Select <i>E. coli</i>	NF ISO 16649-2	Petrifilm Select <i>E. coli</i>	NF ISO 16649-2
Day 0	68	72	480	630	4 000	5 500
	59	69	470	680	6 200	2 700
Day 1	66	65	560	660	4 300	6 400
	60	35	570	680	5 200	5 600
Day 2	71	62	650	650	7 500	6 000
	62	65	640	610	6 100	7 300

**No evolution was observed during storage for 48 h at 3°C ± 2°C.**

### 3.2.3 Logistic conditions

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

**Table 9 - Sample temperatures at receipt**

Laboratories	Temperature measured at receipt (°C)	Receipt date	Analysis date
A	1,4	Day 1	Day 1
B	1,5	Day 2	Day 2
C	4,3	Day 1	Day 1
D	2,0	Day 1	Day 1
E	3,7	Day 1	Day 1
F	0,8	Day 1	Day 1
G	3,0	Day 1	Day 1
H	1,2	Day 1	Day 1
I	0,7	Day 1	Day 1
J	1,4	Day 2	Day 2
K	3,8	Day 1	Day 1
L	1,1	Day 1	Day 1
M	4,6	Day 1	Day 1
N	1,0	Day 1	Day 1

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. Note that two labs (B and J) received their samples at Day 2

### 3.2.4 Result analysis

The raw data are given in **Appendix 8**.

#### 3.2.4.1 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/mL)**

Level (log CFU/ml)	Reference method	Alternative method
L0 (0)	0	0
	0	0
L1(1 to 2)	1.86	1.84
	1.81	1.81
L2 (2 to 3)	2.64	2.74
	2.68	2.65
L3 (3 to 4)	3.38	3.81
	3.60	3.73

#### 3.2.4.2 Results obtained by the collaborators

Samples were sent to 14 collaborators.

##### **Mesophilic aerobic microflora**

The mesophilic aerobic microflora was done on the matrix with ISO 4833 method. The results varied from 50 to 600 CFU/ml.

##### **E. coli enumeration**

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

Table 11 - Summary of data (CFU/ml)

Collaborators	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	85	80	75	74	710	900	660	750	3500	5800	4600	5500
B	<1	<1	<1	<1	10	44	56	65	210	130	460	470	90	96	4200	3700
C	<1	<1	<1	<1	73	65	69	65	440	480	550	450	2400	4000	6400	5400
D	<1	<1	<1	<1	70	67	70	56	550	450	470	520	7400	4600	4700	5500
E	<1	<1	<1	<1	65	70	60	69	580	510	470	520	4300	4800	4400	5200
F	<1	<1	<1	<1	40	59	77	55	550	430	480	540	2300	3500	5500	4400
G	<1	<1	<1	<1	43	50	73	71	100	80	760	610	1500	40	4700	7000
H	<1	<1	<1	<1	72	73	69	72	370	250	650	480	970	1000	5500	4700
I	<1	<1	<1	<1	65	74	70	52	860	730	660	590	6000	6700	5900	6100
J	<1	<1	<1	<1	65	75	66	64	540	560	890	680	3100	3900	5000	6800
K	<1	<1	<1	<1	59	65	59	70	440	530	520	560	2300	2700	5300	5200
L	<1	<1	<1	<1	70	72	85	55	530	530	530	90	2000	2000	5400	5400
M	<1	<1	<1	<1	77	81	69	73	720	790	570	570	7700	6900	3500	5800
N	<1	<1	<1	<1	77	73	57	75	260	210	660	420	2600	1300	3600	5800

Table 12 - Summary of data (log CFU/ml)

Collaborators	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	1,929	1,903	1,875	1,869	2,851	2,954	2,820	2,875	3,544	3,763	3,663	3,740
B	<0	<0	<0	<0	1,000	1,643	1,748	1,813	2,322	2,114	2,663	2,672	1,954	1,982	3,623	3,568
C	<0	<0	<0	<0	1,863	1,813	1,839	1,813	2,643	2,681	2,740	2,653	3,380	3,602	3,806	3,732
D	<0	<0	<0	<0	1,845	1,826	1,845	1,748	2,740	2,653	2,672	2,716	3,869	3,663	3,672	3,740
E	<0	<0	<0	<0	1,813	1,845	1,778	1,839	2,763	2,708	2,672	2,716	3,633	3,681	3,643	3,716
F	<0	<0	<0	<0	1,602	1,771	1,886	1,740	2,740	2,633	2,681	2,732	3,362	3,544	3,740	3,643
G	<0	<0	<0	<0	1,633	1,699	1,863	1,851	2,000	1,903	2,881	2,785	3,176	1,602	3,672	3,845
H	<0	<0	<0	<0	1,857	1,863	1,839	1,857	2,568	2,398	2,813	2,681	2,987	3,000	3,740	3,672
I	<0	<0	<0	<0	1,813	1,869	1,845	1,716	2,934	2,863	2,820	2,771	3,778	3,826	3,771	3,785
J	<0	<0	<0	<0	1,813	1,875	1,820	1,806	2,732	2,748	2,949	2,833	3,491	3,591	3,699	3,833
K	<0	<0	<0	<0	1,771	1,813	1,771	1,845	2,643	2,724	2,716	2,748	3,362	3,431	3,724	3,716
L	<0	<0	<0	<0	1,845	1,857	1,929	1,740	2,724	2,724	2,724	1,954	3,301	3,301	3,732	3,732
M	<0	<0	<0	<0	1,886	1,908	1,839	1,863	2,857	2,898	2,756	2,756	3,886	3,839	3,544	3,763
N	<0	<0	<0	<0	1,886	1,863	1,756	1,875	2,415	2,322	2,820	2,623	3,415	3,114	3,556	3,763

Note that collaborator J proceeded to the enumeration of the TBX plates after 72 h incubation of the plates at 44°C instead of 48 h.

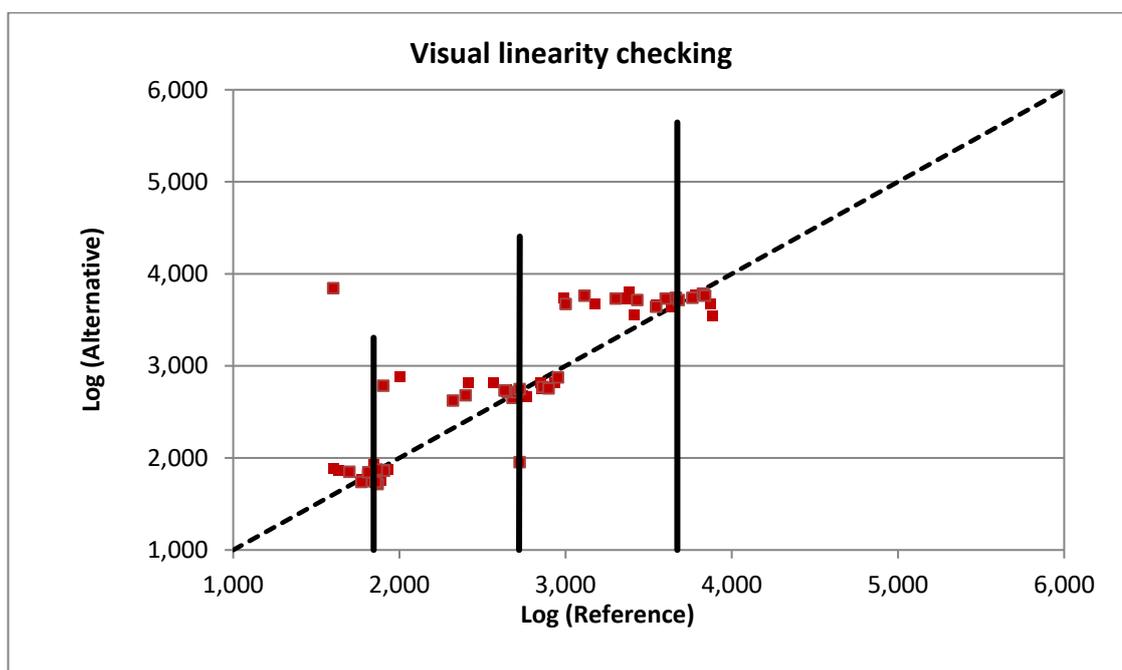
Finally, the results from 12 collaborators were taken into account for interpretation. Results from collaborators B and J were removed

### 3.2.5 Calculation and interpretation

#### 3.2.5.1 Visual linearity checking

The figure 11 shows the data points after  $\log_{10}$  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 11 - Visual linearity checking



#### 3.2.5.2 Accuracy profile calculation

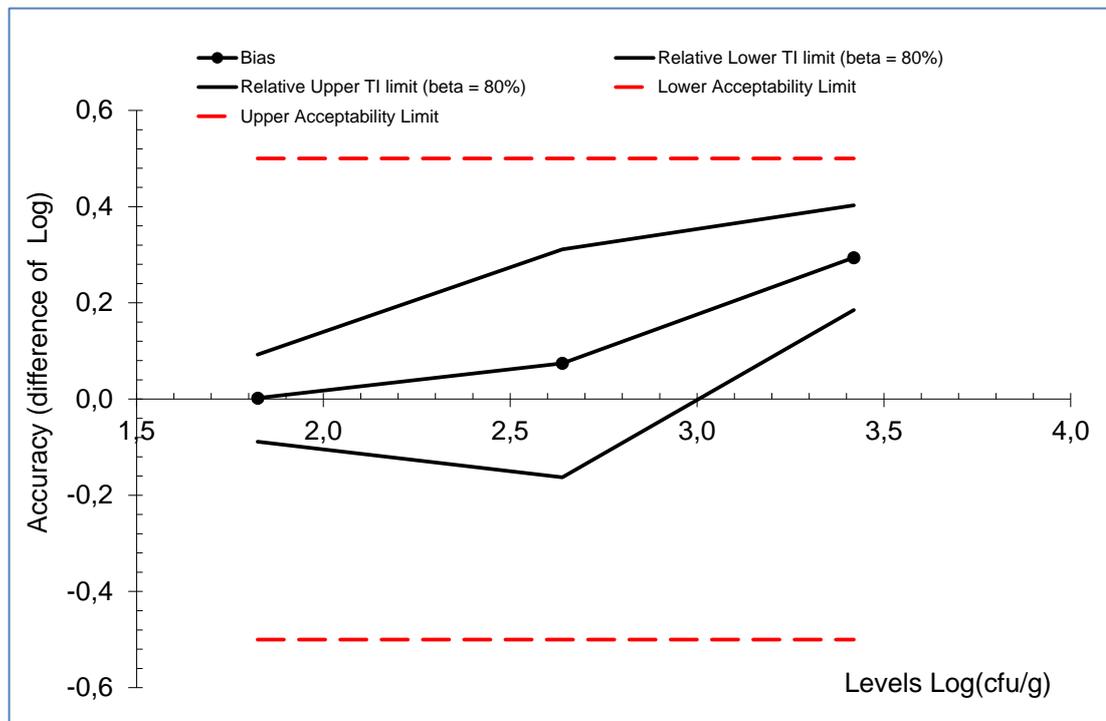
Statistical calculations were done according to the Excel spreadsheet available on <http://standards.iso.org/ISO/16140>. A summary of the statistical test is provided in Table 13.

**Table 13 - Summary of statistical tests**

<b>Accuracy profile</b>				<div style="border: 1px solid black; padding: 5px;">                 Application of clause 6.2.3                  Step 8: If any of the values for the <math>\beta</math>-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>					
Study Name	Petrifilm SEC						FAUX		
Date	2001								
Coordinator	Free text								
Tolerance probability (beta)	80%	80%	80%						
Acceptability limit in log (lambda)	0,50	0,50	0,50						
	<b>Alternative method</b>			<b>Reference method</b>					
Levels	Low	Medium	High	Low	Medium	High			
Target value	1,824	2,639	3,419						
Number of participants (K)	12	12	12	12	12	12			
Average for alternative method	1,826	2,714	3,713	1,824	2,639	3,419			
Repeatability standard deviation (sr)	0,067	0,168	0,081	0,043	0,063	0,339			
Between-labs standard deviation (sL)	0,000	0,050	0,000	0,070	0,264	0,335			
Reproducibility standard deviation (sR)	0,067	0,176	0,081	0,082	0,271	0,476			
Corrected number of dof	22,957	22,642	22,957	14,376	11,604	17,839			
Coverage factor	1,347	1,350	1,347						
Interpolated Student t	1,320	1,320	1,320						
Tolerance interval standard deviation	0,0686	0,1794	0,0825						
Lower TI limit	1,736	2,477	3,604						
Upper TI limit	1,916	2,950	3,822						
Bias	0,002	0,074	0,294						
Relative Lower TI limit (beta = 80%)	-0,089	-0,163	0,185						
Relative Upper TI limit (beta = 80%)	0,092	0,311	0,403						
Lower Acceptability Limit	-0,50	-0,50	-0,50						
Upper Acceptability Limit	0,50	0,50	0,50						
<b>New acceptability limits may be based on reference method pooled variance</b>									
Pooled repro standard dev of reference	0,320								

These values are collected in a graphical representation together with the acceptability limits (AL). This representation is given Figure 12.

**Figure 12 - Accuracy profile**



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

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

### 3.2.5.3 Conclusion

**The alternative method is equivalent to the reference method.**

## 3.3 General conclusion

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

- **259 samples were tested in the relative trueness study providing 152 interpretable results by both methods**, which clearly satisfied the required criteria for quantitative method comparison per ISO 16140-2;
- **The observed profiles are comprised within the AL.**
- **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.**
- **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 alternative method is considered equivalent to the reference method.**

Quimper, 29 October 2021

Lizaïg GOUGUET  
Technical Study Manager  
Validation of Alternative methods  
*Food Safety & Quality*



I hereby attest to the validation of the results of the analyses carried out under the COFRAC accreditation.

Maryse RANNOU  
Project Manager  
Validation of Alternative methods  
*Food Safety & Quality*



I hereby attest to the validation of the verification of the conformity of the report (opinion and interpretation).

**Appendix 1 – Flow diagram of the alternative method:  
Test 3M™ Petrifilm™ Select *E. coli***

Initial suspension 1/10 (solid product) according to ISO 6887 parts  
and ISO 18593 (environmental samples)

Sample for analysis (liquid product)

Adjust the pH between 6,5 and 7,5 if necessary



Decimal dilutions in peptone salt



Inoculation of the Petrifilm Test with 1 ml suspension



Incubation 24 h  $\pm$  2 h at 42°C  $\pm$  1°C



Enumeration of characteristic colonies

(dark green to blue with or without gas)

Retain the Petrifilm tests with less than 150 characteristic colonies

For environmental samples analyses after cleaning process, Lethen broth is used.



### Appendix 3 – Artificial contaminations of samples

#### Extension study 2015

Year of analysis	Sample N°	Product (French name)	Product	Inoculations			
				Strain		Injury applied	Injury evaluation
				Reference	Origin		
2015	4718	Croquettes de volaille pour chien	Pellets for dog (poultry)	<i>Escherichia coli</i> 9	Goose rillettes	HT 56°C 30min	0.89
2015	4719	Croquettes pour chat bœuf, poulet, foie	Pellets for cat (poultry)	<i>Escherichia coli</i> 123	Calf liver	HT 56°C 30min	1.23
2015	4720	Bouchées pour chien au veau et dès de carottes	Pâté for dog	<i>Escherichia coli</i> 2B	Pork	HT 56°C 30min	0.61
2015	4721	Terrine de poulet pour chat	Pâté for cat	<i>Escherichia coli</i> 9	Goose rillettes	HT 56°C 30min	0.89
2015	4908	Croquettes pour chien à la volaille	Pellets for dog (poultry)	<i>Escherichia coli</i> 21	Salted pork	TS+10%NaCl	0.50
2015	4909	Croquettes pour chat au bœuf	Pellets for cat (beef)	<i>Escherichia coli</i> 70	VSM	TS+10%NaCl	0.50
2015	4910	Pâté pour chien au bœuf et légumes	Pâté for dog (beef)	<i>Escherichia coli</i> 21	Salted pork	TS+10%NaCl	0.50
2015	4911	Pâté pour chat	Pâté for cat	<i>Escherichia coli</i> 21	Salted pork	TS+10%NaCl	0.50
2015	4975	Biscuits fourrés pour chien	Snack for dog	<i>Escherichia coli</i> 96	Turkey	HT 56°C 30min	0.50
2015	3842	Farine d'agneau	Lamb flour	<i>Escherichia coli</i> 13	Ground beef	HT 56°C 30min	0.40
2015	3843	Creton (farine animale)	Animal flour	<i>Escherichia coli</i> 13	Ground beef	HT 56°C 30min	0.40
2015	3844	Chiffonnette Microcut petits pois	Wipe (peas industry)	<i>Escherichia coli</i> 19	Grated carrots	HT 56°C 30min	1.20
2015	3845	Eau de cuisson petits pois	Process water (peas)	<i>Escherichia coli</i> 19	Grated carrots	HT 56°C 30min	1.20
2015	3846	Eau de rinçage casserole cuisson bechamel	Process water (bechamel sauce)	<i>Escherichia coli</i> Ad1393	Water source	HT 56°C 30min	0.40
2015	3906	Chiffonnette table découpe emmenthal	Wipe (cheese industry)	<i>Escherichia coli</i> Ad 1395	Water	HT 56°C 25 min	1.44
2015	4104	Lingette chariot stockage charcuterie	Wipe (delicatessen storage)	<i>Escherichia coli</i> 123	Veal liver	HT 50°C 5 min	0.42
2015	4105	Lingette caisse stockage saucisse	Wipe (delicatessen storage)	<i>Escherichia coli</i> 1	Pork	HT 50°C 10 min	0.40
2015	4106	Lingette plan cuisson riz sushi	Wipe (rice cooking)	<i>Escherichia coli</i> Ad1395	Water	HT 50°C 5 min	0.45
2015	4107	Lingette tapis parage après désinfection	Wipe after cleaning(fish industry)	<i>Escherichia coli</i> Ad1395	Water	HT 50°C 5 min	0.45
2015	4108	Eau de rinçage bac charcuterie	Process water (delicatessen)	<i>Escherichia coli</i> 123	Veal liver	HT 50°C 5 min	0.42
2015	4500	Farine de volaille	Animal flour	<i>Escherichia coli</i> 124	Veal liver	HT 50°C 5 min	0.42
2015	4565	Chiffonnette table découpe après nettoyage	Wipe after cleaning	<i>Escherichia coli</i> 125	Veal liver	HT 50°C 5 min	0.42
2015	4567	Poussières environnement laitier	Dusts	<i>Escherichia coli</i> Ad1828	Beef meat	HT 50°C 10 min	0.4

**Renewal study 2021**

Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				pH		Category	Type
				Strain	Origin	Injury protocol	Injury measurement	before	after		
2021	2691	Osso buco	Veal meat RTRH	<i>E. coli</i> Ad1828	Meat product	Seeding 72h 3°C±2°C	/	6,98	/	1	c
2021	2692	Noix de joue de bœuf	Beef meat RTRH	<i>E. coli</i> Ad1828	Meat product	Seeding 72h 3°C±2°C	/	6,92	/	1	c
2021	2693	Tajine de bœuf	Beef meat RTRH tajine	<i>E. coli</i> Ad2000	Meat product	Seeding 72h 3°C±2°C	/	6,94	/	1	c
2021	2694	Porc au caramel	Pork meat RTRH	<i>E. coli</i> Ad2000	Meat product	Seeding 72h 3°C±2°C	/	7,06	/	1	c
2021	4367	Filet de cabillaud	Fish filet	<i>E. coli</i> Ad1393	Spring water	Seeding 48h 3°C±2°C	/	7,01	/	3	a
2021	4368	Filet de lieu noir	Fish filet	<i>E. coli</i> Ad1393	Spring water	Seeding 48h 3°C±2°C	/	6,95	/	3	a
2021	3962	Crevettes décortiquées crues	Raw peeled shrimps	<i>E. coli</i> Ad1389	Sea water	Seeding 48h 3°C±2°C	/	7,07	/	3	b
2021	3963	Cocktail fruit de mer (moules, calamars, crevettes)	Seafood cocktail	<i>E. coli</i> Ad1389	Sea water	Seeding 48h 3°C±2°C	/	7,16	/	3	b
2021	3964	Saumon atlantique fumé	Smoked salmon	<i>E. coli</i> Ad1389	Sea water	Seeding 48h 3°C±2°C	/	7,02	/	3	b
2021	3965	Filet de maquereaux fumés au bois de hêtre	Smoked mackerel	<i>E. coli</i> Ad1384	Sea water	Seeding 48h 3°C±2°C	/	7	/	3	b
2021	3966	Saumon fumé	Smoked salmon	<i>E. coli</i> Ad1384	Sea water	Seeding 48h 3°C±2°C	/	7,05	/	3	b
2021	2695	Brandade de morue	Codfish brandade	<i>E. coli</i> Ad228	Seafood product	Seeding 72h 3°C±2°C	/	7,01	/	3	c
2021	2696	Coquille au saumon	Salmon shell	<i>E. coli</i> Ad228	Seafood product	Seeding 72h 3°C±2°C	/	6,94	/	3	c
2021	2697	Darnes de saumon d'Ecosse	Salmon steak from Scotland	<i>E. coli</i> Ad1401	Seafood product	Seeding 72h 3°C±2°C	/	6,99	/	3	c
2021	2698	Terrine de saumon	Salmon terrine	<i>E. coli</i> Ad1401	Seafood product	Seeding 72h 3°C±2°C	/	7,01	/	3	c
2021	2699	Purée de patates douces	Sweet potato purée	<i>E. coli</i> Ad19	Vegetable product	Seeding 72h 3°C±2°C	/	6,99	/	4	c
2021	2700	Ecrasé de pomme de terre	Potato purée	<i>E. coli</i> Ad19	Vegetable product	Seeding 72h 3°C±2°C	/	7,12	/	4	c
2021	2701	Radis apéro	RTE radish	<i>E. coli</i> Ad18	Environmental product	Seeding 72h 3°C±2°C	/	7,03	/	4	c
2021	2702	Baby carottes	RTE carrot	<i>E. coli</i> Ad18	Environmental product	Seeding 72h 3°C±2°C	/	6,96	/	4	c

Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				pH		Category	Type
				Strain	Origin	Injury protocol	Injury measurement	before	after		
2021	4076	Galettes épinards pignons	RTRH vegetables galette (spinach and pine nuts)	<i>E. coli</i> Ad1398	Water treatment plant	Seeding 48h 3°C±2°C	/	7,03	/	4	c
2021	4077	Galettes panées sarrasin poireaux boulgour	RTRH vegetables galette (leek, buckwheat and bulgur)	<i>E. coli</i> Ad1398	Water treatment plant	Seeding 48h 3°C±2°C	/	6,96	/	4	c
2021	3967	Religieuse café	Pastry (coffee flavor)	<i>E. coli</i> 142	Egg products	Seeding 48h 3°C±2°C	/	7,01	/	5	b
2021	3968	Tutti frutti	Pastry	<i>E. coli</i> 142	Egg products	Seeding 48h 3°C±2°C	/	7	/	5	b
2021	3969	Eclair chocolat	Pastry	<i>E. coli</i> 142	Egg products	Seeding 48h 3°C±2°C	/	6,96	/	5	b
2021	3970	Poire belle Hélène	Pastry (pear)	<i>E. coli</i> 143	Egg products	Seeding 48h 3°C±2°C	/	7,1	/	5	b
2021	3971	Tartelette pomme à la normande	Pastry (apple)	<i>E. coli</i> 143	Egg products	Seeding 48h 3°C±2°C	/	6,95	/	5	b
2021	3975	Paëlla volaille et fruit de mer	Paella with meat and seafood	<i>E. coli</i> 123	Meat product	Seeding 48h 3°C±2°C	/	7,01	/	5	c
2021	3976	Paëlla au poulet et fruit de mer	Paella with meat and seafood	<i>E. coli</i> 123	Meat product	Seeding 48h 3°C±2°C	/	6,98	/	5	c
2021	4361	Salade de poulet rôti	RTE salad with chicken	<i>E. coli</i> 9	Meat product	Seeding 48h 3°C±2°C	/	6,85	/	5	c
2021	4362	Salade à base de poulet	RTE salad with chicken	<i>E. coli</i> 9	Meat product	Seeding 48h 3°C±2°C	/	6,88	/	5	c
2021	4363	Filet de poulet et pommes de terre à la sarladaise	RTRH Chicken meat with potatoes and sauces	<i>E. coli</i> 9	Meat product	Seeding 48h 3°C±2°C	/	6,83	/	5	c
2021	4364	Hachis parmentier	RTRH beef meat with purée	<i>E. coli</i> 13	Beef meat	Seeding 48h 3°C±2°C	/	6,81	/	5	c
2021	4365	Lasagne bolognaise	RTRH food lasagne with bolognese	<i>E. coli</i> 13	Beef meat	Seeding 48h 3°C±2°C	/	6,91	/	5	c
2021	4366	Lasagne bolognaise	RTRH food lasagne with bolognese	<i>E. coli</i> 13	Beef meat	Seeding 48h 3°C±2°C	/	6,91	/	5	c
2021	4290	Croquettes pour chat bœuf/poulet	Pellets for cat (beef/chicken meat)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	6,98	/	6	a
2021	4291	Croquettes pour chien volailles/légumes verts	Pellets for dog (chicken meat and vegetables)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	6,95	/	6	a
2021	4292	Biscuit pour chien bœuf/poulet/agneau	Biscuit for dog (beef, chicken and lamb meat)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	7,03	/	6	a
2021	4293	Tablette au bœuf pour chien	Biscuit for dog (beef meat)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	7,01	/	6	a

Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				pH		Category	Type
				Strain	Origin	Injury protocol	Injury measurement	before	after		
2021	4294	Pâté pour chat bio poulet	Organic terrine for cat (chicken meat)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	6,99	/	6	b
2021	4295	Terrine au bœuf pour chien	Terrine for dog (beef meat)	<i>E. coli</i> Ad1915	Meat product	Spiking Heat treatment 56°C 10min	1,9	7,02	/	6	b
2021	4296	Matière première alimentation animal (farine) 42	Raw material for feed (flour)	<i>E. coli</i> Ad233	Meat product	Spiking Heat treatment 56°C 10min	1,4	7	/	6	c
2021	4297	Matière première alimentation animal (farine) 42	Raw material for feed (flour)	<i>E. coli</i> Ad234	Meat product	Spiking Heat treatment 56°C 10min	0,9	7	/	6	c
2021	4298	Matière première alimentation animal	Raw material for feed	<i>E. coli</i> Ad233	Meat product	Spiking Heat treatment 56°C 10min	1,4	6,98	/	6	c
2021	4299	Matière première alimentation animal	Raw material for feed	<i>E. coli</i> Ad234	Meat product	Spiking Heat treatment 56°C 10min	0,9	6,98	/	6	c
2021	4078	Eau de process fin de lavage sortie évaporateur (laiterie) n°7	Process water n°7 (Dairy products industry)	<i>E. coli</i> E17	Dairy products	Seeding 48h 3°C±2°C	/	7,06	/	7	b
2021	4079	Eau de process fin de lavage sortie évaporateur (laiterie) n°7	Process water n°7 (Dairy products industry)	<i>E. coli</i> E17	Dairy products	Seeding 48h 3°C±2°C	/	7,06	/	7	b
2021	4080	Eau de rinçage n°1 (industrie de produits carnés)	Rinse water n°1 (Meat products industry)	<i>E. coli</i> Ad2001	Dairy products	Seeding 48h 3°C±2°C	/	7,07	/	7	b
2021	4081	Eau de rinçage n°1 (industrie de produits carnés)	Rinse water n°1 (Meat products industry)	<i>E. coli</i> Ad2001	Dairy products	Seeding 48h 3°C±2°C	/	7,06	/	7	b
2021	4300	Poussière d'aspirateur de laiterie P51	Vacuum dusts (from dairy industry)	<i>E. coli</i> 14	Dairy product	Spiking Heat treatment 56°C 10min	0,6	6,86	/	7	c
2021	4301	Poussière d'aspirateur de laiterie P62	Vacuum dusts (from dairy industry)	<i>E. coli</i> 14	Dairy product	Spiking Heat treatment 56°C 10min	0,6	6,97	/	7	c
2021	4302	Poussière d'aspirateur de laiterie E241	Vacuum dusts (from dairy industry)	<i>E. coli</i> 14	Dairy product	Spiking Heat treatment 56°C 10min	0,6	7	/	7	c
2021	4303	Poussière d'aspirateur de laiterie A12	Vacuum dusts (from dairy industry)	<i>E. coli</i> 121	Dairy product	Spiking Heat treatment 56°C 10min	0,4	7,03	/	7	c

Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				pH		Category	Type
				Strain	Origin	Injury protocol	Injury measurement	before	after		
2021	4304	Poussière d'aspirateur de laiterie A32	Vacuum dusts (from dairy industry)	<i>E. coli</i> 121	Dairy product	Spiking Heat treatment 56°C 10min	0,4	6,97	/	7	c
2021	4305	Poussière d'aspirateur de laiterie A31	Vacuum dusts (from dairy industry)	<i>E. coli</i> 121	Dairy product	Spiking Heat treatment 56°C 10min	0,4	6,95	/	7	c

## Appendix 4 - Relative trueness study: raw data

MEAT PRODUCTS																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2000	A2	Toulouse sausages	/					<1	<1					<1	<1	1	b		
2000	A3	Stuffed roast	/					1,00*	1,00					1,70	1,70	1	c		
2000	A5	Frozen breast of chicken	/					1,40*	1,74					1,70	1,48	1	a		
2000	A6	Frozen breast of chicken	/					1,30*	1,65					1,95	1,90	1	a		
2000	A10	Meat cutlet	/					1,18*	1,18					<1	1,30	1	a		
2000	A11	Sausages	/					1,60	1,70					1,78	2,15	1	b		
2000	A12	Veal olive	/					2,00	1,95					2,30	2,28	1	c		
2000	A19	Pork tongue	/					1,30*	<1					1,78	1,95	1	a		
2000	A20	Pork breast without rind	/					2,00	2,00					2,30	2,60	1	a		
2000	A24	Chicken gizzards	/					1,00*	<1					<1	1,70	1	a		
2000	A26	Cockerel	/					3,02	3,10					3,95	3,98	1	a		
2000	A27	Chicken heart	/					<1	1,18					1,95	1,85	1	a		
2000	A28	Chicken gizzards	/					2,33	2,33					2,66	2,66	1	a		
2000	A30	Cockerel	/					1,00*	<1					2,13	2,08	1	a		
2000	A31	chicken	/					1,40*	1,60					1,78	1,78	1	a		
2000	A32	Cockerel	/					1,00*	0,66					1,70	2,04	1	a		
2000	A33	Chicken legs	/					1,18*	1,18					2,13	1,78	1	a		
2000	A38	Veal olive	/					0,66*	<1					1,70	1,30	1	c		
2000	A39	Veal olive	/					1,13*	1,36					1,95	1,85	1	c		
2000	A40	Sausage meat	/					<1	<1					<1	<1	1	b		
2000	A49	Merguez	/					2,58	2,51					2,59	2,64	1	b		
2000	A50	Merguez	/					2,49	2,53					2,66	2,63	1	b		
2000	A51	Merguez	/					2,72	2,71					2,92	2,97	1	b		
2000	A52	Merguez	/					2,53	2,56					2,64	2,53	1	b		
2000	A53	Merguez	/					2,44	2,39					2,69	2,67	1	b		
2000	A54	Sausage meat preparation	/					<1	<1					<1	1,00	1	b		
2000	A55	Sausage meat preparation	/					0,66*	1,00					1,00*	1,00	1	b		
2000	A56	Sausage meat preparation	/					<1	1,18					1,30*	<1	1	b		
2000	A57	Chipolatas	/					0,66*	0,66					<1	1,60	1	b		
2000	A58	Chipolatas with aromatic herbs	/					<1	1,30					1,48*	1,00	1	b		
2000	A66	Merguez	/					0,66*	1,40					1,30*	1,85	1	b		
2000	A67	Sausage meat preparation	/					<1	<1					1,00*	<1	1	b		
2000	A68	Toulouse sausages	/					0,66*	1,18					1,30*	1,48	1	b		
2000	A69	Chipolatas	/					<1	0,66					1,00*	<1	1	b		
2000	A71	Duck liver	/					2,85	2,92					3,00	2,94	1	a		
2000	A72	Chicken heart	/					2,23	2,04					2,74	2,76	1	a		
2000	A73	Chicken gizzards	/					1,00*	0,66					1,00	1,00	1	c		
2000	A74	Turkey cutlet	/					1,70	1,48					1,86	2,04	1	a		
2000	A75	Chipolatas with aromatic herbs	/					1,18*	0,66					1,48	1,60	1	b		
2000	A89	Guineafowl	/					1,98	2,00					2,42	2,57	1	a		
2000	A90	Cockerel	/					1,48*	1,88					2,32	2,21	1	a		
2000	A91	Chicken cutlet	/					1,18*	0,66					<1	1,00	1	a		
2000	A93	Chicken cutlet	/					1,98	1,90					2,11	2,20	1	a		
2000	A94	Turkey cutlet	/					2,37	2,43					2,78	2,75	1	a		
2000	A95	Chicken liver	/					3,35	3,37					4,76	4,71	1	a		
2000	A110	Chipolatas	/					2,33	2,32					2,54	2,41	1	b		

\* Analyses performed according to the COFRAC accreditation

MEAT PRODUCTS																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2000	A111	Guineafowl	/						<1	0,70						2,19	1,90	1	a
2000	A112	Toulouse sausages	/						1,94	2,02						2,32	2,28	1	b
2000	A113	Turkey cutlet	/						1,30*	1,48						1,70	1,48	1	a
2000	A114	Chicken cutlet	/						<1	<1						<1	1,00	1	a
2021	2691	Veal meat RTRH	Osso buco	10	37		350		2,54		10	44		470		2,67		1	c
				100	1					100	8								
2021	2692	Beef meat RTRH	Noix de joue de bœuf	100	88		8900		3,95		100	88		8500		3,93		1	c
				1000	10					1000	5								
2021	2693	Beef meat RTRH tajine	Tajine de bœuf	100	60		5600		3,75		1000	23		22000		4,34		1	c
				1000	2					10000	1								
2021	2694	Pork meat RTRH	Porc au caramel	1000	>150		200000		5,30		1000	>150		170000		5,23		1	c
				10000	20		N'			10000	17				N'				

DAIRY PRODUCTS																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2000	A7	Bethmal	/					1,00*	0,70					1,70	1,85	2	b		
2000	A8	Tomme de savoie	/					3,37	3,29					3,19	3,37	2	b		
2000	A13	Crottin de chavignol	/					1,65	1,18					1,48*	1,70	2	b		
2000	A14	Camembert	/					4,18	4,40					4,76	4,76	2	b		
2000	A15	Brie de meaux	/					3,29	3,44					3,71	3,74	2	b		
2000	A21	Crottin de chavignol	/					1,00*	<1					1,00*	<1	2	b		
2000	A22	Swiss cheese (raw milk)	/					1,66	1,48					1,70	2,08	2	c		
2000	A23	Tomme du nevet	/					<1	<1					<1	<1	2	b		
2000	A29	Raw milk	/					1,62	1,71					1,65	1,61	2	a		
2000	A37	Raw milk	/					1,68	1,68					1,69	1,61	2	a		
2000	A42	Camembert	/					4,66	4,67					4,81	4,73	2	b		
2000	A43	Raw milk	/					1,72	1,85					1,97	2,03	2	a		
2000	A44	Brie	/					3,49	3,50					3,63	3,56	2	b		
2000	A45	Farm Munster	/					3,73	3,76					3,76	3,80	2	b		
2000	A46	Munster	/					1,00*	<1					<1	<1	2	b		
2000	A59	Camembert	/					1,56*	1,77					1,60	1,00	2	b		
2000	A60	Munster	/					2,00	2,18					2,36	2,26	2	b		
2000	A61	Bethmal	/					0,70*	1,18					<1	<1	2	b		
2000	A62	Raw milk	/					-0,04	0,26					0,48*	0,26	2	a		
2000	A63	Raw milk	/					0,70*	0,50					0,70*	0,56	2	a		
2000	A64	Reblochon	/					1,00*	0,70					1,00*	1,30	2	b		
2000	A83	Raw milk	/					4,28	4,39					5,12	5,07	2	a		
2000	A84	Raw milk	/					3,05	3,02					2,94	2,85	2	a		
2000	A85	Raw milk	/					0,94*	1,26					1,26*	1,37	2	a		
2000	A86	Raw milk	/					3,81	3,90					4,48	4,52	2	a		
2000	A87	Raw milk	/					1,83	1,73					1,00*	1,11	2	a		
2000	A88	Raw milk	/					0,50*	0,66					0,66*	1,37	2	a		
2000	A96	Soft white cheese	/					2,73	2,65					2,70	2,37	2	b		
2000	A98	Ewe's raw milk cheese	/					<1	<1					1,00*	1,00	2	b		
2000	A99	Fermented milk	/					1,78	1,40					1,70	1,60	2	c		
2000	A100	Soft white cheese	/					1,98	1,70					1,85	1,30	2	c		
2000	A101	Fermented milk	/					2,06	2,10					1,60	1,30	2	c		
2000	A102	Cream	/					1,85	2,04					2,08	1,70	2	c		
2000	A103	Fresh cream	/					2,13	2,10					2,04	2,08	2	c		

SEAFOOD																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate								Category	Type
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/petrifilm		CFU/g		log CFU/g			
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		
2000	A4	Frozen fish croquettes	/						2,88	2,86						3,00	3,14	3	c
2000	A25	Frozen sardines	/						1,00*	1,30						1,30*	1,30	3	a
2000	A35	Frozen shells	/						<1	<1						<1	<1	3	a
2000	A127	Cockles	/						<1	<1						1,30*	1,30	3	a
2000	A128	Cockles	/						<1	<1						<1	1,00	3	a
2000	A132	Smoked salmon	/						<1	<1						<1	<1	3	b
2000	A133	Sea almond	/						<1	<1						<1	<1	3	a
2000	A134	Clams	/						<1	<1						<1	<1	3	a
2000	A135	Cockles	/						<1	<1						<1	<1	3	a
2000	A136	Oysters	/						<1	<1						<1	<1	3	a
2000	A145	Clams	/						<1	<1						<1	<1	3	a
2000	A146	Pilchards	/						<1	<1						<1	<1	3	a
2000	A147	Mackerel	/						<1	<1						<1	<1	3	a
2000	A148	Mussels	/						2,16	2,12						2,60	2,44	3	a
2000	A149	Clams	/						2,12	2,19						2,58	2,50	3	a
2000	A150	Pilchards	/						1,54	1,81						1,00	1,78	3	a
2000	A151	Mussels	/						2,53	2,42						2,59	2,59	3	a
2000	A152	Mackerel	/						1,48*	1,00						1,30*	1,30	3	a
2000	A153	Cockles	/						1,18*	1,30						1,30*	1,78	3	a
2000	A154	Mussels	/						0,66*	1,00						1,00*	1,30	3	a
2021	2695	Codfish brandade	Brandade de morue	10	8		80		1,90		10	31		300		2,48		3	c
				100	0				Ne		100	2							
2021	2696	Salmon shell	Coquille au saumon	100	48		4500		3,65		100	68		6600		3,82		3	c
				1000	2						1000	5							
2021	2697	Salmon steak from Scotland	Darnes de saumon d'Ecosse	100	15		1500		3,18		1000	13		14000		4,15		3	c
				1000	2						10000	2							
2021	2698	Salmon terrine	Terrine de saumon	1000	39		36000		4,56		1000	98		100000		5,00		3	c
				10000	1						10000	14							
2021	3962	Raw peeled shrimps	Crevettes décortiquées crues	10	38		380		2,58		10	59		590		2,77		3	b
				100	12						100	6							
2021	3963	Seafood cocktail	Cocktail fruit de mer (moules, calamars, crevettes)	100	99		10000		4,00		100	94		9300		3,97		3	b
				1000	11						1000	8							
2021	3964	Smoked salmon	Saumontlantique fumé	100	91		9200		3,96		1000	17		17000		4,23		3	b
				1000	10						10000	2							
2021	3965	Smoked mackerel	Filet de maquereaux fumés au bois de hêtre	1000	67		66000		4,82		1000	97		97000		4,99		3	b
				10000	6						10000	10							
2021	3966	Smoked salmon	Saumon fumé	1000	11		13000		4,11		1000	11		12000		4,08		3	b
				10000	3						10000	2							
2021	4367	Fish filet	Filet de cabillaud	1000	62		62000		4,79		1000	>150		180000		5,26		3	a
				10000	6						10000	18		N'		N'			
2021	4368	Fish filet	Filet de lieu noir	10000	21		240000		5,38		10000	29		280000		5,45		3	a
				100000	5						100000	2							

VEGETABLES																				
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				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g		
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2	
2000	A1	Buckwheat flour	/							2,02	2,04					2,04	2,00	4	b	
2000	A34	Buckwheat flour	/							1,65	1,66					1,78	1,78	4	b	
2000	A47	Frozen mashed potatoes	/							2,06	2,04					2,00	1,85	4	b	
2000	A48	Frozen spinach puree	/							<1	<1					<1	<1	4	b	
2000	A65	Red pepper	/							1,00*	<1					1,60	1,78	4	a	
2000	A70	Soya bean sprouts	/							<1	<1					<1	<1	4	a	
2000	A76	Cabbage	/							1,65	1,74					3,13	3,11	4	a	
2000	A77	Endive salad	/							2,81	2,79					3,09	2,98	4	a	
2000	A78	Green pepper	/							2,47	2,34					2,44	2,36	4	a	
2000	A79	Red pepper	/							2,04	2,02					1,95	2,16	4	a	
2000	A80	Parsley	/							3,05	3,05					2,98	3,02	4	a	
2000	A81	Radish	/							2,06	1,93					2,04	2,00	4	a	
2000	A82	Potatoes	/							2,00	1,98					2,15	2,08	4	a	
2000	A92	Frozen spinaches	/							1,85	1,60					2,21	2,26	4	b	
2000	A97	Frozen spinaches	/							1,48*	1,54					2,20	2,36	4	b	
2000	A104	Frozen Brussels sprouts	/							1,70	1,78					2,08	2,16	4	b	
2000	A105	Frozen sti-fry vegetable assortment	/							1,70	1,40					2,15	2,04	4	b	
2000	A106	Frozen vegetable preparation for couscous	/							1,18*	1,00					1,48*	1,78	4	b	
2000	A107	Frozen sti-fry vegetable assortment	/							<1	1,00					1,00*	1,00	4	b	
2000	A108	Frozen spinaches	/							1,95	1,74					2,26	1,95	4	b	
2000	A109	Frozen vegetable preparation for ratatouille	/							<1	<1					<1	1,00	4	b	
2000	A129	Buckwheat seeds	/							<1	<1					<1	<1	4	a	
2000	A130	Frozen spinaches	/							<1	<1					1,60	1,48	4	b	
2000	A131	Red peppers	/							1,18*	1,40					1,60	1,48	4	a	
2000	A137	Stir-fry vegetable assortment	/							2,15	2,21					2,64	2,66	4	b	
2000	A138	Brussels sprouts	/							2,34	2,24					2,54	2,64	4	a	
2000	A139	Spinaches	/							2,29	2,18					2,82	2,71	4	a	
2000	A140	Vegetable preparation for couscous	/							1,91	1,74					2,57	2,59	4	b	
2000	A141	Frozen vegetable preparation for couscous	/							4,22	4,33					4,21	4,23	4	b	
2000	A142	Brussels sprouts	/							4,45	4,62					4,43	4,54	4	a	
2000	A143	Spinaches	/							3,74	3,74					3,68	3,75	4	a	
2000	A144	Stir-fry vegetable assortment	/							4,19	4,08					3,94	3,86	4	b	
2021	2699	Sweet potato purée	Purée de patates douces	10	8		80			1,90		10	36		350		2,54		4	c
				100	0					Ne		100	2							
2021	2700	Potato purée	Ecrasé de pomme de terre	10	47		460			2,66		100	70		7000		3,85		4	c
				100	4							1000	7							

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VEGETABLES																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2021	2701	RTE radish	Radis apéro	100	8		730		2,86		100	78		7700		3,89		4	c
				1000	0					1000	7								
2021	2702	RTE carrot	Baby carottes	100	13		1200		3,08		1000	29		27000		4,43		4	c
				1000	0					10000	1								
2021	4076	RTRH vegetables galette (spinach and pine nuts)	Gallettes épinards pignons	1000	25		28000		4,45		1000	87		89000		4,95		4	c
				10000	6					10000	11								
2021	4077	RTRH vegetables galette (leek, buckwheat and bulgur)	Gallettes panées sarrasin poireaux boulgour	1000	126		120000		5,08		1000	132		140000		5,15		4	c
				10000	11					10000	22								

EGG PRODUCTS AND COMPOSITE FOOD																			
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				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2000	A9	Dehydrated chicken cream	/					<1	<1					<1	<1	5	c		
2000	A16	Liquid egg product	/					2,40	2,95					2,95	3,00	5	a		
2000	A17	Liquid egg product	/					3,44	3,32					3,56	3,50	5	a		
2000	A18	Liquid egg product	/					2,46	2,54					2,69	2,80	5	a		
2000	A36	Frozen goat's milk cheese pizza	/					<1	<1					<1	<1	5	c		
2000	A41	Toasted cheese sandwich with ham	/					1,48*	1,40					1,60	1,48	5	c		
2000	A115	Liquid egg product	/					1,54*	1,60					1,60	1,60	5	a		
2000	A116	Liquid egg product	/					0,70*	1,18					1,60	1,60	5	a		
2000	A117	Liquid egg product	/					1,54*	1,18					1,30*	1,00	5	a		
2000	A118	Liquid egg product	/					1,18*	1,00					1,60	1,60	5	a		
2000	A119	Liquid egg product	/					1,00*	1,48					1,30*	1,60	5	a		
2000	A120	Liquid egg product	/					1,30*	1,48					1,78	1,60	5	a		
2000	A121	Liquid egg product	/					1,18*	1,30					1,48*	1,70	5	a		
2000	A122	Liquid egg product	/					1,60	1,40					1,30*	1,78	5	a		
2000	A123	Liquid egg product	/					1,00*	1,30					1,48*	1,70	5	a		
2000	A124	Liquid egg product	/					1,18*	1,18					1,30*	1,48	5	a		
2000	A125	Liquid egg product	/					1,88	1,40					1,85	1,90	5	a		
2000	A126	Liquid egg product	/					1,40*	1,18					1,60	1,60	5	a		
2000	A155	Liquid egg product	/					2,76	2,81					2,96	2,91	5	a		
2000	A156	Liquid egg product	/					3,44	3,42					3,42	3,45	5	a		
2000	A157	Liquid egg product	/					3,35	3,48					3,26	3,36	5	a		
2000	A158	Liquid egg product	/					3,30	3,24					3,36	3,45	5	a		
2000	A159	Liquid egg product	/					2,51	2,62					2,73	2,73	5	a		
2000	A160	Liquid egg product	/					3,19	3,26					3,32	3,26	5	a		
2000	A161	Liquid egg product	/					2,59	2,63					2,63	2,72	5	a		
2000	A162	Liquid egg product	/					2,64	2,65					2,82	2,86	5	a		
2000	A163	Liquid egg product	/					2,72	2,71					2,70	2,71	5	a		
2000	A164	Liquid egg product	/					3,03	3,02					2,98	3,04	5	a		
2021	3967	Pastry (coffee flavor)	Religieuse café	10	16		160	2,20		10	43		420	2,62		5	b		
				100	1					100	3								
2021	3968	Pastry	Tutti frutti	100	54		5700	3,76		100	69		7000	3,85		5	b		
				1000	9					1000	8								
2021	3969	Pastry	Eclair chocolat	100	70		6500	3,81		1000	31		30000	4,48		5	b		
				1000	2					10000	2								
2021	3970	Pastry (pear)	Poire belle Hélène	1000	21		20000	4,30		1000	35		34000	4,53		5	b		
				10000	1					10000	2								
2021	3971	Pastry (apple)	Tartelette pomme à la normande	10000	18		170000	5,23		10000	16		160000	5,20		5	b		
				100000	1					100000	2								
2021	3975	Paëlla with meat and seafood	Paëlla volaille et fruit de mer	1000	38		37000	4,57		1000	122		120000	5,08		5	c		
				10000	3					10000	9								
2021	3976	Paëlla with meat and seafood	Paëlla au poulet et fruit de mer	1000	2		2000*	3,00*		1000	>150		250000	5,40		5	c		
				10000	0					10000	25		N'						

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EGG PRODUCTS AND COMPOSITE FOOD																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2021	4361	RTE salad with chicken	Salade de poulet roti	10	16		160		2,20		10	56		540		2,73		5	c
				100	2					100	3								
2021	4362	RTE salad with chicken	Salade à base de poulet	100	16		1600		3,20		100	95		10000		4,00		5	c
				1000	2					1000	18								
2021	4363	RTRH Chicken meat with potatoes and sauces	Filet de poulet et pommes de terre à la saladaise	100	62		5800		3,76		100	>150		27000		4,43		5	c
				1000	2					1000	27		N'	N'					
2021	4364	RTRH beef meat with purée	Hachis parmentier	10	55		530		2,72		10	>150		2400		3,38		5	c
				100	3					100	24		N'	N'					
2021	4365	RTRH food lasagne with bolognese	Lasagne bolognaise	100	61		5600		3,75		100	103		10000		4,00		5	c
				1000	1					1000	11								
2021	4366	RTRH food lasagne with bolognese	Lasagne bolognaise	1000	33		33000		4,52		1000	100		100000		5,00		5	c
				10000	3					10000	11								

PET FOOD																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2015	4718	Pellets for dog (poultry)	/					1,60	2,00							<1,00	1,00	6	a
2015	4719	Pellets for cat (poultry)	/					1,00*	<1,00							1,00*	<1,00	6	a
2015	4720	Pâté for dog	/					3,72	3,81							3,61	3,69	6	b
2015	4721	Pâté for cat	/					2,40	2,43							2,64	2,81	6	b
2015	4908	Pellets for dog (poultry)	/					2,86	2,79							2,81	2,82	6	a
2015	4909	Pellets for cat (beef)	/					3,57	3,51							3,46	3,64	6	a
2015	4910	Pâté for dog (beef)	/					3,67	3,76							3,72	3,58	6	b
2015	4911	Pâté for cat	/					4,00	4,04							4,04	3,90	6	b
2015	4975	Snack for dog	/					3,11	3,04							2,73	2,63	6	a
2015	3672	Poultry flour	/					<1,00	<1,00							<1,00	<1,00	6	c
2015	3673	Lamb flour	/					<1,00	<1,00							<1,00	<1,00	6	c
2015	3674	Animal flour	/					<1,00	<1,00							<1,00	<1,00	6	c
2015	3675	Animal flour	/					<1,00	<1,00							<1,60	<1,00	6	c
2015	3842	Lamb flour	/					1,60	1,60							1,70	1,60	6	c
2015	3843	Animal flour	/					1,95	1,78							1,70	1,60	6	c
2015	4500	Animal flour	/					2,23	2,45							2,28	2,28	6	c
2021	4290	Pellets for cat (beef/chicken meat)	Croquettes pour chat bœuf/poulet	10	10		110	2,04		10	2		20		1,30*		6	a	
				100	2					100	0								
2021	4291	Pellets for dog (chicken meat and vegetables)	Croquettes pour chien volailles/légumes verts	100	>150		67000	4,83		100	>150		73000		4,86		6	a	
				1000	67		N'	N'		1000	73		N'		N'				
2021	4292	Biscuit for dog (beef, chicken and lamb meat)	Biscuit pour chien bœuf/poulet/agneau	1000	>150		200000	5,30		1000	>150		210000		5,32		6	a	
				10000	20		N'	N'		10000	21		N'		N'				
2021	4293	Biscuit for dog (beef meat)	Tablette au bœuf pour chien	1000	>150		630000	5,80		1000	>150		590000		5,77		6	a	
				10000	63		N'	N'		10000	59		N'		N'				
2021	4294	Organic terrine for cat (chicken meat)	Pâté pour chat bio poulet	10	21		200	2,30		10	10		110		2,04		6	b	
				100	1					100	2								
2021	4295	Terrine for dog (beef meat)	Terrine au bœuf pour chien	1000	>150		490000	5,69		1000	>150		740000		5,87		6	b	
				10000	49		N'	N'		10000	74		N'		N'				
2021	4296	Raw material for feed (flour)	Matière première alimentation animal (farine) 42	10	60		590	2,77		100	13		1300		3,11		6	c	
				100	5					1000	1								
2021	4297	Raw material for feed (flour)	Matière première alimentation animal (farine) 42	1000	56		60000	4,78		1000	67		65000		4,81		6	c	
				10000	10					10000	4								
2021	4298	Raw material for feed	Matière première alimentation animal	100	151		15000	4,18		1000	26		25000		4,40		6	c	
				1000	9					10000	1								
2021	4299	Raw material for feed	Matière première alimentation animal	1000	120		110000	5,04		1000	137		130000		5,11		6	c	
				10000	5					10000	10								

\* Analyses performed according to the COFRAC accreditation

ENVIRONMENTAL SAMPLES																			
Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrifilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2015	3676	Dusts from egg industry	/															7	c
2015	3677	Dusts	/															7	c
2015	3678	Dusts from dairy industry	/															7	c
2015	3679	Dusts from dairy industry	/															7	c
2015	3844	Wipe (peas industry)	/															7	a
2015	3845	Process water (peas)	/															7	b
2015	3846	Process water (bechamel sauce)	/															7	b
2015	3906	Wipe (cheese industry)	/															7	a
2015	4006	Process water (fish industry)	/															7	b
2015	4007	Process water (fish industry)	/															7	b
2015	4008	Process water (fish industry)	/															7	b
2015	4009	Process water (fish industry)	/															7	b
2015	4010	Process water (fish industry)	/															7	b
2015	4011	Swab after cleaning (fish industry)	/															7	a
2015	4012	Swab after cleaning (fish industry)	/															7	a
2015	4013	Wipe after cleaning(fish industry)	/															7	a
2015	4014	Wipe after cleaning(fish industry)	/															7	a
2015	4015	Wipe after cleaning(fish industry)	/															7	a
2015	4104	Wipe (delicatessen storage)	/															7	a
2015	4105	Wipe (delicatessen storage)	/															7	a
2015	4106	Wipe (rice cooking)	/															7	a
2015	4107	Wipe after cleaning(fish industry)	/															7	a
2015	4108	Process water (delicatessen)	/															7	b
2015	4565	Wipe after cleaning	/															7	a
2015	4567	Dusts	/															7	c
2021	4078	Process water n°7 (Dairy products industry)	Eau de process fin de lavage sortie évaporateur (laiterie) n°7	100	63		6100		3,79		100	70		7100		3,85		7	b
				1000	4							1000	8						
2021	4079	Process water n°7 (Dairy products industry)	Eau de process fin de lavage sortie évaporateur (laiterie) n°7	100	114		12000		4,08		100	111		12000		4,08		7	b
				1000	16							1000	22						
2021	4080	Rinse water n°1 (Meat products industry)	Eau de rinçage n°1 (industrie de produits carnés)	1000	97		98000		4,99		1000	121		120000		5,08		7	b
				10000	11							10000	15						

\* Analyses performed according to the COFRAC accreditation

## ENVIRONMENTAL SAMPLES

Year of analysis	Sample N°	Product	Product (French name)	Reference method: ISO 16649-2*						Alternative method: 3M™ Petrifilm™ Select <i>E.coli</i> Count Plate						Category	Type		
				Dilution	CFU/plate		CFU/g		log CFU/g		Dilution	CFU/Petrefilm		CFU/g				log CFU/g	
					Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2		Rep 1	Rep 2	Rep 1	Rep 2			Rep 1	Rep 2
2021	4081	Rinse water n°1 (Meat products industry)	Eau de rinçage n°1 (industrie de produits carnés)	1000	105		100000		5,00		1000	131		130000		5,11		7	b
				100	10						10000	12							
2021	4300	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie P51	100	>150		42000		4,62		100	>150		56000		4,75		7	c
				1000	42		N'		N'		1000	56		N'		N'			
2021	4301	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie P62	1000	>150		380000		5,58		1000	>150		280000		5,45		7	c
				10000	38		N'		N'		10000	28		N'		N'			
2021	4302	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie E241	1000	>150		1070000		6,03		1000	>150		1300000		6,11		7	c
				10000	107		N'		N'		10000	125		N'		N'			
2021	4303	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie A12	100	5		500		2,70		100	95		9300		3,97		7	c
				1000	0		Ne		Ne		1000	7							
2021	4304	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie A32	1000	46		45000		4,65		1000	55		56000		4,75		7	c
				10000	4						10000	7							
2021	4305	Vacuum dusts (from dairy industry)	Poussière d'aspirateur de laiterie A31	1000	114		120000		5,08		1000	114		120000		5,08		7	c
				10000	16						10000	14							

## Appendix 5 - Accuracy profile study: raw data

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2*				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i> 22h at 42°C			
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Rilletes Batch 1 Aerobic mesophilic flora: <2,0.10 <sup>1</sup> CFU/g	<i>E. coli</i> 9	1	2471	10	12	130	2,11	10	23	280	2,45
				100	2			100	8		
			2472	10	21	210	2,32	10	35	360	2,56
				100	2			100	4		
			2473	10	32	320	2,51	10	39	380	2,58
				100	3			100	3		
		2474	10	25	300	2,48	10	31	300	2,48	
			100	8			100	2			
		2475	10	35	400	2,60	10	33	340	2,53	
			100	9			100	4			
		2	2476	100	54	5400	3,73	100	96	9500	3,98
				1000	5			1000	9		
			2477	100	34	3500	3,54	100	62	5800	3,76
				1000	5			1000	2		
			2478	100	68	6500	3,81	100	62	5900	3,77
				1000	3			1000	3		
		2479	100	56	5500	3,74	100	35	3500	3,54	
			1000	4			1000	13			
		3	2480	100	32	3000	3,48	100	102	10000	4,00
				1000	1			1000	10		
			2481	1000	58	55000	4,74	1000	99	110000	5,04
				10000	2			10000	18		
			2482	1000	24	24000	4,38	1000	102	110000	5,04
				10000	2			10000	15		
2483	1000	62	62000	4,79	1000	123	130000	5,11			
	10000	6			10000	18					
Rilletes Batch 2 Aerobic mesophilic flora: <2,0.10 <sup>1</sup> CFU/g	<i>E. coli</i> 9	1	2484	1000	59	62000	4,79	1000	97	98000	4,99
				10000	9			10000	11		
			2485	1000	54	52000	4,72	1000	114	120000	5,08
				10000	3			10000	18		
			2486	10	15	160	2,20	10	30	310	2,49
				100	2			100	4		
2487	10	18	170	2,23	10	27	280	2,45			
	100	1			100	4					
2	2488	10	34	360	2,56	10	36	360	2,56		
		100	5			100	4				
	2489	10	27	290	2,46	10	41	440	2,64		
		100	5			100	7				
	2490	10	25	260	2,41	10	39	370	2,57		
		100	4			100	2				
3	2491	100	32	3200	3,51	100	120	12000	4,08		
		1000	3			1000	11				
	2492	100	59	5500	3,74	1000	29	27000	4,43		
		1000	2			10000	1				
	2493	100	30	3100	3,49	100	106	11000	4,04		
		1000	4			1000	11				
2494	100	81	7800	3,89	100	104	11000	4,04			
	1000	5			1000	16					
2495	100	64	6300	3,80	100	119	12000	4,08			
	1000	5			1000	10					
	2496	1000	39	38000	4,58	1000	119	120000	5,08		
		10000	3			10000	10				
	2497	1000	25	25000	4,40	1000	119	120000	5,08		
		10000	2			10000	11				
2498	1000	68	68000	4,83	1000	97	95000	4,98			
	10000	7			10000	8					
2499	1000	39	40000	4,60	1000	99	96000	4,98			
	10000	5			10000	7					
2500	1000	62	61000	4,79	1000	102	97000	4,99			
	10000	5			10000	5					

\* Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2*				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Pasteurised cheese ( Camembert) Batch 1 Aerobic mesophilic flora: 1,2.10 <sup>6</sup> CFU/g	<i>E. coli</i> 14	1	2291	10	51	490	2,69	10	38	360	2,56
				100	3			100	2		
			2292	10	42	460	2,66	10	42	400	2,60
				100	8			100	2		
			2293	10	24	250	2,40	10	42	420	2,62
				100	3			100	0		
		2294	10	39	390	2,59	10	36	360	2,56	
			100	4			100	4			
		2295	10	43	430	2,63	10	47	480	2,68	
			100	4			100	6			
		2	2296	100	112	11000	4,04	100	81	8600	3,93
				1000	8			1000	14		
			2297	100	137	13000	4,11	100	100	10000	4,00
				1000	10			1000	15		
			2298	100	96	9200	3,96	100	88	9400	3,97
				1000	5			1000	15		
		2299	100	110	10000	4,00	100	88	8500	3,93	
			1000	4			1000	5			
		3	2300	100	115	11000	4,04	100	110	11000	4,04
				1000	4			1000	16		
2301	1000		129	130000	5,11	1000	123	120000	5,08		
	10000		4			10000	13				
2302	1000		122	120000	5,08	1000	116	120000	5,08		
	10000		5			10000	18				
2303	1000	71	72000	4,86	1000	117	120000	5,08			
	10000	8			10000	15					
2304	1000	136	130000	5,11	1000	109	110000	5,04			
	10000	8			10000	13					
2305	1000	86	89000	4,95	1000	119	120000	5,08			
	10000	12			10000	8					
1	2306	10	46	450	2,65	10	23	230	2,36		
		100	3			100	2				
	2307	10	30	320	2,51	10	43	440	2,64		
		100	5			100	5				
	2308	10	45	460	2,66	10	32	320	2,51		
		100	5			100	3				
2309	10	39	360	2,56	10	32	300	2,48			
	100	1			100	1					
2310	10	51	540	2,73	10	37	410	2,61			
	100	8			100	8					
2	2311	100	130	12000	4,08	100	126	13000	4,11		
		1000	7			1000	17				
	2312	100	112	11000	4,04	100	96	10000	4,00		
		1000	10			1000	16				
	2313	100	95	9700	3,99	100	123	12000	4,08		
		1000	12			1000	13				
2314	100	115	11000	4,04	100	107	10000	4,00			
	1000	9			1000	4					
2315	100	125	12000	4,08	100	101	11000	4,04			
	1000	5			1000	16					
3	2316	1000	94	97000	4,99	1000	102	98000	4,99		
		10000	13			10000	6				
	2317	1000	126	120000	5,08	1000	91	92000	4,96		
		10000	9			10000	10				
	2318	1000	97	98000	4,99	1000	88	88000	4,94		
		10000	11			10000	9				
2319	1000	110	110000	5,04	1000	101	100000	5,00			
	10000	12			10000	11					
2320	1000	125	120000	5,08	1000	109	110000	5,04			
	10000	8			10000	10					

\* Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2*				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Fish terrine Batch 1 Aerobic mesophilic flora: 2,4.10 <sup>2</sup> CFU/g	<i>E. coli</i> Ad228	1	2376	10	37	370	2,57	10	23	250	2,40
				100	4			100	4		
			2377	10	30	280	2,45	10	28	320	2,51
				100	1			100	7		
			2378	10	20	200	2,30	10	37	370	2,57
				100	2			100	4		
		2379	10	31	320	2,51	10	23	230	2,36	
			100	4			100	2			
		2380	10	35	350	2,54	10	25	360	2,56	
			100	3			100	4			
		2	2381	100	119	11000	4,04	100	137	14000	4,15
				1000	7			1000	14		
			2382	100	119	12000	4,08	100	99	9500	3,98
				1000	9			1000	6		
			2383	100	83	8400	3,92	100	103	11000	4,04
				1000	9			1000	13		
		2384	100	89	9200	3,96	100	93	9500	3,98	
			1000	12			1000	12			
		2385	100	108	10000	4,00	100	99	10000	4,00	
1000	7		1000	16							
3	2386	1000	113	110000	5,04	1000	106	100000	5,00		
		10000	5			10000	8				
	2387	1000	98	93000	4,97	1000	99	94000	4,97		
		10000	4			10000	4				
	2388	1000	91	99000	5,00	1000	91	94000	4,97		
		10000	18			10000	12				
2389	1000	114	110000	5,04	1000	118	120000	5,08			
	10000	10			10000	13					
2390	1000	107	100000	5,00	1000	83	81000	4,91			
	10000	7			10000	6					
1	2391	10	21	220	2,34	10	24	240	2,38		
		100	3			100	2				
		2392	10	32	310	2,49	10	34	370	2,57	
			100	2			100	7			
		2393	10	25	250	2,40	10	28	260	2,41	
			100	2			100	1			
2394	10	36	340	2,53	10	26	270	2,43			
	100	1			100	4					
2395	10	37	360	2,56	10	26	260	2,41			
	100	2			100	3					
2	2396	100	99	9800	3,99	100	98	9700	3,99		
		1000	9			1000	9				
	2397	100	108	10000	4,00	100	96	9500	3,98		
		1000	6			1000	8				
	2398	100	94	9000	3,95	100	105	11000	4,04		
		1000	5			1000	21				
2399	100	98	9500	3,98	100	106	11000	4,04			
	1000	7			1000	12					
2400	100	94	9400	3,97	100	108	11000	4,04			
	1000	9			1000	16					
3	2401	1000	73	73000	4,86	1000	91	89000	4,95		
		10000	7			10000	7				
	2402	1000	72	73000	4,86	1000	103	100000	5,00		
		10000	8			10000	7				
	2403	1000	101	100000	5,00	1000	83	87000	4,94		
		10000	12			10000	13				
2404	1000	90	88000	4,94	1000	90	88000	4,94			
	10000	7			10000	7					
2405	1000	95	94000	4,97	1000	108	110000	5,04			
	10000	8			10000	11					

\* Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2♦				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Grated carrots Batch 1 Aerobic mesophilic flora: 4.4.10 <sup>6</sup> CFU/g	<i>E. coli</i> 9	1	2501	10	61	580	2,76	10	51	530	2,72
				100	3			100	7		
			2502	10	46	460	2,66	10	48	500	2,70
				100	4			100	7		
			2503	10	48	460	2,66	10	40	400	2,60
				100	2			100	4		
		2504	10	53	540	2,73	10	51	510	2,71	
			100	6			100	5			
		2505	10	47	450	2,65	10	47	460	2,66	
			100	2			100	4			
		2	2506	100	117	12000	4,08	1000	18	21000	4,32
				1000	1			10000	5		
			2507	100	124	12000	4,08	100	116	12000	4,08
				1000	1			1000	17		
			2508	100	150	14000	4,15	100	148	15000	4,18
1000	6			1000	13						
2509	100	139	14000	4,15	100	145	14000	4,15			
	1000	3			1000	14					
2510	100	113	11000	4,04	100	142	14000	4,15			
	1000	4			1000	9					
3	2511	1000	128	130000	5,11	1000	106	100000	5,00		
		10000	4			10000	9				
	2512	1000	96	96000	4,98	1000	148	150000	5,18		
		10000	10			10000	16				
	2513	1000	133	130000	5,11	1000	137	140000	5,15		
		10000	10			10000	12				
2514	1000	122	120000	5,08	1000	127	130000	5,11			
	10000	8			10000	17					
2515	1000	133	130000	5,11	10000	18	170000	5,23			
	10000	12			100000	1					
Grated carrots Batch 2 Aerobic mesophilic flora: 4.4.10 <sup>6</sup> CFU/g	<i>E. coli</i> 9	1	2516	10	70	680	2,83	10	49	480	2,68
				100	5			100	4		
			2517	10	55	550	2,74	10	52	530	2,72
				100	5			100	6		
			2518	10	54	540	2,73	10	61	600	2,78
				100	5			100	5		
		2519	10	46	460	2,66	10	64	630	2,80	
			100	5			100	5			
		2520	10	48	450	2,65	10	54	560	2,75	
			100	1			100	7			
		2	2521	100	109	11000	4,04	100	84	8800	3,94
				1000	6			1000	13		
			2522	100	144	14000	4,15	100	145	15000	4,18
				1000	3			1000	20		
			2523	100	124	12000	4,08	100	147	15000	4,18
1000	7			1000	16						
2524	1000	12	11000	4,04	1000	11	11000	4,04			
	10000	0			10000	1					
2525	100	133	13000	4,11	100	129	13000	4,11			
	1000	12			1000	19					
3	2526	1000	82	77000	4,89	10000	18	190000	5,28		
		10000	3			100000	3				
	2527	1000	79	74000	4,87	10000	15	150000	5,18		
		10000	2			100000	2				
	2528	1000	108	100000	5,00	10000	16	190000	5,28		
		10000	7			100000	5				
2529	1000	93	90000	4,95	1000	148	150000	5,18			
	10000	6			10000	20					
2530	10000	14	140000	5,15	10000	14	150000	5,18			
	100000	1			100000	3					

♦ Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2♦				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Pastry ( Custard pastry) Batch 1 Aerobic mesophilic flora: 2,3.10 <sup>3</sup> CFU/g	<i>E. coli</i> 142	1	2166	10	56	520	2,72	10	64	640	2,81
				100	1			100	6		
			2167	10	57	560	2,75	10	66	660	2,82
				100	5			100	6		
			2168	10	32	350	2,54	10	70	710	2,85
				100	6			100	8		
		2169	10	55	530	2,72	10	51	540	2,73	
			100	3			100	8			
		2170	10	58	570	2,76	10	70	670	2,83	
			100	5			100	4			
		2	2171	1000	15	14000	4,15	1000	22	20000	4,30
				10000	0			10000	0		
			2172	1000	13	13000	4,11	1000	24	23000	4,36
				10000	1			10000	1		
			2173	1000	19	18000	4,26	1000	19	18000	4,26
				10000	1			10000	1		
		2174	1000	19	18000	4,26	1000	16	15000	4,18	
			10000	1			10000	1			
		2175	1000	15	15000	4,18	1000	20	18000	4,26	
			10000	2			10000	0			
		3	2176	10000	19	170000	5,23	1000	137	140000	5,15
100000	0			10000	22						
2177	1000		132	130000	5,11	10000	13	150000	5,18		
	10000		12			100000	3				
2178	10000		17	160000	5,20	1000	147	150000	5,18		
	100000		1			10000	13				
2179	1000	131	130000	5,11	1000	131	130000	5,11			
	10000	14			10000	15					
2180	10000	14	130000	5,11	10000	17	170000	5,23			
	100000	0			100000	2					
1	2181	10	50	520	2,72	10	40	410	2,61		
		100	7			100	5				
	2182	10	49	510	2,71	10	76	720	2,86		
		100	7			100	3				
	2183	10	56	560	2,75	10	64	650	2,81		
		100	6			100	7				
2184	10	49	510	2,71	10	59	610	2,79			
	100	7			100	8					
2185	10	70	720	2,86	10	69	660	2,82			
	100	9			100	4					
2	2186	1000	30	28000	4,45	1000	23	22000	4,34		
		10000	1			10000	1				
	2187	1000	26	25000	4,40	1000	15	17000	4,23		
		10000	2			10000	4				
	2188	1000	18	18000	4,26	1000	32	32000	4,51		
		10000	2			10000	3				
2189	1000	21	21000	4,32	1000	24	23000	4,36			
	10000	2			10000	1					
2190	1000	18	16000	4,20	1000	20	20000	4,30			
	10000	0			10000	2					
3	2191	10000	20	190000	5,28	10000	21	220000	5,34		
		100000	1			100000	3				
	2192	10000	16	150000	5,18	1000	146	150000	5,18		
		100000	0			10000	24				
	2193	10000	25	280000	5,45	10000	27	250000	5,40		
		100000	6			100000	1				
2194	10000	28	250000	5,40	10000	19	170000	5,23			
	100000	0			100000	0					
2195	10000	24	230000	5,36	10000	34	340000	5,53			
	100000	1			100000	4					

♦ Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2*				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Pellet for cat Batch 1 Aerobic mesophilic flora: 2,0.10 <sup>2</sup> CFU/g	<i>E. coli</i> 1	1	3922	10	33	310	2,49	10	22	220	2,34
				100	1			100	2		
			3923	10	31	330	2,52	10	24	250	2,40
				100	5			100	3		
			3924	10	37	370	2,57	10	33	310	2,49
				100	0			100	1		
		3925	10	29	310	2,49	10	36	350	2,54	
			100	5			100	2			
		3926	10	23	240	2,38	10	36	340	2,53	
			100	3			100	1			
		2	3927	100	96	9600	3,98	100	99	9900	4,00
				1000	10			1000	10		
			3928	100	94	9600	3,98	100	100	9800	3,99
				1000	12			1000	8		
			3929	100	97	10000	4,00	100	114	11000	4,04
				1000	13			1000	11		
		3930	100	90	8800	3,94	100	90	8900	3,95	
			1000	7			1000	8			
3931	100	141	13000	4,11	100	104	10000	4,00			
	1000	6			1000	11					
3	3932	1000	88	85000	4,93	1000	108	110000	5,04		
		10000	5			10000	8				
	3933	1000	92	88000	4,94	1000	91	93000	4,97		
		10000	5			10000	11				
	3934	1000	72	72000	4,86	1000	82	78000	4,89		
		10000	7			10000	4				
3935	1000	71	73000	4,86	1000	86	86000	4,93			
	10000	9			10000	9					
3936	1000	59	55000	4,74	1000	70	68000	4,83			
	10000	1			10000	5					
Pellet for cat Batch 2 Aerobic mesophilic flora: 6,0.10 <sup>2</sup> CFU/g	<i>E. coli</i> 1	1	3937	10	18	170	2,23	10	25	260	2,41
				100	1			100	3		
			3938	10	38	380	2,58	10	37	360	2,56
				100	4			100	2		
			3939	10	26	260	2,41	10	25	250	2,40
				100	3			100	2		
		3940	10	28	270	2,43	10	22	220	2,34	
			100	2			100	2			
		3941	10	38	380	2,58	10	29	290	2,46	
			100	0			100	3			
		2	3942	100	110	10000	4,00	100	84	8700	3,94
				1000	5			1000	12		
			3943	100	78	8600	3,93	100	88	8800	3,94
				1000	17			1000	9		
			3944	100	84	8000	3,90	100	96	9300	3,97
				1000	4			1000	6		
		3945	100	107	11000	4,04	100	104	10000	4,00	
			1000	13			1000	9			
3946	100	72	7000	3,85	100	83	8000	3,90			
	1000	5			1000	6					
3	3947	1000	128	130000	5,11	1000	119	120000	5,08		
		10000	15			10000	13				
	3948	1000	86	85000	4,93	1000	80	85000	4,93		
		10000	8			10000	13				
	3949	1000	90	85000	4,93	1000	92	90000	4,95		
		10000	4			10000	7				
3950	1000	99	110000	5,04	1000	78	81000	4,91			
	10000	19			10000	11					
3951	1000	79	75000	4,88	1000	85	87000	4,94			
	10000	4			10000	11					

\* Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	N° sample	Reference method : ISO 16649-2*				Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>			
				22h at 42°C							
				Dilution	CFU/plate	CFU/g	log CFU/g	Dilution	CFU/Petrifilm test	CFU/g	log CFU/g
Process water (dairy industry) Batch 1 Aerobic mesophilic flora: 2,1.10 <sup>4</sup> CFU/g	<i>E. coli</i> Ad1396	1	3986	10	18	170	2,23	10	26	250	2,40
				100	1			100	1		
			3987	10	21	220	2,34	10	28	260	2,41
				100	3			100	1		
			3988	10	10	100	2,00	10	26	260	2,41
				100	1			100	2		
		3989	10	23	230	2,36	10	27	260	2,41	
			100	2			100	1			
		3990	10	14	160	2,20	10	30	340	2,53	
			100	3			0	7			
		2	3991	100	34	3200	3,51	100	86	8900	3,95
				1000	1			1000	12		
			3992	100	57	5900	3,77	100	107	11000	4,04
				1000	8			1000	13		
			3993	100	41	3900	3,59	100	84	8500	3,93
				1000	2			1000	9		
		3994	100	57	5500	3,74	100	83	8600	3,93	
			1000	3			1000	12			
3995	100	67	6300	3,80	100	106	10000	4,00			
	1000	2			1000	9					
3	3996	1000	33	31000	4,49	1000	95	92000	4,96		
		10000	1			10000	6				
	3997	1000	35	33000	4,52	1000	66	69000	4,84		
		10000	1			10000	10				
	3998	1000	38	38000	4,58	1000	67	66000	4,82		
		10000	4			10000	6				
3999	1000	61	62000	4,79	1000	93	90000	4,95			
	10000	7			10000	6					
4000	1000	70	65000	4,81	1000	73	74000	4,87			
	10000	2			10000	8					
Process water (dairy industry) Batch 2 Aerobic mesophilic flora: 1,9.10 <sup>7</sup> CFU/g	<i>E. coli</i> Ad1396	1	4001	10	9	90 Ne	1,95 Ne	10	24	240	2,38
				100	0			100	2		
			4002	10	16	160	2,20	10	27	260	2,41
				100	1			100	2		
			4003	10	9	90 Ne	1,95 Ne	10	24	240	2,38
				100	1			100	2		
		4004	10	17	180	2,26	10	21	220	2,34	
			100	3			100	3			
		4005	10	16	150	2,18	10	19	210	2,32	
			100	0			100	4			
		2	4006	100	28	2700	3,43	100	56	5500	3,74
				1000	2			1000	5		
4007	100		20	2100	3,32	100	79	7900	3,90		
	1000		3			1000	8				
4008	100		22	2100	3,32	100	64	6500	3,81		
	1000		1			1000	8				
4009	100	44	4200	3,62	100	71	6700	3,83			
	1000	2			1000	3					
4010	100	42	4000	3,60	100	64	6400	3,81			
	1000	2			1000	6					
3	4011	1000	41	41000	4,61	1000	48	48000	4,68		
		10000	0			10000	5				
	4012	1000	22	23000	4,36	1000	80	80000	4,90		
		10000	3			10000	8				
	4013	1000	28	27000	4,43	1000	72	72000	4,86		
		10000	2			10000	7				
4014	1000	40	41000	4,61	1000	83	89000	4,95			
	10000	5			10000	15					
4015	1000	40	37000	4,57	1000	80	82000	4,91			
	10000	1			10000	10					

\* Analyses performed according to the COFRAC accreditation

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3M Petrifilm Select *E. coli*

Appendix 6 - Accuracy profile study: summarized results

(Food) Category 1		Category 1-Meat products										
(Food) Type 1		Rillettes										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
2471-2475	Rillettes	low	130	210	320	300	400	280	360	380	300	340
2486-2490	Rillettes	low	160	170	360	290	260	310	280	360	440	370
2476-2480	Rillettes	intermediate	5400	3500	6500	5500	3000	9500	5800	5900	3500	10000
2491-2495	Rillettes	intermediate	3200	5500	3100	7800	6300	12000	27000	11000	11000	12000
2481-2485	Rillettes	high	55000	24000	62000	62000	52000	110000	110000	130000	98000	120000
2496-2500	Rillettes	high	38000	25000	68000	40000	61000	120000	120000	95000	96000	97000

(Food) Category 2		Category 2-Dairy products										
(Food) Type 2		Pasteurised cheese (camembert)										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
2291-2295	Pasteurised cheese	low	490	460	250	390	430	360	400	420	360	480
2306-2310	Pasteurised cheese	low	450	320	460	360	540	230	440	320	300	410
2296-2300	Pasteurised cheese	intermediate	11000	13000	9200	10000	11000	8600	10000	94000	85000	11000
2311-2315	Pasteurised cheese	intermediate	12000	11000	97000	11000	12000	13000	10000	12000	10000	11000
2301-2305	Pasteurised cheese	high	130000	120000	720000	130000	89000	120000	120000	120000	110000	120000
2316-2320	Pasteurised cheese	high	97000	120000	98000	110000	120000	98000	92000	88000	100000	110000

(Food) Category 3		Category 3 - Seafood										
(Food) Type 3		Fish terrine										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
2376-2380	Fish terrine	low	370	280	200	320	350	250	320	370	230	360
2391-2395	Fish terrine	low	220	310	250	340	360	240	370	260	270	260
2381-2385	Fish terrine	intermediate	11000	12000	8400	9200	10000	14000	9500	11000	9500	10000
2396-2400	Fish terrine	intermediate	9800	10000	9000	9500	9400	9700	9500	11000	11000	11000
2386-2390	Fish terrine	high	110000	93000	99000	110000	100000	100000	94000	94000	120000	81000
2401-2405	Fish terrine	high	73000	73000	100000	88000	94000	89000	100000	87000	88000	110000

(Food) Category 4		Category 4- vegetables										
(Food) Type 4		Grated carrots										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
2501-2505	Grated carrots	low	580	460	460	540	450	530	500	400	510	460
2516-2520	Grated carrots	low	680	550	540	460	450	480	530	600	630	560
2506-2510	Grated carrots	intermediate	12000	12000	14000	14000	11000	21000	12000	15000	14000	14000
2521-2525	Grated carrots	intermediate	11000	14000	12000	11000	13000	8800	15000	15000	11000	13000
2511-2515	Grated carrots	high	130000	96000	130000	120000	130000	100000	150000	140000	130000	170000
2526-2530	Grated carrots	high	77000	74000	100000	90000	140000	190000	150000	190000	150000	150000

(Food) Category 5		Category 5 - Egg products and composite food										
(Food) Type 5		Pastries										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
2166-2170	Custard pastry	low	520	560	350	530	570	640	660	710	540	670
2181-2185	Custard pastry	low	520	510	560	510	720	410	720	650	610	660
2171-2175	Custard pastry	intermediate	14000	13000	18000	18000	15000	20000	23000	18000	15000	18000
2186-2190	Custard pastry	intermediate	28000	25000	18000	21000	16000	22000	17000	32000	23000	20000
2176-2180	Custard pastry	high	170000	130000	160000	130000	130000	140000	150000	150000	130000	170000
2191-2195	Custard pastry	high	190000	150000	280000	250000	230000	210000	150000	250000	170000	340000

(Food) Category 6		Category 6- Pet food										
(Food) Type 6		Pellet for cat										
Sample Name	(Food) item	Level	Reference method result					Alternative method result				
			rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
3922-3926	Pellet for cat	low	310	330	370	310	240	220	250	310	350	340
3937-3941	Pellet for cat	low	170	380	260	270	380	260	360	250	220	290
3927-3931	Pellet for cat	intermediate	9600	9600	10000	8800	13000	9900	9800	11000	8900	10000
3942-3946	Pellet for cat	intermediate	10000	8600	8000	11000	7000	8700	8800	9300	10000	8000
3932-3936	Pellet for cat	high	85000	88000	72000	73000	55000	110000	96000	78000	86000	68000
3947-3951	Pellet for cat	high	130000	85000	85000	110000	75000	120000	85000	90000	81000	87000

(Food) Category 7		Category 7- Environmental samples										
(Food) Type 7		Process water (dairy industry)										
			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
3986-3990	Process water (dairy industry)	low	170	220	100	230	160	250	260	260	260	340
4001-4005	Process water (dairy industry)	low	90	160	90	180	150	240	260	240	220	210
3991-3995	Process water (dairy industry)	intermediate	3200	5900	3900	5500	6300	8900	11000	8500	8600	10000
4006-4010	Process water (dairy industry)	intermediate	2700	2100	2100	4200	4000	5500	7900	6500	6700	6400
3996-4000	Process water (dairy industry)	high	31000	33000	38000	62000	65000	92000	69000	66000	90000	74000
4011-4015	Process water (dairy industry)	high	41000	23000	27000	41000	37000	48000	80000	72000	89000	82000

## Appendix 7 – Inclusivity / Exclusivity: raw data

INCLUSIVITY										
No	Strain	Reference	Origin	PCA	Reference method : ISO 16649-2 <sup>♦</sup>			Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>		
				log CFU/ml	a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies	a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies
1	<i>Escherichia coli</i>	1	Toulouse sausage	9,11	9,12	8,98	Blue	8,99	9,13	Blue
2	<i>Escherichia coli</i>	9	Goose rillettes	9,00	9,14	9,13	Blue	8,93	8,89	Blue
3	<i>Escherichia coli</i>	12	Turkey meat	8,95	9,03	9,29	White	8,85	8,81	White
4	<i>Escherichia coli</i>	13	Ground beef	8,94	8,95	8,93	Blue	8,78	8,88	Blue
5	<i>Escherichia coli</i>	14	Raw milk	8,92	9,05	8,97	Blue	9,06	8,99	Blue
6	<i>Escherichia coli</i>	17	Spring water	9,18	9,1	9,03	Blue	9,12	9,13	Blue
7	<i>Escherichia coli</i>	18	Water	8,90	8,95	8,96	Blue turquoise	9,15	8,88	Blue turquoise
8	<i>Escherichia coli</i>	19	Grated carrots	8,86	9,85	8,94	Blue	8,85	8,88	Blue
9	<i>Escherichia coli</i>	21	Cured pork meat	8,85	9,8	8,89	Blue	8,79	8,88	Blue
10	<i>Escherichia coli</i>	70	Mechanically deboned meat	9,11	9,04	8,97	Blue	9,08	9,1	Blue
11	<i>Escherichia coli</i>	91	Ready to eat meal	9,88	>9,48	>9,48	White	>9,48	>9,48	White
12	<i>Escherichia coli</i>	94	Cheese (Bethmal)	9,04	8,99	8,94	Blue	8,96	8,92	Blue
13	<i>Escherichia coli</i>	96	Turkey meat	8,77	8,76	8,86	Blue	8,72	8,81	Blue
14	<i>Escherichia coli</i>	97	Cheese (Bleu de Causse)	9,04	8,94	8,89	Blue	9,03	8,95	Blue
15	<i>Escherichia coli</i>	101	Pork brain	8,98	8,92	8,95	Blue	8,56	8,63	Blue
16	<i>Escherichia coli</i>	108	Ready to eat meal	9,04	8,93	8,84	Blue	8,88	8,92	Blue
17	<i>Escherichia coli</i>	118	Raw milk	8,72	<7,00	<7,00	/	9,17	8,92	Blue turquoise
18	<i>Escherichia coli</i>	121	Cheese (raclette)	8,99	8,98	8,97	Blue turquoise	8,64	8,44	Blue turquoise
19	<i>Escherichia coli</i>	123	Veal liver	9,32	9,44	9,39	Blue turquoise	8,28	8,46	Blue turquoise
20	<i>Escherichia coli</i>	125	Pork liver	8,79	8,76	8,81	Blue turquoise	9,16	8,92	Blue turquoise

♦ Analyses performed according to the COFRAC accreditation

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3M Petrifilm Select *E. coli*

INCLUSIVITY										
No	Strain	Reference	Origin	PCA log CFU/ml	Reference method : ISO 16649-2 <sup>♦</sup>			Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>		
					a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies	a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies
21	<i>Escherichia coli</i>	142	Whole liquid egg product	8,96	9,09	9,09	Very pale blue green	9,30	9,03	Blue turquoise
22	<i>Escherichia coli</i>	143	Mayonnaise	8,89	8,68	8,61	Pale blue	8,87	8,77	Blue
23	<i>Escherichia coli</i>	144	Ready to reheat meal (Paella)	9,04	8,99	8,95	White with blue edges	9,14	8,91	Blue turquoise
24	<i>Escherichia coli</i>	2B	Sausage	8,80	8,92	8,94	Blue turquoise	9,18	8,90	Blue turquoise
25	<i>Escherichia coli</i>	CIP 43888	Unknown	8,86	8,71	8,95	White	8,52	9,71	White
26	<i>Escherichia coli</i>	CIP 54117	Unknown	9,04	8,89	8,81	Blue	8,73	8,76	Blue
27	<i>Escherichia coli</i>	CIP 54127	Unknown	9,08	8,96	9,01	Blue	8,99	9,08	Blue
28	<i>Escherichia coli</i>	CIP 7624	Unknown	9,08	9,14	9,06	Blue	9,11	9,08	Blue
29	<i>Escherichia coli</i>	Ad222	Whole liquid egg product	9,08	9,15	9,15	Pale blue turquoise	9,33	9,09	Blue turquoise
30	<i>Escherichia coli</i>	Ad228	Fish	8,74	9,11	9,14	/	9,39	9,16	Blue turquoise
31	<i>Escherichia coli</i>	Ad233	Raw veal meat	9,15	9,19	9,10	/	9,38	9,07	Blue turquoise

INCLUSIVITY (2021)							
No	Strain	Reference	Origin	Dilution	PCA (CFU/plate)	Reference method : ISO 16649-2*	Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i> 22h at 42°C
						(CFU/Plate)	(CFU/Petrifilm)
1	<i>Escherichia coli</i>	CIP 53126	/	-6	>150	28	>150
				-7	24	2	35
				-8	3	0	1
2	<i>Escherichia coli</i>	ATCC 8739	/	-6	>150	112	>150
				-7	32	16	33
				-8	1	1	1
3	<i>Escherichia coli</i>	CIP 103982	/	-6	>150	31 (white colonies)	101
				-7	63	6 (white colonies)	2
				-8	6	0	1
4	<i>Escherichia coli</i>	Ad1383	Swimming pool water	-6	>150	>150 (white colonies)	>150 (white colonies)
				-7	70	39 (white colonies)	66 (white colonies)
				-8	7	3 (white colonies)	7 (white colonies)
5	<i>Escherichia coli</i>	Ad1384	Seafood water	-6	>150	>150	>150
				-7	55	47	63
				-8	5	3	3
6	<i>Escherichia coli</i>	Ad1386	Well water	-6	>150	>150 (white colonies)	>150 (white colonies)
				-7	117	60 (white colonies)	108 (white colonies)
				-8	17	8 (white colonies)	11 (white colonies)
7	<i>Escherichia coli</i>	Ad1422	Infant formula	-6	>150	>150	>150
				-7	72	56	97
				-8	8	8	13
8	<i>Escherichia coli</i>	Ad1458	River water	-6	>150	>150	>150
				-7	>150	>150	>150
				-8	41	40	43
9	<i>Escherichia coli</i>	Ad1816	Raw milk cheese	-6	>150	53	53
				-7	73	5	5
				-8	0	0	0
10	<i>Escherichia coli</i>	Ad2304	Raw ewe milk cheese	-6	>150	>150	>150
				-7	>150	>150	>150

\* Analyses performed according to the COFRAC accreditation

ADRIA Développement

Summary report (Version 0)

3M Petrifilm Select *E. coli*

INCLUSIVITY (2021)							
No	Strain	Reference	Origin	Dilution	PCA (CFU/plate)	Reference method : ISO 16649-2*	Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i> 22h at 42°C
						(CFU/Plate)	(CFU/Petrifilm)
				-8	86	90	107
11	<i>Escherichia coli</i>	Ad2627	Dairy product	-6	>150	>150	>150
				-7	96	10	73
				-8	13	1	13
12	<i>Escherichia coli</i> O103	Ad3117	Lamb meat	-6	>150	159	>150
				-7	106	18	89
				-8	3	2	13
13	<i>Escherichia coli</i>	Ad1828	Beef meat	-6	>150	>150	>150
				-7	118	57	121
				-8	9	3	16
14	<i>Escherichia coli</i>	Ad1999	Chicken meat	-6	>150	>150 (white colonies)	>150 (white colonies)
				-7	48	33 (white colonies)	34 (white colonies)
				-8	9	1 (white colonies)	8 (white colonies)
15	<i>Escherichia coli</i>	CIP 106878	Water	-6	>150	>150	>150
				-7	75	83	83
				-8	11	8	8
16	<i>Escherichia coli</i>	Ad490	Ground beef	-6	>150	>150	>150
				-7	83	156	>150
				-8	13	22	11
17	<i>Escherichia coli</i>	93	Ready to reheat fish	-6	>150	>150 (white colonies)	>150 (white colonies)
				-7	83	65 (white colonies)	69 (white colonies)
				-8	7	4 (white colonies)	7 (white colonies)
18	<i>Escherichia coli</i>	119	Raw milk	-6	>150	>150	>150
				-7	132	151	138
				-8	9	14	19
19	<i>Escherichia coli</i>	Ad1391	Surface water	-6	>150	>150	>150
				-7	132	110	89
				-8	12	16	6

EXCLUSIVITY										
No	Strain	Reference	Origin	PCA log CFU/ml	Reference method : ISO 16649-2 <sup>♦</sup>			Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>		
					a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies	a (log CFU/ml)	b (log CFU/ml)	Aspect of colonies
1	Bacillus subtilis	630	Dairy product	7,45	<5,00	<5,00	/	<5,00	<5,00	/
2	Buttiauxella agrestis	115	Turnips	8,74	8,69	8,70	White	<6,00	<6,00	/
3	Citrobacter diversus	140	Raw milk	9,11	9,23	9,23	White	<6,00	<6,00	/
4	Citrobacter freundii	23	Toulouse sausages	8,99	8,76	8,76	White	<6,00	<6,00	/
5	E. vulneris	127	Raw milk	8,30	<6,00	<6,00	/	<6,00	<6,00	/
6	E. hermanii	395	Raw meat	8,96	<6,00	<6,00	/	<6,00	<6,00	/
7	E. vulneris	132	Veal liver	8,30	<6,00	<6,00	/	<6,00	<6,00	/
8	E. vulneris	134	Liver	8,32	<6,00	<6,00	/	<6,00	<6,00	/
9	Enterobacter aerogenes	CIP 6086	Unknown	8,57	<6,00	<6,00	/	<6,00	<6,00	/
10	Enterobacter agglomerans	62	Flat beans	8,32	<6,00	<6,00	/	<6,00	<6,00	/
11	Enterobacter amnigenus	129	Raw milk	8,52	<6,00	<6,00	/	<6,00	<6,00	/
12	Enterobacter amnigenus	52	Flat beans	8,81	<6,00	<6,00	/	<6,00	<6,00	/
13	Enterococcus faecalis	25	Dairy product	9,00	<6,00	<6,00	/	<6,00	<6,00	/
14	Erwinia carotovora	CIP 103762	Unknown	7,54	<5,00	<5,00	/	<5,00	<5,00	/
15	Klebsiella oxytoca	CIP 7932	Unknown	8,57	<6,00	<6,00	/	<6,00	<6,00	/
16	Klebsiella pneumoniae	114	Turnips	9,00	8,89	8,87	White	<6,00	<6,00	/
17	Lactobacillus casei casei	91L353	Unknown	8,38	<6,00	<6,00	/	<6,00	<6,00	/
18	Proteus vulgaris	56	Food product	8,54	<6,00	<6,00	/	<6,00	<6,00	/
19	Rhanella aquatilis	69	Shellfish	8,86	<6,00	<6,00	/	<6,00	<6,00	/
20	Serratia liquefaciens	26	Egg	8,58	<6,00	<6,00	/	<6,00	<6,00	/
21	Shigella flexneri	CIP 8248	Unknown	8,58	8,62	8,15	White	8,28	8,41	White

♦ Analyses performed according to the COFRAC accreditation

ADRIA Développement

Summary report (Version 0)

3M Petrifilm Select *E. coli*

EXCLUSIVITY (2021)								
No	Strain	Reference	Origin	Dilution	PCA CFU/plate	Dilution	Reference method : ISO 16649-2*	Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>
							ISO 16649 TBX (CFU/plate)	22h <i>E. coli</i> (CFU/Petrifilm)
1-	<i>Escherichia fergusonii</i>	Ad1381	Tap water	-6	>300	-4	>150 (white colonies)	>150 (white colonies)
				-7	>300	-5	>150 (white colonies)	>150 (white colonies)
				-8	73	-6	50 (white colonies)	44 (white colonies)
2-	<i>Enterobacter cloacae</i>	Ad2851	Dairy industry environment	-6	>300	-4	>150 (white colonies)	>150 (white colonies)
				-7	>300	-5	>150 (white colonies)	>150 (white colonies)
				-8	130	-6	85 (white colonies)	43 (white colonies)
3-	<i>Enterobacter aerogenes</i>	Ad2973	Cheese	-6	>300	-4	0	0
				-7	>300	-5	0	0
				-8	40	-6	0	0
4-	<i>Cronobacter sakazakii</i>	Ad2428	Infant cereals	-6	>300	-4	>150 (white colonies)	>150 (white colonies)
				-7	>300	-5	>150 (white colonies)	>150 (white colonies)
				-8	44	-6	47 (white colonies)	40 (white colonies)
5-	<i>Cronobacter condimenti</i>	LMG2848	Spice wheat	-6	>300	-4	>150 (white colonies)	>150 (white colonies)
				-7	304	-5	131 (white colonies)	>150 (white colonies)
				-8	36	-6	19 (white colonies)	22 (white colonies)
6-	<i>Citrobacter werkmanii</i>	Ad3004	Raw milk	-6	>300	-4	0	0
				-7	>300	-5	0	0
				-8	105	-6	0	0
7-	<i>Citrobacter braakii</i>	Ad2701	Squids	-6	>300	-4	>150 (little white colonies)	>150 (little white colonies)
				-7	>300	-5	>150 (little white colonies)	>150 (little white colonies)
				-8	42	-6	13 (little white colonies)	13 (little white colonies)

\* Analyses performed according to the COFRAC accreditation

ADRIA Développement

Summary report (Version 0)

3M Petrifilm Select *E. coli*

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29 October 2021

EXCLUSIVITY (2021)								
No	Strain	Reference	Origin	Dilution	PCA CFU/plate	Dilution	Reference method : ISO 16649-2*	Alternative method : 3M™ Petrifilm™ Select <i>E. coli</i>
							ISO 16649 TBX (CFU/plate)	22h <i>E. coli</i> (CFU/Petrifilm)
8-	<i>Shimwellia blattae</i>	ATCC 29907	/	-6	>300	-4	0	0
				-7	>300	-5	0	0
				-8	32	-6	0	0
9-	<i>Raoultella terrigena</i>	Ad138	Ta water	-6	>300	-4	0	0
				-7	>300	-5	0	0
				-8	40	-6	0	0

**Appendix 8 - Inter-laboratory: results obtained by the collaborators  
and the expert laboratory**

Collaborators	Sample No	Reference method: ISO 16649-2					Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>			
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
Mesophilic aerobic flora: 130/g	A5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	A8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	A2	1	80	90	85	1,93	1	78	75	1,88
		10	8	8			10	4		
	A6	1	76	80	80	1,90	1	71	74	1,87
		10	11	9			10	10		
	A3	10	78	61	710	2,85	10	55	660	2,82
		100	6	10			100	17		
	A7	10	88	92	900	2,95	10	76	750	2,88
		100	14	3			100	6		
	A1	100	30	44	3500	3,54	100	47	4600	3,66
		1000	2	0			1000	4		
A4	100	65	47	5800	3,76	100	55	5500	3,74	
	1000	7	9			1000	5			
Mesophilic aerobic flora 50/ml	B5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	B8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	B2	1	15	4	10	1,00	1	58	56	1,75
		10	0	0			10	4		
	B6	1	63	33	44	1,64	1	66	65	1,81
		10	0	0			10	6		
	B3	10	28	18	210	2,32	10	48	460	2,66
		100	1	0			100	3		
	B7	10	21	3	130	2,11	10	48	470	2,67
		100	4	1			100	4		
	B1	10	10	8	90 e	1,95	100	39	4200	3,62
		100	1	3			1000	7		
B4	1	81	125	96	1,98	100	34	3700	3,57	
	10	1	4			1000	7			

Collaborators	Sample No	Reference method: ISO 16649-2				Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>				
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
C	C5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	C8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	C2	1	73	71	73	1,86	1	71	69	1,84
		10	7	9			10	5		
	C6	1	65	61	65	1,81	1	71	65	1,81
		10	9	7			10	0		
	C3	10	43	48	440	2,64	10	57	550	2,74
		100	3	2			100	3		
	C7	10	57	41	480	2,68	10	47	450	2,65
		100	6	2			100	2		
	C1	100	22	28	2400	3,38	100	63	6400	3,81
		1000	2	0			1000	7		
C4	100	46	40	4000	3,60	100	54	5400	3,73	
	1000	3	0			1000	5			

\* Laboratory C finds a result higher than  $3.0 \cdot 10^8$  CFU/ml: a contamination problem is to be considered.

Collaborators	Sample No	Reference method: ISO 16649-2				Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>				
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
D	D5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	D8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	D2	1	60	77	70	1,85	1	73	70	1,85
		10	9	7			10	4		
	D6	1	69	70	67	1,83	1	56	56	1,75
		10	5	3			10	6		
	D3	10	53	55	550	2,74	10	47	470	2,67
		100	7	6			100	5		
	D7	10	43	48	450	2,65	10	52	520	2,72
		100	3	4			100	5		
	D1	100	59	85	7400	3,87	100	45	4700	3,67
		1000	6	13			1000	7		
D4	100	49	44	4600	3,66	100	55	5500	3,74	
	1000	4	5			1000	6			

Collaborators	Sample No	Reference method: ISO 16649-2				Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>				
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
E	E5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	E8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	E2	1	63	69	65	1,81	1	64	60	1,78
		10	5	5			10	2		
	E6	1	75	70	70	1,85	1	74	69	1,84
		10	4	5			10	2		
	E3	10	64	56	580	2,76	10	48	470	2,67
		100	4	4			100	4		
	E7	10	49	55	510	2,71	10	51	520	2,72
		100	4	4			100	6		
E1	100	47	44	4300	3,63	100	46	4400	3,64	
	1000	2	2			1000	2			
E4	100	41	55	4800	3,68	100	51	5200	3,72	
	1000	3	6			1000	6			
F	F5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	F8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	F2	1	38	42	40	1,60	1	76	77	1,89
		10	3	6			10	9		
	F6	1	59	59	59	1,77	1	55	55	1,74
		10	6	6			10	5		
	F3	10	59	59	550	2,74	10	51	480	2,68
		100	1	2			100	2		
	F7	10	35	49	430	2,63	10	55	540	2,73
		100	3	7			100	4		
F1	100	27	22	2300	3,36	100	57	5500	3,74	
	1000	1	0			1000	3			
F4	100	39	38	3500	3,54	100	47	4400	3,64	
	1000	0	0			1000	1			

Collaborators	Sample No	Reference method: ISO 16649-2					Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>			
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
G	G5	1	0	0	<1	0,00	1	0	<1	<1
		10	0	0						
	G8	1	0	0	<1	0,00	1	0	<1	<1
		10	0	0						
	G2	1	48	41	43	1,63	1	76	73	1,86
		10	2	4						
	G6	1	48	59	50	1,70	1	65	71	1,85
		10	1	1						
	G3	1	236	>300	100	2,00	10	78	760	2,88
		10	7	3			e			
	G7	1	294	206	80	1,90	10	59	610	2,79
		10	11	5			e			
G1	10	179	149	1500	3,18	100	51	4700	3,67	
	100	2	4							
G4	1	>300	>300	40	1,60	100	70	7000	3,85	
	10	6	2			e				
H	H5	1	0	0	<1	0,00	1	0	<1	<1
		10	0	0						
	H8	1	0	0	<1	0,00	1	0	<1	<1
		10	0	0						
	H2	1	66	89	72	1,86	1	73	69	1,84
		10	2	1						
	H6	1	80	76	73	1,86	1	71	72	1,86
		10	3	2						
	H3	10	47	29	370	2,57	10	64	650	2,81
		100	3	2						
	H7	10	23	30	250	2,40	10	47	480	2,68
		100	2	0						
H1	10	129	61	970	2,99	100	53	5500	3,74	
	1000	11	12							
H4	100	7	13	1000	3,00	100	45	4700	3,67	
	1000	3	0			e				
I	I5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	I8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	I2	1	60	61	65	1,81	1	70	70	1,85
		10	10	12						
	I6	1	71	71	74	1,87	1	51	52	1,72
		10	11	10						
	I3	10	86	90	860	2,93	10	68	660	2,82
		100	6	7						
	I7	10	70	78	730	2,86	10	57	590	2,77
		100	7	6						
I1	100	64	60	6000	3,78	100	57	5900	3,77	
	1000	4	4							
I4	100	69	63	6700	3,83	100	62	6100	3,79	
	1000	7	8							

e : estimation

Collaborators	Sample No	Reference method: ISO 16649-2					Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>			
		Dilution	CFU/plate a	CFU/plate b	CFU/ml l	log CFU/ml	Dilution	CFU/plate e	CFU/ml l	log CFU/ml
J  Mesophilic aerobic flora 450/ml	J5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	J8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	J2	1	84	46	65	1,81	1	65	66	1,82
		10	6	8						
	J6	1	75	76	75	1,88	1	64	64	1,81
		10	7	8						
	J3	10	53	56	540	2,73	10	89	890	2,95
		100	6	4						
	J7	10	61	53	560	2,75	10	64	680	2,83
		100	3	6						
	J1	100	35	33	3100	3,49	100	50	5000	3,70
		1000	0	0						
J4	100	47	33	3900	3,59	100	65	6800	3,83	
	1000	2	3							
K  Mesophilic aerobic flora 220/ml	K5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	K8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	K2	1	57	64	59	1,77	1	59	59	1,77
		10	4	4						
	K6	1	68	66	65	1,81	1	71	70	1,85
		10	5	5						
	K3	10	43	46	440	2,64	10	53	520	2,72
		100	3	4						
	K7	10	55	53	530	2,72	10	56	560	2,75
		100	4	4						
	K1	100	21	25	2300	3,36	100	52	5300	3,72
		1000	2	3						
K4	100	30	24	2700	3,43	100	53	5200	3,72	
	1000	3	2							
L  Mesophilic aerobic flora 350/ml	L5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	L8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0						
	L2	1	79	63	70	1,85	1	84	85	1,93
		10	8	4						
	L6	1	76	71	72	1,86	1	59	55	1,74
		10	1	10						
	L3	10	44	70	530	2,72	10	52	530	2,72
		100	1	1						
	L7	10	67	43	530	2,72	1	>150	90	1,95
		100	1	5						
	L1	100	19	26	2000	3,30	100	58	5400	3,73
		1000	0	0						
L4	100	23	21	2000	3,30	100	51	5400	3,73	
	1000	0	0							

Collaborators	Sample No	Reference method: ISO 16649-2				Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>				
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
Mesophilic aerobic flora 70/ml	M5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	M8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	M2	1	60	86	77	1,89	1	63	69	1,84
		10	10	13			10	13		
	M6	1	85	82	81	1,91	1	76	73	1,86
		10	6	5			10	4		
	M3	10	76	72	720	2,86	10	57	570	2,76
		100	5	5			100	6		
	M7	10	68	89	790	2,90	10	53	570	2,76
		100	8	8			100	10		
	M1	100	76	80	7700	3,89	100	34	3500	3,54
		1000	7	7			1000	5		
M4	100	75	70	6900	3,84	100	55	5800	3,76	
	1000	4	3			1000	9			
Mesophilic aerobic flora 660/ml	N5	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N8	1	0	0	<1	0,00	1	0	<1	0,00
		10	0	0			10	0		
	N2	1	79	80	77	1,89	1	57	57	1,76
		10	6	4			10	6		
	N6	1	78	70	73	1,86	1	78	75	1,88
		10	7	5			10	5		
	N3	10	22	32	260	2,41	10	63	660	2,82
		100	2	2			100	9		
	N7	10	24	21	210	2,32	10	42	420	2,62
		100	1	0			100	4		
	N1	100	27	27	2600	3,41	100	33	3600	3,56
		1000	2	1			1000	7		
N4	100	16	12	1300	3,11	100	59	5800	3,76	
	1000	1	0			1000	5			

Collaborators	Sample No	Reference method: ISO 16649-2 <sup>♦</sup>					Alternative method: 3M™ Petrifilm™ Select <i>E. coli</i>			
		Dilution	CFU/plate a	CFU/plate b	CFU/ml	log CFU/ml	Dilution	CFU/plate	CFU/ml	log CFU/ml
ADRIA  Mesophilic aerobic flora 380/ml	35	1	0	0	<1	<0	1	0	<1	<0
		10	0	0			10	0		
	36	1	0	0	<1	<0	1	0	<1	<0
		10	0	0			10	0		
	37	1	64	69	65	1,81	1	70	66	1,82
		10	5	4			10	3		
	38	1	64	67	35	1,54	1	58	60	1,78
		10	5	8			10	8		
	39	10	70	63	660	2,82	10	54	560	2,75
		100	5	7			100	7		
	40	10	78	60	680	2,83	10	59	570	2,76
		100	6	5			100	4		
	41	100	82	57	6400	3,81	100	46	4300	3,63
		1000	1	1			1000	1		
	42	100	64	58	5600	3,75	100	50	5200	3,72
		1000	1	0			1000	7		

♦ Analyses performed according to the COFRAC accreditation