

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

**Summary report
according to the standard EN ISO 16140-2:2016**

Quantitative method

***Bacillus Cereus* Rapid Agar – BACARA and BACARA 2
Certificate # AES 10/10-07/10
for the enumeration of *Bacillus cereus* in food and feed products**

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

For: bioMérieux
Chemin de l'Orme
69280 MARCY L'ETOILE
FRANCE

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LABORATOIRE MICROSEPT

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

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

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

Preamble

- Protocols of validation :

- EN ISO 16140-1 and NF EN ISO 16140-2/A1 (2024): Microbiology of the food chain — Method validation
Part 1: Vocabulary.
Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method.
- Requirements regarding comparison and interlaboratory studies for implementation of the standard EN ISO 16140-2 (version 12).

- Reference method:

- EN ISO 7932 (July 2005): Horizontal method for the enumeration of presumptive *Bacillus cereus* – Colony-count technique at 30°C
- EN ISO 7932/A1 (April 2020): Horizontal method for the enumeration of presumptive *Bacillus cereus* – Colony-count technique at 30°C – Amendment 1: addition of optional tests (Draw 2 (2020-10-01))

- Application scope of initial validation study (BACARA):

- **All human food products** by a validation testing of a broad range of foods, including:
 - meat products, fish products and seafood,
 - dairy products,
 - vegetables,
 - eggs and pastries,
 - baby foods
- **Feeds.**

- Application scope of extension study (BACARA 2):

- **All human food products** by a validation testing of a broad range of foods, including:
 - Dairy products: Milk powders/ Pasteurized products / Infant formula with and without probiotics
 - Meat Products & Seafood: Ready-to-cook products / Ready-to-reheat products / Sauces, soups
 - Vegetables: Flours, spices, dehydrated vegetables / Pasta, rice / Deli salad, vegetable preparations
 - Eggs & Pastries: Pasteurized liquid eggs / Egg powders / Pastries, creams, desserts
 - Ready-to-eat (RTE) and ready-to-reheat (RTRH) products: RTE cereals-based products / RTE products containing starch / RTRH products containing starch
- **Feed products:** Dry pet foods / Livestock foods / Poultry & rabbit foods.

- Certification body:

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

Definitions

- **Method comparison study**

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

- A comparative study of the results of the reference method to the results of the alternative method in a variety of different items (naturally and/or artificially) contaminated samples (so-called relative trueness study).
- A comparative study of the results of the reference method to the results of the alternative method in artificially contaminated samples using replicates of a single item per category. The data are analyzed using the accuracy profile (AP) approach (so-called AP study).
- An inclusivity/exclusivity study of the alternative method.

- **Relative trueness study**

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

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

- **Accuracy profile study**

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

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

- **Inclusivity and exclusivity study**

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

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

- **Interlaboratory study**

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

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

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Appendices

- **Initial validation study**

Appendix A: Protocol of the alternative method

Appendix B: Protocol of the reference method

Appendix C: Artificial contaminations

Appendix D: Relative trueness study - Raw results

Appendix E: Relative trueness study - Statistical calculations

Appendix F: Accuracy profile study - Raw results

Appendix G: Selectivity - Raw results

Appendix H: Interlaboratory study - Raw results

- **Extension study (2022) – BACARA 2 – interpretation with 2 dilutions**

Appendix I: Protocol of the alternative method

Appendix J: Protocol of the reference method

Appendix K: Artificial contaminations

Appendix L: Relative trueness study - Raw results

Appendix M: Relative trueness study - Statistical calculations

Appendix N: Accuracy profile study - Raw results

Appendix O: Selectivity - Raw results

- Extension study (2025) – BACARA 2 – interpretation with 1 dilution

Appendix P: Relative trueness study - Raw results

Appendix Q: Relative trueness study - Statistical calculations

Appendix R: Accuracy profile study - Raw results

1. Introduction

The *Bacillus cereus* Rapid Agar (BACARA) is validated by AFNOR Certification under the NF Validation mark with the certification number AES 10/10–07/10 according to the standard ISO 16140-2:2016. The method is intended for all human food products and feed products since its initial validation.

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

Table 1: Steps of the validation AFNOR certification

Study	Date	Standard	Expert Laboratory	Observation
Initial validation	July 2010	ISO 16140:2003	IPL Santé, Environnement Durables Nord	/
First renewal	May 2014	ISO 16140/A1:2011	ADRIA Développement	No additional tests
Second renewal	July 2018	ISO 16140-2:2016	Microsept	Additional tests to perform to fulfill the updated validation standard
Extension study	June 2021	ISO 16140-2:2016	Microsept	Method comparison study for new formulation of the medium (BACARA 2)
Renewal study	June 2022	ISO 16140-2:2016	Microsept	No additional tests
Extension study	June 2025	ISO 16140-2/A1 (2024)	Microsept	Reinterpretation using a single plate and a single dilution for BACARA 2 formulation only

The present document introduces a summary report for the AFNOR Certification validation of the BACARA® and BACARA®2 methods according to the standard EN ISO 16140-2:2016 for a broad range of foods.

The difference between the BACARA®2 method and the BACARA® method being based on the formulation of the medium (addition of a supplement), the members of the Technical Board concluded during the June 2021 meeting that it consists of an extension of the BACARA® method.

A part of the results set out in this report were produced during validation tests carried out by IPL Santé, Environnement Durables Nord as part of NF Validation, in accordance with prevailing requirements.

The remaining part of the results, including the extension study realized in 2022, is constituted by the analyses performed by the Laboratory Microsept as part of the requirements of the updated validation standard.

The second extension realized in 2025, consists of adding the possibility to interpret the result of the method using only one dilution of the sample for the **BACARA® 2 formulation** of the method.

For this extension study, no additional tests were carried out. A reinterpretation of all the data from a single dilution for relative trueness and accuracy profile studies were performed only for the data generated with the BACARA® 2 formulation.

For the raw data of these two parameters, when two dilutions of the sample are present, the first decimal dilution of the alternative method was retained for the calculation of the result except in the case where this dilution is greater than the quantification limit of the method.

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

2. Initial validation study (initial formulation: BACARA)

2.1. Protocols of the methods

2.1.1. Alternative method

2.1.1.1. Principle of the method

BACARA agar is a selective chromogenic medium that allows the enumeration of *Bacillus* of the *cereus* group without confirmation.

On BACARA, typical colonies of *B. cereus* show a pink / orangey color due to the metabolism of the chromogenic substrate and are surrounded with an opaque halo due to the phospholipase activity. The selectivity of BACARA agar has been especially optimized to prevent growth of interfering flora and thus to allow an easy interpretation of plates even when matrix highly contaminated with competitive flora are analyzed.

2.1.1.2. Protocol of the method

The diagram summarizing the method is shown in appendix A.

From an initial suspension realized according to the prescriptions of the ISO 6887 standard, or directly from a liquid sample, BACARA plates are inoculated as described below:

- Spreading of 0.1 ml on the surface of one plate per dilution. Low numbers estimations can be performed by the inoculation of 1 ml on 3 plates to enumerate low contaminations of *Bacillus cereus* group,
Or
- Pouring 1 ml into about 18 mL of BACARA agar maintained at 44-47°C.

The inoculated plates are incubated at 30±1°C for 24±2 h.

After incubation, the characteristic colonies of *Bacillus cereus* group (pink/orangey colonies with a halo of opacification) are enumerated as colonies of the *Bacillus cereus* group. No confirmation is necessary.

Notes: as part of the study of certification, confirmations according to the tests described in the reference method were realized.

Moreover, during the accuracy test, plates were stored at 5±3°C for 48 hours and again interpreted, to verify that this preservation did not modify their performance.

2.1.1.3. Restrictions

There are no restrictions on use for the BACARA method.

2.1.2. Reference method

The EN ISO 7932:2005 standard, Horizontal method for the enumeration of presumptive *Bacillus cereus* – Colony-count technique at 30°C, was used for the initial validation study, for the first renewal study and for the second renewal study.

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

2.2. Methods comparison study

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

2.2.1. Relative trueness study

2.2.1.1. Number and nature of the samples

The distribution of the samples per category, type and inoculation technique is given in table 2.

Table 2: number and nature of the samples analyzed for the relative trueness study

Category	Type		Analyzed samples		Exploited samples	
			Initial validation study	Second renewal study	Surface spreading	Pour plates
Meat products, fish products and seafood	a	Ready-to-cook products	5	2	5	5
	b	Ready-to-reheat products	5	1	5	5
	c	Sauces, soups	2	4	6	6
	Total		12	7	16	16
Dairy products	a	Raw milk products	10	0	6	6
	b	Pasteurized products	2	3	5	5
	c	Milk powders	2	3	5	5
	Total		14	6	16	16
Vegetables	a	Flours, spices, dehydrated veg.	5	4	5	5
	b	Pasta, rices	1	6	6	6
	c	Deli salads, vegetables preparations	9	1	7	7
	Total		15	11	18	18
Eggs and pastries	a	Pasteurized liquid eggs	0	5	5	5
	b	Egg powders	1	4	5	5
	c	Pastries, creams, desserts	10	0	8	9
	Total		11	9	18	19
Baby foods	a	Ingredients	0	7	5	5
	b	Infant formula without probiotics	0	5	5	5
	c	Infant formula with probiotics	0	6	5	5
	Total		0	18	15	15
Feeds	a	Dry pet foods	0	6	5	5
	b	Poultry and rabbit foods	6	2	5	5
	c	Livestock foods	5	2	5	5
	Total		11	10	15	15
Total			63	61	98	99

Considering all the steps of the validation:

- 63 samples were analyzed during the initial validation study,

- 61 samples were analyzed during the second renewal study.

Overall, 124 samples were analyzed giving 98 exploitable results for the surface spreading technique modality and 99 exploitable results for the pour plate modality.

2.2.1.2. Artificial contaminations

Artificial contaminations were performed using spiking and seeding protocols. The strains used, and the contamination protocols are presented in Appendix C.

Naturally contaminated samples were also used: 49 of them were analyzed that led to the obtention of 29 interpretable results (29.6% and 29.3% for respectively the surface spreading method and the pour plate method).

2.2.1.3. Protocols used during the study

The two modalities of enumeration of the alternative method were tested: surface spreading and pour plates. The minimum incubation times of the Petri dishes was applied, namely 22 hours at $30\pm 1^\circ\text{C}$. Confirmations of the alternative method was performed on 5 colonies per Petri dish by spotting on a sheep blood agar media to observe the presence of a hemolysis.

A storage at $5\pm 3^\circ\text{C}$ for 3 days of the Petri dishes after incubation was performed. The Petri dishes were read again after this storage.

2.2.1.4. Results

Samples were analyzed by the reference and the alternative method so as to obtain at least 15 interpretable results per category and at least 5 per type. As results were available in duplicates concerning the initial validation study, only the first replicate was considered as part of the calculations of the EN ISO 16140-2:2016 standard.

Raw results are shown in appendix D.

Three kinds of results are not considered as part of the statistical calculations:

- Those expressed with less than 4 colonies per Petri dish for at least one method or inoculation modality,
- those lower or higher than the quantification limits,
- Undetermined results.

All results are presented in scatter plots per category and modality of inoculation in figures below:

- Figure 1: scatter plots for the surface spreading technique for each category,
- Figure 2: scatter plots for the pour plates method for each category,
- Figure 3: scatter plots for all categories.

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 1: Two-dimensional plots per category, using the surface spreading inoculation for BACARA

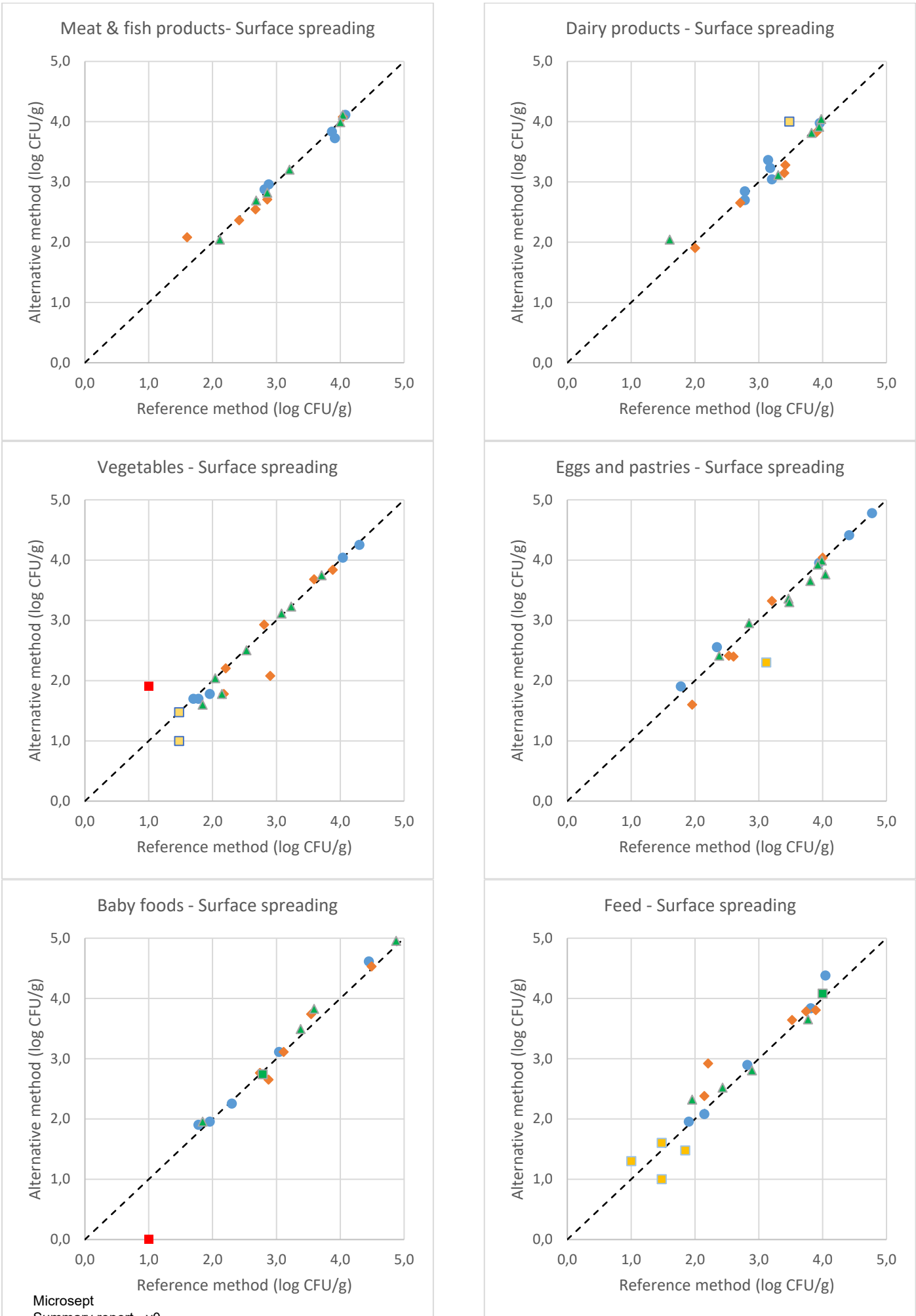


Figure 2: Two-dimensional plots per category, using the pour plate inoculation for BACARA

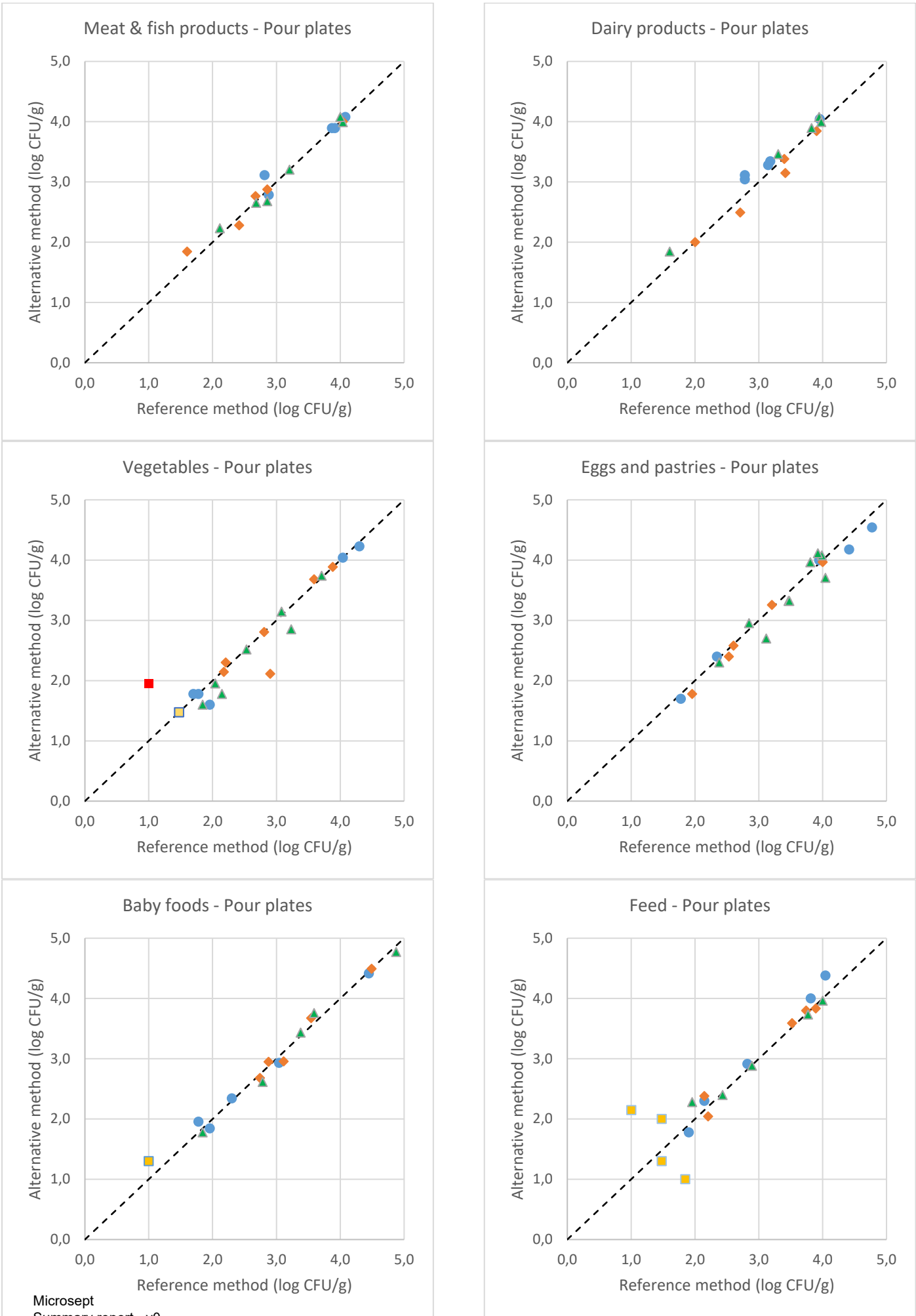


Figure 3: Two-dimensional plots for all categories using the surface spreading inoculation for BACARA

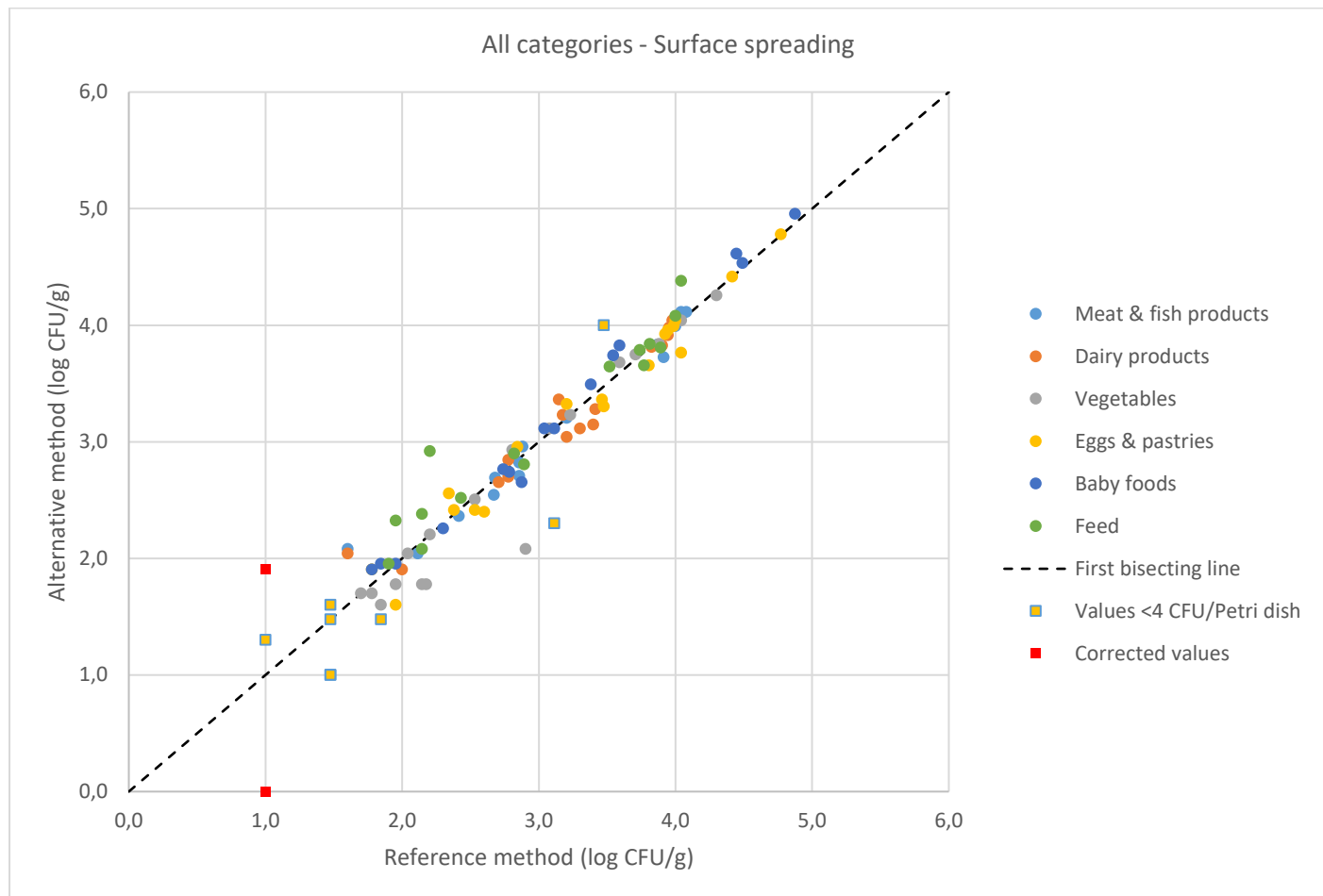
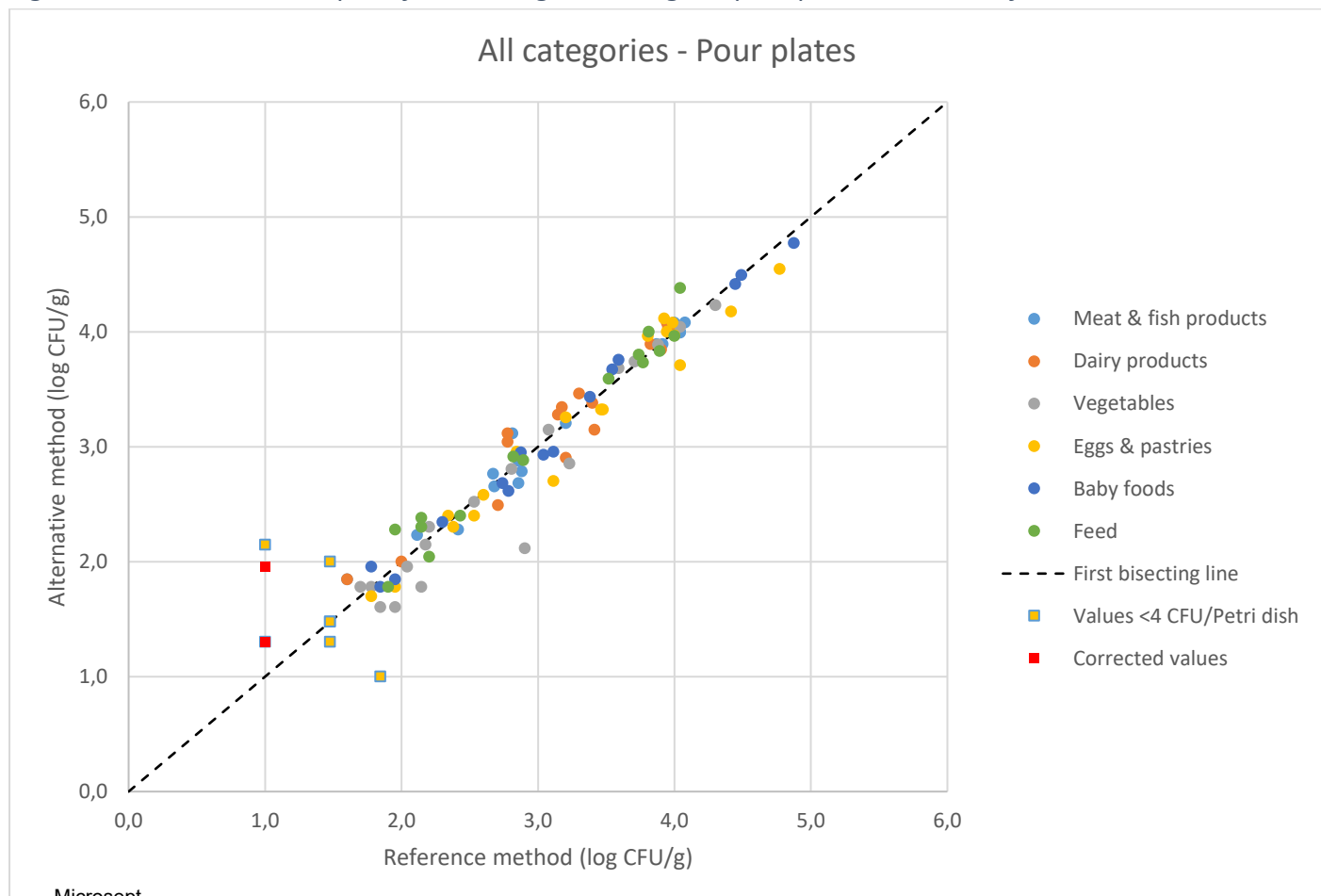


Figure 4: Two-dimensional plots for all categories using the pour plate inoculation for BACARA



2.2.1.5. Calculation and interpretation of relative trueness study

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

Statistical calculations are presented in Appendix E, as well as the results excluding from the statistical analysis per category, type and modality of inoculation.

Table 3 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 3: values for the Bland-Altman difference plot

Inoculation	Category	n	Average difference	Standard deviation differences	Bias	Lower Confidence Limit	Upper Confidence Limit
Surface spreading	MFP	16	0.01	0.15	/	/	/
	DP	16	-0.01	0.17	/	/	/
	V	18	-0.11	0.23	/	/	/
	E&P	18	-0.04	0.15	/	/	/
	BF	15	0.06	0.11	/	/	/
	F	15	0.12	0.22	/	/	/
	All cat.	98	0.00	0.19	0.00	-0.37	0.37
Pour plate	MFP	16	0.02	0.12	/	/	/
	DP	16	0.05	0.19	/	/	/
	V	18	-0.11	0.23	/	/	/
	E&P	19	-0.07	0.17	/	/	/
	BF	15	-0.01	0.11	/	/	/
	F	15	0.07	0.15	/	/	/
	All cat.	99	-0.01	0.18	-0.01	-0.37	0.34

Overall, the average difference is equal to 0,00 (surface spreading method) and -0,01 (pour plate method), showing no bias between the BACARA method and the reference method. The average difference varies from -0.11 log CFU/g (vegetables) to 0.12 CFU/g (feed samples) for the surface spreading method and from -0.11 log CFU/g (vegetables) to 0.07 log CFU/g (feed samples) for the pour plate technique.

Upper and lower 95% confidence interval limits are lower than 0.4 log showing a good correlation between the two methods.

The Bland-Altman difference plots are presented in figures 4 and 5 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 5: Bland-Altman difference plot for all categories with the surface spreading technique

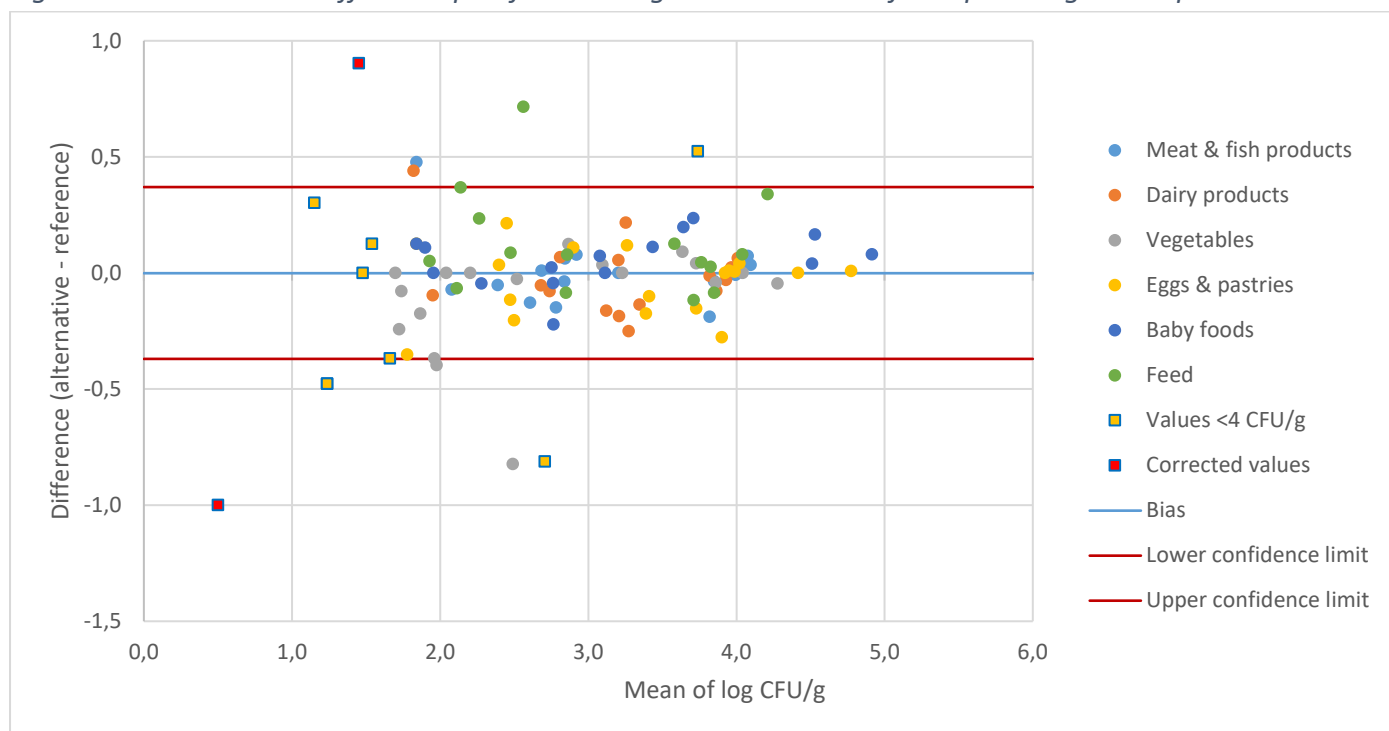
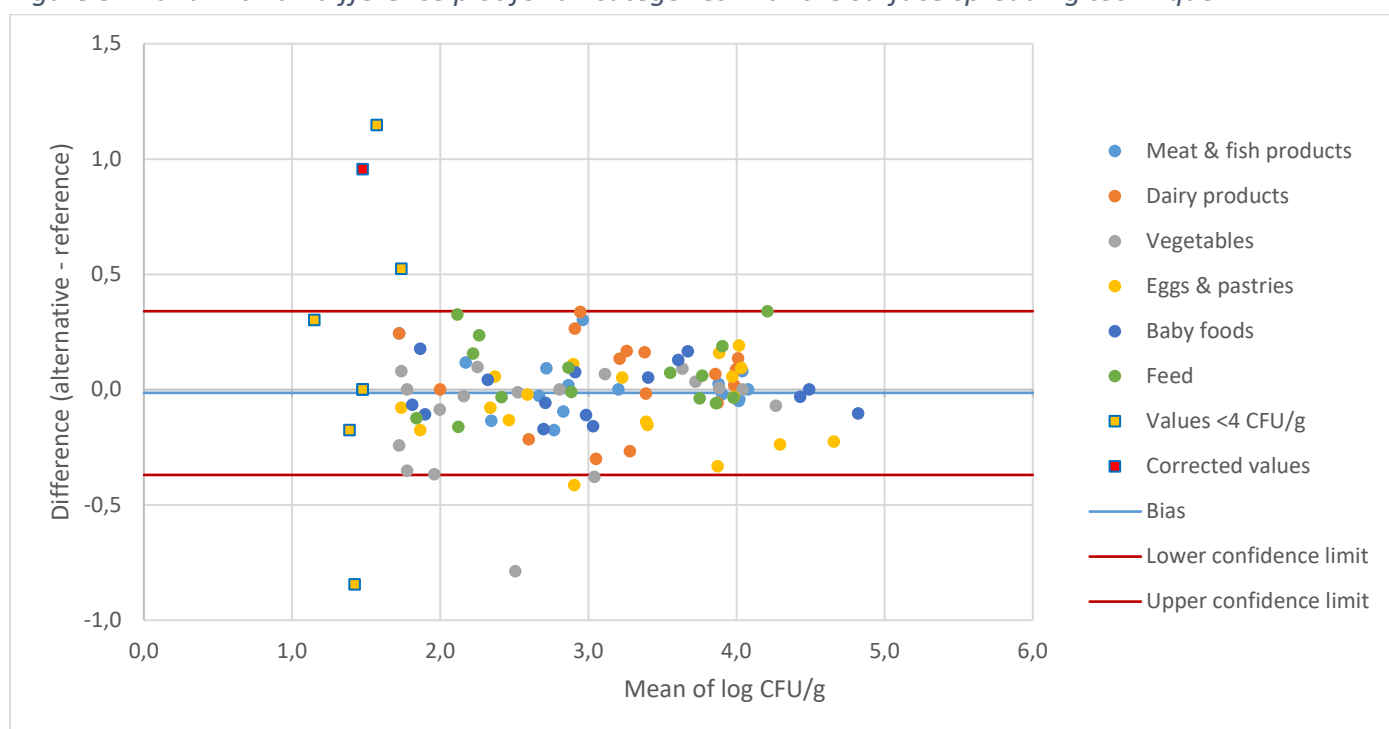


Figure 5: Bland-Altman difference plot for all categories with the surface spreading technique



- Observations:

Samples for which the average difference is lower or higher than the confidence limits are listed in table 4.

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

Inoculation	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
Surface spreading LCL: -0.37 UCL: 0.37	M&FP	b	B303	1.60	2.08	1.84	0.48
	DP	c	B360	1.60	2.04	1.82	0.44
	V	b	E2	2.90	2.08	2.49	-0.82
	V	b	B312	2.18	1.78	1.98	-0.40
	F	b	L2	2.20	2.92	2.56	0.71
	M&FP	a	M2	3.48	4.00	3.74	0.52
	V	a	D2	1.48	1.00	1.24	-0.48
	V	c	A1	1.00	1.90	1.45	0.90
	E & P	c	H1	3.11	2.30	2.71	-0.81
	BF	c	B326	1.00	0.00	0.50	-1.00
Pour plate LCL: -0.37 UCL: 0.34	F	b	J1	1.48	1.00	1.24	-0.48
	V	b	E2	2.90	2.11	2.51	-0.79
	V	c	D5	3.23	2.85	3.04	-0.38
	E & P	c	H1	3.11	2.70	2.91	-0.41
	V	c	A1	1.00	1.95	1.48	0.95
	F	b	K2	1.48	2.00	1.74	0.52
	F	b	L1	1.00	2.15	1.57	1.15
	F	c	J3	1.85	1.00	1.42	-0.85

- **Surface spreading method:**

Eleven samples are out of the confidence limits: 6 concern corrected values or samples with less than 4 CFU/Petri dish, 3 are higher than the upper confidence limit and 2 are lower than the lower confidence limit.

- **Pour plate technique:**

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

2.2.1.6. Conservation of the incubated BACARA Petri dishes at 5±3°C for 48 h

During the initial validation study and during the second renewal study, no evolution of the enumerations between the readings realized after 22 hours of incubation at 30°C and after conservation of the Petri dishes for 48 hours at 5±3°C was observed.

The conclusions of the observations are therefore the same than after the first reading of the Petri dishes.

2.2.1.7. Conclusion

The relative trueness study of the alternative method is satisfactory.

2.2.2. Accuracy profile study

2.2.2.1. Protocols

Six matrix-strain couples were tested by both methods. Two batches of a matrix, representative of each category, were inoculated with a *Bacillus cereus* strain at three levels (low, medium and high). For each sample, 5 replicates, represented by 5 different test portions, were tested by each method. This represents a total of 30 analyses per method.

The matrix-strain couples are presented in table 5.

Table 5: matrix-strain couples for the RLoD study

Category	Matrix	Strain	Strain code	Origin of the strain	Target contamination level (log CFU/g)
Meat and fish products	Pâté	<i>B. cereus</i> gp II	EAA229	Sandwich ham cheddar	2.0
Dairy products	Raw milk	<i>B. cereus</i> gp III	CND844	Milk proteins	
Vegetables	Vegetables purée	<i>B. pseudomycoides</i> gp I	FFT320	Broccoli puree	
Eggs and pastries	Custard	<i>B. cereus</i> gp IV	ANJ157	Potato starch	3.5
Baby foods	Infant formula with probiotics	<i>B. cereus</i> gp VI	GAR051	Cheesecake	5.0
Feeds	Dry pet food	<i>B. cereus</i> gp V	LDG480	Pasteurized potatoes puree	

2.2.2.2. Results

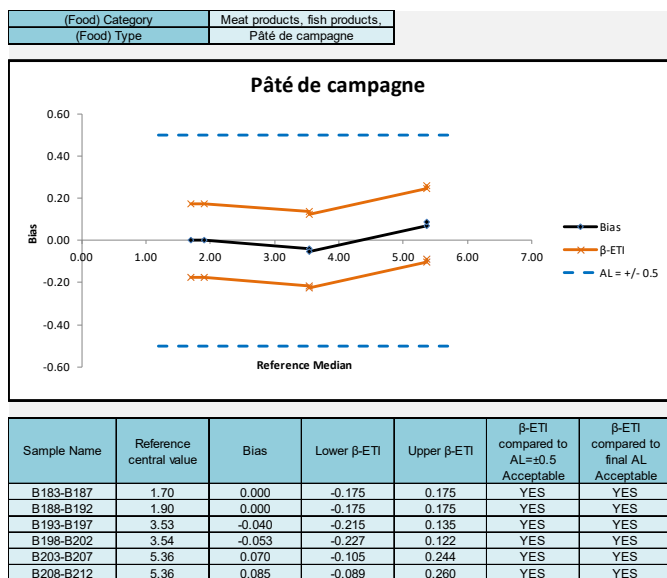
Raw data are provided in appendix F.

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

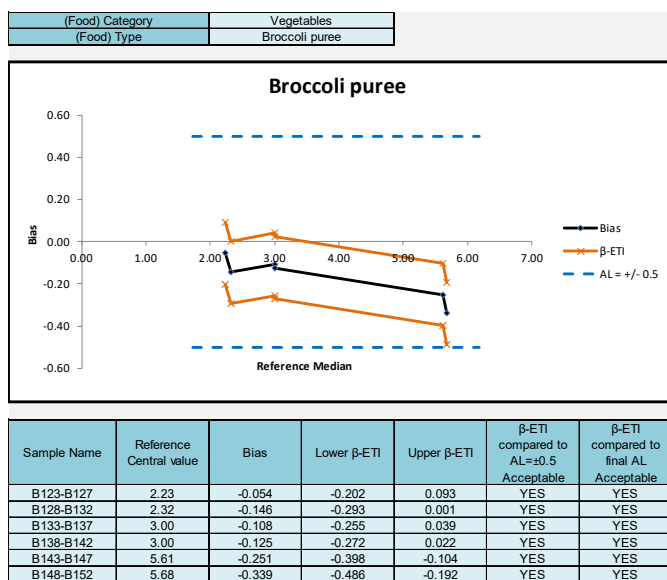
Statistical calculations were done according to the Excel spreadsheet named AP calculation tool MCS 16140-2 clause 6-1-3-3 ver 31-07-2018 available at <http://standards.iso.org/iso/16140>.

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

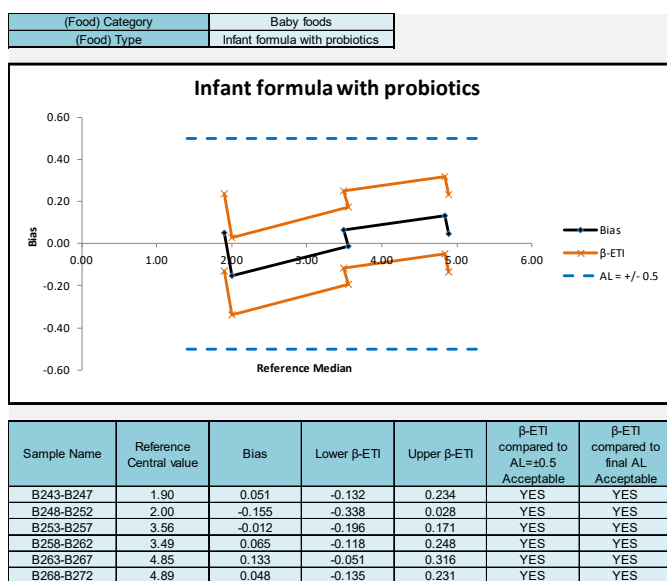
Figure 7: Accuracy profiles per category, using the surface spreading inoculation for BACARA



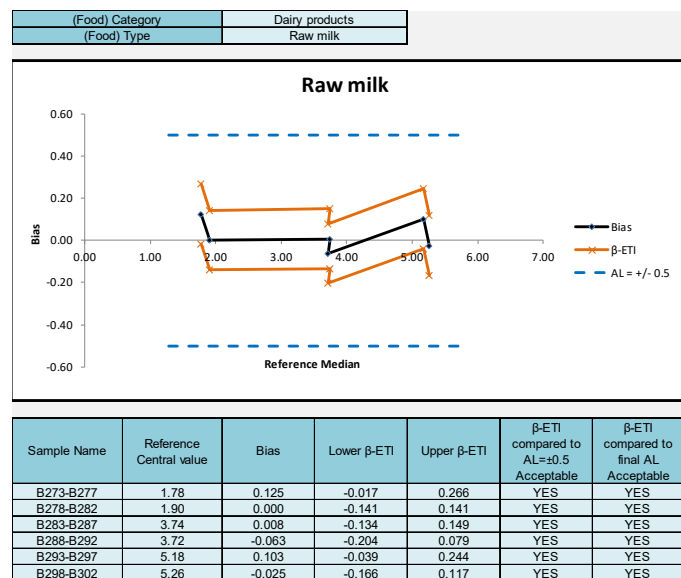
	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.126	0.121	NO	+/- 0.500



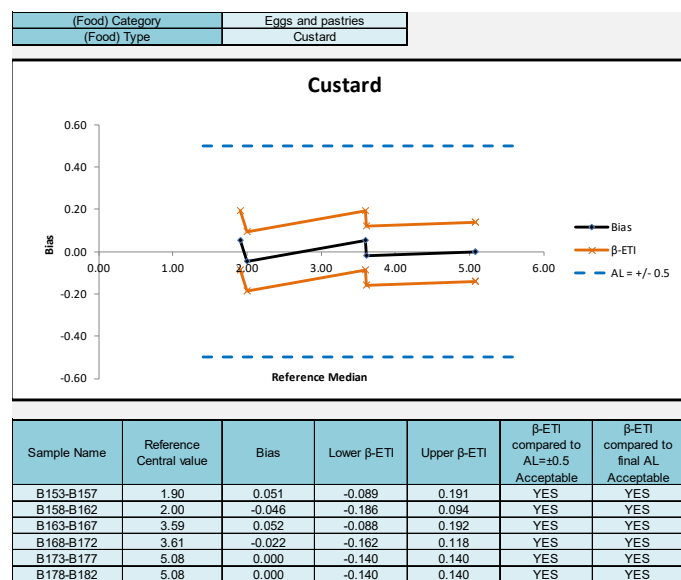
	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.081	0.102	YES	+/- 0.500



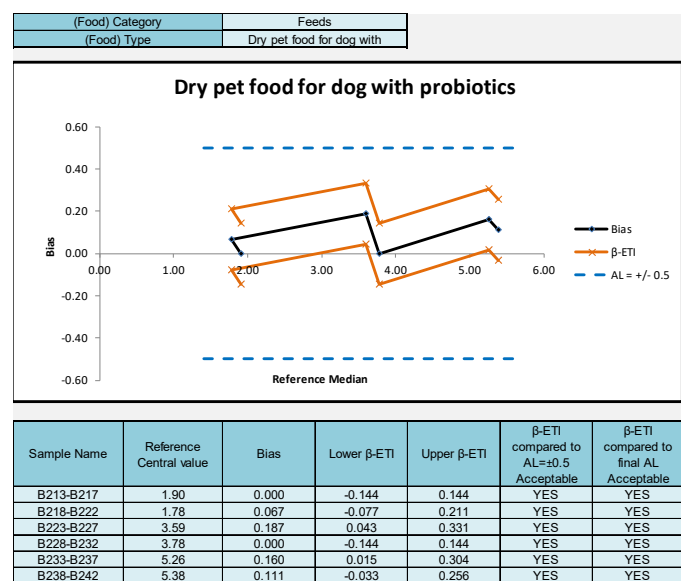
	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.094	0.127	YES	+/- 0.500



	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.102	0.098	YES	+/- 0.500

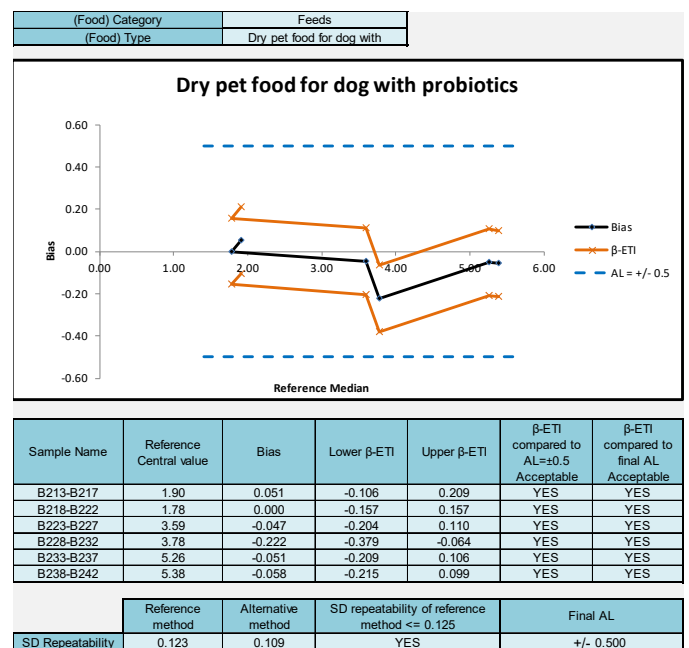
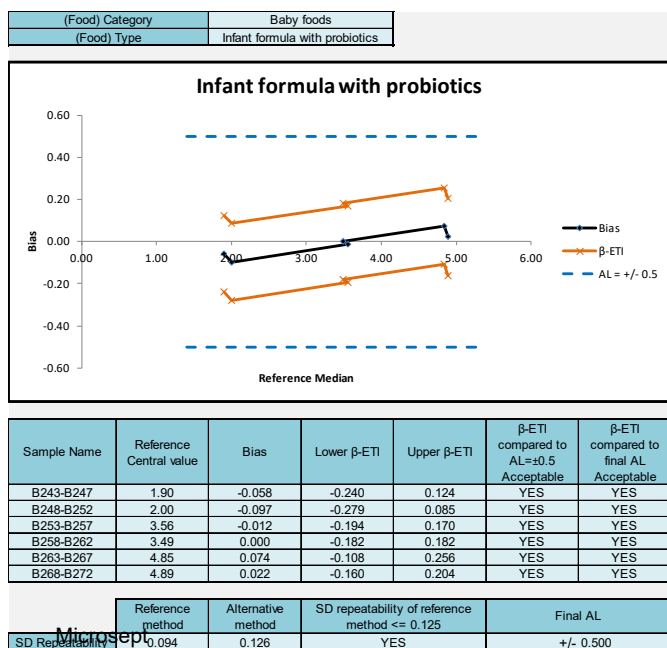
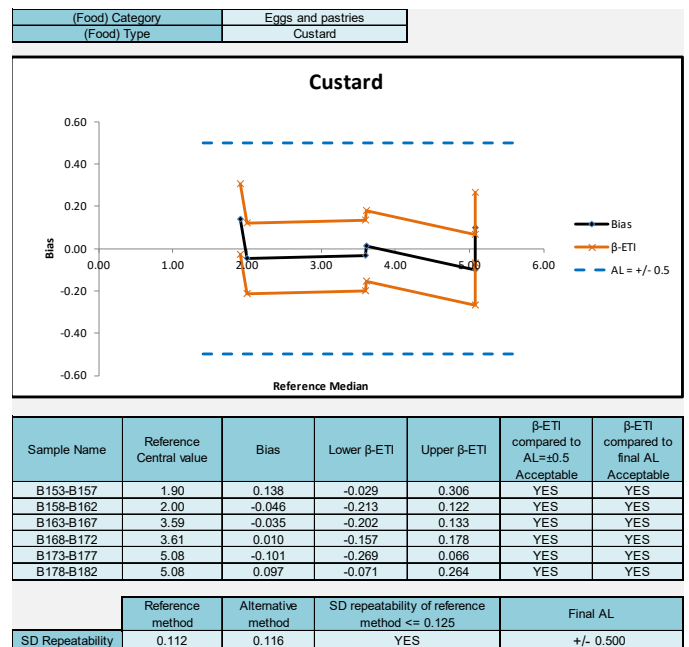
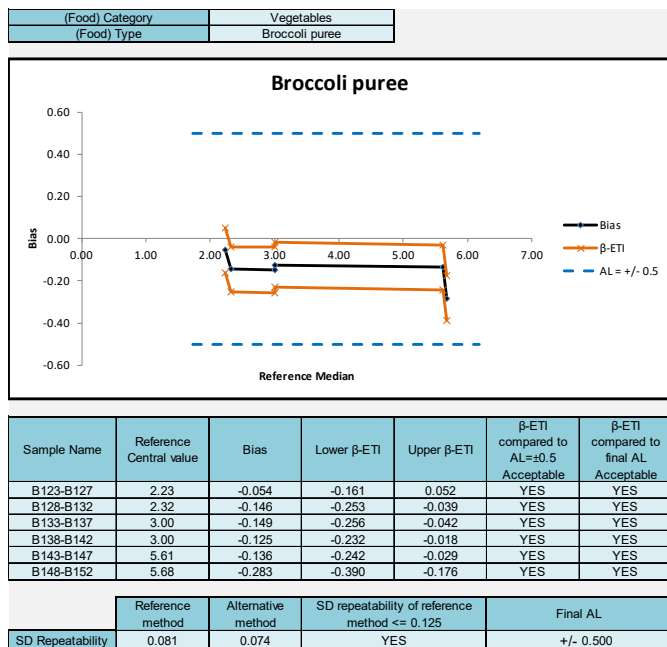
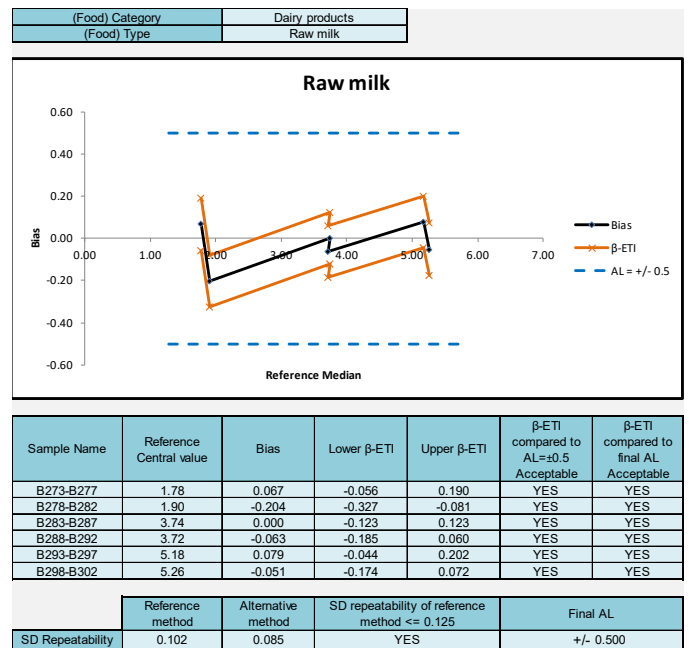
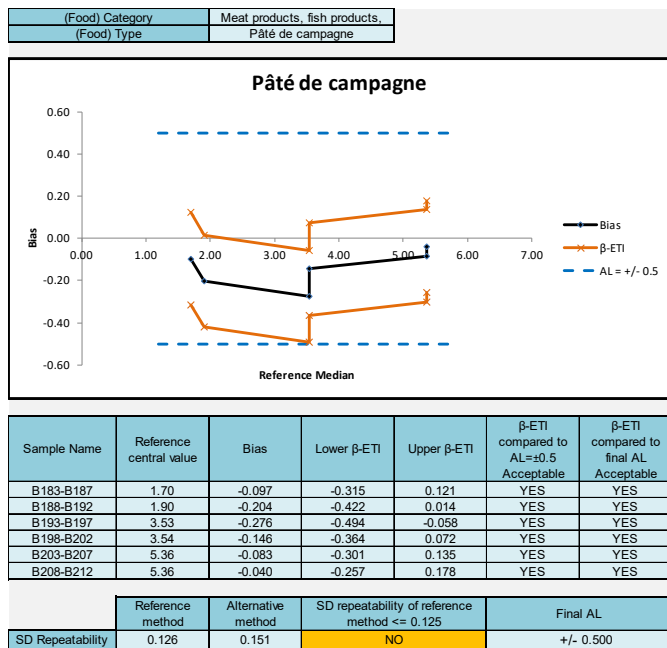


	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.112	0.097	YES	+/- 0.500



	Reference method	Alternative method	SD repeatability of reference method <= 0.125	Final AL
SD Repeatability	0.123	0.100	YES	+/- 0.500

Figure 8: Accuracy profiles per category, using the pour plate inoculation for BACARA



The tolerance intervals fall into the acceptability limits for all categories with the two modalities of inoculation.

2.2.2.3. Conclusion

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

2.2.3. Specificity / selectivity

The aim of this study is to check that all the strains of the *Bacillus cereus* group are detected, and that no cross-reaction exists with other species of *Bacillus* or with strains from other genera.

The inclusivity and the exclusivity of the method are defined by analysis, respectively of 50 positive strains and 30 negative strains.

2.2.3.1. Protocols

- Initial validation study

The strains were tested in duplicate according to two types of inoculation of BACARA medium: spreading or inclusion method.

Thirty (30) target strains and twenty-eight (28) non-target strains were tested.

The raw data are provided in Appendix G.

- Second renewal study

Tests for target microorganisms were performed once with the alternative method (by spreading and pour plate), the reference method and a non-selective agar at an inoculation level sufficient to obtain a countable number of colonies on the plate. Twenty (20) target strains were tested. A pure culture of the strains was calibrated and diluted in 90 ml of buffered peptone water then enumerated to obtain a countable number of colonies on Petri dishes.

Tests for non-target microorganisms were performed once with the alternative method (by spreading and pour plate) and the reference method. Pure cultures were grown on a non-selective broth for 24 hours and diluted at an appropriate level before testing. Two (2) non-target strains were tested. A pure culture of the strains in Brain Heart Infusion Broth was performed at the optimal growth temperature of the strains then enumerated to obtain a countable number of colonies on Petri dishes.

2.2.3.2. Results

- Initial validation study

- Target strains

The thirty strains of *Bacillus cereus* group gave typical colonies with an opaque halo.

- Non-target strains

The twenty-eight non-target strains did not give characteristic aspect onto the BACARA medium:

- No growth for 25 strains,
- Growth on BACARA medium (pink colonies without halo) for 2 strains of *Enterococcus faecalis*,
- Growth on BACARA medium (small white colonies without halo) for a strain of *Leuconostoc citreum*.

- [Second renewal study](#)

- **Target strains**

Nineteen strains gave typical colonies on BACARA agar media: pink-orangey colonies with an opaque halo. Among these strains, one (FFT320) needed the addition of milk powder in the initial suspension to be recovered on the BACARA agar media and to give typical colonies.

One strain of the group VII (*Bacillus cytotoxicus* AF2 from INRA PACA UMR408 SQPOV, coded GGB821 by Laboratory Microsept) did not grow on the BACARA agar media even with the addition of milk powder in the initial suspension.

This strain was able to grow on a surface Petri dish of BACARA only by direct streaking of an opalescent suspension of a pure culture, in the zone corresponding to the deposit point of a loop and after 48 h of incubation at 30±1°C.

Furthermore, this strain is typical on the MYP agar medium and has a positive reaction to the haemolysis test.

- **Non-target strains**

The two non-target strains did not grow on the BACARA medium.

2.2.3.3. [Conclusion](#)

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

Only one strain of *Bacillus cereus* (*B. cytotoxicus*, group VII) did not grow on the BACARA agar media after 22 hours of incubation at 30±1°C.

2.2.4. [Practicability](#)

Practicability is studied as a function of the four criteria defined by the Technical Board in comparing the reference method EN ISO 7932 (2005) with the *Bacillus cereus* Rapid Agar (BACARA) method.

The criteria defined are informed below:

Packaging Volume of reagents	Pre-poured complete medium: - AEB520100: pack of 20 plates of Ø 90 mm, - AEB120102: pack of 10 plates of Ø 140 mm. Ready-to-use base medium: - AEB620106: Kit BACARA base composed of 5 vials of 100 ml base medium and 2 vials of supplement (enrichment supplement and chromogenic selective supplement). Each supplement vial is planned for 500 ml of base medium.
Storage conditions and kit	The plates of pre-poured complete medium and Kit BACARA base must be kept between +2°C and +8°C. The expiry date is shown on each plate and each vial.

Use after opening of the kit	The pre-poured complete medium plates must be stored at 2-8°C in their package until the expiry date, protected from light. The plates poured from flasks can be kept up to 2 weeks at 2-8°C in a hermetically sealed package. After opening, the BACARA enrichment supplement can be used up to its expiry date if it was manipulated according to good laboratory practice (ie: use in aseptic conditions and storage between 2 and 8°C). After opening, the BACARA selective supplement can be used up to 15 days maximum if it was manipulated according to good laboratory practice. <u>Warning:</u> Do not flame the tube before closing it. This supplement contains a flammable solvent. For the mode of storage, refer to the standard EN ISO 7218.
Reagents	Supplements have to be kept protected from light. For the medium in flask, liquefy the medium in a water bath at 100°C and cool to 44-47°C. Per flask of 100 ml of BACARA medium, add aseptically 4 ml of BACARA enrichment supplement and 0.5 ml of BACARA selective supplement. Homogenize well the agar base and the supplements, avoiding the incorporation of air bubbles.

Time to result		
Step	Time required (Day)	Time required (Day)
	BACARA® method	EN ISO 7932 standard
Realization of first dilution and decimal dilutions	D0	D0
Media inoculation	D0	D0
Plates reading, interpretation and calculation	D1	D1 and D2
Obtaining negative results (if no characteristic colony)	D1	D2
Hemolysis test from an isolated colony	/	D2 to D3
Hemolysis test after purification	/	D3 to D4
Obtaining negative results (after negative confirmations if necessary)	D1	D2 to D4
Obtaining positive results: Confirmation by reference method test (including purification)	/	D2 to D4
Alternative method	D1	/
Common step with reference method	Preparation of initial suspension and decimal dilutions.	

2.2.5. General conclusion for the methods comparison study

The relative trueness study shows a good correlation between the alternative method and the reference method.

The accuracy profile study illustrates that the performances of the alternative method are comparable to those of the reference method.

The alternative method is specific and selective, although one strain of the group VII of *Bacillus cereus* was not detected by the method after 22 hours of incubation of the media at $30\pm 1^{\circ}\text{C}$.

Time-to-result is faster with the alternative method (one day) than with the reference method (two days), and the alternative method does not require confirmations.

2.3. Interlaboratory study

The aim of the interlaboratory study, as described in ISO 16140/A1:2011 standard, was to determine the variability of the results obtained in different laboratories using identical samples and to compare these results with those obtained during the methods comparison study.

2.3.1. Study organization

Fourteen (14) collaborators took part in the interlaboratory study. Pasteurized milk was inoculated with a *Bacillus cereus* strain, isolated from a dairy product.

Eight samples were prepared per collaborator, representing 4 levels of contamination with 2 samples per level. Collaborators and Expert Laboratory carried out the analyses with the reference method and the alternative method (spreading method). It was asked to the collaborators to analyze samples from the initial suspension (dilution of the sample at 1/10th) to its third decimal dilution.

2.3.2. Control of experimental parameters

2.3.2.1. Contamination levels obtained after artificial contamination

The four contamination levels are detailed in the following table.

Table 6: Contamination levels of inoculated samples

Level	Sample	Targeted level (CFU/ml)	Real level (CFU/ml)
Level 0 (L_0)	1 and 2	0	0
Level 1 (L_1)	3 and 4	100	101
Level 2 (L_2)	7 and 8	1 000	975
Level 3 (L_3)	5 and 6	10 000	9360

2.3.2.2. Strain stability during shipping

In order to evaluate the *Bacillus cereus* strain variability during shipping, bacterial counts of inoculated milk at different levels were checked at different times, during storage at 6°C.

Enumeration results (CFU/ml) are reported in table 7.

Table 7: Stability of the *Bacillus cereus* strain at 6°C (*: day of the analysis)

Level	Day 0	Day 1*	Day 2
L_1	101	72	<10
L_2	975	510	380
L_3	9360	4000	2700

An evolution of the enumeration was observed during storage at 6°C; the concentration of *Bacillus cereus* decreased in the samples over time.

2.3.2.3. Shipping conditions

Temperatures registered by the temperature probe during shipping were between 1.6°C and 6.0°C. The temperatures at reception are recorded in the following table.

Table 8: temperatures at reception

Collaborator	Reception temperature (°C)		Comments
	Communicated by the collaborator	Indicated by the temperature probe	
A	2.3	2.9	Delivery at Day 1 in the afternoon. Analyses at Day 2.
B	1.0	2.0	/
C	3.9	2.8	/
D	5.9	5.5	/
E	1.1	1.6	/
F	2.5	6.0	/
G	11.8	5.7	/
H	5.0	5.1	/
I	4.8	5.7	/
J	9.0	5.1	/
K	6.7	2.0	/
L	4.8	3.1	/
M	5.5	5.0	/
N	5.3	3.0	/

The 14 collaborators received their samples at Day 1.

Collaborator A analyzed the samples at Day 2; their results were not kept for statistical interpretation. Collaborator G and Collaborator J indicated a reception temperature above 8°C; this was not confirmed by the temperature probe. Their results were exploited.

2.3.2.4. Conclusion

The results of 13 laboratories were exploited.

2.3.3. Results

2.3.3.1. Expert laboratory

Results obtained for the Expert Laboratory are presented in the table 9.

Table 9: Results of the Expert Laboratory (in CFU/ml)

Level	Reference method		Alternative method	
	Duplicate 1	Duplicate 2	Duplicate 1	Duplicate 2
L_0	<10	<10	<10	<10
L_1	20	30	40	20
L_2	340	430	340	300
L_3	3000	5500	2900	2400

Results according to the EN ISO 7932 standard and according to the alternative method were in agreement.

2.3.3.2. Results obtained by the collaborators

Detailed results of the 14 laboratories which realized the analysis are presented in Appendix H.

The results are summarized in the table 10 for the low level L_1 , intermediate level L_2 and high level L_3 .

Table 10: Results in CFU/ml of the collaborators per level of contamination (RM: reference method, AM: alternative method, D: duplicate)

Collaborator	L_1				L_2				L_3			
	RM		AM		RM		AM		RM		AM	
	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2
A	<10	<10	10	10	250	310	280	200	1500	1300	1300	1500
B	20	30	30	10	440	420	410	320	2400	2800	2000	2200
C	30	70	30	20	310	440	260	340	1400	1500	1700	1500
D	90	10	80	<10	360	350	330	280	1500	1600	1400	1600
E	70	40	70	40	380	410	310	410	2100	1800	2000	1800
F	90	130	40	50	310	450	290	430	1300	1800	1500	1500
G	80	90	30	20	420	560	430	420	2000	1900	1700	1600
H	50	110	10	50	400	450	430	310	2100	1700	1700	1500
I	50	60	30	30	370	510	330	380	2400	2400	1800	2200
J	60	60	60	20	460	460	450	430	2300	2900	1900	2400
K	50	60	10	50	430	440	330	460	1800	2300	1800	1900
L	70	10	30	10	590	360	410	360	1500	1800	1400	1600
M	50	70	40	80	590	620	540	420	2200	2300	2300	2100
N	50	50	40	80	530	530	470	390	1700	2000	1700	1900

Two collaborators (A and D) showed results inferior to 10 CFU/g for one or the two replicates of the level L_1 . Consequently, the results of these collaborators are not considered in the statistical treatment of the data.

Moreover, it's important to note that a part of the results of the level L_1 do not fulfill the requirements of the standard EN ISO 7218/A1:2013 for the low counts of colonies (§ 10.3.2.4.1). Because of the decrease of the concentration in *Bacillus cereus* after inoculation, some results are expressed despite of their concentration inferior to 40 CFU/g (less than 4 colonies on Petri dishes for the enumeration of the initial suspension) while they should be noted: "Microorganisms are present but less than 40 per ml".

Besides collaborators A and D, 4 results of the reference method and 13 results of the alternative method are concerned.

After the presentation of the project of renewal study of the method in March 2018, the Technical Board agreed with the proposition of the Expert Laboratory to still interpret all the data of the level L_1 .

2.3.3.3. Conclusion

Results of 12 laboratories were finally statistically exploited.

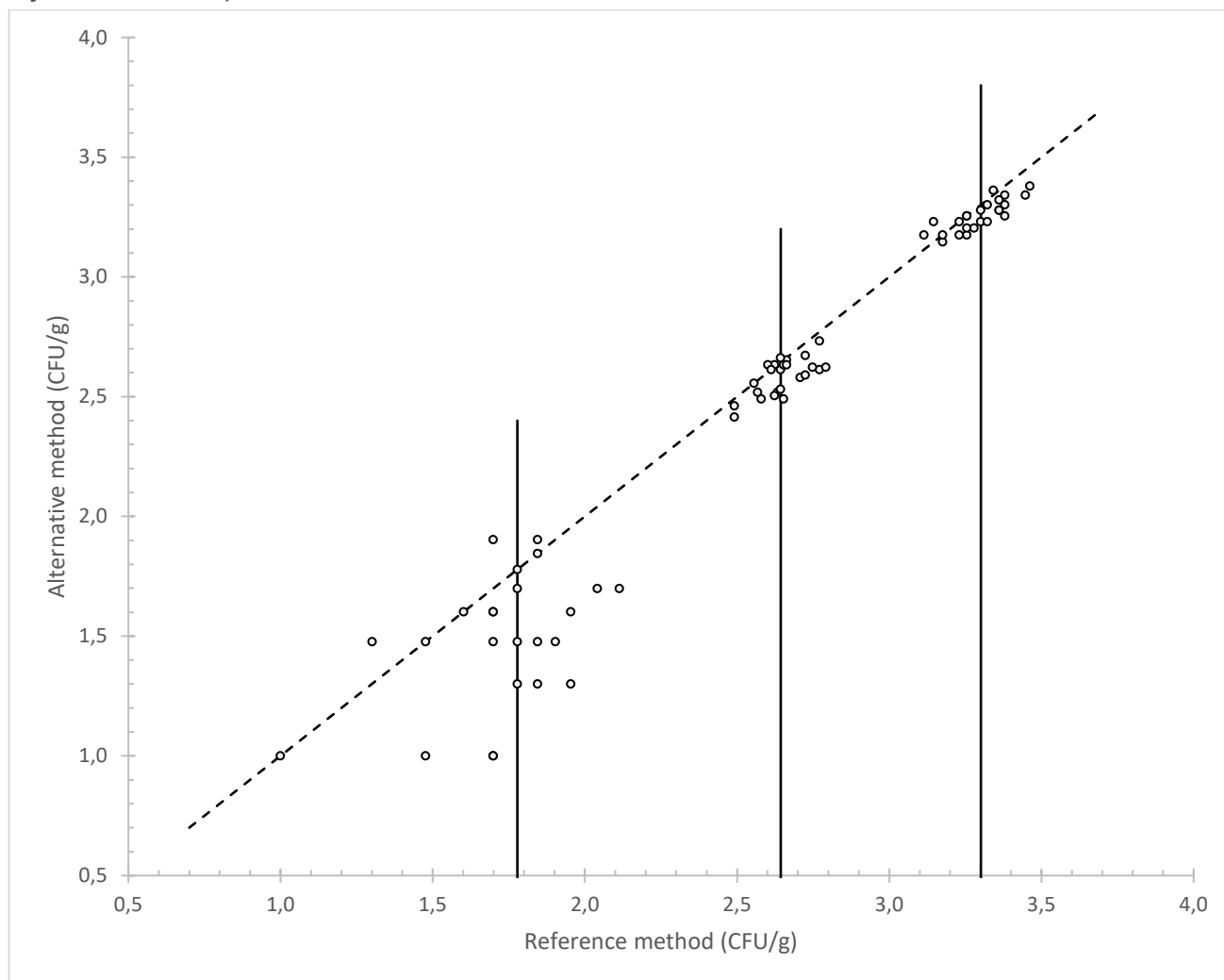
The results obtained by the collaborators were in agreement with those of the Expert Laboratory.

2.3.4. Statistical interpretations and calculations

2.3.4.1. Visual linearity checking

After the log10 transformation of all test results, data are plotted with the results of the reference method on the x-axis and the results of the alternative method on the y-axis (figure 9).

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



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

2.3.4.2. Calculation of the accuracy profile and interpretation

An accuracy profile is drawn according to the calculations provided in the Excel spreadsheet named [AP calculation tool ILS \(clause 6-2-3 Calculations summary and interpretation of data\) ver 14-03-2016.xlsx](#), available at: <http://standards.iso.org/iso/16140/-2/ed-1/en>.

The results of the calculations are provided in table 11.

Table 11: Summary of the accuracy profile calculations (AL: acceptability limit, TI: tolerance interval, SD: standard deviation)

Tolerance probability (β): 80% AL in log (λ) by default: 0.5 AL in log (λ) based on reference method pooled variance ($3.3 \times s_{R,ref}$): 0.51						
Levels	Alternative method			Reference method		
	Low	Medium	High	Low	Medium	High
Target value	1.730	2.649	3.296			
Number of participants (K)	12	12	12	12	12	12
Average for alternative method	1.488	2.583	3.256	1.730	2.649	3.296
Repeatability SD (s_r)	0.287	0.075	0.039	0.216	0.075	0.055
Between-labs SD (s_L)	0.000	0.014	0.053	0.103	0.031	0.074
Reproducibility SD (s_R)	0.287	0.077	0.066	0.239	0.081	0.092
Corrected number of dof	22.957	22.857	15.464	21.863	22.228	15.602
Coverage factor	1.347	1.348	1.384			
Interpolated Student t	1.320	1.320	1.339			
Tolerance interval SD	0.2925	0.0783	0.0682			
Lower TI limit	1.101	2.480	3.164			
Upper TI limit	1.874	2.687	3.347			
Bias	-0.242	-0.066	-0.040			
Relative Lower TI limit ($\beta = 80\%$)	-0.628	-0.169	-0.131			
Relative Upper TI limit ($\beta = 80\%$)	0.144	0.037	0.051			
Lower Acceptability Limit	-0.51	-0.51	-0.51			
Upper Acceptability Limit	0.51	0.51	0.51			
Pooled average reproducibility SD of the reference method ($s_{R,ref}$)				0.155		

- Comments:**

As the lower tolerance interval limit of the low level of contamination (-0.628) falls outside the acceptability limit usually (set by default at ± 0.500), a new acceptability limit is defined based on the reference method pooled variance.

This new limit set at ± 0.51 is still above the lower tolerance interval limit of the low level of contamination (-0.628).

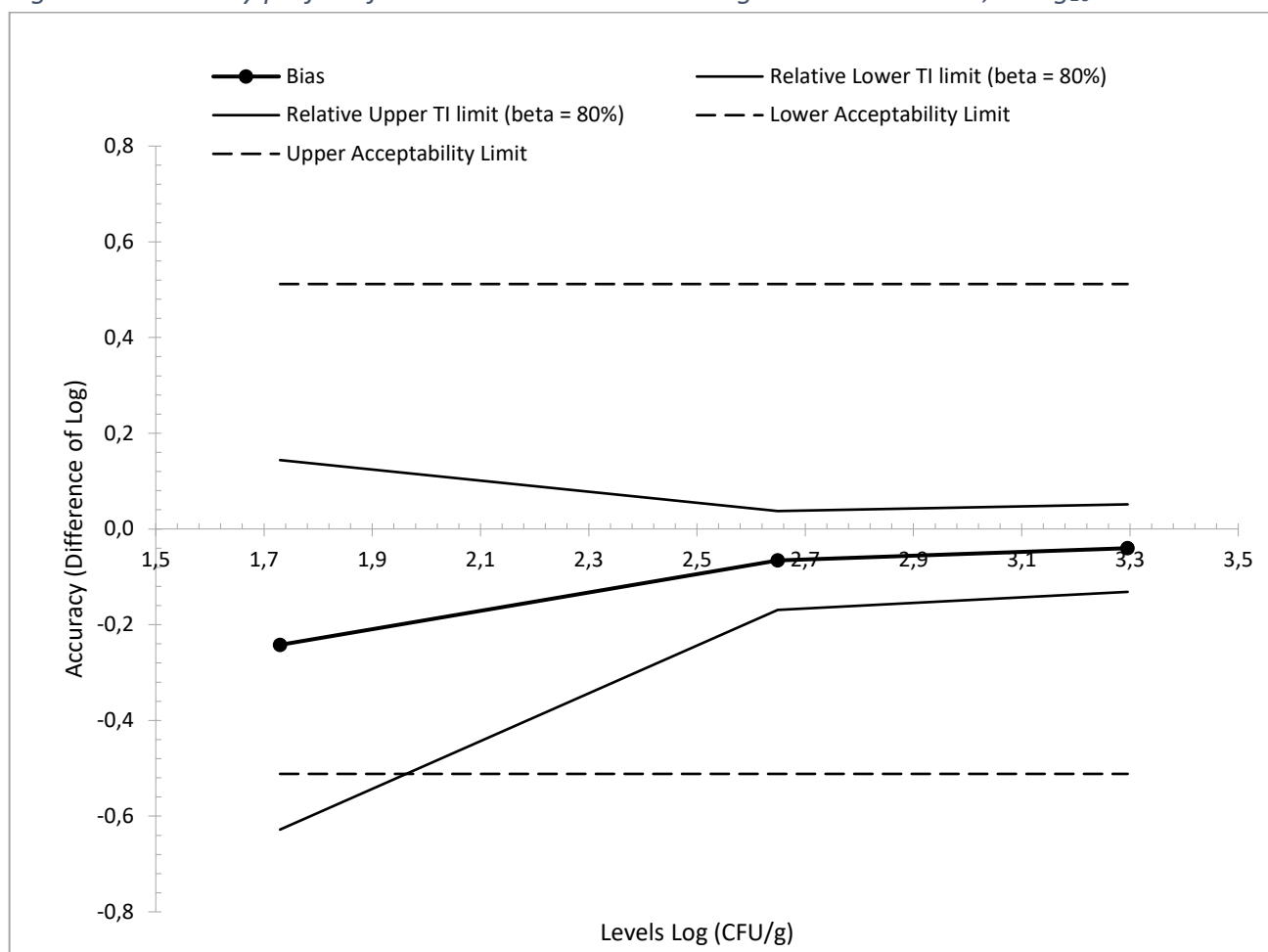
This observation probably results from the low counts used to calculate the concentration of the low level of contamination with the alternative method.

As several results are expressed with colony counts between 1 and 3, their precision is too low. This leads to a high dispersion of the results. Associated with the slight negative bias observed on the scatter plot and determined by the calculations above, the lower tolerance interval limit falls below the recalculated acceptability limit.

In conclusion, the bias introduced by the inclusion of the low counts of colonies at the low level of contamination leads to a bias for the interpretation of the accuracy profile.

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

Figure 10: Accuracy profile of the alternative method using $\theta = 80\%$ and $\lambda = 0,51 \log_{10}$ unit



As described above, the AL is not met only for the lower tolerance interval of the low level of contamination. This observation is most probably due to the low counts observed at this level.

For the upper tolerance interval of the low level and for the two other levels, the tolerance interval limits of the alternative method are within the acceptability limits of $0.5 \log \text{ CFU/g}$.

2.3.5. General conclusion for the interlaboratory study

The control of experimental parameters showed a decrease of the concentration in *Bacillus cereus* over the time in the matrix. This decrease led to low counts of colonies with both methods at the low level of inoculation. Associated with a slight negative bias for the alternative method, the dispersion of the results implied by the low counts causes that the lower tolerance interval falls outside of the lower acceptability limit.

The tolerance intervals of the other levels of contamination and the upper tolerance interval of the low level of contamination fall within the default acceptability limits ($\pm 0.5 \log \text{ CFU/ml}$).

Despite the bias observed for the low level of contamination, the alternative method is regarded as being equivalent to the reference method.

3. Extension study – 2022 (new formulation: BACARA 2)

3.1. Protocols of the methods

3.1.1. Alternative method

3.1.1.1. Principle of the method

The principle of detection of BACARA and BACARA 2 agar media is the same.

BACARA 2 agar is a selective chromogenic medium that allows the enumeration of *Bacillus* of the *cereus* group without confirmation.

On BACARA 2, typical colonies of *B. cereus*, including *B. cytotoxicus* show a pink / orangey color due to the metabolism of the chromogen substrate and are surrounded with an opaque halo due to the phospholipase activity.

The selectivity of BACARA 2 agar has been especially optimized to prevent growth of interfering flora and thus to allow an easy interpretation of plates even when matrix highly contaminated with competitive flora are analyzed.

3.1.1.2. Protocol of the method

From an initial suspension realized according to the prescriptions of the ISO 6887 standard, or directly from a liquid sample, BACARA 2 plates are inoculated as described below:

- Spreading of 0.1 ml on the surface of one plate per dilution. Low numbers estimations can be performed by the inoculation of 1 ml on 3 plates to enumerate low contaminations of *Bacillus cereus* group,
Or
- Pouring 1 ml into about 18 mL of BACARA 2 agar maintained at 44-47°C.

The inoculated plates are incubated at 30±1°C for 24±3 h.

After incubation, the characteristic colonies of *Bacillus cereus* group (pink/orangey colonies with a halo of opacification) are enumerated as colonies of the *Bacillus cereus* group. No confirmation is necessary.

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

Notes: as part of the study of certification, confirmations according to the tests described in the reference method were realized.

Moreover, during the sensitivity study, plates were stored at 5±3°C for 3 days and again interpreted, to verify that these storage conditions did not modify their performance.

3.1.1.3. Restrictions

There are no restrictions on use for the BACARA 2 method.

3.1.2. Reference method

The EN ISO 7932:2005 standard and its amendment A1 of April 2020, Horizontal method for the enumeration of presumptive *Bacillus cereus* – Colony-count technique at 30°C, was used for this extension study.

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

3.2. Methods comparison study

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

3.2.1. Relative trueness study

3.2.1.1. Number and nature of the samples

Overall, 178 samples were analyzed giving 110 exploitable results for the surface spreading technique modality and 110 exploitable results for the pour plate modality.

The distribution of the samples per category, type and inoculation technique is given in table 12.

Table 12: number and nature of the samples analyzed for the relative trueness study

Category	Type		Analyzed samples	Exploited samples	
				Surface	Pour plates
Meat products, fish products and seafood	a	Meat and fish ready-to-cook products	8	5	5
	b	Meat and fish ready-to-reheat products	25	6	6
	c	Meat and fish sauces, soups...	5	5	5
	Total		38	16	16
Dairy products	a	Pasteurized dairy products	12	6	6
	b	Infant formula with and without probiotics	17	7	7
	c	Milk Powders	12	5	5
	Total		41	18	18
Vegetables	a	Flours, spices, dehydrated vegetables	8	8	8
	b	Pasta, rices	13	6	6
	c	Deli salads, vegetables preparations	12	8	8
	Total		33	22	22
Eggs and pastries	a	Pasteurized liquid eggs	7	6	6
	b	Egg powders	7	5	5
	c	Pastries, creams, desserts	11	7	7
	Total		25	18	18
Ready-to-eat and ready-to-reheat products	a	RTE cereals-based products	7	6	6
	b	RTE products containing starch	5	5	5
	c	RTRH products containing starch	9	7	7
	Total		21	18	18
Feeds	a	Dry Pet foods	5	5	5
	b	Poultry and rabbit foods	6	5	5
	c	Livestock foods	9	8	8
	Total		20	18	18
Total			178	110	110

3.2.1.2. Artificial contaminations

Artificial contaminations were performed using seeding protocol. The strains used, and the contamination protocols are presented in Appendix K.

Naturally contaminated samples were also used: 70 of them were analyzed that led to the obtention of 37 interpretable results (33,6% for both plating modalities).

3.2.1.3. Protocols used during the study

The two modalities of enumeration of the alternative method were tested: surface spreading and pour plates technique. The minimum incubation times of the Petri dishes was applied, namely 21 hours at $30\pm 1^\circ\text{C}$.

Confirmations of the alternative method was performed on 5 colonies per Petri dish by spotting on a sheep blood agar media to observe the presence of a hemolysis.

A storage at $5\pm 3^\circ\text{C}$ for 3 days of the Petri dishes after incubation was performed. The Petri dishes were read again after this storage.

3.2.1.4. Results

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

Raw results are shown in appendix L.

Three kinds of results are not considered as part of the statistical calculations:

- Those expressed with less than 4 colonies per Petri dish for at least one method or inoculation modality,
- Those lower or higher than the quantification limits,
- Undetermined results.

All results are presented in scatter plots per category and modality of inoculation in figures below:

- Figure 11: scatter plots for the surface spreading technique for each category,
- Figure 12: scatter plots for the pour plates method for each category,
- Figure 13: scatter plots for the surface spreading technique for all categories.
- Figure 14: scatter plots for the pour plates method for all categories.

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 11: Two-dimensional plots per category, using the surface spreading inoculation.

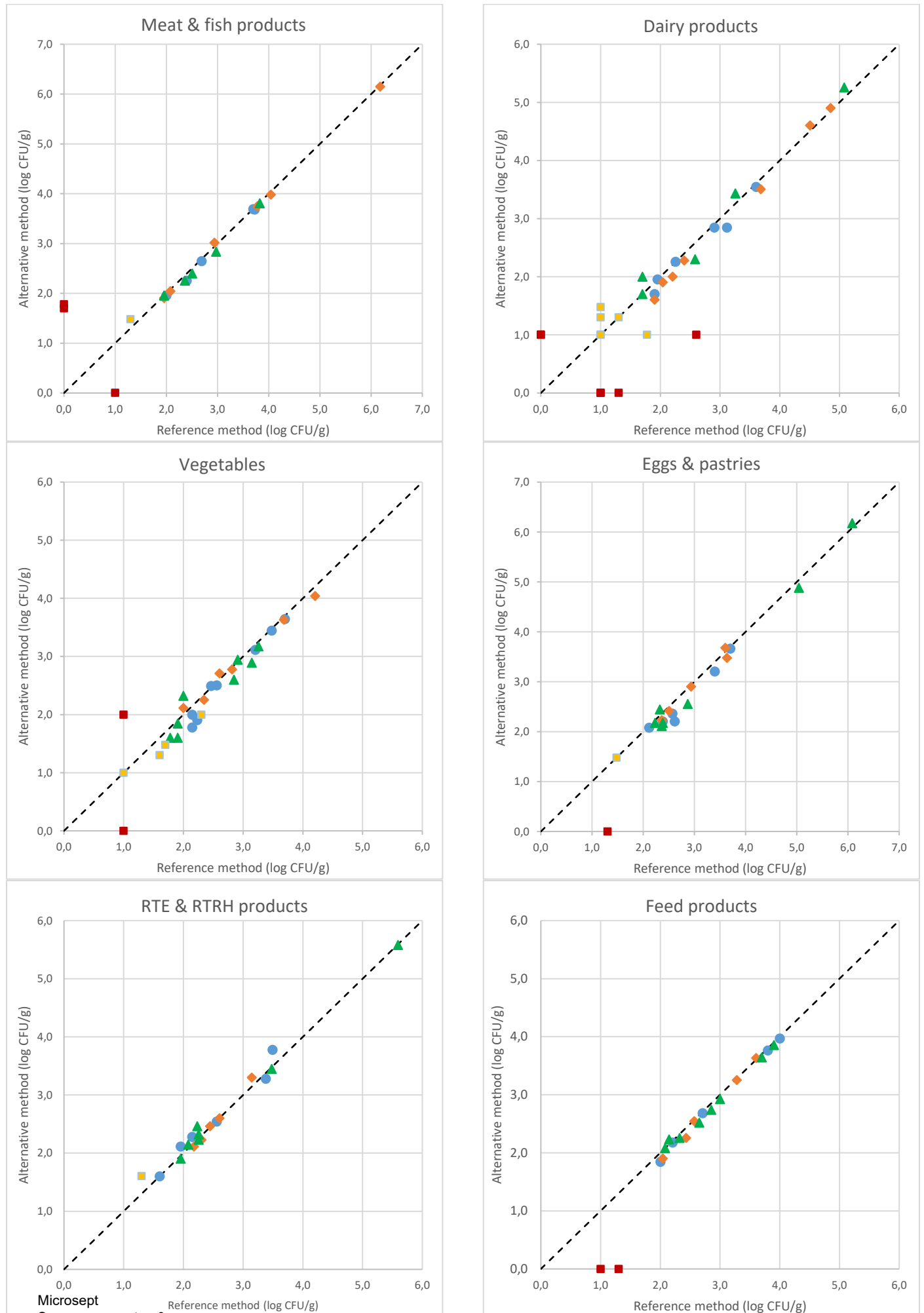


Figure 12: Two-dimensional plots per category, using the pour plate inoculation.

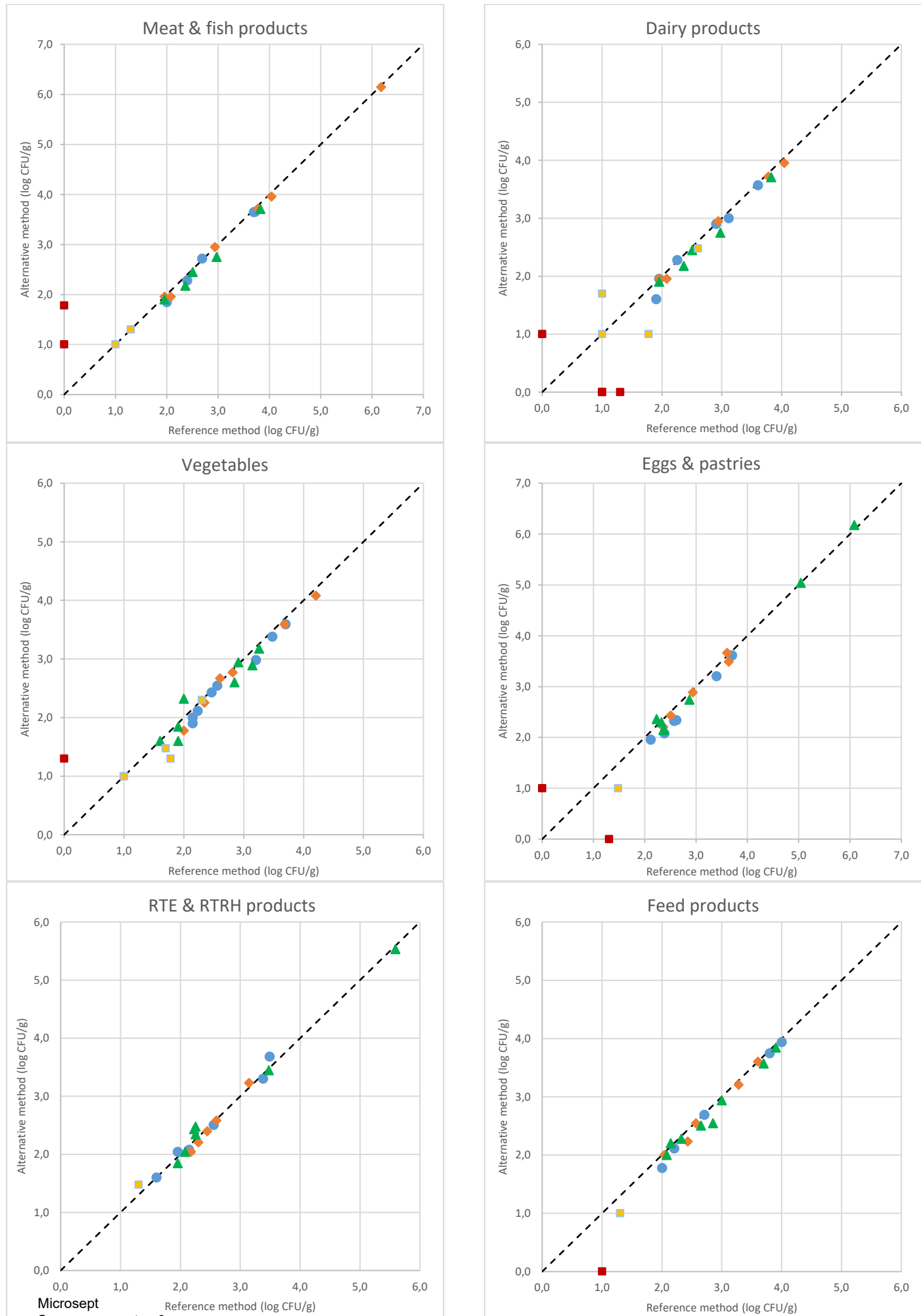


Figure 13: Two-dimensional plots for all categories using the surface spreading inoculation.

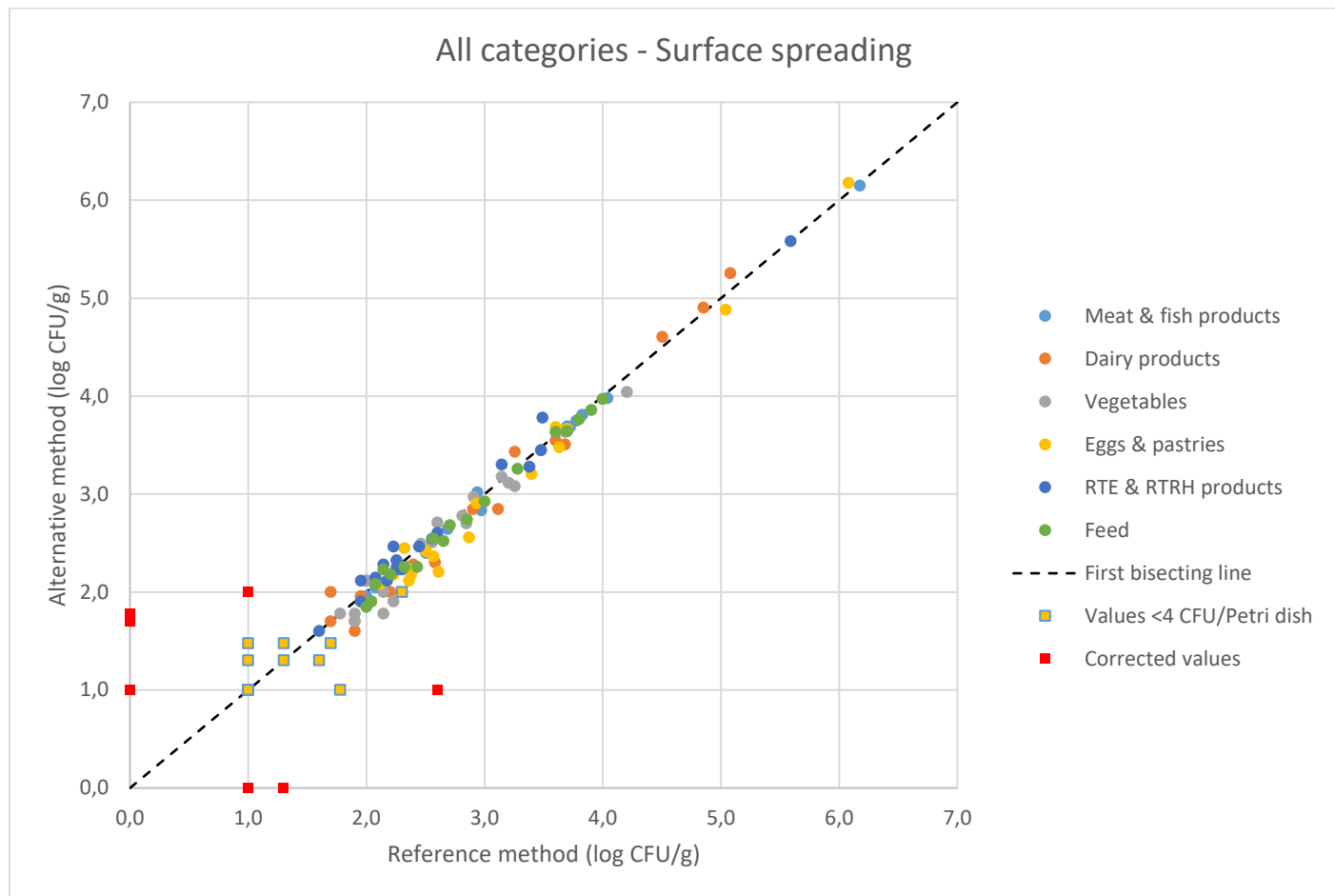
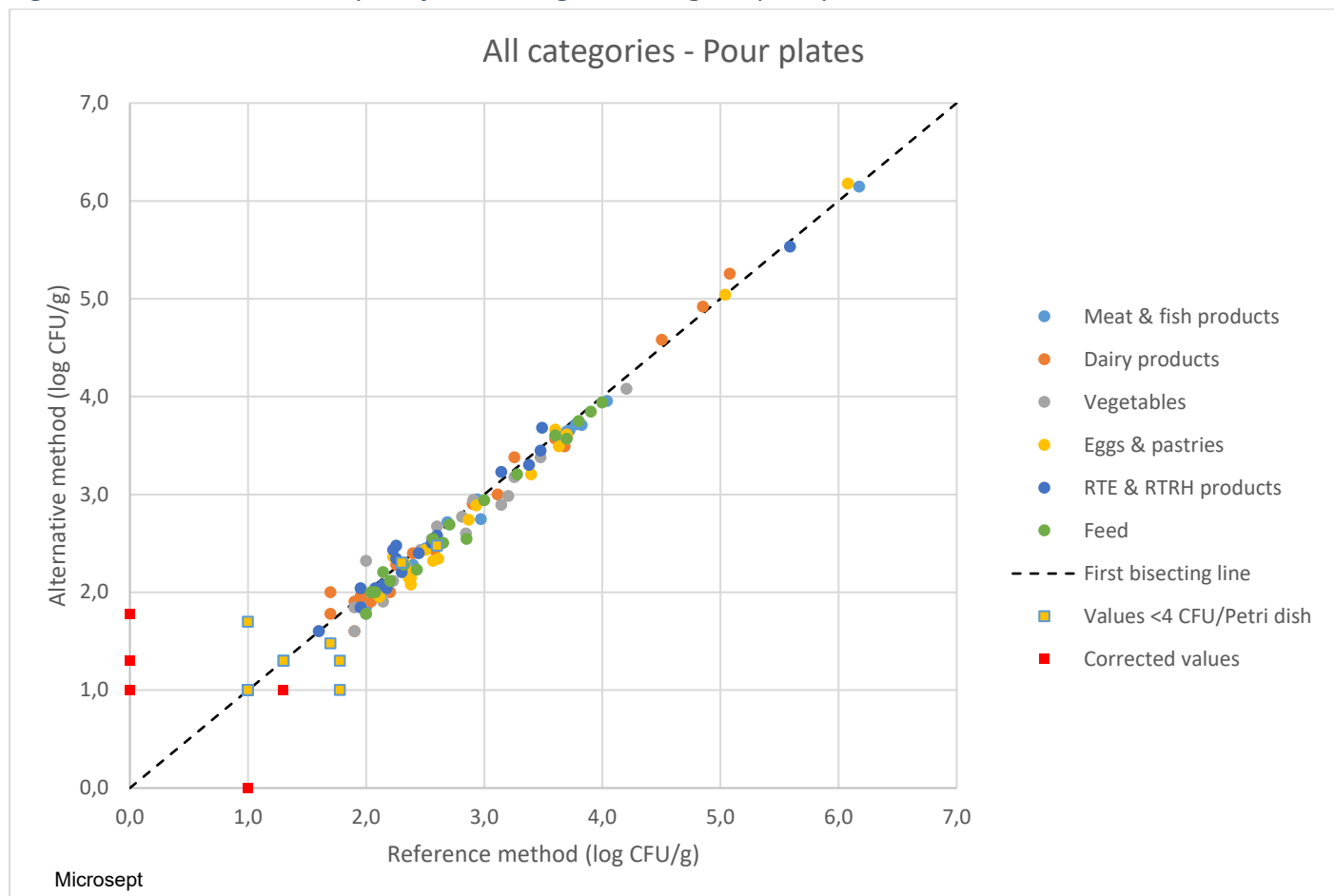


Figure 14: Two-dimensional plots for all categories using the pour plate inoculation.



3.2.1.5. Calculation and interpretation of relative trueness study

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

Statistical calculations are presented in Appendix M, as well as the results excluded from the statistical analysis per category, type and modality of inoculation.

Table 13 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 13: values for the Bland-Altman difference plot

Inoculation	Category	n	Average difference (bias)	Standard deviation differences	Lower Confidence Limit	Upper Confidence Limit
Surface spreading	MFP	16	-0.05	0.06	-0.17	0.07
	DP	18	-0.06	0.17	-0.43	0.32
	V	22	-0.07	0.13	-0.35	0.20
	E&P	18	-0.12	0.14	-0.42	0.19
	RTE&RTRH	18	0.04	0.11	-0.20	0.28
	F	18	-0.06	0.07	-0.20	0.09
	All cat.	110	-0.05	0.13	-0.31	0.20
Pour plate	MFP	16	-0.08	0.07	-0.24	0.07
	DP	18	-0.02	0.15	-0.34	0.31
	V	22	-0.09	0.14	-0.38	0.20
	E&P	18	-0.11	0.13	-0.39	0.17
	RTE&RTRH	18	0.01	0.11	-0.23	0.25
	F	18	-0.09	0.09	-0.28	0.10
	All cat.	110	-0.06	0.12	-0.31	0.18

Overall, the average difference is equal to -0.05 (surface spreading method) and -0.06 (pour plate method), showing a very slight negative bias between the BACARA 2 method and the reference method. The average difference varies from -0.12 log CFU/g (Eggs & Pastries) to 0.04 CFU/g (Ready-to-eat & ready to reheat products) for the surface spreading method and from -0.11 log CFU/g (Eggs & Pastries) to 0.01 log CFU/g (Ready-to-eat & ready to reheat products) for the pour plate technique.

The Bland-Altman difference plots are presented in figures 15 and 16 for all categories.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
- Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 15: Bland-Altman difference plot for all categories with the surface spreading inoculation

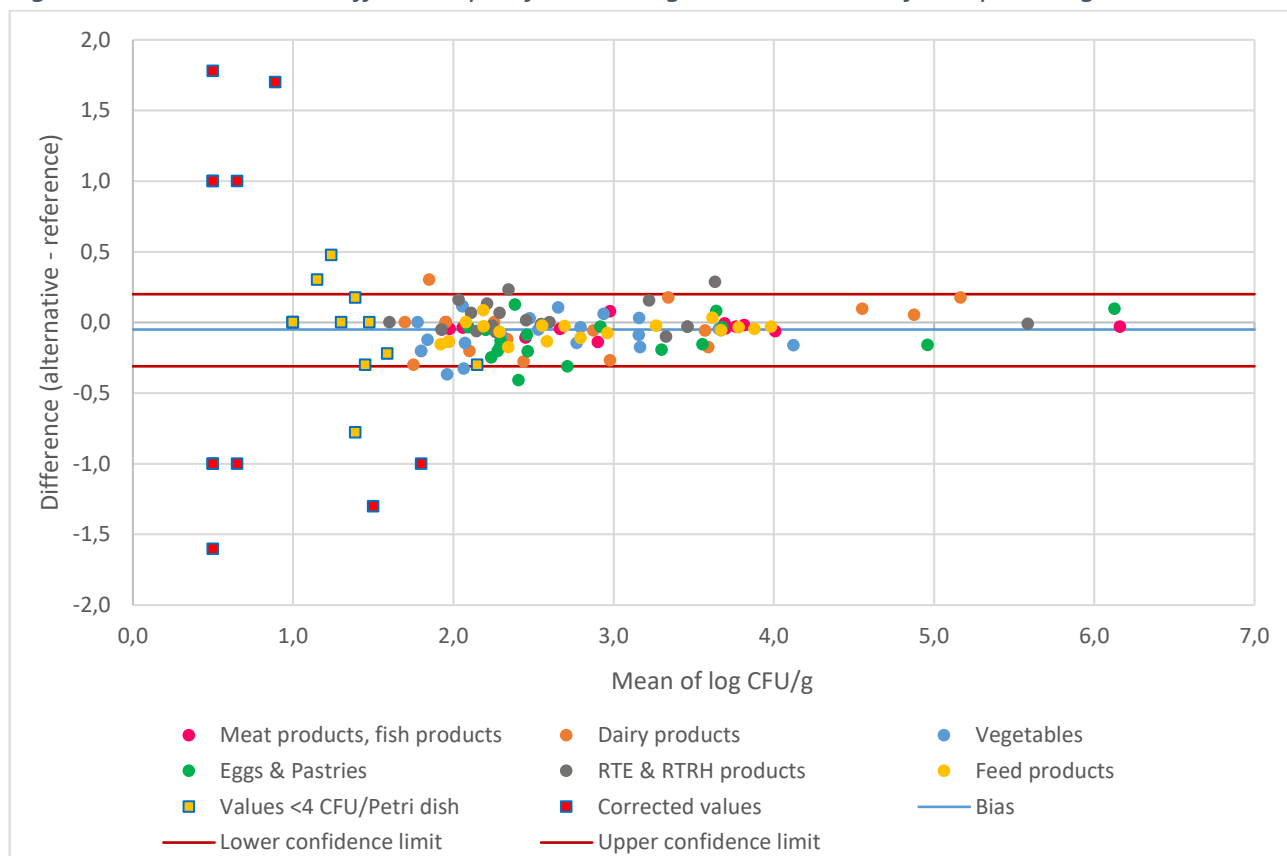
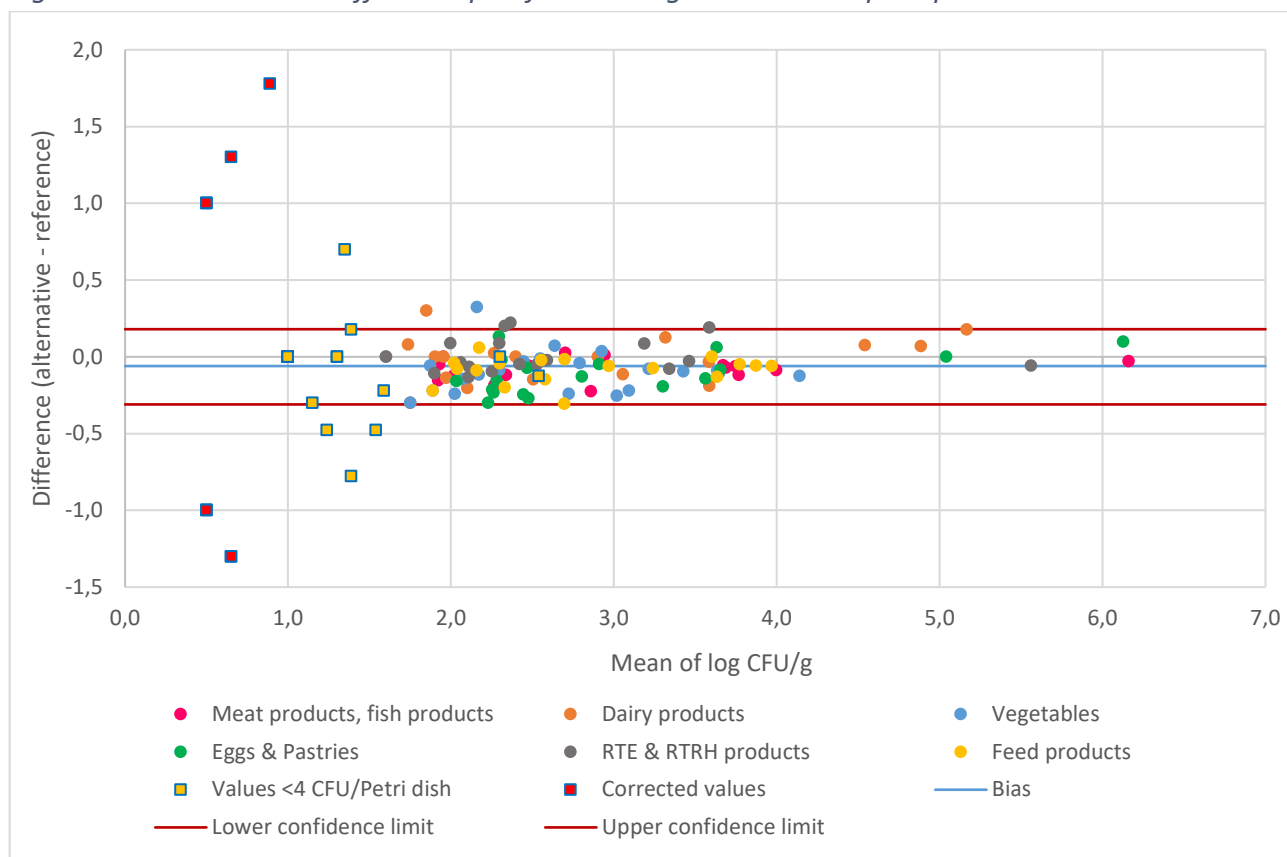


Figure 16: Bland-Altman difference plot for all categories with the pour plate inoculation



- **Observations:**

Samples for which the average difference is lower or higher than the confidence limits are listed in tables 14 and 15.

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

Inoculation	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
Surface spreading LCL: -0.31 UCL: 0.20	DP	c	1939865	1.70	2.00	1.85	0.30
	VP	a	1915588	2.15	1.78	1.96	-0.37
	VP	a	1921846	2.23	1.90	2.07	-0.33
	E&P	a	1921797	2.61	2.20	2.41	-0.41
	RTE&RTH	a	1939820	3.49	3.78	3.63	0.29
	RTE&RTH	c	1915613	2.23	2.46	2.35	0.23
	MP	b	1921853	0.00	1.70	0.85	1.70
	MP	b	1915578	1.00	0.00	0.50	-1.00
	MP	b	1915591	0.00	1.78	0.89	1.78
	DP	a	1921792	1.00	1.48	1.24	0.48
	DP	a	1921790	1.78	1.00	1.39	-0.78
	DP	a	1921793	2.60	1.00	1.80	-1.60
	DP	b	1939859	1.00	0.00	0.50	-1.00
	DP	b	1939868	0.00	1.00	0.50	1.00
	DP	b	1939870	0.00	1.00	0.50	1.00
	DP	c	1939891	1.00	1.30	1.15	0.30
	DP	c	1939871	1.00	0.00	0.50	-1.00
	DP	c	1939855	1.30	0.00	0.65	-1.30
	VP	b	1915616	1.00	0.00	0.50	-1.00
	VP	b	1915618	1.00	2.00	1.50	1.00
	E&P	c	1915607	1.30	0.00	0.65	-1.30
	RTE&RTH	a	1921857	1.30	1.60	1.45	0.30
	FP	b	1921840	1.00	0.00	0.50	-1.00
	FP	c	1921843	1.30	0.00	0.65	-1.30

- **Surface spreading method:**

Twenty-four samples are outside the confidence limits: 18 concern corrected values or samples with less than 4 CFU/Petri dish, 3 are higher than the upper confidence limit and 3 are lower than the lower confidence limit.

Table 15: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits) for pour plate inoculation.

Inoculation	Category	Type	Sample #	Reference method value (log)	Alternative method value (log)	Mean	Difference
Pour plate LCL: -0.31 UCL: 0.18	DP	c	1939865	1.70	2.00	1.85	0.30
	VP	c	1915598	2.00	2.32	2.16	0.32
	RTE&RTH	a	1939820	3.49	3.68	3.59	0.19
	RTE&RTH	c	1915614	2.26	2.48	2.37	0.22
	RTE&RTH	c	1915613	2.23	2.43	2.33	0.20
	MP	b	1921853	0.00	1.78	0.89	1.78
	MP	b	1915591	0.00	1.00	0.50	1.00
	DP	a	1921792	1.00	1.70	1.35	0.70
	DP	a	1921790	1.78	1.00	1.39	-0.78
	DP	b	1939868	0.00	1.00	0.50	1.00
	DP	c	1939855	1.30	0.00	0.65	-1.30
	DP	c	1939856	1.00	0.00	0.50	-1.00
	DP	c	1939871	1.00	0.00	0.50	-1.00
	VP	c	1915621	1.78	1.30	1.54	-0.48
	VP	c	1915601	0.00	1.30	0.65	1.30
	E&P	b	1921802	0.00	1.00	0.50	1.00
	E&P	b	1921805	1.48	1.00	1.24	-0.48
	E&P	c	1915607	1.30	0.00	0.65	-1.30
	FP	b	1921840	1.00	0.00	0.50	-1.00

- **Pour plate method:**

Nineteen samples are outside the confidence limits: 14 concern corrected values or samples with less than 4 CFU/Petri dish, and 5 are upper than the upper confidence limit.

- **Comments concerning the two plating modalities:**

Generally speaking, BACARA 2 Petri dishes are more readable than MYP Petri dishes, probably because of the better selectivity of the BACARA 2 formula.

It was clearly observable for two food items: 1939820 (rice pudding) and 1921841 (lamb feed) where an abundant interfering flora made the enumeration of *Bacillus cereus* typical colonies difficult on MYP plates regarding the BACARA 2 plates.

3.2.1.6. Conservation of the incubated BACARA 2 Petri dishes at 5±3°C for 3 days

During this extension study, no evolution of the enumerations between the readings realized after 21 hours of incubation at 30°C and after conservation of the Petri dishes for 3 days at 5±3°C was observed.

The conclusions of the observations are therefore the same than after the first reading of the Petri dishes.

3.2.1.7. Conclusion

During the extension study, only one sample from the Feed products category (Lamb feed n° 1921841) showed important background microflora on MYP medium but which did not prevent the counting of characteristic colonies. This flora was not observed on the BACARA 2 medium. The relative trueness study of the alternative method is satisfactory.

3.2.2. Accuracy profile study

3.2.2.1. Protocols

Six matrix-strain couples were tested by both methods. Two batches of a matrix, representative of each category, were inoculated with a *Bacillus cereus* strain at three levels (low, medium and high). For each sample, 5 replicates, represented by 5 different test portions, were tested by each method. This represents a total of 30 analyses per method. The matrix-strain couples are presented in table 16.

Table 16: matrix-strain couples for the accuracy profile study

Category	Matrix	Strain	Strain code	Origin of the strain	Target contamination level (log CFU/g)
Meat and fish products	Pâté	<i>Bacillus cereus</i> group II	EAA229	Sandwich ham cheddar	2.0
Dairy products	Milk powder	<i>Bacillus cereus</i> group III (spore)	CND844	Milk proteins	
Vegetables	Vegetables purée	<i>Bacillus cytotoxicus</i> group VII (spore)	GGB821	Potato flakes	
Eggs and pastries	Custard	<i>Bacillus wehinstephanensis</i> group III	JFM917	Environment egg industry	3.5
Ready-to-eat and ready-to-reheat products	Tabbouleh	<i>Bacillus thuringiensis</i> group IV (spore)	KGB008	Piemontese salad	5.0
Feeds	Cat kibble	<i>Bacillus cereus</i> group V (spore)	LDG480	Pasteurized potato puree	

3.2.2.2. Results

Raw data are provided in appendix N.

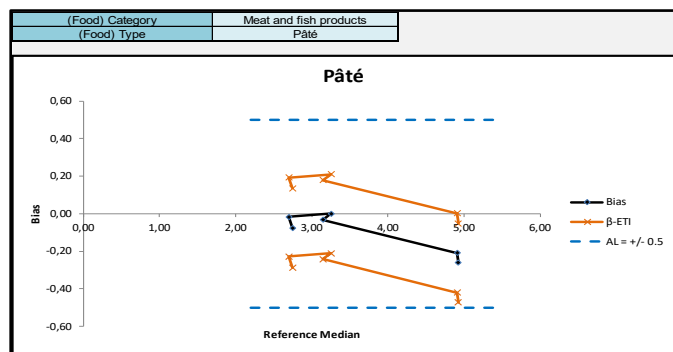
The statistical data and the accuracy profiles are shown in figures 17 and 18.

Statistical calculations were done according to the Excel spreadsheet named AP calculation tool MCS 16140-2 clause 6-1-3-3 ver 31-07-2018 available at <http://standards.iso.org/iso/16140>.

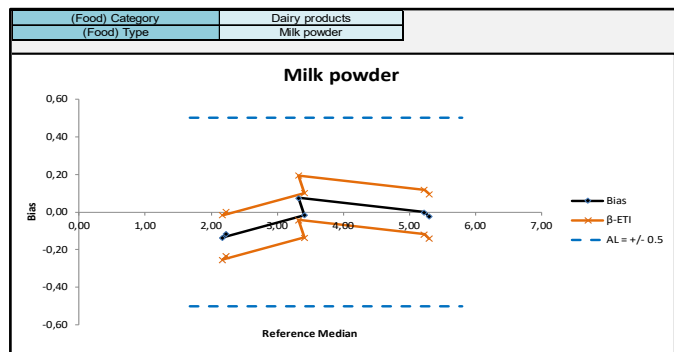
The probability for the tolerance interval is set at 80% and the central value is the median.

The acceptability limit is set at $AL = 0.5 \log_{10} \text{CFU/g or ml}$.

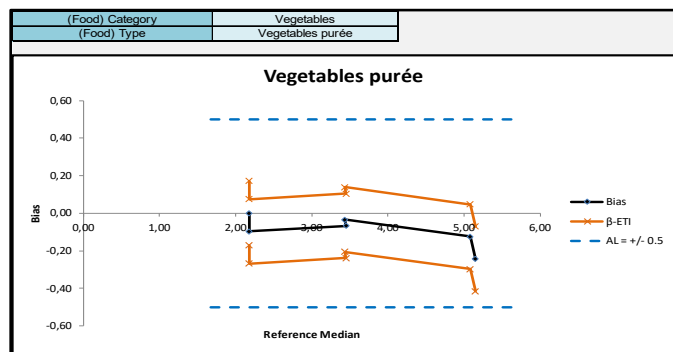
Figure 17: Accuracy profiles per category, using the surface spreading inoculation.



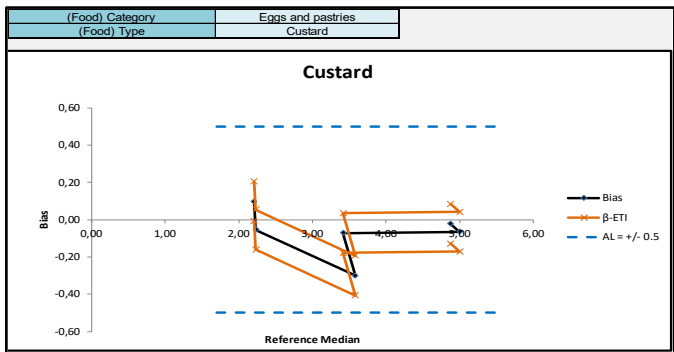
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1897067 - 1897071	2,75	-0,076	-0,287	0,135	YES	YES
1897072 - 1897076	2,70	-0,018	-0,228	0,193	YES	YES
1897077 - 1897081	3,26	0,000	-0,211	0,211	YES	YES
1897082 - 1897209	3,15	-0,032	-0,243	0,179	YES	YES
1897212	4,91	-0,210	-0,420	0,001	YES	YES
1897213 - 1897217	4,91	-0,210	-0,420	0,001	YES	YES
1897218 - 1897222	4,92	-0,262	-0,472	-0,051	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.115	0.146	YES		+/- 0.500	



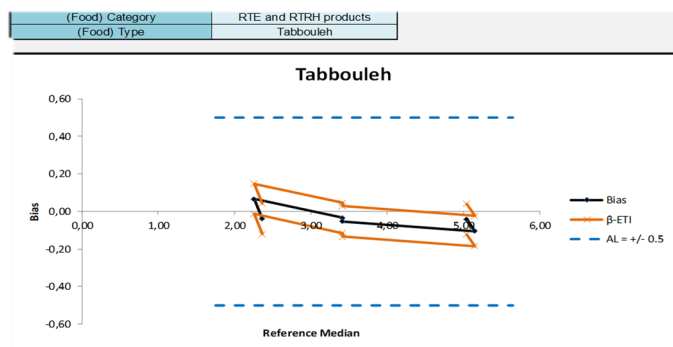
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1897293 - 1897297	2,23	-0,117	-0,235	0,002	YES	YES
1897298 - 1897302	2,18	-0,135	-0,253	-0,016	YES	YES
1897303 - 1897307	3,41	-0,017	-0,135	0,101	YES	YES
1897308 - 1897312	3,32	0,076	-0,043	0,194	YES	YES
1897313 - 1897317	5,23	0,000	-0,118	0,118	YES	YES
1897318 - 1897322	5,30	-0,022	-0,141	0,096	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.047	0.082	YES		+/- 0.500	



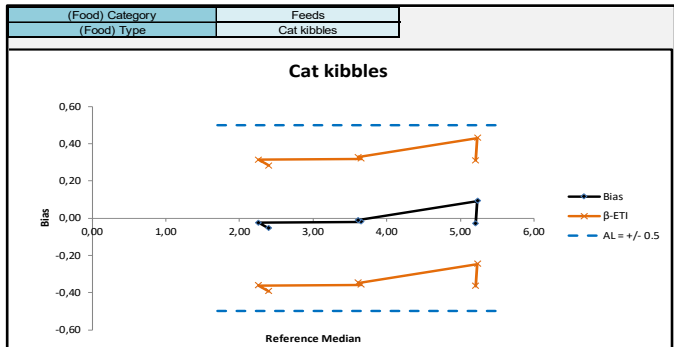
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1939822 - 1939826	2,18	0,000	-0,172	0,172	YES	YES
1939827 - 1939831	2,18	-0,097	-0,269	0,075	YES	YES
1939832 - 1939836	3,45	-0,067	-0,239	0,105	YES	YES
1939837 - 1939841	3,43	-0,033	-0,205	0,138	YES	YES
1939872 - 1939846	5,08	-0,125	-0,297	0,047	YES	YES
1939847 - 1939851	5,15	-0,243	-0,415	-0,071	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.104	0.119	YES		+/- 0.500	



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1897223 - 1897227	2,20	0,097	-0,010	0,204	YES	YES
1897228 - 1897232	2,23	-0,054	-0,161	0,052	YES	YES
1897233 - 1897237	3,58	-0,301	-0,408	-0,194	YES	YES
1897238 - 1897242	3,41	-0,073	-0,179	0,034	YES	YES
1897243 - 1897247	5,00	-0,066	-0,172	0,041	YES	YES
1897248 - 1897252	4,88	-0,024	-0,131	0,083	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.095	0.074	YES		+/- 0.500	

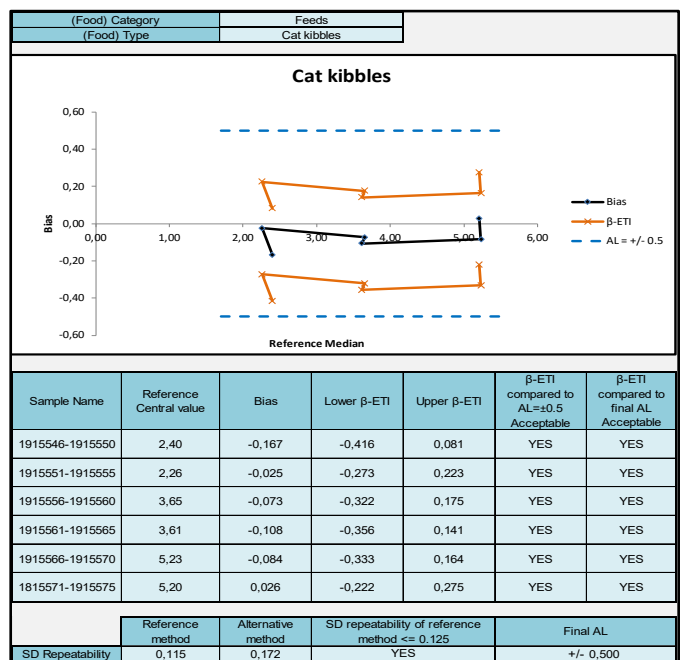
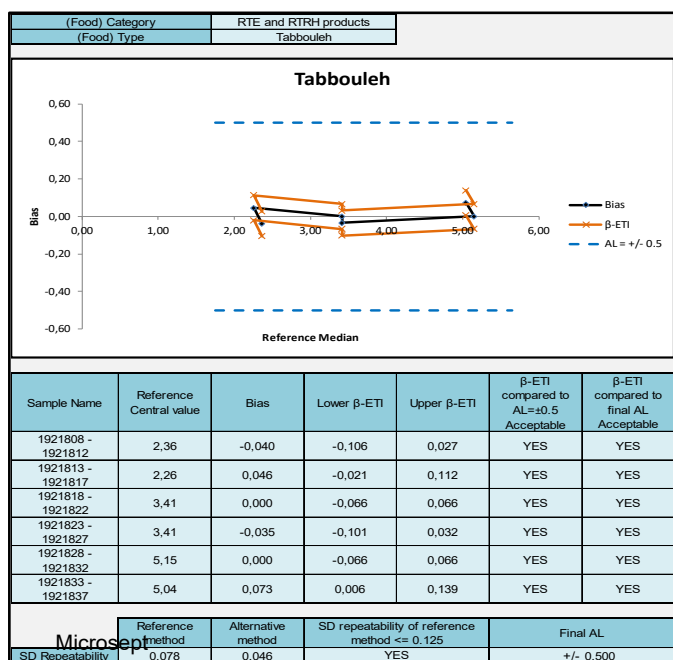
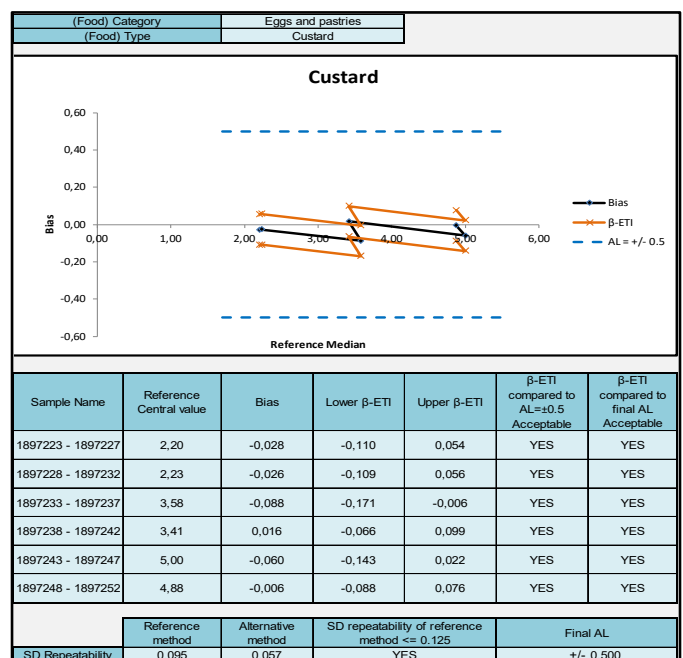
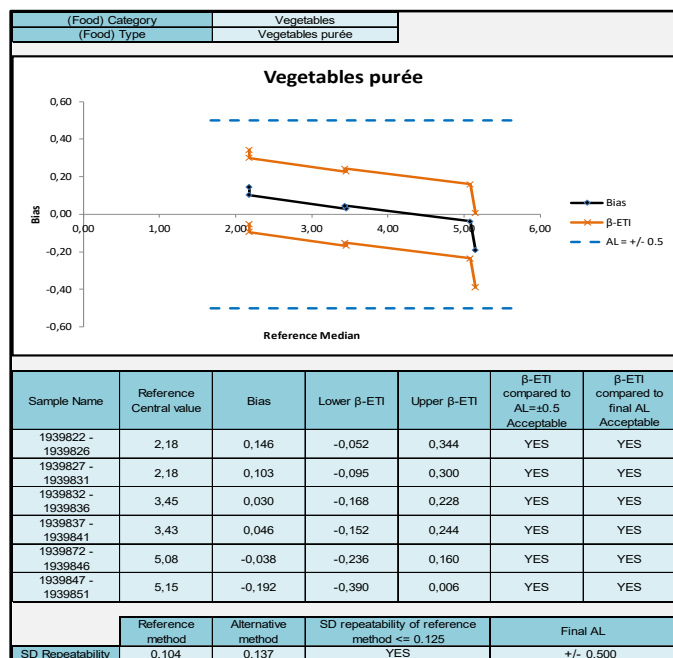
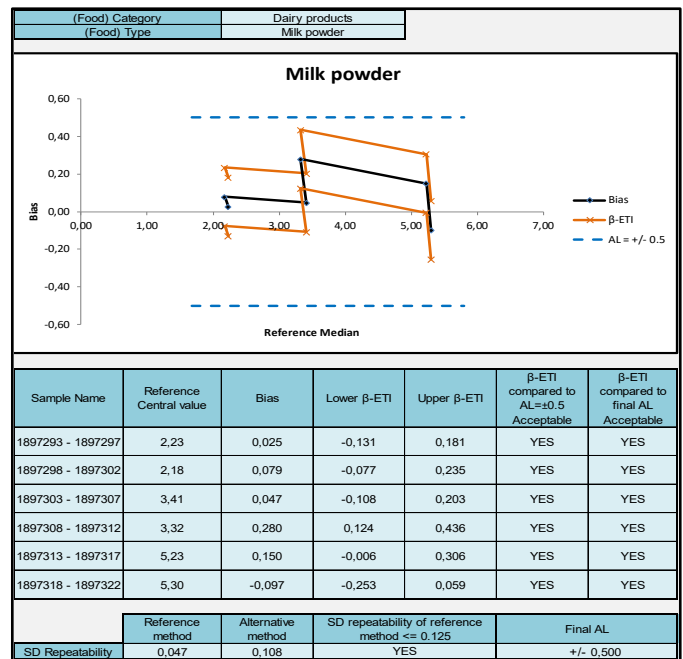
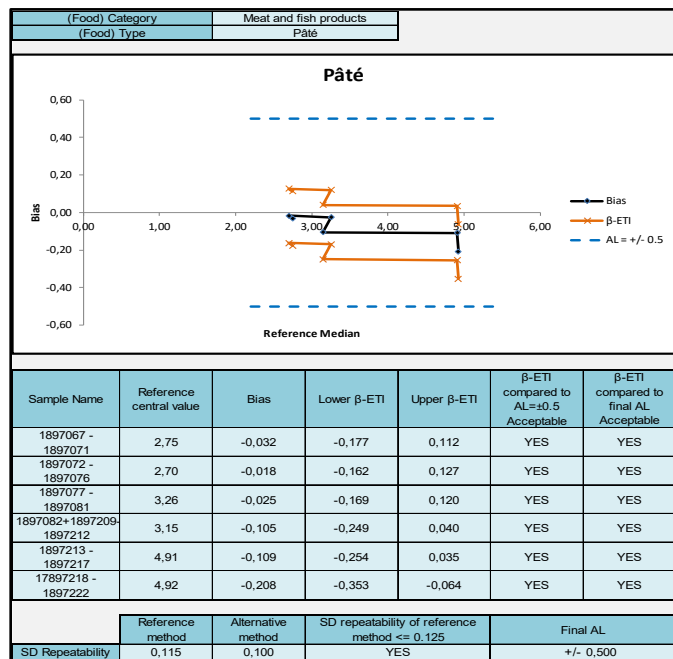


Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1921808 - 1921812	2,36	-0,040	-0,120	0,041	YES	YES
1921813 - 1921817	2,26	0,067	-0,014	0,148	YES	YES
1921818 - 1921822	3,41	-0,035	-0,116	0,046	YES	YES
1921823 - 1921827	3,41	-0,053	-0,134	0,028	YES	YES
1921828 - 1921832	5,15	-0,105	-0,186	-0,024	YES	YES
1921833 - 1921837	5,04	-0,041	-0,122	0,039	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.078	0.056	YES		+/- 0.500	



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
1915546-1915550	2,40	-0,056	-0,393	0,282	YES	YES
1915551-1915555	2,26	-0,025	-0,363	0,313	YES	YES
1915556-1915560	3,65	-0,020	-0,358	0,318	YES	YES
1915561-1915565	3,61	-0,011	-0,349	0,327	YES	YES
1915566-1915570	5,23	0,092	-0,246	0,430	YES	YES
1815571-1915575	5,20	-0,028	-0,366	0,310	YES	YES
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125		Final AL	
SD Repeatability	0.115	0.234	YES		+/- 0.500	

Figure 18: Accuracy profiles per category, using the pour plate inoculation.



The tolerance intervals fall into the acceptability limits for all categories with the two modalities of inoculation.

3.2.2.3. Conclusion

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

3.2.3. Specificity / selectivity

The aim of this study is to check that all the strains of the *Bacillus cereus* group are detected, and that no cross-reaction exists with other species of *Bacillus* or with strains from other genera.

The inclusivity and the exclusivity of the method are defined by analysis, respectively of 50 positive strains and 30 negative strains.

3.2.3.1. Protocols

Tests for target microorganisms were performed once with the alternative method (by spreading method and pour plate technique), the reference method and a non-selective agar at an inoculation level sufficient to obtain a countable number of colonies on the plate. Fifty-two (52) target strains were tested. A pure culture of the strains was calibrated and diluted in 90 ml of buffered peptone water then enumerated to obtain a countable number of colonies on Petri dishes.

Tests for non-target microorganisms were performed once with the alternative method (by spreading method and pour plate technique) and the reference method. Pure cultures were grown on a non-selective broth for 24 hours and diluted at an appropriate level before testing. Thirty-three (33) non-target strains were tested. A pure culture of the strains in Brain Heart Infusion Broth was performed at the optimal growth temperature of the strains then enumerated to obtain a countable number of colonies on Petri dishes.

3.2.3.2. Results

- **Target strains**

The fifty-two strains of *Bacillus cereus* group gave typical colonies with an opaque halo. For 3 strains of *Bacillus mycoides* tested (DZL672, DVT570, DWW520), the colonies observed show a starry appearance and a weak halo on the BACARA 2 agar. The 6 strains of *Bacillus cytotoxicus* tested showed small characteristic colonies with a halo at 21 h of incubation.

- **Non-target strains**

The thirty-three non-target strains did not give characteristic aspect onto the BACARA 2 medium:

- No growth for 23 strains,
- Growth on BACARA 2 medium (pink colonies without halo) for 2 strains of *Staphylococcus aureus*, 1 strain of *Staphylococcus saprophyticus*, 1 strain of *Staphylococcus sciuri* and 1 strain of *Staphylococcus succinus*.
- Growth on BACARA 2 medium (red colonies without halo) for a strain of *Geobacillus stearothermophilus* and a strain of *Brevibacillus parabrevis*.
- A strain of *Bacillus megaterium* (SDT644) gave on the MYP and BACARA 2 agar media pink colonies not exhibiting a halo of opacification but rather a zone of lightening of the media around the colony. Two other strains of *Bacillus megaterium* (SHC194 and SFC228) were tested and produced the same reaction.

3.2.3.3. Conclusion

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

3.2.4. Practicability

Practicability is studied as a function of the four criteria defined by the Technical Board in comparing the reference method EN ISO 7932 (2005) with the BACARA 2 method.

The criteria defined are informed below:

Packaging Volume of reagents	Ready-to-use media: 423849: pack of 20 plates of Ø 90 mm, 423868: pack of 10 plates of Ø 140 mm. Kit base + supplement (BACARA 2): 423871: Kit BACARA 2 base composed of 6 bottles of 100 ml base medium (R1) and 2 vials of supplement (R2+R3: enrichment supplement and chromogenic selective supplement). Each supplement vial is planned for 600 ml of base medium.	
Storage conditions and kit	The plates of pre-poured complete medium and Kit BACARA 2 base must be kept between +2°C and +8°C. The expiry date is shown on each plate and each vial.	
Use after opening of the kit	The pre-poured complete medium plates must be stored at 2-8°C in their package until the expiry date, protected from light. The plates poured from flasks can be kept up to 2 weeks at 2-8°C in a hermetically sealed package. After opening, the R2 BACARA 2 enrichment supplement can be used up to its expiry date if it was manipulated according to good laboratory practice (ie: use in aseptic conditions and storage between 2 and 8°C). After opening, the BACARA 2 R3 selective supplement can be used up to 15 days maximum if it was manipulated according to good laboratory practice. <u>Warning:</u> Do not flame the tube before closing it. This supplement contains a flammable solvent. For the mode of storage, refer to the standard EN ISO 7218.	
Reagents	Supplements have to be kept protected from light. For the medium in flask, liquefy the medium in a water bath at 100°C and cool to 44-47°C. Per flask of 100 ml of BACARA 2 medium, add aseptically 4 ml of BACARA 2 R2 enrichment supplement and 0.5 ml of BACARA 2 R3 selective supplement. Homogenize well the agar base and the supplements, avoiding the incorporation of air bubbles.	
Time to result		
Step	Time required (Day)	Time required (Day)
	BACARA 2 method	EN ISO 7932 standard
Realization of first dilution and decimal dilutions	D0	D0
Media inoculation	D0	D0
Plates reading, interpretation and calculation	D1	D1 and D2

Obtaining negative results if no characteristic colony)	D1	D2
Hemolysis test from an isolated colony Hemolysis test after purification	/	D2 to D3 D3 to D4
Obtaining negative results (after negative confirmations if necessary)	D1	D2 to D4
Obtaining positive results: Confirmation by reference method test (including purification)	/	D2 to D4
Alternative method	D1	/
Common step with reference method	Preparation of initial suspension and decimal dilutions.	

3.2.5. [General conclusion for the methods comparison extension study \(new formulation\)](#)

The relative trueness study shows a good correlation between the alternative method and the reference method.

The accuracy profile study illustrates that the performances of the alternative method are comparable to those of the reference method.

The alternative method is specific and selective.

Time-to-result is faster with the alternative method (one day) than with the reference method (two days), and the alternative method does not require confirmations.

4. Extension study – 2025 (reinterpretation single plate and single dilution for BACARA 2)

4.1. Protocols of the methods

4.1.1. Alternative method

4.1.1.1. Principle of the method

The principle of detection of BACARA and BACARA 2 agar media is the same.

BACARA 2 agar is a selective chromogenic medium that allows the enumeration of *Bacillus* of the *cereus* group without confirmation.

On BACARA 2, typical colonies of *B. cereus*, including *B. cytotoxicus* show a pink / orangey color due to the metabolism of the chromogen substrate and are surrounded with an opaque halo due to the phospholipase activity.

The selectivity of BACARA 2 agar has been especially optimized to prevent growth of interfering flora and thus to allow an easy interpretation of plates even when matrix highly contaminated with competitive flora are analyzed.

4.1.1.2. Protocol of the method

From an initial suspension realized according to the prescriptions of the ISO 6887 standard, or directly from a liquid sample, BACARA 2 plates are inoculated as described below:

- Spreading of 0.1 ml on the surface of one plate per dilution. Low numbers estimations can be performed by the inoculation of 1 ml on 3 plates to enumerate low contaminations of *Bacillus cereus* group,
Or
- Pouring 1 ml into about 18 mL of BACARA 2 agar maintained at 44-47°C.

The inoculated plates are incubated at 30±1°C for 24±3 h.

After incubation, the characteristic colonies of *Bacillus cereus* group (pink/orangey colonies with a halo of opacification) are enumerated as colonies of the *Bacillus cereus* group. No confirmation is necessary.

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

Notes: as part of the study of certification, confirmations according to the tests described in the reference method were realized.

Moreover, during the sensitivity study, plates were stored at 5±3°C for 3 days and again interpreted, to verify that these storage conditions did not modify their performance.

4.1.1.3. Restrictions

There are no restrictions on use for the BACARA 2 method.

4.1.2. Reference method

The EN ISO 7932:2005 standard and its amendment A1 of April 2020, Horizontal method for the enumeration of presumptive *Bacillus cereus* – Colony-count technique at 30°C, was used for this extension study.

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

4.2. Methods comparison study

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

4.2.1. Relative trueness study

4.2.1.1. Number and nature of the samples

Overall, 178 samples were analyzed giving 110 exploitable results for the surface spreading technique modality and 110 exploitable results for the pour plate modality.

The distribution of the samples per category, type and inoculation technique is given in table 17.

Table 17: number and nature of the samples analyzed for the relative trueness study

Category	Type		Analyzed samples	Exploited samples	
				Surface	Pour plates
Meat products, fish products and seafood	a	Meat and fish ready-to-cook products	8	5	5
	b	Meat and fish ready-to-reheat products	25	6	6
	c	Meat and fish sauces, soups...	5	5	5
	Total		38	16	16
Dairy products	a	Pasteurized dairy products	12	6	6
	b	Infant formula with and without probiotics	17	7	7
	c	Milk Powders	12	5	5
	Total		41	18	18
Vegetables	a	Flours, spices, dehydrated vegetables	8	8	8
	b	Pasta, rices	13	6	6
	c	Deli salads, vegetables preparations	12	8	8
	Total		33	22	22
Eggs and pastries	a	Pasteurized liquid eggs	7	6	6
	b	Egg powders	7	5	5
	c	Pastries, creams, desserts	11	7	7
	Total		25	18	18
Ready-to-eat and ready-to-reheat products	a	RTE cereals-based products	7	6	6
	b	RTE products containing starch	5	5	5
	c	RTRH products containing starch	9	7	7
	Total		21	18	18
Feeds	a	Dry Pet food	5	5	5
	b	Poultry and rabbit feed	6	5	5
	c	Livestock feed	9	8	8
	Total		20	18	18
Total			178	110	110

4.2.1.2. Artificial contamination

Artificial contaminations were performed using seeding protocol. The strains used, and the contamination protocols are presented in Appendix C.

Naturally contaminated samples were also used: 70 of them were analyzed that led to the obtention of 37 interpretable results (33,6% for both plating modalities).

4.2.1.3. Protocols used during the study

The two modalities of enumeration of the alternative method were tested: surface spreading and pour plates technique. The minimum incubation times of the Petri dishes was applied, namely 21 hours at $30\pm 1^{\circ}\text{C}$.

Confirmations of the alternative method were performed on 5 colonies per Petri dish by spotting on a sheep blood agar media to observe the presence of hemolysis.

A storage at $5\pm 3^{\circ}\text{C}$ for 3 days of the Petri dishes after incubation was performed. The Petri dishes were read again after this storage.

4.2.1.4. Results

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

Raw results are shown in appendix D.

Three kinds of results are not considered as part of the statistical calculations:

- Those expressed with less than 4 colonies per Petri dish for at least one method or inoculation modality,
- Those lower or higher than the quantification limits,
- Undetermined results.

All results are presented in scatter plots per category and modality of inoculation in figures below:

- Figure 19: scatter plots for the pour plates method for each category,
- Figure 20: scatter plots for the surface spreading technique for each category,
- Figure 21: scatter plots for the pour plates method for all categories.
- Figure 22: scatter plots for the surface spreading technique for all categories.

On scatter plots:

- Each type of food is differentiated per type on individual category scatter plots: blue circle: type a / orange diamond: type b / green triangle: type c
 - Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,
 - Results lower or higher than the quantification limits for one method are indicated by a red square.
- The value of these results is corrected according to the EN ISO 16140-2:2016 requirements.

Figure 19: Two-dimensional plots per category, using the surface spreading inoculation.

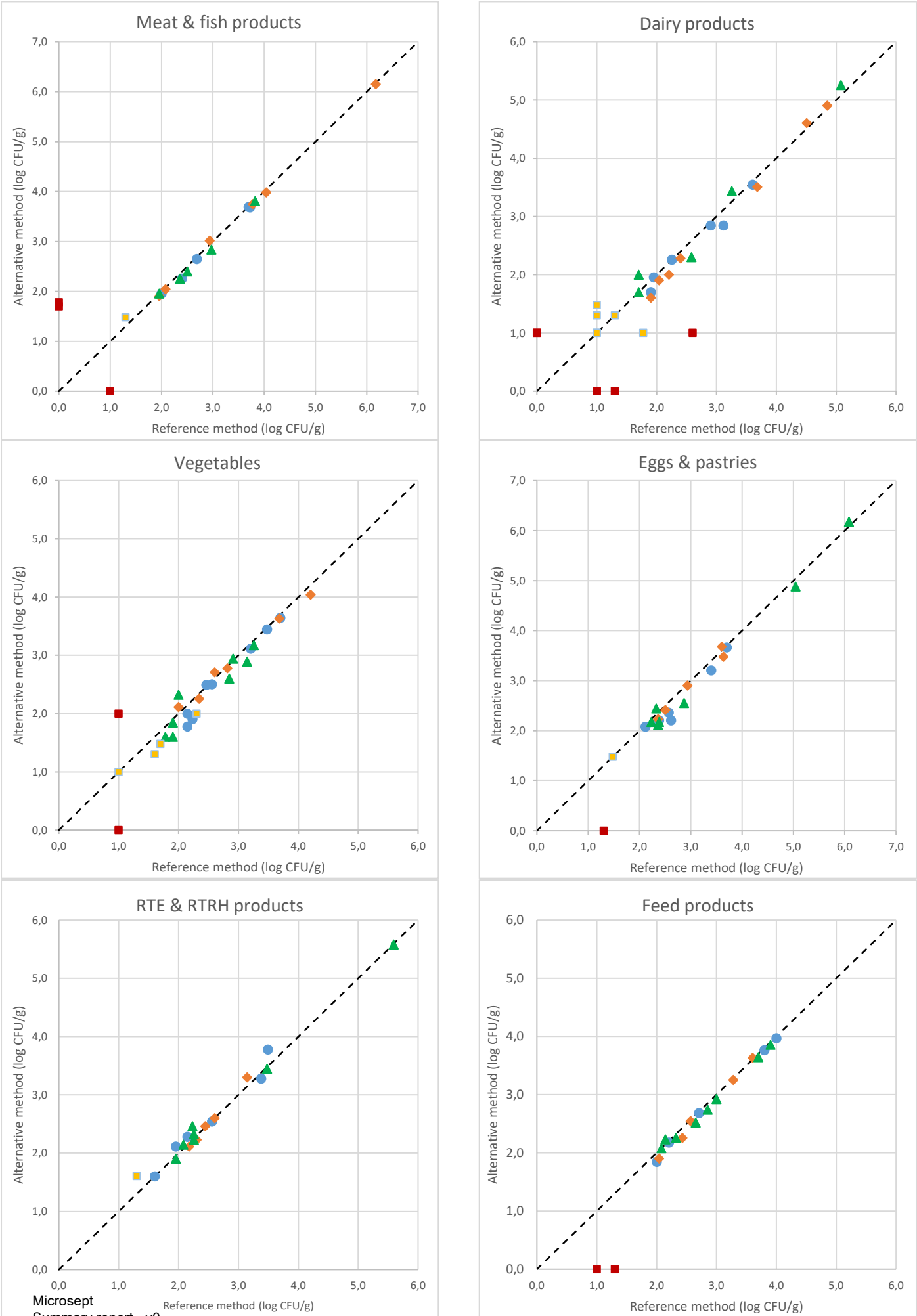


Figure 20: Two-dimensional plots per category, using the pour plate inoculation.

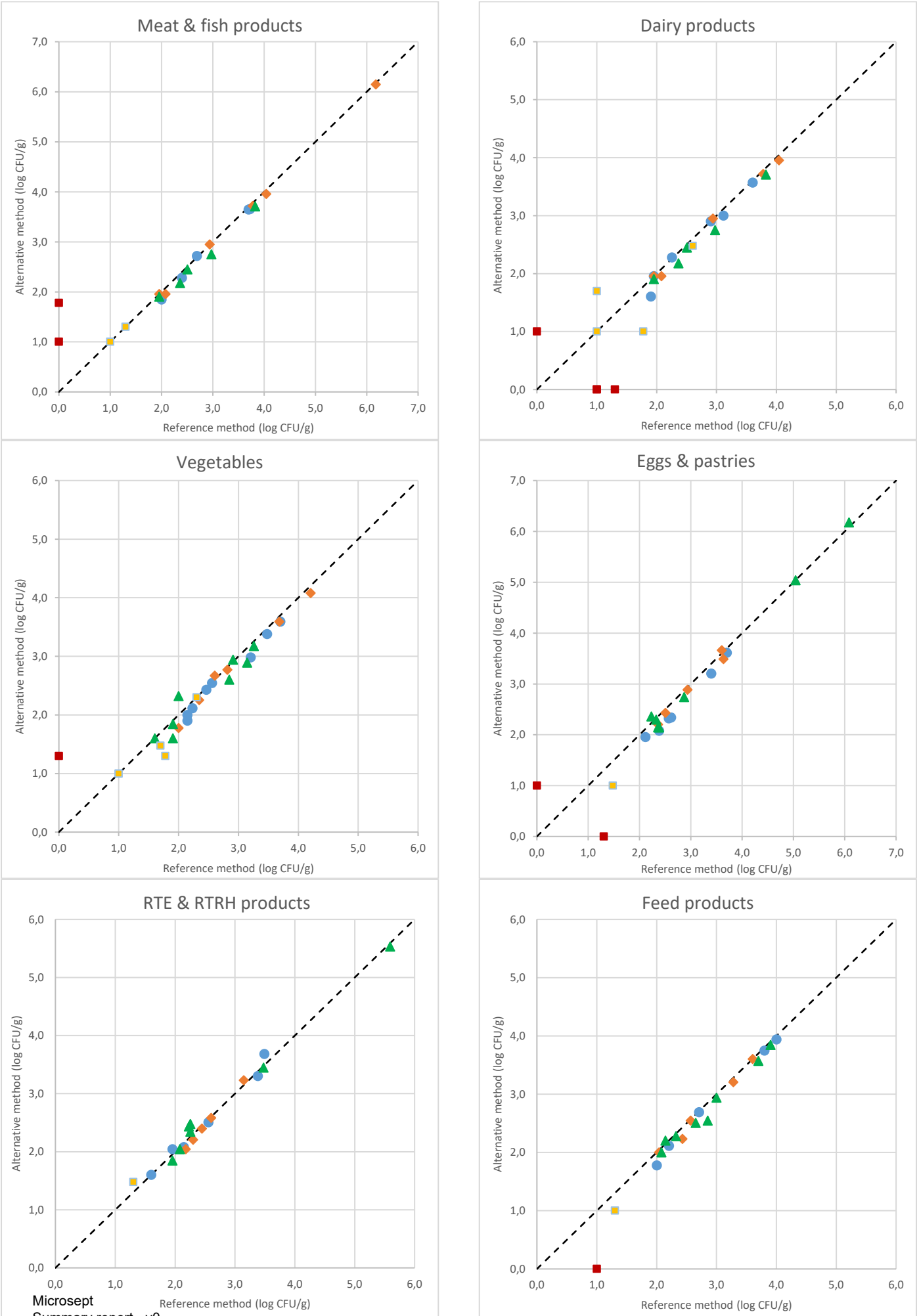


Figure 21: Two-dimensional plots for all categories using the surface spreading inoculation.

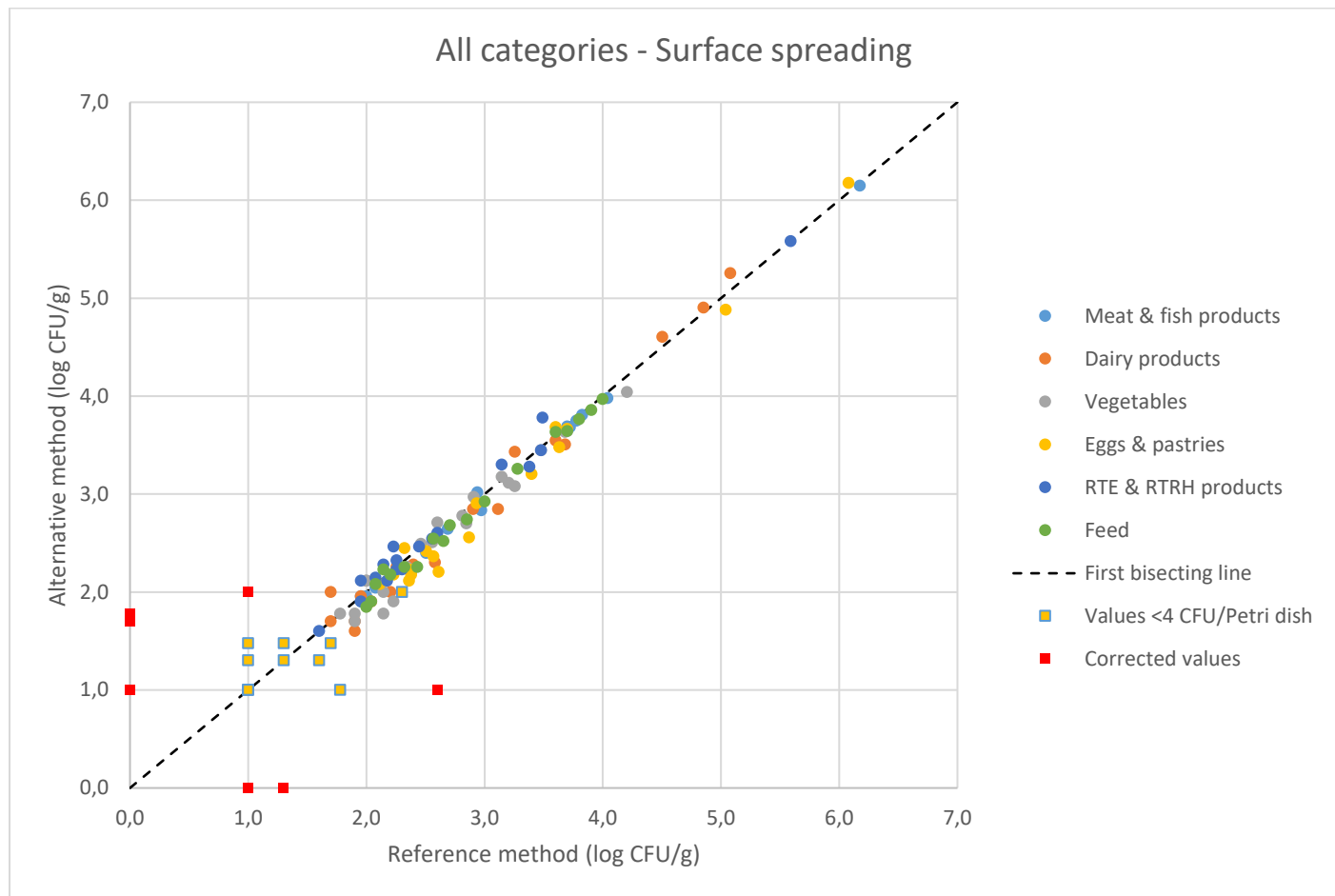
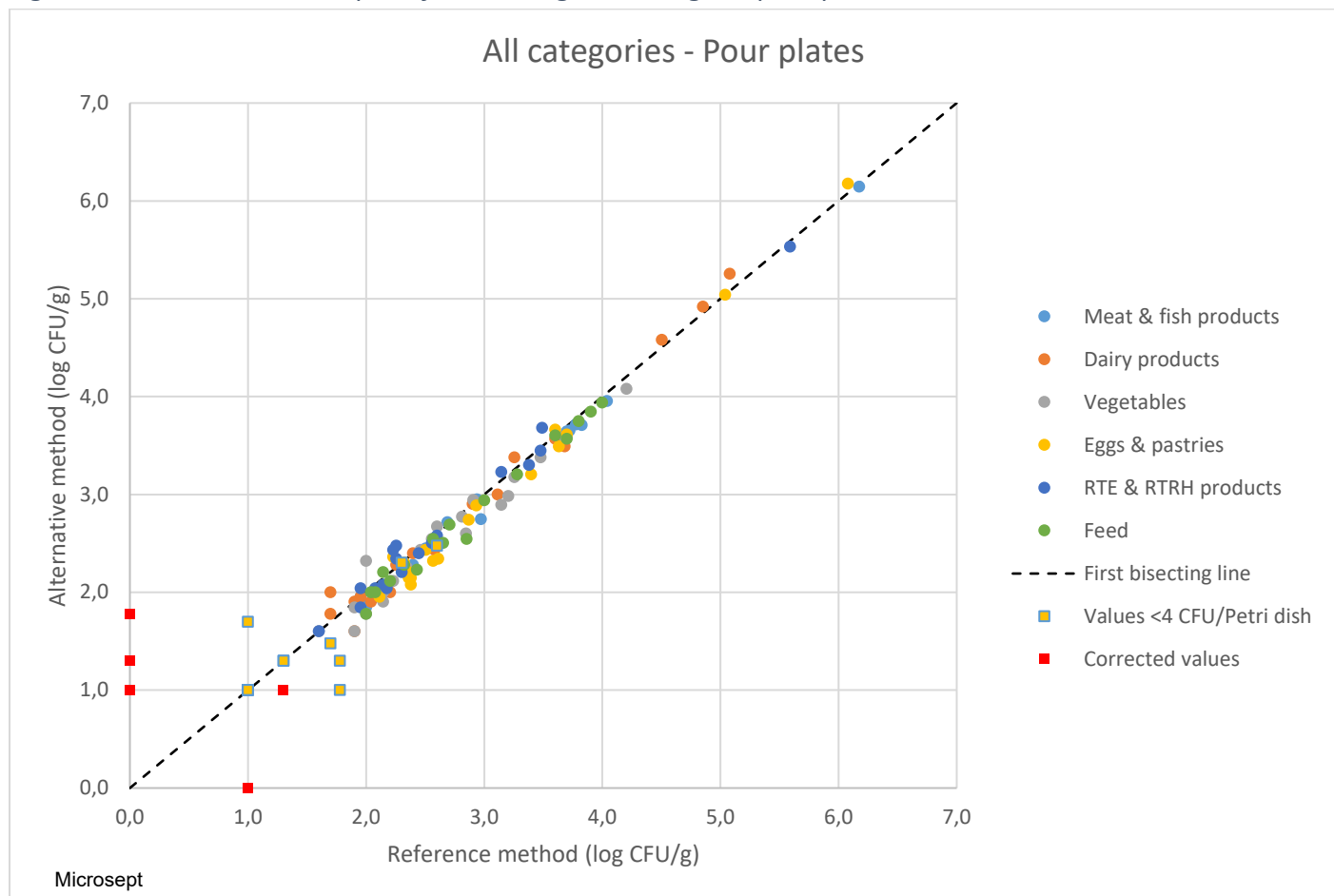


Figure 22: Two-dimensional plots for all categories using the pour plate inoculation.



4.2.1.5. Calculation and interpretation of relative trueness study

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

Statistical calculations are presented in Appendix E, as well as the results excluding from the statistical analysis per category, type and modality of inoculation.

Table 18 presents the summary of the average differences and standard deviation differences per category and for all categories.

Table 18: values for the Bland-Altman difference plot

Inoculation	Category	n	Average difference (bias)	Standard deviation differences	Lower Confidence Limit	Upper Confidence Limit
Pour plate	MFP	16	-0.08	0.07	-0.24	0.08
	DP	18	-0.02	0.14	-0.32	0.28
	V	22	-0.10	0.13	-0.40	0.19
	E&P	18	-0.13	0.14	-0.43	0.18
	RTE&RTRH	18	-0.01	0.11	-0.25	0.23
	F	18	-0.09	0.09	-0.28	0.09
	All cat.	110	-0.07	0.12	-0.32	0.17
Surface spreading	MFP	16	-0.05	0.06	-0.17	0.07
	DP	18	-0.06	0.17	-0.44	0.31
	V	22	-0.07	0.12	-0.34	0.18
	E&P	18	-0.13	0.15	-0.45	0.19
	RTE&RTRH	18	0.03	0.11	-0.22	0.28
	F	18	-0.06	0.06	-0.19	0.08
	All cat.	110	-0.06	0.13	-0.31	0.20

Overall, the average difference is equal to -0.06 (surface spreading method) and -0.07 (pour plate method), showing a very slight negative bias between the BACARA 2 method and the reference method. The average difference varies from -0.13 log CFU/g (Eggs & Pastries) to 0.03 CFU/g (Ready-to-eat & ready to reheat products) for the surface spreading method and from -0.13 log CFU/g (Eggs & Pastries) to -0.01 log CFU/g (Ready-to-eat & ready to reheat products) for the pour plate technique.

The Bland-Altman difference plots are presented in figures 20 and 21 for all categories. They are also shown per category in Appendix P.

As on scatter plots:

- Each category is differentiated by a specific colour,
- Results expressed with less than 4 colonies per Petri dish for at least one method are indicated by a yellow square,

Results lower or higher than the quantification limits for one method are indicated by a red square. The value of these results is corrected according to the EN ISO 16140-2/A1 (2024) requirements.

Figure 20: Bland-Altman difference plot for all categories with the surface spreading inoculation

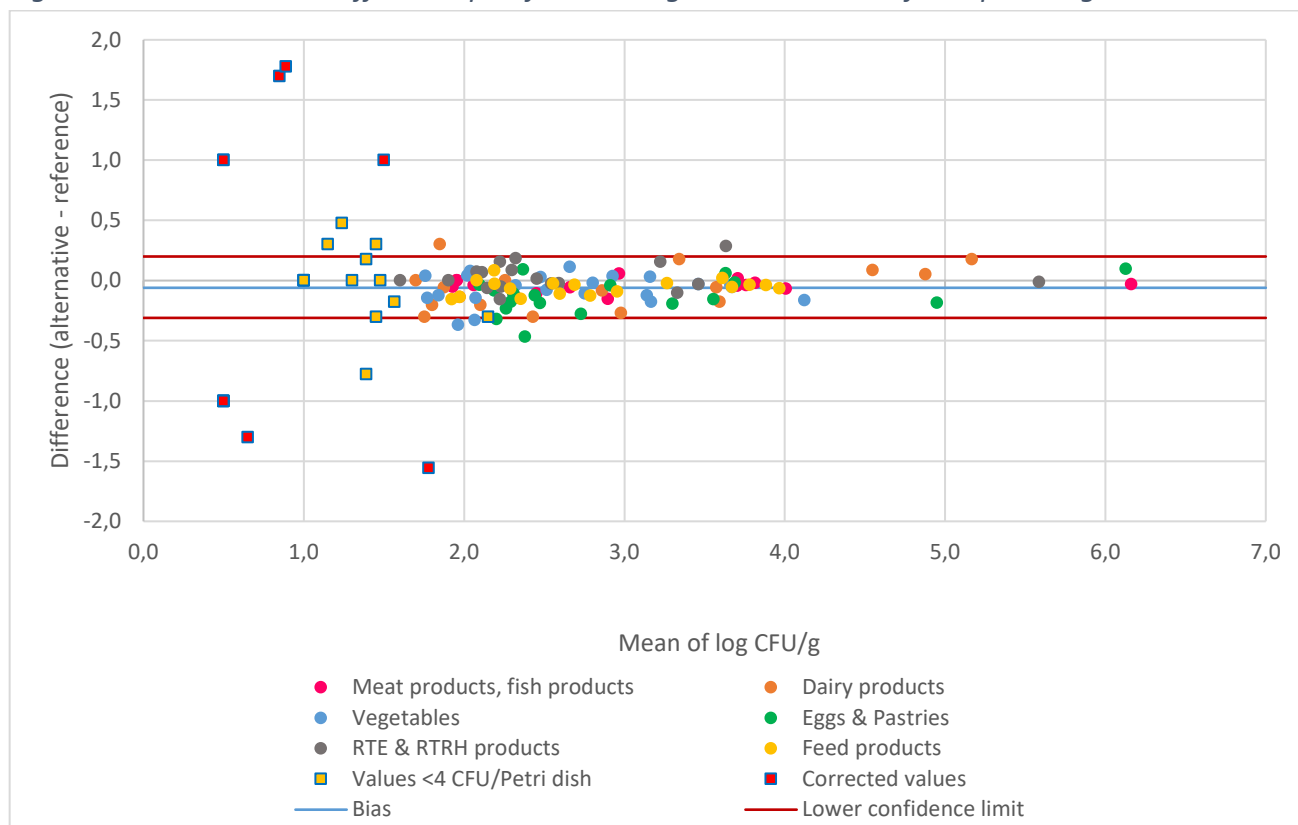
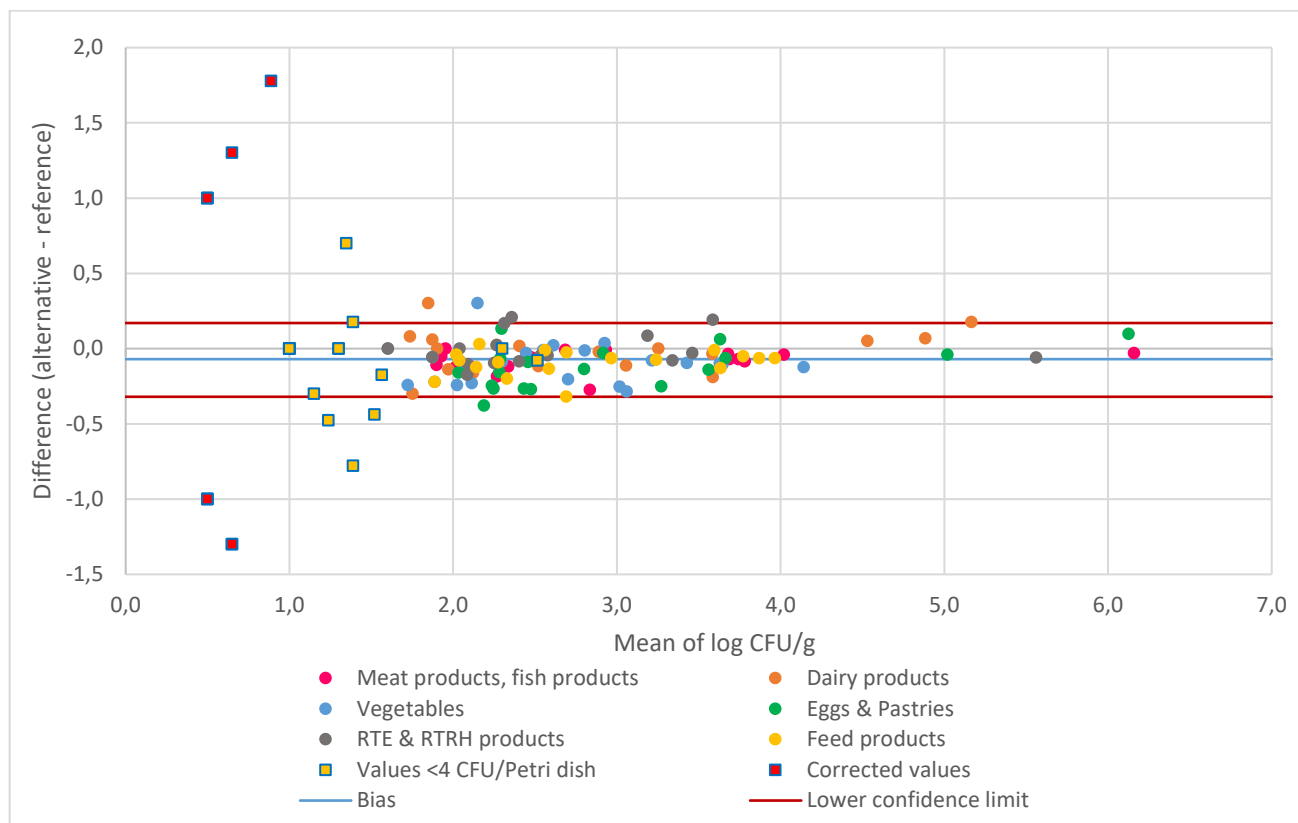


Figure 21: Bland-Altman difference plot for all categories with the pour plate inoculation



- **Observations:**

Samples for which the average difference is lower or higher than the confidence limits are listed in tables 19 and 20.

- **Pour plate method:**

LCL: -0,32 log CFU/g – UCL: 0,17 log CFU/g

Twenty-one samples are outside the confidence limits:

- For 15 samples, one or both methods give results expressed with less than 4 CFU/Petri dish or below the limit of quantification
- 5 samples are above the upper confidence limit,
- 1 sample is below the lower confidence limit.

Table 19: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits) for pour plate inoculation.

Cat.	Type	#	Sample	RM	AM	Difference
				CFU/g	CFU/g	
MP	b	1921853	Beef tongue	<10	60	1,78
	b	1915591	Ham croissant	<10	10	1,00
DP	c	1939865	Skimmed milk powder	50	100	0,30
	c	1939894	Powdered caseinate	120000	180000	0,18
	a	1921792	Munster cheese	10	50	0,70
	a	1921790	Yogurt	60	10	-0,78
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	1,00
	c	1939855	Semi-skimmed milk powder	20	<10	-1,30
	c	1939856	Powdered whole milk	10	<10	-1,00
	c	1939871	Powdered whole milk	10	<10	-1,00
	c	1915598	Salad, snout, tomatoes	100	200	0,30
V	c	1915621	Tomato tartare	60	20	-0,48
	c	1915601	Greek tomato salad	<10	20	1,30
	c	1915601	Greek tomato salad	<10	20	1,30
E&P	a	1921796	Liquid egg yolk	240	100	-0,38
	b	1921802	Pasteurized egg white powder	<10	10	1,00
	b	1921805	Unpasteurized egg white powder	30	10	-0,48
	c	1915607	Chocolate dessert	20	<10	-1,30
RTE & RTRH	a	1939820	Rice pudding	3100	4800	0,19
	c	1915614	Hachis parmentier	180	290	0,21
	a	1921857	Quinoa salad, bulgur	20	30	0,18
FP	b	1921840	Maize	10	<10	-1,00

- **Surface spreading method:**

LCL: -0,31 log CFU/g – UCL: 0,20 log CFU/g

Twenty-two samples are outside the confidence limits:

- For 18 samples, one or both methods give results expressed with less than 4 CFU/Petri dish or below the limit of quantification,
- 2 samples are above the upper confidence limit,
- 2 sample is below the lower confidence limit.

Table 20: values outside the confidence limits on the Bland-Altman difference plot (green cases: values <4 CFU/Petri dish, yellow cases: values lower and higher than the quantification limits, blue: values higher than the confidence limits, red: values lower than the quantification limits) for pour plate inoculation.

Cat.	Type	#	Sample	RM	AM	Difference
				CFU/g	CFU/g	
MP	b	1921853	Beef tongue	<10	50	1,70
	b	1915578	Cooked pork	10	<10	-1,00
	b	1915591	Ham croissant	<10	60	1,78
DP	c	1939865	Skimmed milk powder	50	100	0,30
	a	1921792	Munster cheese	10	30	0,48
	a	1921790	Yogurt	60	10	-0,78
	a	1921793	Fresh cream	400	<100	-1,60
	b	1939859	Growth milk 12 months-3 years without probiotic	10	<10	-1,00
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	1,00
	b	1939870	Infant formula 6-12 months with probiotic	<10	10	1,00
	c	1939891	Semi-skimmed milk powder	10	20	0,30
	c	1939871	Powdered whole milk	10	<10	-1,00
	c	1939855	Semi-skimmed milk powder	20	<10	-1,30
V	b	1915616	Rice salad, tomatoes, tuna, egg	10	<10	-1,00
	b	1915618	Pasta, tomato, pepper salad	<100	100	1,00
E&P	a	1921797	Liquid whole egg	410	140	-0,47
	c	1915631	Paris Brest	230	110	-0,32
	c	1915607	Chocolat dessert	20	<10	-1,30
RTE & RTRH	a	1939820	Rice pudding	3100	6000	0,29
	a	1921857	Quinoa salad, bulgur	20	40	0,30
FP	b	1921840	Maize	10	<10	-1,00
	c	1921843	Horse feed	20	<10	-1,30

4.2.2. Conclusion

The relative trueness study of the alternative method is satisfactory.

4.3. Accuracy profile study

4.3.1. Protocols

Six matrix-strain couples were tested by both methods. Two batches of a matrix, representative of each category, were inoculated with a *Bacillus cereus* strain at three levels (low, medium and high). For each sample, 5 replicates, represented by 5 different test portions, were tested by each method. This represents a total of 30 analyses per method.

The matrix-strain couples are presented in table 21.

Table 21: matrix-strain couples for the accuracy profile study

Category	Matrix	Strain	Strain code	Origin of the strain	Target contamination level (log CFU/g)
Meat and fish products	Pâté	<i>Bacillus cereus</i> group II	EAA229	Sandwich ham cheddar	2.0
Dairy products	Milk powder	<i>Bacillus cereus</i> group III (spore)	CND844	Milk proteins	
Vegetables	Vegetables purée	<i>Bacillus cytotoxicus</i> group VII (spore)	GGB821	Potato flakes	
Eggs and pastries	Custard	<i>Bacillus weheinstephanensis</i> group III	JFM917	Environment egg industry	3.5
Ready-to-eat and ready-to-reheat products	Tabbouleh	<i>Bacillus thuringiensis</i> group IV (spore)	KGB008	Piemontese salad	5.0
Feeds	Cat kibbles	<i>Bacillus cereus</i> group V (spore)	LDG480	Pasteurized potato puree	

4.3.2. Results

Raw data are provided in Appendix R.

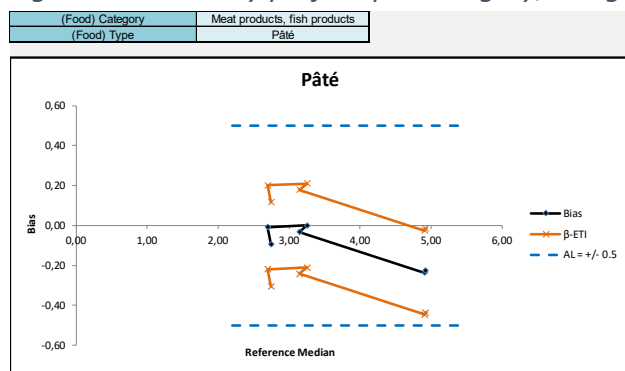
The statistical data and the accuracy profiles are shown in figures 22 and 23.

Statistical calculations were done according to the Excel spreadsheet named AP calculation tool MCS 16140-2 clause 6-1-3-3 ver 31-07-2018 available at <http://standards.iso.org/iso/16140>.

The probability for the tolerance interval is set at 80% and the central value is the median.

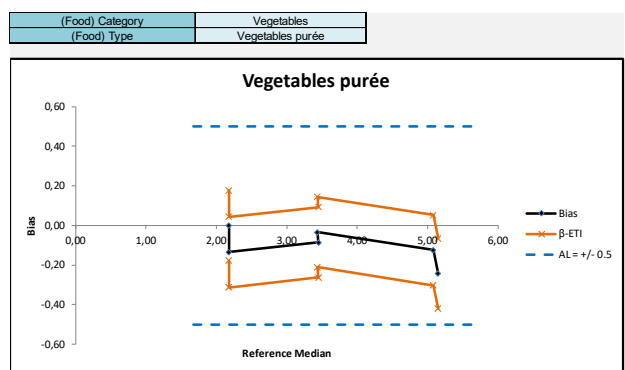
The acceptability limit is set at $AL = 0.5 \log_{10} \text{CFU/g or ml}$.

Figure 22: Accuracy profiles per category, using the surface spreading inoculation.



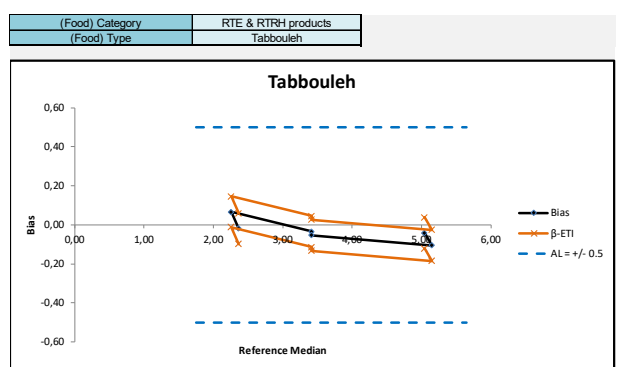
Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.75	-0.095	-0.306	0.116	YES	YES
	2.70	-0.009	-0.220	0.202	YES	YES
	3.26	0.000	-0.211	0.211	YES	YES
	3.15	-0.032	-0.243	0.179	YES	YES
	4.91	-0.236	-0.447	-0.026	YES	YES
	4.92	-0.225	-0.436	-0.015	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.115	0.146	YES	+/- 0.500



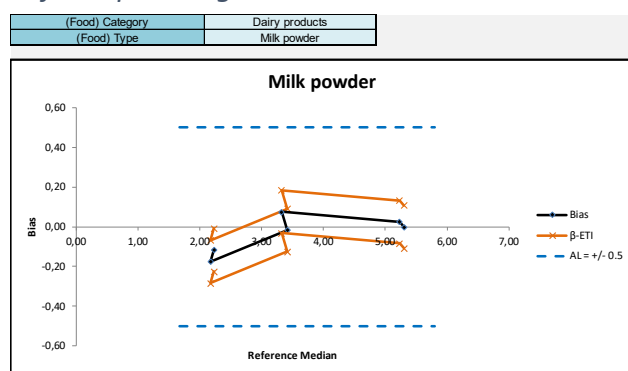
Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.18	0.000	-0.178	0.178	YES	YES
	2.18	-0.135	-0.312	0.043	YES	YES
	3.45	-0.085	-0.263	0.092	YES	YES
	3.43	-0.033	-0.211	0.144	YES	YES
	5.08	-0.125	-0.303	0.053	YES	YES
	5.15	-0.243	-0.421	-0.065	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.104	0.123	YES	+/- 0.500



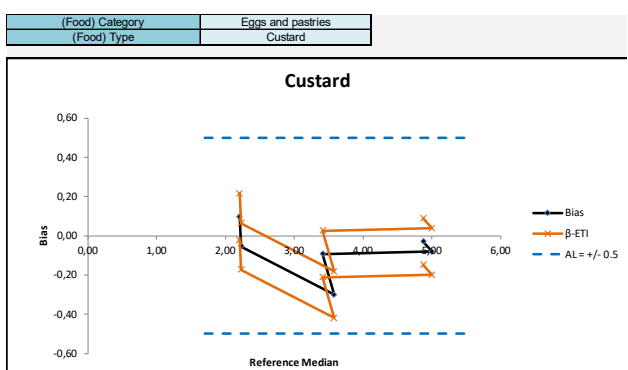
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.36	-0.019	-0.099	0.060	YES	YES
	2.26	0.067	-0.012	0.146	YES	YES
	3.41	-0.035	-0.114	0.045	YES	YES
	3.41	-0.053	-0.133	0.026	YES	YES
	5.15	-0.105	-0.184	-0.025	YES	YES
	5.04	-0.041	-0.121	0.038	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.082	0.055	YES	+/- 0.500



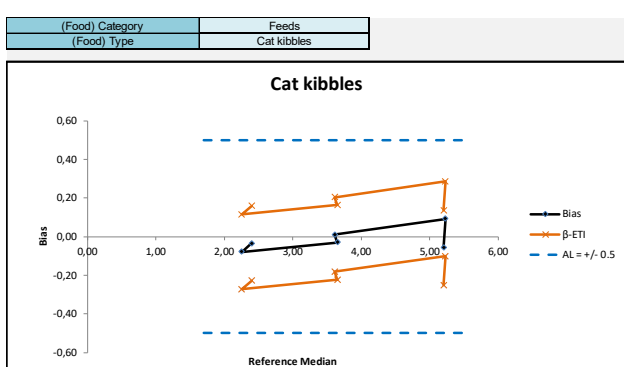
Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.23	-0.117	-0.225	-0.008	YES	YES
	2.18	-0.176	-0.284	-0.068	YES	YES
	3.41	-0.017	-0.125	0.091	YES	YES
	3.32	0.076	-0.033	0.184	YES	YES
	5.23	0.025	-0.083	0.133	YES	YES
	5.30	0.000	-0.108	0.108	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.047	0.075	YES	+/- 0.500



Sample Name	Reference central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.20	0.097	-0.021	0.215	YES	YES
	2.23	-0.054	-0.173	0.064	YES	YES
	3.58	-0.301	-0.419	-0.183	YES	YES
	3.41	-0.093	-0.211	0.026	YES	YES
	5.00	-0.081	-0.199	0.037	YES	YES
	4.88	-0.030	-0.148	0.088	YES	YES

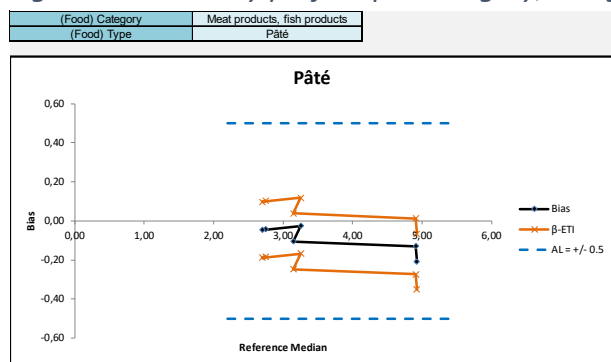
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.095	0.082	YES	+/- 0.500



Sample Name	Reference Central value	Bias	Lower β-ETI	Upper β-ETI	β-ETI compared to AL=±0.5 Acceptable	β-ETI compared to final AL Acceptable
	2.40	-0.036	-0.230	0.157	YES	YES
	2.26	-0.079	-0.273	0.114	YES	YES
	3.65	-0.030	-0.223	0.163	YES	YES
	3.61	0.010	-0.183	0.204	YES	YES
	5.23	0.092	-0.102	0.285	YES	YES
	5.20	-0.058	-0.251	0.135	YES	YES

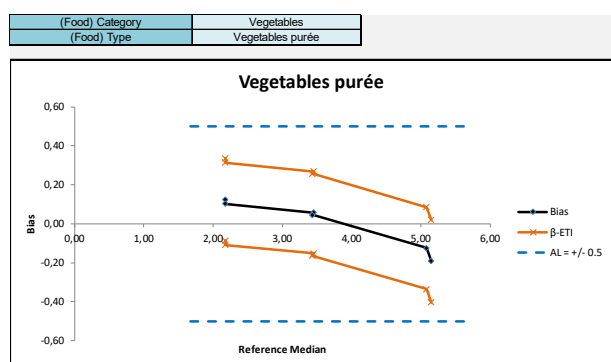
	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.114	0.134	YES	+/- 0.500

Figure 23: Accuracy profiles per category, using the pour plate inoculation.



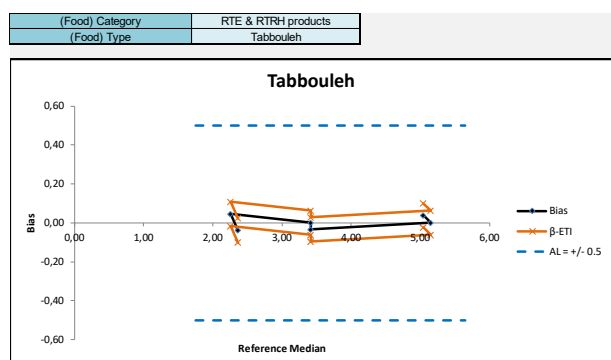
Sample Name	Reference central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.75	-0.041	-0.184	0.102	YES	YES
	2.70	-0.046	-0.189	0.097	YES	YES
	3.26	-0.025	-0.168	0.118	YES	YES
	3.15	-0.105	-0.248	0.038	YES	YES
	4.91	-0.130	-0.273	0.013	YES	YES
	4.92	-0.208	-0.351	-0.065	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.115	0.099	YES	+/- 0.500



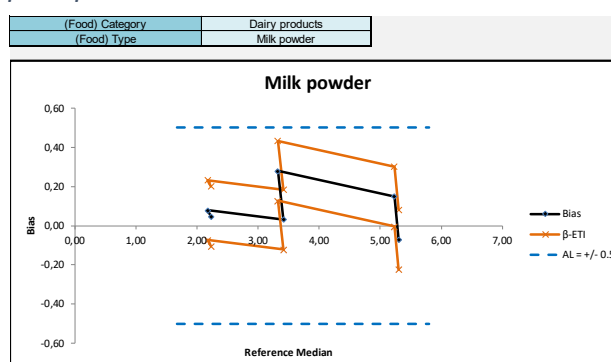
Sample Name	Reference Central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.18	0.125	-0.086	0.336	YES	YES
	2.18	0.103	-0.108	0.313	YES	YES
	3.45	0.058	-0.153	0.269	YES	YES
	3.43	0.046	-0.165	0.257	YES	YES
	5.08	-0.125	-0.336	0.086	YES	YES
	5.15	-0.192	-0.403	0.019	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.104	0.146	YES	+/- 0.500



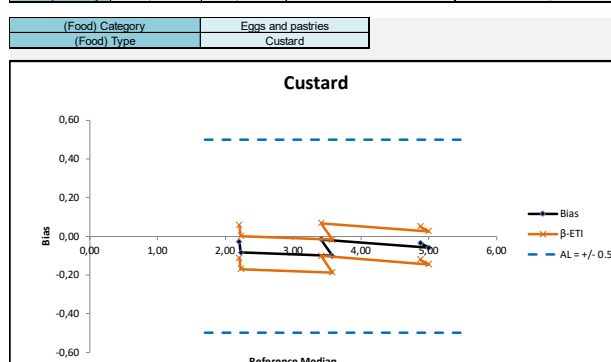
Sample Name	Reference Central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.36	-0.040	-0.102	0.023	YES	YES
	2.26	0.046	-0.016	0.108	YES	YES
	3.41	0.000	-0.062	0.062	YES	YES
	3.41	-0.035	-0.097	0.027	YES	YES
	5.15	0.000	-0.062	0.062	YES	YES
	5.04	0.038	-0.024	0.100	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.082	0.043	YES	+/- 0.500



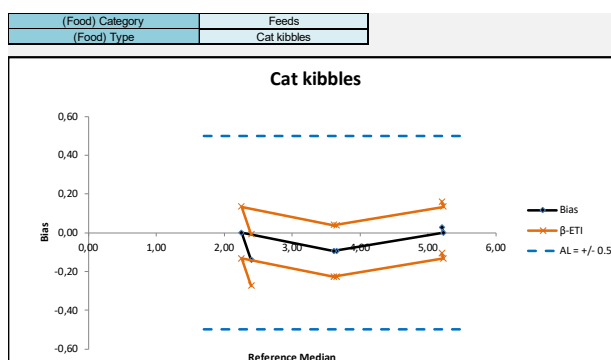
Sample Name	Reference Central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.23	0.048	-0.105	0.201	YES	YES
	2.18	0.079	-0.074	0.232	YES	YES
	3.41	0.032	-0.121	0.185	YES	YES
	3.32	0.280	0.127	0.433	YES	YES
	5.23	0.150	-0.003	0.303	YES	YES
	5.30	-0.071	-0.224	0.082	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.047	0.106	YES	+/- 0.500



Sample Name	Reference Central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.20	-0.028	-0.113	0.057	YES	YES
	2.23	-0.084	-0.169	0.001	YES	YES
	3.58	-0.103	-0.188	-0.017	YES	YES
	3.41	-0.017	-0.102	0.068	YES	YES
	5.00	-0.060	-0.146	0.025	YES	YES
	4.88	-0.036	-0.121	0.049	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.095	0.059	YES	+/- 0.500



Sample Name	Reference Central value	Bias	Lower β -ETI	Upper β -ETI	β -ETI compared to AL=±0.5 Acceptable	β -ETI compared to final AL Acceptable
	2.40	-0.143	-0.275	-0.010	YES	YES
	2.26	0.000	-0.133	0.133	YES	YES
	3.65	-0.097	-0.230	0.036	YES	YES
	3.61	-0.094	-0.227	0.039	YES	YES
	5.23	0.000	-0.133	0.133	YES	YES
	5.20	0.026	-0.106	0.159	YES	YES

	Reference method	Alternative method	SD repeatability of reference method ≤ 0.125	Final AL
SD Repeatability	0.114	0.092	YES	+/- 0.500

The tolerance intervals fall into the acceptability limits for all categories with the two modalities of inoculation.

4.3.3. Conclusion

The alternative method with interpretation with single plate and single dilution is accepted as being equivalent to the reference method.

5. General conclusion

The data and interpretation of the method comparison study, interlaboratory study and the first extension study fulfill the requirements of EN ISO 16140-2/A1(2024). The BACARA method and its BACARA 2 extension are considered equivalent to the reference method described in standard EN ISO 7932:2005 and its amendment A1 of 2020.

The data and interpretation of the relative trueness and accuracy profiles of the second extension study fulfill the requirements of EN ISO 16140-2/A1:2024. The BACARA® method, using the BACARA® 2 formulation and the reading of the Petri dishes using one single plate and one single dilution, is considered equivalent to the reference method described in the standard ISO 7932/A1:2020.

The results expressed by reading BACARA® 2 Petri dishes using only one single plate and one single dilution give results very close, almost identical to the ones expressed using the requirements of the ISO 7218:2024.

Le Lion d'Angers, June 25, 2025

François Le Nestour

Head of the Methods Validation studies and R&D

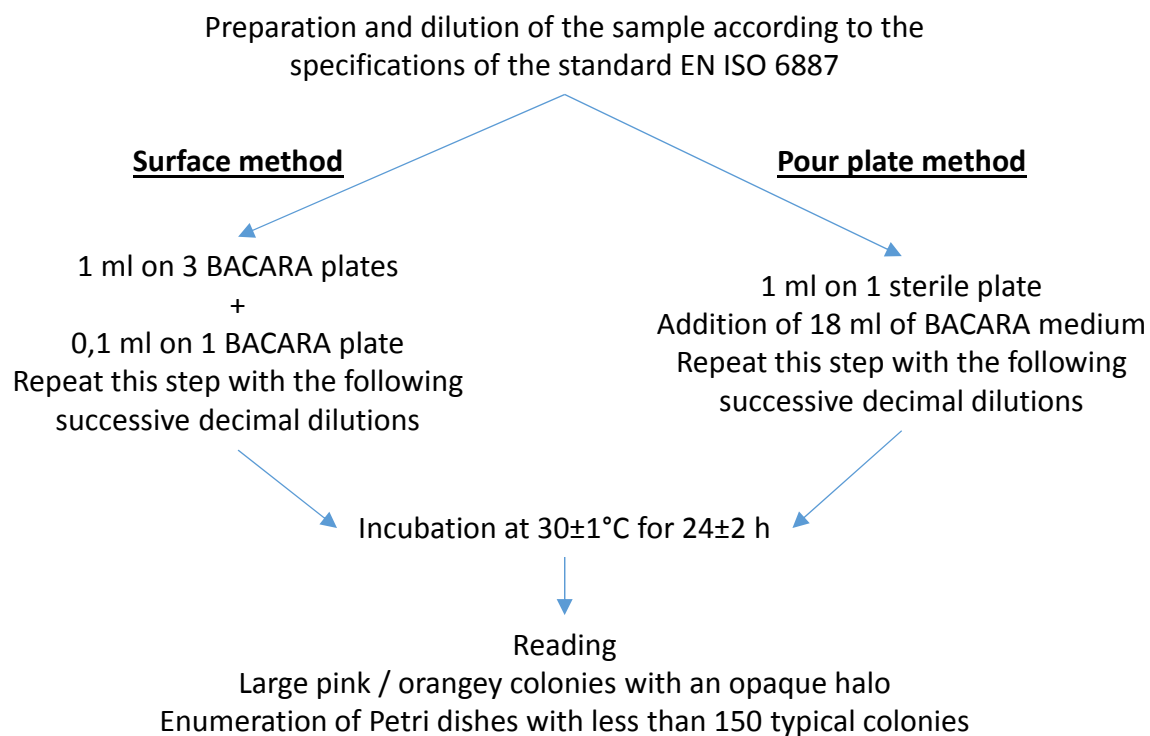
A handwritten signature in black ink, consisting of a stylized 'F' and 'N' followed by a horizontal line.

APPENDICES

APPENDIX A

PROTOCOL OF THE BACARA METHOD

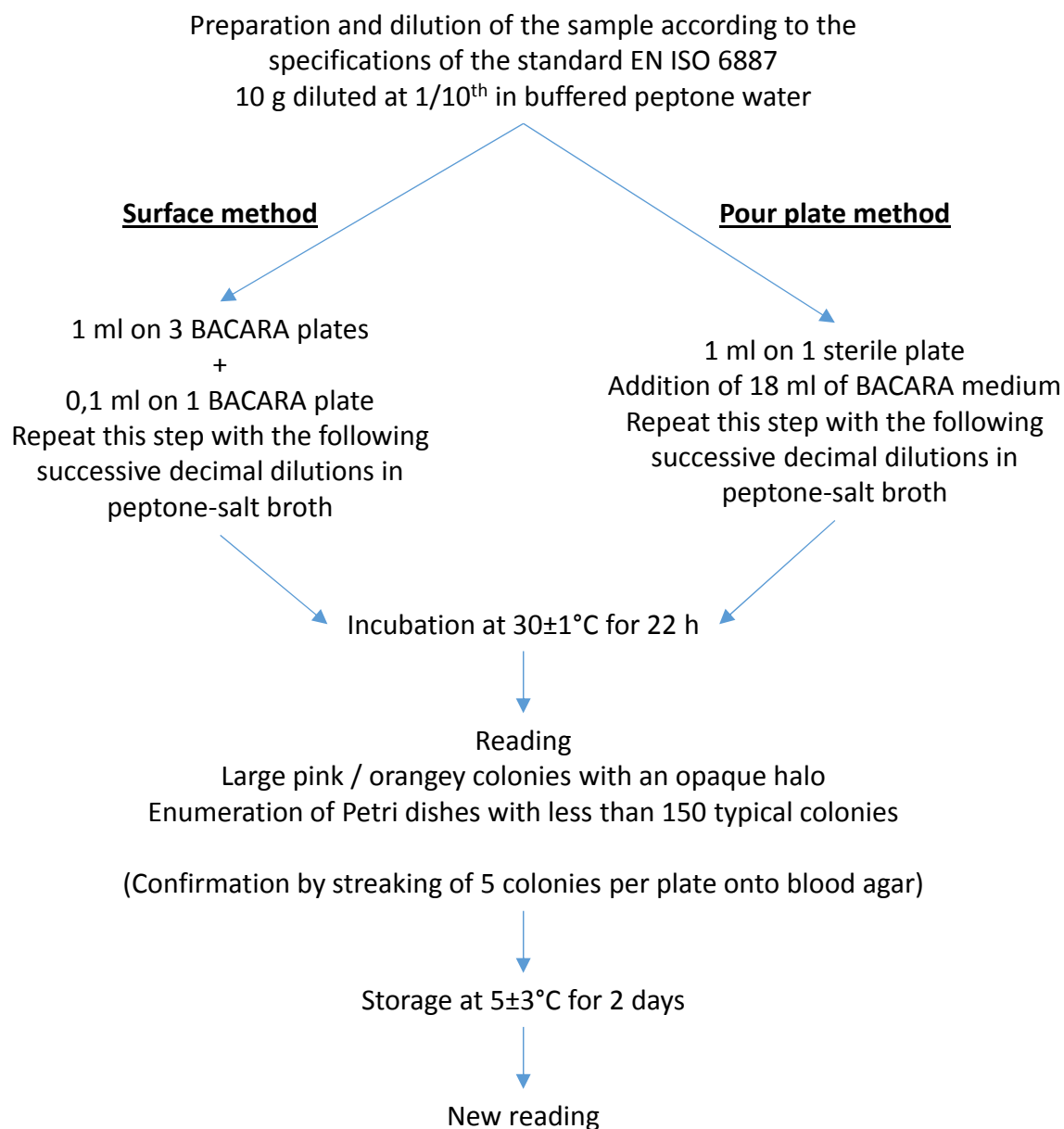
Diagram of the procedure as described in the user guide



APPENDIX A

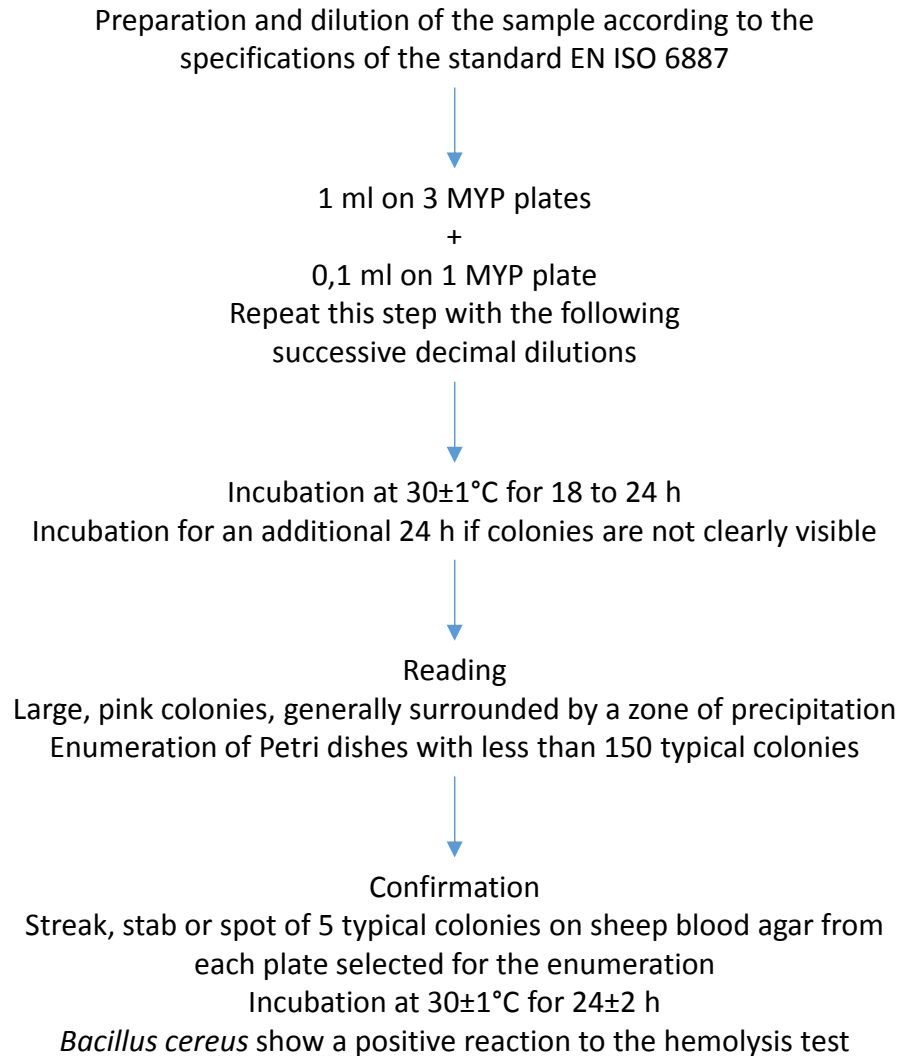
PROTOCOL OF THE BACARA METHOD

Diagram of the procedure as applied by the Expert Laboratory



APPENDIX B
EN ISO 7932:2005

Diagram of the procedure as described in the standard



Appendix C

Artificial contaminations

Initial validation study

Code	Sample name	Category	Strain			Stress type	Stress intensity
			Code	Name	Origin		
G1	Boar stew	PCM	BA10	<i>Bacillus cereus</i>	Milk	spores	/
G2	Lobster bisque	PCM	BA14	<i>Bacillus cereus</i>	Egg	spores	/
G3	Milk powder	PL	BA10	<i>Bacillus cereus</i>	Milk	spores	/
G4	Strawberry bifidus yoghurt	PL	BA36	<i>Bacillus cereus</i>	ATCC10876	spores	/
G5	Potato flakes	FL	BA10	<i>Bacillus cereus</i>	Milk	spores	/
G6	Spices for paella	FL	BA36	<i>Bacillus cereus</i>	ATCC10876	spores	/
G7	Sweets	D	BA14	<i>Bacillus cereus</i>	Egg	spores	/
G8	Egg powder	D	BA36	<i>Bacillus cereus</i>	ATCC10876	spores	/
G9	Bone meal	AA	BA14	<i>Bacillus cereus</i>	Egg	spores	/
G10	Chasseur sauce with mushrooms	FL	BA10	<i>Bacillus cereus</i>	Milk	spores	/
H1	Chocolate powder	D	BA19	<i>Bacillus cereus</i>	Environment	20 min. at 48°C	0.65
H2	Seed mixture	AA	BA51	<i>Bacillus mycoides cereus</i>	Red berries semolina pudding	20 min. at 48°C	0.5
H4	Sweets	D	BA51	<i>Bacillus mycoides cereus</i>	Red berries semolina pudding	20 min. at 48°C	0.5
H6	Forêt noire cake	D	BA51	<i>Bacillus mycoides cereus</i>	Red berries semolina pudding	20 min. at 48°C	0.5
H7	Pudding	D	BA19	<i>Bacillus cereus</i>	Environment	20 min. at 48°C	0.65
H8	Chicken aiguillettes	PCM	BA51	<i>Bacillus mycoides cereus</i>	Red berries semolina pudding	20 min. at 48°C	0.5
H9	Fish fillet	PCM	BA14	<i>Bacillus cereus</i>	Egg	spores	/
H10	Breaded pork	PCM	BA36	<i>Bacillus cereus</i>	ATCC10876	spores	/
I5	Chocolate éclair	D	BA10	<i>Bacillus cereus</i>	Milk	spores	/
I6	Chocolate cake	D	BA50	<i>Bacillus cereus</i>	Milk	20 min. at 48°C	0.5
I7	Pastry cream cake	D	BA50	<i>Bacillus cereus</i>	Milk	20 min. at 48°C	0.5
I8	Pasteurized milk	PL	BA50	<i>Bacillus cereus</i>	Milk	20 min. at 48°C	0.5
I9	Raw milk	PL	BA10	<i>Bacillus cereus</i>	Milk	spores	/
I10	Milk powder	PL	BA10	<i>Bacillus cereus</i>	Milk	spores	/
L1	Pullet feed	AA	Contamination by mixture : 2 g of horse feed				
L2	Turkey feed	AA	Contamination by mixture : 3 g of horse feed				
L3	Horde feed	AA	Contamination by mixture : 4 g of horse feed				
M1	Brie cheese	PL	BA35	<i>Bacillus cereus</i>	Milk powder	24h 4°C, 10 min. 50°C	0.58
M3	St Nectaire cheese	PL	BA65	<i>Bacillus mycoides cereus</i>	Dairy product	24h 4°C, 10 min. 50°C	0.5
M4	Brie de Meaux cheese, aged	PL	BA65	<i>Bacillus mycoides cereus</i>	Dairy product	24h 4°C, 10 min. 50°C	0.5
M5	Brie de Meaux cheese, aged	PL	BA65	<i>Bacillus mycoides cereus</i>	Dairy product	24h 4°C, 10 min. 50°C	0.5
M6	Brie cheese	PL	BA35	<i>Bacillus cereus</i>	Milk powder	24h 4°C, 10 min. 50°C	0.58

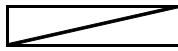
Second renewal study

Sample #	Sample name	Category	Type	Strain			Contamination
				Code	Name	Origin	
B306	Pasteurized milk cheese	DP	b	CLC707	<i>Bacillus cereus</i> group III	Three cheese pizza	2-3 days at 5±3°C
B309	Coffee ice-cream	DP	b	CLC707	<i>Bacillus cereus</i> group III	Three cheese pizza	2 weeks at -24°C
B320	Chocolate flavoured infant cereals	BF	a	ANJ157	<i>Bacillus cereus</i> group IV	Starch	Spores
B321	Vanilla flavoured infant cereals	BF	a	ANJ157	<i>Bacillus cereus</i> group IV	Starch	Spores
B324	Dehydrated meat-based cooking ingredient	M&FP	c	ANJ157	<i>Bacillus cereus</i> group IV	Starch	Spores
B325	Dehydrated fish-based cooking ingredient	M&FP	c	ANJ157	<i>Bacillus cereus</i> group IV	Starch	Spores
B326	Organic infant formula with probiotics	BF	c	BMK053	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B327	Infant food supplement multigrain	BF	a	BMK053	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B328	Infant formula 6 months - 1 year with probiotics	BF	c	BMK053	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B329	Infant formula 6 months - 1 year with probiotics	BF	c	BMK053	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B330	Semi-skimmed milk powder	DP	c	FEQ368	<i>Bacillus cereus</i> group IV	Cheese with nuts	Air-dried culture - 2 weeks at room temp.
B331	Infant formula 10-36 months w/o probiotics	BF	b	FEQ368	<i>Bacillus cereus</i> group IV	Cheese with nuts	Air-dried culture - 2 weeks at room temp.
B332	Infant formula 10 months - 3 years w/o probiotics	BF	b	FEQ368	<i>Bacillus cereus</i> group IV	Cheese with nuts	Air-dried culture - 2 weeks at room temp.
B333	Infant formula 0 - 6 months w/o probiotics	BF	b	FEQ368	<i>Bacillus cereus</i> group IV	Cheese with nuts	Air-dried culture - 2 weeks at room temp.
B334	Infant formula 10 months - 3 years with probiotics	BF	c	CND844	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B335	Whole milk powder	DP	c	CND844	<i>Bacillus cereus</i> group III	Milk proteins	Air-dried culture - 2 weeks at room temp.
B336	Puffed rice for animals	F	a	GFF463	<i>Bacillus cereus</i>	Common wheat	Spores
B337	Pre-cooked pasta	V	b	GFF463	<i>Bacillus cereus</i>	Common wheat	2-3 days at 5±3°C
B338	Pre-cooked rice	V	b	GFF463	<i>Bacillus cereus</i>	Common wheat	2-3 days at 5±3°C
B339	Pasteurized egg yolk powder 1	E&P	b	REB947	<i>Bacillus cereus</i> group IV	Crème brûlée with cranberries	Air-dried culture - 2 weeks at room temp.
B340	Pasteurized egg yolk powder 2	E&P	b	REB947	<i>Bacillus cereus</i> group IV	Crème brûlée with cranberries	Air-dried culture - 2 weeks at room temp.
B341	Pasteurized liquid egg yolk	E&P	a	KJL797	<i>Bacillus cereus</i> group V	Ground	2-3 days at 5±3°C
B342	Pasteurized liquid whole egg	E&P	a	KJL797	<i>Bacillus cereus</i> group V	Ground	2-3 days at 5±3°C
B343	Liquid egg yolk (salt 11%)	E&P	a	CBB622	<i>Bacillus cereus</i> group III	Piémontaise	2-3 days at 5±3°C
B344	Liquid whole egg (salt 9% - sugar 10.9%)	E&P	a	CBB622	<i>Bacillus cereus</i> group III	Piémontaise	2-3 days at 5±3°C
B345	Liquid egg yolk (sugar 30%)	E&P	a	KJL797	<i>Bacillus cereus</i> group V	Ground	2-3 days at 5±3°C
B346	Pasteurized egg white powder	E&P	b	DJQ279	<i>Bacillus cereus</i> group II	Ground	Air-dried culture - 2 weeks at room temp.
B347	Pasteurized whole egg powder 1	E&P	b	DJQ279	<i>Bacillus cereus</i> group II	Ground	Air-dried culture - 2 weeks at room temp.
B348	Dehydrated complementary food for cat	F	a	NBB986	<i>Bacillus cereus</i> group III	Pieces of pork muzzle	Air-dried culture - 2 weeks at room temp.
B349	Dehydrated complementary food for dog	F	a	NBB986	<i>Bacillus cereus</i> group III	Pieces of pork muzzle	Air-dried culture - 2 weeks at room temp.
B351	Broken rice for pets	F	a	GFF463	<i>Bacillus cereus</i>	Common wheat	Spores
B352	Infant food supplement rice-carrots	BF	a	HEK655	<i>Bacillus cereus</i> group VI	Zucchini puree	Spores
B353	Infant food supplement semolina-vegetables	BF	a	HEK655	<i>Bacillus cereus</i> group VI	Zucchini puree	Spores
B354	Infant formula 12 months - 3 years w/o probiotics	BF	b	GAR051	<i>Bacillus cereus</i>	Cheesecake	Air-dried culture - 2 weeks at room temp.
B355	Infant formula 6 - 12 months w/o probiotics	BF	b	GAR051	<i>Bacillus cereus</i>	Cheesecake	Air-dried culture - 2 weeks at room temp.
B356	Chocolate flavoured infant cereals	BF	a	PCE867	<i>Bacillus cereus</i> group II	Organic peppermint	Spores
B357	Vanilla flavoured infant cereals	BF	a	PCE867	<i>Bacillus cereus</i> group II	Organic peppermint	Spores
B358	Organic infant formula with probiotics	BF	c	GAR051	<i>Bacillus cereus</i>	Cheesecake	Air-dried culture - 2 weeks at room temp.
B359	Organic Infant formula with probiotics	BF	c	GAR051	<i>Bacillus cereus</i>	Cheesecake	Air-dried culture - 2 weeks at room temp.
B360	Organic skimmed milk powder	DP	c	PCE867	<i>Bacillus cereus</i> group II	Organic peppermint	Spores
B361	Calf & kid goats feed	F	c	DCA171	<i>Bacillus cereus</i> group III	Environment	Spores
B362	Rabbit feed	F	b	DCA171	<i>Bacillus cereus</i> group III	Environment	Spores
B363	Rabbit feed	F	b	DCA171	<i>Bacillus cereus</i> group III	Environment	Spores

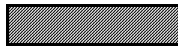
Appendix D

Relative trueness study – Raw results

Key:



replicate analyzed during the initial validation study,
not considered as part of the renewal study ac. EN ISO 16140-2:2016



not realized: only one replicate analyzed during the renewal study
ac. EN ISO 16140-2:2016

Results are expressed in CFU/g or ml

nc: not countable



Estimated number



Microorganisms are present but less than 40 per g or ml



Results not countable or inferior to the limit of quantification

Relative trueness study - Meat products, fish products, seafood

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005						BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		Result	Result	R1		R2		Result	Result	R1		R2		Result	Result
						CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.		
Initial validation study	E1	Pâté de campagne	No	a	-1	0	/	0	/	<10	<10	0	/	0	/	<10	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	E3	Thai style chicken with rice and vegetables	No	b	-1	nc	/	nc	/	nc	nc	1	100%	1	100%	10	10	>150	/	>150	/	nc	nc
					-2	nc	/	nc	/			0	/	0	/			nc	/	nc	/		
	G1	Boar stew	Yes	b	-2	108	100%	113	100%	11000	12000	116	100%	109	100%	12000	11000	102	100%	108	100%	10000	11000
					-3	10	100%	14	100%			12	100%	15	100%			9	100%	9	100%		
	G2	Lobster bisque	Yes	c	-2	114	100%	118	100%	11000	12000	126	100%	128	100%	13000	12000	98	100%	100	100%	9800	9900
					-3	12	100%	10	100%			14	100%	7	100%			10	100%	9	100%		
	G10	Chasseur sauce with mushrooms	Yes	c	-2	98	100%	76	100%	10000	7600	96	100%	73	100%	9800	7400	120	100%	98	100%	12000	10000
					-3	13	100%	8	100%			12	100%	8	100%			11	100%	12	100%		
	H8	Chicken aiguillettes	Yes	a	-2	80	100%	96	100%	8200	9800	51	100%	69	100%	5300	6800	80	100%	67	100%	7800	6800
					-3	10	100%	12	100%			7	100%	6	100%			6	100%	8	100%		
	H9	Fish fillet	Yes	a	-2	120	100%	113	100%	12000	11000	128	100%	118	100%	13000	13000	124	100%	136	100%	12000	14000
					-3	16	100%	13	100%			16	100%	20	100%			13	100%	17	100%		
	H10	Breaded pork	Yes	a	-2	69	100%	76	100%	7400	7500	68	100%	69	100%	6800	7400	69	100%	75	100%	7800	7800
					-3	12	100%	7	100%			7	100%	12	100%			17	100%	11	100%		
Second renewal study	I1	Meat ready-to-reheat meal	No	b	-1	49	100%	55	100%	470	650	35	100%	36	100%	350	390	60	100%	63	100%	580	660
					-2	3	100%	16	100%			4	100%	7	100%			4	100%	10	100%		
	I2	Beef ready-to-reheat meal	No	b	-1	24	100%	28	100%	260	280	22	100%	23	100%	230	250	18	100%	23	100%	190	240
					-2	5	100%	3	100%			3	100%	5	100%			3	100%	3	100%		
	I3	Pork ready-to-reheat meal	No	b	-1	69	100%	51	100%	720	580	45	100%	57	100%	510	560	66	100%	63	100%	750	650
					-2	10	100%	9	100%			11	100%	5	100%			17	100%	8	100%		
	I4	Minced raw pork meat	No	a	-1	63	100%	53	100%	650	610	72	100%	77	100%	750	750	>150	/	>150	/	1300	800
					-2	9	100%	14	100%			10	100%	5	100%			13	100%	8	100%		
	B303	Shepherd's pie	No	b	-1	4	100%			40		11	100%			120		7	100%			70	
					-2	1	100%					2	100%					0	/				
	B304	Tuna fillet	No	a	-1	80	100%			760		87	100%			910		60	100%			610	
					-2	4	100%					13	100%					7	100%				
	B305	Raw minced veal	No	a	-1	0	/			<10		0	/			<10		0	/			<10	
					-2	0	/					0	/					0	/				
	B322	Fish soup thai flavoured	No	c	-1	13	100%			130		10	100%			110		18	100%			170	
					-2	1	100%					2	100%					1	100%				
	B323	Dehydrated poultry cream with mushrooms	No	c	-1	47	100%			480		52	100%			490		46	100%			450	
					-2	6	100%					2	100%					3	100%				
	B324	Dehydrated meat-based cooking ingredient	Yes	c	-1	66	100%			720		64	100%			660		46	100%			480	
					-2	13	100%					9	100%					7	100%				
	B325	Dehydrated fish-based cooking ingredient	Yes	c	-1	146	100%			1600		155	100%			1600		152	100%			1600	
					-2	28	100%					22	100%					19	100%				

Relative trueness study - Dairy products

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005						BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		R1	R2	R1		R2		R1	R2	R1		R2		R1	R2
						CFU	Conf.	CFU	Conf.	Result	Result	CFU	Conf.	CFU	Conf.	Result	Result	CFU	Conf.	CFU	Conf.	Result	Result
Initial validation study	G3	Milk powder	Yes	c	-2	86	100%	96	100%	8800	9700	77	100%	97	100%	8200	10000	120	100%	126	100%	12000	12000
					-3	11	100%	11	100%			13	100%	13	100%			11	100%	11	100%		
	G4	Bifidus strawberry yoghurt	Yes	b	-2	79	100%	91	100%	8000	9300	65	100%	92	100%	6700	9400	70	100%	76	100%	7000	7600
					-3	9	100%	11	100%			9	100%	11	100%			7	100%	8	100%		
	I8	Pasteurized milk	Yes	b	-1	/	/	/	/	2600	3100	/	/	/	/	1900	2500	140	100%	148	100%	1400	1500
					-2	25	100%	31	100%			19	100%	27	100%			12	100%	15	100%		
					-3	4	100%	3	100%			2	100%	1	100%			/	/	/	/		
	I9	Raw milk	Yes	a	-2	nc	/	nc	/	9000	7000	92	100%	71	100%	9500	7500	110	100%	83	100%	11000	8400
					-3	9	100%	7	100%			13	100%	12	100%			10	100%	9	100%		
	I10	Milk powder	Yes	c	-2	89	100%	67	100%	9500	7500	111	100%	95	100%	11000	10000	95	100%	97	100%	9900	11000
					-3	16	100%	15	100%			8	100%	15	100%			14	100%	21	100%		
	J4	Raw milk camembert cheese	No	a	-1	0	/	0	/	<10	<10	0	/	0	/	<10	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	J5	Raw milk camembert cheese	No	a	-1	0	/	0	/	<10	<10	0	/	0	/	<10	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	J6	Raw milk Coulommiers cheese	No	a	-1	0	/	0	/	<10	<10	0	/	0	/	<10	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	M1	Brie cheese	Yes	a	-2	6	100%	8	100%	600	600	7	100%	5	100%	700	500	11	100%	7	100%	1100	700
					-3	1	100%	0	/			1	100%	0	/			1	100%	0	/		
	M2	Raw milk Normandy cheese	Yes	a	-3	3	100%	7	100%	3000	7000	nc	/	7	100%	10000	7000	nc	/	nc	/	nc	nc
					-4	0	/	0	/			1	100%	1	100%			1	100%	0	/		
	M3	Saint-Nectaire cheese	Yes	a	-2	6	100%	4	100%	600	400	5	100%	10	100%	500	1000	13	100%	10	100%	1300	1000
					-3	0	/	1	100%			2	100%	1	100%			1	100%	1	100%		
	M4	Aged Brie de Meaux cheese 1	Yes	a	-2	14	100%	12	100%	1400	1200	23	100%	13	100%	2300	1400	20	100%	18	100%	1900	1800
					-3	1	100%	1	100%			2	100%	2	100%			1	100%	2	100%		
	M5	Aged Brie de Meaux cheese 2	Yes	a	-2	16	100%	15	100%	1500	1500	18	100%	17	100%	1700	1600	21	100%	30	100%	2200	2900
					-3	1	100%	1	100%			1	100%	1	100%			3	100%	2	100%		
	M6	Brie cheese	Yes	a	-2	16	100%	13	100%	1600	1200	11	100%	10	100%	1100	910	8	100%	8	100%	800	800
					-3	2	100%	0	/			1	100%	0	/			1	100%	0	/		
Second renewal study	B306	Pasteurized milk cheese	Yes	b	-1	50	100%			510		48	100%			450		30	100%			310	
					-2	6	100%					2	100%					4	100%				
	B309	Coffee ice-cream	Yes	b	-1	>150	/			2500		143	100%			1400		>150	/			2400	
					-2	27	100%					15	100%					25	100%				
					-3	1	100%					0	/					1	100%				
	B319	Goat pasteurized milk cheese	No	b	-1	10	100%			100		8	100%			80		10	100%			100	
					-2	1	100%					0	100%					1	100%				
	B330	Semi-skimmed milk powder	Yes	c	-2	18	100%			2000		13	100%			1300		31	100%			2900	
					-3	4	100%					1	100%					1	100%				
	B335	Whole milk powder	Yes	c	-2	68	100%			6700		68	100%			6500		75	100%			7800	
					-3	6	100%					4	100%					11	100%				
	B360	Organic skimmed milk powder	Yes	c	-1	4	100%			40		11	100%			110		7	100%			70	
					-2	0	/					1	100%					0	/				

Relative trueness study - Vegetables

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005						BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		Result	Result	R1		R2		Result	Result	R1		R2		Result	Result
						CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.		
Initial validation study	A1	Tabbouleh	No	c	-1	nc	/	nc	/	<100	<100	8	100%	13	100%	80	130	9	100%	10	100%	90	90
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	A2	Potato salad	No	c	-1	34	100%	20	100%	340	280	32	100%	29	100%	320	280	33	100%	36	100%	330	340
					-2	3	100%	8	100%			3	100%	0	/			3	100%	1	100%		
	A3	Ratatouille	No	c	-1	11	100%	12	100%	110	180	11	100%	10	100%	110	90	9	100%	8	100%	90	80
					-2	1	100%	4	100%			1	100%	0	/			1	100%	0	/		
	B1	Soup	No	c	-1	0	/	0	/	<10	<10	2	100%	0	/	20	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	D1	Potato flakes	No	a	-1	5	100%	4	100%	50	40	5	100%	3	100%	50	30	6	100%	7	100%	60	70
					-2	1	100%	0	/			0	/	0	/			0	/	2	100%		
	D2	Potato flakes	No	a	-1	3	100%	2	100%	30	20	1	100%	3	100%	10	30	3	100%	3	100%	30	30
					-2	1	100%	1	100%			0	/	0	/			1	100%	0	/		
	D3	Tomato flat beans	No	c	-1	0	/	3	100%	<10	30	0	/	0	/	<10	<10	1	100%	0	/	10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	D4	Lentil salad	No	c	-1	nc	/	nc	/	nc	nc	4	100%	4	100%	40	40	0	/	0	/	<10	<10
					-2	nc	/	nc	/			1	100%	1	100%			0	/	0	/		
	D5	Glass cup broccoli beetroot	No	c	-1	174	100%	112	100%	1700	1200	175	100%	150	100%	1700	1500	71	100%	67	100%	710	680
					-2	14	100%	16	100%			7	100%	10	100%			7	100%	4	100%		
	E2	Pasta salad with chicken	No	b	-1	nc	/	nc	/	800	400	12	100%	9	100%	120	90	13	100%	11	100%	130	100
					-2	8	100%	4	100%			1	100%	1	100%			1	100%	0	/		
	E4	Tokyo salad	No	c	-1	nc	/	nc	/	nc	nc	0	/	0	/	<10	<10	>150	/	26	100%	nc	240
					-2	nc	/	nc	/			0	/	0	/			>150	/	0	/		
	E5	Nicoise salad	No	c	-1	3	100%	2	100%	30	20	3	100%	3	100%	30	30	3	100%	6	100%	30	60
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
	F1	Spinach	No	c	-1	14	100%	5	100%	140	50	6	100%	4	100%	60	40	6	100%	11	100%	60	110
					-2	1	100%	1	100%			0	/	0	/			0	/	1	100%		
	F2	Spinach	No	c	-1	7	100%	7	100%	70	70	4	100%	5	100%	40	50	4	100%	7	100%	40	70
					-2	0	/	1	100%			0	/	0	/			1	100%	1	100%		
	F3	Spinach	No	c	-1	123	100%	136	100%	1200	1400	122	100%	121	100%	1300	1200	127	100%	139	100%	1400	1500
					-2	9	100%	15	100%			19	100%	14	100%			23	100%	21	100%		
	G5	Potato flakes	Yes	a	-2	>150	/	>150	/	20000	20000	>150	/	>150	/	18000	19000	>150	/	>150	/	17000	19000
					-3	20	100%	20	100%			18	100%	19	100%			17	100%	19	100%		
	G6	Paella spices	Yes	a	-2	110	100%	93	100%	11000	9400	108	100%	98	100%	11000	10000	108	100%	113	100%	11000	11000
					-3	14	100%	10	100%			15	100%	12	100%			8	100%	10	100%		
	H3	Spices mixture	Yes	a	-2	nc	/	nc	/	nc	nc	3	100%	2	100%	300	200	2	100%	4	100%	200	400
					-3	nc	/	nc	/			0	/	0	/			0	/	0	/		

Relative trueness study - Vegetables

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005						BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		R1 Result	R2 Result	R1		R2		R1 Result	R2 Result	R1		R2		R1 Result	R2 Result
						CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.		
Second renewal study	B310	Common wheat	No	a	-1	6	100%			60		5	100%			50		6	100%			60	
					-2	0	/					0	/					0	/				
	B311	Ready-to cook pasta	No	b	-1	15	100%			160		17	100%			160		19	100%			200	
					-2	3	100%					1	100%					3	100%				
	B312	Ready-to cook pasta	No	b	-1	15	100%			150		6	100%			60		12	100%			140	
					-2	1	100%					1	100%					3	100%				
	B313	Ready-to cook pasta	No	b	-1	0	/			<10		0	/			<10		0	/			<10	
					-2	0	/					0	/					0	/				
	B314	Dehydrated onions	No	a	-1	9	100%			90		6	100%			60		4	100%			40	
					-2	0	/					0	/					0	/				
	B315	Dehydrated black mushrooms	No	a	-3	40	100%			39000		47	100%			48000		48	100%			48000	
					-4	3	100%					6	100%					5	100%				
	B316	Dandelions powder	No	a	-1	nc	/			nc		nc	/			nc		nc	/			nc	
					-2	nc	/					nc	/					nc	/				
	B317	Salad potatoes, bacon, tomatoes	No	c	-2	52	100%			5100		55	100%			5600		51	100%			5500	
					-3	4	100%					7	100%					10	100%				
	B318	Breadcrumbs	No	b	-2	40	100%			3900		47	100%			4800		48	100%			4800	
					-3	3	100%					6	100%					5	100%				
	B337	Pre-cooked pasta	Yes	b	-1	60	100%			640		85	100%			850		67	100%			640	
					-2	10	100%					8	100%					3	100%				
	B338	Pre-cooked rice	Yes	b	-2	71	100%			7600		67	100%			6900		75	100%			7700	
					-3	13	100%					9	100%					10	100%				

Relative trueness study - Eggs and pastries

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005				BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		R1	R2	R1		R2		R1	R2	R1		R2	
						CFU	Conf.	CFU	Conf.	Result	Result	CFU	Conf.	CFU	Conf.	Result	Result	CFU	Conf.	CFU	Conf.
Initial validation study	C1	Red berries semolina pudding	No	c	-1	23	100%	20	100%	240	240	24	100%	20	100%	260	240	21	100%	16	100%
					-2	3	100%	3	100%			5	100%	6	100%			1	100%	1	100%
	G7	Sweets	Yes	c	-2	96	100%	124	100%	9700	12000	98	100%	96	100%	9800	9600	116	100%	113	100%
					-3	11	100%	10	100%			10	100%	10	100%			12	100%	10	100%
	G8	Egg powder	Yes	b	-2	98	100%	93	100%	10000	9600	108	100%	98	100%	11000	10000	93	100%	120	100%
					-3	16	100%	13	100%			15	100%	12	100%			9	100%	10	100%
	H1	Chocolate powder	Yes	c	-2	13	100%	6	100%	1300	600	2	100%	1	100%	200	100	5	100%	6	100%
					-3	1	100%	2	100%			0	/	0	/			0	/	2	100%
	H4	Sweets	Yes	c	-2	113	100%	98	100%	11000	9600	54	100%	49	100%	5800	4700	51	100%	50	100%
					-3	13	100%	8	100%			10	100%	3	100%			5	100%	8	100%
	H5	Profiteroles	Yes	c	-2	nc	/	nc	/	nc	nc	6	100%	3	100%	600	300	13	100%	12	100%
					-3	nc	/	nc	/			0	/	0	/			3	100%	2	100%
Second renewal study	H6	Forêt noire cake	Yes	c	-2	61	100%	48	100%	6400	5500	42	100%	45	100%	4500	5100	89	100%	50	100%
					-3	9	100%	13	100%			7	100%	11	100%			12	100%	6	100%
	H7	Pudding	Yes	c	-2	7	100%	6	100%	700	600	9	100%	8	100%	900	800	9	100%	2	100%
					-3	1	100%	1	100%			1	100%	1	100%			2	100%	0	/
	I5	Chocolate éclair	Yes	c	-2	83	100%	72	100%	8400	7700	83	100%	96	100%	8400	10000	125	100%	101	100%
					-3	9	100%	13	100%			9	100%	15	100%			13	100%	19	100%
	I6	Chocolate cake	Yes	c	-1	/	/	/	/	2900	3000	/	/	/	/	2300	3100	>150	/	160	100%
					-2	29	100%	31	100%			23	100%	30	100%			21	100%	12	100%
					-3	3	100%	2	100%			2	100%	4	100%			2	100%	1	100%
	I7	Chou à la crème	Yes	c	-1	/	/	/	/	3000	3000	/	/	/	/	2000	2700	>150	/	>150	/
					-2	31	100%	32	100%			19	100%	26	100%			21	100%	12	100%
					-3	2	100%	1	100%			3	100%	4	100%			/	/	/	/
	B339	Pasteurized egg yolk powder 1	Yes	b	-1	9	100%			90		4	100%			40		6	100%		
					-2	0	/					0	/					0	/		
	B340	Pasteurized egg yolk powder 2	Yes	b	-1	40	100%			400		26	100%			250		38	100%		
					-2	4	100%					2	100%					4	100%		
	B341	Pasteurized liquid egg yolk	Yes	a	-1	6	100%			60		8	100%			80		5	100%		
					-2	0	/					0	/					0	/		
	B342	Pasteurized liquid whole egg	Yes	a	-1	23	100%			220		36	100%			360		26	100%		
					-2	1	100%					4	100%					1	100%		
	B343	Liquid egg yolk (salt 11%)	Yes	a	-2	87	100%			8800		91	100%			9000		102	100%		
					-3	10	100%					8	100%					10	100%		
	B344	Liquid whole egg (salt 9% - sugar 10.9%)	Yes	a	-3	60	100%			59000		53	100%			60000		36	100%		
					-4	5	100%					13	100%					2	100%		
	B345	Liquid egg yolk (sugar 30%)	Yes	a	-3	28	100%			26000		28	100%			26000		16	100%		
					-4	1	100%					1	100%					1	100%		
	B346	Pasteurized egg white powder	Yes	b	-2	16	100%			1600		22	100%			2100		19	100%		
					-3	2	100%					1	100%					1	100%		
	B347	Pasteurized whole egg powder 1	Yes	b	-1	32	100%			340		27	100%			260		24	100%		
					-2	5	100%					2	100%					3	100%		

Relative trueness study - Baby foods

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005				BACARA - Surface spreading				BACARA - Pour plate			
						R1		R1	Result	R1		R1	Result	R1		R1	Result
						CFU	Conf.			CFU	Conf.			CFU	Conf.		
Second renewal study	B320	Chocolate flavoured infant cereals	Yes	a	-1	0	/		<10	0	/		<10	0	/		<10
					-2	0	/			0	/			0	/		
	B321	Vanilla flavoured infant cereals	Yes	a	-1	0	/		<10	0	/		<10	0	/		<10
					-2	0	/			0	/			0	/		
	B326	Organic infant formula with probiotics	Yes	c	-1	1	100%		10	0	/		<10	2	100%		20
					-2	0	/			0	/			0	/		
	B327	Infant food supplement multigrain	Yes	a	-1	9	100%		90	9	100%		90	7	100%		70
					-2	0	/			0	/			0	/		
	B328	Infant formula 6 months - 1 year with probiotics	Yes	c	-3	77	100%		75000	92	100%		90000	60	100%		59000
					-4	6	100%			7	100%			5	100%		
	B329	Infant formula 6 months - 1 year with probiotics	Yes	c	-2	41	100%		3900	68	100%		6700	56	100%		5700
					-3	2	100%			6	100%			7	100%		
	B331	Infant formula 10-36 months w/o probiotics	Yes	b	-1	68	100%		750	45	100%		450	88	100%		890
					-2	14	100%			5	100%			10	100%		
	B332	Infant formula 10 months - 3 years w/o probiotics	Yes	b	-1	124	100%		1300	130	100%		1300	82	100%		900
					-2	14	100%			13	100%			17	100%		
	B333	Infant formula 0 - 6 months w/o probiotics	Yes	b	-3	32	100%		31000	34	100%		34000	31	100%		31000
					-4	2	100%			3	100%			3	100%		
	B334	Infant formula 10 months - 3 years with probiotics	Yes	c	-2	22	100%		2400	29	100%		3100	27	100%		2700
					-3	4	100%			5	100%			3	100%		
	B352	Infant food supplement rice-carots	Yes	a	-3	28	100%		28000	39	100%		41000	24	100%		26000
					-4	3	100%			6	100%			5	100%		
	B353	Infant food supplement semolina-vegetables	Yes	a	-1	104	100%		1100	129	100%		1300	88	100%		850
					-2	19	100%			16	100%			5	100%		
	B354	Infant formula 12 months - 3 years w/o probiotics	Yes	b	-1	52	100%		550	54	100%		580	44	100%		480
					-2	8	100%			10	100%			9	100%		
	B355	Infant formula 6 - 12 months w/o probiotics	Yes	b	-2	33	100%		3500	51	100%		5500	48	100%		4700
					-3	5	100%			9	100%			4	100%		
	B356	Chocolate flavoured infant cereals	Yes	a	-1	6	100%		60	8	100%		80	9	100%		90
					-2	0	/			0	/			0	/		
	B357	Vanilla flavoured infant cereals	Yes	a	-1	21	100%		200	18	100%		180	23	100%		220
					-2	1	100%			2	100%			1	100%		
	B358	Organic infant formula with probiotics	Yes	c	-1	60	100%		610	58	100%		550	40	100%		410
					-2	7	100%			3	100%			5	100%		
	B359	Organic Infant formula with probiotics	Yes	c	-1	7	100%		70	9	100%		90	6	100%		60
					-2	0	/			0	/			1	/		

Relative trueness study - Feed

Study	Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005						BACARA - Surface spreading						BACARA - Pour plate					
						R1		R2		Result	Result	R1		R2		Result	Result	R1		R2		Result	Result
						CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.			CFU	Conf.	CFU	Conf.		
Initial validation study	G9	Bone meal	Yes	c	-2	99	100%	116	100%	10000	12000	116	100%	99	100%	12000	10000	92	100%	103	100%	9200	10000
					-3	11	100%	14	100%			12	100%	12	100%			9	100%	11	100%		
	H2	Seed mixture	Yes	b	-2	55	100%	63	100%	5500	6300	57	100%	46	100%	6100	4700	62	100%	64	100%	6300	6300
					-3	5	100%	6	100%			10	100%	6	100%			7	100%	5	100%		
	J1	Laying hen feed	No	b	-1	3	100%	12	100%	30	120	1	100%	4	100%	10	40	2	100%	2	100%	20	20
					-2	1	100%	1	100%			1	100%	0	/			0	/	0	/		
	J2	Chicken feed	No	b	-1	11	100%	13	100%	140	140	24	100%	5	100%	240	50	24	100%	11	100%	240	140
					-2	4	100%	2	100%			2	100%	1	100%			2	100%	1	100%		
	J3	Dairy cow feed	No	c	-1	7	100%	8	100%	70	80	3	100%	4	100%	30	40	1	100%	2	100%	10	20
					-2	1	100%	2	100%			0	/	0	/			1	100%	0	/		
	K1	Cattle feed	No	c	-1	0	/	0	/	<10	<10	0	/	0	/	<10	<10	0	/	0	/	<10	<10
					-2	0	/	0	/			0	/	0	/			0	/	0	/		
Second renewal study	K2	Rabbit feed	No	b	-1	3	100%	6	100%	30	60	4	100%	6	100%	40	60	10	100%	13	100%	100	140
					-2	1	100%	1	100%			1	100%	1	100%			1	100%	2	100%		
	K3	Horse feed	No	c	-1	26	100%	25	100%	270	280	33	100%	42	100%	330	430	26	100%	25	100%	250	270
					-2	4	100%	2	100%			3	100%	5	100%			2	100%	5	100%		
	L1	Pullet feed	Yes	b	-1	1	100%	13	100%	10	130	2	100%	18	100%	20	170	13	100%	13	100%	140	160
					-2	0	/	1	100%			1	100%	1	100%			2	100%	3	100%		
	L2	Turkey feed	Yes	b	-1	18	100%	15	100%	160	150	87	100%	21	100%	830	200	11	100%	9	100%	110	90
					-2	0	/	1	100%			4	100%	1	100%			1	100%	2	100%		
	L3	Horse feed	Yes	c	-1	9	100%	11	100%	90	110	22	100%	14	100%	210	150	19	100%	16	100%	190	190
					-2	5	100%	1	100%			1	100%	2	100%			2	100%	5	100%		
	B307	Cattle feed	No	c	-1	82	100%			780		66	100%			640		73	100%			760	
					-2	4	100%					4	100%					11	100%				
	B308	Pasta dog food	No	a	-1	8	100%			80		9	100%			90		6	100%			60	
					-2	0	/					0	/					0	/				
	B336	Puffed rice for animals	Yes	a	-1	63	100%			660		78	100%			790		82	100%			820	
					-2	10	100%					9	100%					8	100%				
	B348	Dehydrated complementary food for cat	Yes	a	-2	104	100%			11000		>150	/			24000		>150	/			24000	
					-3	17	100%					25	100%					24	100%				
					-4	0	/					1	100%					2	100%				
	B349	Dehydrated complementary food for dog	Yes	a	-1	14	100%			140		12	100%			120		21	100%			200	
					-2	1	100%					1	100%					1	100%				
	B350	Pasta & kibbles dog food	No	a	-1	0	/			<10		0	/			<10		0	/			<10	
					-2	0	/					0	/					0	/				
	B351	Broken rice for pets	Yes	a	-2	67	100%			6500		75	100%			6900		98	100%			10000	
					-3	4	100%					1	100%					15	100%				
	B361	Calf & kig goats feed	Yes	c	-2	59	100%			5900		46	100%			4500		53	100%			5400	
					-3	6	100%					3	100%					6	100%				
	B362	Rabbit feed	Yes	b	-2	77	100%			7800		61	100%			6400		66	100%			6800	
					-3	9	100%					9	100%					9	100%				
	B363	Rabbit feed	Yes	b	-2	35	100%			3300		45	100%			4400		39	100%			3900	
					-3	1	100%					3	100%					4	100%				

Appendix E

Relative trueness study – Statistical calculations

Results summary and statistical calculations

Surface spreading for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Meat products, fish products, seafood (MP)	a	H8	3.91	3.72	3.82	-0.19
		H9	4.08	4.11	4.10	0.03
		H10	3.87	3.83	3.85	-0.04
		I4	2.81	2.88	2.84	0.06
		B304	2.88	2.96	2.92	0.08
	b	G1	4.04	4.08	4.06	0.04
		I1	2.67	2.54	2.61	-0.13
		I2	2.41	2.36	2.39	-0.05
		I3	2.86	2.71	2.78	-0.15
		B303	1.60	2.08	1.84	0.48
	c	G2	4.04	4.11	4.08	0.07
		G10	4.00	3.99	4.00	-0.01
		B322	2.11	2.04	2.08	-0.07
		B323	2.68	2.69	2.69	0.01
		B324	2.86	2.82	2.84	-0.04
		B325	3.20	3.20	3.20	0.00
Average difference of the category						0.01
Standard deviation of differences						0.15
Dairy products (DP)	a	I9	3.95	3.98	3.97	0.02
		M1	2.78	2.85	2.81	0.07
		M3	2.78	2.70	2.74	-0.08
		M4	3.15	3.36	3.25	0.22
		M5	3.18	3.23	3.20	0.05
		M6	3.20	3.04	3.12	-0.16
	b	G4	3.90	3.83	3.86	-0.08
		I8	3.41	3.28	3.35	-0.14
		B306	2.71	2.65	2.68	-0.05
		B309	3.40	3.15	3.27	-0.25
		B319	2.00	1.90	1.95	-0.10
	c	G3	3.94	3.91	3.93	-0.03
		I10	3.98	4.04	4.01	0.06
		B330	3.30	3.11	3.21	-0.19
		B335	3.83	3.81	3.82	-0.01
		B360	1.60	2.04	1.82	0.44
Average difference						-0.01
Standard deviation of differences						0.17

Results summary and statistical calculations

Surface spreading for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Vegetables (V)	a	D1	1.70	1.70	1.70	0.00
		G5	4.30	4.26	4.28	-0.05
		G6	4.04	4.04	4.04	0.00
		B310	1.78	1.70	1.74	-0.08
		B314	1.95	1.78	1.87	-0.18
	b	E2	2.90	2.08	2.49	-0.82
		B311	2.20	2.20	2.20	0.00
		B312	2.18	1.78	1.98	-0.40
		B318	3.59	3.68	3.64	0.09
		B337	2.81	2.93	2.87	0.12
		B338	3.88	3.84	3.86	-0.04
	c	A2	2.53	2.51	2.52	-0.03
		A3	2.04	2.04	2.04	0.00
		D5	3.23	3.23	3.23	0.00
		F1	2.15	1.78	1.96	-0.37
		F2	1.85	1.60	1.72	-0.24
		F3	3.08	3.11	3.10	0.03
		B317	3.71	3.75	3.73	0.04
Average difference						-0.11
Standard deviation of differences						0.23
Eggs and pastries (E&P)	a	B341	1.78	1.90	1.84	0.12
		B342	2.34	2.56	2.45	0.21
		B343	3.94	3.95	3.95	0.01
		B344	4.77	4.78	4.77	0.01
		B345	4.41	4.41	4.41	0.00
	b	G8	4.00	4.04	4.02	0.04
		B339	1.95	1.60	1.78	-0.35
		B340	2.60	2.40	2.50	-0.20
		B346	3.20	3.32	3.26	0.12
		B347	2.53	2.41	2.47	-0.12
	c	C1	2.38	2.41	2.40	0.03
		G7	3.99	3.99	3.99	0.00
		H4	4.04	3.76	3.90	-0.28
		H6	3.81	3.65	3.73	-0.15
		H7	2.85	2.95	2.90	0.11
		I5	3.92	3.92	3.92	0.00
		I6	3.46	3.36	3.41	-0.10
		I7	3.48	3.30	3.39	-0.18
Average difference						-0.04
Standard deviation of differences						0.15

Results summary and statistical calculations

Surface spreading for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Baby foods (BF)	a	B327	1.95	1.95	1.95	0.00
		B352	4.45	4.61	4.53	0.17
		B353	3.04	3.11	3.08	0.07
		B356	1.78	1.90	1.84	0.12
		B357	2.30	2.26	2.28	-0.05
	b	B331	2.88	2.65	2.76	-0.22
		B332	3.11	3.11	3.11	0.00
		B333	4.49	4.53	4.51	0.04
		B354	2.74	2.76	2.75	0.02
		B355	3.54	3.74	3.64	0.20
	c	B328	4.88	4.95	4.91	0.08
		B329	3.59	3.83	3.71	0.24
		B334	3.38	3.49	3.44	0.11
		B358	2.79	2.74	2.76	-0.04
		B359	1.85	1.95	1.90	0.11
Average difference						0.06
Standard deviation of differences						0.11
Feed (F)	a	B308	1.90	1.95	1.93	0.05
		B336	2.82	2.90	2.86	0.08
		B348	4.04	4.38	4.21	0.34
		B349	2.15	2.08	2.11	-0.07
		B351	3.81	3.84	3.83	0.03
	b	H2	3.74	3.79	3.76	0.04
		J2	2.15	2.38	2.26	0.23
		L2	2.20	2.92	2.56	0.71
		B362	3.89	3.81	3.85	-0.09
		B363	3.52	3.64	3.58	0.12
	c	G9	4.00	4.08	4.04	0.08
		K3	2.43	2.52	2.47	0.09
		L3	1.95	2.32	2.14	0.37
		B307	2.89	2.81	2.85	-0.09
		B361	3.77	3.65	3.71	-0.12
Average difference						0.12
Standard deviation of differences						0.22

Results summary and statistical calculations

Surface spreading for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Average difference all categories						0.00
Standard deviation of differences						0.19

n = 98

β = 95%

$T(0.025;97)$ = 1.98

Lower confidence limit	Upper confidence limit
-0.37	0.37

Data not used for the calculations

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
MP	a	E1	0.00	0.00	0.00	0.00
	b	E3	nc	1.00	/	/
	a	B305	0.00	0.00	0.00	0.00
DP	a	M2	3.48	4.00	3.74	0.52
	a	J4	0.00	0.00	0.00	0.00
	a	J5	0.00	0.00	0.00	0.00
	a	J6	0.00	0.00	0.00	0.00
V	c	A1	1.00	1.90	1.45	0.90
	c	B1	0.00	1.30	0.65	1.30
	a	D2	1.48	1.00	1.24	-0.48
	c	D3	0.00	0.00	0.00	0.00
	c	D4	nc	1.60	/	/
	c	E4	nc	0.00	/	/
	c	E5	1.48	1.48	1.48	0.00
	a	H3	nc	2.48	/	/
	b	B313	0.00	0.00	0.00	0.00
	a	B316	nc	nc	/	/
E&P	c	H1	3.11	2.30	2.71	-0.81
	c	H5	nc	2.78	/	/
BF	a	B320	0.00	0.00	0.00	0.00
	a	B321	0.00	0.00	0.00	0.00
	c	B326	1.00	0.00	0.50	-1.00
F	b	J1	1.48	1.00	1.24	-0.48
	c	K1	0.00	0.00	0.00	0.00
	b	K2	1.48	1.60	1.54	0.12
	b	L1	1.00	1.30	1.15	0.30
	c	J3	1.85	1.48	1.66	-0.37
	a	B350	0.00	0.00	0.00	0.00

Results summary and statistical calculations

Pour plates for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Meat products, fish products, seafood (MP)	a	H8	3.91	3.89	3.90	-0.02
		H9	4.08	4.08	4.08	0.00
		H10	3.87	3.89	3.88	0.02
		I4	2.81	3.11	2.96	0.30
		B304	2.88	2.79	2.83	-0.10
	b	G1	4.04	4.00	4.02	-0.04
		I1	2.67	2.76	2.72	0.09
		I2	2.41	2.28	2.35	-0.14
		I3	2.86	2.88	2.87	0.02
		B303	1.60	1.85	1.72	0.24
	c	G2	4.04	3.99	4.02	-0.05
		G10	4.00	4.08	4.04	0.08
		B322	2.11	2.23	2.17	0.12
		B323	2.68	2.65	2.67	-0.03
		B324	2.86	2.68	2.77	-0.18
		B325	3.20	3.20	3.20	0.00
Average difference of the category						0.02
Standard deviation of differences						0.12
Dairy products (DP)	a	I9	3.95	4.04	4.00	0.09
		M1	2.78	3.04	2.91	0.26
		M3	2.78	3.11	2.95	0.34
		M4	3.15	3.28	3.21	0.13
		M5	3.18	3.34	3.26	0.17
		M6	3.20	2.90	3.05	-0.30
	b	G4	3.90	3.85	3.87	-0.06
		I8	3.41	3.15	3.28	-0.27
		B306	2.71	2.49	2.60	-0.22
		B309	3.40	3.38	3.39	-0.02
		B319	2.00	2.00	2.00	0.00
	c	G3	3.94	4.08	4.01	0.13
		I10	3.98	4.00	3.99	0.02
		B330	3.30	3.46	3.38	0.16
		B335	3.83	3.89	3.86	0.07
		B360	1.60	1.85	1.72	0.24
Average difference of the category						0.05
Standard deviation of differences						0.19

Results summary and statistical calculations

Pour plates for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Vegetables (V)	a	D1	1.70	1.78	1.74	0.08
		G5	4.30	4.23	4.27	-0.07
		G6	4.04	4.04	4.04	0.00
		B310	1.78	1.78	1.78	0.00
		B314	1.95	1.60	1.78	-0.35
	b	E2	2.90	2.11	2.51	-0.79
		B311	2.20	2.30	2.25	0.10
		B312	2.18	2.15	2.16	-0.03
		B318	3.59	3.68	3.64	0.09
		B337	2.81	2.81	2.81	0.00
		B338	3.88	3.89	3.88	0.01
	c	A2	2.53	2.52	2.52	-0.01
		A3	2.04	1.95	2.00	-0.09
		D5	3.23	2.85	3.04	-0.38
		F1	2.15	1.78	1.96	-0.37
		F2	1.85	1.60	1.72	-0.24
		F3	3.08	3.15	3.11	0.07
		B317	3.71	3.74	3.72	0.03
Average difference of the category						-0.11
Standard deviation of differences						0.23
Eggs and pastries (E&P)	a	B341	1.78	1.70	1.74	-0.08
		B342	2.34	2.40	2.37	0.06
		B343	3.94	4.00	3.97	0.06
		B344	4.77	4.54	4.66	-0.23
		B345	4.41	4.18	4.30	-0.24
	b	G8	4.00	3.97	3.98	-0.03
		B339	1.95	1.78	1.87	-0.18
		B340	2.60	2.58	2.59	-0.02
		B346	3.20	3.26	3.23	0.05
		B347	2.53	2.40	2.46	-0.13
	c	C1	2.38	2.30	2.34	-0.08
		G7	3.99	4.08	4.03	0.09
		H1	3.11	2.70	2.91	-0.41
		H4	4.04	3.71	3.87	-0.33
		H6	3.81	3.96	3.88	0.16
		H7	2.85	2.95	2.90	0.11
		I5	3.92	4.11	4.02	0.19
I6		3.46	3.32	3.39	-0.14	
I7	3.48	3.32	3.40	-0.15		
Average difference of the category						-0.07
Standard deviation of differences						0.17

Results summary and statistical calculations

Pour plates for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Baby foods (BF)	a	B327	1.95	1.85	1.90	-0.11
		B352	4.45	4.41	4.43	-0.03
		B353	3.04	2.93	2.99	-0.11
		B356	1.78	1.95	1.87	0.18
		B357	2.30	2.34	2.32	0.04
	b	B331	2.88	2.95	2.91	0.07
		B332	3.11	2.95	3.03	-0.16
		B333	4.49	4.49	4.49	0.00
		B354	2.74	2.68	2.71	-0.06
		B355	3.54	3.67	3.61	0.13
	c	B328	4.88	4.77	4.82	-0.10
		B329	3.59	3.76	3.67	0.16
		B334	3.38	3.43	3.41	0.05
		B358	2.79	2.61	2.70	-0.17
		B359	1.85	1.78	1.81	-0.07
Average difference of the category						-0.01
Standard deviation of differences						0.11
Feed (F)	a	B308	1.90	1.78	1.84	-0.12
		B336	2.82	2.91	2.87	0.09
		B348	4.04	4.38	4.21	0.34
		B349	2.15	2.30	2.22	0.15
		B351	3.81	4.00	3.91	0.19
	b	H2	3.74	3.80	3.77	0.06
		J2	2.15	2.38	2.26	0.23
		L2	2.20	2.04	2.12	-0.16
		B362	3.89	3.83	3.86	-0.06
		B363	3.52	3.59	3.55	0.07
	c	G9	4.00	3.96	3.98	-0.04
		K3	2.43	2.40	2.41	-0.03
		L3	1.95	2.28	2.12	0.32
		B307	2.89	2.88	2.89	-0.01
		B361	3.77	3.73	3.75	-0.04
Average difference of the category						0.07
Standard deviation of differences						0.15

Results summary and statistical calculations

Pour plates for BACARA

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
Average difference all categories						-0.01
Standard deviation of differences						0.18

n = 99

β = 95%

T (0.025;97)= 1.98

Lower confidence limit	Upper confidence limit
-0.37	0.34

Data not used for the calculations

Category	Type	Sample code	Reference method	Alternative method	Mean	Difference
MP	a	E1	0.00	0.00	0.00	0.00
	b	E3	nc	nc	/	/
	a	B305	0.00	0.00	0.00	0.00
DP	a	M2	3.48	nc	/	/
	a	J4	0.00	0.00	0.00	0.00
	a	J5	0.00	0.00	0.00	0.00
	a	J6	0.00	0.00	0.00	0.00
V	c	A1	1.00	1.95	1.48	0.95
	c	B1	0.00	0.00	0.00	0.00
	a	D2	1.48	1.48	1.48	0.00
	c	D3	0.00	1.00	0.50	1.00
	c	D4	nc	0.00	/	/
	c	E4	nc	0.00	/	/
	c	E5	1.48	1.48	1.48	0.00
	a	H3	nc	2.30	/	/
	b	B313	0.00	0.00	0.00	0.00
E&P	a	B316	nc	nc	/	/
	c	H5	nc	3.18	/	/
BF	a	B320	0.00	0.00	0.00	0.00
	a	B321	0.00	0.00	0.00	0.00
	c	B326	1.00	1.30	1.15	0.30
F	b	J1	1.48	1.30	1.39	-0.18
	c	K1	0.00	0.00	0.00	0.00
	b	K2	1.48	2.00	1.74	0.52
	b	L1	1.00	2.15	1.58	1.15
	c	J3	1.85	1.00	1.42	-0.85
	a	B350	0.00	0.00	0.00	0.00

Appendix F

Accuracy profile study – Raw results

Accuracy profile - Meat products, fish products, seafood

Matrix: pâté de campagne

Strain: *Bacillus cereus* group II, EAA229

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: 1800000 CFU/g									Enumeration of the microorganisms at 30°C: 810000 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	6	60 (NE)	-1	4	40 (NE)	-1	4	40 (NE)	-1	9	90 (NE)	-1	4	40 (NE)	-1	6	60 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	5	50 (NE)	-1	5	50 (NE)	-1	7	70 (NE)	-1	6	60 (NE)	-1	5	50 (NE)	-1	8	80 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	5	50 (NE)	-1	4	40 (NE)	-1	5	50 (NE)	-1	8	80 (NE)	-1	6	60 (NE)	-1	9	90 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	5	50 (NE)	-1	8	80 (NE)	-1	7	70 (NE)	-1	13	130	-1	9	90 (NE)	-1	8	80 (NE)
	-2	0		-2	0		-2	0		-2	1		-2	0		-2	0	
	-1	7	70 (NE)	-1	4	40 (NE)	-1	4	40 (NE)	-1	7	70 (NE)	-1	4	40 (NE)	-1	6	60 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
Level 2	-2	36	3400	-2	18	1800	-2	31	3100	-2	30	2800	-2	43	4600	-2	31	3200
	-3	1		-3	2		-3	3		-3	1		-3	8		-3	4	
	-2	37	3600	-2	17	1600	-2	22	2200	-2	41	3900	-2	21	2100	-2	15	1500
	-3	3		-3	1		-3	2		-3	2		-3	2		-3	2	
	-2	36	3400	-2	33	3500	-2	30	2900	-2	33	3500	-2	35	3700	-2	58	5600
	-3	1		-3	5		-3	2		-3	5		-3	6		-3	4	
	-2	50	5100	-2	42	4400	-2	45	4500	-2	22	2700	-2	27	2500	-2	32	3000
	-3	6		-3	6		-3	4		-3	8		-3	1		-3	1	
	-2	33	3300	-2	15	1500	-2	33	3100	-2	63	5700	-2	20	1900	-2	34	3100
	-3	3		-3	2		-3	1		-3	0		-3	1		-3	0	
Level 3	-4	55	560000	-4	24	250000	-4	24	270000	-4	22	230000	-4	16	160000	-4	24	280000
	-5	7		-5	3		-5	6		-5	3		-5	2		-5	7	
	-4	17	180000	-4	14	170000	-4	26	250000	-4	16	170000	-4	17	160000	-4	27	310000
	-5	3		-5	5		-5	2		-5	3		-5	1		-5	7	
	-4	23	220000	-4	17	190000	-4	21	240000	-4	34	330000	-4	24	270000	-4	22	250000
	-5	1		-5	4		-5	5		-5	2		-5	6		-5	6	
	-4	23	230000	-4	19	190000	-4	30	310000	-4	24	230000	-4	20	210000	-4	22	240000
	-5	2		-5	2		-5	4		-5	1		-5	3		-5	4	
	-4	29	330000	-4	30	290000	-4	39	410000	-4	29	310000	-4	31	310000	-4	31	330000
	-5	7		-5	2		-5	6		-5	5		-5	3		-5	5	

Accuracy profile - Dairy products

Matrix: raw milk

Strain: *Bacillus cereus* group III, CND844

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: 1800000 CFU/g									Enumeration of the microorganisms at 30°C: 810000 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	6	60 (NE)	-1	7	70 (NE)	-1	6	60 (NE)	-1	8	80 (NE)	-1	4	40 (NE)	-1	6	60 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	8	80 (NE)	-1	7	70 (NE)	-1	8	80 (NE)	-1	12	120	-1	5	50 (NE)	-1	8	80 (NE)
	-2	0		-2	0		-2	0		-2	1		-2	0		-2	0	
	-1	6	60 (NE)	-1	7	70 (NE)	-1	6	60 (NE)	-1	6	60 (NE)	-1	6	60 (NE)	-1	9	90 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	7	70 (NE)	-1	6	60 (NE)	-1	11	110	-1	10	100	-1	9	90 (NE)	-1	8	80 (NE)
	-2	0		-2	0		-2	1		-2	1		-2	0		-2	0	
	-1	4	40 (NE)	-1	7	70 (NE)	-1	11	110	-1	7	70 (NE)	-1	4	40 (NE)	-1	6	60 (NE)
	-2	0		-2	0		-2	1		-2	0		-2	0		-2	0	
Level 2	-2	56	5300	-2	56	5500	-2	57	5600	-2	54	5900	-2	41	4100	-2	57	5500
	-3	2		-3	5		-3	5		-3	11		-3	4		-3	4	
	-2	55	5500	-2	54	5500	-2	50	5200	-2	45	4500	-2	36	3900	-2	46	4500
	-3	6		-3	7		-3	7		-3	5		-3	7		-3	3	
	-2	61	6300	-2	61	6100	-2	62	6000	-2	45	4500	-2	54	5800	-2	63	6700
	-3	8		-3	6		-3	4		-3	5		-3	10		-3	11	
	-2	56	6100	-2	56	5500	-2	54	5600	-2	52	5500	-2	51	4900	-2	40	3800
	-3	11		-3	5		-3	8		-3	8		-3	3		-3	2	
	-2	49	5400	-2	59	6400	-2	45	4600	-2	51	5200	-2	41	4500	-2	38	3600
	-3	10		-3	11		-3	6		-3	6		-3	8		-3	2	
Level 3	-4	14	140000	-4	12	120000	-4	22	210000	-4	27	250000	-4	13	140000	-4	18	170000
	-5	1		-5	1		-5	1		-5	1		-5	2		-5	1	
	-4	15	150000	-4	18	180000	-4	19	190000	-4	16	170000	-4	15	160000	-4	14	150000
	-5	2		-5	2		-5	2		-5	3		-5	3		-5	2	
	-4	23	220000	-4	18	180000	-4	15	160000	-4	27	260000	-4	21	200000	-4	25	250000
	-5	1		-5	2		-5	3		-5	2		-5	1		-5	3	
	-4	28	270000	-4	19	180000	-4	28	280000	-4	15	160000	-4	17	160000	-4	16	150000
	-5	2		-5	1		-5	3		-5	3		-5	1		-5	1	
	-4	12	120000	-4	23	220000	-4	20	190000	-4	17	180000	-4	20	220000	-4	22	230000
	-5	1		-5	1		-5	1		-5	3		-5	4		-5	3	

Accuracy profile - Vegetables

Matrix: broccoli puree

Strain: *Bacillus pseudomycolides* group I, FFT320

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: 9400 CFU/g									Enumeration of the microorganisms at 30°C: 6800 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	23	250	-1	14	150	-1	10	110	-1	23	250	-1	15	150	-1	14	130
	-2	4		-2	3		-2	2		-1	4		-2	1		-2	0	
	-1	22	230	-1	13	130	-1	15	150	-1	28	300	-1	16	150	-1	15	150
	-2	3		-2	1		-2	1		-2	5		-2	1		-2	2	
	-1	17	170	-1	17	170	-1	13	150	-1	16	160	-1	13	130	-1	9	90 (NE)
	-2	2		-2	2		-2	3		-2	2		-2	1		-2	0	
	-1	15	150	-1	10	90	-1	10	100	-1	20	190	-1	15	150	-1	20	220
	-2	1		-2	0		-2	1		-2	1		-2	2		-2	4	
	-1	14	140	-1	14	150	-1	14	150	-1	22	210	-1	17	180	-1	20	220
	-2	1		-2	3		-2	3		-2	1		-2	3		-2	4	
Level 2	-1	123	1300	-1	82	850	-1	61	610	-1	99	1100	-1	57	600	-1	60	630
	-2	21		-2	12		-2	6		-2	19		-2	9		-2	9	
	-1	82	840	-1	69	710	-1	82	800	-1	99	1000	-1	76	830	-1	76	750
	-2	10		-2	9		-2	6		-2	13		-2	15		-2	7	
	-1	95	1000	-1	62	620	-1	78	780	-1	95	960	-1	82	850	-1	69	680
	-2	18		-2	6		-2	8		-2	11		-2	12		-2	6	
	-1	103	1100	-1	76	740	-1	81	850	-1	113	1200	-1	76	750	-1	89	940
	-2	21		-2	5		-2	12		-2	16		-2	7		-2	14	
	-1	94	960	-1	59	640	-1	70	740	-1	104	1000	-1	70	690	-1	86	880
	-2	12		-2	11		-2	11		-2	10		-2	6		-2	11	
Level 3	-4	42	450000	-4	26	260000	-4	24	230000	-4	51	500000	-4	23	230000	-4	31	340000
	-5	7		-5	3		-5	1		-5	4		-5	2		-5	6	
	-4	41	410000	-4	31	330000	-4	18	190000	-4	43	420000	-4	18	180000	-4	25	240000
	-5	4		-5	5		-5	3		-5	3		-5	2		-5	1	
	-4	53	520000	-4	32	320000	-4	24	250000	-4	53	550000	-4	25	250000	-4	19	180000
	-5	4		-5	3		-5	4		-5	7		-5	2		-5	1	
	-4	36	360000	-4	21	200000	-4	18	190000	-4	50	480000	-4	26	250000	-4	21	220000
	-5	4		-5	1		-5	3		-5	3		-5	1		-5	3	
	-4	38	390000	-4	31	300000	-4	29	320000	-4	34	360000	-4	24	260000	-4	19	210000
	-5	5		-5	2		-5	6		-5	6		-5	5		-5	4	

Accuracy profile - Eggs and pastries

Matrix: custard

Strain: *Bacillus cereus* group IV, ANJ157

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: <10 CFU/g									Enumeration of the microorganisms at 30°C: <10 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	16	170	-1	11	110	-1	8	80 (NE)	-1	14	140	-1	10	90	-1	9	90 (NE)
	-2	3		-2	1		-2	0		-2	1		-2	0		-2	0	
	-1	5	50 (NE)	-1	11	120	-1	9	90 (NE)	-1	10	110	-1	13	130	-1	8	80 (NE)
	-2	1		-2	2		-2	0		-2	2		-2	1		-2	1	
	-1	8	80 (NE)	-1	11	110	-1	10	110	-1	8	80 (NE)	-1	12	130	-1	11	100
	-2	0		-2	1		-2	2		-2	0		-2	2		-2	0	
	-1	8	80 (NE)	-1	10	110	-1	7	70 (NE)	-1	7	70 (NE)	-1	6	60 (NE)	-1	10	100
	-2	1		-2	2		-2	1		-2	0		-2	0		-2	1	
	-1	11	110	-1	10	110	-1	14	150	-1	11	100	-1	9	90 (NE)	-1	7	70 (NE)
	-2	1		-2	2		-2	2		-2	0		-2	2		-2	0	
Level 2	-2	39	4200	-2	50	4900	-2	44	4400	-2	35	3500	-2	38	3900	-2	40	3800
	-3	7		-3	4		-3	4		-3	3		-3	5		-3	2	
	-2	37	3900	-2	36	3600	-2	40	3800	-2	45	4900	-2	59	5900	-2	41	4000
	-3	6		-3	4		-3	2		-3	9		-3	6		-3	3	
	-2	32	3100	-2	31	3100	-2	39	4000	-2	39	4200	-2	44	4500	-2	41	3900
	-3	2		-3	3		-3	5		-3	7		-3	5		-3	2	
	-2	49	4800	-2	46	4500	-2	46	4400	-2	40	4100	-2	41	4200	-2	33	3200
	-3	4		-3	4		-3	2		-3	5		-3	5		-3	2	
	-2	38	3600	-2	29	3200	-2	41	4500	-2	39	4100	-2	39	4000	-2	51	4900
	-3	2		-3	6		-3	8		-3	6		-3	5		-3	3	
Level 3	-3	137	140000	-3	92	85000	-3	119	120000	-3	132	150000	-3	96	95000	-3	106	110000
	-4	19		-4	1		-4	11		-4	29		-4	9		-4	10	
	-3	117	120000	-3	88	95000	-4	22	240000	-3	117	120000	-4	19	180000	-3	118	120000
	-4	15		-4	17		-5	4		-4	20		-5	1		-4	19	
	-3	136	140000	-4	14	150000	-3	121	120000	-3	104	110000	-4	13	150000	-3	135	140000
	-4	16		-5	3		-4	15		-4	19		-5	4		-4	18	
	-3	108	110000	-3	124	130000	-3	81	85000	-3	107	120000	-4	10	100000	-3	110	110000
	-4	11		-4	18		-4	12		-4	21		-5	1		-4	9	
	-3	93	94000	-3	62	65000	-3	114	110000	-4	17	190000	-4	21	230000	-3	121	120000
	-4	10		-4	10		-4	8		-5	4		-5	4		-4	11	

Accuracy profile - Baby foods

Matrix: infant formula with probiotics (*Lactobacillus reuteri*)

Strain: *Bacillus cereus* group VI, GAR051

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: 23 000 CFU/g									Enumeration of the microorganisms at 30°C: 31 000 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	8	80 (NE)	-1	8	80 (NE)	-1	12	130	-1	10	100	-1	14	140	-1	11	120
	-2	1		-2	1		-2	2		-2	1		-2	1		-2	2	
	-1	7	70 (NE)	-1	10	110	-1	10	90	-1	10	100	-1	7	70 (NE)	-1	5	50 (NE)
	-2	0		-2	2		-2	0		-2	1		-2	0		-2	0	
	-1	9	90 (NE)	-1	7	70 (NE)	-1	13	130	-1	9	90 (NE)	-1	8	80 (NE)	-1	7	70 (NE)
	-2	1		-2	0		-2	1		-2	0		-2	0		-2	2	
	-1	11	110	-1	4	40 (NE)	-1	4	40 (NE)	-1	12	120	-1	6	60 (NE)	-1	11	120
	-2	1		-2	0		-2	0		-2	1		-2	2		-2	2	
	-1	6	60 (NE)	-1	5	50 (NE)	-1	7	70 (NE)	-1	8	80 (NE)	-1	8	80 (NE)	-1	7	70 (NE)
	-2	1		-2	0		-2	0		-2	0		-2	0		-2	0	
Level 2	-2	34	3700	-2	26	2500	-2	29	3000	-2	33	3200	-2	39	4200	-2	42	4200
	-3	7		-3	1		-3	4		-3	2		-3	7		-3	4	
	-2	22	2400	-2	32	3300	-2	30	3000	-2	27	2900	-2	32	3100	-2	35	3400
	-3	4		-3	4		-3	3		-3	5		-3	2		-3	2	
	-2	41	4300	-2	42	4200	-2	44	4300	-2	31	3200	-2	28	3000	-2	31	3100
	-3	6		-3	4		-3	3		-3	4		-3	5		-3	3	
	-2	25	2500	-2	54	5200	-2	34	3700	-2	29	3100	-2	22	2300	-2	39	4100
	-3	2		-3	3		-3	7		-3	5		-3	3		-3	6	
	-2	34	3600	-2	36	3500	-2	36	3500	-2	29	2900	-2	40	3900	-2	34	3600
	-3	6		-3	3		-3	3		-3	3		-3	3		-3	6	
Level 3	-3	68	70000	-3	81	83000	-3	101	100000	-3	85	85000	-3	69	74000	-3	77	75000
	-4	9		-4	10		-4	11		-4	8		-4	12		-4	6	
	-3	68	68000	-3	79	85000	-3	93	95000	-3	77	77000	-3	71	76000	-3	86	86000
	-4	7		-4	15		-4	12		-4	8		-4	13		-4	9	
	-3	73	72000	-3	88	90000	-3	87	88000	-3	54	59000	-3	102	100000	-3	92	95000
	-4	6		-4	11		-4	10		-4	11		-4	12		-4	12	
	-3	66	70000	-3	65	69000	-3	105	100000	-3	132	140000	-3	151	160000	-3	149	150000
	-4	11		-4	11		-4	9		-4	22		-4	21		-4	21	
	-3	65	70000	-3	70	76000	-3	83	81000	-3	55	55000	-3	84	81000	-3	73	80000
	-4	12		-4	14		-4	6		-4	5		-4	5		-4	15	

Accuracy profile - Feeds

Matrix: dry pet food for dog with probiotics

Strain: *Bacillus cereus* group V, LDG480

	Batch 1									Batch 2								
	Enumeration of the microorganisms at 30°C: 7900 CFU/g									Enumeration of the microorganisms at 30°C: 3000 CFU/g								
	EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading			EN ISO 7932:2005(■)			BACARA pour plate			BACARA spreading		
	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)	Dilution	Number of CFU	Result (CFU/g)
Level 1	-1	8	80 (NE)	-1	9	90 (NE)	-1	7	70 (NE)	-1	8	80 (NE)	-1	5	50 (NE)	-1	8	80 (NE)
	-2	0		-2	0		-2	0		-2	1		-2	0		-2	1	
	-1	8	80 (NE)	-1	4	40 (NE)	-1	5	50 (NE)	-1	6	60 (NE)	-1	4	40 (NE)	-1	9	90 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	0	
	-1	6	60 (NE)	-1	8	80 (NE)	-1	9	90 (NE)	-1	4	40 (NE)	-1	6	60 (NE)	-1	7	70 (NE)
	-2	0		-2	0		-2	0		-2	0		-2	0		-2	2	
	-1	9	90 (NE)	-1	10	100	-1	9	90 (NE)	-1	10	100	-1	9	90 (NE)	-1	6	60 (NE)
	-2	0		-2	1		-2	0		-2	1		-2	1		-2	1	
	-1	10	110	-1	9	90 (NE)	-1	8	80 (NE)	-1	4	40 (NE)	-1	7	70 (NE)	-1	7	70 (NE)
	-2	2		-2	0		-2	0		-2	0		-2	1		-2	0	
Level 2	-2	49	4900	-2	36	3500	-2	59	6200	-2	39	3900	-2	36	3500	-2	67	6600
	-3	5		-3	3		-3	9		-3	4		-3	3		-3	6	
	-2	41	3900	-2	25	2500	-2	56	5400	-2	64	6700	-2	38	3600	-2	61	6000
	-3	2		-3	3		-3	3		-3	10		-3	2		-3	5	
	-2	42	3900	-2	25	2700	-2	44	4500	-2	41	4300	-2	35	3600	-2	32	3100
	-3	1		-3	5		-3	6		-3	6		-3	5		-3	2	
	-2	48	4700	-2	50	5000	-2	58	6000	-2	60	6000	-2	37	4000	-2	79	7600
	-3	4		-3	5		-3	8		-3	6		-3	7		-3	5	
	-2	37	3600	-2	44	4500	-2	81	7700	-2	66	6600	-2	36	3500	-2	57	5800
	-3	3		-3	6		-3	4		-3	7		-3	2		-3	7	
Level 3	-4	22	230000	-4	14	150000	-4	18	190000	-4	32	310000	-4	20	210000	-4	38	380000
	-5	3		-5	2		-5	3		-5	2		-5	3		-5	4	
	-4	16	160000	-4	18	190000	-4	29	300000	-4	13	130000	-4	19	210000	-4	26	250000
	-5	2		-5	3		-5	4		-5	1		-5	4		-5	2	
	-4	14	140000	-4	16	150000	-4	34	320000	-4	25	240000	-4	17	160000	-4	24	240000
	-5	1		-5	1		-5	1		-5	1		-5	1		-5	2	
	-4	23	230000	-4	17	160000	-4	23	250000	-4	23	230000	-4	14	140000	-4	34	340000
	-5	2		-5	1		-5	5		-5	2		-5	1		-5	3	
	-4	17	180000	-4	18	170000	-4	25	260000	-4	34	330000	-4	20	220000	-4	32	310000
	-5	3		-5	1		-5	4		-5	2		-5	4		-5	2	

Appendix G

Selectivity study – Raw results

Inclusivity - Initial validation study (2010)

#	Reference Eurofins IPL Nord	Strain	Origin	Number of CFU on TSA agar medium		Number of CFU on MYP agar medium		Alternative method							
								Colonies on BACARA - Surface spreading - Incubation 24 h at 30°C				Colonies on BACARA - Pour plate - Incubation 24 h at 30°C			
				Result 1	Result 2	Result 1	Result 2	Colour	Presence of halo	Result 1	Result 2	Colour	Presence of halo	Result 1	Result 2
1	BA1	<i>Bacillus cereus</i>	Whole egg	89	62	76	95	red	oui	149	91	red	yes	150	65
2	BA10	<i>Bacillus cereus</i>	Milk	83	112	93	176	red	oui	80	172	red	yes	81	158
3	BA14	<i>Bacillus cereus</i>	Egg	10	42	36	54	red	oui	102	56	red	yes	43	46
4	BA15	<i>Bacillus cereus</i>	Custard	14	10	17	30	red	oui	14	10	red	yes	18	25
5	BA19	<i>Bacillus cereus</i>	Environment	20	48	68	21	red	oui	17	35	red	yes	40	28
6	BA21	<i>Bacillus cereus</i>	Tabbouleh with poultry	16	21	21	31	red	yes	23	21	red	yes	25	30
7	BA34	<i>Bacillus cereus</i>	/	18	18	19	23	red	yes	23	17	red	yes	13	12
8	BA41	<i>Bacillus cereus</i>	Celery	28	28	33	30	red	yes	32	27	red	yes	28	23
9	BA45	<i>Bacillus cereus</i>	Lamb's lettuce	42	27	38	41	red	yes	17	20	red	yes	46	31
10	BA50	<i>Bacillus cereus</i>	Milk	19	14	27	13	red	yes	8	4	red	yes	14	9
11	BA35	<i>Bacillus cereus</i>	Milk powder	30	32	38	27	red	yes	24	35	red	yes	28	18
12	BA44	<i>Bacillus cereus</i>	ATCC 11778	16	16	21	29	red	yes	23	27	red	yes	14	10
13	BA36	<i>Bacillus cereus</i>	ATCC 10876	16	11	19	19	red	yes	16	25	red	yes	13	14
14	BA33	<i>Bacillus cereus</i>	ATCC 7004	17	4	20	16	red	yes	11	13	red	yes	10	8
15	BA61	<i>Bacillus cereus</i>	CIP 5832	98	102	80	108	red	yes (faint)	90	91	red	yes (faint)	71	69
16	BA64	<i>Bacillus cereus</i>	Medical collection	17	13	25	29	red	yes	25	20	red	yes	13	12
17	BA24	<i>Bacillus mycoïdes</i>	Ground of potato workshop	7	17	45	34	red	yes	8	33	red	yes	5	17
18	BA30	<i>Bacillus mycoïdes</i>	LMG 9680	55	70	44	66	red	yes	53	57	red	yes	98	79
19	BA39	<i>Bacillus mycoïdes</i>	LMG12256	27	21	36	33	red	yes	16	31	red	yes	33	20
20	BA65	<i>Bacillus mycoïdes cereus</i>	Dairy product	76	92	80	65	red	yes	84	90	red	yes	80	120
21	BA49	<i>Bacillus pseudomycoïdes</i>	LMG 18993	8	6	16	13	red	yes	12	4	red	yes	7	14
22	BA40	<i>Bacillus pseudomycoïdes</i>	Collection	22	10	26	22	red	yes	19	16	red	yes	21	14
23	BA38	<i>Bacillus thuringiensis</i>	ATCC 10792	45	47	55	45	red	yes	31	50	red	yes	42	48
24	BA46	<i>Bacillus thuringiensis</i>	LMG 12265	29	24	33	29	red	yes	25	19	red	yes	35	20
25	BA48	<i>Bacillus thuringiensis</i>	LMG 12266	22	33	13	26	red	yes	13	19	red	yes	18	25
26	BA62	<i>Bacillus thuringiensis</i>	LMG7138	12	18	26	24	red	yes	14	13	red	yes	6	7
27	BA54	<i>Bacillus weihenstephanensis</i>	Collection	22	14	21	12	red	yes	17	20	red	yes	13	20
28	BA55	<i>Bacillus weihenstephanensis</i>	Collection	77	72	98	105	red	yes	136	113	red	yes	90	40
29	BA56	<i>Bacillus weihenstephanensis</i>	Collection	10	11	15	18	red	yes	11	13	red	yes	11	11
30	BA57	<i>Bacillus weihenstephanensis</i>	Collection	7	10	12	8	red	yes	13	6	red	yes	8	8

Exclusivity - Initial validation study (2010)

#	Reference Eurofins IPL Nord	Strain	Origin	Inoculum	Alternative method		Comments
				Growth on TSA (24 h - 30°C)	Colonies on BACARA - Surface spreading - Incubation 24 h at 30°C	Colonies on BACARA - Pour plate - Incubation 24 h at 30°C	
					Aspect on agar medium	Aspect on agar medium	
1	BA9	<i>Bacillus amyloliquefaciens</i>	Potato flakes	+	no growth	no growth	/
2	BA20	<i>Bacillus amyloliquefaciens</i>	Tabbouleh with poultry	+	no growth	no growth	/
3	BA47	<i>Bacillus badius</i>	Environment	+	no growth	no growth	/
4	BA18	<i>Bacillus circulans</i>	Custard	+	no growth	no growth	/
5	BA37	<i>Bacillus coagulans</i>	ATCC 7050	+	no growth	no growth	/
6	BA16	<i>Bacillus licheniformis</i>	Custard	+	no growth	no growth	/
7	BA17	<i>Bacillus pumilus</i>	Custard	+	no growth	no growth	/
8	BA22	<i>Bacillus pumilus</i>	Tabbouleh with poultry	+	no growth	no growth	/
9	BA63	<i>Bacillus firmus</i>	ATCC 7953	+	no growth	no growth	/
10	BA43	<i>Bacillus subtilis</i>	ATCC 23059	+	no growth	no growth	/
11	BA32	<i>Bacillus subtilis</i>	ATCC 27689	+	no growth	no growth	/
12	CIT23	<i>Citrobacter freundii</i>	Celery	+	no growth	no growth	/
13	E1	<i>Enterococcus faecalis</i>	Egg	+	Pink salmon CFU without halo	Pink salmon CFU without halo	No halo after 48 h of incubation
14	E6	<i>Enterococcus faecalis</i>	ATCC 29212	+	Pink salmon CFU without halo	Pink salmon CFU without halo	No halo after 48 h of incubation
15	E7	<i>Enterococcus faecium</i>	CIP 5433	+	no growth	no growth	/
16	E10	<i>Enterococcus durans</i>	Meat product	+	no growth	no growth	/
17	/	<i>Leuconostoc citreum</i>	/	+	Small white CFU without halo	Small white CFU without halo	No halo after 48 h of incubation
18	L156	<i>Listeria monocytogenes</i>	Frozen fries	+	no growth	no growth	/
19	L236	<i>Listeria monocytogenes</i>	Meat product	+	no growth	no growth	/
20	L133	<i>Listeria ivanovii</i>	Roquefort cheese	+	no growth	no growth	/
21	PRO EN43	<i>Proteus mirabilis</i>	Meat product	+	no growth	no growth	/
22	PS28	<i>Pseudomonas fluorescens</i>	Dried herbs	+	no growth	no growth	/
23	S122	<i>Salmonella</i> Enteritidis	Liquid egg	+	no growth	no growth	/
24	ST29	<i>Staphylococcus aureus</i>	Pasta salad	+	no growth	no growth	/
25	ST30	<i>Staphylococcus aureus</i>	Country style toast	+	no growth	no growth	/
26	ST13	<i>Staphylococcus aureus</i>	ATCC 25923	+	no growth	no growth	/
27	ST3	<i>Staphylococcus epidermidis</i>	Strawberry yoghurt	+	no growth	no growth	/
28	ST20	<i>Staphylococcus epidermidis</i>	Smoked salmon	+	no growth	no growth	/

Inclusivity - Second renewal study (2018)

Addition of milk powder

#	Reference Microsept	Strain	Origin	Decimal dilution of the initial suspension	Number of CFU on TSA agar medium	MYP agar medium		Alternative method BACARA					
						Aspect of the colonies	Number of CFU	Surface spreading Incubation 22 h at 30°C			Pour plate Incubation 22 h at 30°C		
								Number of CFU	Colour of the colonies	Presence of a halo	Number of CFU	Colour of the colonies	Presence of a halo
1	AAT115	<i>Bacillus cereus</i> group II	Pear banana crumble	1	30	Pink with halo	48	32	Orangy pink	Yes	36	Orangy pink	Yes
2	JCT201	<i>Bacillus cereus</i> group IV	Panini ham emmental	1	66	Pink with halo	95	80	Orangy pink	Yes	78	Orangy pink	Yes
3	FBF747	<i>Bacillus cereus</i> group V	Chives	1	24	Pink with halo	26	22	Orangy pink	Yes	28	Orangy pink	Yes
4	KGB008	<i>Bacillus cereus</i> group IV	Piemontese salad	1	49	Pink with halo	35	25	Orangy pink	Yes	42	Orangy pink	Yes
5	AGP399	<i>Bacillus cereus</i> group III	Cheese with nuts	1	33	Pink with halo	44	22	Orangy pink	Yes	28	Orangy pink	Yes
6	CLC707	<i>Bacillus cereus</i> group III	Pizza 3 cheese	1	53	Pink with halo	55	55	Orangy pink	Yes	57	Orangy pink	Yes
7	PCE867	<i>Bacillus cereus</i> group II	Organic peppermint	1	67	Pink with halo	113	83	Orangy pink	Yes	50	Orangy pink	Yes
8	SDC155	<i>Bacillus cereus</i> group III	Cake filled with blueberries	1	60	Pink with halo	26	40	Orangy pink	Yes	51	Orangy pink	Yes
9	ANJ157	<i>Bacillus cereus</i> group IV	Potato starch	1	66	Pink with halo	45	89	Orangy pink	Yes	73	Orangy pink	Yes
10	BMK053	<i>Bacillus cereus</i> group III	Milk proteins	1	66	Pink with halo	62	58	Orangy pink	Yes	46	Orangy pink	Yes
11	CND844	<i>Bacillus cereus</i> group III	Milk proteins	1	66	Pink with halo	58	56	Orangy pink	Yes	43	Orangy pink	Yes
12	DJQ279	<i>Bacillus cereus</i> group II	Ground	1	67	Pink with halo	65	66	Orangy pink	Yes	70	Orangy pink	Yes
13	EGY443	<i>Bacillus cereus</i> group II	Zucchini	1	80	Pink with halo	76	82	Orangy pink	Yes	70	Orangy pink	Yes
14	FFT320	<i>Bacillus cereus</i> group I (<i>B. pseudomycoides</i>)	Broccoli puree	1	53	Pink with halo	29	26	Orangy pink	Yes	25	Orangy pink	Yes
15	GGB821	<i>Bacillus cereus</i> group VII (<i>B. cytotoxicus</i>)	Potato flakes	1	48	Pink with halo	43	<1	No growth	/	1	Orangy pink	No
16	HEK655	<i>Bacillus cereus</i> group VI	Zucchini puree	1	43	Pink with halo	32	20	Orangy pink	Yes	13	Orangy pink	Yes
17	JFM917	<i>Bacillus cereus</i> group VI	Ground	1	50	Pink with halo	32	24	Orangy pink	Yes	19	Orangy pink	Yes (faint)
18	KJL797	<i>Bacillus cereus</i> group V	Ground	1	98	Pink with halo	72	76	Orangy pink	Yes	84	Orangy pink	Yes
19	LDG480	<i>Bacillus cereus</i> group V	Pasteurized potato puree	1	29	Pink with halo	40	39	Orangy pink	Yes	27	Orangy pink	Yes
20	MER869	<i>Bacillus cereus</i> group IV	Pasteurized potatoes	1	62	Pink with halo	52	73	Orangy pink	Yes	62	Orangy pink	Yes

Exclusivity - Second renewal study (2018)

#	Reference Microsept	Strain	Origin	Decimal dilutions of the initial suspension	Number of CFU on TSA agar medium	MYP agar medium		Alternative method BACARA					
						Aspect of the colonies	Number of CFU	Surface spreading - Incubation 22 h at 30°C			Pour plate - Incubation 22 h at 30°C		
								Number of CFU	Colour of the colonies	Presence of a halo	Number of CFU	Colour of the colonies	Presence of a halo
1	AER835	<i>Carnobacterium divergens</i>	Salmon steak	-6/-7	24/1	/	<1/<1	<1/<1	/	/	<1/<1	/	/
2	EFG554	<i>Corynebacterium callunae</i>	Calzone	-6/-7	79/8	/	<1/<1	<1/<1	/	/	<1/<1	/	/

Appendix H

Interlaboratory study – Raw results

**Results of the enumeration of the mesophilic
aerobic flora**

Collaborator	Results in CFU/ml
A	<1
B	20 en (presence<40)
C	<10
D	<10
E	<10
F	<10
G	3 en (presence <40)
H	20 en (presence <40)
I	<1
J	<1
K	3 en (presence <40)
L	<1
M	<1
N	<1
Expert Laboratory	2 en (presence <40)

Summary of the interlaboratory results

Raw data (CFU/g)

Laboratoire	Niveau 1				Niveau 2				Niveau 3			
	Méthode de référence		Méthode alternative		Méthode de référence		Méthode alternative		Méthode de référence		Méthode alternative	
	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2
B	20	30	30	10	440	420	410	320	2400	2800	2000	2200
C	30	70	30	20	310	440	260	340	1400	1500	1700	1500
D	90	10	80	0	360	350	330	280	1500	1600	1400	1600
E	70	40	70	40	380	410	310	410	2100	1800	2000	1800
F	90	130	40	50	310	450	290	430	1300	1800	1500	1500
G	80	90	30	20	420	530	430	420	2000	1900	1700	1600
H	50	110	10	50	400	450	430	310	2100	1700	1700	1500
I	50	60	30	30	370	510	330	380	2400	2400	1800	2200
J	60	60	60	20	460	460	450	430	2300	2900	1900	2400
K	50	60	10	50	430	440	330	460	1800	2300	1800	1900
L	70	10	30	10	590	360	410	360	1500	1800	1400	1600
M	50	70	40	80	590	530	540	420	2200	2300	2300	2100
N	50	50	40	50	530	530	470	390	1700	2000	1700	1900

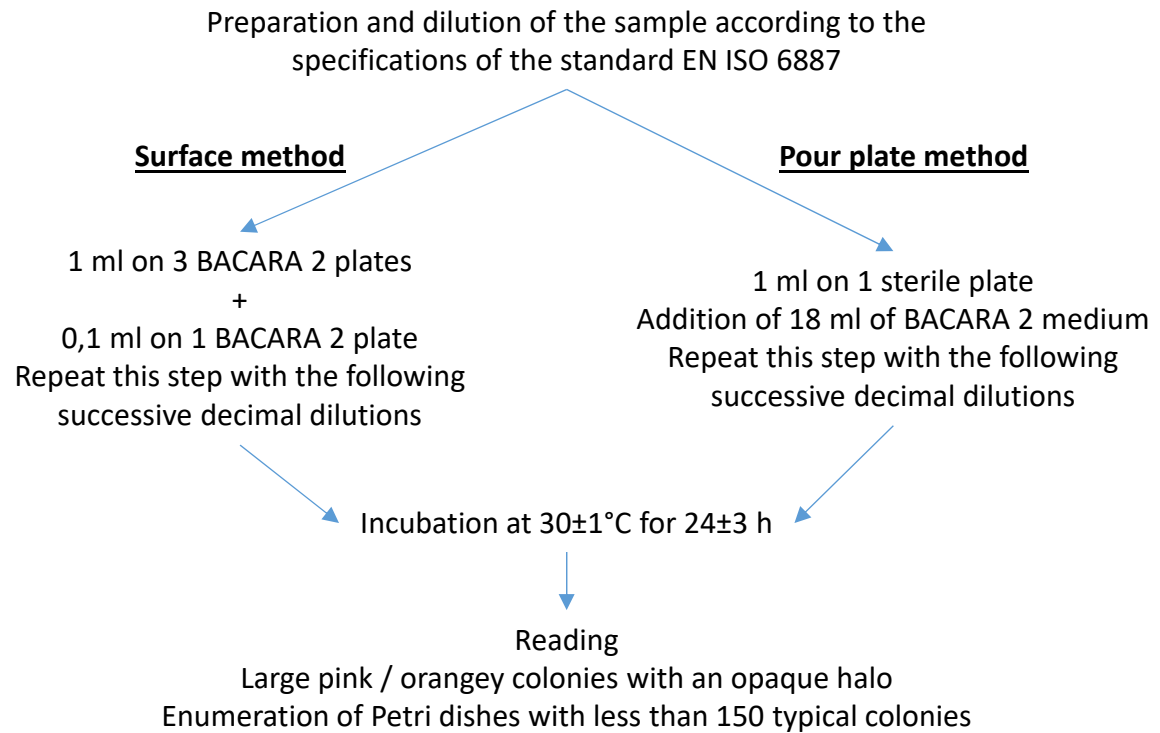
Data converted in log (lof CFU/g)

Laboratoire	Niveau 1				Niveau 2				Niveau 3			
	Méthode de référence		Méthode alternative		Méthode de référence		Méthode alternative		Méthode de référence		Méthode alternative	
	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2	Résultat 1	Résultat 2
B	1,30	1,48	1,48	1,00	2,64	2,62	2,61	2,51	3,38	3,45	3,30	3,34
C	1,48	1,85	1,48	1,30	2,49	2,64	2,41	2,53	3,15	3,18	3,23	3,18
D	1,95	1,00	1,90	0,00	2,56	2,54	2,52	2,45	3,18	3,20	3,15	3,20
E	1,85	1,60	1,85	1,60	2,58	2,61	2,49	2,61	3,32	3,26	3,30	3,26
F	1,95	2,11	1,60	1,70	2,49	2,65	2,46	2,63	3,11	3,26	3,18	3,18
G	1,90	1,95	1,48	1,30	2,62	2,72	2,63	2,62	3,30	3,28	3,23	3,20
H	1,70	2,04	1,00	1,70	2,60	2,65	2,63	2,49	3,32	3,23	3,23	3,18
I	1,70	1,78	1,48	1,48	2,57	2,71	2,52	2,58	3,38	3,38	3,26	3,34
J	1,78	1,78	1,78	1,30	2,66	2,66	2,65	2,63	3,36	3,46	3,28	3,38
K	1,70	1,78	1,00	1,70	2,63	2,64	2,52	2,66	3,26	3,36	3,26	3,28
L	1,85	1,00	1,48	1,00	2,77	2,56	2,61	2,56	3,18	3,26	3,15	3,20
M	1,70	1,85	1,60	1,90	2,77	2,72	2,73	2,62	3,34	3,36	3,36	3,32
N	1,70	1,70	1,60	1,70	2,72	2,72	2,67	2,59	3,23	3,30	3,23	3,28

APPENDIX I

PROTOCOL OF THE BACARA 2 METHOD

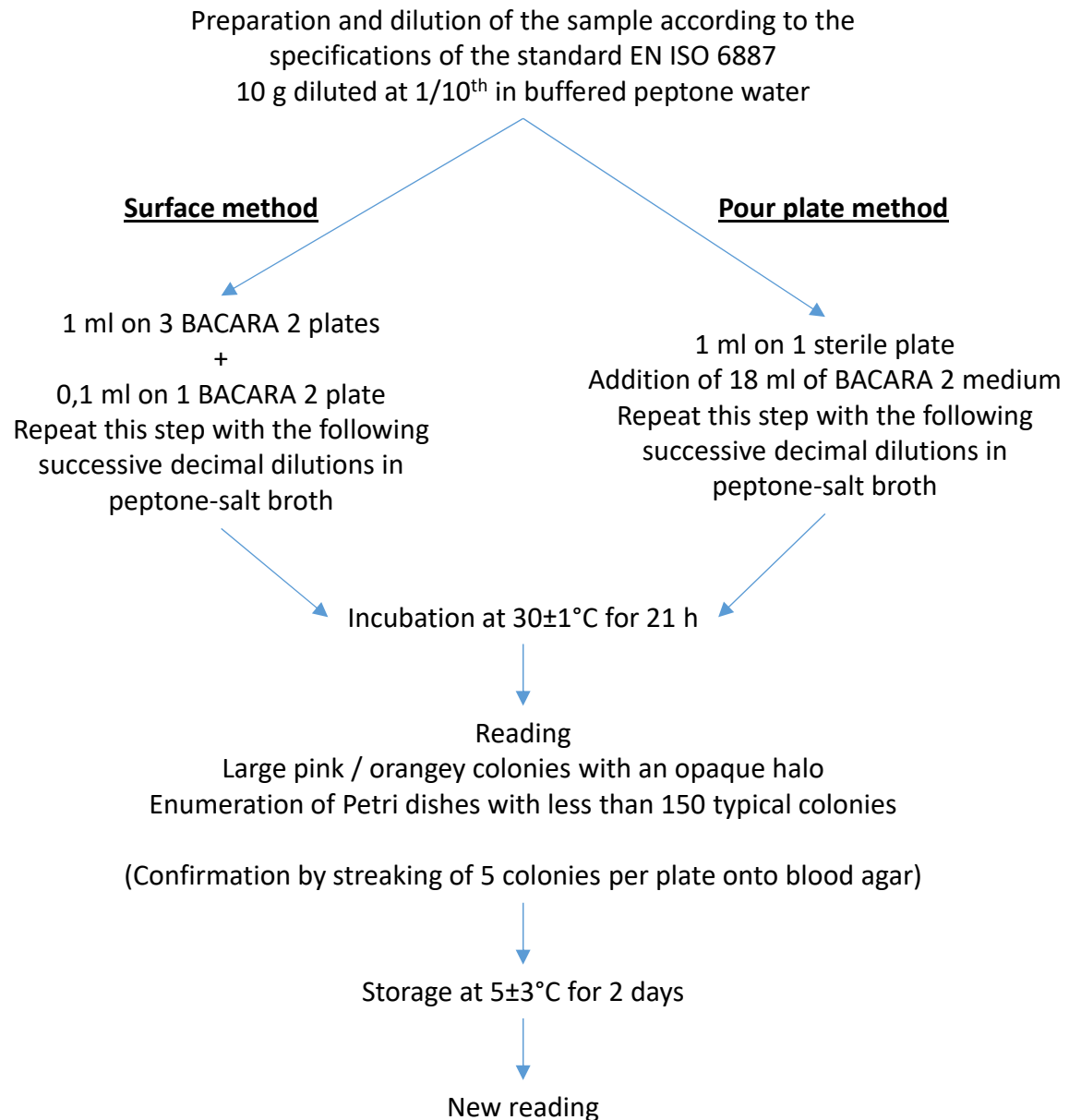
Diagram of the procedure as described in the user guide



APPENDIX I

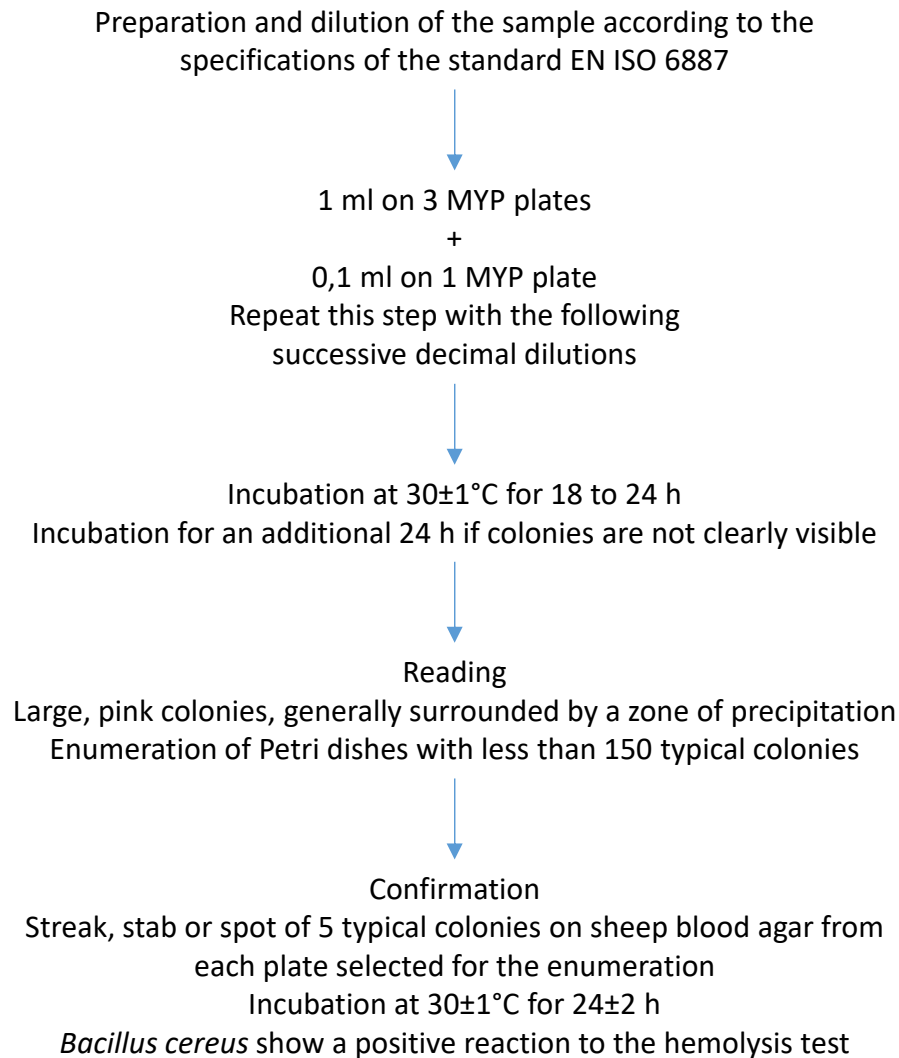
PROTOCOL OF THE BACARA 2 METHOD

Diagram of the procedure that will be applied by the Expert Laboratory



APPENDIX J
EN ISO 7932:2005

Diagram of the procedure as described in the standard



APPENDIX K - Artificial contaminations

#	Sample name	Category	Type	Strain				Injury protocol
				Strain	Group	Code	Origin	
1921848	Raw beef	M&F P	a	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1921849	Raw rabbit sausage	M&F P	a	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1921850	Turkey fillet	M&F P	a	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1939814	Veal paupiette	M&F P	a	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1939813	Sliced turkey	M&F P	a	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1921884	Saithe fillet	M&F P	a	<i>Bacillus cereus</i>	III	DHF065	Piemontese salad	Seeding 48h at 3±2°C
1939815	Raw beef meat	M&F P	a	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1921885	Sardine fillet	M&F P	a	<i>Bacillus cereus</i>	III	DHF065	Shrimp spring rolls	Seeding 48h at 3±2°C
1921851	Chicken curry panini	M&F P	b	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1921852	Bouchée à la reine	M&F P	b	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1921853	Beej tongue	M&F P	b	<i>Bacillus wehinstephanensis</i>	VI	DJL088	Piemontese salad	Seeding 72h at 3±2°C (spores)
1939816	Caramel pork	M&F P	b	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1939817	Burger	M&F P	b	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1921886	Salmon roll in sauce	M&F P	b	<i>Bacillus cereus</i>	III	DHF065	Shrimp spring rolls	Seeding 48h at 3±2°C
1921887	Fish shell	M&F P	b	<i>Bacillus cereus</i>	III	DHF065	Shrimp spring rolls	Seeding 48h at 3±2°C
1939818	Lamb stew	M&F P	b	<i>Bacillus thuringiensis</i>	IV	KGB008	Piemontese salad	Seeding 48h at 3±2°C (spores)
1939852	Fish soup	M&F P	c	<i>Bacillus cereus</i>	II	FRL346	Salad potatoes salmon	Seeding 48h at 3±2°C (spores)
1939853	Lobster bisque	M&F P	c	<i>Bacillus cereus</i>	II	FRL346	Salad potatoes salmon	Seeding 48h at 3±2°C (spores)
1939854	Nouc Mam sauce	M&F P	c	<i>Bacillus cereus</i>	II	FRL346	Salad potatoes salmon	Seeding 48h at 3±2°C (spores)
1921864	Bolognaise sauce	M&F P	c	<i>Bacillus cereus</i>	III	CEC296	Vegetables samosa	Seeding 48h at 3±2°C
1921865	Smoked ham sauce	M&F P	c	<i>Bacillus cereus</i>	III	CEC296	Vegetables samosa	Seeding 48h at 3±2°C
1921792	Cheese Munster	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921790	Yogurt	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921791	Cheese Camembert	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921795	Organic white cheese	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921877	Pasteurized milk cheese	DP	a	<i>Bacillus cereus</i>	V	DBM182	Paris-Brest with strawberry	Seeding 72h at 3±2°C (spores)
1921793	Fresh cream	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921794	Organic pasteurized milk	DP	a	<i>Bacillus cereus</i>	III	AGP399	Nut cheese	Seeding 72h at 3±2°C
1921878	Yogurt	DP	a	<i>Bacillus cereus</i>	V	DBM182	Paris-Brest with strawberry	Seeding 72h at 3±2°C (spores)
1939858	Infant formula 6-12 months with probiotic - (5,7 10 ⁶ <i>S. thermophilus</i>)	DP	b	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939859	Growth milk 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939860	Growth milk 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939862	2nd age thickened milk without probiotics	DP	b	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature
1939863	2nd age thickened milk with probiotics - (1,6 10 ⁶ <i>Bifidobacterie</i>)	DP	b	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature
1939864	Infant formula 12 months - 3 years without probiotic	DP	b	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature
1939868	Infant formula 6-12 months without probiotic	DP	b	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939869	Goat's milk for infants 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939870	Infant formula 6-12 months with probiotic - (7,7 10 ⁶ <i>S. thermophilus</i>)	DP	b	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939884	Infant formula 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939885	Growth milk 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	IV	CLQ110	Dry products environment	Air-dried culture - 2 weeks at room temperature
1939887	Infant formula 6-12 months with probiotic - (3,4 10 ⁶ <i>Lacto. reuteri</i>)	DP	b	<i>Bacillus wehinstephanensis</i>	VI	JFM917	Environment powder industry	Air-dried culture - 2 weeks at room temperature
1939888	Goat's milk for infants 12 months-3 years without probiotic	DP	b	<i>Bacillus cereus</i>	IV	CLQ110	Dry products environment	Air-dried culture - 2 weeks at room temperature
1939889	Infant formula 0-6 months without probiotic	DP	b	<i>Bacillus cereus</i>	III	CND844	Milk protein	Air-dried culture - 2 weeks at room temperature
1969961	Infant formula 6-12 months with probiotic - (3,4 10 ⁶ <i>Lacto. reuteri</i>)	DP	b	<i>Bacillus wehinstephanensis</i>	VI	JFM917	Environment powder industry	Air-dried culture - 2 weeks at room temperature
1939855	Semi-skimmed milk powder	DP	c	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939856	Powdered whole milk	DP	c	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939857	Organic skimmed milk powder batch 1	DP	c	<i>Bacillus cereus</i>	III	BMK053	Milk protein	Lyophilisation - 2 weeks at room temperature
1939861	Organic skimmed milk powder batch 2	DP	c	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939865	Skimmed milk powder	DP	c	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature
1939866	Semi-skimmed milk powder	DP	c	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature

APPENDIX K - Artificial contaminations

#	Sample name	Category	Type	Strain				Injury protocol
				Strain	Group	Code	Origin	
1939867	Powdered whole milk	DP	c	<i>Bacillus thuringiensis</i>	IV	JCT201	Emmental ham panini	Lyophilisation - 2 weeks at room temperature
1939871	Powdered whole milk	DP	c	<i>Bacillus cereus</i>	IV	FEQ368	Nut cheese	Lyophilisation - 2 weeks at room temperature
1939891	Semi-skimmed milk powder	DP	c	<i>Bacillus cereus</i>	IV	CLQ110	Dry products environment	Air-dried culture - 2 weeks at room temperature
1939893	Buttermilk powder	DP	c	<i>Bacillus weheinstephanensis</i>	VI	JFM917	Environment powder industry	Air-dried culture - 2 weeks at room temperature
1939894	Powdered caseinate	DP	c	<i>Bacillus cereus</i>	III	CND844	Milk protein	Air-dried culture - 2 weeks at room temperature
1969963	Semi-skimmed milk powder	DP	c	<i>Bacillus cereus</i>	IV	CLQ110	Dry products environment	Air-dried culture - 2 weeks at room temperature
1915615	Pasta salad, carrots, prawns	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1915619	Farfalle with chorizo	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1915616	Rice salad, tomatoes, tuna, egg	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1915618	Pasta, tomato, pepper salad	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1915617	Cantonese rice	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1915620	Rice salad, tomatoes, corn	VP	b	<i>Bacillus cereus</i>	V	LDG480	Pasteurised potatoes puree	Seeding 72h at 3±2°C
1921854	Pasta salad, sausage, tomatoes	VP	b	<i>Bacillus cytotoxicus</i>	VII	UHA235	Couscous seed	Seeding 72h at 3±2°C (spores)
1921855	Pasta with pesto	VP	b	<i>Bacillus cytotoxicus</i>	VII	UHA235	Couscous seed	Seeding 72h at 3±2°C (spores)
1939821	Fresh pasta	VP	b	<i>Bacillus cytotoxicus</i>	VII	GGB821	Potato flakes	Seeding 48h at 3±2°C
1915622	Cabbage trio	VP	c	<i>Bacillus cereus</i>	II	EGY443	Zucchini	Seeding 72h at 3±2°C
1915623	Grated carrots vinaigrette	VP	c	<i>Bacillus cereus</i>	II	EGY443	Zucchini	Seeding 72h at 3±2°C
1915621	Tomato tartare	VP	c	<i>Bacillus cereus</i>	II	EGY443	Zucchini	Seeding 72h at 3±2°C
1915624	Pork snout salad with pickles	VP	c	<i>Bacillus cereus</i>	II	EGY443	Zucchini	Seeding 72h at 3±2°C
1915625	Vegetable tian	VP	c	<i>Bacillus cereus</i>	II	EGY443	Zucchini	Seeding 72h at 3±2°C
1921801	Liquid egg white	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921856	Liquid egg white	E&P P	a	<i>Bacillus weheinstephanensis</i>	VI	JFM917	Ground	Seeding 72h at 3±2°C (spores)
1921796	Liquid egg yolk	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921797	Liquid whole egg	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921798	11% salted egg yolk	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921799	Sweet yellow 30%	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921800	Salty yellow 9% - sweet 10.9%	E&P P	a	<i>Bacillus cereus</i>	IV	REB947	Creme brulee with cranberry	Seeding 72h at 3±2°C
1921802	Pasteurized egg white powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921805	Unpasteurized egg white powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921866	Powdered egg white	E&P P	b	<i>Bacillus weheinstephanensis</i>	VI	JFM917	Ground	Seeding 48h at room temperature
1921803	Pasteurized egg yolk powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921804	Pasteurized whole egg powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921806	Pasteurized egg yolk powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921807	Pasteurized whole egg powder	E&P P	b	<i>Bacillus cereus</i>	II	JEG961	Kirsch pastry	Seeding 48h at room temperature
1921857	Quinoa salad, bulgur	RTE & RTHR P	a	<i>Bacillus cytotoxicus</i>	VII	UHA235	Couscous seed	Seeding 72h at 3±2°C (spores)
1921858	Semolina (dessert)	RTE & RTHR P	a	<i>Bacillus cytotoxicus</i>	VII	UHA235	Couscous seed	Seeding 72h at 3±2°C (spores)
1921859	Milk rice	RTE & RTHR P	a	<i>Bacillus cytotoxicus</i>	VII	UHA235	Couscous seed	Seeding 72h at 3±2°C (spores)
1921876	Muesli cereals	RTE & RTHR P	a	<i>Bacillus cereus</i>	IV	ANJ157	Potato starch	Seeding 48h at room temperature
1939820	Milk rice	RTE & RTHR P	a	<i>Bacillus cytotoxicus</i>	VII	GGB821	Potato flakes	Seeding 48h at 3±2°C
1921860	Corn tortillas	RTE & RTHR P	b	<i>Bacillus thuringiensis</i>	IV	DKG963	Raw shortbread	Seeding 72h at 3±2°C (spores)
1921861	Banana	RTE & RTHR P	b	<i>Bacillus thuringiensis</i>	IV	DKG963	Raw shortbread	Seeding 72h at 3±2°C (spores)
1921862	Rice cracker	RTE & RTHR P	b	<i>Bacillus thuringiensis</i>	IV	DKG963	Raw shortbread	Seeding 72h at 3±2°C (spores)
1921873	Bread	RTE & RTHR P	b	<i>Bacillus cereus</i>	III	GFF463	Soft wheat	Seeding 48h at room temperature
1921888	Chestnut jam	RTE & RTHR P	b	<i>Bacillus cereus</i>	III	GFF463	Soft wheat	Seeding 48h at room temperature
1921874	Lentils	RTE & RTHR P	b	<i>Bacillus cereus</i>	IV	MER869	Pasteurised potatoes	Seeding 72h at 3±2°C
1921863	From mashed parsnip	RTE & RTHR P	c	<i>Bacillus thuringiensis</i>	IV	DKG963	Raw shortbread	Seeding 72h at 3±2°C (spores)
1921882	Chickpea	RTE & RTHR P	c	<i>Bacillus thuringiensis</i>	IV	DKG963	Raw shortbread	Seeding 72h at 3±2°C (spores)
1921875	Mashed Sweet Potatoes	RTE & RTHR P	c	<i>Bacillus cereus</i>	IV	MER869	Pasteurised potatoes	Seeding 72h at 3±2°C
1921867	Guinea pig food	F P	a	<i>Bacillus cereus</i>	II	DJQ279	Ground	Seeding 48h at room temperature
1921868	Hamster food	F P	a	<i>Bacillus cereus</i>	II	DJQ279	Ground	Seeding 48h at room temperature

APPENDIX K - Artificial contaminations

#	Sample name	Category	Type	Strain				Injury protocol
				Strain	Group	Code	Origin	
1921869	Pet bird food	F P	a	<i>Bacillus cereus</i>	II	DJQ279	Ground	Seeding 48h at room temperature
1939794	Cat food	F P	a	<i>Bacillus cytotoxicus</i>	VII	WGL755	Dehydrated mashed potato	Seeding 48h at room temperature
1939795	Dog food	F P	a	<i>Bacillus cytotoxicus</i>	VII	WGL755	Dehydrated mashed potato	Seeding 48h at room temperature
1921870	Wheat	F P	b	<i>Bacillus cereus</i>	III	GFF463	Soft wheat	Seeding 48h at room temperature
1921871	Corn	F P	b	<i>Bacillus cereus</i>	III	GFF463	Soft wheat	Seeding 48h at room temperature
1921872	Dwarf rabbit food	F P	b	<i>Bacillus cereus</i>	III	GFF463	Soft wheat	Seeding 48h at room temperature
1939796	Horse feed	F P	c	<i>Bacillus cytotoxicus</i>	VII	WGL755	Dehydrated mashed potato	Seeding 48h at room temperature
1939797	Soy	F P	c	<i>Bacillus cytotoxicus</i>	VII	WGL755	Dehydrated mashed potato	Seeding 48h at room temperature

APPENDIX L

Relative trueness - raw results

Key:

Results are expressed in CFU/g or ml

nc:	not countable
	Estimated number
	Microorganisms are present but less than 40 per g or ml
	Results not countable or superior or inferior to the limit of quantification
	Abundant interfering flora

Relative trueness study - Meat products, fish products, seafood

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921848	Raw beef	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921849	Raw rabbit sausage	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921850	Turkey fillet	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939814	Veal paupiette	Yes	a	-1	10	100%	100	7	100%	70	70	9	100%	90	90
				-2	0	/		0	/			0	/		
1939813	Sliced turkey	Yes	a	-1	24	100%	250	19	100%	190	190	18	100%	180	180
				-2	3	100%		2	100%			2	100%		
1921884	Saithe fillet	Yes	a	-1	49	100%	490	48	100%	520	520	43	100%	440	440
				-2	5	100%		9	100%			5	100%		
1939815	Raw beef meat	Yes	a	-2	51	100%	5300	45	100%	4500	4500	48	100%	4800	4800
				-3	7	100%		4	100%			5	100%		
1921885	Sardine fillet	Yes	a	-2	50	100%	5000	46	100%	4400	4400	52	100%	4900	4900
				-3	5	100%		2	100%			2	100%		
1921851	Chicken curry panini	Yes	b	-1	2	100%	20	2	100%	20	20	3	100%	30	30
				-2	0	/		0	/			0	/		
1921852	Bouchée à la reine	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921853	Beef tongue	Yes	b	-1	0	/	<10	6	100%	60	60	5	100%	50	50
				-2	0	/		0	/			0	/		
1915576	Veal sweetbread bouchée	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915577	Paella	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915578	Cooked pork	No	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915579	Shoulder of lamb and mash	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915580	Salmon puff pastry	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915581	Chicken pie	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915589	Salmon spinach quiche	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915590	Sea lasagna	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915591	Ham croissant	No	b	-1	0	/	<10	1	100%	10	10	6	100%	60	60
				-2	0	/		0	/			0	/		
1915592	Quiche lorraine	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		

Relative trueness study - Meat products, fish products, seafood

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915593	Bouchée à la reine	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915594	Francfort sausage	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1925627	Beef lasagna	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915636	Chicken sataï sauce	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915637	Poultry tournedos and foie gras	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939816	Caramel pork	Yes	b	-1	9	100%	90	9	100%	90	90	8	100%	80	80
				-2	3	100%		0	/			1	/		
1939817	Burger	Yes	b	-1	12	100%	120	9	100%	90	90	11	100%	110	110
				-2	1	100%		0	/			1	/		
1921886	Salmon roll in sauce	Yes	b	-1	85	100%	870	85	100%	890	890	99	100%	1040	1040
				-2	1	100%		13	100%			15	100%		
1921887	Fish shell	Yes	b	-2	60	100%	6000	51	100%	5200	5200	55	100%	5600	5600
				-3	6	100%		6	100%			7	100%		
1939818	Lamb stew	Yes	b	-2	112	100%	11000	104	100%	9000	9000	94	100%	9500	9500
				-3	12	100%		9	100%			10	100%		
1921889	Beef cheek terrine	No	b	-3	>150	/	1500000	>150	/	1400000	1400000	>150	/	1400000	1400000
				-4	149	100%		138	100%			140	100%		
1915634	Chicken sataï sauce	No	b	-1	>150	100%	>150000	>150	100%	>150000	>150000	>150	100%	>150000	>150000
				-2	>150	100%		>150	100%			>150	100%		
1939852	Fish soup	Yes	c	-1	10	100%	90	8	100%	80	80	9	100%	90	90
				-2	0	/		2	100%			1	100%		
1939853	Lobster bisque	Yes	c	-1	23	100%	230	15	100%	150	150	18	100%	180	180
				-2	2	100%		2	100%			2	100%		
1939854	Nuoc Mam sauce	Yes	c	-1	31	100%	320	28	100%	280	280	25	100%	250	250
				-2	4	100%		2	100%			2	100%		
1921864	Bolognaise sauce	Yes	c	-1	88	100%	940	50	100%	560	560	66	100%	680	680
				-2	15	100%		11	100%			9	100%		
1921864	Smoked sauce ham	Yes	c	-2	67	100%	6700	55	100%	5100	5100	64	100%	6400	6400
				-3	7	100%		1	100%			6	100%		

Relative trueness study - Dairy products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 [■]			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915582	Panna cotta	No	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915585	Custard	No	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915584	Strawberry mint ice cream	No	a	-1	1	100%	10	1	100%	10	10	1	100%	10	10
				-2	0	100%		0	100%			0	100%		
1921792	Munster cheese	Yes	a	-1	1	100%	10	5	100%	50	50	3	100%	30	30
				-2	0	/		0	/			0	/		
1921790	Yogurt	Yes	a	-1	6	100%	60	6	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1921791	Camembert cheese	Yes	a	-1	7	100%	80	4	100%	40	40	5	100%	50	50
				-2	2	/		0	/			0	/		
1921795	Organic cottage cheese	Yes	a	-1	9	100%	90	8	100%	90	90	7	100%	90	90
				-2	0	/		2	100%			3	100%		
1921877	Brie pasteurized milk cheese	Yes	a	-1	16	100%	180	19	100%	190	190	18	100%	180	180
				-2	4	100%		1	100%			2	100%		
1921793	Fresh cream	Yes	a	-2	4	100%	400	3	100%	300	300	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915583	Emmental cheese	No	a	-1	71	100%	800	76	100%	800	800	66	100%	700	700
				-2	15	100%		16	100%			8	100%		
1921794	Organic pasteurised milk	Yes	a	-2	14	100%	1300	10	100%	1000	1000	7	100%	700	700
				-3	0	/		0	/			0	/		
1921878	Yogurt	Yes	a	-1	>150	/	4000	>150	/	3700	3700	>150	/	3500	3500
				-2	40	100%		37	100%			35	100%		
1915587	Infant milk powder	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915586	Infant milk powder	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1939858	Infant formula 6-12 months with probiotic - (5,7 10 ⁶ <i>S. thermophilus</i>)	Yes	b	-1	16	100%	160	11	100%	100	100	10	100%	100	100
				-2	1	100%		0	/			1	100%		
1939859	Growth milk 12 months-3 years without probiotic	Yes	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939860	Growth milk 12 months-3 years without probiotic	Yes	b	-1	2	100%	20	2	100%	20	20	2	100%	20	20
				-2	0	/		0	/			0	/		
1939862	2nd age thickened milk without probiotics	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939863	2nd age thickened milk with probiotics - (1,6 10 ⁶ - Bifidobacterie)	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939864	Infant formula 12 months - 3 years without probiotic	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939868	Infant formula 6-12 months without probiotic	Yes	b	-1	0	/	<10	1	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1939869	Goat's milk for infants 12 months-3 years without probiotic	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939870	Infant formula 6-12 months with probiotic - (7,7 10 ⁶ <i>S. thermophilus</i>)	Yes	b	-1	0	/	<10	0	/	<10	<10	1	100%	10	10
				-2	0	/		0	/			0	/		

Relative trueness study - Dairy products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005*			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1939884	Infant formula 12 months-3 years without probiotic	Yes	b	-3	29	100%	32000	36	100%	38000	38000	39	100%	40000	40000
				-4	6	100%		6	100%			6	100%		
1939885	Growth milk 12 months-3 years without probiotic	Yes	b	-1	8	100%	80	8	100%	80	80	4	100%	40	40
				-2	0	/		0	/			0	/		
1939887	Infant formula 6-12 months with probiotic - 3,4 10 ⁶ <i>Lactobacillus reuteri</i>	Yes	b	-1	12	100%	110	8	100%	80	80	8	100%	80	80
				-2	0	/		1	100%			0	/		
1939888	Goat's milk for infants 12 months-3 years without probiotic	Yes	b	-1	26	100%	250	26	100%	250	250	18	100%	190	190
				-2	1	100%		1	100%			3	100%		
1939889	Infant formula 0-6 months without probiotic	Yes	b	-2	>150	/	71000	>150	/	83000	83000	>150	/	80000	80000
				-3	71	100%		83	100%			80	100%		
1969961	Infant formula 6-12 months with probiotic - 3,4 10 ⁶ <i>Lactobacillus reuteri</i>	Yes	b	-2	44	100%	4800	31	100%	3100	3100	32	100%	3200	3200
				-3	9	100%		3	100%			3	100%		
1939855	Semi-skimmed milk powder	Yes	c	-1	2	100%	20	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939856	Powdered whole milk	Yes	c	-1	1	100%	10	0	/	<10	<10	1	100%	10	10
				-2	0	/		0	/			0	/		
1939857	Organic skimmed milk powder batch 1	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939861	Organic skimmed milk powder batch 2	Yes	c	-1	5	100%	50	6	100%	60	60	5	100%	50	50
				-2	0	/		0	/			0	/		
1939865	Skimmed milk powder	Yes	c	-1	5	100%	50	10	100%	100	100	10	100%	100	100
				-2	1	100%		1	100%			1	100%		
1939866	Semi-skimmed milk powder	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939867	Powdered whole milk	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939871	Powdered whole milk	Yes	c	-1	1	100%	10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939891	Semi-skimmed milk powder	Yes	c	-1	1	100%	10	1	100%	10	10	2	100%	20	20
				-2	0	/		0	/			0	/		
1939893	Buttermilk powder	Yes	c	-1	38	100%	380	29	100%	270	270	19	100%	200	200
				-2	4	100%		1	100%			3	100%		
1939894	Powdered caseinate	Yes	c	-3	>150	/	120000	>150	/	180000	180000	>150	100%	180000	180000
				-4	12	100%		18	100%			18	100%		
1969963	Semi-skimmed milk powder	Yes	c	-2	19	100%	1800	18	100%	2400	2400	27	100%	2700	2700
				-3	1	100%		8	100%			3	100%		

Relative trueness study - Vegetables

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result		CFU	Conf.	Result	Result
1915588	Grated coconut	No	a	-1	15	100%	140	8	100%	80	80	6	100%	60	60
				-2	0	100%		1	100%			2	100%		
1921846	Beetroot powder	No	a	-1	17	100%	170	10	100%	130	130	8	100%	80	80
				-2	2	100%		4	100%			1	100%		
1921847	Potato flakes	No	a	-1	13	100%	140	10	100%	100	100	10	100%	100	100
				-2	2	100%		1	100%			1	100%		
1915632	Thyme	No	a	-1	35	100%	360	35	100%	350	350	30	100%	320	320
				-2	5	100%		4	100%			5	100%		
1915595	Wheat flour	No	a	-1	>150	/	1600	83	100%	960	960	123	100%	1300	1300
				-2	16	100%		23	100%			21	100%		
1921883	Dehydrated mushrooms	No	a	-1	>150	/	3000	>150	/	2400	2400	>150	/	2800	2800
				-2	30	100%		24	100%			28	100%		
1915596	Rye flour	No	a	-1	>150	/	5000	>150	/	3900	3900	>150	100%	4400	4400
				-2	50	100%		39	100%			44	100%		
1977611	Curry Madras	No	a	-1	30	100%	290	27	100%	270	270	31	100%	310	310
				-2	2	100%		3	100%			3	100%		
1915615	Pasta salad, carrots, prawns	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915619	Farfalle with chorizo	Yes	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915597	Pasta salad, pepper, corn, olive	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939799	Crozet salad, turkey, pepper	No	b	-1	1	100%	10	1	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1915616	Rice salad, tomatoes, tuna, egg	Yes	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915618	Pasta, tomato, pepper salad	Yes	b	-2	0	/	<100	0	/	<100	<100	1	100%	100	100
				-3	0	/		0	/			0	/		
1915617	Cantonese rice	Yes	b	-1	10	100%	100	6	100%	60	60	12	100%	130	130
				-2	1	/		0	/			2	100%		
1915620	Rice salad, tomatoes, corn	Yes	b	-2	2	100%	200	2	100%	200	200	1	100%	100	100
				-3	0	/		0	/			0	/		
1921854	Pasta salad, sausage, tomatoes	Yes	b	-1	19	100%	220	18	100%	180	180	20	100%	180	180
				-2	5	100%		2	100%			0	/		
1915626	Rice	No	b	-1	43	100%	400	42	100%	470	470	52	100%	510	510
				-2	1	100%		10	100%			4	100%		
1921855	Pasta with pesto	Yes	b	-1	65	100%	650	63	100%	590	590	62	100%	600	600
				-2	6	100%		2	100%			6	100%		
1939878	Indian pasta salad	No	b	-2	46	100%	4800	38	100%	3900	3900	44	100%	4300	4300
				-3	7	100%		5	100%			3	100%		
1939821	Fresh pasta	Yes	b	-2	>150	/	16000	>150	/	12000	12000	>150	/	11000	11000
				-3	16	100%		12	100%			11	100%		

Relative trueness study - Vegetables

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915601	Greek tomato salad	No	c	-1	0	/	<10	2	100%	20	20	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915602	Celery, apples, cucumber, tomatoes	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915622	Cabbage trio	Yes	c	-1	4	100%	40	4	100%	40	40	2	100%	20	20
				-2	0	/		0	/			0	/		
1915623	Grated carrots vinaigrette	Yes	c	-1	5	/	50	3	100%	30	30	3	100%	30	30
				-2	0	/		0	/			0	/		
1915621	Tomato tartare	Yes	c	-1	6	100%	60	2	100%	20	20	6	100%	60	60
				-2	0	/		0	/			0	/		
1939875	Piémontaise	No	c	-1	8	100%	80	4	100%	40	40	5	100%	50	50
				-2	0	/		0	/			0	/		
1939877	Beets, tomatoes, celery	No	c	-1	8	100%	80	7	100%	70	70	6	100%	60	60
				-2	1	100%		1	100%			1	100%		
1915598	Salad, snout, tomatoes	No	c	-1	10	100%	100	20	100%	210	210	11	100%	130	130
				-2	1	100%		3	100%			3	100%		
1915624	Pork snout salad with pickles	Yes	c	-2	7	100%	700	4	100%	400	400	5	100%	500	500
				-3	0	/		0	/			0	/		
1915600	Tomato and vegetable salad	No	c	-1	75	100%	810	88	100%	880	880	88	100%	930	930
				-2	14	100%		9	100%			14	100%		
1915625	Vegetable tian	Yes	c	-2	20	100%	1800	15	100%	1500	1500	12	100%	1200	1200
				-3	0	/		1	100%			1	100%		
1915599	Piémontaise	No	c	-1	138	100%	1400	78	100%	780	780	149	100%	1500	1500
				-2	19	100%		8	100%			16	100%		

Relative trueness study - Eggs and pastries

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921801	Liquid egg white	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921856	Liquid egg white	Yes	a	-1	14	100%	130	9	100%	90	90	12	100%	120	120
				-2	0	/		1	100%			1	100%		
1921796	Liquid egg yolk	Yes	a	-1	24	100%	240	10	100%	120	120	16	100%	160	160
				-2	2	100%		3	100%			2	100%		
1921797	Liquid whole egg	Yes	a	-1	41	100%	410	22	100%	220	220	14	100%	160	160
				-2	4	100%		2	100%			4	100%		
1921798	11% salted egg yolk	Yes	a	-1	30	100%	370	20	100%	210	210	24	100%	230	230
				-2	11	100%		3	100%			1	100%		
1921799	Sweet egg yolk 30%	Yes	a	-2	23	100%	2500	14	100%	1600	1600	16	100%	1600	1600
				-3	4	100%		4	100%			2	100%		
1921800	Salty egg yolk 9% - sweet 10.9%	Yes	a	-2	51	100%	5000	43	100%	4100	4100	18	100%	4600	4600
				-3	4	100%		2	100%			3	100%		
1921802	Pasteurized egg white powder	Yes	b	-1	0	/	<10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921805	Unpasteurized egg white powder	Yes	b	-1	3	100%	30	1	100%	10	10	3	100%	30	30
				-2	1	100%		0	/			0	/		
1921866	Powdered egg white	Yes	b	-1	25	100%	230	16	100%	160	160	18	100%	170	170
				-2	0	/		2	100%			1	100%		
1921803	Pasteurized egg yolk powder	Yes	b	-1	32	100%	320	26	100%	270	270	24	100%	260	260
				-2	3	100%		4	100%			5	100%		
1921804	Pasteurized whole egg powder	Yes	b	-1	90	100%	860	80	100%	770	770	78	100%	800	800
				-2	5	100%		5	100%			10	100%		
1921806	Pasteurized egg yolk powder	Yes	b	-2	39	100%	4300	31	100%	3100	3100	30	100%	3000	3000
				-3	8	100%		3	100%			3	100%		
1921807	Pasteurized whole egg powder	Yes	b	-2	39	100%	4000	46	100%	4600	4600	46	100%	4800	4800
				-3	5	100%		5	100%			7	100%		
1915605	Vanilla dessert	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915607	Chocolat dessert	No	c	-1	2	100%	20	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915608	Whipped cream cabbage	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915630	Nantais cake	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915631	Paris Brest	No	c	-1	22	100%	230	13	100%	140	140	11	100%	130	130
				-2	3	100%		2	100%			3	100%		
1915628	Coffee eclair	No	c	-1	17	100%	170	23	100%	230	230	14	100%	150	150
				-2	2	100%		2	100%			2	100%		
1915629	Cream pastry	No	c	-1	24	100%	240	13	100%	140	140	14	100%	150	150
				-2	2	100%		2	100%			2	100%		

Relative trueness study - Eggs and pastries

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915606	Raspberry strawberry dessert	No	c	-1	23	100%	210	18	100%	200	200	26	100%	280	280
				-2	0	100%		4	100%			5	100%		
1915609	Raspberry tartlet	No	c	-1	66	100%	740	54	100%	550	550	39	100%	360	360
				-2	15	100%		6	100%			0	100%		
1915603	Crème brulee	No	c	-3	105	100%	110000	103	100%	110000	110000	72	100%	76000	76000
				-4	17	100%		19	100%			12	100%		
1915604	Chocolate eclair	No	c	-3	>150	100%	1200000	>150	100%	1500000	1500000	>150	100%	1500000	1500000
				-4	121	100%		150	100%			148	100%		

Relative trueness study - RTE & RTH products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915611	Tabbouleh of the sea	No	a	-1	4	100%	40	4	100%	40	40	4	100%	40	40
				-2	0	100%		0	100%			1	100%		
1921857	Quinoa salad, bulgur	Yes	a	-1	2	100%	20	3	100%	30	30	4	100%	40	40
				-2	0	/		0	/			1	100%		
1921858	Semolina (dessert)	Yes	a	-1	9	100%	90	11	100%	110	110	13	100%	130	130
				-2	3	100%		1	100%			1	100%		
1915610	Oriental tabbouleh	No	a	-1	12	100%	140	11	100%	120	120	20	100%	190	190
				-2	3	100%		2	100%			1	100%		
1921859	Rice pudding	Yes	a	-1	37	100%	360	32	100%	320	320	34	100%	350	350
				-2	3	100%		3	100%			4	100%		
1921876	Muesli cereals	Yes	a	-1	>150	/	2400	>150	/	2000	2000	>150	/	1900	1900
				-2	24	100%		20	100%			19	100%		
1939820	Rice pudding	Yes	a	-1	>150	/	3100	>150	/	4800	4800	>150	/	6000	6000
				-2	31	100%		48	100%			60	100%		
1921860	Corn tortillas	Yes	b	-1	15	100%	150	10	100%	110	110	13	100%	130	130
				-2	1	100%		2	100%			1	100%		
1921861	Banana	Yes	b	-1	21	100%	200	16	100%	160	160	14	100%	170	170
				-2	1	100%		1	100%			5	100%		
1921862	Rice cracker	Yes	b	-1	28	100%	280	23	100%	250	250	29	100%	290	290
				-2	3	100%		4	100%			3	100%		
1921873	Bread	Yes	b	-1	42	100%	400	36	100%	380	380	38	100%	400	400
				-2	2	100%		6	100%			6	100%		
1921888	Chestnut jam	Yes	b	-1	135	100%	1400	>150	/	1700	1700	>150	/	2000	2000
				-2	15	100%		17	100%			20	100%		
1915612	Fish sticks and potatoes	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921874	Lentils	Yes	c	-1	9	100%	90	7	100%	70	70	8	100%	80	80
				-2	0	/		0	/			0	/		
1921863	Parsnip puree	Yes	c	-1	12	100%	120	10	100%	110	110	14	100%	140	140
				-2	1	100%		2	100%			2	100%		
1921882	Chickpea	Yes	c	-1	18	100%	180	19	100%	220	220	16	100%	170	170
				-2	1	100%		5	100%			3	100%		
1915614	Hachis parmentier	No	c	-1	16	100%	180	29	100%	300	300	22	100%	210	210
				-2	4	100%		4	100%			1	100%		
1915613	Mashed potatoes	No	c	-1	16	100%	170	25	100%	270	270	26	100%	290	290
				-2	3	100%		5	100%			6	100%		
1921875	Mashed Sweet Potatoes	Yes	c	-1	>150	/	3000	>150	/	2800	2800	>150	/	2800	2800
				-2	30	100%		28	100%			28	100%		
1915635	Mashed potatoes and carrots	No	c	-3	>150	/	390000	>150	/	340000	340000	>150	/	380000	380000
				-4	39	100%		34	100%			38	100%		
1915633	Mashed potatoes	No	c	-1	>150	100%	>150000	>150	100%	>150000	>150000	>150	100%	>150000	>150000
				-2	>150	100%		>150	100%			>150	100%		

Relative trueness study - Feed products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921867	Guinea pig feed	Yes	a	-1	10	100%	100	6	100%	60	60	7	100%	70	70
				-2	1	100%		1	100%			1	100%		
1921868	Hamster feed	Yes	a	-1	14	100%	160	12	100%	130	130	15	100%	150	150
				-2	6	100%		2	100%			1	100%		
1921869	Pet bird feed	Yes	a	-1	50	100%	510	48	100%	490	490	47	100%	480	480
				-2	6	100%		6	100%			6	100%		
1939794	Cat feed	Yes	a	-2	63	100%	6300	56	100%	5600	5600	58	100%	5800	5800
				-3	6	100%		5	100%			6	100%		
1939795	Dog feed	Yes	a	-2	99	100%	10000	86	100%	8700	8700	86	100%	9300	9300
				-3	11	100%		10	100%			16	100%		
1921838	Rabbit feed	No	b	-1	11	100%	110	10	100%	100	100	8	100%	80	80
				-2	1	100%		1	100%			0	/		
1921839	Poultry feed	No	b	-1	25	100%	270	17	100%	170	170	19	100%	180	180
				-2	5	100%		1	100%			1	100%		
1921840	Maize	No	b	-1	1	100%	10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921870	Wheat	Yes	b	-1	40	100%	370	36	100%	350	350	35	100%	350	350
				-2	1	100%		2	100%			3	100%		
1921871	Corn	Yes	b	-2	20	100%	1900	16	100%	1600	1600	18	100%	1800	1800
				-3	1	100%		1	100%			2	100%		
1921872	Dwarf rabbit feed	Yes	b	-2	40	100%	4000	39	100%	4000	4000	42	100%	4300	4300
				-3	4	100%		5	100%			5	100%		
1921843	Horse feed	No	c	-1	2	100%	20	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921844	Soy	No	c	-1	10	100%	120	10	100%	100	100	12	100%	120	120
				-2	3	100%		1	100%			1	100%		
1921842	Sheep feed	No	c	-1	13	100%	140	15	100%	160	160	17	100%	170	170
				-2	2	100%		2	100%			2	100%		
1939796	Horse feed	Yes	c	-1	21	100%	210	17	100%	190	190	18	100%	180	180
				-2	2	100%		4	100%			2	100%		
1921845	Rapeseed	No	c	-1	43	100%	450	33	100%	320	320	35	100%	330	330
				-2	6	100%		2	100%			1	100%		
1939883	Pig feed	No	c	-1	63	100%	710	34	100%	350	350	53	100%	550	550
				-2	15	100%		4	100%			8	100%		
1921841	Lamb feed	No	c	-1	>150	/	1000	86	100%	870	870	81	100%	840	840
				-2	10	100%		10	100%			11	100%		
1939882	Piglet feed	No	c	-1	>150	/	5000	>150	/	3700	3700	>150	/	4400	4400
				-2	50	100%		37	100%			44	100%		
1939797	Soy	Yes	c	-2	79	100%	8000	69	100%	7000	7000	73	100%	7200	7200
				-3	9	100%		8	100%			6	100%		

APPENDIX M - Relative trueness statistical calculations

Pour plate for BACARA 2

	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Meat products, fish products	a	1939814	Veal paupiette	100	70	2.00	1.85	1.92	-0.15
	a	1939813	Sliced turkey	250	190	2.40	2.28	2.34	-0.12
	a	1921884	Saithe fillet	490	520	2.69	2.72	2.70	0.03
	a	1921885	Sardine fillet	5000	4400	3.70	3.64	3.67	-0.06
	a	1939815	Raw beef meat	5300	4500	3.72	3.65	3.69	-0.07
	b	1939816	Caramel pork	90	90	1.95	1.95	1.95	0.00
	b	1939817	Burger	120	90	2.08	1.95	2.02	-0.12
	b	1921886	Salmon roll in sauce	870	890	2.94	2.95	2.94	0.01
	b	1921887	Fish shell	6000	5200	3.78	3.72	3.75	-0.06
	b	1939818	Lamb stew	11000	9000	4.04	3.95	4.00	-0.09
	b	1921889	Beef cheek terrine	1500000	1400000	6.18	6.15	6.16	-0.03
	c	1939852	Fish soup	90	80	1.95	1.90	1.93	-0.05
	c	1939853	Lobster bisque	230	150	2.36	2.18	2.27	-0.19
	c	1939854	Nuoc Mam sauce	320	280	2.51	2.45	2.48	-0.06
	c	1921864	Bolognese sauce	940	560	2.97	2.75	2.86	-0.22
	c	1921865	Smoked ham sauce	6700	5100	3.83	3.71	3.77	-0.12
	Average difference of the category								-0.08
	Standard deviation of differences								0.07
Dairy products	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
	a	1921791	Cheese Camembert	80	40	1.90	1.60	1.75	-0.30
	a	1921795	Organic white cheese	90	90	1.95	1.95	1.95	0.00
	a	1921877	Pasteurized milk cheese	180	190	2.26	2.28	2.27	0.02
	a	1915583	Emmental cheese	800	800	2.90	2.90	2.90	0.00
	a	1921794	Organic pasteurized milk	1300	1000	3.11	3.00	3.06	-0.11
	a	1921878	Yogurt	4000	3700	3.60	3.57	3.59	-0.03
	b	1939885	Growth milk 12 months-3 years without probiotic	80	80	1.90	1.90	1.90	0.00
	b	1939887	Infant formula 6-12 months with probiotic - (3,4	110	80	2.04	1.90	1.97	-0.14
	b	1939858	Infant formula 6-12 months with probiotic	160	100	2.20	2.00	2.10	-0.20
	b	1939888	Goat's milk for infants 12 months-3 years without	250	250	2.40	2.40	2.40	0.00
	b	1969961	Infant formula 6-12 months with probiotic	4800	3100	3.68	3.49	3.59	-0.19
	b	1939884	Infant formula 12 months-3 years without	32000	38000	4.51	4.58	4.54	0.07
	b	1939889	Infant formula 0-6 months without probiotic	71000	83000	4.85	4.92	4.89	0.07
	c	1939861	Organic skimmed milk powder batch 2	50	60	1.70	1.78	1.74	0.08
	c	1939865	Skimmed milk powder	50	100	1.70	2.00	1.85	0.30
	c	1939893	Buttermilk powder	380	270	2.58	2.43	2.51	-0.15
	c	1969963	Semi-skimmed milk powder	1800	2400	3.26	3.38	3.32	0.12
	c	1939894	Powdered caseinate	120000	180000	5.08	5.26	5.17	0.18
	Average difference of the category								-0.02
	Standard deviation of differences								0.15

APPENDIX M - Relative trueness statistical calculations

Pour plate for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Vegetables	a	1915588	Grated coconut	140	80	2.15	1.90	2.02	-0.24
	a	1921846	Beetroot powder	170	130	2.23	2.11	2.17	-0.12
	a	1921847	Potato flakes	140	100	2.15	2.00	2.07	-0.15
	a	1977611	Curry Madras	290	270	2.46	2.43	2.45	-0.03
	a	1915632	Thyme	360	350	2.56	2.54	2.55	-0.01
	a	1915595	Wheat flour	1600	960	3.20	2.98	3.09	-0.22
	a	1921883	Dehydrated mushrooms	3000	2400	3.48	3.38	3.43	-0.10
	a	1915596	Rye flour	5000	3900	3.70	3.59	3.65	-0.11
	b	1915617	Cantonese rice	100	60	2.00	1.78	1.89	-0.22
	b	1921854	Pasta salad, sausage, tomatoes	220	180	2.34	2.26	2.30	-0.09
	b	1915626	Rice	400	470	2.60	2.67	2.64	0.07
	b	1921855	Pasta with pesto	650	590	2.81	2.77	2.79	-0.04
	b	1939878	Indian pasta salad	4800	3900	3.68	3.59	3.64	-0.09
	b	1939821	Fresh pasta	16000	12000	4.20	4.08	4.14	-0.12
	c	1915622	Cabbage trio	40	40	1.60	1.60	1.60	0.00
	c	1939875	Piémontaise	80	40	1.90	1.60	1.75	-0.30
	c	1939877	Beets, tomatoes, celery	80	70	1.90	1.85	1.87	-0.06
	c	1915598	Salad, snout, tomatoes	100	210	2.00	2.32	2.16	0.32
	c	1915624	Pork snout salad with pickles	700	400	2.85	2.60	2.72	-0.24
	c	1915600	Tomato and vegetable salad	810	880	2.91	2.94	2.93	0.04
	c	1915625	Vegetable tian	1800	1500	3.26	3.18	3.22	-0.08
	c	1915599	Piémontaise	1400	780	3.15	2.89	3.02	-0.25
	Average difference of the category								-0.09
	Standard deviation of differences								0.14
Eggs & Pastries	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921856	Liquid egg white	130	90	2.11	1.95	2.03	-0.16
	a	1921796	Liquid egg yolk	240	120	2.38	2.08	2.23	-0.30
	a	1921797	Liquid whole egg	410	220	2.61	2.34	2.48	-0.27
	a	1921798	11% salted egg yolk	370	210	2.57	2.32	2.45	-0.25
	a	1921799	Sweet egg yolk 30%	2500	1600	3.40	3.20	3.30	-0.19
	a	1921800	Salty egg yolk 9% - sweet 10.9%	5000	4100	3.70	3.61	3.66	-0.09
	b	1921866	Powdered egg white	230	160	2.36	2.20	2.28	-0.16
	b	1921803	Pasteurized egg yolk powder	320	270	2.51	2.43	2.47	-0.07
	b	1921804	Pasteurized whole egg powder	860	770	2.93	2.89	2.91	-0.05
	b	1921806	Pasteurized egg yolk powder	4300	3100	3.63	3.49	3.56	-0.14
	b	1921807	Pasteurized whole egg powder	4000	4600	3.60	3.66	3.63	0.06
	c	1915631	Paris Brest	230	140	2.36	2.15	2.25	-0.22
	c	1915628	Coffee éclair	170	230	2.23	2.36	2.30	0.13
	c	1915629	Cream pastry	240	140	2.38	2.15	2.26	-0.23
	c	1915606	Raspberry strawberry dessert	210	200	2.32	2.30	2.31	-0.02
	c	1915609	Raspberry tartlet	740	550	2.87	2.74	2.80	-0.13
	c	1915603	Crème brulée	110000	110000	5.04	5.04	5.04	0.00
	c	1915604	Chocolat éclair	1200000	1500000	6.08	6.18	6.13	0.10
	Average difference of the category								-0.11
	Standard deviation of differences								0.13

APPENDIX M - Relative trueness statistical calculations

Pour plate for BACARA 2

RTE & RTRH products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1915611	Tabbouleh of the sea	40	40	1.60	1.60	1.60	0.00
	a	1921858	Semolina (dessert)	90	110	1.95	2.04	2.00	0.09
	a	1915610	Oriental tabbouleh	140	120	2.15	2.08	2.11	-0.07
	a	1921859	Rice pudding	360	320	2.56	2.51	2.53	-0.05
	a	1921876	Muesli cereals	2400	2000	3.38	3.30	3.34	-0.08
	a	1939820	Rice pudding	3100	4800	3.49	3.68	3.59	0.19
	b	1921860	Corn tortillas	150	110	2.18	2.04	2.11	-0.13
	b	1921861	Banana	200	160	2.30	2.20	2.25	-0.10
	b	1921862	Rice cracker	280	250	2.45	2.40	2.42	-0.05
	b	1921873	Bread	400	380	2.60	2.58	2.59	-0.02
	b	1921888	Chestnut jam	1400	1700	3.15	3.23	3.19	0.08
	c	1921874	Lentils	90	70	1.95	1.85	1.90	-0.11
	c	1921863	Parnsnip puree	120	110	2.08	2.04	2.06	-0.04
	c	1921882	Chickpea	180	220	2.26	2.34	2.30	0.09
	c	1915614	Hachis parmentier	180	300	2.26	2.48	2.37	0.22
	c	1915613	Mashed potatoes	170	270	2.23	2.43	2.33	0.20
	c	1921875	Mashed Sweet Potatoes	3000	2800	3.48	3.45	3.46	-0.03
	c	1915635	Mashed potatoes and carrots	390000	340000	5.59	5.53	5.56	-0.06
Average difference of the category									0.01
Standard deviation of differences									0.11
Feed products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921867	Guinea pig food	100	60	2.00	1.78	1.89	-0.22
	a	1921868	Hamster food	160	130	2.20	2.11	2.16	-0.09
	a	1921869	Pet bird food	510	490	2.71	2.69	2.70	-0.02
	a	1939794	Cat food	6300	5600	3.80	3.75	3.77	-0.05
	a	1939795	Dog food	10000	8700	4.00	3.94	3.97	-0.06
	b	1921838	Rabbit feed	110	100	2.04	2.00	2.02	-0.04
	b	1921839	Poultry feed	270	170	2.43	2.23	2.33	-0.20
	b	1921870	Wheat	370	350	2.57	2.54	2.56	-0.02
	b	1921871	Corn	1900	1600	3.28	3.20	3.24	-0.07
	b	1921872	Dwarf rabbit food	4000	4000	3.60	3.60	3.60	0.00
	c	1921844	Soy	120	100	2.08	2.00	2.04	-0.08
	c	1921842	Sheep feed	140	160	2.15	2.20	2.18	0.06
	c	1939796	Horse feed	210	190	2.32	2.28	2.30	-0.04
	c	1921845	Rapeseed	450	320	2.65	2.51	2.58	-0.15
	c	1939883	Pig feed	710	350	2.85	2.54	2.70	-0.31
	c	1921841	Lamb feed	1000	870	3.00	2.94	2.97	-0.06
	c	1939882	Piglet feed	5000	3700	3.70	3.57	3.63	-0.13
	c	1939797	Soy	8000	7000	3.90	3.85	3.87	-0.06
Average difference of the category									-0.09
Standard deviation of differences									0.09
Average difference all categories									-0.06
Standard deviation of differences									0.12

Lower confidence limit

Upper confidence limit

APPENDIX M - Relative trueness statistical calculations

Pour plate for BACARA 2

n = 16 $T(0.025;15)=$ 2.131
 n = 18 $T(0.025;17)=$ 2.110
 n = 22 $T(0.025;21)=$ 2.080
 n = 18 $T(0.025;17)=$ 2.110
 n = 18 $T(0.025;17)=$ 2.110
 n = 18 $T(0.025;17)=$ 2.110
 n = 110 $T(0.025;109)=$ 1.982
 $\beta =$ 95%

MP	-0.24	0.07
DP	-0.34	0.31
V	-0.38	0.20
E&P	-0.39	0.17
RTE	-0.23	0.25
FEED	-0.28	0.10
All	-0.31	0.18

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	b	1921853	Beef tong	<10	60	0.00	1.78	0.89	1.78
	b	1915591	Ham croissant	<10	10	0.00	1.00	0.50	1.00
	b	1921851	Chicken panini curry	20	20	1.30	1.30	1.30	0.00
	b	1915578	Cooked pork	10	10	1.00	1.00	1.00	0.00
Dairy products	a	1915584	Strawberry mint ice cream	10	10	1.00	1.00	1.00	0.00
	a	1921792	Munster cheese	10	50	1.00	1.70	1.35	0.70
	a	1921790	Yogurt	60	10	1.78	1.00	1.39	-0.78
	a	1921793	Fresh cream	400	300	2.60	2.48	2.54	-0.12
	b	1939859	Growth milk 12 months-3 years without probiotic	10	10	1.00	1.00	1.00	0.00
	b	1939860	Growth milk 12 months-3 years without probiotic	20	20	1.30	1.30	1.30	0.00
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	0.00	1.00	0.50	1.00
	c	1939855	Semi-skimmed milk powder	20	<10	1.30	0.00	0.65	-1.30
	c	1939856	Powdered whole milk	10	<10	1.00	0.00	0.50	-1.00
	c	1939871	Powdered whole milk	10	<10	1.00	0.00	0.50	-1.00
Vegetables	c	1939891	Semi-skimmed milk powder	10	10	1.00	1.00	1.00	0.00
	b	1939799	Crozet salad, turkey, pepper	10	10	1.00	1.00	1.00	0.00
	b	1915616	Rice salad, tomatoes, tuna, egg	10	10	1.00	1.00	1.00	0.00
	b	1915620	Rice salad, tomatoes, corn	200	200	2.30	2.30	2.30	0.00
	c	1915623	Grated carrots vinaigrette	50	30	1.70	1.48	1.59	-0.22
	c	1915621	Tomato tartare	60	20	1.78	1.30	1.54	-0.48
Eggs & pastries	c	1915601	Greek tomato salad	<10	20	0.00	1.30	0.65	1.30
	b	1921802	Pasteurized egg white powder	<10	10	0.00	1.00	0.50	1.00
	b	1921805	Unpasteurized egg white powder	30	10	1.48	1.00	1.24	-0.48
	c	1915607	Chocolate dessert	20	<10	1.30	0.00	0.65	-1.30
RTE & RTRH	a	1921857	Quinoa salad, bulgur	20	30	1.30	1.48	1.39	0.18
Feed products	b	1921840	Maize	10	<10	1.00	0.00	0.50	-1.00
	c	1921843	Horse feed	20	10	1.30	1.00	1.15	-0.30

APPENDIX M - Relative trueness statistical calculations

Surface spreading for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products, fish products	a	1939814	Veal paupiette	100	90	2.00	1.95	1.98	-0.05
	a	1939813	Sliced turkey	250	180	2.40	2.26	2.33	-0.14
	a	1921884	Saithe fillet	490	440	2.69	2.64	2.67	-0.05
	a	1939815	Raw beef meat	5300	4800	3.72	3.68	3.70	-0.04
	a	1921885	Sardin fillet	5000	4900	3.70	3.69	3.69	-0.01
	b	1939816	Caramel pork	90	80	1.95	1.90	1.93	-0.05
	b	1939817	Burger	120	110	2.08	2.04	2.06	-0.04
	b	1921886	Salmon roll in sauce	870	1040	2.94	3.02	2.98	0.08
	b	1921887	Fish shell	6000	5600	3.78	3.75	3.76	-0.03
	b	1939818	Lamb stew	11000	9500	4.04	3.98	4.01	-0.06
	b	1921889	Beef cheek terrine	1500000	1400000	6.18	6.15	6.16	-0.03
	c	1939852	Fish soup	90	90	1.95	1.95	1.95	0.00
	c	1939853	Lobster bisque	230	180	2.36	2.26	2.31	-0.11
	c	1939854	Nuoc Mam sauce	320	250	2.51	2.40	2.45	-0.11
	c	1921864	Bolognaise sauce	940	680	2.97	2.83	2.90	-0.14
	c	1921865	Smoked ham sauce	6700	6400	3.83	3.81	3.82	-0.02
	Average difference of the category								-0.05
	Standard deviation of differences								0.06
Dairy products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921791	Cheese Camembert	80	50	1.90	1.70	1.80	-0.20
	a	1921795	Organic white cheese	90	90	1.95	1.95	1.95	0.00
	a	1921877	Pasteurized milk cheese	180	180	2.26	2.26	2.26	0.00
	a	1915583	Emmental cheese	800	700	2.90	2.85	2.87	-0.06
	a	1921794	Organic pasteurized milk	1300	700	3.11	2.85	2.98	-0.27
	a	1921878	Yogurt	4000	3500	3.60	3.54	3.57	-0.06
	b	1939858	Infant formula 6-12 months with probiotic	160	100	2.20	2.00	2.10	-0.20
	b	1939885	Growth milk 12 months-3 years without probiotic	80	40	1.90	1.60	1.75	-0.30
	b	1939887	Infant formula 6-12 months with probiotic - (3,4 10 ⁶)	110	80	2.04	1.90	1.97	-0.14
	b	1939888	Goat's milk for infants 12 months-3 years without	250	190	2.40	2.28	2.34	-0.12
	b	1969961	Infant formula 6-12 months with probiotic	4800	3200	3.68	3.51	3.59	-0.18
	b	1939884	Infant formula 12 months-3 years without probiotic	32000	40000	4.51	4.60	4.55	0.10
	b	1939889	Infant formula 0-6 months without probiotic	71000	80000	4.85	4.90	4.88	0.05
	c	1939861	Organic skimmed milk powder batch 2	50	50	1.70	1.70	1.70	0.00
	c	1939865	Skimmed milk powder	50	100	1.70	2.00	1.85	0.30
	c	1939893	Buttermilk powder	380	200	2.58	2.30	2.44	-0.28
	c	1969963	Semi-skimmed milk powder	1800	2700	3.26	3.43	3.34	0.18
	c	1939894	Powdered caseinate	120000	180000	5.08	5.26	5.17	0.18
	Average difference of the category								-0.06
	Standard deviation of differences								0.17

APPENDIX M - Relative trueness statistical calculations

Surface spreading for BACARA 2

	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
Vegetables	a	1915588	Grated coconut	140	60	2.15	1.78	1.96	-0.37
	a	1921846	Beetroot powder	170	80	2.23	1.90	2.07	-0.33
	a	1921847	Potato flakes	140	100	2.15	2.00	2.07	-0.15
	a	1977611	Curry Madras	290	310	2.46	2.49	2.48	0.03
	a	1915632	Thyme	360	320	2.56	2.51	2.53	-0.05
	a	1915595	Wheat flour	1600	1300	3.20	3.11	3.16	-0.09
	a	1921883	Dehydrated mushrooms	3000	2800	3.48	3.45	3.46	-0.03
	a	1915596	Rye flour	5000	4400	3.70	3.64	3.67	-0.06
	b	1915617	Cantonese rice	100	130	2.00	2.11	2.06	0.11
	b	1921854	Pasta salad, sausage, tomatoes	220	180	2.34	2.26	2.30	-0.09
	b	1915626	Rice	400	510	2.60	2.71	2.65	0.11
	b	1921855	Pasta with pesto	650	600	2.81	2.78	2.80	-0.03
	b	1939878	Indian pasta salad	4800	4300	3.68	3.63	3.66	-0.05
	b	1939821	Fresh pasta	16000	11000	4.20	4.04	4.12	-0.16
	c	1915621	Tomato tartare	60	60	1.78	1.78	1.78	0.00
	c	1939875	Piémontaise	80	50	1.90	1.70	1.80	-0.20
	c	1939877	Beets, tomatoes, celery	80	60	1.90	1.78	1.84	-0.12
	c	1915598	Salad, snout, tomatoes	100	130	2.00	2.11	2.06	0.11
	c	1915624	Pork snout salad with pickles	700	500	2.85	2.70	2.77	-0.15
	c	1915600	Tomato and vegetable salad	810	930	2.91	2.97	2.94	0.06
	c	1915625	Vegetable tian	1800	1200	3.26	3.08	3.17	-0.18
	c	1915599	Piémontaise	1400	1500	3.15	3.18	3.16	0.03
	Average difference of the category								-0.07
	Standard deviation of differences								0.13
Eggs & Pastries	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
	a	1921856	Liquid egg white	130	120	2.11	2.08	2.10	-0.03
	a	1921796	Liquid egg yolk	240	160	2.38	2.20	2.29	-0.18
	a	1921797	Liquid whole egg	410	160	2.61	2.20	2.41	-0.41
	a	1921798	11% salted egg yolk	370	230	2.57	2.36	2.46	-0.21
	a	1921799	Sweet egg yolk 30%	2500	1600	3.40	3.20	3.30	-0.19
	a	1921800	Salty egg yolk 9% - sweet 10.9%	5000	4600	3.70	3.66	3.68	-0.04
	b	1921866	Powdered egg white	230	170	2.36	2.23	2.30	-0.13
	b	1921803	Pasteurized egg yolk powder	320	260	2.51	2.41	2.46	-0.09
	b	1921804	Pasteurized whole egg powder	860	800	2.93	2.90	2.92	-0.03
	b	1921806	Pasteurized egg yolk powder	4300	3000	3.63	3.48	3.56	-0.16
	b	1921807	Pasteurized whole egg powder	4000	4800	3.60	3.68	3.64	0.08
	c	1915631	Paris Brest	230	130	2.36	2.11	2.24	-0.25
	c	1915628	Coffee éclair	170	150	2.23	2.18	2.20	-0.05
	c	1915629	Cream pastry	240	150	2.38	2.18	2.28	-0.20
	c	1915606	Raspberry strawberry dessert	210	280	2.32	2.45	2.38	0.12
	c	1915609	Raspberry tartlet	740	360	2.87	2.56	2.71	-0.31
	c	1915603	Crème brulee	110000	76000	5.04	4.88	4.96	-0.16
	c	1915604	Chocolat éclair	1200000	1500000	6.08	6.18	6.13	0.10
	Average difference of the category								-0.12
	Standard deviation of differences								0.14

APPENDIX M - Relative trueness statistical calculations

Surface spreading for BACARA 2

RTE & RTRH products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1915611	Tabbouleh of the sea	40	40	1.60	1.60	1.60	0.00
	a	1921858	Semolina (dessert)	90	130	1.95	2.11	2.03	0.16
	a	1915610	Oriental tabbouleh	140	190	2.15	2.28	2.21	0.13
	a	1921859	Rice pudding	360	350	2.56	2.54	2.55	-0.01
	a	1921876	Muesli cereals	2400	1900	3.38	3.28	3.33	-0.10
	a	1939820	Rice pudding	3100	6000	3.49	3.78	3.63	0.29
	b	1921860	Corn tortillas	150	130	2.18	2.11	2.15	-0.06
	b	1921861	Banana	200	170	2.30	2.23	2.27	-0.07
	b	1921862	Rice cracker	280	290	2.45	2.46	2.45	0.02
	b	1921873	Bread	400	400	2.60	2.60	2.60	0.00
	b	1921888	Chestnut jam	1400	2000	3.15	3.30	3.22	0.15
	c	1921874	Lentils	90	80	1.95	1.90	1.93	-0.05
	c	1921863	Parsnip puree	120	140	2.08	2.15	2.11	0.07
	c	1921882	Chickpea	180	170	2.26	2.23	2.24	-0.02
	c	1915614	Hachis parmentier	180	210	2.26	2.32	2.29	0.07
	c	1915613	Mashed potatoes	170	290	2.23	2.46	2.35	0.23
	c	1921875	Mashed Sweet Potatoes	3000	2800	3.48	3.45	3.46	-0.03
	c	1915635	Mashed potatoes and carrots	390000	380000	5.59	5.58	5.59	-0.01
Average difference of the category									0.04
Standard deviation of differences									0.11
Feed products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921867	Guinea pig food	100	70	2.00	1.85	1.92	-0.15
	a	1921868	Hamster food	160	150	2.20	2.18	2.19	-0.03
	a	1921869	Pet bird food	510	480	2.71	2.68	2.69	-0.03
	a	1939794	Cat food	6300	5800	3.80	3.76	3.78	-0.04
	a	1939795	Dog food	10000	9300	4.00	3.97	3.98	-0.03
	b	1921838	Rabbit feed	110	80	2.04	1.90	1.97	-0.14
	b	1921839	Poultry feed	270	180	2.43	2.26	2.34	-0.18
	b	1921870	Wheat	370	350	2.57	2.54	2.56	-0.02
	b	1921871	Corn	1900	1800	3.28	3.26	3.27	-0.02
	b	1921872	Dwarf rabbit food	4000	4300	3.60	3.63	3.62	0.03
	c	1921844	Soy	120	120	2.08	2.08	2.08	0.00
	c	1921842	Sheep feed	140	170	2.15	2.23	2.19	0.08
	c	1939796	Horse feed	210	180	2.32	2.26	2.29	-0.07
	c	1921845	Rapeseed	450	330	2.65	2.52	2.59	-0.13
	c	1939883	Pig feed	710	550	2.85	2.74	2.80	-0.11
	c	1921841	Lamb feed	1000	840	3.00	2.92	2.96	-0.08
	c	1939882	Piglet feed	5000	4400	3.70	3.64	3.67	-0.06
	c	1939797	Soy	8000	7200	3.90	3.86	3.88	-0.05
Average difference of the category									-0.06
Standard deviation of differences									0.07
Average difference all categories									-0.05
Standard deviation of differences									0.13

Lower confidence limit

Upper confidence limit

APPENDIX M - Relative trueness statistical calculations

Surface spreading for BACARA 2

n = 16 $T(0.025;15)=$ 2.131
 n = 18 $T(0.025;17)=$ 2.110
 n = 22 $T(0.025;21)=$ 2.080
 n = 18 $T(0.025;17)=$ 2.110
 n = 18 $T(0.025;17)=$ 2.110
 n = 18 $T(0.025;17)=$ 2.110
 n = 110 $T(0.025;109)=$ 1.982
 $\beta =$ 95%

MP	-0.17	0.07
DP	-0.43	0.32
V	-0.35	0.20
E&P	-0.42	0.19
RTE	-0.20	0.28
FEED	-0.20	0.09
All	-0.31	0.20

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	b	1921851	Chicken panini curry	20	30	1.30	1.48	1.39	0.18
	b	1921853	Beef tong	<10	50	0.00	1.70	0.85	1.70
	b	1915578	Cooked pork	10	<10	1.00	0.00	0.50	-1.00
	b	1915591	Ham croissant	<10	60	0.00	1.78	0.89	1.78
Dairy products	a	1915584	Strawberry mint ice cream	10	10	1.00	1.00	1.00	0.00
	a	1921792	Munster cheese	10	30	1.00	1.48	1.24	0.48
	a	1921790	Yogurt	60	10	1.78	1.00	1.39	-0.78
	a	1921793	Fresh cream	400	<100	2.60	1.00	1.80	-1.60
	b	1939859	Growth milk 12 months-3 years without probiotic	10	<10	1.00	0.00	0.50	-1.00
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	0.00	1.00	0.50	1.00
	b	1939870	Infant formula 6-12 months with probiotic	<10	10	0.00	1.00	0.50	1.00
	b	1939860	Growth milk 12 months-3 years without probiotic	20	20	1.30	1.30	1.30	0.00
	c	1939856	Powdered whole milk	10	10	1.00	1.00	1.00	0.00
	c	1939891	Semi-skimmed milk powder	10	20	1.00	1.30	1.15	0.30
	c	1939871	Powdered whole milk	10	<10	1.00	0.00	0.50	-1.00
	c	1939855	Semi-skimmed milk powder	20	<10	1.30	0.00	0.65	-1.30
Vegetables	b	1915616	Rice salad, tomatoes, tuna, egg	10	<10	1.00	0.00	0.50	-1.00
	b	1915618	Pasta, tomato, pepper salad	<100	100	1.00	2.00	1.50	1.00
	b	1939799	Crozet salad, turkey, pepper	10	10	1.00	1.00	1.00	0.00
	b	1915620	Rice salad, tomatoes, corn	200	100	2.30	2.00	2.15	-0.30
	c	1915622	Cabbage trio	40	20	1.60	1.30	1.45	-0.30
	c	1915623	Grated carrots vinaigrette	50	30	1.70	1.48	1.59	-0.22
Eggs & pastries	b	1921805	Unpasteurized egg white powder	30	30	1.48	1.48	1.48	0.00
	c	1915607	Chocolat dessert	20	<10	1.30	0.00	0.65	-1.30
RTE & RTRH	a	1921857	Quinoa salad, bulgur	20	40	1.30	1.60	1.45	0.30
Feed products	b	1921840	Maize	10	<10	1.00	0.00	0.50	-1.00
	c	1921843	Horse feed	20	<10	1.30	0.00	0.65	-1.30

APPENDIX N

Accuracy profile study - Raw results

ACCURACY PROFIL - Meat and seafood products

Matrix: Pâté

Strain: *Bacillus cereus cereus* group II - EAA229 - vegetative form

Enumeration of the microorganisms at 30°C - batch 1: 40000 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 16000 CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	63	-2	4	100%	610	-1	53	-2	8	560	-1	49	-2	9	530
		R2	-1	47	-2	2	100%	450	-1	53	-2	4	520	-1	45	-2	7	470
		R3	-1	60	-2	10	100%	640	-1	51	-2	6	520	-1	56	-2	3	540
		R4	-1	45	-2	14	100%	540	-1	41	-2	4	410	-1	45	-2	4	450
		R5	-1	58	-2	3	100%	560	-1	47	-2	6	480	-1	39	-2	3	380
	Batch 2	R1	-1	47	-2	8	100%	500	-1	45	-2	8	480	-1	49	-2	4	480
		R2	-1	39	-2	3	100%	380	-1	31	-2	3	310	-1	32	-2	3	320
		R3	-1	42	-2	7	100%	450	-1	38	-2	5	390	-1	31	-2	6	340
		R4	-1	60	-2	7	100%	610	-1	54	-2	5	540	-1	59	-2	3	560
		R5	-1	58	-2	9	100%	610	-1	51	-2	2	480	-1	57	-2	4	560
Level 2	Batch 1	R1	-2	18	-3	1	100%	1800	-2	19	-3	1	1900	-2	21	-3	2	2100
		R2	-2	21	-3	2	100%	2100	-2	17	-3	1	1700	-2	18	-3	1	1800
		R3	-2	13	-3	2	100%	1300	-2	15	-3	1	1500	-2	14	-3	1	1400
		R4	-2	37	-3	4	100%	3700	-2	35	-3	4	3500	-2	33	-3	2	3200
		R5	-2	29	-3	2	100%	1300	-2	13	-3	1	1300	-2	12	-3	1	1200
	Batch 2	R1	-2	21	-3	2	100%	2100	-2	19	-3	1	1900	-2	18	-3	1	1800
		R2	-2	19	-3	1	100%	1900	-2	16	-3	1	1600	-2	16	-3	1	1600
		R3	-2	11	-3	1	100%	1100	-2	10	-3	1	1000	-2	12	-3	0	1100
		R4	-2	12	-3	1	100%	1200	-2	11	-3	1	1100	-2	12	-3	1	1200
		R5	-2	14	-3	1	100%	1400	-2	11	-3	0	1000	-2	13	-3	1	1300
Level 3	Batch 1	R1	-3	61	-4	13	100%	67000	-3	66	-4	8	67000	-3	38	-4	2	36000
		R2	-3	106	-4	8	100%	100000	-3	64	-4	5	63000	-3	43	-4	12	50000
		R3	-3	118	-4	22	100%	130000	-3	50	-4	10	55000	-3	47	-4	4	46000
		R4	-3	71	-4	18	100%	81000	-3	49	-4	4	48000	-3	82	-4	8	82000
		R5	-3	77	-4	6	100%	76000	-3	60	-4	13	66000	-3	72	-4	14	78000
	Batch 2	R1	-3	91	-4	8	100%	90000	-3	53	-4	4	52000	-3	124	-4	5	120000
		R2	-3	87	-4	5	100%	84000	-3	49	-4	5	49000	-3	45	-4	5	45000
		R3	-3	109	-4	6	100%	110000	-3	46	-4	4	46000	-3	50	-4	1	46000
		R4	-3	74	-4	6	100%	73000	-3	52	-4	5	52000	-3	42	-4	4	42000
		R5	-3	71	-4	11	100%	75000	-3	56	-4	6	56000	-3	110	-4	12	110000

ACCURACY PROFIL - Dairy products

Matrix: Milk powder

Strain: *Bacillus cereus cereus* group III - CND 844 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 350 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 340 CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2- surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	19	-2	1	100%	180	-1	24	-2	2	240	-1	13	-2	1	130
		R2	-1	19	-2	1	100%	180	-1	23	-2	3	240	-1	8	-2	0	80
		R3	-1	17	-2	1	100%	160	-1	19	-2	1	180	-1	18	-2	5	210
		R4	-1	16	-2	1	100%	160	-1	18	-2	2	180	-1	16	-2	3	170
		R5	-1	17	-2	1	100%	170	-1	15	-2	1	150	-1	10	-2	2	110
	Batch 2	R1	-1	18	-2	1	100%	170	-1	25	-2	3	250	-1	10	-2	1	100
		R2	-1	15	-2	1	100%	150	-1	12	-2	1	120	-1	14	-2	2	150
		R3	-1	15	-2	1	100%	150	-1	18	-2	1	180	-1	10	-2	2	110
		R4	-1	15	-2	1	100%	150	-1	19	-2	1	190	-1	9	-2	1	90
		R5	-1	19	-2	1	100%	180	-1	13	-2	0	120	-1	10	-2	2	110
Level 2	Batch 1	R1	-2	26	-3	3	100%	2600	-2	28	-3	2	2800	-2	28	-3	2	2800
		R2	-2	24	-3	3	100%	2400	-2	38	-3	2	3600	-2	25	-3	2	2500
		R3	-2	26	-3	6	100%	2900	-2	28	-3	4	2900	-2	24	-3	2	2400
		R4	-2	25	-3	4	100%	2600	-2	29	-3	3	3100	-2	23	-3	4	2500
		R5	-2	24	-3	2	100%	2400	-2	20	-3	2	2000	-2	28	-3	2	2800
	Batch 2	R1	-2	25	-3	3	100%	2500	-2	50	-3	4	4900	-2	26	-3	2	2600
		R2	-2	21	-3	2	100%	2100	-2	40	-3	5	4100	-2	27	-3	2	2700
		R3	-2	20	-3	2	100%	2000	-2	35	-3	3	3500	-2	25	-3	2	2500
		R4	-2	20	-3	2	100%	2000	-2	42	-3	2	4000	-2	24	-3	2	2400
		R5	-2	26	-3	2	100%	2600	-2	34	-3	3	3400	-2	24	-3	2	2400
Level 3	Batch 1	R1	-3	19	-4	0	100%	170000	-3	24	-4	2	240000	-3	15	-4	1	140000
		R2	-3	20	-4	2	100%	200000	-3	25	-4	3	280000	-3	17	-4	2	170000
		R3	-3	17	-4	2	100%	170000	-3	12	-4	2	130000	-3	19	-4	2	190000
		R4	-3	19	-4	1	100%	180000	-3	16	-4	2	160000	-3	21	-4	0	190000
		R5	-3	14	-4	1	100%	140000	-3	27	-4	3	270000	-3	18	-4	1	170000
	Batch 2	R1	-3	22	-4	2	100%	220000	-3	17	-4	1	160000	-3	20	-4	1	190000
		R2	-3	21	-4	1	100%	200000	-3	16	-4	1	150000	-3	21	-4	1	200000
		R3	-3	18	-4	0	100%	160000	-3	23	-4	2	230000	-3	22	-4	0	200000
		R4	-3	20	-4	1	100%	190000	-3	22	-4	2	220000	-3	17	-4	1	160000
		R5	-3	23	-4	2	100%	230000	-3	16	-4	2	160000	-3	18	-4	0	160000

ACCURACY PROFIL - Vegetables

Matrix: vegetables puree

Strain: *Bacillus cytotoxicus* group VII - GGB821 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 900 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 17 000CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	17	-2	5	100%	200	-1	17	-2	3	180	-1	15	-2	2	150
		R2	-1	14	-2	4	100%	160	-1	24	-2	6	270	-1	21	-2	1	200
		R3	-1	15	-2	2	100%	150	-1	20	-2	3	210	-1	14	-2	3	150
		R4	-1	11	-2	1	100%	110	-1	23	-2	1	220	-1	15	-2	4	170
		R5	-1	13	-2	3	100%	150	-1	13	-2	1	130	-1	13	-2	1	130
	Batch 2	R1	-1	16	-2	0	100%	150	-1	32	-2	1	300	-1	20	-2	4	220
		R2	-1	16	-2	3	100%	170	-1	19	-2	1	180	-1	11	-2	2	120
		R3	-1	15	-2	2	100%	150	-1	15	-2	6	190	-1	10	-2	1	100
		R4	-1	19	-2	2	100%	190	-1	14	-2	2	150	-1	11	-2	2	120
		R5	-1	16	-2	1	100%	150	-1	20	-2	1	190	-1	10	-2	1	100
Level 2	Batch 1	R1	-2	41	-3	6	100%	4300	-2	31	-3	1	2900	-2	22	-3	2	2200
		R2	-2	26	-3	5	100%	2800	-2	36	-3	2	3500	-2	30	-3	1	2800
		R3	-2	29	-3	0	100%	2600	-2	36	-3	3	3600	-2	28	-3	1	2600
		R4	-2	26	-3	3	100%	2600	-2	25	-3	3	2600	-2	23	-3	3	2400
		R5	-2	33	-3	6	100%	3600	-2	32	-3	1	3000	-2	22	-3	0	2000
	Batch 2	R1	-2	34	-3	2	100%	3300	-2	39	-3	3	3800	-2	29	-3	5	3100
		R2	-2	29	-3	1	100%	2700	-2	36	-3	3	3600	-2	22	-3	4	2400
		R3	-2	26	-3	0	100%	2400	-2	30	-3	3	3000	-2	26	-3	1	2500
		R4	-2	26	-3	2	100%	2600	-2	25	-3	3	2600	-2	25	-3	4	2600
		R5	-2	32	-3	1	100%	3000	-2	25	-3	6	2800	-2	18	-3	6	2200
Level 3	Batch 1	R1	-4	13	-5	0	100%	120000	-4	14	-5	0	130000	-4	13	-5	0	120000
		R2	-4	6	-5	1	100%	150000	-4	9	-5	2	100000	-4	9	-5	0	90000
		R3	-4	12	-5	2	100%	130000	-4	8	-5	2	90000	-4	6	-5	0	60000
		R4	-4	12	-5	1	100%	120000	-4	10	-5	2	110000	-4	9	-5	0	90000
		R5	-4	11	-5	1	100%	110000	-4	9	-5	3	110000	-4	5	-5	0	50000
	Batch 2	R1	-4	15	-5	2	100%	150000	-4	14	-5	1	140000	-4	6	-5	2	60000
		R2	-4	27	-5	0	100%	250000	-4	5	-5	0	50000	-4	8	-5	0	80000
		R3	-4	9	-5	1	100%	90000	-4	9	-5	0	90000	-4	6	-5	2	60000
		R4	-4	8	-5	0	100%	80000	-4	4	-5	0	40000	-4	10	-5	2	110000
		R5	-4	14	-5	0	100%	140000	-4	17	-5	0	170000	-4	16	-5	0	150000

ACCURACY PROFIL - Eggs and pastries

Matrix: Custard

Strain: *Bacillus wehsteinstephanensis* group III - JFM917 - vegetative form

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

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

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	16	-2	1	100%	160	-1	13	-2	1	130	-1	23	-2	2	230
		R2	-1	15	-2	3	100%	160	-1	16	-2	2	160	-1	13	-2	1	130
		R3	-1	15	-2	3	100%	160	-1	16	-2	6	200	-1	20	-2	3	210
		R4	-1	26	-2	1	100%	250	-1	14	-2	1	140	-1	21	-2	1	200
		R5	-1	15	-2	1	100%	150	-1	15	-2	2	150	-1	12	-2	4	150
	Batch 2	R1	-1	16	-2	2	100%	160	-1	16	-2	3	170	-1	22	-2	2	220
		R2	-1	16	-2	3	100%	170	-1	14	-2	3	160	-1	15	-2	1	150
		R3	-1	21	-2	1	100%	200	-1	14	-2	1	140	-1	14	-2	2	140
		R4	-1	31	-2	1	100%	290	-1	14	-2	1	140	-1	14	-2	1	140
		R5	-1	14	-2	2	100%	150	-1	15	-2	3	160	-1	16	-2	1	160
Level 2	Batch 1	R1	-2	42	-3	1	100%	3900	-1	30	-2	5	3200	-1	18	-2	1	1700
		R2	-2	44	-3	2	100%	4200	-1	25	-2	4	2600	-1	19	-2	2	1900
		R3	-2	28	-3	2	100%	2800	-1	22	-2	5	2500	-1	18	-2	1	1700
		R4	-2	35	-3	7	100%	3800	-1	30	-2	4	3100	-1	20	-2	5	2300
		R5	-2	28	-3	1	100%	2600	-1	34	-2	2	3300	-1	23	-2	1	2200
	Batch 2	R1	-2	28	-3	3	100%	2800	-1	22	-2	3	2300	-1	23	-2	1	2200
		R2	-2	37	-3	6	100%	3900	-1	31	-2	1	2900	-1	33	-2	1	3100
		R3	-2	27	-3	1	100%	2600	-1	34	-2	6	3600	-1	21	-2	2	2100
		R4	-2	24	-3	2	100%	2400	-1	25	-2	5	2700	-1	20	-2	4	2200
		R5	-2	19	-3	2	100%	1900	-1	21	-2	4	2300	-1	21	-2	2	2100
Level 3	Batch 1	R1	-3	95	-4	15	100%	100000	-3	87	-4	6	85000	-3	79	-4	6	77000
		R2	-3	104	-4	9	100%	100000	-3	87	-4	12	90000	-3	95	-4	8	94000
		R3	-3	99	-4	13	100%	100000	-3	95	-4	13	98000	-3	107	-4	12	110000
		R4	-3	102	-4	9	100%	100000	-3	72	-4	10	75000	-3	83	-4	12	86000
		R5	-3	64	-4	7	100%	65000	-3	81	-4	15	87000	-3	75	-4	12	79000
	Batch 2	R1	-3	68	-4	14	100%	75000	-3	86	-4	7	85000	-3	63	-4	11	67000
		R2	-3	66	-4	11	100%	70000	-3	63	-4	12	68000	-3	61	-4	8	63000
		R3	-3	72	-4	12	100%	76000	-3	67	-4	11	71000	-3	81	-4	7	80000
		R4	-3	67	-4	9	100%	69000	-3	69	-4	12	74000	-3	73	-4	13	78000
		R5	-3	108	-4	3	100%	100000	-3	78	-4	9	79000	-3	70	-4	8	71000

ACCURACY PROFIL - Ready-to-eat and ready to reheat products

Matrix: Tabbouleh

Strain: *Bacillus thuringiensis* group IV - KGB008 - sporulated form

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

Level	Batch	R.	Reference method: ISO 7932(n)					Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading					
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	28	-2	2	100 %	270	-1	22	-2	2	220	-1	19	-2	2	190
		R2	-1	22	-2	2	100 %	220	-1	21	-2	2	210	-1	25	-2	2	250
		R3	-1	22	-2	3	100 %	230	-1	20	-2	3	210	-1	22	-2	1	210
		R4	-1	25	-2	3	100 %	250	-1	21	-2	2	210	-1	22	-2	1	210
		R5	-1	20	-2	2	100 %	200	-1	18	-2	2	180	-1	16	-2	1	160
	Batch 2	R1	-1	18	-2	2	100 %	180	-1	21	-2	1	200	-1	21	-2	2	210
		R2	-1	17	-2	2	100 %	170	-1	20	-2	3	210	-1	18	-2	3	190
		R3	-1	16	-2	2	100 %	160	-1	23	-2	3	240	-1	21	-2	4	230
		R4	-1	20	-2	2	100 %	200	-1	19	-2	2	190	-1	24	-2	3	250
		R5	-1	22	-2	1	100 %	210	-1	17	-2	2	170	-1	19	-2	2	190
Level 2	Batch 1	R1	-2	37	-3	2	100 %	3600	-2	27	-3	3	2700	-2	27	-3	2	2600
		R2	-2	39	-3	2	100 %	3700	-2	26	-3	2	2600	-2	25	-3	4	2600
		R3	-2	23	-3	3	100 %	2400	-2	26	-3	3	2600	-2	24	-3	2	2400
		R4	-2	24	-3	4	100 %	2600	-2	23	-3	2	2300	-2	21	-3	2	2100
		R5	-2	21	-3	2	100 %	2100	-2	21	-3	2	2100	-2	20	-3	2	2000
	Batch 2	R1	-2	34	-3	5	100 %	3600	-2	24	-3	2	2400	-2	25	-3	3	2500
		R2	-2	29	-3	2	100 %	2800	-2	25	-3	2	2500	-2	22	-3	3	2300
		R3	-2	25	-3	4	100 %	2600	-2	22	-3	2	2200	-2	24	-3	5	2600
		R4	-2	22	-3	2	100 %	2200	-2	24	-3	3	2400	-2	22	-3	2	2200
		R5	-2	21	-3	2	100 %	2100	-2	24	-3	2	2400	-2	23	-3	2	2300
Level 3	Batch 1	R1	-4	15	-5	1	100 %	150000	-4	14	-5	1	140000	-4	10	-5	1	100000
		R2	-4	14	-5	1	100 %	140000	-4	12	-5	1	120000	-4	10	-5	2	110000
		R3	-4	13	-5	1	100 %	130000	-4	15	-5	1	150000	-4	13	-5	1	130000
		R4	-4	14	-5	1	100 %	140000	-4	11	-5	1	110000	-4	13	-5	1	130000
		R5	-4	12	-5	1	100 %	120000	-4	14	-5	2	150000	-4	11	-5	1	110000
	Batch 2	R1	-4	11	-5	1	100 %	110000	-4	12	-5	1	120000	-4	9	-5	1	90000
		R2	-4	10	-5	1	100 %	100000	-4	12	-5	1	130000	-4	11	-5	1	110000
		R3	-4	8	-5	2	100 %	90000	-4	13	-5	1	130000	-4	8	-5	1	80000
		R4	-4	17	-5	1	100 %	160000	-4	13	-5	1	130000	-4	11	-5	2	120000
		R5	-4	16	-5	1	100 %	160000	-4	10	-5	1	100000	-4	10	-5	1	100000

ACCURACY PROFIL - Feed products

Matrix: Cat kibble

Strain: *Bacillus cereus cereus* group V - LDG480 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 140 CFU/g

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

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	17	-2	1	100%	160	-1	14	-2	3	160	-1	34	-2	2	330
		R2	-1	26	-2	3	100%	260	-1	19	-2	2	190	-1	23	-2	1	220
		R3	-1	25	-2	1	100%	240	-1	29	-2	3	290	-1	23	-2	1	220
		R4	-1	29	-2	4	100%	300	-1	14	-2	1	140	-1	18	-2	1	170
		R5	-1	25	-2	2	100%	250	-1	18	-2	1	170	-1	15	-2	2	150
	Batch 2	R1	-1	23	-2	2	100%	230	-1	20	-2	2	200	-1	18	-2	2	180
		R2	-1	16	-2	1	100%	160	-1	18	-2	1	170	-1	38	-2	4	380
		R3	-1	25	-2	3	100%	250	-1	13	-2	5	160	-1	12	-2	2	130
		R4	-1	19	-2	1	100%	180	-1	23	-2	3	240	-1	15	-2	2	150
		R5	-1	14	-2	2	100%	150	-1	17	-2	2	170	-1	13	-2	6	170
Level 2	Batch 1	R1	-2	46	-3	4	100%	4600	-2	36	-3	6	3800	-2	52	-3	4	5100
		R2	-2	32	-3	3	100%	3200	-2	47	-3	2	4500	-2	41	-3	6	4300
		R3	-2	44	-3	9	100%	4800	-2	34	-3	2	3300	-2	44	-3	4	4400
		R4	-2	36	-3	2	100%	3500	-2	36	-3	2	3500	-2	39	-3	1	3600
		R5	-2	45	-3	4	100%	4500	-2	41	-3	3	4000	-2	42	-3	4	4200
	Batch 2	R1	-2	34	-3	3	100%	3400	-2	23	-3	4	2500	-2	40	-3	1	3700
		R2	-2	31	-3	3	100%	3100	-2	39	-3	2	3700	-2	35	-3	4	3500
		R3	-2	41	-3	4	100%	4100	-2	37	-3	2	3600	-2	46	-3	4	4600
		R4	-2	51	-3	6	100%	5100	-2	29	-3	6	3200	-2	42	-3	2	4000
		R5	-2	40	-3	6	100%	4200	-2	33	-3	2	3200	-2	51	-3	4	5000
Level 3	Batch 1	R1	-4	24	-5	2	100%	240000	-4	13	-5	2	140000	-4	10	-5	5	140000
		R2	-4	17	-5	4	100%	170000	-4	17	-5	1	160000	-4	25	-5	2	250000
		R3	-4	30	-5	1	100%	280000	-4	22	-5	1	210000	-4	21	-5	2	210000
		R4	-4	9	-5	1	100%	91000	-4	13	-5	1	130000	-4	24	-5	3	250000
		R5	-4	16	-5	1	100%	160000	-4	17	-5	0	160000	-4	18	-5	2	180000
	Batch 2	R1	-4	13	-5	2	100%	140000	-4	13	-5	0	120000	-4	26	-5	3	260000
		R2	-4	15	-5	3	100%	160000	-4	18	-5	1	170000	-4	12	-5	1	120000
		R3	-4	23	-5	1	100%	220000	-4	20	-5	2	200000	-4	15	-5	1	150000
		R4	-4	17	-5	0	100%	160000	-4	17	-5	3	180000	-4	14	-5	2	150000
		R5	-4	24	-5	1	100%	230000	-4	17	-5	0	160000	-4	13	-5	0	120000

APPENDIX O- Inclusivity

#	Reference Microsept	Strain	Phylogenetic group	Origin	Decimal dilution of the initial suspension	Number of CFU on TSA agar medium	MYP agar medium		Alternative method BACARA 2					
							Aspect of the colonies	Number of CFU	Pour plate - Incubation 21 h at 30°C			Surface spreading - Incubation 21 h at 30°C		
									Number of CFU	Colour of the colonies	Presence of a halo	Number of CFU	Colour of the colonies	Presence of a halo
1	FFT320	<i>Bacillus cereus</i> group I	<i>pseudomycoides</i>	Broccoli puree	1	73	Pink with halo	51	48	Orangy pink	Yes	49	Orangy pink	Yes
2	DZN354	<i>Bacillus cereus</i> group I	<i>pseudomycoides</i>	Celeriac	1	12	Pink with halo	26	19	Orangy pink	Yes	15	Orangy pink	Yes
3	DZC498	<i>Bacillus cereus</i> group I	<i>pseudomycoides</i>	Raspberry	1	45	Pink with halo	8	20	Orangy pink	Yes	6	Orangy pink	Yes
4	PCE867	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Organic peppermint	1	53	Pink with halo	60	36	Orangy pink	Yes	55	Orangy pink	Yes
5	DIQ279	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Ground	1	58	Pink with halo	91	44	Orangy pink	Yes	50	Orangy pink	Yes
6	EGY443	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Zucchini	1	39	Pink with halo	54	29	Orangy pink	Yes	35	Orangy pink	Yes
7	MEL032	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Caramel mille-feuille	1	78	Pink with halo	12	9	Orangy pink	Yes	10	Orangy pink	Yes
8	HDS007	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Citrus and chocolate mousse	1	62	Pink with halo	65	45	Orangy pink	Yes	67	Orangy pink	Yes
9	JEG961	<i>Bacillus cereus</i> group II	<i>ceruus</i>	Kirch pastry	1	30	Pink with halo	33	30	Orangy pink	Yes	23	Orangy pink	Yes
10	AGP399	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Cheese with nuts	1	55	Pink with halo	13	14	Orangy pink	Yes	4	Orangy pink	Yes
11	CLC707	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Pizza 3 cheese	1	65	Pink with halo	62	48	Orangy pink	Yes	63	Orangy pink	Yes
12	SDC155	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Cake filled with blueberries	1	65	Pink with halo	50	33	Orangy pink	Yes	62	Orangy pink	Yes
13	BMK053	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Milk proteins	1	50	Pink with halo	56	44	Orangy pink	Yes	46	Orangy pink	Yes
14	CND844	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Milk proteins	1	19	Pink with halo	14	23	Orangy pink	Yes	23	Orangy pink	Yes
15	CBB622	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Salad piedmontese	1	95	Pink with halo	100	60	Orangy pink	Yes	86	Orangy pink	Yes
16	CEC296	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Vegetable samosa	1	92	Pink with halo	85	75	Orangy pink	Yes	84	Orangy pink	Yes
17	DCA171	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Environment	1	100	Pink with halo	88	66	Orangy pink	Yes	89	Orangy pink	Yes
18	GAR051	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Cheesecake	1	50	Pink with halo	44	39	Orangy pink	Yes	37	Orangy pink	Yes
19	DHF065	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Shrimp spring rolls	1	88	Pink with halo	78	67	Orangy pink	Yes	75	Orangy pink	Yes
20	NBB986	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Pork snout in pieces	1	71	Pink with halo	71	51	Orangy pink	Yes	56	Orangy pink	Yes
21	AML933	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Nut cheese	1	45	Pink with halo	16	16	Orangy pink	Yes	9	Orangy pink	Yes
22	FFS146	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Homemade mashed potatoes	1	43	Pink with halo	64	28	Orangy pink	Yes	28	Orangy pink	Yes
23	DZS041	<i>Bacillus cereus</i> group III	<i>ceruus</i>	Chocolat pastry	1	72	Pink with halo	95	72	Orangy pink	Yes	81	Orangy pink	Yes
24	JCT201	<i>Bacillus cereus</i> group IV	<i>thuringiensis</i>	Panini ham emmental	1	39	Pink with halo	31	33	Orangy pink	Yes	35	Orangy pink	Yes
25	KGB008	<i>Bacillus cereus</i> group IV	<i>thuringiensis</i>	Piemontese salad	1	66	Pink with halo	91	72	Orangy pink	Yes	65	Orangy pink	Yes
26	ANJ157	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Potato starch	1	31	Pink with halo	34	31	Orangy pink	Yes	42	Orangy pink	Yes
27	MER869	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Pasteurized potatoes	1	106	Pink with halo	152	83	Orangy pink	Yes	119	Orangy pink	Yes
28	BAF065	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Potato salad, cervelas, tomatoes, egg, parsley	1	63	Pink with halo	60	23	Orangy pink	Yes	53	Orangy pink	Yes
29	EDA449	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Vegetables spring rolls	1	78	Pink with halo	71	25	Orangy pink	Yes	70	Orangy pink	Yes
30	FEQ368	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Walnut cheese	1	51	Pink with halo	62	33	Orangy pink	Yes	40	Orangy pink	Yes
31	QEL286	<i>Bacillus cereus</i> group IV	<i>thuringiensis</i>	Dry chocolate cake	1	53	Pink with halo	42	32	Orangy pink	Yes	47	Orangy pink	Yes
32	REB947	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Cranberries crème brûlée	1	30	Pink with halo	25	19	Orangy pink	Yes	18	Orangy pink	Yes
33	CLQ110	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Egg-produced environmental sewer	1	74	Pink with halo	55	45	Orangy pink	Yes	61	Orangy pink	Yes
34	EGK496	<i>Bacillus cereus</i> group IV	<i>thuringiensis</i>	Caramel pear cake	1	54	Pink with halo	55	52	Orangy pink	Yes	52	Orangy pink	Yes
35	EFR056	<i>Bacillus cereus</i> group IV	<i>ceruus</i>	Barbecue marinade powder	1	45	Pink with halo	38	9	Orangy pink	Yes	26	Orangy pink	Yes
36	DKG963	<i>Bacillus cereus</i> group IV	<i>thuringiensis</i>	Raw shortbread	1	58	Pink with halo	58	59	Orangy pink	Yes	55	Orangy pink	Yes
37	FBB747	<i>Bacillus cereus</i> group V	<i>ceruus</i>	Chives	1	60	Pink with halo	63	60	Orangy pink	Yes	60	Orangy pink	Yes
38	KJL797	<i>Bacillus cereus</i> group V	<i>ceruus</i>	Ground	1	34	Pink with halo	21	21	Orangy pink	Yes	30	Orangy pink	Yes
39	LDG480	<i>Bacillus cereus</i> group V	<i>ceruus</i>	Pasteurized potato puree	1	44	Pink with halo	59	40	Orangy pink	Yes	47	Orangy pink	Yes
40	DBM182	<i>Bacillus cereus</i> group V	<i>ceruus</i>	Paris-Brest with strawberries	1	65	Pink with halo	60	58	Orangy pink	Yes	46	Orangy pink	Yes
41	HEK655	<i>Bacillus cereus</i> group VI	<i>weihenstephanensis</i>	Zucchini puree	1	240	Pink with halo	104	116	Orangy pink	Yes	92	Orangy pink	Yes
42	DZL672	<i>Bacillus cereus</i> group VI	<i>mycoides</i>	Potatoes	1	120	Pink with weak halo (starry)	100	88	Orangy pink (starry)	Yes (weak)	87	Orangy pink (starry)	Yes (weak)
43	DVT570	<i>Bacillus cereus</i> group VI	<i>mycoides</i>	Lemon balm	1	65	Pink with halo (starry)	59	50	Orangy pink (starry)	Yes (weak)	56	Orangy pink (starry)	Yes (weak)
44	DWW520	<i>Bacillus cereus</i> group VI	<i>mycoides</i>	Pepper mint	1	38	Pink with halo (starry)	42	39	Orangy pink (starry)	Yes (weak)	20	Orangy pink (starry)	Yes (weak)
45	JFM917	<i>Bacillus cereus</i> group VI	<i>weihenstephanensis</i>	Ground	1	32	Pink with halo	19	14	Orangy pink	Yes	19	Orangy pink	Yes
46	DJL088	<i>Bacillus cereus</i> group VI	<i>weihenstephanensis</i>	Salad piemontese	1	54	Pink with halo	47	35	Orangy pink	Yes	13	Orangy pink	Yes
47	GGB821	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Potato flakes	1	74	Pink with halo	32	8	Small at 21h, orangy pink	Yes	8	Small at 21h, orangy pink	Yes
48	WGL755	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Dehydrated mashed potatoes	1	36	Pink with halo	14	14	Small at 21h, orangy pink	Yes	13	Small at 21h, orangy pink	Yes
49	UHA235	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Couscous seed	1	62	Pink with halo	57	59	Small at 21h, orangy pink	Yes	50	Small at 21h, orangy pink	Yes
50	VYN478	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Dehydrated mashed potatoes	1	59	Pink with halo	48	42	Small at 21h, orangy pink	Yes	46	Small at 21h, orangy pink	Yes
51	GTL187	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Dehydrated mashed potatoes	1	55	Pink with halo	37	43	Small at 21h, orangy pink	Yes	31	Small at 21h, orangy pink	Yes
52	GTP008	<i>Bacillus cereus</i> group VII	<i>cytotoxicus</i>	Couscous seed	1	90	Pink with halo	112	38	Small at 21h, orangy pink	Yes	35	Small at 21h, orangy pink	Yes

APPENDIX O - Exclusivity

#	Reference Microsept	Strain	Origin	Dilutions	Number of CFU on TSA agar medium	MYP agar medium			Alternative method BACARA 2							
						Dilutions	Number of CFU	Aspect of the colonies	Surface spreading - Incubation 22 h at 30°C				Pour plate - Incubation 22 h at 30°C			
									Dilutions	Number of CFU	Colour of the colonies	Presence of a halo	Dilutions	Number of CFU	Colour of the colonies	Presence of a halo
1	BCJ766	<i>Bacillus</i> sp	Pasteurized milk soft cheese	-7 -8	16 2	-6 -7	>150 16	Small, white without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
2	YFJ492	<i>Carnobacterium divergens</i>	Salmon steak	-7 -8	>150 27	-6 -7	>150 148	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
3	BBF899	<i>Staphylococcus aureus</i>	Turkey carcass	-7 -8	80 9	-6 -7	82 7	White colonies without halo	-3 -4	77 5	Pink colonies	Without halo	-3 -4	70 8	Pink colonies	Without halo
4	ACY440	<i>Staphylococcus aureus</i>	Shrimps	-7 -8	55 6	-6 -7	51 4	White colonies without halo	-3 -4	47 2	Pink colonies	Without halo	-3 -4	50 6	Pink colonies	Without halo
5	AAV895	<i>Staphylococcus saprophyticus</i>	Lasagna	-7 -8	30 4	-6 -7	28 3	Yellow colonies without halo	-3 -4	22 1	Pink colonies	Without halo	-3 -4	21 2	Pink colonies	Without halo
6	CCN391	<i>Staphylococcus sciuri</i> *	From hake	-7 -8	41 3	-5 -6	40 3	Yellow colonies without halo	-3 -4	38 2	Pink colonies	Without halo	-3 -4	24 2	Pink colonies	Without halo
7	YHW642	<i>Enterococcus durans</i>	Well water	-7 -8	57 12	-6 -7	>150 146	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
8	BYK585	<i>Enterococcus faecalis</i>	Pond water	-7 -8	>300 24	-6 -7	>150 140	Yellow colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
9	SAK840	<i>Enterococcus faecium</i>	River water	-7 -8	150 22	-6 -7	>150 127	Yellow colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
10	RCJ280	<i>Enterococcus hirae</i>	Bathing water	-7 -8	132 10	-6 -7	>150 134	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
11	DMQ497	<i>Staphylococcus succinus</i> *	Milling bran	-6 -7	98 9	-5 -6	91 7	White colonies without halo	-3 -4	89 7	Pink colonies	Without halo	-3 -4	82 8	Pink colonies	Without halo
12	DNB576	<i>Staphylococcus pasteurii</i>	Raw shortbread	-7 -8	17 2	-6 -7	>150 31	Yellow colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
13	CXZ948	<i>Brochotrix thermosphacta</i>	Sushi	-7 -8	19 5	-6 -7	>150 35	Yellow colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
14	CYL424	<i>Ochrobactrum</i> sp.	Piemontaise	-7 -8	78 8	-6 -7	>150 46	Small, without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
15	DZW418	<i>Leuconostoc mesenteroides</i>	Zucchini flan	-7 -8	40 1	-6 -7	>150 40	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
16	WJM246	<i>Bacillus subtilis</i>	Turmeric	-7 -8	15 0	-6 -7	>150 26	Yellow colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
17	CZZ189	<i>Bacillus amyloliquefaciens</i>	Veggi burger	-6 -7	35 4	-6 -7	55 4	Pink colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
18	RZV558	<i>Bacillus circulans</i>	Vegetable Calmosine	-7 -8	11 2	-3 -4	0 0	/	-3 -4	0 0	/	/	-3 -4	0 0	/	/
19	DLX565	<i>Bacillus pumilus</i>	Pepper mint	-6 -7	17 1	-5 -6	42 5	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
20	DMB846	<i>Bacillus pumilus</i>	Milling bran	-7 -8	22 3	-6 -7	>150 25	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
21	SDT644	<i>Bacillus megaterium</i>	Sweet potato peelings	-6 -7	140 12	-6 -7	>150 17	Pink colonies without halo but transparency of media	-3 -4	56 4	Pink colonies	Without halo but transparency of media	-3 -4	>150 16	Pink colonies	Without halo but transparency of media
22	SHC194	<i>Bacillus megaterium</i>	Topinambour	-7 -8	47 6	-3 -4	>150 18	Pink colonies without halo but transparency of media	-3 -4	15 2	Pink colonies	Without halo but transparency of media	-3 -4	34 1	Pink colonies	Without halo but transparency of media
23	SFC228	<i>Bacillus megaterium</i>	Carrot	-7 -8	44 5	-3 -4	60 7	Pink colonies without halo but transparency of media	-3 -4	3 0	Pink colonies	Without halo but transparency of media	-3 -4	9 1	Pink colonies	Without halo but transparency of media
24	CZL399	<i>Bacillus licheniformis</i>	Milk powder	-7 -8	25 1	-6 -7	39 4	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
25	SGN761	<i>Bacillus licheniformis</i>	Topinambour	-6 -7	14 2	-5 -6	62 2	White colonies without halo	-3 -4	0 0	/	/	-3 -4	0 0	/	/
26	DSM6790	<i>Geobacillus stearothermophilus</i>	Collection strain	-5 -6	60 4	-4 -5	>150 66	White colonies without halo	-2 -3	27 2	Red colonies	Without halo	-2 -3	92 11	Red colonies	Without halo

APPENDIX O - Exclusivity

#	Reference Microsept	Strain	Origin	Dilutions	Number of CFU on TSA agar medium	MYP agar medium			Alternative method BACARA 2							
						Dilutions	Number of CFU	Aspect of the colonies	Surface spreading - Incubation 22 h at 30°C				Pour plate - Incubation 22 h at 30°C			
									Dilutions	Number of CFU	Colour of the colonies	Presence of a halo	Dilutions	Number of CFU	Colour of the colonies	Presence of a halo
27	SHE527	<i>Bacillus simplex</i> *	Celeriac	-6	176	-4	21	Pink and small colonies without halo	-3	0	/	/	-3	0	/	/
				-7	13	-5	2		-4	0			-4	0		
28	DPP171	<i>Bacillus kochii</i> *	Cosmetic industry environment	-5	53	-5	39	White colonies without halo	-3	0	/	/	-3	0	/	/
				-6	1	-6	6		-4	0			-4	0		
29	BMH115	<i>Lysinibacillus fusiformis</i>	Panna cotta red fruits	-6	113	-6	49	Pink colonies without halo	-3	0	/	/	-3	0	/	/
				-7	10	-7	5		-4	0			-4	0		
30	FND144	<i>Brevibacillus parabrevis</i>	Cheese	-5	22	-3	8	White colonies without halo	-3	7	Red colonies**	Yes but not characteristic	-3	3	Red colonies**	Yes but not characteristic
				-6	2	-4	0		-4	0			-4	0		
31	FQJ653	<i>Paenibacillus polymixa</i>	Ground	-5	26	-4	81	Yellow colonies without halo	-3	0	/	/	-3	0	/	/
				-6	6	-5	6		-4	0			-4	0		
32	FQL249	<i>Bacillus sphaericus</i>	Beet juice	-5	58	-3	0	/	-3	0	/	/	-3	0	/	/
				-6	6	-4	0		-4	0			-4	0		
33	FNX731	<i>Bacillus coagulans</i>	Evaporated milk	-5	26	-3	2	White colonies without halo	-3	0	/	/	-3	0	/	/
				-6	3	-4	0		-4	0			-4	0		

*strain isolated from MYP agar media in routine

**colonies color darker than typical *Bacillus cereus*

APPENDIX P

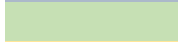
Relative trueness - raw results

Key:

Results are expressed in CFU/g or ml

nc: not countable

 Estimated number

 Microorganisms are present but less than 40 per g or ml

 Results not countable or superior or inferior to the limit of quantification

 Abundant interfering flora

 Dilution withdrawn for the alternative method as part of the extension study
for the enumeration using one dilution and one Petri dish

Relative trueness study - Meat products, fish products, seafood

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921848	Raw beef	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921849	Raw rabbit sausage	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921850	Turkey fillet	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939814	Veal paupiette	Yes	a	-1	10	100%	90	7	100%	70	70	9	100%	90	90
				-2	0	/		0	/			0	/		
1939813	Sliced turkey	Yes	a	-1	24	100%	250	19	100%	190	190	18	100%	180	180
				-2	3	100%		2	100%			2	100%		
1921884	Saithe fillet	Yes	a	-1	49	100%	490	48	100%	480	480	43	100%	430	430
				-2	5	100%		9	100%			5	100%		
1939815	Raw beef meat	Yes	a	-2	51	100%	5300	45	100%	4500	4500	48	100%	4800	4800
				-3	7	100%		4	100%			5	100%		
1921885	Sardine fillet	Yes	a	-2	50	100%	5000	46	100%	4600	4600	52	100%	5200	5200
				-3	5	100%		2	100%			2	100%		
1921851	Chicken curry panini	Yes	b	-1	2	100%	20	2	100%	20	20	3	100%	30	30
				-2	0	/		0	/			0	/		
1921852	Bouchée à la reine	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921853	Beef tongue	Yes	b	-1	0	/	<10	6	100%	60	60	5	100%	50	50
				-2	0	/		0	/			0	/		
1915576	Veal sweetbread bouchée	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915577	Paella	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915578	Cooked pork	No	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915579	Shoulder of lamb and mash	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915580	Salmon puff pastry	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915581	Chicken pie	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915589	Salmon spinach quiche	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915590	Sea lasagna	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915591	Ham croissant	No	b	-1	0	/	<10	1	100%	10	10	6	100%	60	60
				-2	0	/		0	/			0	/		
1915592	Quiche lorraine	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		

Relative trueness study - Meat products, fish products, seafood

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915593	Bouchée à la reine	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915594	Francfort sausage	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1925627	Beef lasagna	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915636	Chicken satai sauce	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915637	Poultry tournedos and foie gras	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939816	Caramel pork	Yes	b	-1	9	100%	90	9	100%	90	90	8	100%	80	80
				-2	3	100%		0	/			1	/		
1939817	Burger	Yes	b	-1	12	100%	120	9	100%	90	90	11	100%	110	110
				-2	1	100%		0	/			1	/		
1921886	Salmon roll in sauce	Yes	b	-1	85	100%	870	85	100%	850	850	99	100%	990	990
				-2	1	100%		13	100%			15	100%		
1921887	Fish shell	Yes	b	-2	60	100%	6000	51	100%	5100	5100	55	100%	5500	5500
				-3	6	100%		6	100%			7	100%		
1939818	Lamb stew	Yes	b	-2	112	100%	11000	104	100%	10000	10000	94	100%	9400	9400
				-3	12	100%		9	100%			10	100%		
1921889	Beef cheek terrine	No	b	-3	>150	/	1500000	>150	/	1400000	1400000	>150	/	1400000	1400000
				-4	149	100%		138	100%			140	100%		
1915634	Chicken satai sauce	No	b	-1	>150	100%	>150000	>150	100%	>150000	>150000	>150	100%	>150000	>150000
				-2	>150	100%		>150	100%			>150	100%		
1939852	Fish soup	Yes	c	-1	10	100%	90	8	100%	80	80	9	100%	90	90
				-2	0	/		2	100%			1	100%		
1939853	Lobster bisque	Yes	c	-1	23	100%	230	15	100%	150	150	18	100%	180	180
				-2	2	100%		2	100%			2	100%		
1939854	Nuoc Mam sauce	Yes	c	-1	31	100%	320	28	100%	280	280	25	100%	250	250
				-2	4	100%		2	100%			2	100%		
1921864	Bolognese sauce	Yes	c	-1	88	100%	940	50	100%	500	500	66	100%	660	660
				-2	15	100%		11	100%			9	100%		
1921864	Smoked sauce ham	Yes	c	-2	67	100%	6700	55	100%	5500	5500	64	100%	6400	6400
				-3	7	100%		1	100%			6	100%		

Relative trueness study - Dairy products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915582	Panna cotta	No	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915585	Custard	No	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915584	Strawberry mint ice cream	No	a	-1	1	100%	10	1	100%	10	10	1	100%	10	10
				-2	0	100%		0	100%			0	100%		
1921792	Munster cheese	Yes	a	-1	1	100%	10	5	100%	50	50	3	100%	30	30
				-2	0	/		0	/			0	/		
1921790	Yogurt	Yes	a	-1	6	100%	60	1	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1921791	Camembert cheese	Yes	a	-1	7	100%	80	4	100%	40	40	5	100%	50	50
				-2	2	/		0	/			0	/		
1921795	Organic cottage cheese	Yes	a	-1	9	100%	80	8	100%	80	80	7	100%	70	70
				-2	0	/		2	100%			3	100%		
1921877	Brie pasteurized milk cheese	Yes	a	-1	16	100%	180	19	100%	190	190	18	100%	180	180
				-2	4	100%		1	100%			2	100%		
1921793	Fresh cream	Yes	a	-2	4	100%	360	3	100%	300	300	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915583	Emmental cheese	No	a	-1	71	100%	800	76	100%	760	760	66	100%	660	660
				-2	15	100%		16	100%			8	100%		
1921794	Organic pasteurised milk	Yes	a	-2	14	100%	1300	10	100%	1000	1000	7	100%	700	700
				-3	0	/		0	/			0	/		
1921878	Yogurt	Yes	a	-1	>150	/	4000	>150	/	3700	3700	>150	/	3500	3500
				-2	40	100%		37	100%			35	100%		
1915587	Infant milk powder	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915586	Infant milk powder	No	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1939858	Infant formula 6-12 months with probiotic - (5,7 10 ⁶ <i>S. thermophilus</i>)	Yes	b	-1	16	100%	160	11	100%	110	110	10	100%	100	100
				-2	1	100%		0	/			1	100%		
1939859	Growth milk 12 months-3 years without probiotic	Yes	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939860	Growth milk 12 months-3 years without probiotic	Yes	b	-1	2	100%	20	2	100%	20	20	2	100%	20	20
				-2	0	/		0	/			0	/		
1939862	2nd age thickened milk without probiotics	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939863	2nd age thickened milk with probiotics - (1,6 10 ⁶ - <i>Bifidobacterie</i>)	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939864	Infant formula 12 months - 3 years without probiotic	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939868	Infant formula 6-12 months without probiotic	Yes	b	-1	0	/	<10	1	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1939869	Goat's milk for infants 12 months-3 years without probiotic	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939870	Infant formula 6-12 months with probiotic - (7,7 10 ⁶ <i>S. thermophilus</i>)	Yes	b	-1	0	/	<10	0	/	<10	<10	1	100%	10	10
				-2	0	/		0	/			0	/		

Relative trueness study - Dairy products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1939884	Infant formula 12 months-3 years without probiotic	Yes	b	-3	29	100%	32000	36	100%	36000	36000	39	100%	39000	39000
				-4	6	100%		6	100%			6	100%		
1939885	Growth milk 12 months-3 years without probiotic	Yes	b	-1	8	100%	70	8	100%	80	80	4	100%	40	40
				-2	0	/		0	/			0	/		
1939887	Infant formula 6-12 months with probiotic - 3,4 10 ⁶ <i>Lactobacillus reuteri</i>	Yes	b	-1	12	100%	110	8	100%	80	80	8	100%	80	80
				-2	0	/		1	100%			0	/		
1939888	Goat's milk for infants 12 months-3 years without probiotic	Yes	b	-1	26	100%	250	26	100%	260	260	18	100%	180	180
				-2	1	100%		1	100%			3	100%		
1939889	Infant formula 0-6 months without probiotic	Yes	b	-2	>150	/	71000	>150	/	83000	83000	>150	/	80000	80000
				-3	71	100%		83	100%			80	100%		
1969961	Infant formula 6-12 months with probiotic - 3,4 10 ⁶ <i>Lactobacillus reuteri</i>	Yes	b	-2	44	100%	4800	31	100%	3100	3100	32	100%	3200	3200
				-3	9	100%		3	100%			3	100%		
1939855	Semi-skimmed milk powder	Yes	c	-1	2	100%	20	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939856	Powdered whole milk	Yes	c	-1	1	100%	10	0	/	<10	<10	1	100%	10	10
				-2	0	/		0	/			0	/		
1939857	Organic skimmed milk powder batch 1	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939861	Organic skimmed milk powder batch 2	Yes	c	-1	5	100%	50	6	100%	60	60	5	100%	50	50
				-2	0	/		0	/			0	/		
1939865	Skimmed milk powder	Yes	c	-1	5	100%	50	10	100%	100	100	10	100%	100	100
				-2	1	100%		1	100%			1	100%		
1939866	Semi-skimmed milk powder	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939867	Powdered whole milk	Yes	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939871	Powdered whole milk	Yes	c	-1	1	100%	10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939891	Semi-skimmed milk powder	Yes	c	-1	1	100%	10	1	100%	10	10	2	100%	20	20
				-2	0	/		0	/			0	/		
1939893	Buttermilk powder	Yes	c	-1	38	100%	380	29	100%	290	290	19	100%	190	190
				-2	4	100%		1	100%			3	100%		
1939894	Powdered caseinate	Yes	c	-3	>150	/	120000	>150	/	180000	180000	>150	100%	180000	180000
				-4	12	100%		18	100%			18	100%		
1969963	Semi-skimmed milk powder	Yes	c	-2	19	100%	1800	18	100%	1800	1800	27	100%	2700	2700
				-3	1	100%		8	100%			3	100%		

Relative trueness study - Vegetables

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915588	Grated coconut	No	a	-1	15	100%	140	8	100%	80	80	6	100%	60	60
				-2	0	100%		1	100%			2	100%		
1921846	Beetroot powder	No	a	-1	17	100%	170	10	100%	100	100	8	100%	80	80
				-2	2	100%		4	100%			1	100%		
1921847	Potato flakes	No	a	-1	13	100%	140	10	100%	100	100	10	100%	100	100
				-2	2	100%		1	100%			1	100%		
1915632	Thyme	No	a	-1	35	100%	360	35	100%	350	350	30	100%	300	300
				-2	5	100%		4	100%			5	100%		
1915595	Wheat flour	No	a	-1	>150	/	1600	83	100%	830	830	123	100%	1200	1200
				-2	16	100%		23	100%			21	100%		
1921883	Dehydrated mushrooms	No	a	-1	>150	/	3000	>150	/	2400	2400	>150	/	2800	2800
				-2	30	100%		24	100%			28	100%		
1915596	Rye flour	No	a	-1	>150	/	5000	>150	/	3900	3900	>150	100%	4400	4400
				-2	50	100%		39	100%			44	100%		
1977611	Curry Madras	No	a	-1	30	100%	290	27	100%	270	270	31	100%	310	310
				-2	2	100%		3	100%			3	100%		
1915615	Pasta salad, carrots, prawns	Yes	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915619	Farfalle with chorizo	Yes	b	-2	0	/	<100	0	/	<100	<100	0	/	<100	<100
				-3	0	/		0	/			0	/		
1915597	Pasta salad, pepper, corn, olive	No	b	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1939799	Crozet salad, turkey, pepper	No	b	-1	1	100%	10	1	100%	10	10	1	100%	10	10
				-2	0	/		0	/			0	/		
1915616	Rice salad, tomatoes, tuna, egg	Yes	b	-1	1	100%	10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915618	Pasta, tomato, pepper salad	Yes	b	-2	0	/	<100	0	/	<100	<100	1	100%	100	100
				-3	0	/		0	/			0	/		
1915617	Cantonese rice	Yes	b	-1	10	100%	100	6	100%	60	60	12	100%	120	120
				-2	1	/		0	/			2	100%		
1915620	Rice salad, tomatoes, corn	Yes	b	-2	2	100%	200	2	100%	200	200	1	100%	100	100
				-3	0	/		0	/			0	/		
1921854	Pasta salad, sausage, tomatoes	Yes	b	-1	19	100%	220	18	100%	180	180	20	100%	200	200
				-2	5	100%		2	100%			0	/		
1915626	Rice	No	b	-1	43	100%	400	42	100%	420	420	52	100%	520	520
				-2	1	100%		10	100%			4	100%		
1921855	Pasta with pesto	Yes	b	-1	65	100%	650	63	100%	630	630	62	100%	620	620
				-2	6	100%		2	100%			6	100%		
1939878	Indian pasta salad	No	b	-2	46	100%	4800	38	100%	3800	3800	44	100%	4400	4400
				-3	7	100%		5	100%			3	100%		
1939821	Fresh pasta	Yes	b	-2	>150	/	16000	>150	/	12000	12000	>150	/	11000	11000
				-3	16	100%		12	100%			11	100%		

Relative trueness study - Vegetables

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005 ■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915601	Greek tomato salad	No	c	-1	0	/	<10	2	100%	20	20	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915602	Celery, apples, cucumber, tomatoes	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915622	Cabbage trio	Yes	c	-1	4	100%	40	4	100%	40	40	2	100%	20	20
				-2	0	/		0	/			0	/		
1915623	Grated carrots vinaigrette	Yes	c	-1	5	/	45	3	100%	30	30	3	100%	30	30
				-2	0	/		0	/			0	/		
1915621	Tomato tartare	Yes	c	-1	6	100%	55	2	100%	20	20	6	100%	60	60
				-2	0	/		0	/			0	/		
1939875	Piémontaise	No	c	-1	8	100%	70	4	100%	40	40	5	100%	50	50
				-2	0	/		0	/			0	/		
1939877	Beets, tomatoes, celery	No	c	-1	8	100%	80	7	100%	70	70	6	100%	60	60
				-2	1	100%		1	100%			1	100%		
1915598	Salad, snout, tomatoes	No	c	-1	10	100%	100	20	100%	200	200	11	100%	110	110
				-2	1	100%		3	100%			3	100%		
1915624	Pork snout salad with pickles	Yes	c	-2	7	100%	640	4	100%	400	400	5	100%	500	500
				-3	0	/		0	/			0	/		
1915600	Tomato and vegetable salad	No	c	-1	75	100%	810	88	100%	880	880	88	100%	880	880
				-2	14	100%		9	100%			14	100%		
1915625	Vegetable tian	Yes	c	-2	20	100%	1800	15	100%	1500	1500	12	100%	1200	1200
				-3	0	/		1	100%			1	100%		
1915599	Piémontaise	No	c	-1	138	100%	1400	78	100%	780	780	149	100%	1500	1500
				-2	19	100%		8	100%			16	100%		

Relative trueness study - Eggs and pastries

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921801	Liquid egg white	Yes	a	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921856	Liquid egg white	Yes	a	-1	14	100%	130	9	100%	90	90	12	100%	120	120
				-2	0	/		1	100%			1	100%		
1921796	Liquid egg yolk	Yes	a	-1	24	100%	240	10	100%	100	100	16	100%	160	160
				-2	2	100%		3	100%			2	100%		
1921797	Liquid whole egg	Yes	a	-1	41	100%	410	22	100%	220	220	14	100%	140	140
				-2	4	100%		2	100%			4	100%		
1921798	11% salted egg yolk	Yes	a	-1	30	100%	370	20	100%	200	200	24	100%	240	240
				-2	11	100%		3	100%			1	100%		
1921799	Sweet egg yolk 30%	Yes	a	-2	23	100%	2500	14	100%	1400	1400	16	100%	1600	1600
				-3	4	100%		4	100%			2	100%		
1921800	Salty egg yolk 9% - sweet 10.9%	Yes	a	-2	51	100%	5000	43	100%	4300	4300	48	100%	4800	4800
				-3	4	100%		2	100%			3	100%		
1921802	Pasteurized egg white powder	Yes	b	-1	0	/	<10	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921805	Unpasteurized egg white powder	Yes	b	-1	3	100%	30	1	100%	10	10	3	100%	30	30
				-2	1	100%		0	/			0	/		
1921866	Powdered egg white	Yes	b	-1	25	100%	230	16	100%	160	160	18	100%	180	180
				-2	0	/		2	100%			1	100%		
1921803	Pasteurized egg yolk powder	Yes	b	-1	32	100%	320	26	100%	260	260	24	100%	240	240
				-2	3	100%		4	100%			5	100%		
1921804	Pasteurized whole egg powder	Yes	b	-1	90	100%	860	80	100%	800	800	78	100%	780	780
				-2	5	100%		5	100%			10	100%		
1921806	Pasteurized egg yolk powder	Yes	b	-2	39	100%	4300	31	100%	3100	3100	30	100%	3000	3000
				-3	8	100%		3	100%			3	100%		
1921807	Pasteurized whole egg powder	Yes	b	-2	39	100%	4000	46	100%	4600	4600	46	100%	4600	4600
				-3	5	100%		5	100%			7	100%		
1915605	Vanilla dessert	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915607	Chocolat dessert	No	c	-1	2	100%	20	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915608	Whipped cream cabbage	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915630	Nantais cake	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1915631	Paris Brest	No	c	-1	22	100%	230	13	100%	130	130	11	100%	110	110
				-2	3	100%		2	100%			3	100%		
1915628	Coffee eclair	No	c	-1	17	100%	170	23	100%	230	230	14	100%	140	140
				-2	2	100%		2	100%			2	100%		
1915629	Cream pastry	No	c	-1	24	100%	240	13	100%	130	130	14	100%	140	140
				-2	2	100%		2	100%			2	100%		

Relative trueness study - Eggs and pastries

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915606	Raspberry strawberry dessert	No	c	-1	23	100%	210	18	100%	180	180	26	100%	260	260
				-2	0	100%		4	100%			5	100%		
1915609	Raspberry tartlet	No	c	-1	66	100%	740	54	100%	540	540	39	100%	390	390
				-2	15	100%		6	100%			0	100%		
1915603	Crème brulee	No	c	-3	105	100%	110000	103	100%	100000	100000	72	100%	72000	72000
				-4	17	100%		19	100%			12	100%		
1915604	Chocolate eclair	No	c	-3	>150	100%	1200000	>150	100%	1500000	1500000	>150	100%	1500000	1500000
				-4	121	100%		150	100%			148	100%		

Relative trueness study - RTE & RTH products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C		3 days at 4°C		21h at 30°C		3 days at 4°C	
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1915611	Tabbouleh of the sea	No	a	-1	4	100%	40	4	100%	40	40	4	100%	40	40
				-2	0	100%		0	100%			1	100%		
1921857	Quinoa salad, bulgur	Yes	a	-1	2	100%	20	3	100%	30	30	4	100%	40	40
				-2	0	/		0	/			1	100%		
1921858	Semolina (dessert)	Yes	a	-1	9	100%	110	11	100%	110	110	13	100%	130	130
				-2	3	100%		1	100%			1	100%		
1915610	Oriental tabbouleh	No	a	-1	12	100%	140	11	100%	110	110	20	100%	200	200
				-2	3	100%		2	100%			1	100%		
1921859	Rice pudding	Yes	a	-1	37	100%	360	32	100%	320	320	34	100%	340	340
				-2	3	100%		3	100%			4	100%		
1921876	Muesli cereals	Yes	a	-1	>150	/	2400	>150	/	2000	2000	>150	/	1900	1900
				-2	24	100%		20	100%			19	100%		
1939820	Rice pudding	Yes	a	-1	>150	/	3100	>150	/	4800	4800	>150	/	6000	6000
				-2	31	100%		48	100%			60	100%		
1921860	Corn tortillas	Yes	b	-1	15	100%	150	10	100%	100	100	13	100%	130	130
				-2	1	100%		2	100%			1	100%		
1921861	Banana	Yes	b	-1	21	100%	200	16	100%	160	160	14	100%	140	140
				-2	1	100%		1	100%			5	100%		
1921862	Rice cracker	Yes	b	-1	28	100%	280	23	100%	230	230	29	100%	290	290
				-2	3	100%		4	100%			3	100%		
1921873	Bread	Yes	b	-1	42	100%	400	36	100%	360	360	38	100%	380	380
				-2	2	100%		6	100%			6	100%		
1921888	Chestnut jam	Yes	b	-1	135	100%	1400	>150	/	1700	1700	>150	/	2000	2000
				-2	15	100%		17	100%			20	100%		
1915612	Fish sticks and potatoes	No	c	-1	0	/	<10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921874	Lentils	Yes	c	-1	9	100%	80	7	100%	70	70	8	100%	80	80
				-2	0	/		0	/			0	/		
1921863	Parsnip puree	Yes	c	-1	12	100%	120	10	100%	100	100	14	100%	140	140
				-2	1	100%		2	100%			2	100%		
1921882	Chickpea	Yes	c	-1	18	100%	180	19	100%	190	190	16	100%	160	160
				-2	1	100%		5	100%			3	100%		
1915614	Hachis parmentier	No	c	-1	16	100%	180	29	100%	290	290	22	100%	220	220
				-2	4	100%		4	100%			1	100%		
1915613	Mashed potatoes	No	c	-1	16	100%	170	25	100%	250	250	26	100%	260	260
				-2	3	100%		5	100%			6	100%		
1921875	Mashed Sweet Potatoes	Yes	c	-1	>150	/	3000	>150	/	2800	2800	>150	/	2800	2800
				-2	30	100%		28	100%			28	100%		
1915635	Mashed potatoes and carrots	No	c	-3	>150	/	390000	>150	/	340000	340000	>150	/	380000	380000
				-4	39	100%		34	100%			38	100%		
1915633	Mashed potatoes	No	c	-1	>150	100%	>150000	>150	100%	>150000	>150000	>150	100%	>150000	>150000
				-2	>150	100%		>150	100%			>150	100%		

Relative trueness study - Feed products

Sample code	Sample name	AC	Type	Dil.	EN ISO 7932:2005■			BACARA - Pour plate				BACARA - Surface spreading			
								21h at 30°C			3 days at 4°C	21h at 30°C			3 days at 4°C
					CFU	Conf.	Result	CFU	Conf.	Result	Result	CFU	Conf.	Result	Result
1921867	Guinea pig feed	Yes	a	-1	10	100%	100	6	100%	60	60	7	100%	70	70
				-2	1	100%		1	100%			1	100%		
1921868	Hamster feed	Yes	a	-1	14	100%	160	12	100%	120	120	15	100%	150	150
				-2	6	100%		2	100%			1	100%		
1921869	Pet bird feed	Yes	a	-1	50	100%	510	48	100%	480	480	47	100%	470	470
				-2	6	100%		6	100%			6	100%		
1939794	Cat feed	Yes	a	-2	63	100%	6300	56	100%	5600	5600	58	100%	5800	5800
				-3	6	100%		5	100%			6	100%		
1939795	Dog feed	Yes	a	-2	99	100%	10000	86	100%	8600	8600	86	100%	8600	8600
				-3	11	100%		10	100%			16	100%		
1921838	Rabbit feed	No	b	-1	11	100%	110	10	100%	100	100	8	100%	80	80
				-2	1	100%		1	100%			0	/		
1921839	Poultry feed	No	b	-1	25	100%	270	17	100%	170	170	19	100%	190	190
				-2	5	100%		1	100%			1	100%		
1921840	Maize	No	b	-1	1	100%	10	0	/	<10	<10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921870	Wheat	Yes	b	-1	40	100%	370	36	100%	360	360	35	100%	350	350
				-2	1	100%		2	100%			3	100%		
1921871	Corn	Yes	b	-2	20	100%	1900	16	100%	1600	1600	18	100%	1800	1800
				-3	1	100%		1	100%			2	100%		
1921872	Dwarf rabbit feed	Yes	b	-2	40	100%	4000	39	100%	3900	3900	42	100%	4200	4200
				-3	4	100%		5	100%			5	100%		
1921843	Horse feed	No	c	-1	2	100%	20	1	100%	10	10	0	/	<10	<10
				-2	0	/		0	/			0	/		
1921844	Soy	No	c	-1	10	100%	120	10	100%	100	100	12	100%	120	120
				-2	3	100%		1	100%			1	100%		
1921842	Sheep feed	No	c	-1	13	100%	140	15	100%	150	150	17	100%	170	170
				-2	2	100%		2	100%			2	100%		
1939796	Horse feed	Yes	c	-1	21	100%	210	17	100%	170	170	18	100%	180	180
				-2	2	100%		4	100%			2	100%		
1921845	Rapeseed	No	c	-1	43	100%	450	33	100%	330	330	35	100%	350	350
				-2	6	100%		2	100%			1	100%		
1939883	Pig feed	No	c	-1	63	100%	710	34	100%	340	340	53	100%	530	530
				-2	15	100%		4	100%			8	100%		
1921841	Lamb feed	No	c	-1	>150	/	1000	86	100%	860	860	81	100%	810	810
				-2	10	100%		10	100%			11	100%		
1939882	Piglet feed	No	c	-1	>150	/	5000	>150	/	3700	3700	>150	/	4400	4400
				-2	50	100%		37	100%			44	100%		
1939797	Soy	Yes	c	-2	79	100%	8000	69	100%	6900	6900	73	100%	7300	7300
				-3	9	100%		8	100%			6	100%		

APPENDIX Q - Relative trueness statistical calculations

Pour plate for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products, fish products	a	1939814	Veal paupiette	90	70	1,95	1,85	1,90	-0,11
	a	1939813	Sliced turkey	250	190	2,40	2,28	2,34	-0,12
	a	1921884	Saithe fillet	490	480	2,69	2,68	2,69	-0,01
	a	1921885	Sardine fillet	5300	4500	3,72	3,65	3,69	-0,07
	a	1939815	Raw beef meat	5000	4600	3,70	3,66	3,68	-0,04
	b	1939816	Caramel pork	90	90	1,95	1,95	1,95	0,00
	b	1939817	Burger	120	90	2,08	1,95	2,02	-0,12
	b	1921886	Salmon roll in sauce	870	850	2,94	2,93	2,93	-0,01
	b	1921887	Fish shell	6000	5100	3,78	3,71	3,74	-0,07
	b	1939818	Lamb stew	11000	10000	4,04	4,00	4,02	-0,04
	b	1921889	Beef cheek terrine	1500000	1400000	6,18	6,15	6,16	-0,03
	c	1939852	Fish soup	90	80	1,95	1,90	1,93	-0,05
	c	1939853	Lobster bisque	230	150	2,36	2,18	2,27	-0,19
	c	1939854	Nuoc Mam sauce	320	280	2,51	2,45	2,48	-0,06
	c	1921864	Bolognaise sauce	940	500	2,97	2,70	2,84	-0,27
	c	1921865	Smoked ham sauce	6700	5500	3,83	3,74	3,78	-0,09
	Average difference of the category								-0,08
	Standard deviation of differences								0,07
Dairy products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921791	Cheese Camembert	80	40	1,90	1,60	1,75	-0,30
	a	1921795	Organic white cheese	80	80	1,90	1,90	1,90	0,00
	a	1921877	Pasteurized milk cheese	180	190	2,26	2,28	2,27	0,02
	a	1915583	Emmental cheese	800	760	2,90	2,88	2,89	-0,02
	a	1921794	Organic pasteurized milk	1300	1000	3,11	3,00	3,06	-0,11
	a	1921878	Yogurt	4000	3700	3,60	3,57	3,59	-0,03
	b	1939885	Growth milk 12 months-3 years without probiotic	70	80	1,85	1,90	1,87	0,06
	b	1939887	Infant formula 6-12 months with probiotic - (3,4	110	80	2,04	1,90	1,97	-0,14
	b	1939858	Infant formula 6-12 months with probiotic	160	110	2,20	2,04	2,12	-0,16
	b	1939888	Goat's milk for infants 12 months-3 years without	250	260	2,40	2,41	2,41	0,02
	b	1969961	Infant formula 6-12 months with probiotic	4800	3100	3,68	3,49	3,59	-0,19
	b	1939884	Infant formula 12 months-3 years without	32000	36000	4,51	4,56	4,53	0,05
	b	1939889	Infant formula 0-6 months without probiotic	71000	83000	4,85	4,92	4,89	0,07
	c	1939861	Organic skimmed milk powder batch 2	50	60	1,70	1,78	1,74	0,08
	c	1939865	Skimmed milk powder	50	100	1,70	2,00	1,85	0,30
	c	1939893	Buttermilk powder	380	290	2,58	2,46	2,52	-0,12
	c	1969963	Semi-skimmed milk powder	1800	1800	3,26	3,26	3,26	0,00
	c	1939894	Powdered caseinate	120000	180000	5,08	5,26	5,17	0,18
	Average difference of the category								-0,02
	Standard deviation of differences								0,14

APPENDIX Q - Relative trueness statistical calculations

Pour plate for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Vegetables	a	1915588	Grated coconut	140	80	2,15	1,90	2,02	-0,24
	a	1921846	Beetroot powder	170	100	2,23	2,00	2,12	-0,23
	a	1921847	Potato flakes	140	100	2,15	2,00	2,07	-0,15
	a	1977611	Curry Madras	290	270	2,46	2,43	2,45	-0,03
	a	1915632	Thyme	360	350	2,56	2,54	2,55	-0,01
	a	1915595	Wheat flour	1600	830	3,20	2,92	3,06	-0,29
	a	1921883	Dehydrated mushrooms	3000	2400	3,48	3,38	3,43	-0,10
	a	1915596	Rye flour	5000	3900	3,70	3,59	3,65	-0,11
	b	1915617	Cantonese rice	100	60	2,00	1,78	1,89	-0,22
	b	1921854	Pasta salad, sausage, tomatoes	220	180	2,34	2,26	2,30	-0,09
	b	1915626	Rice	400	420	2,60	2,62	2,61	0,02
	b	1921855	Pasta with pesto	650	630	2,81	2,80	2,81	-0,01
	b	1939878	Indian pasta salad	4800	3800	3,68	3,58	3,63	-0,10
	b	1939821	Fresh pasta	16000	12000	4,20	4,08	4,14	-0,12
	c	1915622	Cabbage trio	40	40	1,60	1,60	1,60	0,00
	c	1939875	Piémontaise	70	40	1,85	1,60	1,72	-0,24
	c	1939877	Beets, tomatoes, celery	80	70	1,90	1,85	1,87	-0,06
	c	1915598	Salad, snout, tomatoes	100	200	2,00	2,30	2,15	0,30
	c	1915624	Pork snout salad with pickles	640	400	2,81	2,60	2,70	-0,20
	c	1915600	Tomato and vegetable salad	810	880	2,91	2,94	2,93	0,04
	c	1915625	Vegetable tian	1800	1500	3,26	3,18	3,22	-0,08
	c	1915599	Piémontaise	1400	780	3,15	2,89	3,02	-0,25
	Average difference of the category								-0,10
	Standard deviation of differences								0,13
Eggs & Pastries	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921856	Liquid egg white	130	90	2,11	1,95	2,03	-0,16
	a	1921796	Liquid egg yolk	240	100	2,38	2,00	2,19	-0,38
	a	1921797	Liquid whole egg	410	220	2,61	2,34	2,48	-0,27
	a	1921798	11% salted egg yolk	370	200	2,57	2,30	2,43	-0,27
	a	1921799	Sweet egg yolk 30%	2500	1400	3,40	3,15	3,27	-0,25
	a	1921800	Salty egg yolk 9% - sweet 10.9%	5000	4300	3,70	3,63	3,67	-0,07
	b	1921866	Powdered egg white	230	160	2,36	2,20	2,28	-0,16
	b	1921803	Pasteurized egg yolk powder	320	260	2,51	2,41	2,46	-0,09
	b	1921804	Pasteurized whole egg powder	860	800	2,93	2,90	2,92	-0,03
	b	1921806	Pasteurized egg yolk powder	4300	3100	3,63	3,49	3,56	-0,14
	b	1921807	Pasteurized whole egg powder	4000	4600	3,60	3,66	3,63	0,06
	c	1915631	Paris Brest	230	130	2,36	2,11	2,24	-0,25
	c	1915628	Coffee éclair	170	230	2,23	2,36	2,30	0,13
	c	1915629	Cream pastry	240	130	2,38	2,11	2,25	-0,27
	c	1915606	Raspberry strawberry dessert	210	180	2,32	2,26	2,29	-0,07
	c	1915609	Raspberry tartlet	740	540	2,87	2,73	2,80	-0,14
	c	1915603	Crème brulee	110000	100000	5,04	5,00	5,02	-0,04
	c	1915604	Chocolat éclair	1200000	1500000	6,08	6,18	6,13	0,10
	Average difference of the category								-0,13
	Standard deviation of differences								0,14

APPENDIX Q - Relative trueness statistical calculations

Pour plate for BACARA 2

RTE & RTRH products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1915611	Tabbouleh of the sea	40	40	1,60	1,60	1,60	0,00
	a	1921858	Semolina (dessert)	110	110	2,04	2,04	2,04	0,00
	a	1915610	Oriental tabbouleh	140	110	2,15	2,04	2,09	-0,10
	a	1921859	Rice pudding	360	320	2,56	2,51	2,53	-0,05
	a	1921876	Muesli cereals	2400	2000	3,38	3,30	3,34	-0,08
	a	1939820	Rice pudding	3100	4800	3,49	3,68	3,59	0,19
	b	1921860	Corn tortillas	150	100	2,18	2,00	2,09	-0,18
	b	1921861	Banana	200	160	2,30	2,20	2,25	-0,10
	b	1921862	Rice cracker	280	230	2,45	2,36	2,40	-0,09
	b	1921873	Bread	400	360	2,60	2,56	2,58	-0,05
	b	1921888	Chestnut jam	1400	1700	3,15	3,23	3,19	0,08
	c	1921874	Lentils	80	70	1,90	1,85	1,87	-0,06
	c	1921863	Parnsnip puree	120	100	2,08	2,00	2,04	-0,08
	c	1921882	Chickpea	180	190	2,26	2,28	2,27	0,02
	c	1915614	Hachis parmentier	180	290	2,26	2,46	2,36	0,21
	c	1915613	Mashed potatoes	170	250	2,23	2,40	2,31	0,17
	c	1921875	Mashed Sweet Potatoes	3000	2800	3,48	3,45	3,46	-0,03
	c	1915635	Mashed potatoes and carrots	390000	340000	5,59	5,53	5,56	-0,06
Average difference of the category									-0,01
Standard deviation of differences									0,11
Feed products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921867	Guinea pig food	100	60	2,00	1,78	1,89	-0,22
	a	1921868	Hamster food	160	120	2,20	2,08	2,14	-0,12
	a	1921869	Pet bird food	510	480	2,71	2,68	2,69	-0,03
	a	1939794	Cat food	6300	5600	3,80	3,75	3,77	-0,05
	a	1939795	Dog food	10000	8600	4,00	3,93	3,97	-0,07
	b	1921838	Rabbit feed	110	100	2,04	2,00	2,02	-0,04
	b	1921839	Poultry feed	270	170	2,43	2,23	2,33	-0,20
	b	1921870	Wheat	370	360	2,57	2,56	2,56	-0,01
	b	1921871	Corn	1900	1600	3,28	3,20	3,24	-0,07
	b	1921872	Dwarf rabbit food	4000	3900	3,60	3,59	3,60	-0,01
	c	1921844	Soy	120	100	2,08	2,00	2,04	-0,08
	c	1921842	Sheep feed	140	150	2,15	2,18	2,16	0,03
	c	1939796	Horse feed	210	170	2,32	2,23	2,28	-0,09
	c	1921845	Rapeseed	450	330	2,65	2,52	2,59	-0,13
	c	1939883	Pig feed	710	340	2,85	2,53	2,69	-0,32
	c	1921841	Lamb feed	1000	860	3,00	2,93	2,97	-0,07
	c	1939882	Piglet feed	5000	3700	3,70	3,57	3,63	-0,13
	c	1939797	Soy	8000	6900	3,90	3,84	3,87	-0,06
Average difference of the category									-0,09
Standard deviation of differences									0,09
Average difference all categories									-0,07
Standard deviation of differences									0,12

APPENDIX Q - Relative trueness statistical calculations

Pour plate for BACARA 2

n = 16 $T(0,025;15)=$ 2,131
 n = 18 $T(0,025;17)=$ 2,110
 n = 22 $T(0,025;21)=$ 2,080
 n = 18 $T(0,025;17)=$ 2,110
 n = 18 $T(0,025;17)=$ 2,110
 n = 18 $T(0,025;17)=$ 2,110
 n = 110 $T(0,025;109)=$ 1,982
 $\beta =$ 95%

	Lower confidence limit	Upper confidence limit
MP	-0,24	0,08
DP	-0,32	0,29
V	-0,38	0,18
E&P	-0,43	0,18
RTE	-0,24	0,22
FEED	-0,28	0,09
All	-0,32	0,17

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	b	1921853	Beef tong	<10	60	0,00	1,78	0,89	1,78
	b	1915591	Ham croissant	<10	10	0,00	1,00	0,50	1,00
	b	1921851	Chicken panini curry	20	20	1,30	1,30	1,30	0,00
	b	1915578	Cooked pork	10	10	1,00	1,00	1,00	0,00
Dairy products	a	1915584	Strawberry mint ice cream	10	10	1,00	1,00	1,00	0,00
	a	1921792	Munster cheese	10	50	1,00	1,70	1,35	0,70
	a	1921790	Yogurt	60	10	1,78	1,00	1,39	-0,78
	a	1921793	Fresh cream	360	300	2,56	2,48	2,52	-0,08
	b	1939859	Growth milk 12 months-3 years without probiotic	10	10	1,00	1,00	1,00	0,00
	b	1939860	Growth milk 12 months-3 years without probiotic	20	20	1,30	1,30	1,30	0,00
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	0,00	1,00	0,50	1,00
	c	1939855	Semi-skimmed milk powder	20	<10	1,30	0,00	0,65	-1,30
	c	1939856	Powdered whole milk	10	<10	1,00	0,00	0,50	-1,00
	c	1939871	Powdered whole milk	10	<10	1,00	0,00	0,50	-1,00
Vegetables	c	1939891	Semi-skimmed milk powder	10	10	1,00	1,00	1,00	0,00
	b	1939799	Crozet salad, turkey, pepper	10	10	1,00	1,00	1,00	0,00
	b	1915616	Rice salad, tomatoes, tuna, egg	10	10	1,00	1,00	1,00	0,00
	b	1915620	Rice salad, tomatoes, corn	200	200	2,30	2,30	2,30	0,00
	c	1915623	Grated carrots vinaigrette	45	30	1,65	1,48	1,57	-0,18
	c	1915621	Tomato tartare	55	20	1,74	1,30	1,52	-0,44
Eggs & pastries	c	1915601	Greek tomato salad	<10	20	0,00	1,30	0,65	1,30
	b	1921802	Pasteurized egg white powder	<10	10	0,00	1,00	0,50	1,00
	b	1921805	Unpasteurized egg white powder	30	10	1,48	1,00	1,24	-0,48
RTE & RTRH	c	1915607	Chocolate dessert	20	<10	1,30	0,00	0,65	-1,30
	a	1921857	Quinoa salad, bulgur	20	30	1,30	1,48	1,39	0,18
	b	1921840	Maize	10	<10	1,00	0,00	0,50	-1,00
	c	1921843	Horse feed	20	10	1,30	1,00	1,15	-0,30

APPENDIX Q - Relative trueness statistical calculations

Surface spreading for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products, fish products	a	1939814	Veal paupiette	90	90	1,95	1,95	1,95	0,00
	a	1939813	Sliced turkey	250	180	2,40	2,26	2,33	-0,14
	a	1921884	Saithe fillet	490	430	2,69	2,63	2,66	-0,06
	a	1939815	Raw beef meat	5300	4800	3,72	3,68	3,70	-0,04
	a	1921885	Sardin fillet	5000	5200	3,70	3,72	3,71	0,02
	b	1939816	Caramel pork	90	80	1,95	1,90	1,93	-0,05
	b	1939817	Burger	120	110	2,08	2,04	2,06	-0,04
	b	1921886	Salmon roll in sauce	870	990	2,94	3,00	2,97	0,06
	b	1921887	Fish shell	6000	5500	3,78	3,74	3,76	-0,04
	b	1939818	Lamb stew	11000	9400	4,04	3,97	4,01	-0,07
	b	1921889	Beef cheek terrine	1500000	1400000	6,18	6,15	6,16	-0,03
	c	1939852	Fish soup	90	90	1,95	1,95	1,95	0,00
	c	1939853	Lobster bisque	230	180	2,36	2,26	2,31	-0,11
	c	1939854	Nuoc Mam sauce	320	250	2,51	2,40	2,45	-0,11
	c	1921864	Bolognaise sauce	940	660	2,97	2,82	2,90	-0,15
	c	1921865	Smoked ham sauce	6700	6400	3,83	3,81	3,82	-0,02
	Average difference of the category								-0,05
	Standard deviation of differences								0,06
Dairy products	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921791	Cheese Camembert	80	50	1,90	1,70	1,80	-0,20
	a	1921795	Organic white cheese	80	70	1,90	1,85	1,87	-0,06
	a	1921877	Pasteurized milk cheese	180	180	2,26	2,26	2,26	0,00
	a	1915583	Emmental cheese	800	660	2,90	2,82	2,86	-0,08
	a	1921794	Organic pasteurized milk	1300	700	3,11	2,85	2,98	-0,27
	a	1921878	Yogurt	4000	3500	3,60	3,54	3,57	-0,06
	b	1939858	Infant formula 6-12 months with probiotic	80	40	1,90	1,60	1,75	-0,30
	b	1939885	Growth milk 12 months-3 years without probiotic	110	80	2,04	1,90	1,97	-0,14
	b	1939887	Infant formula 6-12 months with probiotic - (3,4 10 ⁶)	160	100	2,20	2,00	2,10	-0,20
	b	1939888	Goat's milk for infants 12 months-3 years without	250	180	2,40	2,26	2,33	-0,14
	b	1969961	Infant formula 6-12 months with probiotic	4800	3200	3,68	3,51	3,59	-0,18
	b	1939884	Infant formula 12 months-3 years without probiotic	32000	39000	4,51	4,59	4,55	0,09
	b	1939889	Infant formula 0-6 months without probiotic	71000	80000	4,85	4,90	4,88	0,05
	c	1939861	Organic skimmed milk powder batch 2	50	50	1,70	1,70	1,70	0,00
	c	1939865	Skimmed milk powder	50	100	1,70	2,00	1,85	0,30
	c	1939893	Buttermilk powder	380	190	2,58	2,28	2,43	-0,30
	c	1969963	Semi-skimmed milk powder	1800	2700	3,26	3,43	3,34	0,18
	c	1939894	Powdered caseinate	120000	180000	5,08	5,26	5,17	0,18
	Average difference of the category								-0,06
	Standard deviation of differences								0,17

APPENDIX Q - Relative trueness statistical calculations

Surface spreading for BACARA 2

	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Vegetables	a	1915588	Grated coconut	140	60	2,15	1,78	1,96	-0,37
	a	1921846	Beetroot powder	170	80	2,23	1,90	2,07	-0,33
	a	1921847	Potato flakes	140	100	2,15	2,00	2,07	-0,15
	a	1977611	Curry Madras	290	310	2,46	2,49	2,48	0,03
	a	1915632	Thyme	360	300	2,56	2,48	2,52	-0,08
	a	1915595	Wheat flour	1600	1200	3,20	3,08	3,14	-0,12
	a	1921883	Dehydrated mushrooms	3000	2800	3,48	3,45	3,46	-0,03
	a	1915596	Rye flour	5000	4400	3,70	3,64	3,67	-0,06
	b	1915617	Cantonese rice	100	120	2,00	2,08	2,04	0,08
	b	1921854	Pasta salad, sausage, tomatoes	220	200	2,34	2,30	2,32	-0,04
	b	1915626	Rice	400	520	2,60	2,72	2,66	0,11
	b	1921855	Pasta with pesto	650	620	2,81	2,79	2,80	-0,02
	b	1939878	Indian pasta salad	4800	4400	3,68	3,64	3,66	-0,04
	b	1939821	Fresh pasta	16000	11000	4,20	4,04	4,12	-0,16
	c	1915621	Tomato tartare	55	60	1,74	1,78	1,76	0,04
	c	1939875	Piémontaise	70	50	1,85	1,70	1,77	-0,15
	c	1939877	Beets, tomatoes, celery	80	60	1,90	1,78	1,84	-0,12
	c	1915598	Salad, snout, tomatoes	100	110	2,00	2,04	2,02	0,04
	c	1915624	Pork snout salad with pickles	640	500	2,81	2,70	2,75	-0,11
	c	1915600	Tomato and vegetable salad	810	880	2,91	2,94	2,93	0,04
	c	1915625	Vegetable tian	1800	1200	3,26	3,08	3,17	-0,18
	c	1915599	Piémontaise	1400	1500	3,15	3,18	3,16	0,03
	Average difference of the category								-0,07
	Standard deviation of differences								0,12
Eggs & Pastries	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
	a	1921856	Liquid egg white	130	120	2,11	2,08	2,10	-0,03
	a	1921796	Liquid egg yolk	240	160	2,38	2,20	2,29	-0,18
	a	1921797	Liquid whole egg	410	140	2,61	2,15	2,38	-0,47
	a	1921798	11% salted egg yolk	370	240	2,57	2,38	2,47	-0,19
	a	1921799	Sweet egg yolk 30%	2500	1600	3,40	3,20	3,30	-0,19
	a	1921800	Salty egg yolk 9% - sweet 10.9%	5000	4800	3,70	3,68	3,69	-0,02
	b	1921866	Powdered egg white	230	180	2,36	2,26	2,31	-0,11
	b	1921803	Pasteurized egg yolk powder	320	240	2,51	2,38	2,44	-0,12
	b	1921804	Pasteurized whole egg powder	860	780	2,93	2,89	2,91	-0,04
	b	1921806	Pasteurized egg yolk powder	4300	3000	3,63	3,48	3,56	-0,16
	b	1921807	Pasteurized whole egg powder	4000	4600	3,60	3,66	3,63	0,06
	c	1915631	Paris Brest	230	110	2,36	2,04	2,20	-0,32
	c	1915628	Coffee eclair	170	140	2,23	2,15	2,19	-0,08
	c	1915629	Cream pastry	240	140	2,38	2,15	2,26	-0,23
	c	1915606	Raspberry strawberry dessert	210	260	2,32	2,41	2,37	0,09
	c	1915609	Raspberry tartlet	740	390	2,87	2,59	2,73	-0,28
	c	1915603	Crème brulee	110000	72000	5,04	4,86	4,95	-0,18
	c	1915604	Chocolat eclair	1200000	1500000	6,08	6,18	6,13	0,10
	Average difference of the category								-0,13
	Standard deviation of differences								0,15

APPENDIX Q - Relative trueness statistical calculations

Surface spreading for BACARA 2

RTE & RTRH products	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
	a	1915611	Tabbouleh of the sea	40	40	1,60	1,60	1,60	0,00
	a	1921858	Semolina (dessert)	110	130	2,04	2,11	2,08	0,07
	a	1915610	Oriental tabbouleh	140	200	2,15	2,30	2,22	0,15
	a	1921859	Rice pudding	360	340	2,56	2,53	2,54	-0,02
	a	1921876	Muesli cereals	2400	1900	3,38	3,28	3,33	-0,10
	a	1939820	Rice pudding	3100	6000	3,49	3,78	3,63	0,29
	b	1921860	Corn tortillas	150	130	2,18	2,11	2,15	-0,06
	b	1921861	Banana	200	140	2,30	2,15	2,22	-0,15
	b	1921862	Rice cracker	280	290	2,45	2,46	2,45	0,02
	b	1921873	Bread	400	380	2,60	2,58	2,59	-0,02
	b	1921888	Chestnut jam	1400	2000	3,15	3,30	3,22	0,15
	c	1921874	Lentils	80	80	1,90	1,90	1,90	0,00
	c	1921863	Parsnip puree	120	140	2,08	2,15	2,11	0,07
	c	1921882	Chickpea	180	160	2,26	2,20	2,23	-0,05
	c	1915614	Hachis parmentier	180	220	2,26	2,34	2,30	0,09
	c	1915613	Mashed potatoes	170	260	2,23	2,41	2,32	0,18
	c	1921875	Mashed Sweet Potatoes	3000	2800	3,48	3,45	3,46	-0,03
	c	1915635	Mashed potatoes and carrots	390000	380000	5,59	5,58	5,59	-0,01
	Average difference of the category								
Standard deviation of differences									0,11
Feed products	Type	#	Sample	RM CFU/g	AM CFU/g	RM log CFU/g	AM log CFU/g	Mean	Difference
	a	1921867	Guinea pig food	100	70	2,00	1,85	1,92	-0,15
	a	1921868	Hamster food	160	150	2,20	2,18	2,19	-0,03
	a	1921869	Pet bird food	510	470	2,71	2,67	2,69	-0,04
	a	1939794	Cat food	6300	5800	3,80	3,76	3,78	-0,04
	a	1939795	Dog food	10000	8600	4,00	3,93	3,97	-0,07
	b	1921838	Rabbit feed	110	80	2,04	1,90	1,97	-0,14
	b	1921839	Poultry feed	270	190	2,43	2,28	2,36	-0,15
	b	1921870	Wheat	370	350	2,57	2,54	2,56	-0,02
	b	1921871	Corn	1900	1800	3,28	3,26	3,27	-0,02
	b	1921872	Dwarf rabbit food	4000	4200	3,60	3,62	3,61	0,02
	c	1921844	Soy	120	120	2,08	2,08	2,08	0,00
	c	1921842	Sheep feed	140	170	2,15	2,23	2,19	0,08
	c	1939796	Horse feed	210	180	2,32	2,26	2,29	-0,07
	c	1921845	Rapeseed	450	350	2,65	2,54	2,60	-0,11
	c	1939883	Pig feed	710	530	2,85	2,72	2,79	-0,13
	c	1921841	Lamb feed	1000	810	3,00	2,91	2,95	-0,09
	c	1939882	Piglet feed	5000	4400	3,70	3,64	3,67	-0,06
	c	1939797	Soy	8000	7300	3,90	3,86	3,88	-0,04
	Average difference of the category								
Standard deviation of differences									0,06
Average difference all categories									-0,06
Standard deviation of differences									0,13

APPENDIX Q - Relative trueness statistical calculations

Surface spreading for BACARA 2

n =	16	$T(0,025;15)=$	2,131				
n =	18	$T(0,025;17)=$	2,110				
n =	22	$T(0,025;21)=$	2,080				
n =	18	$T(0,025;17)=$	2,110				
n =	18	$T(0,025;17)=$	2,110				
n =	18	$T(0,025;17)=$	2,110				
n =	110	$T(0,025;109)=$	1,982				
$\beta =$	95%						

	Lower confidence limit	Upper confidence limit
MP	-0,17	0,08
DP	-0,44	0,31
V	-0,33	0,19
E&P	-0,45	0,19
RTE	-0,21	0,27
FEED	-0,19	0,08
All	-0,31	0,20

Results not used in the statistical interpretation

Category	Type	#	Sample	RM	AM	RM	AM	Mean	Difference
				CFU/g	CFU/g	log CFU/g	log CFU/g		
Meat products	b	1921851	Chicken panini curry	20	30	1,30	1,48	1,39	0,18
	b	1921853	Beef tong	<10	50	0,00	1,70	0,85	1,70
	b	1915578	Cooked pork	10	<10	1,00	0,00	0,50	-1,00
	b	1915591	Ham croissant	<10	60	0,00	1,78	0,89	1,78
Dairy products	a	1915584	Strawberry mint ice cream	10	10	1,00	1,00	1,00	0,00
	a	1921792	Munster cheese	10	30	1,00	1,48	1,24	0,48
	a	1921790	Yogurt	60	10	1,78	1,00	1,39	-0,78
	a	1921793	Fresh cream	360	<100	2,56	1,00	1,78	-1,56
	b	1939859	Growth milk 12 months-3 years without probiotic	10	<10	1,00	0,00	0,50	-1,00
	b	1939868	Infant formula 6-12 months without probiotic	<10	10	0,00	1,00	0,50	1,00
	b	1939870	Infant formula 6-12 months with probiotic	<10	10	0,00	1,00	0,50	1,00
	b	1939860	Growth milk 12 months-3 years without probiotic	20	20	1,30	1,30	1,30	0,00
	c	1939856	Powdered whole milk	10	10	1,00	1,00	1,00	0,00
	c	1939891	Semi-skimmed milk powder	10	20	1,00	1,30	1,15	0,30
Vegetables	c	1939871	Powdered whole milk	10	<10	1,00	0,00	0,50	-1,00
	c	1939855	Semi-skimmed milk powder	20	<10	1,30	0,00	0,65	-1,30
	b	1915616	Rice salad, tomatoes, tuna, egg	10	<10	1,00	0,00	0,50	-1,00
	b	1915618	Pasta, tomato, pepper salad	<100	100	1,00	2,00	1,50	1,00
	b	1939799	Crozet salad, turkey, pepper	10	10	1,00	1,00	1,00	0,00
	b	1915620	Rice salad, tomatoes, corn	200	100	2,30	2,00	2,15	-0,30
Eggs & pastries	c	1915622	Cabbage trio	40	20	1,60	1,30	1,45	-0,30
	c	1915623	Grated carrots vinaigrette	45	30	1,65	1,48	1,57	-0,18
RTE & RTRH	b	1921805	Unpasteurized egg white powder	30	30	1,48	1,48	1,48	0,00
	c	1915607	Chocolat dessert	20	<10	1,30	0,00	0,65	-1,30
Feed products	a	1921857	Quinoa salad, bulgur	20	40	1,30	1,60	1,45	0,30
	b	1921840	Maize	10	<10	1,00	0,00	0,50	-1,00
	c	1921843	Horse feed	20	<10	1,30	0,00	0,65	-1,30

APPENDIX R

Accuracy profile study - Raw results

ACCURACY PROFIL - Meat and seafood products

Matrix: Pâté

Strain: *Bacillus cereus cereus* group II - EAA229 - vegetative form

Enumeration of the microorganisms at 30°C - batch 1: 40000 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 16000 CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	63	-2	4	100%	610	-1	53	-2	8	530	-1	49	-2	9	490
		R2	-1	47	-2	2	100%	450	-1	53	-2	4	530	-1	45	-2	7	450
		R3	-1	60	-2	10	100%	640	-1	51	-2	6	510	-1	56	-2	3	560
		R4	-1	45	-2	14	100%	540	-1	41	-2	4	410	-1	45	-2	4	450
		R5	-1	58	-2	3	100%	560	-1	47	-2	6	470	-1	39	-2	3	390
	Batch 2	R1	-1	47	-2	8	100%	500	-1	45	-2	8	450	-1	49	-2	4	490
		R2	-1	39	-2	3	100%	380	-1	31	-2	3	310	-1	32	-2	3	320
		R3	-1	42	-2	7	100%	450	-1	38	-2	5	380	-1	31	-2	6	310
		R4	-1	60	-2	7	100%	610	-1	54	-2	5	540	-1	59	-2	3	590
		R5	-1	58	-2	9	100%	610	-1	51	-2	2	510	-1	57	-2	4	570
Level 2	Batch 1	R1	-2	18	-3	1	100%	1 800	-2	19	-3	1	1 900	-2	21	-3	2	2 100
		R2	-2	21	-3	2	100%	2 100	-2	17	-3	1	1 700	-2	18	-3	1	1 800
		R3	-2	13	-3	2	100%	1 300	-2	15	-3	1	1 500	-2	14	-3	1	1 400
		R4	-2	37	-3	4	100%	3 700	-2	35	-3	4	3 500	-2	33	-3	2	3 300
		R5	-2	29	-3	2	100%	1 300	-2	13	-3	1	1 300	-2	12	-3	1	1 200
	Batch 2	R1	-2	21	-3	2	100%	2 100	-2	19	-3	1	1 900	-2	18	-3	1	1 800
		R2	-2	19	-3	1	100%	1 900	-2	16	-3	1	1 600	-2	16	-3	1	1 600
		R3	-2	11	-3	1	100%	1 100	-2	10	-3	1	1 000	-2	12	-3	0	1 200
		R4	-2	12	-3	1	100%	1 200	-2	11	-3	1	1 100	-2	12	-3	1	1 200
		R5	-2	14	-3	1	100%	1 400	-2	11	-3	0	1 100	-2	13	-3	1	1 300
Level 3	Batch 1	R1	-3	61	-4	13	100%	67 000	-3	66	-4	8	66 000	-3	38	-4	2	38 000
		R2	-3	106	-4	8	100%	100 000	-3	64	-4	5	64 000	-3	43	-4	12	43 000
		R3	-3	118	-4	22	100%	130 000	-3	50	-4	10	50 000	-3	47	-4	4	47 000
		R4	-3	71	-4	18	100%	81 000	-3	49	-4	4	49 000	-3	82	-4	8	82 000
		R5	-3	77	-4	6	100%	76 000	-3	60	-4	13	60 000	-3	72	-4	14	72 000
	Batch 2	R1	-3	91	-4	8	100%	90 000	-3	53	-4	4	53 000	-3	124	-4	5	120 000
		R2	-3	87	-4	5	100%	84 000	-3	49	-4	5	49 000	-3	45	-4	5	45 000
		R3	-3	109	-4	6	100%	110 000	-3	46	-4	4	46 000	-3	50	-4	1	50 000
		R4	-3	74	-4	6	100%	73 000	-3	52	-4	5	52 000	-3	42	-4	4	42 000
		R5	-3	71	-4	11	100%	75 000	-3	56	-4	6	56 000	-3	110	-4	12	110 000

ACCURACY PROFIL - Dairy products

Matrix: Milk powder

Strain: *Bacillus cereus cereus* group III - CND 844 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 350 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 340 CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	19	-2	1	100%	180	-1	24	-2	2	240	-1	13	-2	1	130
		R2	-1	19	-2	1	100%	180	-1	23	-2	3	230	-1	8	-2	0	80
		R3	-1	17	-2	1	100%	160	-1	19	-2	1	190	-1	18	-2	5	180
		R4	-1	16	-2	1	100%	160	-1	18	-2	2	180	-1	16	-2	3	160
		R5	-1	17	-2	1	100%	170	-1	15	-2	1	150	-1	10	-2	2	100
	Batch 2	R1	-1	18	-2	1	100%	170	-1	25	-2	3	250	-1	10	-2	1	100
		R2	-1	15	-2	1	100%	150	-1	12	-2	1	120	-1	14	-2	2	140
		R3	-1	15	-2	1	100%	150	-1	18	-2	1	180	-1	10	-2	2	100
		R4	-1	15	-2	1	100%	150	-1	19	-2	1	190	-1	9	-2	1	90
		R5	-1	19	-2	1	100%	180	-1	13	-2	0	130	-1	10	-2	2	100
Level 2	Batch 1	R1	-2	26	-3	3	100%	2 600	-2	28	-3	2	2 800	-2	28	-3	2	2 800
		R2	-2	24	-3	3	100%	2 400	-2	38	-3	2	3 800	-2	25	-3	2	2 500
		R3	-2	26	-3	6	100%	2 900	-2	28	-3	4	2 800	-2	24	-3	2	2 400
		R4	-2	25	-3	4	100%	2 600	-2	29	-3	3	2 900	-2	23	-3	4	2 300
		R5	-2	24	-3	2	100%	2 400	-2	20	-3	2	2 000	-2	28	-3	2	2 800
	Batch 2	R1	-2	25	-3	3	100%	2 500	-2	50	-3	4	5 000	-2	26	-3	2	2 600
		R2	-2	21	-3	2	100%	2 100	-2	40	-3	5	4 000	-2	27	-3	2	2 700
		R3	-2	20	-3	2	100%	2 000	-2	35	-3	3	3 500	-2	25	-3	2	2 500
		R4	-2	20	-3	2	100%	2 000	-2	42	-3	2	4 200	-2	24	-3	2	2 400
		R5	-2	26	-3	2	100%	2 600	-2	34	-3	3	3 400	-2	24	-3	2	2 400
Level 3	Batch 1	R1	-3	19	-4	0	100%	170 000	-3	24	-4	2	240 000	-3	15	-4	1	150 000
		R2	-3	20	-4	2	100%	200 000	-3	25	-4	3	250 000	-3	17	-4	2	170 000
		R3	-3	17	-4	2	100%	170 000	-3	12	-4	2	120 000	-3	19	-4	2	190 000
		R4	-3	19	-4	1	100%	180 000	-3	16	-4	2	160 000	-3	21	-4	0	210 000
		R5	-3	14	-4	1	100%	140 000	-3	27	-4	3	270 000	-3	18	-4	1	180 000
	Batch 2	R1	-3	22	-4	2	100%	220 000	-3	17	-4	1	170 000	-3	20	-4	1	200 000
		R2	-3	21	-4	1	100%	200 000	-3	16	-4	1	160 000	-3	21	-4	1	210 000
		R3	-3	18	-4	0	100%	160 000	-3	23	-4	2	230 000	-3	22	-4	0	220 000
		R4	-3	20	-4	1	100%	190 000	-3	22	-4	2	220 000	-3	17	-4	1	170 000
		R5	-3	23	-4	2	100%	230 000	-3	16	-4	2	160 000	-3	18	-4	0	180 000

ACCURACY PROFIL - Vegetables

Matrix: vegetables puree

Strain: *Bacillus cytotoxicus* group VII - GGB821 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 900 CFU/g

Enumeration of the microorganisms at 30°C - batch 2: 17 000CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)					Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading					
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	17	-2	5	100%	200	-1	17	-2	3	170	-1	15	-2	2	150
		R2	-1	14	-2	4	100%	160	-1	24	-2	6	240	-1	21	-2	1	210
		R3	-1	15	-2	2	100%	150	-1	20	-2	3	200	-1	14	-2	3	140
		R4	-1	11	-2	1	100%	110	-1	23	-2	1	230	-1	15	-2	4	150
		R5	-1	13	-2	3	100%	150	-1	13	-2	1	130	-1	13	-2	1	130
	Batch 2	R1	-1	16	-2	0	100%	150	-1	32	-2	1	320	-1	20	-2	4	200
		R2	-1	16	-2	3	100%	170	-1	19	-2	1	190	-1	11	-2	2	110
		R3	-1	15	-2	2	100%	150	-1	15	-2	6	150	-1	10	-2	1	100
		R4	-1	19	-2	2	100%	190	-1	14	-2	2	140	-1	11	-2	2	110
		R5	-1	16	-2	1	100%	150	-1	20	-2	1	200	-1	10	-2	1	100
Level 2	Batch 1	R1	-2	41	-3	6	100%	4 300	-2	31	-3	1	3 100	-2	22	-3	2	2 200
		R2	-2	26	-3	5	100%	2 800	-2	36	-3	2	3 600	-2	30	-3	1	3 000
		R3	-2	29	-3	0	100%	2 600	-2	36	-3	3	3 600	-2	28	-3	1	2 800
		R4	-2	26	-3	3	100%	2 600	-2	25	-3	3	2 500	-2	23	-3	3	2 300
		R5	-2	33	-3	6	100%	3 600	-2	32	-3	1	3 200	-2	22	-3	0	2 200
	Batch 2	R1	-2	34	-3	2	100%	3 300	-2	39	-3	3	3 900	-2	29	-3	5	2 900
		R2	-2	29	-3	1	100%	2 700	-2	36	-3	3	3 600	-2	22	-3	4	2 200
		R3	-2	26	-3	0	100%	2 400	-2	30	-3	3	3 000	-2	26	-3	1	2 600
		R4	-2	26	-3	2	100%	2 600	-2	25	-3	3	2 500	-2	25	-3	4	2 500
		R5	-2	32	-3	1	100%	3 000	-2	25	-3	6	2 500	-2	18	-3	6	1 800
Level 3	Batch 1	R1	-4	13	-5	0	100%	120 000	-4	14	-5	0	140 000	-4	13	-5	0	130 000
		R2	-4	6	-5	1	100%	150 000	-4	9	-5	2	90 000	-4	9	-5	0	90 000
		R3	-4	12	-5	2	100%	130 000	-4	8	-5	2	80 000	-4	6	-5	0	60 000
		R4	-4	12	-5	1	100%	120 000	-4	10	-5	2	100 000	-4	9	-5	0	90 000
		R5	-4	11	-5	1	100%	110 000	-4	9	-5	3	90 000	-4	5	-5	0	50 000
	Batch 2	R1	-4	15	-5	2	100%	150 000	-4	14	-5	1	140 000	-4	6	-5	2	60 000
		R2	-4	27	-5	0	100%	250 000	-4	5	-5	0	50 000	-4	8	-5	0	80 000
		R3	-4	9	-5	1	100%	90 000	-4	9	-5	0	90 000	-4	6	-5	2	60 000
		R4	-4	8	-5	0	100%	80 000	-4	4	-5	0	40 000	-4	10	-5	2	100 000
		R5	-4	14	-5	0	100%	140 000	-4	17	-5	0	170 000	-4	16	-5	0	160 000

ACCURACY PROFIL - Eggs and pastries

Matrix: Custard

Strain: *Bacillus weheinstephanensis* group III - JFM917 - vegetative form

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

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

Level	Batch	R.	Reference method: ISO 7932(n)					Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading					
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	16	-2	1	100%	160	-1	13	-2	1	130	-1	23	-2	2	230
		R2	-1	15	-2	3	100%	160	-1	16	-2	2	160	-1	13	-2	1	130
		R3	-1	15	-2	3	100%	160	-1	16	-2	6	160	-1	20	-2	3	200
		R4	-1	26	-2	1	100%	250	-1	14	-2	1	140	-1	21	-2	1	210
		R5	-1	15	-2	1	100%	150	-1	15	-2	2	150	-1	12	-2	4	120
	Batch 2	R1	-1	16	-2	2	100%	160	-1	16	-2	3	160	-1	22	-2	2	220
		R2	-1	16	-2	3	100%	170	-1	14	-2	3	140	-1	15	-2	1	150
		R3	-1	21	-2	1	100%	200	-1	14	-2	1	140	-1	14	-2	2	140
		R4	-1	31	-2	1	100%	290	-1	14	-2	1	140	-1	14	-2	1	140
		R5	-1	14	-2	2	100%	150	-1	15	-2	3	150	-1	16	-2	1	160
Level 2	Batch 1	R1	-2	42	-3	1	100%	3 900	-2	30	-3	5	3 000	-2	18	-3	1	1 800
		R2	-2	44	-3	2	100%	4 200	-2	25	-3	4	2 500	-2	19	-3	2	1 900
		R3	-2	28	-3	2	100%	2 800	-2	22	-3	5	2 200	-2	18	-3	1	1 800
		R4	-2	35	-3	7	100%	3 800	-2	30	-3	4	3 000	-2	20	-3	5	2 000
		R5	-2	28	-3	1	100%	2 600	-2	34	-3	2	3 400	-2	23	-3	1	2 300
	Batch 2	R1	-2	28	-3	3	100%	2 800	-2	22	-3	3	2 200	-2	23	-3	1	2 300
		R2	-2	37	-3	6	100%	3 900	-2	31	-3	1	3 100	-2	33	-3	1	3 300
		R3	-2	27	-3	1	100%	2 600	-2	34	-3	6	3 400	-2	21	-3	2	2 100
		R4	-2	24	-3	2	100%	2 400	-2	25	-3	5	2 500	-2	20	-3	4	2 000
		R5	-2	19	-3	2	100%	1 900	-2	21	-3	4	2 100	-2	21	-3	2	2 100
Level 3	Batch 1	R1	-3	95	-4	15	100%	100 000	-3	87	-4	6	87 000	-3	79	-4	6	79 000
		R2	-3	104	-4	9	100%	100 000	-3	87	-4	12	87 000	-3	95	-4	8	95 000
		R3	-3	99	-4	13	100%	100 000	-3	95	-4	13	95 000	-3	107	-4	12	110 000
		R4	-3	102	-4	9	100%	100 000	-3	72	-4	10	72 000	-3	83	-4	12	83 000
		R5	-3	64	-4	7	100%	65 000	-3	81	-4	15	81 000	-3	75	-4	12	75 000
	Batch 2	R1	-3	68	-4	14	100%	75 000	-3	86	-4	7	86 000	-3	63	-4	11	63 000
		R2	-3	66	-4	11	100%	70 000	-3	63	-4	12	63 000	-3	61	-4	8	61 000
		R3	-3	72	-4	12	100%	76 000	-3	67	-4	11	67 000	-3	81	-4	7	81 000
		R4	-3	67	-4	9	100%	69 000	-3	69	-4	12	69 000	-3	73	-4	13	73 000
		R5	-3	108	-4	3	100%	100 000	-3	78	-4	9	78 000	-3	70	-4	8	70 000

ACCURACY PROFIL - Ready-to-eat and ready to reheat products

Matrix: Tabbouleh

Strain: *Bacillus thuringiensis* group IV - KGB008 - sporulated form

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

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

Level	Batch	R.	Reference method: ISO 7932(n)						Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading				
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	28	-2	2	100 %	270	-1	22	-2	2	220	-1	19	-2	2	190
		R2	-1	22	-2	2	100 %	220	-1	21	-2	2	210	-1	25	-2	2	250
		R3	-1	22	-2	3	100 %	230	-1	20	-2	3	200	-1	22	-2	1	220
		R4	-1	25	-2	3	100 %	250	-1	21	-2	2	210	-1	22	-2	1	220
		R5	-1	20	-2	2	100 %	200	-1	18	-2	2	180	-1	16	-2	1	160
	Batch 2	R1	-1	18	-2	2	100 %	180	-1	21	-2	1	210	-1	21	-2	2	210
		R2	-1	17	-2	2	100 %	170	-1	20	-2	3	200	-1	18	-2	3	180
		R3	-1	16	-2	2	100 %	160	-1	23	-2	3	230	-1	21	-2	4	210
		R4	-1	20	-2	2	100 %	200	-1	19	-2	2	190	-1	24	-2	3	240
		R5	-1	22	-2	1	100 %	210	-1	17	-2	2	170	-1	19	-2	2	190
Level 2	Batch 1	R1	-2	37	-3	2	100 %	3 600	-2	27	-3	3	2 700	-2	27	-3	2	2 700
		R2	-2	39	-3	2	100 %	3 700	-2	26	-3	2	2 600	-2	25	-3	4	2 500
		R3	-2	23	-3	3	100 %	2 400	-2	26	-3	3	2 600	-2	24	-3	2	2 400
		R4	-2	24	-3	4	100 %	2 600	-2	23	-3	2	2 300	-2	21	-3	2	2 100
		R5	-2	21	-3	2	100 %	2 100	-2	21	-3	2	2 100	-2	20	-3	2	2 000
	Batch 2	R1	-2	34	-3	5	100 %	3 600	-2	24	-3	2	2 400	-2	25	-3	3	2 500
		R2	-2	29	-3	2	100 %	2 800	-2	25	-3	2	2 500	-2	22	-3	3	2 200
		R3	-2	25	-3	4	100 %	2 600	-2	22	-3	2	2 200	-2	24	-3	5	2 400
		R4	-2	22	-3	2	100 %	2 200	-2	24	-3	3	2 400	-2	22	-3	2	2 200
		R5	-2	21	-3	2	100 %	2 100	-2	24	-3	2	2 400	-2	23	-3	2	2 300
Level 3	Batch 1	R1	-4	15	-5	1	100 %	150 000	-4	14	-5	1	140 000	-4	10	-5	1	100 000
		R2	-4	14	-5	1	100 %	140 000	-4	12	-5	1	120 000	-4	10	-5	2	100 000
		R3	-4	13	-5	1	100 %	130 000	-4	15	-5	1	150 000	-4	13	-5	1	130 000
		R4	-4	14	-5	1	100 %	140 000	-4	11	-5	1	110 000	-4	13	-5	1	130 000
		R5	-4	12	-5	1	100 %	120 000	-4	14	-5	2	140 000	-4	11	-5	1	110 000
	Batch 2	R1	-4	11	-5	1	100 %	110 000	-4	12	-5	1	120 000	-4	9	-5	1	90 000
		R2	-4	10	-5	1	100 %	100 000	-4	12	-5	1	120 000	-4	11	-5	1	110 000
		R3	-4	8	-5	2	100 %	90 000	-4	13	-5	1	130 000	-4	8	-5	1	80 000
		R4	-4	17	-5	1	100 %	160 000	-4	13	-5	1	130 000	-4	11	-5	2	110 000
		R5	-4	16	-5	1	100 %	160 000	-4	10	-5	1	100 000	-4	10	-5	1	100 000

ACCURACY PROFIL - Feed products

Matrix: Cat kibble

Strain: *Bacillus cereus cereus* group V - LDG480 - sporulated form

Enumeration of the microorganisms at 30°C - batch 1: 140 CFU/g
Enumeration of the microorganisms at 30°C - batch 2: <10 CFU/g

Level	Batch	R.	Reference method: ISO 7932(n)					Alternative method: BACARA 2- pour plates					Alternative method: BACARA 2 - surface spreading					
			dil 1	CFU	dil 2	CFU	Conf	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)	dil 1	CFU	dil 2	CFU	Result (CFU/g)
Level 1	Batch 1	R1	-1	17	-2	1	100%	160	-1	14	-2	3	140	-1	34	-2	2	340
		R2	-1	26	-2	3	100%	260	-1	19	-2	2	190	-1	23	-2	1	230
		R3	-1	25	-2	1	100%	240	-1	29	-2	3	290	-1	23	-2	1	230
		R4	-1	29	-2	4	100%	300	-1	14	-2	1	140	-1	18	-2	1	180
		R5	-1	25	-2	2	100%	250	-1	18	-2	1	180	-1	15	-2	2	150
	Batch 2	R1	-1	23	-2	2	100%	230	-1	20	-2	2	200	-1	18	-2	2	180
		R2	-1	16	-2	1	100%	160	-1	18	-2	1	180	-1	38	-2	4	380
		R3	-1	25	-2	3	100%	250	-1	13	-2	5	130	-1	12	-2	2	120
		R4	-1	19	-2	1	100%	180	-1	23	-2	3	230	-1	15	-2	2	150
		R5	-1	14	-2	2	100%	150	-1	17	-2	2	170	-1	13	-2	6	130
Level 2	Batch 1	R1	-2	46	-3	4	100%	4 600	-2	36	-3	6	3 600	-2	52	-3	4	5 200
		R2	-2	32	-3	3	100%	3 200	-2	47	-3	2	4 700	-2	41	-3	6	4 100
		R3	-2	44	-3	9	100%	4 800	-2	34	-3	2	3 400	-2	44	-3	4	4 400
		R4	-2	36	-3	2	100%	3 500	-2	36	-3	2	3 600	-2	39	-3	1	3 900
		R5	-2	45	-3	4	100%	4 500	-2	41	-3	3	4 100	-2	42	-3	4	4 200
	Batch 2	R1	-2	34	-3	3	100%	3 400	-2	23	-3	4	2 300	-2	40	-3	1	4 000
		R2	-2	31	-3	3	100%	3 100	-2	39	-3	2	3 900	-2	35	-3	4	3 500
		R3	-2	41	-3	4	100%	4 100	-2	37	-3	2	3 700	-2	46	-3	4	4 600
		R4	-2	51	-3	6	100%	5 100	-2	29	-3	6	2 900	-2	42	-3	2	4 200
		R5	-2	40	-3	6	100%	4 200	-2	33	-3	2	3 300	-2	51	-3	4	5 100
Level 3	Batch 1	R1	-4	24	-5	2	100%	240 000	-4	13	-5	2	130 000	-4	10	-5	5	100 000
		R2	-4	17	-5	4	100%	170 000	-4	17	-5	1	170 000	-4	25	-5	2	250 000
		R3	-4	30	-5	1	100%	280 000	-4	22	-5	1	220 000	-4	21	-5	2	210 000
		R4	-4	9	-5	1	100%	91 000	-4	13	-5	1	130 000	-4	24	-5	3	240 000
		R5	-4	16	-5	1	100%	160 000	-4	17	-5	0	170 000	-4	18	-5	2	180 000
	Batch 2	R1	-4	13	-5	2	100%	140 000	-4	13	-5	0	130 000	-4	26	-5	3	260 000
		R2	-4	15	-5	3	100%	160 000	-4	18	-5	1	180 000	-4	12	-5	1	120 000
		R3	-4	23	-5	1	100%	220 000	-4	20	-5	2	200 000	-4	15	-5	1	150 000
		R4	-4	17	-5	0	100%	160 000	-4	17	-5	3	170 000	-4	14	-5	2	140 000
		R5	-4	24	-5	1	100%	230 000	-4	17	-5	0	170 000	-4	13	-5	0	130 000