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NF VALIDATION
Validation of alternative analytical methods
Application in food microbiology

Summary report

Validation study according to the EN ISO 16140-2:2016

CHROMID® Coli (COLI ID-F)

(Certificate number: BIO 12/05-01/99)

for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C in a broad range of foods

Quantitative method

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This report consists of 60 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◆.

Version 0
03 November 2022

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

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 realised according to the EN ISO 16140-2:2016 and the AFNOR technical rules (PR Revision 7).

Validation protocols	▪ ISO 16140-1 (2016): Microbiology of the food chain - Method validation — *Part 1: Vocabulary* ▪ ISO 16140-2 (2016): Microbiology of the food chain - Method validation — *Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method* ▪ AFNOR technical rules (PR Revision 7).
Reference method♦	EN ISO 16649-2 (July 2001): Microbiology of food and animal feeding stuffs. Horizontal method for the enumeration of β glucuronidase-positive *Escherichia coli* – Part 2: colony-count technique at 44°C using 5-bromo-4-chloro-3 indolyl β-D-glucuronate
Alternative method	**CHROMID® Coli (COLI ID-F) for the enumeration of β glucuronidase-positive *Escherichia coli* at 44°C**
Scope	Broad range of foods
Certification organization	AFNOR Certification (http://nf-validation.afnor.org/)

♦ Analyses performed according to the COFRAC accreditation

1 INTRODUCTION

The **CHROMID® Coli (COLI ID-F) for the enumeration of β-Glucuronidase positive *Escherichia coli* at 44°C** was validated in 2006 according to the EN ISO 16140:2003 protocol and the AFNOR technical rules (Certificate number: BIO 12/05 - 01/99).

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

Table 1 - Steps of the validation AFNOR Certification

Date	Study	Protocol
19/01/1999	Initial Validation for a broad range of food	Incubation at 44°C for giblets Incubation at 37°C for other products
06/02/2002	Renewal	Incubation at 44°C for all products
2004	Extension	Modification of inoculation procedure (moving from double layer to single layer)
2006	Extension according to ISO 16140 (2003)	/
2010	Renewal	/
27/11/2014	Renewal	/
December 2018	Renewal study according to the EN ISO 16140-2:2016	/
October 2022	Renewal study	/

2 METHODS DESCRIPTION

2.1 Alternative method

2.1.1 Principle

The CHROMID® Coli (Coli ID) is a chromogenic media which allows the enumeration of coliforms and β glucuronidase-positive *Escherichia coli*. This medium contains 2 chromogenic substrates. The coliforms (different from *Escherichia coli*) appear as blue to grey colonies. The *Escherichia coli* appear as pink to violet colonies due to the presence of *β-glucuronidase.* Only the *Escherichia coli* enumeration has to be considered for the present study.

2.1.2 Protocol

The protocol is described in **Appendix 1**.

2.1.3 Restrictions

There is no restriction for use.

2.2 Reference method◆

The reference method is the ISO 16649-2 (July 2001): Horizontal method for the enumeration of β glucuronidase positive *Escherichia coli* – Part 2: colony-count technique at 44°C using 5-bromo-4-chloro-3 indolyl β-D-glucuronate. The flow diagram is provided in **Appendix 2**.

2.3 Protocols applied during the initial validation and the renewal study

The plates were incubated for 22 h at 44°C ± 1°C

3 INITIAL VALIDATION, EXTENSION/RENEWAL STUDIES: RESULTS

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

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.

◆ Analysis performed according to the COFRAC accreditation

3.1.1.1 Number and nature of the samples

Five food categories were tested with a minimum of 15 interpretable results per category and 5 interpretable results per type.
146 samples were tested for the initial validation study, 45 for a study run for bioMérieux in 2011 and 48 samples for this renewal study.

The repartition per tested category and type is provided in **Table 2**.
Combining all the studies 239 samples were analysed, leading to 175 exploitable results.

Table 2 – Categories and types

Category		Type		Number of samples tested				Number of samples with interpretable results by both methods			
				2002	2011	2018	Total	2002	2011	2018	Total
1	Meat and meat products	a	Raw (unseasoned)	24	10	0	34	11	10	0	21
		b	Raw and cooked delicatessen	3	14	0	17	1	13	0	14
		c	RTE, RTRH	5	9	0	14	2	9	0	11
			Total	32	33	0	65	14	32	0	46
2	Milk and dairy products	a	Raw milk	2	0	4	6	1	0	4	5
		b	Cream, desserts and cheeses	22	0	6	28	19	0	4	23
		c	Milk powder	7	0	3	10	2	0	3	5
			Total	31	0	13	44	22	0	11	33
3	Seafood products	a	Raw fish	26	0	9	35	20	0	7	27
		b	Smoked and marinated	0	0	7	7	0	0	5	5
		c	RTE, RTRH	0	0	11	11	0	0	5	5
			Total	26	0	27	53	20	0	17	37
4	Vegetables	a	Raw vegetables	15	0	0	15	15	0	0	15
		b	Frozen, dehydrated	11	1	0	12	4	1	0	5
		c	RTE, RTRH	1	8	0	9	0	8	0	8
			Total	27	9	0	36	19	9	0	28
5	Eggs and egg-based products	a	Eggs	23	0	0	23	20	0	0	20
		b	Egg-based products	6	0	3	9	4	0	2	6
		c	Pastries	1	3	5	9	0	2	3	5
			Total	30	3	8	41	24	2	5	31
All categories				**146**	**45**	**48**	**239**	**99**	**43**	**33**	**175**

3.1.1.2 Artificial and natural contamination of the samples

64 samples were artificially contaminated in 2011 and 2018 using seeding protocols. The inoculated strains, the contamination protocols, the injury protocols applied are provided in **Appendix 3**.
All samples tested in 2006 were naturally contaminated.
59 samples gave interpretable results by both methods.
116 samples giving interpretable results by both methods were naturally contaminated.

66.3% of the samples 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 were 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 $\log_{10}$ unit less than the observed value. Similarly, any value greater than the upper limit should be amended by adding $\log_{10}$ unit more. These results are not included in the calculations but also appear on the graphs.

Table 3 - Classification of the data

Category		Type		Number of samples tested	Number of interpretable results by both methods	Number of samples with <4 CFU/plate	Number of samples with <1 CFU or >150 CFU/plate
1	Meat and meat products	a	Raw (unseasoned)	34	9	4	7
		b	Raw and cooked delicatessen	17	17	2	2
		c	RTE, RTRH	14	20	3	1
			Total	65	46	9	10
2	Milk and dairy products	a	Raw milk	5	5	1	0
		b	Cream, desserts and cheeses	28	19	0	5
		c	Milk powder	10	9	3	2
			Total	44	33	4	7
3	Seafood products	a	Raw fish	35	28	3	5
		b	Smoked and marinated	7	4	0	4
		c	RTE, RTRH	11	5	0	4
			Total	53	37	3	13
4	Vegetables	a	Raw vegetables	15	15	0	0
		b	Frozen	12	5	3	4
		c	RTE, RTRH	9	8	1	0
			Total	36	28	4	4
5	Eggs and egg-based products	a	Eggs	23	20	1	1
		b	Egg-based products	9	6	0	3
		c	Pastries	9	5	1	4
			Total	41	31	2	8
All categories				**239**	**175**	**22**	**42**

The samples, which were not used in the calculations, are provided in **Table 4**.

Table 4 - Samples which were not used in the calculations

Sample N°	Product	ISO 16649-2♦	chromID® (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C	Category	Type
D124	Raw veal meat	<1,00	<1,00	1	a
D125	Raw veal meat	<1,00	<1,00	1	a
D128	Raw poultry meat	1,40*	1,00*	1	a
D131	Raw ground beef	<1,00	<1,00	1	a
D142	Raw veal meat	1,48*	1,00*	1	a
D144	Raw veal meat	1,65	1,48*	1	a
D148	Raw beef meat	0,70*	<1,00	1	a
D153	Raw meat	1,30*	1,00*	1	a
D154	Raw meat	0,70*	1,00*	1	a
D173	Raw horse meat	<1,00	<1,00	1	a
D175	Raw veal meat	1,48*	1,70	1	a
D178	Chicken meat	<1,00	<1,00	1	a
D271	Raw duck meat	1,40*	1,30*	1	a
D151	Delicatessen	<1,00	<1,00	1	b
D172	Delicatessen	1,74	1,48*	1	b
D122	RTRH meat	1,30*	1,60*	1	c
D138	RTRH Veal meat	1,30*	1,30*	1	c
D146	RTE Chicken meat	<1,00	<1,00	1	c
D164	Raw milk	0,60*	0,90	2	a
D165	Cheese	<1,00	<1,00	2	b
D211	Cheese	0,70*	<1,00	2	b
D214	Cheese	0,70*	<1,00	2	b
6283	Raw milk cheese	<1,0	<1,0	2	b
6284	Raw milk cheese	<1,0	<1,0	2	b
D247	Milk powder	1,40*	1,48*	2	c
D248	Milk powder	1,30*	1,00*	2	c
D249	Milk powder	1,54*	1,78	2	c
D272	Milk powder	<1,00	<1,00	2	c
D273	Milk powder	<1,00	<1,00	2	c
D149	Raw fish	<1,00	<1,00	3	a
D150	Raw fish	<1,00	<1,00	3	a
D237	Raw seafood	1,40*	1,00*	3	a
D270	Raw seafood	1,30*	1,48*	3	a
D274	Raw fish	<1,00	<1,00	3	a
6169	Raw fish	<1,00	<1,00	3	a
6290	**Trout**	<3,00	<3,00	3	a
6286	**Smoked bacon**	<1,00	<1,00	3	b
6288	**Smoked herring**	<1,00	<1,00	3	b
6170	RTRH seafood	<1,00	<1,00	3	c
6279	RTRH fish	<1,00	<1,00	3	c
6280	RTRH salmon	<1,0	<1,00	3	c
6398	RTRH mussels	1,00*	<1,00	3	c

♦ Analyses performed according to the COFRAC accreditation

Sample N°	Product	ISO 16649-2♦	chromID® (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C	Category	Type
6399	RTRH mussels	<1,00	<1,00	3	c
6400	Scallops	<1,00	<1,00	3	c
D133	Dehydrated mushroom	3,28	<1,00	4	b
D134	Dehydrated mushroom	<1,00	<1,00	4	b
D135	Dehydrated mushroom	<1,00	<1,00	4	b
D136	Dehydrated mushroom	<1,00	<1,00	4	b
D185	Frozen vegetables mix	1,65	1,30*	4	b
D186	Frozen vegetables mix	1,40*	1,60	4	b
D245	Flour	1,18*	1,00*	4	b
D140	Raw vegetables mix	1,60	1,48*	4	c
D139	Egg	<1,00	<1,00	5	a
D156	Liquid egg	1,00*	1,30*	5	a
D255	Whole liquid egg	<1,00	<1,00	5	a
D123	Galette	<1,00	<1,00	5	b
D137	Crepes	<1,00	<1,00	5	b
6278	Quiche with eggs	<1,00	<1,00	5	b
D126	Pastry	<1,00	<1,00	5	c
6171	Pastry	<1,00	<1,00	5	c
6281	Pastry	<1,0	<1,00	5	c

*: Results with less than 4 colonies per plate with the reference and/or the alternative method

3.1.1.4 Statistical interpretation

The calculations are provided in **Appendix 5**.

The obtained data were analyzed using the scatter plot. The graphs are provided with the line of identity (y = x).
The Figures **1 to 5** show the data plotted for each individual category.
The **Figure 6** shows the data plotted for all the products.

Figure 1 - Data plotted for the Meat and meat products

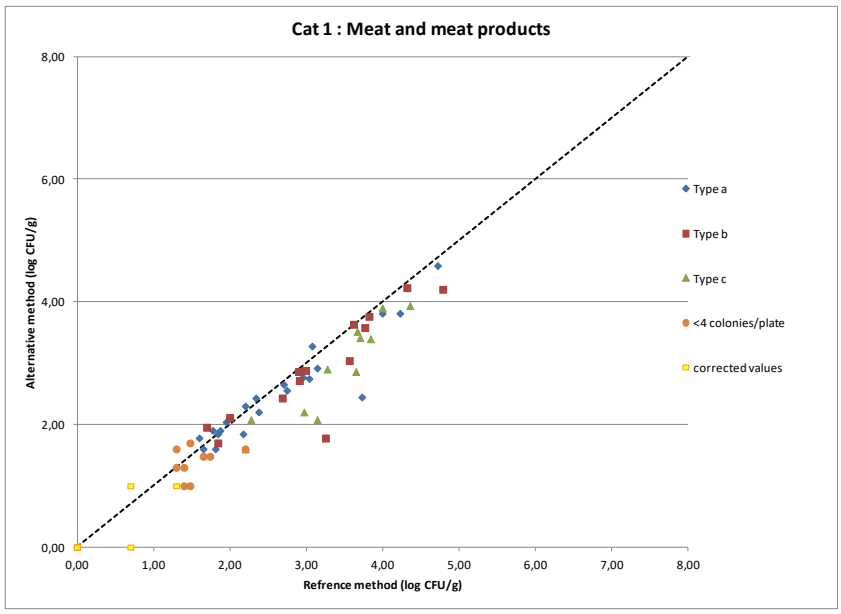


Figure 2 - Data plotted for Milk and dairy products

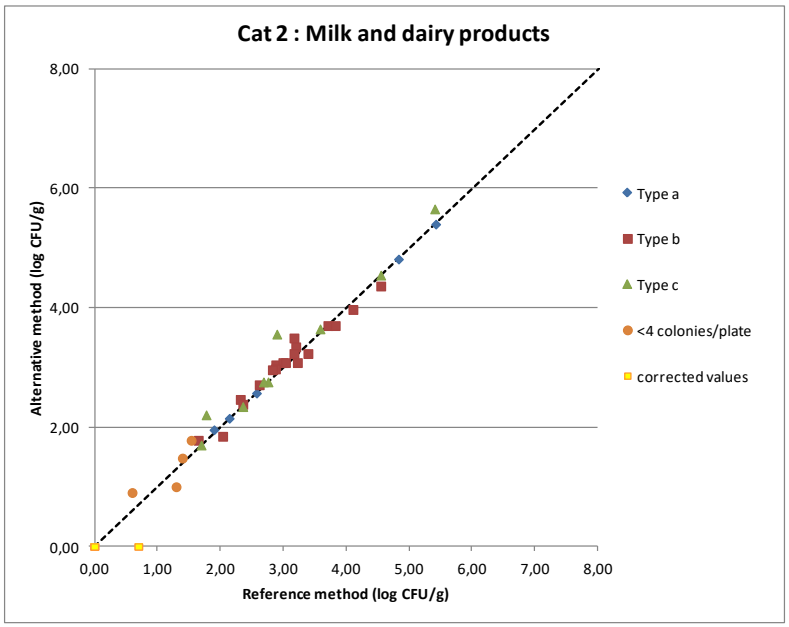


Figure 3 - Data plotted for Seafood products

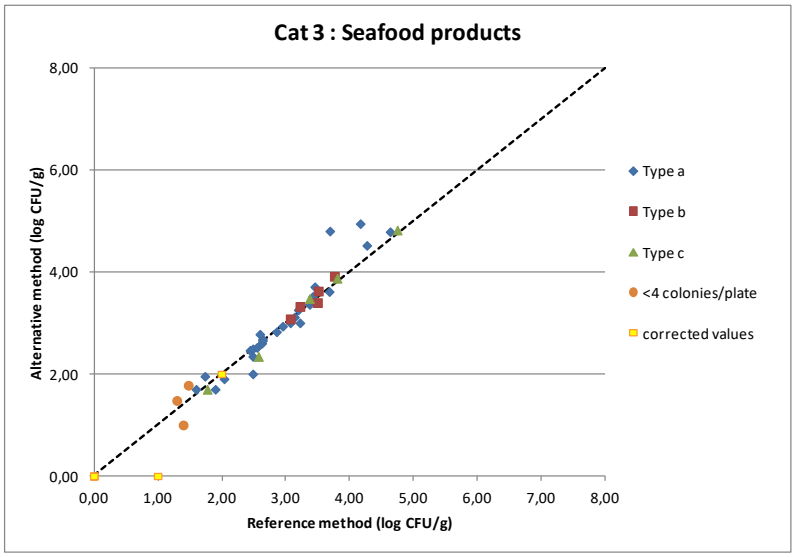


Figure 4 - Data plotted for Vegetables

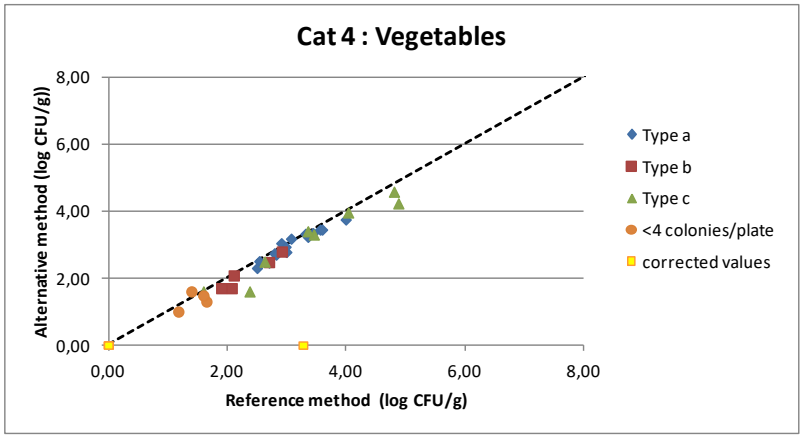


Figure 5 - Data plotted for Eggs and egg based products

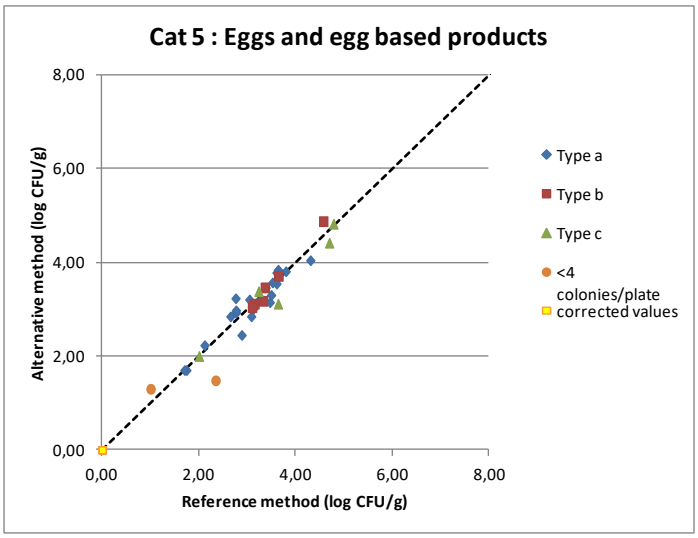
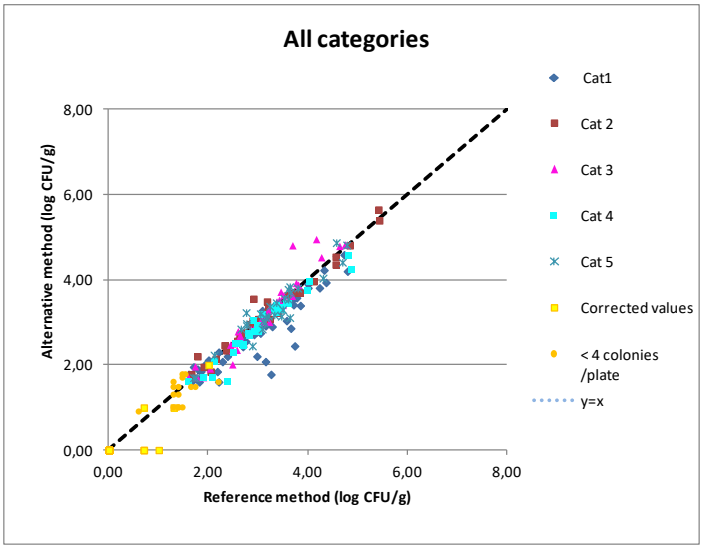


Figure 6 - Data plotted for all the products



The calculated values for Average difference and Standard deviation differences per category are provided in **Table 5**.

Table 5 - Calculated values

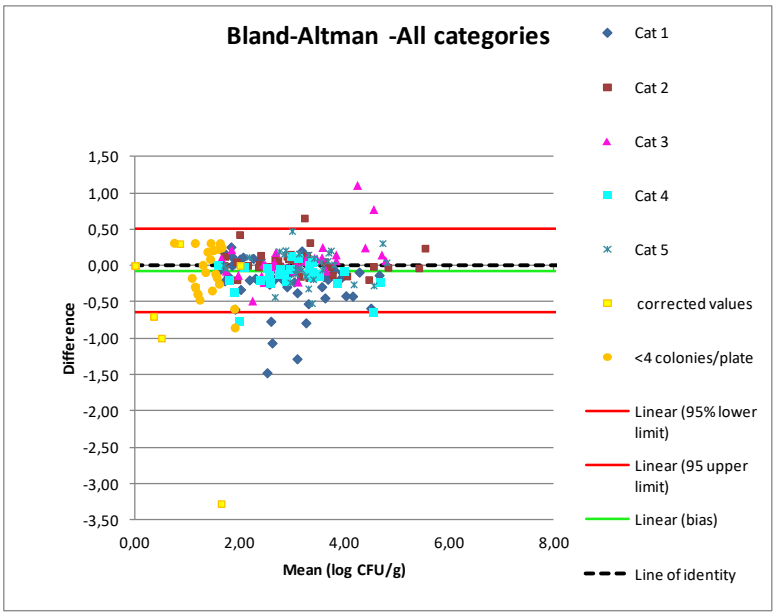
Category		Number of samples with interpretable results	$\bar{D}$	SD	Lower limit (95%)	Upper limit (95%)
1	Meat and meat products	46	-0,25	0,37	-0,99	0,49
2	Milk and dairy products	33	0,05	0,17	-0,31	0,41
3	Seafood products	37	0,05	0,26	-0,49	0,59
4	Vegetables	28	-0,16	0,19	-0,56	0,24
5	Eggs and egg-based products	31	-0,01	0,22	-0,46	0,44
All categories		**175**	**-0,07**	**0,29**	**-0,65**	**0,50**

$\bar{D}$: Average difference SD: Standard deviation of differences

The average differences vary from - 0.25 log (Meat and meat products) to 0.05 log (milk and dairy products and Seafood).
The bias between both method for all categories combined is -0.07 log CFU

The Bland-Altman difference plot for all the samples is given **Figure 7**.

Figure 7 – 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 higher or lower than the limits are listed in Table 6.

Table 6 - Analysis of the data out of the confidence limits

Classification of the data	CHROMID® (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C									
	Category	Type	Sample N°	Product	Reference method	Alternative method	Values before correction (reference and/or alternative)	Mean	Difference	LCL / UCL
Interpretable results	1	a	1913	Raw turkey meat	3,73	2,45	/	3,09	-1,29	-0,65 / 0,60
	1	b	**2369**	**Cooked ham**	3,26	1,78	/	2,52	-1,48	
	1	c	**2066**	**RTRH pork meat**	3,15	2,08	/	2,61	-1,07	
	1	c	**2368**	**Sandwich with ham**	3,65	2,86	/	3,26	-0,79	
	1	c	**2482**	**RTE salad with chicken**	2,97	2,20	/	2,59	-0,77	
	4	c	**2365**	**RTE vegetables mix**	2,38	1,60	/	1,99	-0,78	
	4	c	**2366**	**RTE vegetables mix**	4,89	4,23	/	4,56	-0,66	
	2	c	**6736**	**Semi skimmed milk powder**	2,90	3,56	/	3,23	0,65	
	3	a	**6728**	**Raw shrimps**	3,70	4,80	/	4,25	1,10	
	3	a	**6729**	**Scallops**	4,18	4,94	/	4,56	0,77	
<4 CFU/plate	5	c	**2062**	**Pastry**	2,34	1,48	/	1,91	-0,86	
> or >	1	a	D148	Raw beef meat	0,70	0,00	1,00	0,35	-0,70	
	2	b	D211	Cheese	0,70	0,00	1,00	0,35	-0,70	
	2	b	D214	Cheese	0,70	0,00	1,00	0,35	-0,70	
	3	c	6398	RTRH mussels	1,00	0,00	1,00	0,50	-1,00	
	4	b	D133	Dehydrated mushroom	3,28	0,00	1,00	1,64	-3,28	

Values in green: differences in favour of the alternative method
Values in red: differences in favour of the reference method
Values in black: equivalent enumeration observed for the two methods

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

The values outside of the confidence limits at 95 % concern:

- 10 samples with interpretable results by both methods (7 samples below the LCL, 3 samples above the UCL);
- 1 sample with less than 4 colonies on the plate (CHROMID Coli);
- 5 samples below the quantification limits for the alternative method.

3.1.1.5 Discordant results

The number of samples below or above the CLs is given **Table 7**.

Table 7 - Number of samples outside the CLs

		Number of samples
Interpretable results by both methods	< LCL	7
	> UCL	3
	Total	10
<4 CFU/plate	< LCL	1
	> UCL	0
	Total	1
< or > the quantification limit	< LCL	7
	> UCL	0
	Total	7
Total < LCL		15
Total >UCL		3
TOTAL		18

For samples with interpretable results by both methods, the number of samples with higher enumeration observed with the reference method is more important than the number of samples with higher enumeration using the alternative method (7 VS 3). For 4 samples outside of the confidence interval limits (samples < or > the quantification limit), the results can be considered equivalent.
For one sample (D133: Dehydrated mushroom), an important enumeration difference was observed between both methods. An *Escherichia coli* strain was isolated from TBX plates which gave non-typical colonies on CHROMID plates. This explains the difference observed between both methods. Note that the bias between the reference and the alternative method is closed to 0 (- 0.07 log).

3.1.1.6 Conclusion

The relative trueness of the alternative method is satisfying. The alternative method is equivalent to the reference 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 β-expectation tolerance intervals, both reported to different levels of the reference value.

3.1.2.1 Matrices

Five 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, matrix and inoculated strains are provided in **Table 8**.

Table 8 - Categories, types and matrices

Category		Type	Matrix	Inoculated strain	Origin	Inoculation level (CFU/g)
1	**Meat products and meat**	a Raw meat	Ground beef	*Escherichia coli* 13	Ground beef	
2	**Milk and dairy products**	b Dessert	Vanilla dairy based dessert	*Escherichia coli* 94	Cheese	300
3	**Seafood products**	a Raw fish	Raw fish fillet	*Escherichia coli* Ad228	Fish	50000
4	**Vegetables**	c RTE, RTRH	Grated carrots	*Escherichia coli* 19	Grated carrots	100000
5	**Eggs and egg-based products**	a Eggs	Liquid egg product	*Escherichia coli* 142	Liquid egg product	

3.1.2.2 Calculation and interpretation

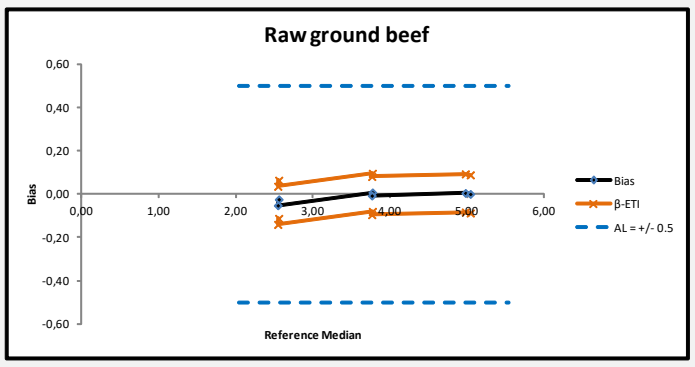
The raw data are provided in **Appendix 6**. The summary tables (in log CFU/g) and calculations are provided in **Appendix 7**. The statistical results and the accuracy profiles are provided **Figure 8**.

The calculations were done using the AP Calculation Tool MCS (Clause 6-1-3-3 calculation and interpretation of accuracy profile study) ver 2027-01-2015 available on http://standards.iso.org/iso/16140

The accuracy profiles are comprised within the Acceptability Limits for all the tested matrices

Figure 8 – Accuracy profile

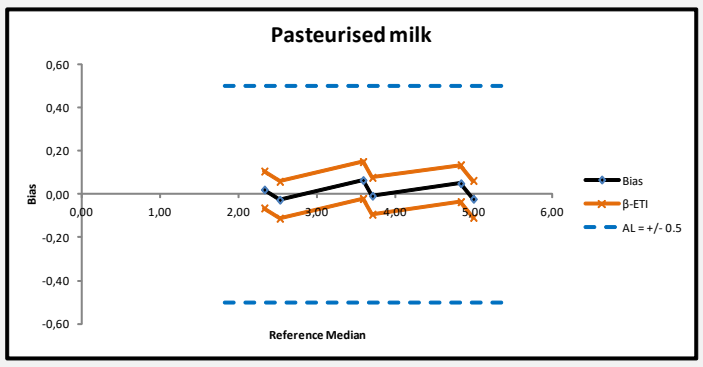
(Food) Category	Meat products
(Food) Type	Raw ground beef



Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
7650-7654	2,56	-0,025	-0,113	0,063	YES	YES
7665-7669	2,54	-0,053	-0,141	0,035	YES	YES
7655-7659	3,77	0,007	-0,081	0,095	YES	YES
7670-7674	3,76	-0,008	-0,096	0,081	YES	YES
7660-7664	4,98	0,005	-0,084	0,093	YES	YES
7675-7679	5,04	0,000	-0,088	0,088	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,054	0,061	YES	+/- 0,500

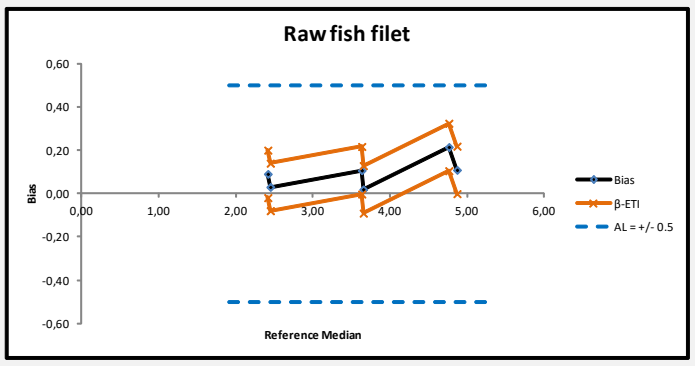
(Food) Category	Dairy products
(Food) Type	Pasteurised milk



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
7750-7754	2,32	0,020	-0,065	0,105	YES	YES
7765-7769	2,52	-0,027	-0,112	0,058	YES	YES
7755-7759	3,58	0,064	-0,022	0,149	YES	YES
7770-7774	3,70	-0,009	-0,094	0,076	YES	YES
7760-7764	4,83	0,049	-0,036	0,134	YES	YES
7775-7779	4,99	-0,023	-0,108	0,062	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,055	0,059	YES	+/- 0,500

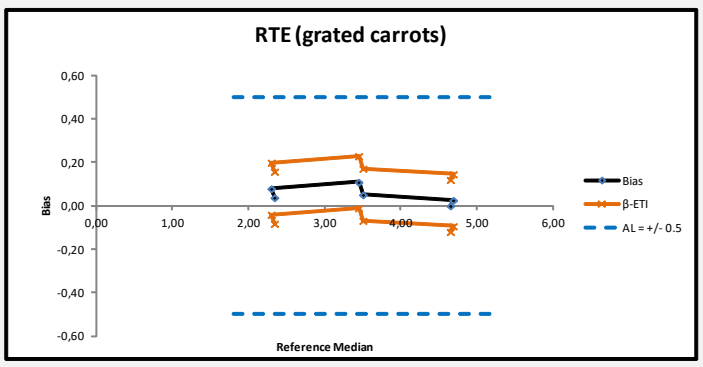
(Food) Category	Seafood
(Food) Type	Raw fish filet



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
8164-8168	2,41	0,090	-0,020	0,200	YES	YES
8179-8183	2,45	0,030	-0,080	0,140	YES	YES
8169-8173	3,63	0,107	-0,003	0,217	YES	YES
8184-8188	3,65	0,019	-0,091	0,129	YES	YES
8174-8178	4,76	0,214	0,105	0,324	YES	YES
8189-8193	4,87	0,108	-0,001	0,218	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,064	0,076	YES	+/- 0,500

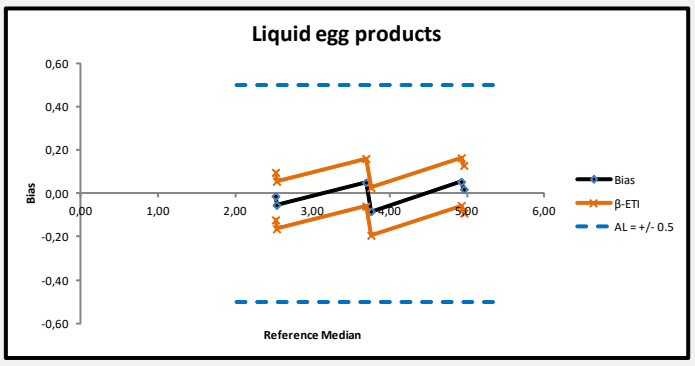
(Food) Category	Vegetables
(Food) Type	RTE (grated carrots)



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
8239-8243	2,34	0,038	-0,082	0,158	YES	YES
8254-8258	2,30	0,079	-0,041	0,199	YES	YES
8244-8248	3,45	0,109	-0,011	0,229	YES	YES
8259-8263	3,51	0,051	-0,069	0,171	YES	YES
8249-8253	4,69	0,026	-0,094	0,146	YES	YES
8264-8268	4,65	0,000	-0,120	0,120	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,076	0,083	YES	+/- 0,500

(Food) Category	Egg products
(Food) Type	Liquid egg products



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
8051-8055	2,52	-0,013	-0,123	0,096	YES	YES
8066-8070	2,53	-0,054	-0,164	0,055	YES	YES
8056-8060	3,69	0,050	-0,060	0,160	YES	YES
8071-8075	3,76	-0,084	-0,193	0,026	YES	YES
8061-8065	4,92	0,053	-0,056	0,163	YES	YES
8076-8080	4,96	0,019	-0,091	0,128	YES	YES

	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0,080	0,076	YES	+/- 0,500

3.1.2.3 Conclusion

For the five matrices tested the observed profiles are comprised within the AL fixed at ± 0.5 log. 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.

For the validation study performed in 2006 according to the ISO 16140 (2003), 30 target and 20 non-target strains were tested in duplicate on PCA, VRBL and CHROMID Coli (44°C).
20 additional target strains and 10 non-target strains were tested in 2017, once on PCA, VRBL and CHROMID Coli (44°C).

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

> ***Inclusivity***

Among the 50 target strains tested 6 gave non-typical colonies using the CHROMID Coli:

- *Escherichia coli* Adria 12
- *Escherichia coli* Adria 20
- *Escherichia coli* ATCC 43888
- *Escherichia coli* Ad1816
- *Escherichia coli* Ad1999
- *Escherichia coli* Ad1386

All these strains are β-glucuronidase negative and all of them tested on TBX also gave atypical white colonies

> ***Exclusivity***

30 non-target strains were tested; 1 strain gave doubtful colonies on CHROMID Coli plates: *Plesiomonas shigelloides* (white, pink colonies).

The CHROMID Coli method is as specific and selective, as the reference method.

3.1.4 Practicability

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

Storage conditions, shelf-life and modalities of utilisation after first use	The bottles are stored in their boxes at 2°C -8°C until the expiry date and kept away from light The agar cannot be melted more than twice		
Time to result	**Steps**	**Reference method**	**Alternative method**
	Sampling analysis	D0	D0
	Enumeration	D1	D1
Common step with the reference method	Preparation of initial suspension		

The *Escherichia coli* enumeration is available in one day for both methods.

3.2 Inter-laboratory study organisation and results

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.

The study was run in 2006.

Pasteurised half-skimmed milk inoculated with *Escherichia coli* 94 and *Enterobacter cloacae* Fb2 was used for the study.

14 laboratories participated in the study.

The results of the inter-laboratory study run in 2006 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).

3.2.1 Experimental parameters controls

Three samples inoculated at a high level (100 CFU/g) were tested for enumeration after 24 h and 48 h storage. Three samples inoculated at a low level were tested for detection after 24 h and 48 h storage (See Table 9).

Table 9 – *Escherichia coli* 94 stability in the matrix

	Level 1		Level 2		Level 3	
	Replicate 1	Replicate 2	Replicate 1	Replicate 2	Replicate 1	Replicate 2
Day 0	55	47	450	450	3 500	2 700
Day 1	36	53	420	350	3 900	4 500
Day 2	38	47	340	550	5 000	4 400

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

3.2.2 Logistic conditions

The temperatures measured at reception by the Labs, the temperatures registered by the thermo-probe, and the receipt dates are given in Table 10.

Table 10 - Sample temperatures at receipt

Collaborator	Temperature measured at receipt (°C)	Date and hour receipt of the samples		Temperature measured by the probe (°C)
A	7.5	Day 2	14h00	0.5
B	2.0	Day 1	11h15	0.0
C	4.0	Day 1	11h30	*Probe not received*
D	3.0	Day 1	08h30	0.0
E	2.5	Day 2	09h10	0.0
F	0.3	Day 1	11h20	- 2.5[1]
G	4.6	Day 1	10h00	0.00
H	0.2	Day 1	08h15	0.00
I	0.4	Day 1	09h30	0.00
J	1.0	Day 1	11h30	- 1.00[1]
K	0.6	Day 1	09h20	0.00
L	0.3	Day 1	13h15	0.00
M	0.0	Day 1	11h00	0.00
N	0.3	Day 1	08h45	0.00

All the packages were declined at Day 1 except for two labs (A and E) which received their sample at Day 2. All the temperature measured at receipt were correct or below 8.4°C. No problem was encountered during transport.

[1] Some temperatures below 0°C were noticed but the samples were not frozen.

3.2.3 Result analysis

3.2.3.1 Results obtained by the expert Lab.

The results obtained by the expert Lab. are the following (See **Table 11**).

Table 11 – Results obtained by the expert Lab.

Level (log CFU/g)	Reference method		Alternative method	
	Replicate 1	Replicate 2	Replicate 1	Replicate 2
< 1	< 1	< 1	< 1	< 1
1 à 2	1,97	1,92	1,92	1,85
2 à 3	2,90	2,75	2,90	2,82
3 à 4	3,98	3,89	3,89	3,92

3.2.3.2 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 22 000 to 480 000 CFU/ml.

- ***Escherichia coli enumeration***

A summary of the test results is given in Table 12 (CFU/g) and Table 13(log CFU/g).

Table 12 - Summary of data (CFU/g)

Collabo-rator	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	<10	<10	<10	<10	35	40	40	80	390	510	550	520	3200	3800	4400	4300
B	<1	<1	<1	<1	43	42	53	58	620	550	670	630	5500	4900	6600	5300
C	<10	<10	<10	<10	65	55	50	40	380	400	350	460	5300	4400	4900	4800
D	<10	<10	<10	<10	30	50	60	80	440	360	500	570	3000	3600	4100	4500
E	<1	<1	<1	<1	44	45	50	40	480	380	540	560	4800	4400	5900	5600
F	<1	<1	<1	<1	25	41	52	49	490	600	620	610	5200	7000	5400	5800
G	<10	<10	<10	<10	35	45	30	30	360	330	190	410	3500	3500	3300	5400
H	<1	<1	<1	<1	25	43	39	38	360	400	480	400	4000	5000	4500	3500
I	<1	<1	<1	<1	40	39	50	47	420	510	570	520	4000	4900	5600	6400
J	<1	<1	<1	<1	39	34	44	43	440	400	490	290	6100	5000	3700	5000
K	<10	<10	<10	<10	35	45	60	20	590	420	480	460	4600	5000	5900	4800
L	<10	<10	<10	<10	35	50	30	50	430	480	590	470	4800	6500	4800	3900
M	<1	<1	<1	<1	39	43	55	43	430	480	500	480	4800	6500	5700	5100
N	<1	<1	<1	<1	24	20	47	42	450	360	420	410	3600	3700	5800	6600

Table 13 - Summary of data (log CFU/g)

Collabo-rator	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	<1,00	<1,00	<1,00	<1,00	1,544	1,602	1,602	1,903	2,591	2,708	2,740	2,716	3,505	3,580	3,643	3,633
B	<0,00	<0,00	<0,00	<0,00	1,633	1,623	1,724	1,763	2,792	2,740	2,826	2,799	3,740	3,690	3,820	3,724
C	<1,00	<1,00	<1,00	<1,00	1,813	1,740	1,699	1,602	2,580	2,602	2,544	2,663	3,724	3,643	3,690	3,681
D	<1,00	<1,00	<1,00	<1,00	1,477	1,699	1,778	1,903	2,643	2,556	2,699	2,756	3,477	3,556	3,613	3,653
E	<0,00	<0,00	<0,00	<0,00	1,643	1,653	1,699	1,602	2,681	2,580	2,732	2,748	3,681	3,643	3,771	3,748
F	<0,00	<0,00	<0,00	<0,00	1,398	1,613	1,716	1,690	2,690	2,778	2,792	2,785	3,716	3,845	3,732	3,763
G	<1,00	<1,00	<1,00	<1,00	1,544	1,653	1,477	1,477	2,556	2,519	2,279	2,613	3,544	3,544	3,519	3,732
H	<0,00	<0,00	<0,00	<0,00	1,398	1,633	1,591	1,580	2,556	2,602	2,681	2,602	3,602	3,699	3,653	3,544
I	<0,00	<0,00	<0,00	<0,00	1,602	1,591	1,699	1,672	2,623	2,708	2,756	2,716	3,602	3,690	3,748	3,806
J	<0,00	<0,00	<0,00	<0,00	1,591	1,531	1,643	1,633	2,643	2,602	2,690	2,462	3,785	3,699	3,568	3,699
K	<1,00	<1,00	<1,00	<1,00	1,544	1,653	1,778	1,301	2,771	2,623	2,681	2,663	3,663	3,699	3,771	3,681
L	<1,00	<1,00	<1,00	<1,00	1,544	1,699	1,477	1,699	2,633	2,681	2,771	2,672	3,681	3,813	3,681	3,591
M	<0,00	<0,00	<0,00	<0,00	1,591	1,633	1,740	1,633	2,633	2,681	2,699	2,681	3,681	3,813	3,756	3,708
N	<0,00	<0,00	<0,00	<0,00	1,380	1,301	1,672	1,623	2,653	2,556	2,623	2,613	3,556	3,568	3,763	3,820

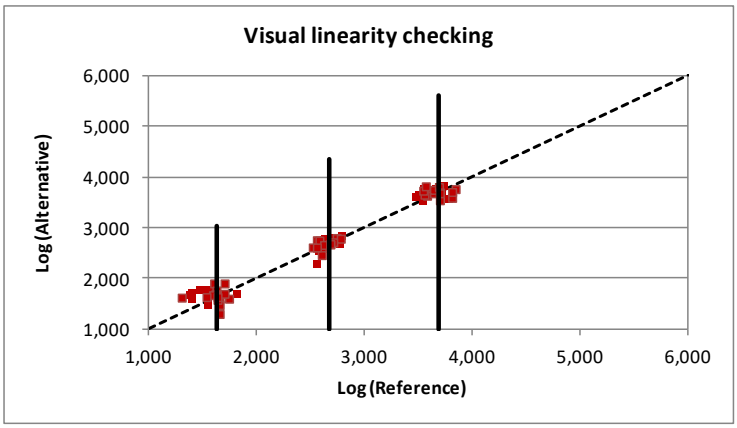
Some labs enumerated the dilution -1, -2, -3 instead of the dilution 0, -1, -2, -3 this explains the results obtained for level 0 (< 1 or < 10 CFU/ml).

3.2.4 Calculation and interpretation

3.2.4.1 Visual linearity checking

The **Figure 9** 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 9 - Visual linearity checking



3.2.4.2 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 14.

Table 14 - Summary of statistical tests

Accuracy profile	0,5		
Study Name	chromID Coli		
Date	2006		
Coordinator	ADRIA Développement		
Tolerance probability (beta)	80%	80%	80%
Acceptability limit in log (lambda)	0,50	0,50	0,50

Application of clause 6.2.3
Step 8: If any of the values for the β-ETI fall outside the acceptability limits, calculate the pooled average reproducibility standard deviation of the reference method.
Step 9: Calculate new acceptability limits as a function of this standard deviation.

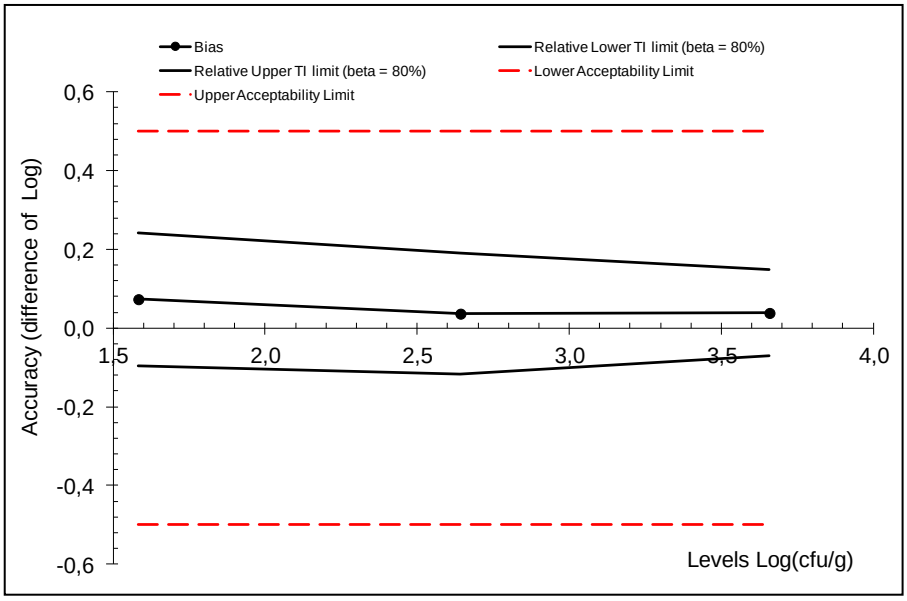
	Alternative method			**Reference method**		
Levels	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
Target value	**1,583**	**2,642**	**3,659**			
Number of participants (K)	14	14	14	14	14	14
Average for alternative method	1,656	2,679	3,697	1,583	2,642	3,659
Repeatability standard deviation (sr)	0,122	0,085	0,063	0,088	0,057	0,060
Between-labs standard deviation (sL)	0,032	0,075	0,051	0,071	0,047	0,076
Reproducibility standard deviation (sR)	0,126	0,113	0,081	0,114	0,074	0,097
Corrected number of dof	26,721	22,012	22,787	22,785	22,635	18,883
Coverage factor	1,339	1,355	1,352			
Interpolated Student t	1,314	1,321	1,320			
Tolerance interval standard deviation	0,1289	0,1159	0,0832			
Lower TI limit	1,487	2,526	3,587			
Upper TI limit	1,826	2,832	3,807			
Bias	**0,073**	**0,036**	**0,038**			
Relative Lower TI limit (beta = 80%)	**-0,096**	**-0,117**	**-0,072**			
Relative Upper TI limit (beta = 80%)	**0,243**	**0,190**	**0,148**			
Lower Acceptability Limit	**-0,50**	**-0,50**	**-0,50**			
Upper Acceptability Limit	**0,50**	**0,50**	**0,50**			

New acceptability limits may be based on reference method pooled variance

Pooled repro standard dev of reference	0,096

These values are collected in a graphical representation together with the acceptability limits (AL). This representation is given **Figure 10**.

Figure 10 - 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.

3.2.4.3 Conclusion

The alternative method is equivalent to the reference method.

4 CONCLUSION

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

- **239 samples were tested in the relative trueness study, providing 175 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 actually set at ± 0.5 Log CFU/g in the EN ISO 16140-2:2016.**

- **The inclusivity and exclusivity testing shows satisfying results.**

- **The quality assurance parameters were verified, 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, 03 November 2022

Maryse RANNOU
Project Manager
Validation of Alternative methods

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: CHROMID Coli (COLI ID-F) for the enumeration of β glucuronidase-positive *Escherichia coli* at 44°C

X g + 9x ml appropriate diluents
according to ISO 6887 parts

↓

Decimal dilution in peptone-salt

↓

1 ml per Petri dish

↓

Add 15 ml of CHROMID Coli medium

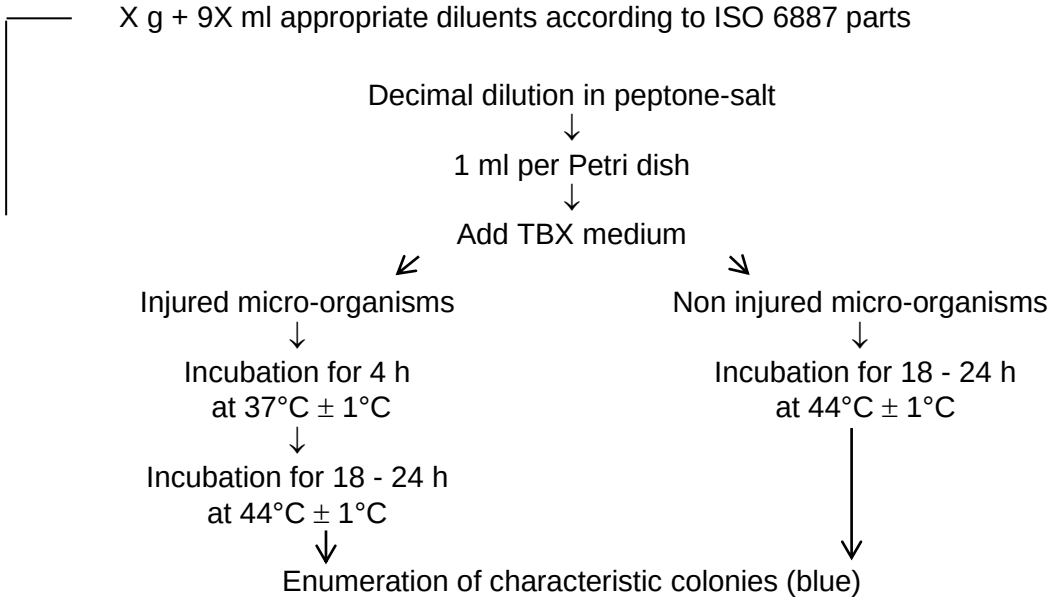
↓

Incubation 24 h ± 2 h
at 44°C ± 1°C

↓

Enumeration of *E. coli*: pink to violet colonies

Appendix 2 – Flow diagram of the reference method:
EN ISO 16649-2 (July 2001): Microbiology of food and animal feeding stuffs: Horizontal method for the enumeration of β glucuronidase positive *Escherichia coli* – Part 2: colony-count technique at 44°C using 5-bromo-4-chloro-3 indolyl β-D-glucuronate



Appendix 3 – Artificial contaminations of samples

Analysis date	Sample N°	Product (French name)	Product	Artificial contamination				Category	Type
				Strain	Origin	Injury	Injury measure-ment		
2011	**2186**	**Escalopes extra-fines de dinde**	**Raw turkey meat**	*Escherichia coli* 96	Turkey meat	6 days at 4°C	/	1	a
2011	**2153**	**Saucisses de Montbéliard fumées au bois de hêtre**	**Smoked sausage**	*Escherichia coli* 21	Delicatessen	Heat treatment 10 min 56°C	/	1	b
2011	**2185**	**Saucisses nature**	**Sausage**	*Escherichia coli* 6	Sausage	6 days at 4°C	/	1	b
2011	**2369**	**Jambon cuit à la broche**	**Cooked ham**	*Escherichia coli* 101	Pork meat	Heat treatment 10 min 56°C	/	1	b
2011	**2470**	**Saucisson à l'ail**	**Sausage with garlic**	*Escherichia coli* 1	Pork meat	Heat treatment 10min 56°C	/	1	b
2011	**2472**	**Chorizo**	**Chorizo**	*Escherichia coli* 1	Pork meat	Heat treatment 10 min 56°C	/	1	b
2011	**2473**	**Saucisson à l'ail**	**Sausage with garlic**	*Escherichia coli* 1	Pork meat	Heat treatment 10 min 56°C	/	1	b
2011	**2475**	**Chiffonnade de jambon sec**	**Ham**	*Escherichia coli* 1	Pork meat	7 days 4°C	/	1	b
2011	**2476**	**Bacon tranches épaisses**	**Bacon**	*Escherichia coli* 3A	Pork meat	7 days 4°C	/	1	b
2011	**2478**	**Poitrine fumée tranches fines**	**Smoked delicatessen**	*Escherichia coli* 1	Pork meat	7 days 4°C	/	1	b
2011	**2479**	**Jambon cru**	**Ham**	*Escherichia coli* 21	Pork meat	7 days 4°C	/	1	b
2011	**2059**	**Chili con carné**	**RTRH beef meat**	*Escherichia coli* 144	Paella	Heat treatment 15 min 56°C	/	1	c
2011	**2065**	**Nems au porc**	**RTRH pork meat**	*Escherichia coli* 108	RTRH	Heat treatment 10 min 56°C	/	1	c
2011	**2066**	**Ravioli chinois au porc**	**RTRH pork meat**	*Escherichia coli* 108	RTRH	Heat treatment 15 min 56°C	/	1	c
2011	**2151**	**Sandwich jambon œuf crudités**	**Sandwich with ham**	*Escherichia coli* Ad 222	Egg product	4°C 1 day	/	1	c
2011	**2184**	**Sandwich poulet œuf**	**Sandwich with chicken**	*Escherichia coli* 142	Egg product	6 days at 4°C	/	1	c
2011	**2368**	**Sandwich jambon œuf tomate**	**Sandwich with ham**	*Escherichia coli* 101	Pork meat	Heat treatment 10 min 56°C	/	1	c
2011	**2480**	**Sandwich poulet rôti mayonnaise**	**Sandwich with chicken**	*Escherichia coli* Ad 218	Poultry meat	7 days 4°C	/	1	c
2011	**2481**	**Sandwich poulet rôti mayonnaise**	**Sandwich with chicken**	*Escherichia coli* Ad 218	Poultry meat	7 days 4°C	/	1	c
2011	**2482**	**Farfalles poulet rôti tomates**	**RTE salad with chicken**	*Escherichia coli* 108	RTRH	Heat treatment 10 min 56°C	/	1	c
2018	**6721**	**Lait cru fermier**	**Raw milk**	*Escherichia coli* 16	Dairy product	Seeding 48 h 3 ± 2°C	/	2	a
2018	**6722**	**Lait cru fermier**	**Raw milk**	*Escherichia coli* 16	Dairy product	Seeding 48 h 3 ± 2°C	/	2	a

Analysis date	Sample N°	Product (French name)	Product	Artificial contamination				Category	Type
				Strain	Origin	Injury	Injury measure-ment		
2018	**6717**	**Riz au lait saveur vanille**	**Dessert (rice pudding)**	*Escherichia coli* 14	Dairy product	Seeding 48 h 3 ± 2°C	/	2	b
2018	**6718**	**Riz au lait à la vanille**	**Dessert (rice pudding)**	*Escherichia coli* 14	Dairy product	Seeding 48 h 3 ± 2°C	/	2	b
2018	**6719**	**Panna cotta coulis de framboise**	**Panna cotta**	*Escherichia coli* 15	Dairy product	Seeding 48 h 3 ± 2°C	/	2	b
2018	**6720**	**Crème fraiche entière**	**Cream**	*Escherichia coli* 15	Dairy product	Seeding 48 h 3 ± 2°C	/	2	b
2018	**6734**	**Poudre de lait demi écrémé**	**Semi skimmed milk powder**	*Escherichia coli* 94	Dairy product	Spiking HT 56°C 8 min	0,7	2	c
2018	**6735**	**Poudre de lait écrémé**	**Skimmed milk powder**	*Escherichia coli* 94	Dairy product	Spiking HT 56°C 8 min	0,7	2	c
2018	**6736**	**Poudre de lait demi écrémé**	**Semi skimmed milk powder**	*Escherichia coli* 94	Dairy product	Spiking HT 56°C 8 min	0,7	2	c
2018	**6290**	**Truite**	**Trout**	*Escherichia coli* 93	Fish product	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6723**	**Filet de julienne**	**Raw fish**	*Escherichia coli* Ad1384	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6724**	**Filet de Merlan**	**Raw fish**	*Escherichia coli* Ad1384	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6725**	**Bar**	**Raw fish**	*Escherichia coli* Ad1384	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6726**	**Lamelles d'encornet géant**	**Raw seafood**	*Escherichia coli* Ad1385	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6727**	**Encornet criée**	**Raw seafood**	*Escherichia coli* Ad1385	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6728**	**Crevettes crues décortiquées**	**Raw shrimps**	*Escherichia coli* Ad1385	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6729**	**Noix de saint jacques**	**Scallops**	*Escherichia coli* Ad1385	Sea water	Seeding 48 h 3 ± 2°C	/	3	a
2018	**6285**	**Lardons de saumon fumé**	**Smoked bacon**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6286**	**Lardons de saumon fumé**	**Smoked bacon**	*Escherichia coli* 93	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6287**	**Harengs fumés au naturel**	**Smoked herring**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6288**	**Harengs fumés au naturel**	**Smoked herring**	*Escherichia coli* 93	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6289**	**Harengs fumés doux**	**Smoked herring**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6291**	**Anchois marinés**	**Marinated anchovy**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6294**	**Anchois marinés à l'orientale**	**Marinated anchovy**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	b
2018	**6292**	**Bâtonnet gourmand**	**RTE surimi**	*Escherichia coli* Ad228	Fish product	Seeding 48 h 3 ± 2°C	/	3	c
2018	**6293**	**Bâtonnet gourmand**	**RTE surimi**	*Escherichia coli* 144	RTRH fish product	Seeding 48 h 3 ± 2°C	/	3	c

Analysis date	Sample N°	Product (French name)	Product	Artificial contamination				Category	Type
				Strain	Origin	Injury	Injury measure-ment		
2018	**6295**	**Bâtonnets de surimi**	**RTE surimi**	*Escherichia coli* 144	RTRH fish product	Seeding 48 h 3 ± 2°C	/	3	c
2018	**6296**	**Breizh surimi**	**RTE surimi**	*Escherichia coli* 144	RTRH fish product	Seeding 48 h 3 ± 2°C	/	3	c
2011	**2120**	**Ratatouille surgelée**	**Frozen vegetables mix**	*Escherichia coli* 19	Grated carrots	-20°C 8 days	/	4	b
2011	**2058**	**Ratatouille**	**RTRH vegetables mix**	*Escherichia coli* 19	Grated carrots	Heat treatment 15 min 56°C	/	4	c
2011	**2060**	**Carottes en lamelles cuites**	**RTRH carrots**	*Escherichia coli* 144	Paella	Heat treatment 10 min 56°C	/	4	c
2011	**2121**	**Salade boulghour légumes du soleil**	**RTE salad with vegetables**	*Escherichia coli* 19	Grated carrots	4°C 8 days	/	4	c
2011	**2183**	**Quiche aux poireaux surgelée**	**RTRH leeks**	*Escherichia coli* 142	Egg product	6 days at -20°C	/	4	c
2011	**2363**	**Salade carotte céleri**	**RTE salad with carrots and celery**	*Escherichia coli* 19	Grated carrots	7 days at 4°C	/	4	c
2011	**2364**	**Salade de céleri rémoulade**	**RTE salad with celery**	*Escherichia coli* 144	Paella	7 days at 4°C	/	4	c
2011	**2365**	**Macédoine de légumes**	**RTE vegetables mix**	*Escherichia coli* 144	Paella	Heat treatment 10 min 56°C	/	4	c
2011	**2366**	**Macédoine de légumes**	**RTE vegetables mix**	*Escherichia coli* 142	Egg product	Heat treatment 10 min 56°C	/	4	c
2018	**6730**	**Mayonnaise fraiche**	**Mayonnaise**	*Escherichia coli* 143	Egg product	Seeding 48 h 3 ± 2°C	/	5	b
2018	**6731**	**Tortilla espagnole aux oignons**	**Tortilla with onions**	*Escherichia coli* 143	Egg product	Seeding 48 h 3 ± 2°C	/	5	b
2011	**2062**	**Tartelette cocktail**	**Pastry**	*Escherichia coli* Ad 222	Egg product	Heat treatment 15 min 56°C	/	5	c
2011	**2063**	**Tartelette cocktail**	**Pastry**	*Escherichia coli* 142	Egg product	Heat treatment 10 min 56°C	/	5	c
2011	**2064**	**Tartelette fraise**	**Pastry**	*Escherichia coli* Ad 222	Egg product	Heat treatment 10 min 56°C	/	5	c
2018	**6732**	**Eclair au chocolat**	**Pastry**	*Escherichia coli* 143	Egg product	Seeding 48 h 3 ± 2°C	/	5	c
2018	**6733**	**Millefeuille**	**Pastry**	*Escherichia coli* 143	Egg product	Seeding 48 h 3 ± 2°C	/	5	c

Appendix 4 - Relative trueness study: raw data

MEAT AND MEAT PRODUCTS																						
Analysis date	Sample N°	Product (in French)	Product	Reference method: ISO 16649-2♦										Alternative method: CHROMID COLI (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C								Category	Type
				Dilution	Replicate 1 Cfu/ plate a	Replicate 1 Cfu/ plate b	Replicate 2 Cfu/ plate c	Replicate 2 Cfu/ plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g (c/d) rounded	Replicate 1 log cfu/g (a/b)	Replicate 2 log cfu/g (c/d)	Result	Dilution	Replicate 1 Cfu/ plate	Replicate 2 Cfu/ plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D122	Palette à la diable	RTRH meat	10	2	2	3	2	20	25	1,30	1,40	1,30*	10	4	1	40	10	1,60	1,00	1,60*	1	c
				100	0	0	0	0						100	1	0							
2002	D124	Collier de veau	Raw veal meat	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D125	Collier de veau	Raw veal meat	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D128	Canette de Barbarie	Raw poultry meat	10	1	4	1	0	25	5	1,40	0,70	1,40*	10	1	1	10	10	1,00	1,00	1,00*	1	a
				100	0	0	0	0						100	0	0							
2002	D129	Filet de dinde	Raw turkey meat	10	28	24	14	13	240	140	2,38	2,15	2,38	10	16	19	160	170	2,20	2,23	2,20	1	a
				100	0	0	0	0						100	1	0							
2002	D130	Cuisse de dinde	Raw turkey meat	10	19	27	24	27	220	250	2,34	2,40	2,34	10	28	22	270	210	2,43	2,32	2,43	1	a
				100	0	2	1	2						100	2	1							
2002	D131	Haché de bœuf	Raw ground beef	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D132	Foie de volaille	Raw poultry meat	10	127	111	133	111	1200	1300	3,08	3,11	3,08	10	>150	>150	1900	3100	3,28	3,49	3,28 N'	1	a
				100	9	24	16	24						100	19	31							
2002	D138	Sauté de collier de veau	RTRH veal meat	10	4	0	3	1	20	20	1,30	1,30	1,30*	10	2	2	20	20	1,30	1,30	1,30*	1	c
				100	0	0	0	0						100	0	0							
2002	D141	Steak haché de veau	Raw veal meat	10	4	8	5	5	60	50	1,78	1,70	1,78 Ne	10	8	4	80	40	1,90	1,60	1,90 Ne	1	a
				100	3	0	0	0						100	0	2							
2002	D142	Steak haché de veau	Raw veal meat	10	4	2	6	4	30	50	1,48	1,70	1,48*	10	1	1	10	10	1,00	1,00	1,00*	1	a
				100	1	1	0	0						100	1	0							
2002	D143	Steak haché de veau	Raw veal meat	10	5	8	4	5	65	45	1,81	1,65	1,81 Ne	10	4	5	40	50	1,60	1,70	1,60 Ne	1	a
				100	0	0	1	0						100	0	0							
2002	D144	Steak haché de veau	Raw veal meat	10	9	0	2	2	45	20	1,65	1,30	1,65 Ne	10	3	3	30	30	1,48	1,48	1,48*	1	a
				100	1	0	2	0						100	0	0							
2002	D145	Steak haché de veau	Raw veal meat	10	3	6	4	4	45	40	1,65	1,60	1,60 Ne	10	2	6	20	60	1,30	1,78	1,78 Ne	1	a
				100	0	0	0	0						100	1	0							
2002	D146	Blanc de poulet cuit	RTE Chicken meat	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	c
				100	0	0	0	0						100	0	0							
2002	D147	Steak haché de bœuf surgelé	Raw beef meat	10	16	15	14	20	150	150	2,18	2,18	2,18	10	7	11	70	110	1,85	2,04	1,85 Ne	1	a
				100	1	1	3	1						100	1	1							
2002	D148	Steak haché de bœuf	Raw beef meat	10	0	1	1	0	5	5	0,70	0,70	0,70*	10	0	1	<10	10	<1,00	1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D151	Jambonneau cuit	Delicatessen	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	b
				100	0	0	0	0						100	0	0							
2002	D152	Escalope (sous noix)	Raw meat	10	2	7	3	4	45	35	1,65	1,54	1,65 Ne	10	4	4	40	40	1,60	1,60	1,60 Ne	1	a
				100	1	0	0	0						100	0	0							
2002	D153	Escalope (sous noix)	Raw meat	10	3	1	0	2	20	10	1,30	1,00	1,30*	10	1	0	10	<10	1,00	<1,00	1,00*	1	a
				100	0	1	0	0						100	0	0							
2002	D154	Escalope (sous noix)	Raw meat	10	1	0	1	0	5	5	0,70	0,70	0,70*	10	1	1	10	10	1,00	1,00	1,00*	1	a
				100	0	0	0	0						100	0	0							
2002	D161	Tête de veau	RTRH veal meat	100	100	106	108	92	10000	11000	4,00	4,04	4,00	100	78	71	8000	7300	3,90	3,86	3,90	1	c
				1000	6	11	13	9						1000	10	9							
2002	D162	Tête de veau	RTRH veal meat	100	>150	>150	231	220	23000	8000	4,36	3,90	4,36 N'	100	92	120	8700	11000	3,94	4,04	3,94	1	c
				1000	22	24	5	11						1000	4	0							

♦ Analyses performed according to the COFRAC accreditation

MEAT AND MEAT PRODUCTS

Analysis date	Sample N°	Product (in French)	Product	Reference method: ISO 16649-2♦										Alternative method: CHROMID COLI (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C								Category	Type
				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g (c/d) rounded	Replicate 1 log cfu/g (a/b)	Replicate 2 log cfu/g (c/d)	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D171	Suprême de pintade	Raw poultry meat	10	3	11	7	10	70	85	1,85	1,93	1,85	10	7	4	70	40	1,85	1,60	1,85	1	a
				100	0	1	0	0					Ne	100	1	1					Ne		
2002	D172	Chipos, merguez, chipos aux herbes	Delicatessen	10	3	8	6	5	55	55	1,74	1,74	1,74	10	3	3	30	30	1,48	1,48	1,48*	1	b
				100	0	0	0	0					Ne	100	0	0							
2002	D173	Steak de cheval surgelé	Raw horse meat	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D175	Sauté de veau	Raw veal meat	10	4	2	5	5	30	50	1,48	1,70	1,48*	10	5	4	50	40	1,70	1,60	1,70	1	a
				100	0	0	0	0						100	0	0					Ne		
2002	D176	Muscle de veau sous noix	Raw veal meat	10	10	8	9	8	90	85	1,95	1,93	1,95	10	11	11	110	110	2,04	2,04	2,04	1	a
				100	0	0	2	1					Ne	100	1	1							
2002	D177	Saucisserie de volaille	Poultry sausage	10	8	12	12	10	100	110	2,00	2,04	2,00	10	13	10	130	100	2,11	2,00	2,11	1	b
				100	3	0	0	0						100	0	0							
2002	D178	Filet de poulet	Chicken meat	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	1	a
				100	0	0	0	0						100	0	0							
2002	D179	Brochettes	Raw meat	10	5	10	9	5	75	70	1,88	1,85	1,88	10	8	4	80	40	1,90	1,60	1,90	1	a
				100	0	0	0	0					Ne	100	0	0					Ne		
2002	D271	Filet de canard	Raw duck meat	10	2	3	5	0	25	25	1,40	1,40	1,40*	10	2	2	20	20	1,30	1,30	1,30*	1	a
				100	1	0	0	0						100	0	0							
2011	1866	Brochette de dinde	Raw turkey meat	10	54				560		2,75		2,75	10	36		360		2,56		2,56	1	a
				100	7									100	3								
2011	1867	Brochette de dinde colombo	Raw turkey meat	10	47				510		2,71		2,71	10	46		450		2,65		2,65	1	a
				100	9									100	3								
2011	1868	Viande d'épaule de dinde saumurée	seasoned turkey meat	100	60				5900		3,77		3,77	100	39		3800		3,58		3,58	1	b
				1000	5									1000	3								
2011	1869	Chipolatas	Sausage	10	99				990		3,00		3,00	10	74		760		2,88		2,88	1	b
				100	10									100	9								
2011	1870	Chipolatas	Sausage	10	81				800		2,90		2,90	10	75		730		2,86		2,86	1	b
				100	7									100	5								
2011	1871	Saucisse fumée	Smoked sausage	10	50				490		2,69		2,69	10	29		270		2,43		2,43	1	b
				100	4									100	1								
2011	1911	Paupiette bardée	Raw meat	10	114				1100		3,04		3,04	10	58		560		2,75		2,75	1	a
				100	5									100	3								
2011	1912	Paupiette bardée	Raw meat	10	93				910		2,96		2,96	10	61		590		2,77		2,77	1	a
				100	7									100	4								
2011	1913	Viande d'échine de dinde broyée	Raw turkey meat	100	57				5400		3,73		3,73	10	28		280		2,45		2,45	1	a
				1000	2									100	3								
2011	1915	Carcasse de dinde	Raw turkey meat	1000	19				17000		4,23		4,23	100	65		6500		3,81		3,81	1	a
				10000	0									1000	6								
2011	1916	Viande rouge de dinde dénervée	Raw turkey meat	10	135				1400		3,15		3,15	10	87		830		2,92		2,92	1	a
				100	14									100	4								
2011	1918	Cornet de porc	Raw pork meat	100	100				10000		4,00		4,00	100	66		6500		3,81		3,81	1	a
				1000	10									1000	5								
2011	1919	PV 3 mm Porc	Raw pork meat	1000	52				53000		4,72		4,72	1000	40		39000		4,59		4,59	1	a
				10000	6									10000	3								
2011	**2059**	**Chili con carné**	**RTRH beef meat**	10	>150				1900		3,28		3,28	10	>150		800		2,90		2,90	1	c
				100	19								N'	100	8						N'		
2011	**2065**	**Nems au porc**	**RTRH pork meat**	100	71				7000		3,85		3,85	100	27		2500		3,40		3,40	1	c
				1000	6									1000	1								
2011	**2066**	**Ravioli chinois au porc**	**RTRH pork meat**	10	135				1400		3,15		3,15	10	12		120		2,08		2,08	1	c
				100	15									100	1								
2011	**2151**	**Sandwich jambon œuf crudités**	**Sandwich with ham**	100	50				5100		3,71		3,71	100	27		2600		3,41		3,41	1	c
				1000	6									1000	2								

MEAT AND MEAT PRODUCTS																							
Analysis date	Sample N°	Product (in French)	Product	Reference method: ISO 16649-2♦										Alternative method: CHROMID COLI (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C								Category	Type
				Dilution	Replicate 1 Cfu/ plate a	Replicate 1 Cfu/ plate b	Replicate 2 Cfu/ plate c	Replicate 2 Cfu/ plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g (c/d) rounded	Replicate 1 log cfu/g (a/b)	Replicate 2 log cfu/g (c/d)	Result	Dilution	Replicate 1 Cfu/ plate	Replicate 2 Cfu/ plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2011	2153	Saucisses de Montbéliard fumées au bois de hêtre	Smoked sausage	100 1000	43 3				4200		3,62		3,62	100 1000	45 2		4300		3,63		3,63	1	b
2011	2184	Sandwich poulet œuf	Sandwich with chicken	100 1000	50 2				4700		3,67		3,67	100 1000	35 1		3300		3,52		3,52	1	c
2011	2185	Saucisses natures	Sausage	10 100	16 2				160		2,20		2,20	10 100	2 2		<40		1,60*		1,60*	1	b
2011	2186	Escalopes extra-fines de dinde	Raw turkey meat	10 100	17 1				160		2,20		2,20	10 100	20 2		200		2,30		2,30	1	a
2011	2368	Sandwich jambon œuf tomate	Sandwich with ham	10 100	>150 45				4500		3,65		3,65 N'	10 100	74 6		730		2,86		2,86	1	c
2011	2369	Jambon cuit à la broche	Cooked ham	10 100	>150 18				1800		3,26		3,26 N'	10 100	6 0		60		1,78		1,78 Ne	1	b
2011	2470	Saucisson à l'ail	Sausage with garlic	10 100	82 8				820		2,91		2,91	10 100	53 4		520		2,72		2,72	1	b
2011	2472	Chorizo	Chorizo	100 1000	38 3				3700		3,57		3,57	10 100	107 16		1100		3,04		3,04	1	b
2011	2473	Saucisson à l'ail	Sausage with garlic	100 1000	66 8				6700		3,83		3,83	100 1000	51 13		5800		3,76		3,76	1	b
2011	2475	Chiffonnade de jambon sec	Ham	10 100	7 0				70		1,85		1,85 Ne	10 100	5 0		50		1,70		1,70 Ne	1	b
2011	2476	Baccon tranches épaisses	Bacon	10 100	5 1				50		1,70		1,70 Ne	10 100	9 0		90		1,95		1,95 Ne	1	b
2011	2478	Poitrine fumée tranches fines	Smoked delicatessen	100 1000	>150 21				21000		4,32		4,32 N'	100 1000	>150 17		17000		4,23		4,23 N'	1	b
2011	2479	Jambon cru	Ham	1000 10000	62 6				62000		4,79		4,79	1000 10000	12 6		16000		4,20		4,20	1	b
2011	2480	Sandwich poulet rôti mayonnaise	Sandwich with chicken	10 100	20 1				190		2,28		2,28	10 100	10 3		120		2,08		2,08	1	c
2011	2481	Sandwich poulet rôti mayonnaise	Sandwich with chicken	10 100	14 4				160		2,20		2,20	10 100	4 0		40		1,60		1,60 Ne	1	c
2011	2482	Farfalles poulet rôti tomates	RTE salad with chicken	10 100	96 7				940		2,97		2,97	10 100	14 3		160		2,20		2,20	1	c

MILK AND DAIRY PRODUCTS																								
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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D163	Lait cru	Raw milk	10	50	31	39	40	380	330	2,58	2,52	2,58	10	37	54	370	520	2,57	2,72	2,57	2	a
				100	2	1	2	5						100	4	3							
2002	D164	Lait cru	Raw milk	1	2	5	4	3	4	4	0,60	0,60	0,60*	1	8	1	8	1	0,90	0,00	0,90	2	a
				10	0	1	0	0						10	2	0					Ne		
2002	D165	Brie de Meaux	Cheese	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	2	b
				100	0	0	0	0						100	0	0							
2002	D166	Bethmal	Cheese	10	47	38	42	44	420	390	2,62	2,59	2,62	10	54	38	510	360	2,71	2,56	2,71	2	b
				100	3	4	1	4						100	2	1							
2002	D167	Tomme du Nevez	Cheese	10	3	6	5	4	45	45	1,65	1,65	1,65	10	6	4	60	40	1,78	1,60	1,78	2	b
				100	0	0	1	0					Ne	100	0	0					Ne		
2002	D174	Crème fraiche	Cream	10	82	69	83	80	770	810	2,89	2,91	2,89	10	109	123	1100	1300	3,04	3,11	3,04	2	b
				100	9	10	15	12						100	13	16							
2002	D180	Crème	Cream	10	104	96	98	98	1000	980	3,00	2,99	3,00	10	123	145	1200	1400	3,08	3,15	3,08	2	b
				100	9	10	12	7						100	13	8							
2002	D181	Crème	Cream	10	99	119	112	102	1100	1100	3,04	3,04	3,04	10	122	110	1200	1000	3,08	3,00	3,08	2	b
				100	7	11	9	8						100	8	4							
2002	D201	Pyrénées	Dessert	10	21	23	24	15	210	220	2,32	2,34	2,32	10	32	19	290	190	2,46	2,28	2,46	2	b
				100	1	1	1	0						100	0	2							
2002	D202	Brie de Meaux	Cheese	10	24	24	17	23	230	200	2,36	2,30	2,36	10	25	26	240	280	2,38	2,45	2,38	2	b
				100	1	1	1	1						100	1	5							
2002	D203	Tomme de savoie	Cheese	10	180	136	142	161	1500	1400	3,18	3,15	3,18	10	272	229	3100	2700	3,49	3,43	3,49	2	b
				100	12	17	4	12						100	31	27							
2002	D204	Reblochon	Cheese	10	11	10	6	4	110	50	2,04	1,70	2,04	10	7	3	70	30	1,85	1,48	1,85	2	b
				100	1	0	0	0						100	4	2					Ne		
2002	D205	Brie de Meaux	Cheese	100	14	18	25	17	1600	2100	3,20	3,32	3,20	100	21	25	2200	2300	3,34	3,36	3,34	2	b
				1000	2	2	1	1						1000	3	0							
2002	D206	Raclette	Cheese	10	82	75	69	68	760	740	2,88	2,87	2,88	10	98	85	940	830	2,97	2,92	2,97	2	b
				100	4	7	12	9						100	5	6							
2002	D207	St Nectaire	Cheese	10	170	184	177	144	1700	1200	3,23	3,08	3,23	10	119	137	1200	1300	3,08	3,11	3,08	2	b
				100	21	13	11	13						100	10	7							
2002	D208	Tomme de montagne	Cheese	100	57	52	52	41	5200	5000	3,72	3,70	3,72	100	53	42	5000	4000	3,70	3,60	3,70	2	b
				1000	4	1	5	0						1000	2	2							
2002	D209	Pyrénées	Dessert	100	122	137	132	141	13000	13000	4,11	4,11	4,11	100	96	88	9300	8600	3,97	3,93	3,97	2	b
				1000	18	10	11	9						1000	6	7							
2002	D210	Tomme de Savoie	Cheese	10	81	60	69	64	680	650	2,83	2,81	2,83	10	95	90	910	910	2,96	2,96	2,96	2	b
				100	4	5	8	5						100	5	10							
2002	D211	Brie de Melun	Cheese	10	0	1	0	1	5	5	0,70	0,70	0,70*	10	0	1	<10	10	<1,00	1,00	<1,00	2	b
				100	0	0	0	0						100	0	0							
2002	D212	Coulommier	Cheese	10	179	184	186	166	1500	1400	3,18	3,15	3,18	10	192	196	1700	2000	3,23	3,30	3,23	2	b
				100	17	13	11	16						100	17	20							
2002	D213	Reblochon	Cheese	100	436	392	436	436	36000	27000	4,56	4,43	4,56	100	264	336	23000	33000	4,36	4,52	4,36	2	b
				1000	33	38	32	21						1000	23	33							

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MILK AND DAIRY PRODUCTS																								
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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D214	Bouchon de Sancerre	Cheese	10	0	1	0	0	5	<10	0,70	<1	0,70*	10	0	1	<10	10	<1,00	1,00	<1,00	2	b
				100	0	0	0	0						100	0	0							
2002	D215	Tomme de brebis	Cheese	100	28	20	22	17	2500	2200	3,40	3,34	3,40	100	17	15	1700	1500	3,23	3,18	3,23	2	b
				1000	4	2	4	2						1000	2	1							
2002	D216	Munster	Cheese	100	63	73	76	59	6800	7300	3,83	3,86	3,83	100	53	55	5000	5300	3,70	3,72	3,70	2	b
				1000	8	6	6	4						1000	2	3							
2002	D246	Poudre de lait	Milk powder	10	49	41	37	42	490	410	2,69	2,61	2,69	10	57	62	570	650	2,76	2,81	2,76	2	c
				100	7	10	2	2						100	6	9							
2002	D247	Poudre de lait	Milk powder	10	3	2	2	1	25	15	1,40	1,18	1,40*	10	3	8	30	80	1,48	1,90	1,48*	2	c
				100	1	1	0	0						100	0	0							
2002	D248	Poudre de lait	Milk powder	10	3	1	2	2	20	20	1,30	1,30	1,30*	10	1	3	10	30	1,00	1,48	1,00*	2	c
				100	0	1	0	0						100	0	0							
2002	D249	Poudre de lait	Milk powder	10	4	3	3	0	35	15	1,54	1,18	1,54*	10	6	7	60	70	1,78	1,85	1,78 Ne	2	c
				100	0	0	0	0						100	0	0							
2002	D250	Poudre de lait	Milk powder	10	6	6	4	3	60	35	1,78	1,54	1,78 Ne	10	18	11	160	110	2,20	2,04	2,20	2	c
				100	1	1	0	1						100	0	5							
2002	D272	Poudre de lait	Milk powder	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	2	c
				100	0	0	0	0						100	0	0							
2002	D273	Poudre de lait	Milk powder	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	2	c
				100	0	0	0	0						100	0	0							
2018	6167	Lait cru	Raw milk	10	8				80		1,90		1,90	10	9		90		1,95		1,95 Ne	2	a
				100	0									100	1								
2018	6168	Lait cru	Raw milk	10	15				140		2,15		2,15	10	14		140		2,15		2,15	2	a
				100	0									100	1								
2018	6283	Fromage Rocquefort au Lait cru	Raw milk cheese	10	0				<10		<1,0		<1,0	10	0		<10		<1,0		<1,0	2	b
				100	0									100	0								
2018	6284	Fromage selles sur cher au lait cru	Raw milk cheese	10	0				<10		<1,0		<1,0	10	1		<10		<1,0		<1,0	2	b
				100	0									100	0								
2018	**6717**	**Riz au lait saveur vanille**	**Dessert (rice pudding)**	10	56				580		2,76		2,76	10	57		570		2,76		2,76	2	b
				100	8									100	6								
2018	**6718**	**Riz au lait à la vanille**	**Dessert (rice pudding)**	100	38				3900		3,59		3,59	100	47		4400		3,64		3,64	2	b
				1000	5									1000	1								
2018	**6719**	**Panna cotta coulis de framboise**	**Panna cotta**	1000	37				36000		4,56		4,56	1000	37		35000		4,54		4,54	2	b
				10000	3									10000	2								
2018	**6720**	**Crème fraiche entière**	**Cream**	10000	25				260000		5,41		5,41	10000	47		450000		5,65		5,65	2	b
				100000	3									100000	3								
2018	**6721**	**Lait cru fermier**	**Raw milk**	1000	68				69000		4,84		4,84	1000	66		65000		4,81		4,81	2	a
				10000	8									10000	6								
2018	**6722**	**Lait cru fermier**	**Raw milk**	10000	25				270000		5,43		5,43	10000	27		250000		5,40		5,40	2	a
				100000	5									100000	1								

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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g (a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2018	6734	Poudre de lait demi écrémé	Semi skimmed milk powder	10	5				50		1,70		1,70	10	5		50		1,70		1,70	2	c
				100	0								Ne	100	0						Ne		
2018	6735	Poudre de lait écrémé	Skimmed milk powder	10	23				230		2,36		2,36	10	20		220		2,34		2,34	2	c
				100	2									100	4								
2018	6736	Poudre de lait demi écrémé	Semi skimmed milk powder	100	8				800		2,90		2,90	100	38		3600		3,56		3,56	2	c
				1000	1								Ne	1000	2								

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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D149	Filet d'églefin	Raw fish	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	3	a
				100	0	0	0	0						100	0	0							
2002	D150	Filet de lieu noir	Raw fish	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	3	a
				100	0	0	0	0						100	0	0							
2002	D192	Merlan	Raw fish filet	10	37	26	27	19	310	260	2,49	2,41	2,49	10	10	21	100	200	2,00	2,30	2,00	3	a
				100	0	2	1	0						100	3	1							
2002	D193	Filet de merlan	Raw fish filet	100	12	19	19	22	1600	2000	3,20	3,30	3,20	100	18	11	1800	1100	3,26	3,04	3,26	3	a
				1000	2	2	4	1						100	2	3							
2002	D194	Pavé haché de merlu	Raw fish filet	10	12	4	6	3	80	45	1,90	1,65	1,90	10	5	3	50	30	1,70	1,48	1,70	3	a
				100	0	0	0	0					Ne	100	0	0					Ne	3	
2002	D195	Lotte	Raw fish filet	10	4	2	2	2	30	20	1,48	1,30	1,48*	10	6	5	60	50	1,78	1,70	1,78	3	a
				100	0	0	0	0						100	0	0					Ne		
2002	D196	Truite saumonée	Raw trout	10	6	2	1	2	40	15	1,60	1,18	1,60	10	5	2	50	20	1,70	1,30	1,70	3	a
				100	1	0	0	0					Ne	10	0	0					Ne		
2002	D197	Petites palourdes	Raw seafood	10	15	7	4	14	110	90	2,04	1,95	2,04	10	8	4	80	40	1,90	1,60	1,90	3	a
				100	1	0	0	1						100	0	0					Ne		
2002	D198	Coques	Raw seafood	10	24	32	24	29	280	280	2,45	2,45	2,45	10	29	25	290	260	2,46	2,41	2,46	3	a
				100	3	3	3	7						100	3	3							
2002	D199	Grosses palourdes	Raw seafood	10	33	53	28	37	430	400	2,63	2,60	2,63	10	40	24	400	260	2,60	2,41	2,60	3	a
				100	4	4	2	5						100	4	4							
2002	D200	Palourdes	Raw seafood	100	14	18	22	14	1700	2000	3,23	3,30	3,23	100	10	11	1000	1100	3,00	3,04	3,00	3	a
				1000	0	5	0	0						1000	2	0							
2002	D227	Truite	Trout filet	10	5	6	12	4	55	80	1,74	1,90	1,74	10	9	5	90	50	1,95	1,70	1,95	3	a
				100	0	1	0	1					Ne	100	0	0					Ne		
2002	D228	Thon	Raw fish	10	>150	>150	>150	>150	4900	4200	3,69	3,62	3,69	10	>150	>150	4100	4200	3,61	3,62	3,61	3	a
				100	49	49	37	46					N'	100	41	42					N'		
2002	D229	Tacaud	Raw fish	10	50	38	46	40	440	410	2,64	2,61	2,64	10	48	40	450	390	2,65	2,59	2,65	3	a
				100	4	5	2	2						100	1	3							
2002	D231	Maquereaux	Raw fish	10	>150	>150	>150	>150	2400	1900	3,38	3,28	3,38	10	>150	>150	2300	1900	3,36	3,28	3,36	3	a
				100	21	27	17	21					N'	100	23	19					N'		
2002	D235	Crabe	Crab	10	150	121	144	138	1400	1300	3,15	3,11	3,15	10	136	139	1300	1400	3,11	3,15	3,11	3	a
				100	19	15	13	14						100	9	14							
2002	D236	Filet de lieu noir	Raw fish	10	33	31	31	25	310	300	2,49	2,48	2,49	10	24	20	220	210	2,34	2,32	2,34	3	a
				100	3	2	2	4						100	0	3							
2002	D237	Sardine	Raw seafood	10	0	5	1	2	25	15	1,40	1,18	1,40*	10	1	3	10	30	1,00	1,48	1,00*	3	a
				100	0	0	0	0						100	0	0							
2002	D238	Huitre plate	Raw seafood	10	38	49	50	37	440	490	2,64	2,69	2,64	10	49	44	480	420	2,68	2,62	2,68	3	a
				100	4	6	3	6						100	4	2							
2002	D239	Huitre creuse	Raw seafood	10	114	128	121	121	1200	1200	3,08	3,08	3,08	10	102	120	1000	1200	3,00	3,08	3,00	3	a
				100	8	9	15	11						100	12	10							
2002	D240	Amande	Raw seafood	10	90	94	85	101	910	910	2,96	2,96	2,96	10	85	88	860	890	2,93	2,95	2,93	3	a
				100	5	10	12	14						100	10	10							
2002	D241	Praire	Raw seafood	10	25	36	41	35	310	370	2,49	2,57	2,49	10	28	39	310	370	2,49	2,57	2,49	3	a
				100	4	2	3	1						100	6	2							

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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D242	Coque	Raw seafood	10	71	68	70	62	730	730	2,86	2,86	2,86	10	68	63	670	640	2,83	2,81	2,83	3	a
				100	11	11	11	4						100	6	7							
2002	D243	Moule	Raw seafood	10	43	31	38	35	360	360	2,56	2,56	2,56	10	32	38	330	370	2,52	2,57	2,52	3	a
				100	1	3	6	5						100	4	3							
2002	D270	Huitres plates	Raw seafood	10	3	1	3	2	20	25	1,30	1,40	1,30*	10	3	3	30	30	1,48	1,48	1,48*	3	a
				100	0	1	2	2						100	1	1							
2002	D274	Colin	Raw fish	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	3	a
				100	0	0	0	0						100	0	0							
2018	6169	Encornet rouge	Raw fish	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	a
				100	0									100	0								
2018	6170	Acra de morue	RTRH seafood	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								
2018	6279	Poisson plat préparé	RTRH fish	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								
2018	6280	Poisson plat préparé saumon	RTRH salmon	10	0				<10		<1,0		<1,0	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								
2018	**6285**	**Lardons de saumon fumé**	**Smoked bacon**	10	175				1700		3,23		3,23	10	225		2100		3,32		3,32	3	b
				100	9									100	21				N'		N'		
2018	**6286**	**Lardons de saumon fumé**	**Smoked bacon**	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	b
				100	0									100	0								
2018	**6287**	**Harengs fumés au naturel**	**Smoked herring**	100	31				3200		3,51		3,51	100	26		2500		3,40		3,40	3	b
				1000	4									1000	1								
2018	**6288**	**Harengs fumés au naturel**	**Smoked herring**	100	0				<10		<1,00		<1,00	100	0		<10		<1,00		<1,00	3	b
				1000	0									1000	0								
2018	**6289**	**Harengs fumés doux**	**Smoked herring**	100	59				5900		3,77		3,77	100	84		8200		3,91		3,91	3	b
				1000	6									1000	6								
2018	**6290**	**Truite**	**Trout**	1000	0				<1000		<3,00		<3,00	1000	0		<1000		<3,00		<3,00	3	a
				10000	0									10000	0								
2018	**6291**	**Anchois marinés**	**Marinated anchovy**	10	118				1200		3,08		3,08	10	120		1200		3,08		3,08	3	b
				100	14									100	9								
2018	**6292**	**Bâtonnet gourmand**	**RTE surimi**	100	24				2400		3,38		3,38	100	31		3000		3,48		3,48	3	c
				1000	2									1000	2								
2018	**6293**	**Bâtonnet gourmand**	**RTE surimi**	10	39				380		2,58		2,58	10	22		220		2,34		2,34	3	c
				100	3									100	2								
2018	**6294**	**Anchois marinés à l'orientale**	**Marinated anchovy**	100	34				3300		3,52		3,52	100	40		4200		3,62		3,62	3	b
				1000	2									1000	6								
2018	**6295**	**Bâtonnets de surimi**	**RTE surimi**	100	63				6500		3,81		3,81	100	75		7500		3,88		3,88	3	c
				1000	8									1000	8								
2018	**6296**	**Breizh surimi**	**RTE surimi**	1000	61				57000		4,76		4,76	1000	64		66000		4,82		4,82	3	c
				10000	2									10000	9								
2018	6398	Chair de moules cuites	RTRH mussles	10	1				10		1,00*		1,00*	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								
2018	6399	Chair de moules cuites	RTRH mussles	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								
2018	6400	Coquille Saint Jacques	Scallops	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	3	c
				100	0									100	0								

SEAFOOD PRODUCTS																								
Analysis date	Sample N°	Product (in French)	Product	Reference method: ISO 16649-2♦										Alternative method: CHROMID® (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C								Category	Type
				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2018	6401	Cubes de colin cuits	RTRH fish	10	6				60		1,78		1,78	10	5		50		1,70		1,70	3	c
				100	0						Ne			100	0				Ne		Ne		
2018	**6723**	**Filet de julienne**	**Raw fish**	10	38				400		2,60		2,60	10	54		600		2,78		2,78	3	a
				100	6									100	12								
2018	**6724**	**Filet de Merlan**	**Raw fish**	100	29				2700		3,43		3,43	100	29		3300		3,52		3,52	3	a
				1000	1									1000	7								
2018	**6725**	**Bar**	**Raw fish**	1000	20				19000		4,28		4,28	1000	35		33000		4,52		4,52	3	a
				10000	1									10000	1								
2018	**6726**	**Lamelles d'encornet géant**	**Raw seafood**	100	27				2900		3,46		3,46	100	54		5100		3,71		3,71	3	a
				1000	5									1000	2								
2018	**6727**	**Encornet criée**	**Raw seafood**	1000	46				44000		4,64		4,64	1000	63		61000		4,79		4,79	3	a
				10000	2									10000	4								
2018	**6728**	**Crevettes crues décortiquées**	**Raw shrimps**	1000	5				5000		3,70		3,70	1000	65		63000		4,80		4,80	3	a
				10000	1						Ne			10000	4								
2018	**6729**	**Noix de Saint Jacques**	**Scallops**	1000	16				15000		4,18		4,18	1000	91		88000		4,94		4,94	3	a
				10000	1									10000	6								

VEGETABLES																							
Analysis date	Sample N°	Product (in French)	Product	Reference method: ISO 16649-2♦										Alternative method: CHROMID® (COLI ID-F) for the enumeration of β-glucuronidase-positive *Escherichia coli* at 44°C								Category	Type
				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D127	Farine de blé noir	Flour	10	8	8	6	7	80	65	1,90	1,81	1,90	10	5	6	50	60	1,70	1,78	1,70	4	b
				100	0	1	1	0					Ne	100	1	0					Ne		
2002	D133	Trompettes déshydratées	Dehydrated mushroom	100	21	20	32	27	1900	2400	3,28	3,38	3,28	10	0	0	<10	<10	<1,00	<1,00	<1,00	4	b
				1000	1	0	0	0						100	0	0							
2002	D134	Bolets déshydratés	Dehydrated mushroom	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,0	10	0	0	<10	<10	<1,00	<1,00	<1,00	4	b
				100	0	0	0	0					0	100	0	0							
2002	D135	Cèpes déshydratés	Dehydrated mushroom	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,0	10	0	0	<10	<10	<1,00	<1,00	<1,00	4	b
				100	0	0	0	0					0	100	0	0							
2002	D136	Bolets déshydratés	Dehydrated mushroom	10	0	0	1	0	<10	5	<1,00	0,70	<1,0	10	0	0	<10	<10	<1,00	<1,00	<1,00	4	b
				100	0	0	0	0					0	100	0	0							
2002	D140	Mix de crudités	Raw vegetables mix	10	6	2	3	3	40	30	1,60	1,48	1,60	10	3	1	30	10	1,48*	1,00*	1,48*	4	c
				100	0	0	0	0					Ne	100	0	1							
2002	D168	Poireaux	Leeks	100	12	11	8	12	1200	1000	3,08	3,00	3,08	100	16	9	1500	900	3,18	2,95	3,18	4	a
				1000	2	0	2	1						1000	1	3							
2002	D169	Betterave rouge	Beet	100	16	25	22	20	2100	2200	3,32	3,34	3,32	100	22	15	2100	1400	3,32	3,15	3,32	4	a
				1000	4	2	0	0						1000	1	0							
2002	D170	Courgette	Zucchini	10	91	83	89	79	820	790	2,91	2,90	2,91	10	116	122	1100	1100	3,04	3,04	3,04	4	a
				100	4	2	0	0						100	10	4							
2002	D182	Poêlée de petits légumes surgelés*	Frozen vegetables mix	10	98	68	88	89	840	800	2,92	2,90	2,92	10	65	42	620	410	2,79	2,61	2,79	4	b
				100	11	7	13	10						100	3	3							
2002	D183	Julienne de légumes surgelés	Frozen vegetables mix	10	12	12	18	18	120	140	2,08	2,15	2,08	10	5	10	50	100	1,70	2,00	1,70	4	b
				100	1	0	1	0						100	0	0					Ne		
2002	D184	Légumes pot au feu	Frozen vegetables mix	10	34	37	36	31	350	360	2,54	2,56	2,54	10	33	31	320	300	2,51	2,48	2,51	4	a
				100	2	3	2	1						100	2	2							
2002	D185	Printanière de légumes surgelés	Frozen vegetables mix	10	7	2	6	5	45	55	1,65	1,74	1,65	10	2	3	20	30	1,30*	1,48*	1,30*	4	b
				100	0	1	0	0					Ne	100	0	0							
2002	D186	Poêlée méridionale surgelée	Frozen vegetables mix	10	4	1	4	6	25	50	1,40*	1,70	1,40*	10	4	3	40	30	1,60	1,48*	1,60	4	b
				100	2	0	3	0						100	0	0					Ne		
2002	D187	Brocolis	Brocoli	100	42	32	36	38	3700	3500	3,57	3,54	3,57	100	30	32	2800	3300	3,45	3,52	3,45	4	a
				1000	2	6	2	2						1000	1	4							
2002	D188	Epinards	Spinach	10	32	32	26	24	320	290	2,51	2,46	2,51	10	19	22	200	250	2,30	2,40	2,30	4	a
				100	4	2	3	7						100	3	5							
2002	D189	Haricots verts	Green beans	10	38	66	56	57	510	590	2,71	2,77	2,71	10	29	28	290	300	2,46	2,48	2,46	4	a
				100	5	2	5	1						100	3	5							
2002	D190	Choux de Bruxelles	Brussel sprout	100	98	109	85	120	10000	9800	4,00	3,99	4,00	100	59	67	5600	6800	3,75	3,83	3,75	4	a
				1000	9	10	12	10						1000	3	8							
2002	D191	Courgettes	Zucchini	100	12	8	15	11	1000	1100	3,00	3,04	3,00	100	6	5	600	500	2,78	2,70	2,78	4	a
				1000	0	1	1	1						1000	0	0					Ne		
2002	D217	Salade	Salad	10	>150	>150	>150	>150	4000	3800	3,60	3,58	3,60	10	>150	>150	2800	3600	3,45	3,56	3,45	4	a
				100	37	43	39	36					N'	100	28	36					N'		
2002	D218	Haricots "beurre"	Beans	10	>150	>150	>150	>150	2800	2700	3,45	3,43	3,45	10	>150	>150	2200	2100	3,34	3,32	3,34	4	a
				100	29	26	30	23					N'	100	22	21					N'		
2002	D219	Oignons	Onions	10	90	106	109	101	970	1100	2,99	3,04	2,99	10	82	85	860	860	2,93	2,93	2,93	4	a
				100	10	8	8	7						100	12	9							

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VEGETABLES																							
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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D220	Poireaux	Leeks	10	63	64	60	80	630	610	2,80	2,79	2,80	10	57	64	550	620	2,74	2,79	2,74	4	a
				100	10	2	7	7						100	3	4							
2002	D221	Betterave rouge	Beet	10	59	77	60	62	670	670	2,83	2,83	2,83	10	51	41	500	400	2,70	2,60	2,70	4	a
				100	5	6	4	6						100	4	3							
2002	D224	Haricots "beurre"	Beans	10	>150	>150	>150	>150	2300	2200	3,36	3,34	3,36	10	>150	>150	1700	1800	3,23	3,26	3,23	4	a
				100	27	19	24	19					N'	100	17	18					N'		
2002	D244	Farine de blé noir	Flour	10	17	9	10	6	130	80	2,11	1,90	2,11	10	11	13	120	130	2,08	2,11	2,08	4	b
				100	1	1	2	1						100	2	1							
2002	D245	Farine de blé noir	Flour	10	1	2	2	3	15	25	1,18*	1,40*	1,18*	10	1	2	10	20	1,00*	1,30*	1,00*	4	b
				100	1	0	0	1						100	1	0							
2011	**2058**	**Ratatouille**	**RTRH vegetables mix**	10	4				40		1,60		1,60	10	4		40		1,60		1,60	4	c
				100	0								Ne	100	1						Ne		
2011	**2060**	**Carottes en lamelles cuites**	**RTRH carrots**	100	29				2900		3,46		3,46	100	19		2000		3,30		3,30	4	c
				1000	3									1000	3								
2011	**2120**	**Ratatouille surgelée**	**Frozen vegetables mix**	10	51				510		2,71		2,71	10	29		300		2,48		2,48	4	b
				100	5									100	4								
2011	**2121**	**Salade boulghour légumes du soleil**	**RTE salad with vegetables**	100	112				11000		4,04		4,04	100	94		9100		3,96		3,96	4	c
				1000	10									1000	6								
2011	**2183**	**Quiche aux poireaux surgelée**	**RTRH leeks**	1000	69				65000		4,81		4,81	1000	38		38000		4,58		4,58	4	c
				10000	3									10000	4								
2011	**2363**	**Salade carotte céleri**	**RTE salad with carrots and celery**	10	42				430		2,63		2,63	10	33		310		2,49		2,49	4	c
				100	5									100	1								
2011	**2364**	**Salade de céleri rémoulade**	**RTE salad with celery**	100	20				2300		3,36		3,36	100	23		2500		3,40		3,40	4	c
				1000	5									1000	5								
2011	**2365**	**Macédoine de légumes**	**RTE vegetables mix**	10	25				240		2,38		2,38	10	4		40		1,60		1,60	4	c
				100	1									100	0						Ne		
2011	**2366**	**Macédoine de légumes**	**RTE vegetables mix**	100	>150				77000		4,89		4,89	100	>150		17000		4,23		4,23	4	c
				1000	77								N'	1000	17						N'		

EGGS AND EGG-BASED PRODUCTS																							
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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D121	Coule d'œuf crue	Liquid egg	10	15	11	15	15	130	120	2,11	2,08	2,11	10	18	22	170	200	2,23	2,30	2,23	5	a
				100	2	1	0	0						100	1	0							
2002	D123	Galette	Galette	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	5	b
				100	0	0	0	0						100	0	0							
2002	D126	Charlotte aux poires	Pastry	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	5	c
				100	0	0	0	0						100	0	0							
2002	D137	Crêpes	Crepes	10	0	0	0	0	<10	<10	<1,00	<1	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	5	b
				100	0	0	0	0						100	0	0							
2002	D139	Œufs dur hachés	Egg	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	5	a
				100	0	0	0	0						100	0	0							
2002	D155	Coule d'œuf crue	Liquid egg	10	98	129	142	164	1100	1300	3,04	3,11	3,04	10	167	173	1600	1700	3,20	3,23	3,20	5	a
				100	16	9	15	10						100	14	14							
2002	D156	Coule d'œuf crue	Liquid egg	10	1	1	0	1	10	5	1,00	0,70	1,00*	10	2	1	20	10	1,30	1,00	1,30*	5	a
				100	1	0	0	0						100	0	0							
2002	D157	Coule d'œuf crue	Liquid egg	10	62	60	61	47	580	570	2,76	2,76	2,76	10	88	82	840	770	2,92	2,89	2,92	5	a
				100	3	2	2	5						100	4	3							
2002	D158	Coule d'œuf crue	Liquid egg	10	59	61	49	55	580	540	2,76	2,73	2,76	10	93	86	940	830	2,97	2,92	2,97	5	a
				100	6	2	6	6						100	10	5							
2002	D159	Coule d'œuf crue	Liquid egg	100	48	38	37	45	4000	3700	3,60	3,57	3,60	100	33	60	3500	5600	3,54	3,75	3,54	5	a
				1000	0	1	5	2						1000	6	2							
2002	D160	Coule d'œuf crue	Liquid egg	100	44	43	47	53	4300	4500	3,63	3,65	3,63	100	75	64	6900	6100	3,84	3,79	3,84	5	a
				1000	4	4	5	3						1000	1	3							
2002	D251	Coule d'œuf entier	Whole liquid egg	100	25	34	30	21	2900	3100	3,46	3,49	3,46	100	15	19	1400	1700	3,15	3,23	3,15	5	a
				1000	3	1	3	1						100	0	0							
2002	D252	Coule d'œuf entier	Whole liquid egg	100	3	3	3	6	300	450	2,48	2,65	2,65	100	7	7	700	700	2,85	2,85	2,85	5	a
				1000	2	0	0	0					Ne	1000	0	0					Ne		
2002	D253	Coule d'œuf entier	Whole liquid egg	100	Background microflora > 300	3	5	7	4000	6000	3,60	3,78	3,60	100	Background microflora >300	4	6000	4000	3,78	3,60	3,78	5	a
				1000	5								Ne	1000	6						Ne		
2002	D254	Coule d'œuf entier	Whole liquid egg	100	Background microflora >300	20	13	16	20000	14500	4,30	4,16	4,30	100	Background microflora >300	12	11000	12000	4,04	4,08	4,04	5	a
				1000	20								N'	1000	11						N'		
2002	D255	Coule d'œuf entier	Whole liquid egg	10	0	0	0	0	<10	<10	<1,00	<1,00	<1,00	10	0	0	<10	<10	<1,00	<1,00	<1,00	5	a
				100	0	0	0	0						100	0	0							
2002	D256	Jaune d'œuf	Egg yolk	100	17	15	8	14	1600	1100	3,20	3,04	3,20	100	14	14	1400	1400	3,15	3,15	3,15	5	a
				1000	2	1	2	1						1000	5	2							
2002	D257	Jaune d'œuf	Egg yolk	10	68	95	92	93	760	880	2,88	2,94	2,88	10	31	34	280	350	2,45	2,54	2,45	5	a
				100	3	1	6	4						100	0	4							
2002	D258	Jaune d'œuf	Egg yolk	100	28	36	35	30	3100	3600	3,49	3,56	3,49	100	20	38	2000	4000	3,30	3,60	3,30	5	a
				1000	3	2	7	6						1000	2	6							
2002	D259	Jaune d'œuf	Egg yolk	100	31	32	42	33	3300	3700	3,52	3,57	3,52	100	38	42	3700	4100	3,57	3,61	3,57	5	a
				1000	6	3	4	5						1000	3	3							

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EGGS AND EGG-BASED PRODUCTS																									
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				Dilution	Replicate 1 Cfu/plate a	Replicate 1 Cfu/plate b	Replicate 2 Cfu/plate c	Replicate 2 Cfu/plate d	Replicate 1 cfu/g(a/b) rounded	Replicate 2 cfu/g(c/d) rounded	Replicate 1 log cfu/g a/b	Replicate 2 log cfu/g c/d	Result	Dilution	Replicate 1 Cfu/plate	Replicate 2 Cfu/plate	Replicate 1 cfu/g rounded	Replicate 2 cfu/g rounded	Replicate 1 log cfu/g	Replicate 2 log cfu/g	Result		
2002	D260	Jaune d'œuf	Egg yolk	100	11	13	18	10	1200	1600	3,08	3,20	3,08	100	7	5	700	500	2,85	2,70	2,85	5	a
				1000	1	1	3	4						1000	0	1					Ne		
2002	D261	Jaune d'œuf	Egg yolk	100	61	66	64	61	6200	6000	3,79	3,78	3,79	100	67	68	6400	6900	3,81	3,84	3,81	5	a
				1000	9	0	3	6						1000	3	8							
2002	D262	Blanc d'œuf	Egg white	10	57	54	43	47	570	510	2,76	2,71	2,76	100	19	12	1700	1200	3,23	3,08	3,23	5	a
				100	7	7	7	7						1000	0	1							
2002	D263	Blanc d'œuf	Egg white	100	12	14	15	13	1300	1500	3,11	3,18	3,11	100	10	9	1000	900	3,00	2,95	3,00	5	a
				1000	0	1	3	0						1000	2	1							
2002	D264	Blanc d'œuf	Egg white	10	8	3	0	2	55	10	1,74	1,00	1,74	10	5	13	50	130	1,70	2,11	1,70	5	a
				100	3	2	0	2					Ne	100	1	0					Ne		
2002	D265	Blanc d'œuf	Egg white	10	4	3	5	5	35	50	1,54	1,70	1,70	10	6	5	60	50	1,78	1,70	1,70	5	a
				100	0	0	0	0					Ne	100	1	0					Ne		
2002	D266	Mayonnaise	Mayonnaise	10	131	141	128	147	1400	1300	3,15	3,11	3,15	10	131	126	1300	1300	3,11	3,11	3,11	5	b
				100	13	14	10	11						100	12	14							
2002	D267	Mayonnaise	Mayonnaise	10	Background microflora >300	17	7	12	1250	950	3,10	2,98	3,10	10	Background microflora >300	10	1100	1000	3,04	3,00	3,04	5	b
				100	8								N'	100	11						N'		
2002	D268	Mayonnaise	Mayonnaise	10	Background microflora >300	22	27	19	2300	2300	3,36	3,36	3,36	10	Background microflora >300	34	2900	3400	3,46	3,53	3,46	5	b
				100	23								N'	100	29						N'		
2002	D269	Mayonnaise	Mayonnaise	10	Background microflora >300	18	19	14	2100	1700	3,32	3,23	3,32	10	Background microflora >300	22	1500	2200	3,18	3,34	3,18	5	b
				100	23								N'	100	15						N'		
2011	**2062**	**Tartelette cocktail**	**Pastry**	10	21				220		2,34		2,34	10	3		30		1,48*		1,48*	5	c
				100	3									100	0								
2011	**2063**	**Tartelette cocktail**	**Pastry**	100	35				4300		3,63		3,63	100	14		1300		3,11		3,11	5	c
				1000	12									1000	0								
2011	**2064**	**Tartelette fraise**	**Pastry**	1000	50				49000		4,69		4,69	1000	28		26000		4,41		4,41	5	c
				10000	4									10000	1								
2018	6171	Tarte aux fraises	Pastry	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	5	c
				100	0									100	0								
2018	6278	Quiche lorraine	Quiche with eggs	10	0				<10		<1,00		<1,00	10	0		<10		<1,00		<1,00	5	b
				100	0									100	0								
2018	6281	Tarte aux fraises	Pastry	10	0				<10		<1,0		<1,0	10	0		<10		<1,00		<1,00	5	c
				100	0									100	0								
2018	6282	Pâtisserie aux fruits	Pastry with fruits	10	10				100		2,00		2,00	10	10		100		2,00		2,00	5	c
				100	0									100	0								
2018	**6730**	**Mayonnaise fraiche**	**Mayonnaise**	100	46				4400		3,64		3,64	100	50		5100		3,71		3,71	5	b
				1000	2									1000	6								
2018	**6731**	**Tortilla espagnole aux oignons**	**Tortilla with onions**	1000	39				37000		4,57		4,57	1000	78		75000		4,88		4,88	5	b
				10000	2									10000	4								
2018	**6732**	**Eclair au chocolat**	**Pastry**	100	16				1700		3,23		3,23	100	25		2400		3,38		3,38	5	c
				1000	3									1000	1								
2018	**6733**	**Millefeuille**	**Pastry**	1000	57				60000		4,78		4,78	1000	67		66000		4,82		4,82	5	c
				10000	9									10000	6								

Appendix 5 - Relative trueness study: calculations

Category	N°sample	Product	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference corrected values
			Reference method	Alternative method			<4 CFU/ plate	<or> threshold corrected values				
1	D124	Raw veal meat	0,00		#N/A			0,00	#N/A		0,00	0,00
	D125	Raw veal meat	0,00		#N/A			0,00	#N/A		0,00	0,00
	D128	Raw poultry meat	1,40		#N/A		1,00		1,20	-0,40	#N/A	
	D129	Raw turkey meat	2,38	2,20	2,29	-0,18			#N/A		#N/A	
	D130	Raw turkey meat	2,34	2,43	2,39	0,09			#N/A		#N/A	
	D131	Raw ground beef	0,00		#N/A			0,00	#N/A		0,00	0,00
	D132	Raw poultry meat	3,08	3,28	3,18	0,20			#N/A		#N/A	
	D141	Raw veal meat	1,78	1,90	1,84	0,12			#N/A		#N/A	
	D142	Raw veal meat	1,48		#N/A		1,00		1,24	-0,48	#N/A	
	D143	Raw veal meat	1,81	1,60	1,71	-0,21			#N/A		#N/A	
	D144	Raw veal meat	1,65		#N/A		1,48		1,57	-0,17	#N/A	
	D145	Raw veal meat	1,60	1,78	1,69	0,18			#N/A		#N/A	
	D147	Raw beef meat	2,18	1,85	2,01	-0,33			#N/A		#N/A	
	D148	Raw beef meat	0,70		#N/A			0,00	#N/A		0,35	-0,70
	D152	Raw meat	1,65	1,60	1,63	-0,05			#N/A		#N/A	
	D153	Raw meat	1,30		#N/A			1,00	#N/A		1,15	-0,30
	D154	Raw meat	0,70		#N/A			1,00	#N/A		0,85	0,30
	D171	Raw poultry meat	1,85	1,85	1,85	0,00			#N/A		#N/A	
	D173	Raw horse meat	0,00		#N/A			0,00	#N/A		0,00	0,00
	D175	Raw veal meat	1,48		#N/A		1,70		1,59	0,22	#N/A	
	D176	Raw veal meat	1,95	2,04	2,00	0,09			#N/A		#N/A	
	D178	Chicken meat	0,00		#N/A			0,00	#N/A		0,00	0,00
	D179	Raw meat	1,88	1,90	1,89	0,03			#N/A		#N/A	
	D271	Raw duck meat	1,40		#N/A		1,30		1,35	-0,10	#N/A	
	1866	Raw turkey meat	2,75	2,56	2,65	-0,19			#N/A		#N/A	
	1867	Raw turkey meat	2,71	2,65	2,68	-0,05			#N/A		#N/A	
	1911	Raw meat	3,04	2,75	2,89	-0,29			#N/A		#N/A	
	1912	Raw meat	2,96	2,77	2,86	-0,19			#N/A		#N/A	
	1913	Raw turkey meat	3,73	2,45	3,09	-1,29			#N/A		#N/A	
	1915	Raw turkey meat	4,23	3,81	4,02	-0,42			#N/A		#N/A	
	1916	Raw turkey meat	3,15	2,92	3,03	-0,23			#N/A		#N/A	
	1918	Raw pork meat	4,00	3,81	3,91	-0,19			#N/A		#N/A	
	1919	Raw pork meat	4,72	4,59	4,66	-0,13			#N/A		#N/A	
	2186	**Raw turkey meat**	2,20	2,30	2,25	0,10			#N/A		#N/A	
	D151	Delicatessen	0,00		#N/A			0,00	#N/A		0,00	0,00
	D172	Delicatessen	1,74		#N/A		1,48		1,61	-0,26	#N/A	
	D177	Poultry sausage	2,00	2,11	2,06	0,11			#N/A		#N/A	
	1868	seasoned turkey meat	3,77	3,58	3,68	-0,19			#N/A		#N/A	
	1869	Sausage	3,00	2,88	2,94	-0,11			#N/A		#N/A	
	1870	Sausage	2,90	2,86	2,88	-0,04			#N/A		#N/A	
	1871	Smoked sausage	2,69	2,43	2,56	-0,26			#N/A		#N/A	
	2153	**Smoked sausage**	3,62	3,63	3,63	0,01			#N/A		#N/A	
	2185	**Sausage**	2,20		#N/A		1,60		1,90	-0,60	#N/A	
	2369	**Cooked ham**	3,26	1,78	2,52	-1,48			#N/A		#N/A	
	2470	**Sausage with garlic**	2,91	2,72	2,81	-0,20			#N/A		#N/A	
	2472	**Chorizo**	3,57	3,04	3,30	-0,53			#N/A		#N/A	
	2473	**Sausage with garlic**	3,83	3,76	3,79	-0,06			#N/A		#N/A	
	2475	**Ham**	1,85	1,70	1,77	-0,15			#N/A		#N/A	
	2476	**Bacon**	1,70	1,95	1,83	0,26			#N/A		#N/A	
	2478	**Smoked delicatessen**	4,32	4,23	4,28	-0,09			#N/A		#N/A	
	2479	**Ham**	4,79	4,20	4,50	-0,59			#N/A		#N/A	
	D122	RTRH meat	1,30		#N/A		1,60		1,45	0,30	#N/A	
	D138	RTRH Veal meat	1,30		#N/A		1,30		1,30	0,00	#N/A	
	D146	RTE Chicken meat	0,00		#N/A			0,00	#N/A		0,00	0,00
	D161	RTRH veal meat	4,00	3,90	3,95	-0,10			#N/A		#N/A	
	D162	RTRH veal meat	4,36	3,94	4,15	-0,42			#N/A		#N/A	
	2059	**RTRH beef meat**	3,28	2,90	3,09	-0,38			#N/A		#N/A	
	2065	**RTRH pork meat**	3,85	3,40	3,62	-0,45			#N/A		#N/A	
	2066	**RTRH pork meat**	3,15	2,08	2,61	-1,07			#N/A		#N/A	
	2151	**Sandwich with ham**	3,71	3,41	3,56	-0,29			#N/A		#N/A	
	2184	**Sandwich with chicken**	3,67	3,52	3,60	-0,15			#N/A		#N/A	
	2368	**Sandwich with ham**	3,65	2,86	3,26	-0,79			#N/A		#N/A	
	2480	**Sandwich with chicken**	2,28	2,08	2,18	-0,20			#N/A		#N/A	
	2481	**Sandwich with chicken**	2,20	1,60	1,90	-0,60			#N/A		#N/A	
	2482	**RTE salad with chicken**	2,97	2,20	2,59	-0,77			#N/A		#N/A	
Average category 1					**-0,25**							
Standard deviation of differences category 1					**0,37**							

Category	N°sample	Product	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference corrected values
			Reference method	Alternative method			<4 CFU/ plate	<or> threshold corrected values				
2	D163	Raw milk	2,58	2,57	2,57	-0,01			#N/A		#N/A	
	D164	Raw milk	0,60		#N/A		0,90		0,75	0,30	#N/A	
	6167	Raw milk	1,90	1,95	1,93	0,05			#N/A		#N/A	
	6168	Raw milk	2,15	2,15	2,15	0,00			#N/A		#N/A	
	6721	**Raw milk**	4,84	4,81	4,83	-0,03			#N/A		#N/A	
	6722	**Raw milk**	5,43	5,40	5,41	-0,03			#N/A		#N/A	
	D165	Cheese	0,00		#N/A			0,00	#N/A		0,00	0,00
	D166	Cheese	2,62	2,71	2,67	0,08			#N/A		#N/A	
	D167	Cheese	1,65	1,78	1,72	0,12			#N/A		#N/A	
	D174	Cream	2,89	3,04	2,96	0,15			#N/A		#N/A	
	D180	Cream	3,00	3,08	3,04	0,08			#N/A		#N/A	
	D181	Cream	3,04	3,08	3,06	0,04			#N/A		#N/A	
	D201	Dessert	2,32	2,46	2,39	0,14			#N/A		#N/A	
	D202	Cheese	2,36	2,38	2,37	0,02			#N/A		#N/A	
	D203	Cheese	3,18	3,49	3,33	0,32			#N/A		#N/A	
	D204	Cheese	2,04	1,85	1,94	-0,20			#N/A		#N/A	
	D205	Cheese	3,20	3,34	3,27	0,14			#N/A		#N/A	
	D206	Cheese	2,88	2,97	2,93	0,09			#N/A		#N/A	
	D207	Cheese	3,23	3,08	3,15	-0,15			#N/A		#N/A	
	D208	Cheese	3,72	3,70	3,71	-0,02			#N/A		#N/A	
	D209	Dessert	4,11	3,97	4,04	-0,15			#N/A		#N/A	
	D210	Cheese	2,83	2,96	2,90	0,13			#N/A		#N/A	
	D211	Cheese	0,70		#N/A			0,00	#N/A		0,35	-0,70
	D212	Cheese	3,18	3,23	3,20	0,05			#N/A		#N/A	
	D213	Cheese	4,56	4,36	4,46	-0,19			#N/A		#N/A	
	D214	Cheese	0,70		#N/A			0,00	#N/A		0,35	-0,70
	D215	Cheese	3,40	3,23	3,31	-0,17			#N/A		#N/A	
	D216	Cheese	3,83	3,70	3,77	-0,13			#N/A		#N/A	
	6283	Raw milk cheese	0,00		#N/A			0,00	#N/A		0,00	0,00
	6284	Raw milk cheese	0,00		#N/A			0,00	#N/A		0,00	0,00
	6717	**Dessert (rice pudding)**	2,76	2,76	2,76	-0,01			#N/A		#N/A	
	6718	**Dessert (rice pudding)**	3,59	3,64	3,62	0,05			#N/A		#N/A	
	6719	**Panna cotta**	4,56	4,54	4,55	-0,01			#N/A		#N/A	
	6720	**Cream**	5,41	5,65	5,53	0,24			#N/A		#N/A	
	D246	Milk powder	2,69	2,76	2,72	0,07			#N/A		#N/A	
	D247	Milk powder	1,40		#N/A		1,48		1,44	0,08	#N/A	
	D248	Milk powder	1,30		#N/A		1,00		1,15	-0,30	#N/A	
	D249	Milk powder	1,54		#N/A		1,78		1,66	0,24	#N/A	
	D250	Milk powder	1,78	2,20	1,99	0,43			#N/A		#N/A	
	D272	Milk powder	0,00		#N/A			0,00	#N/A		0,00	0,00
	D273	Milk powder	0,00		#N/A			0,00	#N/A		0,00	0,00
	6734	**Semi skimmed milk powder**	1,70	1,70	1,70	0,00			#N/A		#N/A	
	6735	**Skimmed milk powder**	2,36	2,34	2,35	-0,02			#N/A		#N/A	
	6736	**Semi skimmed milk powder**	2,90	3,56	3,23	0,65			#N/A		#N/A	

Category	N°sample	Product	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference corrected values
			Reference method	Alternative method			<4 CFU/ plate	<or> threshold corrected values				
Average category 2						**0,05**						
Standard deviation of differences category 2						**0,17**						
3	D149	Raw fish	0,00		#N/A			0,00	#N/A		0,00	0,00
	D150	Raw fish	0,00		#N/A			0,00	#N/A		0,00	0,00
	D192	Raw fish filet	2,49	2,00	2,25	-0,49			#N/A		#N/A	
	D193	Raw fish filet	3,20	3,26	3,23	0,05			#N/A		#N/A	
	D194	Raw fish filet	1,90	1,70	1,80	-0,20			#N/A		#N/A	
	D195	Raw fish filet	1,48		#N/A		1,78		1,63	0,30	#N/A	
	D196	Raw trout	1,60	1,70	1,65	0,10			#N/A		#N/A	
	D197	Raw seafood	2,04	1,90	1,97	-0,14			#N/A		#N/A	
	D198	Raw seafood	2,45	2,46	2,45	0,02			#N/A		#N/A	
	D199	Raw seafood	2,63	2,60	2,62	-0,03			#N/A		#N/A	
	D200	Raw seafood	3,23	3,00	3,12	-0,23			#N/A		#N/A	
	D227	Trout filet	1,74	1,95	1,85	0,21			#N/A		#N/A	
	D228	Raw fish	3,69	3,61	3,65	-0,08			#N/A		#N/A	
	D229	Raw fish	2,64	2,65	2,65	0,01			#N/A		#N/A	
	D231	Raw fish	3,38	3,36	3,37	-0,02			#N/A		#N/A	
	D235	Crab	3,15	3,11	3,13	-0,03			#N/A		#N/A	
	D236	Raw fish	2,49	2,34	2,42	-0,15			#N/A		#N/A	
	D237	Raw seafood	1,40		#N/A		1,00		1,20	-0,40	#N/A	
	D238	Raw seafood	2,64	2,68	2,66	0,04			#N/A		#N/A	
	D239	Raw seafood	3,08	3,00	3,04	-0,08			#N/A		#N/A	
	D240	Raw seafood	2,96	2,93	2,95	-0,02			#N/A		#N/A	
	D241	Raw seafood	2,49	2,49	2,49	0,00			#N/A		#N/A	
	D242	Raw seafood	2,86	2,83	2,84	-0,04			#N/A		#N/A	
	D243	Raw seafood	2,56	2,52	2,54	-0,04			#N/A		#N/A	
	D270	Raw seafood	1,30		#N/A		1,48		1,39	0,18	#N/A	
	D274	Raw fish	0,00		#N/A			0,00	#N/A		0,00	0,00
	6169	Raw fish	0,00		#N/A			0,00	#N/A		0,00	0,00
	6290	**Trout**	2,00		#N/A			2,00	#N/A		2,00	0,00
	6723	**Raw fish**	2,60	2,78	2,69	0,18			#N/A		#N/A	
	6724	**Raw fish**	3,43	3,52	3,47	0,09			#N/A		#N/A	
	6725	**Raw fish**	4,28	4,52	4,40	0,24			#N/A		#N/A	
	6726	**Raw seafood**	3,46	3,71	3,58	0,25			#N/A		#N/A	
	6727	**Raw seafood**	4,64	4,79	4,71	0,14			#N/A		#N/A	
	6728	**Raw shrimps**	3,70	4,80	4,25	1,10			#N/A		#N/A	
	6729	**Scallops**	4,18	4,94	4,56	0,77			#N/A		#N/A	
	6285	**Smoked bacon**	3,23	3,32	3,28	0,09			#N/A		#N/A	
	6286	**Smoked bacon**	0,00		#N/A			0,00	#N/A		0,00	0,00
	6287	**Smoked herring**	3,51	3,40	3,45	-0,11			#N/A		#N/A	
	6288	**Smoked herring**	0,00		#N/A			0,00	#N/A		0,00	0,00
	6289	**Smoked herring**	3,77	3,91	3,84	0,14			#N/A		#N/A	
	6291	**Marinated anchovy**	3,08	3,08	3,08	0,00			#N/A		#N/A	
	6294	**Marinated anchovy**	3,52	3,62	3,57	0,10			#N/A		#N/A	
	6170	RTRH seafood	0,00		#N/A			0,00	#N/A		0,00	0,00
	6279	RTRH fish	0,00		#N/A			0,00	#N/A		0,00	0,00
	6280	RTRH salmon	0,00		#N/A			0,00	#N/A		0,00	0,00
	6292	**RTE surimi**	3,38	3,48	3,43	0,10			#N/A		#N/A	
	6293	**RTE surimi**	2,58	2,34	2,46	-0,24			#N/A		#N/A	
	6295	**RTE surimi**	3,81	3,88	3,84	0,06			#N/A		#N/A	
	6296	**RTE surimi**	4,76	4,82	4,79	0,06			#N/A		#N/A	
	6398	RTRH mussels	1,00		#N/A			0,00	#N/A		0,50	-1,00
	6399	RTRH mussels	0,00		#N/A			0,00	#N/A		0,00	0,00
	6400	Scallops	0,00		#N/A			0,00	#N/A		0,00	0,00
	6401	RTRH fish	1,78	1,70	1,74	-0,08			#N/A		#N/A	
Average category 3						**0,05**						
Standard deviation of differences category 3						**0,26**						

Category	N°sample	Product	Log cfu/g		Average	Difference	Alternative method		Average <4 CFU/ plate	Difference <4 CFU/ plate	Average corrected values	Difference corrected values
			Reference method	Alternative method			<4 CFU/ plate	<or> threshold corrected values				
4	D168	Leeks	3,08	3,18	3,13	0,10			#N/A		#N/A	
	D169	Beet	3,32	3,32	3,32	0,00			#N/A		#N/A	
	D170	Zucchini	2,91	3,04	2,98	0,13			#N/A		#N/A	
	D184	Frozen vegetables mix	2,54	2,51	2,52	-0,04			#N/A		#N/A	
	D187	Broccoli	3,57	3,45	3,51	-0,12			#N/A		#N/A	
	D188	Spinach	2,51	2,30	2,40	-0,20			#N/A		#N/A	
	D189	Green beans	2,71	2,46	2,58	-0,25			#N/A		#N/A	
	D190	Brussel sprout	4,00	3,75	3,87	-0,25			#N/A		#N/A	
	D191	Zucchini	3,00	2,78	2,89	-0,22			#N/A		#N/A	
	D217	Salad	3,60	3,45	3,52	-0,15			#N/A		#N/A	
	D218	Beans	3,45	3,34	3,39	-0,10			#N/A		#N/A	
	D219	Onions	2,99	2,93	2,96	-0,05			#N/A		#N/A	
	D220	Leeks	2,80	2,74	2,77	-0,06			#N/A		#N/A	
	D221	Beet	2,83	2,70	2,76	-0,13			#N/A		#N/A	
	D224	Beans	3,36	3,23	3,30	-0,13			#N/A		#N/A	
	D127	Flour	1,90	1,70	1,80	-0,20			#N/A		#N/A	
	D133	Dehydrated mushroom	3,28		#N/A			0,00	#N/A		1,64	-3,28
	D134	Dehydrated mushroom	0,00		#N/A			0,00	#N/A		0,00	0,00
	D135	Dehydrated mushroom	0,00		#N/A			0,00	#N/A		0,00	0,00
	D136	Dehydrated mushroom	0,00		#N/A			0,00	#N/A		0,00	0,00
	D182	Frozen vegetables mix	2,92	2,79	2,86	-0,13			#N/A		#N/A	
	D183	Frozen vegetables mix	2,08	1,70	1,89	-0,38			#N/A		#N/A	
	D185	Frozen vegetables mix	1,65		#N/A		1,30		1,48	-0,35	#N/A	
	D186	Frozen vegetables mix	1,40		#N/A		1,60		1,50	0,20	#N/A	
	D244	Flour	2,11	2,08	2,10	-0,03			#N/A		#N/A	
	D245	Flour	1,18		#N/A		1,00		1,09	-0,18	#N/A	
	2120	**Frozen vegetables mix**	2,71	2,48	2,59	-0,23			#N/A		#N/A	
	D140	Raw vegetables mix	1,60		#N/A		1,48		1,54	-0,12	#N/A	
	2058	**RTRH vegetables mix**	1,60	1,60	1,60	0,00			#N/A		#N/A	
	2060	**RTRH carrots**	3,46	3,30	3,38	-0,16			#N/A		#N/A	
	2121	**RTE salad with vegetables**	4,04	3,96	4,00	-0,08			#N/A		#N/A	
	2183	**RTRH leeks**	4,81	4,58	4,70	-0,23			#N/A		#N/A	
	2363	**RTE salad with carrots and celery**	2,63	2,49	2,56	-0,14			#N/A		#N/A	
	2364	**RTE salad with celery**	3,36	3,40	3,38	0,04			#N/A		#N/A	
	2365	**RTE vegetables mix**	2,38	1,60	1,99	-0,78			#N/A		#N/A	
	2366	**RTE vegetables mix**	4,89	4,23	4,56	-0,66			#N/A		#N/A	
Average category 4						**-0,16**						
Standard deviation of differences category 4						**0,19**						
5	D121	Liquid egg	2,11	2,23	2,17	0,12			#N/A		#N/A	
	D139	Egg	0,00		#N/A			0,00	#N/A		0,00	0,00
	D155	Liquid egg	3,04	3,20	3,12	0,16			#N/A		#N/A	
	D156	Liquid egg	1,00		#N/A		1,30		1,15	0,30	#N/A	
	D157	Liquid egg	2,76	2,92	2,84	0,16			#N/A		#N/A	
	D158	Liquid egg	2,76	2,97	2,87	0,21			#N/A		#N/A	
	D159	Liquid egg	3,60	3,54	3,57	-0,06			#N/A		#N/A	
	D160	Liquid egg	3,63	3,84	3,74	0,21			#N/A		#N/A	
	D251	Whole liquid egg	3,46	3,15	3,30	-0,32			#N/A		#N/A	
	D252	Whole liquid egg	2,65	2,85	2,75	0,20			#N/A		#N/A	
	D253	Whole liquid egg	3,60	3,78	3,69	0,18			#N/A		#N/A	
	D254	Whole liquid egg	4,30	4,04	4,17	-0,26			#N/A		#N/A	
	D255	Whole liquid egg	0,00		#N/A			0,00	#N/A		0,00	0,00
	D256	Egg yolk	3,20	3,15	3,18	-0,06			#N/A		#N/A	
	D257	Egg yolk	2,88	2,45	2,66	-0,43			#N/A		#N/A	
	D258	Egg yolk	3,49	3,30	3,40	-0,19			#N/A		#N/A	
	D259	Egg yolk	3,52	3,57	3,54	0,05			#N/A		#N/A	
	D260	Egg yolk	3,08	2,85	2,96	-0,23			#N/A		#N/A	
	D261	Egg yolk	3,79	3,81	3,80	0,01			#N/A		#N/A	
	D262	Egg white	2,76	3,23	2,99	0,47			#N/A		#N/A	
	D263	Egg white	3,11	3,00	3,06	-0,11			#N/A		#N/A	
	D264	Egg white	1,74	1,70	1,72	-0,04			#N/A		#N/A	
	D265	Egg white	1,70	1,70	1,70	0,00			#N/A		#N/A	
	D123	Galette	0,00		#N/A			0,00	#N/A		0,00	0,00
	D137	Crepes	0,00		#N/A			0,00	#N/A		0,00	0,00
	D266	Mayonnaise	3,15	3,11	3,13	-0,03			#N/A		#N/A	
	D267	Mayonnaise	3,10	3,04	3,07	-0,06			#N/A		#N/A	
	D268	Mayonnaise	3,36	3,46	3,41	0,10			#N/A		#N/A	
	D269	Mayonnaise	3,32	3,18	3,25	-0,15			#N/A		#N/A	
	6278	Quiche with eggs	0,00		#N/A			0,00	#N/A		0,00	0,00
	6730	**Mayonnaise**	3,64	3,71	3,68	0,06			#N/A		#N/A	
	6731	**Tortilla with onions**	4,57	4,88	4,72	0,31			#N/A		#N/A	
	D126	Pastry	0,00		#N/A			0,00	#N/A		0,00	0,00
	2062	**Pastry**	2,34		#N/A		1,48		1,91	-0,86	#N/A	
	2063	**Pastry**	3,63	3,11	3,37	-0,52			#N/A		#N/A	
	2064	**Pastry**	4,69	4,41	4,55	-0,28			#N/A		#N/A	
	6171	Pastry	0,00		#N/A			0,00	#N/A		0,00	0,00
	6281	Pastry	0,00		#N/A			0,00	#N/A		0,00	0,00
	6282	Pastry with fruits	2,00	2,00	2,00	0,00			#N/A		#N/A	
	6732	**Pastry**	3,23	3,38	3,31	0,15			#N/A		#N/A	
	6733	**Pastry**	4,78	4,82	4,80	0,04			#N/A		#N/A	
Average category 5						**-0,01**						
Standard deviation of differences category 5						**0,22**						
Average all categories				Dall		**-0,07**						
Standard deviation of differences all categories				SDAll		**0,29**						

	n all	175			
β=95%	T(0,05;70)=	1,97			
		0,58	Upper limit	Lower limit	Linear
	Average (minimal value)	**0,00**	0,50	-0,65	-0,07
	Average (maximal value)	**10,00**	0,50	-0,65	-0,07

Category	n	T(0,05;70)=	SD	ISO formula	Bias	Lower limit (95%)	Upper limit (95%)
1	46	2,01	0,37	0,74	-0,25	-0,99	0,49
2	33	2,04	0,17	0,36	0,05	-0,31	0,41
3	37	2,03	0,26	0,54	0,05	-0,49	0,59
4	28	2,05	0,19	0,40	-0,16	-0,56	0,24
5	31	2,04	0,22	0,45	-0,01	-0,46	0,44
All categories	175	1,97	0,29	0,58	-0,07	-0,65	0,50

Appendix 6 - Accuracy profile study: raw data

Matrix	Strain	Level	Sample N°	ISO 16649-2♦				CHROMID Coli 44°C			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Ground beef -Lot 1	*Escherichia coli* 13	1	7650	10	37	360	2,56	10	43	410	2,61
				100	2			100	2		
			7651	10	32	340	2,53	10	29	280	2,45
				100	5			100	2		
			7652	10	34	360	2,56	10	35	340	2,53
				100	6			100	2		
			7653	10	41	390	2,59	10	32	340	2,53
				100	2			100	5		
			7654	10	36	350	2,54	10	30	270	2,43
				100	2			100	0		
		2	7655	100	65	6200	3,79	100	52	5300	3,72
				1000	3			1000	6		N'
			7656	100	79	7600	3,88	100	61	6300	3,80
				1000	5			1000	8		N'
			7657	100	61	5900	3,77	100	65	6400	3,81
				1000	4			1000	5		N'
			7658	100	55	5500	3,74	100	50	5200	3,72
				1000	6			1000	7		N'
			7659	100	56	5800	3,76	100	62	6000	3,78
				1000	8			1000	4		N'
		3	7660	1000	94	95000	4,98	1000	96	96000	4,98
				10000	11			10000	10		
			7661	1000	86	88000	4,94	1000	88	93000	4,97
				10000	11			10000	14		
			7662	1000	93	98000	4,99	1000	70	68000	4,83
				10000	15			10000	5		
			7663	1000	115	110000	5,04	1000	107	100000	5,00
				10000	9			10000	7		
			7664	1000	88	80000	4,90	1000	110	110000	5,04
				10000	0			10000	11		
Ground beef -Batch 2	*Escherichia coli* 13	1	7665	10	47	470	2,67	10	32	310	2,49
				100	5			100	2		
			7666	10	25	270	2,43	10	27	260	2,41
				100	5			100	1		
			7667	10	34	340	2,53	10	28	290	2,46
				100	3			100	4		
			7668	10	35	350	2,54	10	36	370	2,57
				100	3			100	5		
			7669	10	35	370	2,57	10	40	370	2,57
				100	6			100	1		
		2	7670	100	66	6400	3,81	100	59	6300	3,80
				1000	4			1000	10		N'
			7671	100	56	5500	3,74	100	48	4900	3,69
				1000	5			1000	6		N'
			7672	100	56	5800	3,76	100	63	6000	3,78
				1000	8			1000	3		N'
			7673	100	56	5500	3,74	100	54	5500	3,74
				1000	5			1000	6		N'
			7674	100	58	5900	3,77	100	52	5700	3,76
				1000	7			1000	11		N4
		3	7675	1000	118	120000	5,08	1000	103	100000	5,00
				10000	16			10000	8		
			7676	1000	100	110000	5,04	1000	108	110000	5,04
				10000	17			10000	16		
			7677	1000	125	130000	5,11	1000	104	110000	5,04
				10000	23			10000	14		
			7678	1000	100	110000	5,04	1000	104	110000	5,04
				10000	16			10000	16		
			7679	1000	86	93000	4,97	1000	85	83000	4,92
				10000	16			10000	6		

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Matrix	Strain	Level	Sample N°	ISO 16649-2♦				CHROMID Coli 44°C			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Pasteurized milk -Batch 1 (4,0.10³ CFU/g)	*Escherichia coli* 94	1	7750	10	18	190	2,28	10	36	350	2,54
				100	3			100	2		
			7751	10	29	320	2,51	10	28	290	2,46
				100	6			100	4		
			7752	10	26	240	2,38	10	21	220	2,34
				100	0			100	3		
			7753	10	22	210	2,32	10	20	200	2,30
				100	1			100	2		
			7754	10	16	170	2,23	10	24	220	2,34
				100	3			100	0		
		2	7755	100	37	3600	3,56	100	30	3300	3,52
				1000	3			1000	6		
			7756	100	36	3800	3,58	100	48	4700	3,67
				1000	6			1000	4		
			7757	100	43	4500	3,65	100	43	4200	3,62
				1000	6			1000	3		
			7758	100	43	4400	3,64	100	47	4400	3,64
				1000	5			1000	1		
			7759	100	38	3700	3,57	100	40	4500	3,65
				1000	3			1000	9		
		3	7760	1000	56	55000	4,74	1000	71	73000	4,86
				10000	5			10000	9		
			7761	1000	67	67000	4,83	1000	71	77000	4,89
				10000	7			10000	14		
			7762	1000	68	68000	4,83	1000	68	71000	4,85
				10000	7			10000	10		
			7763	1000	72	75000	4,88	1000	72	77000	4,89
				10000	10			10000	13		
			7764	1000	65	67000	4,83	1000	72	75000	4,88
				10000	9			10000	11		
Pasteurized milk -Batch 2 (<1 CFU/g)	*Escherichia coli* 94	1	7765	10	34	320	2,51	10	25	260	2,41
				100	1			100	3		
			7766	10	30	330	2,52	10	29	290	2,46
				100	6			100	3		
			7767	10	33	330	2,52	10	29	310	2,49
				100	3			100	5		
			7768	10	35	340	2,53	10	36	340	2,53
				100	2			100	1		
			7769	10	31	330	2,52	10	36	370	2,57
				100	5			100	5		
		2	7770	100	51	4900	3,69	100	55	5200	3,72
				1000	3			1000	2		
			7771	100	52	5100	3,71	100	48	4900	3,69
				1000	4			1000	6		
			7772	100	51	5000	3,70	100	52	4900	3,69
				1000	4			1000	2		
			7773	100	48	5000	3,70	100	45	4700	3,67
				1000	7			1000	7		
			7774	100	58	6000	3,78	100	55	5700	3,76
				1000	8			1000	8		
		3	7775	1000	94	97000	4,99	1000	101	110000	5,04
				10000	13			10000	11		
			7776	1000	106	110000	5,04	1000	85	93000	4,97
				10000	13			10000	17		
			7777	1000	98	100000	5,00	1000	87	86000	4,93
				10000	12			10000	8		
			7778	1000	85	93000	4,97	1000	94	87000	4,94
				10000	17			10000	2		
			7779	1000	93	94000	4,97	1000	86	92000	4,96
				10000	10			10000	15		

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Matrix	Strain	Level	Sample n°	ISO 16649-2♦				CHROMID Coli 44°C			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Pasteurized liquid egg product – Batch 1 (20 CFU/g)	*Escherichia coli* 142	1	8051	10	32	330	2,52	10	28	300	2,48
				100	4			100	5		
			8052	10	31	330	2,52	10	44	430	2,63
				100	5			100	3		
			8053	10	42	420	2,62	10	31	320	2,51
				100	4			100	4		
			8054	10	32	320	2,51	10	40	420	2,62
				100	3			100	6		
			8055	10	42	400	2,60	10	26	260	2,41
				100	2			100	2		
		2	8056	100	50	5200	3,72	100	57	5800	3,76
				1000	7			1000	7		
			8057	100	45	4600	3,66	100	56	5500	3,74
				1000	6			1000	4		
			8058	100	51	4900	3,69	100	59	5800	3,76
				1000	3			1000	5		
			8059	100	55	5300	3,72	100	50	5500	3,74
				1000	3			1000	10		
			8060	100	43	4100	3,61	100	48	4600	3,66
				1000	2			1000	3		
		3	8061	1000	79	83000	4,92	1000	80	80000	4,90
				10000	12			10000	8		
			8062	1000	57	59000	4,77	1000	73	75000	4,88
				10000	8			10000	9		
			8063	1000	75	84000	4,92	1000	96	95000	4,98
				10000	17			10000	8		
			8064	1000	81	84000	4,92	1000	94	95000	4,98
				10000	11			10000	11		
			8065	1000	87	90000	4,95	1000	101	110000	5,04
				10000	12			10000	16		
Pasteurized liquid egg product – Batch 2 (< 10 CFU/g)	*Escherichia coli* 142	1	8066	10	20	210	2,32	10	27	280	2,45
				100	3			100	4		
			8067	10	34	340	2,53	10	27	260	2,41
				100	3			100	1		
			8068	10	27	270	2,43	10	30	300	2,48
				100	3			100	3		
			8069	10	46	450	2,65	10	37	360	2,56
				100	3			100	3		
			8070	10	41	410	2,61	10	43	410	2,61
				100	4			100	2		
		2	8071	100	44	4200	3,62	100	38	3700	3,57
				1000	2			1000	3		
			8072	100	58	6100	3,79	100	45	4400	3,64
				1000	9			1000	3		
			8073	100	56	5700	3,76	100	57	5700	3,76
				1000	7			1000	6		
			8074	100	59	6100	3,79	100	63	6500	3,81
				1000	8			1000	8		
			8075	100	43	4500	3,65	100	48	4700	3,67
				1000	7			1000	4		
		3	8076	1000	118	120000	5,08	1000	104	110000	5,04
				10000	12			10000	18		
			8077	1000	86	90000	4,95	1000	96	95000	4,98
				10000	13			10000	8		
			8078	1000	93	91000	4,96	1000	73	75000	4,88
				10000	7			10000	10		
			8079	1000	83	85000	4,93	1000	93	100000	5,00
				10000	11			10000	17		
			8080	1000	101	110000	5,04	1000	97	95000	4,98
				10000	16			10000	7		

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Matrix	Strain	Level	Sample N°	ISO 16649-2♦					CHROMID Coli 44°C		
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Fish fillet -Batch 1 (5,2.10³CFU/g)	*Escherichia coli* Ad228	1	8164	10	37	340	2,53	10	27	270	2,43
				100	0			100	3		
			8165	10	32	290	2,46	10	22	220	2,34
				100	0			100	2		
			8166	10	25	260	2,41	10	21	220	2,34
				100	3			100	3		
			8167	10	24	240	2,38	10	82	770	2,89
				100	2			100	3		
			8168	10	20	190	2,28	10	31	350	2,54
				100	1			100	7		
		2	8169	100	52	4900	3,69	100	43	4300	3,63
				1000	2			1000	4		N'
			8170	100	47	4600	3,66	100	43	4200	3,62
				1000	4			1000	3		N'
			8171	100	38	4300	3,63	100	41	4000	3,60
				1000	9			1000	3		N'
			8172	100	43	4200	3,62	100	53	5000	3,70
				1000	3			1000	2		N'
			8173	100	40	4200	3,62	100	46	4600	3,66
				1000	6			1000	5		N'
		3	8174	1000	58	58000	4,76	1000	72	71000	4,85
				10000	6			10000	6		
			8175	1000	57	56000	4,75	1000	75	74000	4,87
				10000	5			10000	6		
			8176	1000	62	65000	4,81	1000	77	77000	4,89
				10000	10			10000	8		
			8177	1000	59	59000	4,77	1000	60	57000	4,76
				10000	6			10000	3		
			8178	1000	56	55000	4,74	1000	92	91000	4,96
				10000	4			10000	8		
Fish fillet -Batch 2 (2,5.10³CFU/g)	*Escherichia coli* Ad228	1	8179	10	35	370	2,57	10	46	470	2,67
				100	6			100	6		
			8180	10	27	280	2,45	10	27	250	2,40
				100	4			100	0		
			8181	10	29	260	2,41	10	32	310	2,49
				100	0			100	2		
			8182	10	27	250	2,40	10	25	240	2,38
				100	0			100	1		
			8183	10	46	430	2,63	10	33	350	2,54
				100	1			100	5		
		2	8184	100	50	4700	3,67	100	46	4600	3,66
				1000	2			1000	5		N'
			8185	100	54	5500	3,74	100	51	5200	3,72
				1000	6			1000	6		N'
			8186	100	45	4500	3,65	100	58	5900	3,77
				1000	5			1000	7		N'
			8187	100	45	4500	3,65	100	59	5900	3,77
				1000	4			1000	6		N'
			8188	100	37	4100	3,61	100	42	4200	3,62
				1000	8			1000	4		N4
		3	8189	1000	79	78000	4,89	1000	85	82000	4,91
				10000	7			10000	5		
			8190	1000	79	85000	4,93	1000	67	68000	4,83
				10000	14			10000	8		
			8191	1000	70	74000	4,87	1000	75	75000	4,88
				10000	11			10000	8		
			8192	1000	70	70000	4,85	1000	80	78000	4,89
				10000	7			10000	6		
			8193	1000	66	68000	4,83	1000	86	85000	4,93
				10000	9			10000	7		

♦ Analyses performed according to the COFRAC accreditation

Matrix	Strain	Level	Sample N°	ISO 16649-2♦				CHROMID Coli 44°C			
				Dilution	cfu/plate	cfu/g	log cfu/g	Dilution	cfu/plate	cfu/g	log cfu/g
Grated carrots -Batch 1 (>3, 0.10^5 CFU/g)	*Escherichia coli* 19	1	8239	10	25	260	2,41	10	17	170	2,23
				100	3			100	2		
			8240	10	25	240	2,38	10	23	400	2,60
				100	1			100	21		
			8241	10	15	150	2,18	10	25	240	2,38
				100	1			100	1		
			8242	10	21	200	2,30	10	27	260	2,41
				100	1			100	1		
			8243	10	21	220	2,34	10	22	240	2,38
				100	3			100	4		
		2	8244	100	25	2500	3,40	100	41	4200	3,62
				1000	3			1000	5		N'
			8245	100	29	2700	3,43	100	39	3700	3,57
				1000	1			1000	2		N'
			8246	100	38	3700	3,57	100	26	2500	3,40
				1000	3			1000	2		N'
			8247	100	36	3800	3,58	100	43	4000	3,60
				1000	6			1000	1		N'
			8248	100	29	2800	3,45	100	41	4100	3,61
				1000	2			1000	4		N'
		3	8249	1000	46	48000	4,68	1000	54	53000	4,72
				10000	7			10000	4		
			8250	1000	59	63000	4,80	1000	63	64000	4,81
				10000	10			10000	7		
			8251	1000	60	58000	4,76	1000	54	52000	4,72
				10000	4			10000	3		
			8252	1000	46	45000	4,65	1000	47	46000	4,66
				10000	4			10000	4		
			8253	1000	48	49000	4,69	1000	46	47000	4,67
				10000	6			10000	6		
Grated carrots -Batch 2 (>3, 0.10^5 CFU/g)	*Escherichia coli* 19	1	8254	10	13	160	2,20	10	22	240	2,38
				100	5			100	4		
			8255	10	31	290	2,46	10	27	280	2,45
				100	1			100	4		
			8256	10	19	180	2,26	10	19	190	2,28
				100	1			100	2		
			8257	10	18	200	2,30	10	29	300	2,48
				100	4			100	4		
			8258	10	25	250	2,40	10	18	170	2,23
				100	2			100	1		
		2	8259	100	24	2500	3,40	100	41	4100	3,61
				1000	4			1000	4		N'
			8260	100	22	2600	3,41	100	39	3700	3,57
				1000	7			1000	2		N'
			8261	100	37	3500	3,54	100	35	3600	3,56
				1000	2			1000	5		N'
			8262	100	31	3200	3,51	100	34	3100	3,49
				1000	4			1000	0		N'
			8263	100	33	3300	3,52	100	39	3600	3,56
				1000	3			1000	1		N4
		3	8264	1000	48	44000	4,64	1000	47	45000	4,65
				10000	0			10000	3		
			8265	1000	49	48000	4,68	1000	58	56000	4,75
				10000	4			10000	4		
			8266	1000	45	45000	4,65	1000	58	59000	4,77
				10000	5			10000	7		
			8267	1000	43	45000	4,65	1000	38	39000	4,59
				10000	7			10000	5		
			8268	1000	44	44000	4,64	1000	47	45000	4,65
				10000	4			10000	3		

♦ Analyses performed according to the COFRAC accreditation

Appendix 7 - Accuracy profile study: summarized results

(Food) Category 1	Meat products
(Food) Type 1	Raw ground beef

			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
7650-7654	Ground beef	1	360	340	360	390	350	410	280	340	340	270
7665-7669	Ground beef	1	470	270	340	350	370	310	260	290	370	370
7655-7659	Ground beef	2	6200	7600	5900	5500	5800	5300	6300	6400	5200	6000
7670-7674	Ground beef	2	6400	5500	5800	5500	5900	6300	4900	6000	5500	5700
7660-7664	Ground beef	3	95000	88000	98000	110000	80000	96000	93000	68000	100000	110000
7675-7679	Ground beef	3	120000	110000	130000	110000	93000	100000	110000	110000	110000	83000

(Food) Category 2	Dairy products
(Food) Type 2	Pasteurised milk

			Reference method result					Alternative method result				
Sample Name	(Food) item	Level	rep 1	rep 2	rep 3	rep 4	rep 5	rep 1	rep 2	rep 3	rep 4	rep 5
7750-7754	Pasteurized milk	1	190	320	240	210	170	350	290	220	200	220
7765-7769	Pasteurized milk	1	320	330	330	340	330	260	290	310	340	370
7755-7759	Pasteurized milk	2	3600	3800	4500	4400	3700	3300	4700	4200	4400	4500
7770-7774	Pasteurized milk	2	4900	5100	5000	5000	6000	5200	4900	4900	4700	5700
7760-7764	Pasteurized milk	3	55000	67000	68000	75000	67000	73000	77000	71000	77000	75000
7775-7779	Pasteurized milk	3	97000	110000	100000	93000	94000	110000	93000	86000	87000	92000

(Food) Category 3	Seafood
(Food) Type 3	Raw fish filet

			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
8164-8168	Raw fish fillet	1	340	290	260	240	190	300	430	320	420	260
8179-8183	Raw fish fillet	1	370	280	260	250	430	280	260	300	360	410
8169-8173	Raw fish fillet	2	4900	4600	4300	4200	4200	5800	5500	5800	5500	4600
8184-8188	Raw fish fillet	2	4700	5500	4500	4500	4100	3700	4400	5700	6500	4700
8174-8178	Raw fish fillet	3	58000	56000	65000	59000	55000	80000	75000	95000	95000	110000
8189-8193	Raw fish fillet	3	78000	85000	74000	70000	68000	110000	95000	75000	100000	95000

(Food) Category 4	Vegetables
(Food) Type 4	RTE (grated carrots)

			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
8239-8243	Grated carrots	1	260	240	150	200	220	170	400	240	260	240
8254-8258	Grated carrots	1	160	290	180	200	250	240	280	190	300	170
8244-8248	Grated carrots	2	2500	2700	3700	3800	2800	4200	3700	3600	3100	3600
8259-8263	Grated carrots	2	2500	2600	3500	3200	3300	4100	3700	3600	3100	3600
8249-8253	Grated carrots	3	48000	63000	58000	45000	49000	53000	64000	52000	46000	47000
8264-8268	Grated carrots	3	44000	48000	45000	45000	44000	45000	56000	59000	39000	45000

(Food) Category 5	Egg products
(Food) Type 5	Liquid egg products

			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
8051-8055	Pasteurized liquid egg	1	330	330	420	320	400	300	430	320	420	260
8066-8070	Pasteurized liquid egg	1	210	340	270	450	410	280	260	300	360	410
8056-8060	Pasteurized liquid egg	2	5200	4600	4900	5300	4100	5800	5500	5800	5500	4600
8071-8075	Pasteurized liquid egg	2	4200	6100	5700	6100	4500	3700	4400	5700	6500	4700
8061-8065	Pasteurized liquid egg	3	83000	59000	84000	84000	90000	80000	75000	95000	95000	110000
8076-8080	Pasteurized liquid egg	3	120000	90000	91000	85000	110000	110000	95000	75000	100000	95000

Appendix 8 – Inclusivity / Exclusivity: raw data

INCLUSIVITY								
Year of testing	N°	Strain	Reference	Origin	PCA	V08-017 (VRBL 44,5°C) OR ISO 16649-2 (TBX)	CHROMID Coli 44°C	
					CFU/plate (1ml -7)	CFU/plate (1ml -7)	CFU/plate (1ml -7)	Description of the colonies
1998 VRBL 44,5°C	1	*Escherichia coli*	Adria 1	Sausage	57	39/40	49/37	Pink
	2	*Escherichia coli*	Adria 2B	Sausage	41	61/52	44/61	Pink
	3	*Escherichia coli*	Adria 3A	Sausage	49	52/40	62/55	Pink
	4	*Escherichia coli*	Adria 6	Sausage	140	58/66	69/55	Pink
	5	*Escherichia coli*	Adria 9	Goose rillettes	92	71/49	67/60	Pink
	6	*Escherichia coli*	Adria 12	Raw poultry meat	67	44/61 (white colonies on TBX)	51/58	Blue
	7	*Escherichia coli*	Adria 13	Ground beef	74	46/53	56/68	Pink
	8	*Escherichia coli*	Adria 14	Raw milk	230	68/62	40/40	Pink
	9	*Escherichia coli*	Adria 15	Raw milk	210	36/42	23/18	Pink
	10	*Escherichia coli*	Adria 16	Raw milk	210	51/42	46/45	Pink
	11	*Escherichia coli*	Adria 17	Water	240	78/90	52/62	Pink
	12	*Escherichia coli*	Adria 18	Water	180	34/52	36/23	Pink
	13	*Escherichia coli*	Adria 19	Grated carrots	100	59/45	58/39	Pink
	14	*Escherichia coli*	Adria 20	Water	160	113/131 (white colonies on TBX)	153/155	Blue
	15	*Escherichia coli*	Adria 21	Cured pork meat	92	55/42	46/61	Pink
	16	*Escherichia coli*	Adria 70	Ground meat	190	145/131	143/120	Pink
	17	*Escherichia coli*	CIP 54117	/	160	114/146	137/150	Pink
	18	*Escherichia coli*	CIP 54127	/	110	100/96	86/92	Pink
	19	*Escherichia coli*	ATCC 43888	Bovine faeces	120	61/69 (white colonies on TBX)	62/74	Blue
	20	*Escherichia coli*	CIP 7624	/	180	137/143	141/125	Pink
2006 TBX 44°C	21	*Escherichia coli*	Ad217	Meat product	35/41	2/3	3/3	Pink
	22	*Escherichia coli*	Ad218	Meat product	49/61	48/42	13/18	Pink
	23	*Escherichia coli*	Ad219	Meat product	21/19	11/9	125/14	Pink
	24	*Escherichia coli*	Ad228	Seafood product	24/16	22/17	17/30	Pink
	25	*Escherichia coli*	Ad94	Dairy product	30/20	24/21	25/25	Pink
	26	*Escherichia coli*	Adria E17	Dairy product	13/11	7/9	14/9	Pink
	27	*Escherichia coli*	Adria 144	Ready to reheat meal	15/11	13/14	16/16	Pink
	28	*Escherichia coli*	Adria142	Egg product	22/32	31/27	26/18	Pink
	29	*Escherichia coli*	Adria143	Egg product	23/29	9/18	27/25	Pink
	30	*Escherichia coli*	Ad222	Egg product	34/23	19/20	18/19	Pink

INCLUSIVITY								
Year of testing	N°	Strain	Reference	Origin	PCA	V08-017 (VRBL 44,5°C) OR ISO 16649-2 (TBX)	CHROMID Coli 44°C	
					CFU/plate (1ml -7)	CFU/plate (1ml -7)	CFU/plate (1ml -7)	Description of the colonies
2018 TBX 44°C	31	*Escherichia coli* O103	Ad1743	Ground beef	58	80	44	Pink
	32	*Escherichia coli*	Ad1816	Raw milk cheese	50	37 (white colonies)	57	Blue
	33	*Escherichia coli*	Ad1828	Beef meat	61	50	64	Pink
	34	*Escherichia coli* O145	Ad1863	Ground beef	42	35	48	Pink
	35	*Escherichia coli* O26	Ad1864	Ground beef	47	34	50	Pink
	36	*Escherichia coli* O26	Ad1866	Raw milk cheese	41	47	39	Pink
	37	*Escherichia coli*	Ad1999	Chicken meat	29	36 (white colonies)	25	Grey
	38	*Escherichia coli* O26	Ad2827	Raw milk	35	39	37	Pink
	39	*Escherichia coli* O26	Ad2830	Raw ewe milk cheese	64	60	63	Pink
	40	*Escherichia coli* O26	Ad2832	Raw cow milk cheese	22	32	29	Pink
	41	*Escherichia coli* O103	Ad2839	Raw ewe milk	37	57	49	Pink
	42	*Escherichia coli* O145	Ad2841	Fermented milk	27	20	37	Pink
	43	*Escherichia coli* O26	Ad1861	Cheese	65	61	51	Pink
	44	*Escherichia coli* O103	Ad1862	Cheese	52	34	52	Pink
	45	*Escherichia coli* O26	Ad1742	Cheese	45	37	34	Pink
	46	*Escherichia coli*	A00C070	Chicken leg	24	39	54	Pink
	47	*Escherichia coli*	CIP53126	Unknown	25	25	73	Pink
	48	*Escherichia coli*	Ad1385	Sea water	59	51	57	Pink
	49	*Escherichia coli*	Ad1386	Well water	64	58 (white colonies)	61	Blue
	50	*Escherichia coli*	Ad1387	Drilling water	64	47	37	Pink

EXCLUSIVITY									
Year of testing	N°	Strain		Reference	Origin	PCA	V08-017 (VRBL 44,5°C) OR ISO 16649-2 (TBX)	CHROMID Coli 44°C	
						CFU/ plate (1ml -7)	CFU/ plate (1ml -7)	CFU/ plate (1ml -7)	Description of the colonies
1998 VRBL 44,5°C	1	*Enterobacter*	*aerogenes*	CIP6086	/	69	55/56	67/58	Pale blue
	2	*Enterobacter*	*aerogenes*	CIP 103659	/	90	53/37	43/58	White
	3	*Citrobacter*	*freundii*	Adria 23	Sausage	73	µcolonies	64/46	Dark blue
	4	*Citrobacter*	*freundii*	Adria 24	Seafood cocktail	41	0/0 (-6)	16/23	Dark blue
	5	*Klebsiella*	*oxytoca*	Adria 42	/	28	0/0 (-6)	21/31	Blue
	6	*Klebsiella*	*oxytoca*	CIP 7932	/	33	0/0 (-6)	18/17	Dark blue
	7	*Serratia*	*liquefaciens*	Adria 26	Beetroot	60	0/0 (-6)	0/0 (-6)	/
	8	*Serratia*	*liquefaciens*	Adria 81	Ham	30 (-5)	0/0 (-5)	0/0 (-5)	/
	9	*Shigella*	*flexneri*	CIP 8248	/	41	0/0 (-6)	51/47	White
	10	*Proteus*	*vulgaris*	Adria 43	Ham	30	0/0 (-6)	0 (-6)	/
	11	*Proteus*	*vulgaris*	Adria 56	Food product	170	0/0 (-6)	43/29	White
	12	*Erwinia*	*carotovora*	CIP 103762	Salad	280	0/0 (-6)	0 (-6)	/
	13	*Erwinia*	*carotovora*	CIP 8283	Potatoes	14	0/0 (-6)	0/0 (-6)	/
	14	*Bacillus*	*polymyxa*	CIP A39	/	32 (-6)	0/0 (-6)	0/0 (-6)	/
	15	*Enterococcus*	*faecalis*	Adria 25	Chicken leg	120	0/0 (-6)	0/0 (-6)	/
	16	*Staphylococcus*	*aureus*	Adria 501	Raw milk	77	0/0 (-6)	0/0 (-6)	/
	17	*Lactobacillus*	*plantarum*	A159	/	53	0/0 (-6)	0/0 (-6)	/
	18	*Hafnia*	*alvei*	Adria 50	Ground meat	100	0/0 (-6)	76/71	Small white
	19	*Candida*	*guilermondii*	Adria 381	Bier	160 (-5)	0/0 (-5)	0/0 (-5)	/
	20	*Candida*	*liptolytica*	CIP 81663	/	43 (-5)	0/0 (-5)	0/0 (-5)	/
	21	*Salmonella*	Enteritidis	CIP 8297	/	160	135/137	100/95	White
	22	*Escherichia*	*vulneris*	Adria 151	Raw milk	17	0/0 (-6)	0/0 (-6)	/
	23	*Plesiomonas*	*shigelloides*	Add 673	Fish	53 (-6)	77/63 (-6)	47/56 (-6)	White/pink
2018 TBX 44°C	24	*Escherichia*	*vulneris*	Adria 127	Dairy product	16/15	0/0 (-7)	0/0 (-7)	/
	25	*Escherichia*	*vulneris*	Adria 132	Meat product	40/30	0/0 (-7)	0/0 (-7)	/
	26	*Escherichia*	*vulneris*	Adria 134	Meat product	45/44	0/0 (-7)	0/0 (-7)	/
	27	*Buttiauxella*	*agrestis*	Ad1328	Egg product	30 (-6)	0/0 (-6)	0/0 (-6)	/
	28	*Kluyvera*	*ascorbata*	Ad229	Fish	177 (-6)	0/0 (-6)	0/0 (-6)	/
	29	*Escherichia*	*fergusonii*	Ad1381	Water	184 (-6)	0/0 (-6)	0/0 (-6)	/
	30	*Escherichia*	*hermanii*	Ad464	Raw milk	248 (-6)	0/0 (-6)	0/0 (-6)	/
	31	*Escherichia*	*vulneris*	Ad2853	Dairy environment	156 (-6)	0/0 (-6)	0/0 (-6)	/