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NF Validation Certification of the TRANSIA® PLATE *Salmonella* Gold method

Certificate number: TRA 02/08 – 03/01

Comparative and interlaboratory studies according to the
EN ISO 16140 standard

SUMMARY REPORT v02

This document cancels and replaces the referenced report TPSG – summary 2009 v01.

Modifications with regard to the version 01:

Further to the change of calculation of the positive threshold, the data of the 2009 complement comparative study 2009 (accuracy and inclusivity) were reinterpreted (§2.1.7 and §2.3.3 and related annexes).

+ Modifications in §4 Practicability (criteria 1, 2 and 5).

The modifications are indicated in the margin by a vertical or shaded line in tables.

<u>Validation date:</u>	2001/03/23
<u>First renewal date:</u>	2005/02/03
<i>(The EN ISO 16140 protocol has been implemented for the 1st renewal)</i>	
<u>Extension and second renewal date:</u>	2009/07/02
<i>(addition of a new reagent and combination of substrate and chromogen reagents)</i>	2011/05/12
<i>(modification of TPSG positive threshold calculation)</i>	
<u>End validation date:</u>	2013/02/03

TPSG - summary 2009 v02

IPL Santé Environnement Durables Nord –1 rue du Professeur Calmette – 59 046 LILLE cedex – France

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Study realized by:

IPL Santé Environnement Durables Nord
1 rue du Professeur Calmette
59046 LILLE cedex
FRANCE

For:

BioControl Systems Inc.
12822 SE 32nd Street
BELLEVUE, WA 98005
USA

1 Introduction

1.1 Validation references

The TRANSIA[®] PLATE *Salmonella* Gold method (BioControl Systems Inc) has been validated with the certificate number TRA-02/8-03/01, in March 2001 according to the AFNOR current requirements, with respect to the reference method NF EN 12824 standard method, and according to EN ISO 16140 (2003) since 1st renewal in 2005, with respect to the reference method EN ISO 6579 (2002), for all human food products and animal food products, and environmental samples.

1.2 Protocol and principle of the alternative method

1.2.1 Protocol

The validated protocol of the alternative method is the following:

- enrichment on buffered peptone water incubated for 16-20 h at **37°C ± 1°C**,
- then inoculation of 0.1 ml of the pre-culture broth in 10 ml of RVS incubated 18 to 24 h at 41.5°C ± 1.0°C,
- followed by a TRANSIA[®] PLATE *Salmonella* Gold test after heating of 1 to 2 ml of the enrichment broth RVS in boiling water for 20 minutes.

The tests can be performed after storage of the RVS broth for 48 hours at 2°C – 8°C after incubation.

Positive or doubtful results with TRANSIA[®] PLATE *Salmonella* Gold, have to be confirmed by streaking the non-heated RVS broth on selective media plates, followed by a biochemical identification according to EN ISO 6579.

The diagram summarizing the method is shown in appendix A.

Note: Protocol reference is 55076 TPSG DFU for 1 plate (references 55076F.R002.052011 for French version and 55076.R003.052011 for English version) and 55077 TPSG DFU rev 03 for 10 plates (references 55077F.R003.052011 and 55077.R003.052011).

1.2.2 Principle of the alternative method

TRANSIA[®] PLATE *Salmonella* Gold is based on a three-step, sandwich-type ELISA (Enzyme Linked ImmunoSorbent Assay) using:

- a microtitre plate with divisible strips coated with antibodies specific for *Salmonella*,
- and ready-to-use reagents.

The assay reliably recovers and detects low levels of all *Salmonella* serovars in a variety of foods and feeds, after the steps of enrichment and a heating shock which allows the release of *Salmonella* antigens possibly presents in the analyzed sample.

The reading of the microtiter plate is done with a spectrophotometer at an Optical Density (OD) of 450 nm.

Test results (positive/negative) are determined by comparing the Optical Density values of the samples to a Positive Threshold value.

The Positive Threshold is derived from the OD values of the 2 negative controls included with each plate of samples analyzed.

Samples with OD values above the threshold are “positive”.

Samples with OD values less than 90 % of the threshold are “negative”.

Samples with OD values less than the threshold and greater than 90 % of the threshold are “doubtful”.

The thresholds of the tests are calculated using the following formula:

A result is considered negative if:

$$\text{O.D.} < 0.9 \times \left[\frac{(\text{NC1} + \text{NC2})}{2} + 0.11 \right]$$

A result is considered positive if:

$$\text{O.D.} \geq \frac{(\text{NC1} + \text{NC2})}{2} + 0.11$$

The 2011 modification changes calculation of thresholds (positive and negative thresholds) of the GOLD test and TAG24 method.

The thresholds and validation of the tests are now calculated using the following formula:

A result is considered **negative** if:

$$\text{OD} < 0.9 \times \left[\frac{(\text{NC1} + \text{NC2})}{2} + 0.2 \right]$$

A result is considered **positive** if:

$$\text{OD} \geq \frac{(\text{NC1} + \text{NC2})}{2} + 0.2$$

NC1: optical density of the negative control 1

NC2: optical density of the negative control 1

1.3 Application scope

The application scope of the method concern:

- all human food,
- animal feeds,
- and environmental samples.

1.4 Reference method

The validation study was carried out by reference to the EN ISO 6579: 2002 "Microbiology of food and animal feeding stuffs. Horizontal method for the detection of *Salmonella* spp.» (#) since the renewal study in 2005.

The diagram of the method is shown in annex A.

1.5 Background of certification

The initial certification study in 2001 was performed according to the AFNOR requirements, rev.7, with respect to the reference method NF EN 12824.

The main results of this first study are presented in annex B.

Since the first certification study, three modifications were proposed:

- the possibility of storing the RVS broth at 2 – 8°C before performing the TRANSIA® PLATE *Salmonella* Gold test. Assays were made during the renewal study in 2005.
- the introduction of a non selective additive to be combined with the aliquot of RVS broth before heating for 20 minutes in water bath. The role of this extraction reagent is to help improve sensitivity of certain *Salmonella* strains. Assays were made during the renewal study in 2009.
- the combination of the substrate and the chromogen into a single reagent in the kit as a convenience to customers. A vial with the both reagents is proposed and some stability assays have showed that the performance of this mixture is satisfactory. This modification was considered as a minor modification and no assays were performed by the expert lab.

Regarding the nature of modifications presented in 2009, some additional assays were decided by the Technical Board to be sure that the addition of a new non-selective additive before performing the TRANSIA® PLATE *Salmonella* Gold test will not change the performances of the alternative method.

The assays concerned:

- a study of relative accuracy, on 10 positive samples and 10 negative samples per category,
- a complementary study of inclusivity, with strains of the new list of *Salmonella* which were not tested by the expert laboratory.

The renewal study in 2005 and the complementary assays in 2009 were realized according to EN ISO 16140:2003, with respect to the reference method EN ISO 6579:2002.

In May 2011, BioControl Systems Inc presented to the Technical Board modifications in calculation of positive threshold of the method. Regarding the nature of the modifications, a new summary report with new interpretation of 2009 results was realized at the request of the AFNOR Technical Committee. Results are presented in the present summary report (version 2).

2 Comparative study of methods

2.1 Relative accuracy, relative specificity and relative sensitivity

The aim of the study, according to the reference document EN ISO 16140, is to compare the performances of the two methods:

- the reference method EN ISO 6579: 2002,
 - the TRANSIA® PLATE *Salmonella* Gold method,
- on samples naturally contaminated and not contaminated with *Salmonella*.

2.1.1 Number and nature of the samples

According to the EN ISO 16140 standard, a minimum of 60 products per category must be analyzed, with around 50% of positive products (at least 30 results) and 50% of negative products.

Each category was divided into various types and the results are displayed as follows in table 1.

Table 1: number and nature of the samples

Category	Types	Positive*	Negative	Total
Meat products	Raw meats	12	29	41
	Poultry	10	29	39
	Delicatessen	9	20	29
	Total	31	78	109
Dairy products	Cheeses	13	8	21
	Pastries	12	10	22
	Milks and milk powders	10	12	22
	Total	35	30	65
Miscellaneous	Eggs products and Egg-based products (mayonnaise)	14	12	26
	Ready-to-eat meals	6	10	16
	Pastries	10	10	20
	Total	30	32	62
Seafood products and vegetables	Fish fillets and shellfish	10	13	23
	Raw vegetables, spices and herbs	10	11	21
	Ready-to eat vegetables	10	10	20
	Total	30	34	64
Feed	Cattle cakes	10	13	23
	Meals and dry pet foods	11	16	27
	Wet pet foods and raw meat for animals	9	10	20
	Total	30	39	69
Environment	Various waters	10	11	21
	Surface samplings	11	10	21
	Residues and scraps	10	8	18
	Total	31	29	60
TOTAL		187	242	429

*these are positive results by either one or two methods

2.1.2 Artificial contamination of the samples and percentage

Artificial contamination was achieved by using stressed bacterial suspensions, the stress treatment and efficiency of which have been determined according to EN ISO 16140 and AFNOR validation rules.

118 samples were positive after artificial contamination.

In total, of 187 positive results of *Salmonella*, **63%** were obtained as a result of artificial contamination.

2.1.3 Results (2005)

All samples were analyzed **in single** by the **two methods**.
Individual results (429 samples) are presented in annex C.
The overall results are shown in the summary table 2 below:

Table 2: Total paired results of the reference and alternative method

	Positive reference method (R+)	Negative reference method (R-)	Total
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 186	Positive deviation (R-/A+) PD = 0	186
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 1*	Negative agreement (A-/R-) NA = 242*	243
Total	187	242	429

Legend: A+ = positive confirmed
A- = immediate negatives **and** negatives after confirmation when presumed positive
* not including any non-confirmed positive result

The results of paired results of the reference and alternative method by samples categories are presented in tables below:

Table 3: Meat products (109)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 31	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 78

Table 4: Dairy products (65)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 35	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 30

Table 5: Seafood and vegetables (64)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 30	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 34

Table 6: Egg products and pastries (62)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 30	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 32

Table 7: Feed (69)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 29	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 39

Table 8: Environment (60)	Positive reference method (R+)	Negative reference method (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 31	Positive deviation (R-/A+) PD = 0
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0	Negative agreement (A-/R-) NA = 29

2.1.4 Calculation of relative accuracy (AC), relative specificity (SP) and relative sensitivity (SE)

All previous results were used to calculate the relative accuracy, relative sensitivity and relative specificity for each category, according to the EN ISO 16140 standard.

The results are summarised in the table 9.

Table 9: Calculation of the relative accuracy, the relative sensitivity and the relative specificity

Category	PA	NA	ND	PD	Sum N	Relative accuracy AC (%) [100x(PA+NA)]/N	N+ PA + ND	Relative sensitivity SE (%) [100xPA]/N+	N- NA + PD	Relative specificity SP (%) [100xNA]/N-
Meat products	31	78	0	0	109	100.0	31	100.0	78	100
Dairy products	35	30	0	0	65	100.0	35	100.0	30	100
Seafood & vegetables	30	34	0	0	64	100.0	30	100.0	34	100
Egg products & pastries	30	32	0	0	62	100.0	30	100.0	32	100
Feed	29	39	1	0	69	98.6	30	96.7	39	100
Environment	31	29	0	0	60	100.0	31	100.0	29	100
TOTAL	186	242	1	0	429	99.8	186	99.5	242	100

The percentage values of the alternative method calculated for the following three criteria according to the EN ISO 16140 standard were:

Relative accuracy: <i>AC</i>	99.8 %
Relative specificity : <i>SP</i>	100.0 %
Relative sensitivity : <i>SE</i>	99.5 %

The AFNOR technical committee asks the sensitivity of both methods to be calculated with consideration of all the confirmed positives (this includes the additional positives of the alternative method):

Table 10: Sensitivity calculated with all the confirmed positives

	Alternative method	Reference method
Sensitivity	$(PA + PD) / (PA + PD + ND) = 99.5 \%$	$(PA + ND) / (PA + PD + ND) = 100.0 \%$

2.1.5 Analysis of discrepant results

The number of discrepant results between the reference method and the alternative method was 1.

According to annex F of the EN ISO 16140 standard, the minimum number of discordances for which a statistical test must be conducted in order to compare the two methods is 6.

No statistic test has been done. The TRANSIA™ PLATE *Salmonella* Gold method and the reference method EN ISO 6579 can be considered as equivalent.

2.1.6 Comments on the storage of RVS broth at 2 – 8°C during 48 hours

Eventually, the results obtained after storage of RVS broth at 2 – 8°C were the same as those obtained directly after incubation for the positive samples. It was also possible to find the typical colonies of *Salmonella* on the selective medium plates.

2.1.7 Complementary assays (2009) and reinterpretation of results (2011)

According to the decisions taken by the Technical Board, a minimum of 10 positive results and 10 negative results per category were obtained with the addition of the new additive to evaluate the performances of the alternative method.

The performances were determined by analyses of 148 samples distributed over the six categories of products. The detailed results are presented in annex D.

The results with new calculation of positive threshold (NC+0.2) are displayed in table 11 as follows:

Table 11: number and nature of the samples

Category	Positive*	Negative	Total
Meat products	11	11	22
Dairy products	11	16	27
Miscellaneous (egg-based products & Ready-to-eat- meals)	11	16	27
Seafood products and vegetables	10	18	28
Feed	10	10	20
Environment	10	14	24
TOTAL	63	85	148

*these are positive results by either one or two methods

Artificial contamination was achieved by using stressed contaminating suspensions, the stress treatment and efficiency of which have been determined according to EN ISO 16140 and AFNOR validation rules. 54 samples were positive after artificial contamination.

The paired results of the reference and alternative method of the 148 analyzed samples, reinterpreted according to new positive threshold calculation are presented in table 12 below.

Table 12: Total paired results of the reference and alternative method

	Positive reference method (R+)	Negative reference method (R-)	Total
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 62	Positive deviation (R-/A+) PD = 0	62
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 1*	Negative agreement (A-/R-) NA =85*	86
Total	63	85	148

Legend:

A+ = positives confirmed

A- = immediate negatives **and** negatives after confirmation when presumed positive

* not including any non-confirmed positive result

In this study, a doubtful result C14 (strawberry tart) became negative with new calculation of positive threshold and confirmed as negative, like the reference method.

A dairy product (F24, raw milk) became negative and a discrepant result (false negative result) after new determination of threshold. The positive threshold wasn't anymore reached.

So, one discordance was observed between the reference method and the alternative method in the relative accuracy study.

2.2. Relative detection level

The objective was to determine the level of contamination that can be detected in the sample in 50% occasions by the alternative and reference methods.

Different «food matrix strain» associations were studied in parallel with the reference method and TRANSIA[®] PLATE *Salmonella* Gold method, for six product categories.

The artificial contaminations were realized according to EN ISO 16140 and AFNOR validation rules.

The levels of detection, calculated according to the Spearman – Kärber⁽¹⁾ method (LOD₅₀), obtained for each combination «matrix-strain» are presented in table 13 below.

Table 13: Relative detection level according to «food matrix strain»

Matrix	Strain	Relative detection level(CFU/ 25 g or 25 ml) with confidence interval ⁽²⁾ LOD ₅₀	
		Reference method	Alternative method
Poultry minced meat	<i>Salmonella</i> Hadar	0.3 [0.2 – 0.5]	0.3 [0.2 – 0.5]
Raw milk	<i>Salmonella</i> Typhimurium	0.8 [0.4 – 1.4]	0.8 [0.4 – 1.4]
Raw egg	<i>Salmonella</i> Enteritidis	0.7 [0.4 - 1.3]	0.7 [0.4 - 1.3]
Fish filet	<i>Salmonella</i> Virchow	0.3 [0.2 – 0.5]	0.3 [0.2 – 0.5]
Pet food	<i>Salmonella</i> Senftenberg	0.5 [0.3 – 0.9]	0.5 [0.3 – 0.9]
Process water	<i>Salmonella</i> Infantis	0.7 [0.4 – 1.5]	0.7 [0.4 – 1.5]

⁽¹⁾Hitchins A. Proposed Use of a 50% Limit of Detection Value in Defining Uncertainty Limits in the Validation of Presence-Absence Microbial Detection Methods, Draft 10th December, 2003.”

⁽²⁾ LOD₅₀: estimation of level of contamination enabling positive detection by alternative method in 50 % of cases

The level of detection obtained for the TRANSIA[®] PLATE *Salmonella* Gold method is between 0.2 and 1.5 cells per 25 grams and is identical to the one of the reference method EN ISO 6579.

2.3 Inclusivity / exclusivity

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

The study of specificity was performed in 2001 according to AFNOR requirements, rev.7 (initial certification). Then, it was redone in 2005 according to EN ISO 16140 protocol (1st renewal study).

In 2009 (2nd renewal), to answer the new requirements of the Technical Food Microbiology committee - new lists of *Salmonella* strains, ten strains of *Salmonella* were tested with TRANSIA[®] PLATE *Salmonella* Gold method.

All the results of specificity are presented in annexes E and F.

2.3.1 Initial certification study in 2001

70 *Salmonella* strains and 47 non *Salmonella* strains were tested, after an overnight culture in buffered peptone water.

Three strains of *Salmonella* gave negative test results (two strains of *S.arizonae* serovar: IIIa 48:z4 z23, among 11 *S. arizonae* and *S. diarizonae* tested and one strain of *S. Kedougou* among four strains tested).

The study of the non-*Salmonella* strains by the TRANSIA[®] PLATE *Salmonella* Gold test, did not detect the presence of any cross-reaction.

2.3.2 Renewal study in 2005

a) Protocols

Protocol for inclusivity

A culture of each *Salmonella* strain was prepared in a Buffered Peptone Water (BPW) for 24 hours at 37°C.

An enrichment broth was inoculated with around 10 *Salmonella* cells per 225 ml and incubated at 37°C, then the complete protocol of the alternative method was realized.

Protocol for exclusivity

The different negative strains were cultivated in nutritional broth and diluted to obtain levels of around 10⁵ cells per ml. Then the ELISA assay was performed for each strain.

b) Results and conclusion

50 *Salmonella* strains were tested after the complete protocol of the alternative method (BPW, then RVS broth, then TRANSIA® PLATE *Salmonella* Gold test). All the strains were detected.

30 non *Salmonella* strains were tested, after an overnight culture in BPW and no cross-reaction was detected.

2.3.3 Second renewal study in 2009

a) Data of inclusivity and exclusivity obtained by Biocontrol

Some data of inclusivity and exclusivity were obtained by Biocontrol with the addition of the new additive to evaluate the performances of the alternative method.

Detailed results are presented in annex F1.

For the inclusivity study, *Salmonella* strains were started from frozen bead stocks into 10 ml buffered peptone water (BPW) and grown 24 hours at 35-37 °C in an air incubator. Then a 10 ml Rappaport Vassiliadis buffer Soya broth (RVS) was inoculated and incubated an additional 24 hours at 42 °C in a water bath. After incubation, the RVS was mixed thoroughly and 1 ml of sample was transferred to a 13X100 mm test tube. An additional 1ml was transferred to a second 13X100 mm test tube containing 100 µl of additive. These tubes were heated at 100°C and the TRANSIA® PLATE *Salmonella* Gold was performed.

For the exclusivity study, the non-*Salmonella* strains were started from frozen bead stocks into 10 ml buffered peptone water (BPW) and grown 24 hours at 35-37 °C in an air incubator. One ml of the BPW was transferred into each of two 13X100 mm test tubes heated as indicated above.

The values obtained for all the strains are closed without and with the additive, and with the pre-mixed substrate and chromogen reagent.

b) Complementary assays realized by Expert laboratory and reinterpretation in 2011

According to the decisions taken by the Technical Board, the strains of the new *Salmonella* list, which were not previously tested, were tested with the new version of the TRANSIA® PLATE *Salmonella* Gold test, including the additive (see annex F1).

All the strains tested with the complete protocol of the alternative method were positive except *S. arizonae* serovar: IIIa 48:z4 z23. Another strain of *Salmonella arizonae* serovar: IIIa 51:z4,z23:- leads to a positive result.

We can note that two strains of *S. arizonae* serovar: IIIa 48:z4 z23 were tested in the 2001 (inclusivity study) and gave negative results.

| The new calculation of threshold did not change these conclusions (see annex F2).

3 Interlaboratory study

The aim of the interlaboratory study was to determine the variability of the results obtained in different laboratories using identical samples and to compare these results with those obtained in the methods comparison study.

3.1 Study organization

- Number of participating laboratories: The inter-laboratory study was conducted in 2005 (renewal study) with 11 participating laboratories.
- Matrix used: pasteurized milk (25 ml).
- Strain: *Salmonella* Typhimurium (origin “dairy products”).
- Number of samples per laboratory: 24 samples per laboratory were prepared to represent 3 levels of contamination, with 8 samples per level for each method.

3.2 Control of experimental parameters

3.2.1 Contamination levels obtained after artificial contamination

The following table shows the contamination rates obtained and estimated precisions.

Table 14: contamination levels of inoculated samples

Level	Samples	Targeted theoretical rate (CFU/25ml)	Real rate (CFU/25ml)	Estimated lower contamination limit per 25 ml sample	Estimated upper contamination limit per 25 ml sample
Level 0 (L0)	3-4-9-10-15-16-21-22	0	0		
Low level (L1)	5-6-11-12-17-18-23-24	3	2.4	0.3	8.8
High level (L2)	1-2-7-8-13-14-19-20	30	17.4	10.1	27.8

3.2.2 Problems of temperature recorded during transport, temperature on reception and reception times

a) Analysis of temperature monitoring curves during transport

Temperatures registered by thermo button during shipment show that temperatures were stable during transport for all the laboratories.

b) Temperatures on reception and reception times

The temperatures obtained are recorded in the following table.

Table 15: temperatures at receipt

Laboratory	Temperatures at receipt (°C)		Comments
	Measured by the laboratory	Thermobutton record	
A	4.3°C	2.4°C	
B	2.4°C	0.3°C	
C	4.4°C	2.0°C	
D	/	/	Samples delivered at D+2
F	3.8°C	2.1°C	
G	16.0°C	1.5°C	Problem to measure temperature at reception
H	5.1°C	3.9°C	
I	3.9°C	2.6°C	
J	4.0°C	1.3°C	
K	2.3°C	0.8°C	
L	1.3°C	0.7°C	

3.2.3 Conclusion

The results of 10 participating laboratories could be analyzed after considering the conditions of shipment and delivery due to time-to-delivery problems.

The temperature curve of the laboratory G showed that the temperature was below +6°C before start of a analyses.

3.3 Results

3.3.1 Results obtained by cooperating laboratories

The detailed results are presented in annex G and the following tables give a synthesis of the results obtained by all the laboratories.

Table 16: Positive results obtained with the reference method

Laboratory	Levels of contamination					
	L0		L1		L2	
	Positive results	Total samples	Positive results	Total samples	Positive results	Total samples
A	0	8	8	8	8	8
B	0	8	8	8	8	8
C	0	8	8	8	8	8
F	0	8	8	8	8	8
G	0	8	8	8	8	8
H	0	8	7	8	8	8
I	0	8	8	8	8	8
J	0	8	5	8	8	8
K	0	8	8	8	8	8
L	0	8	8	8	8	8
Total	0 (a)	80	76 (b)	80	80 (c)	80

Table 17: Positive results obtained with the alternative method

Laboratory	Levels of contamination					
	L0		L1		L2	
	Positive results	Total samples	Positive results	Total samples	Positive results	Total samples
A	0	8	8	8	8	8
B	0	8	8	8	8	8
C	0	8	8	8	8	8
F	0	8	8	8	8	8
G	0	8	8	8	8	8
H	0	8	7	8	8	8
I	0	8	7	8	8	8
J	0	8	5	8	8	8
K	0	8	8	8	8	8
L	0	8	8	8	8	8
Total	0 (a)	80	75 (b)	80	80 (c)	80

(a) : False positive

(b) : True positive at level 1

(c) : True positive at level 2

The results of the reference method and the alternative method **were in agreement** for 9 laboratories.

Some laboratories found sample(s) contaminated at a low rate, negative by the alternative method and by the reference method. The contamination level was not so high (2.4 *Salmonella* in 25 ml), so their results are consistent. Four samples are concerned in the study.

The tenth laboratory found one sample contaminated at low rate, negative by the alternative method and positive by the reference method, but only after streaking of MKTTn broth on selective medium plate.

3.3.2 Conclusion with comments (discordances with expected results, exclusions... for instance)

Finally, the results of **10 laboratories** were considered.

Note: the positive results of the alternative method were all confirmed.

3.4 Calculations

3.4.1 Specificity percentage (% SP) and sensitivity percentage (% SE) for both methods

The percentages of specificity (SP) and sensitivity (SE) were calculated according to the EN ISO 16140.

At level L0, the specificity percentage (%SP) is calculated as follows:

$$SP = \{1 - (FP/N_-)\} \times 100$$

where FP, number of false positives
N₋, total number of tests L0

At levels L1 and L2, the sensitivity percentage (%SE) is calculated as follows:

$$SE = (TP/N_+) \times 100$$

where TP, number of true positives
N₊, total number of tests L1 or L2

The results are given in the table 18 below.

Table 18: Specificity percentage (% SP) and sensitivity percentage (% SE) for both methods

Level	Reference method		Alternative method	
	SP/SE	LCL* %	SP/SE	LCL* %
L0	SP% = 100.0	98	SP% = 100.0	98
L1	SE% = 95.0	89	SE% = 93.8	88
L2	SE% = 100.0	98	SE% = 100.0	98
L1+L2	SE% = 97.5	93	SE% = 96.9	93

* LCL : low critical value, defined by EN ISO 16140 standard

3.4.2 Relative accuracy (AC)

The relative accuracy is calculated using the following formula:

$$AC = \{(PA + NA) / N\} \times 100$$

where PA, number of positive agreements
NA, number of negative agreements

The results for all the samples are resumed below.

Table 19: total paired results of the reference and alternative method

	Positive reference method (R+)	Negative reference method (R-)	Total
Positive alternative method (A+)	Positive Agreement (A+/R+) PA = 156	Positive Deviation (R-/A+) PD = 0	(N+) = 156
Negative alternative method (A-)	Negative Deviation (A-/R+) ND = 1*	Negative Agreement (A-/R-) NA = 83*	(N-) = 84
Total	(N+) = 157	(N-) = 83	N = 240

* including no positive samples (not confirmed)

In this study, **relative accuracy** was **99.6%**.

3.4.3 Analysis of discrepant results

As defined in annex F of the EN ISO 16140 standard, the minimum number of discordances beyond which a statistical test must be carried out to compare the two methods is 6.

No statistical test was performed, because there was one discrepant result between the reference method and the alternative method.

Both methods would be considered as equivalent.

3.5 Interpretation

3.5.1 Comparison of relative accuracy (AC), specificity (SP) and sensitivity (SE) values

The values obtained in the two parts of the validation study are given in the table 20.

Table 20: Comparison of relative accuracy (AC), specificity (SP) and sensitivity (SE) values

	Interlaboratory study	Comparative study
Relative accuracy (AC)	99.6 %	99.8 %
Sensitivity (SE)	96.9 %	99.5 %
Specificity (SP)	100.0 %	100.0 %

The values obtained following the interlaboratory study were comparable to the values obtained in the comparative study.

The AFNOR Technical Committee requests the calculation of the **sensitivity** of the both methods with consideration of all confirmed positives (true positive results). Results are presented in table below.

Table 21: Sensitivity of the both methods with consideration of all confirmed positives

	Alternative method	Reference method
Sensitivity	(PA + PD) / (PA + PD + ND) = 99.4 %	(PA + ND) / (PA + PD + ND) = 100.0 %

3.5.2 Accordance (DA)

The accordance is the percentage chance of finding the same result from two identical test portions analyzed in the same laboratory under repeatability conditions: a single operator using the same instrument and the same reagents within the shortest feasible time interval.

The first step to calculate the accordance is to calculate the probability that two identical samples give the same result for each of the participating laboratories, and then to determine the average of the probabilities of all laboratories.

The different tables used to determine the accordance are given in annex H and the accordance of each method at each level is given in the following table.

Table 22: results of accordance (DA %) for both methods

Level	Reference method	Alternative method
L0	DA % = 100 %	DA % = 100 %
L1	DA % = 93 %	DA % = 91 %
L2	DA % = 100 %	DA % = 100 %

3.5.3 Concordance

The concordance is the percentage chance of finding the same result for two identical samples analyzed in two different laboratories. The objective is to calculate the percentage of all pairs giving the same results on all possible pairs of results. Result of the calculations are shown in tables in annex I and the concordance of each method at each level is given in the following table.

Table 23: results of concordance for both methods

Level	Reference method	Alternative method
L0	Concordance % = 100 %	Concordance % = 100 %
L1	Concordance % = 90 %	Concordance % = 88 %
L2	Concordance % = 100 %	Concordance % = 100 %

3.5.4 Odds Ratio (COR)

The concordance odds ratio is calculated using the following formula:

$$\text{COR} = \frac{\text{accordance} \times (100 - \text{concordance})}{\text{concordance} \times (100 - \text{accordance})}$$

The concordance odds ratio of each method and at each level is given in the following table:

Table 24: results of Odds Ratio (COR) for both methods

Level	Reference method	Alternative method
L0	COR % = 1.01	COR % = 1.00
L1	COR % = 1.38	COR % = 1.47
L2	COR % = 1.00	COR % = 1.00

A value of 1.00 for the Odds ratio means that accordance and concordance are equal. When the Odds ratio increases, the interlaboratory variation becomes more predominant.

4 Praticability

Praticability is studied as a function of the 13 criteria defined by the technical committee in comparing the reference method to the TRANSIA[®] PLATE *Salmonella* Gold method.

The criteria defined by the AFNOR are informed below:

Criterion	Communication on the criterion
<p>1. Packaging mode of the components of the method (cf package insert)</p> <p>2. Reagent volumes (cf package insert and vial packaging)</p>	<p>The TRANSIA[™] PLATE <i>Salmonella</i> Gold kit contains the quantity of reagent necessary for 96 analyses:</p> <ul style="list-style-type: none"> - Microtiter plate with divisible strips, 96 wells (8 wells × 12 strips) – 1 pc, - Lid for the microtiter plate – 1 pc, - Negative control: 1 × 10 ml, ready-to-use, - Positive control (LPS- lipopolysaccharide): 1 × 8 ml, ready-to-use, - Washing buffer, concentrated 20X concentrated: 1 × 60 ml, - Conjugate, anti-<i>Salmonella</i> antibodies conjugated to peroxidase: 1 × 16 ml, ready-to-use, - Substrate TMB: 1 × 57 ml, ready-to-use, - Stop solution (H₂SO₄): 1 × 57 ml, ready-to-use, - Extraction reagent: 1 × 12.5 ml, ready-to-use.
<p>3. Storage conditions of the components (cf package insert) – Expiry of products not opened (cf package insert)</p>	<p>The storage temperature is of 2-8°C. The kit expiry date is shown on the box label and on the different vials.</p>
<p>4. Modalities of use after first use (cf package insert)</p>	<p>The kit components should be stored at 2-8°C. The reconstituted washing buffer (1X) should be stored at 2-8°C for a maximum of three months.</p>
<p>5. Equipments or necessary specific premises (cf package insert)</p>	<p>Normal configuration of and common material of a laboratory of microbiology. Among the required equipment:</p> <ul style="list-style-type: none"> - an air incubator at 37°C ± 1°C, - an air incubator at 41.5°C ± 1.0°C or preferably a water bath at 41.5°C ± 0.5°C, - a water bath at 95 – 100°C, <p>And for the immunoenzymatic assay:</p> <ul style="list-style-type: none"> - micropipette 100-1000 µl, - multipipette with 5 and 2.5 ml Combitips, - wash bottle or preferably an automatic microplate washer, - absorbent paper, - a microtiter plate reader (450 nm) or TRANSIA[®] Elisamatic II, TRANSIA[®] 4U or GEMINI[®] automated systems (cf automate manuals).
<p>6. Reagents ready for use or to be reconstituted (cf package insert)</p>	<p>All the reagents are ready-to-use, except the washing buffer to reconstitute.</p>
<p>7. Duration of training of the operator not familiar with the method</p>	<p>For an operator trained in standard techniques of microbiology, training in the technique requires less than 1 day.</p>

8. Real time handling – Flexibility of the technique relative to the number of samples to be analyzed

Table 25: Real time handling and flexibility of the technique

Steps	Average time for a sample (min)		Average time for 30 samples(min)	
	Standard	Alternative	Standard	Alternative
Preparation, weighing, dilution in BPW and crushing	7	7	90	90
Transfer to selective broths				
- RVS and MKTTn	3		45	
- RVS		1		25
TRANSIA® PLATE <i>Salmonella</i> Gold test (heating and automated assay procedure)	/	1	/	25
Streaking of RVS and MKTTn broths, on two selective media	10	/	150	/
Average total time (per sample)	20 minutes	9 minutes	9.5 minutes	4.7 minutes

These times correspond to negative samples for which no confirmation is necessary.

In the case of positive samples, the necessary time for isolation of the RVS broth on selective media must be added to the confirmations (around 1 minute).

And the average time for the confirmation of a typical colony by reference method tests can be evaluated at around 5 minutes.

The advantage of the alternative method particularly lies in the possibility to sort negative samples from the suspicious samples and thus reducing the number of confirmations.

The interest of the alternative method is the possibility of screening the negative samples and of reducing the number of confirmations.

9. Time to result

Table 26: Time to result for positive and negative results

Step	Time required (Day)	Time required (Day)
	TPSG <i>Salmonella</i> method	Reference method EN ISO 6579
Realization of pre-enrichment	D0	D0
Transfer to selective broths (Rappaport-Vassiliadis Soja, MKTTn)	D1	D1
TRANSIA® PLATE <i>Salmonella</i> Gold procedure	D2	/
Test result		
Obtaining negative results (if negative test)	D2	/
Obtaining negative results (if no characteristic colony or after negative confirmation if necessary)	/	D3 to D6
Streaking of selective broths on selective media	/	D2
Reading the plates	/	D3 to D4
Confirmation tests : identification strips, serology		
Obtaining positive results (after confirmation of typical colonies)	D5 to D6	D5 to D6
Confirmation by reference method tests (including purification)	D5 to D6	D5 to D6

10. Type of qualification of the operator	Same as for the reference method.
11. Steps common to the reference method	First step of enrichment. Confirmations.
12. Traceability of the analysis results	The work sheet is identified as ENR COM 511. If an automated system is used, all the results are saved in a history file. A result sheet is printed with the reagents lot numbers, time, test result, and sample identification. The results can be exported to a LIMS.

13. Maintenance by the laboratory	No specific maintenance, other than classical procedure for the Microtitre plate reader. Note: the BioControl Systems firm offers a customer technical support for the possible problems during the ELISA procedure.
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5 General conclusion

The validation study of the methods was conducted according to the reference document EN ISO 16 140 (2003).

The **comparative study** allows assessing:

- the relative accuracy, the relative sensitivity and the relative specificity,
- the relative detection level,
- the inclusivity and the exclusivity.

The performances of the TRANSIA® PLATE *Salmonella* Gold method were equivalent to those of the reference method EN ISO 6579:2002. They were determined by analysis of 429 samples distributed over six categories of products.

The relative accuracy obtained was 99.8%, the relative sensitivity 99.5% and the relative specificity 100%, according to the calculations required by the EN ISO 16140 standard.

One false positive result was obtained, both methods were considered as statistically equivalent.

Because the positive samples by the alternative method are positive confirmed samples, the sensitivities were recalculated relative to all positive results according to the calculations recommended by the AFNOR and were of 99.5% for the alternative method and 100% for the reference method.

The relative level of detection of the TRANSIA® PLATE *Salmonella* Gold method and of the reference method was evaluated by artificial contaminations of six different products, representative of the six categories tested.

It was between 0.2 and 1.5 cells of *Salmonella* per 25 g or ml of sample and was identical to the one of the reference method.

The specificity of the method was satisfactory since the strains of *Salmonella* were detected (inclusivity) except one strain of *S. arizonae* serovar: IIIa 48:z4 z23 and no cross-reactions were observed in the non *Salmonella* strains tested (exclusivity).

The complementary assays with the addition of an additive before performing the TRANSIA® PLATE *Salmonella* Gold test show that the performances of the alternative method were not modified.

The modification of calculation of positive threshold lead to transform a doubtful result (C14) into a concordant negative result and a concordant positive result (F24) became a discrepant result (false negative result).

Finally, conclusions are not changed, the two methods (reference and alternative methods) can be considered as equivalent.

The **interlaboratory study results** obtained for all of the 10 selected laboratories show that the alternative method and the reference method had comparable values of relative accuracy, specificity and sensitivity as those obtained during the preliminary study.

The variability of the alternative method (accordance, concordance, Odds ratio) was better than the variability of the reference method.

Set of results led to renew **NF VALIDATION certification** according to EN ISO 16140, of the TRANSIA® PLATE *Salmonella* Gold (certificate n°TRA 02/8 - 03/01), for the detection of *Salmonella* in all human food products, animal food products and environmental samples for a period of 4 years.

Lille, October 11th 2011



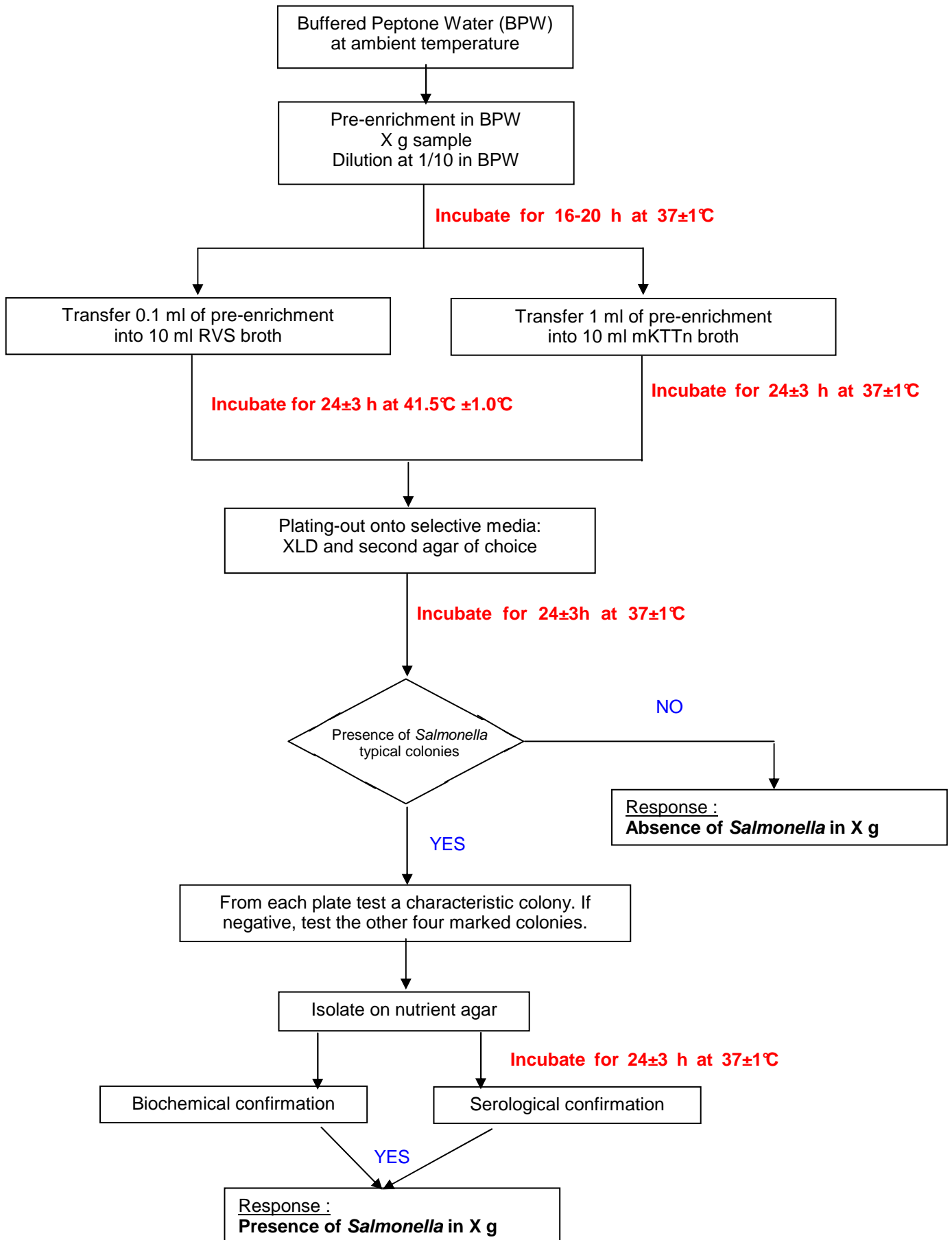
Méline Maux
Technical manager

ANNEXES

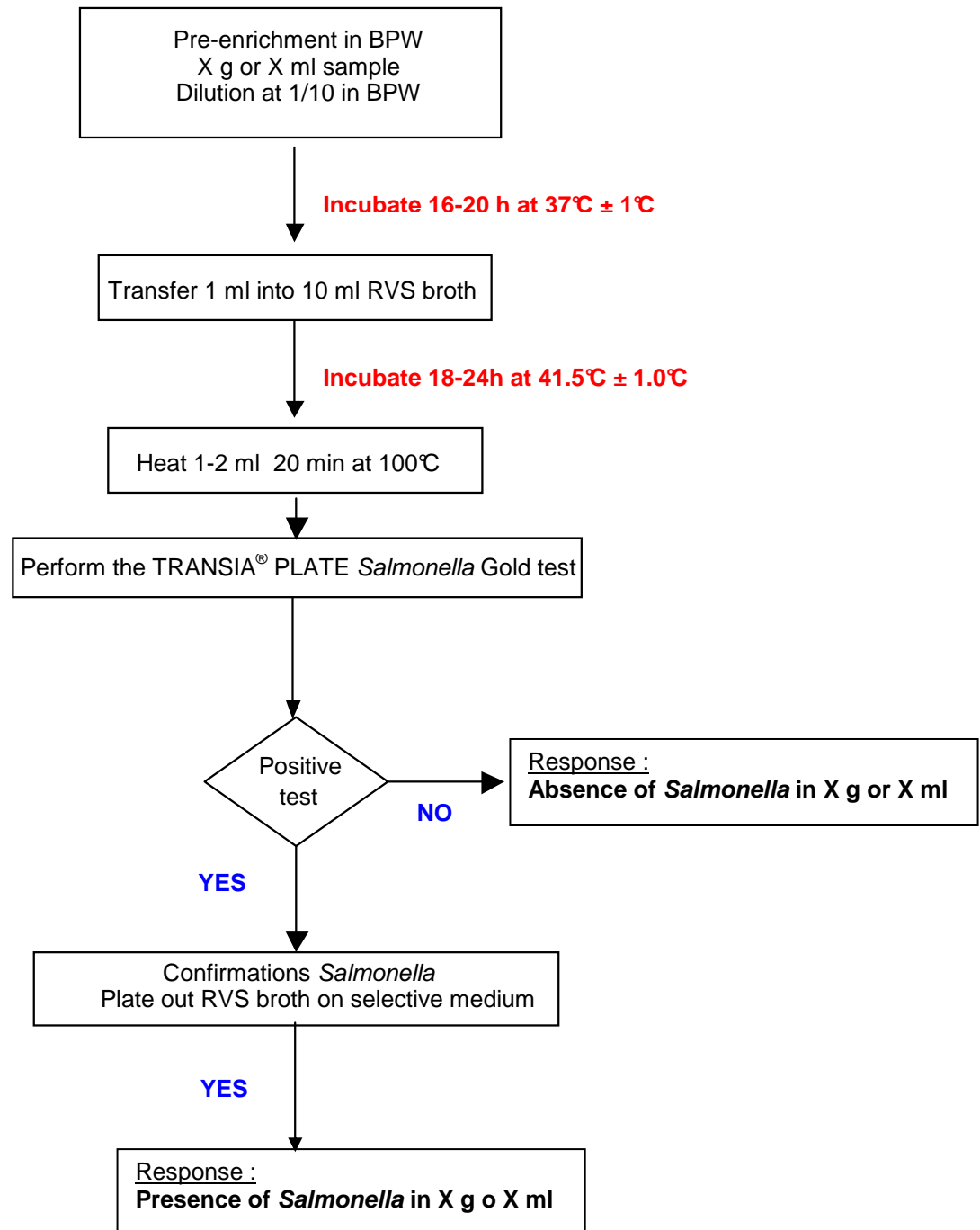
ANNEX A

ANALYTICAL PROTOCOLS

EN ISO STANDARD 6579:2002



ALTERNATIVE METHOD TRANSIA[®] PLATE *Salmonella* GOLD method



ANNEX B

MAIN RESULTS OF THE FIRST VALIDATION STUDY (2001)

1 1st Certification date and renewal dates

The TRANSIA® PLATE *Salmonella* Gold method (BioControl Systems) has been validated with the certificate number TRA-02/8-03/01:

- in March 2001 : first validation study
- in February 2004 : first renewal study
- in July 2009 : second renewal study

2 Reference method used for the validation

The reference methods used were the following methods:

- for the first certification study: NF EN 12824 standard method « Horizontal method for the detection of *Salmonella* spp. »
- for the renewal study: EN ISO 6579:2002 standard method: « Horizontal method for the detection of *Salmonella* spp. »

3 Main results obtained in the first validation study

Specificity

Initial certification study 2001

70 *Salmonella* strains and 47 non *Salmonella* strains were tested, after an overnight culture in buffered peptone water.

Three strains of *Salmonella* gave negative test results (two strains of *S.arizonae* serovar: IIIa 48:z4 z23, among 11 *S. arizonae* and *diarizonae* tested and one strain of *S. Kedougou* among four strains tested)

The study of the non-*Salmonella* strains by the TRANSIA® PLATE *Salmonella* Gold test, did not detect the presence of any cross-reaction.

Limit of detection

Initial certification study 2001

Four strains of *Salmonella* (*S. Enteritidis*, *S. Infantis*, *S. Typhimurium*, *S. Virchow*) were tested at different levels in RVS broth.

The limit of detection of the immunoenzymatic test was between $9.0.10^4$ to $3.0.10^5$ cells/ml RVS broth.

Relative detection level

Initial certification study 2001

This level was studied on 4 food matrices (raw milk, beef minced meat, red cabbage, liquid whole egg), with 4 *Salmonella* strains (*S.Enteritidis*, *S.Infantis*, *S.Typhimurium*, *S.Virchow*) at 5 contamination levels.

No discordance was observed in comparison with the reference method NF EN 12 824. Even the weakest rates made (from 1 to 8 bacteria per 25 grams) were detected, irrespective of the strain used.

Accuracy

Initial certification study 2001

290 samples distributed over 5 categories (“meat products”, “dairy products”, “seafood, vegetables, cocoa and spices”, “egg products and pastries”, “animal feed”) were analysed: 127 samples were contaminated by *Salmonella*. The percentage of concordance between the two methods (TRANSIA® PLATE *Salmonella* Gold method and NF EN 12824) was 99 % with 3 false negative results (pork liver, mixed spices and soy cattle cake) and 1 additional positive result (rape cattle cake) for the TRANSIA® PLATE *Salmonella* Gold method.

Fidelity

Initial certification study 2001

10 laboratories conducted analyses on eight milk samples (two samples per contamination level). The results were according to expected results.

4 Report of modifications made in the alternative method, having caused or not a validation extension

Since the first certification study, the only modification was the possibility of storing the RVS broth at 2 – 8°C before performing the TRANSIA® PLATE Salmonella Gold test. Assays were made during the renewal study in 2005.

5 Bibliography

- NordVal, validation for food, feed and environmental samples, Certificate number: 2004-30-5408-000033, reference method: EN ISO 6579
- AOAC RI, certification number 010602, reference method: EN ISO 6579

6 Technical requirements for AFNOR validation

The validation referential was that in effect in dates of different studies:

- the AFNOR requirements rev.7 for the initial certification study
- the EN ISO 16140:2003 standard for the renewal study in 2005

ANNEX C

ASSAYS – 2005

RELATIVE ACCURACY, RELATIVE SPECIFICITY,
RELATIVE SENSITIVITY

DETAILED RESULTS TABLES
FOR EACH SAMPLE CATEGORY

LEGEND

Total bacteria growth

Ø : no growth

L = low

M = medium

H = high

Distribution of flora

A = pure culture of suspicious colonies

B = mix with a majority of suspicious colonies

C = mix with a minority of suspicious colonies

D = mix with rare suspicious colonies

E = absence of suspicious colonies

(x) : x characteristic colonies of *Salmonella* if $x \leq 5$

Artif.: artificial contamination

Results

Artif.: artificial contamination

Res. : TP *Salmonella* test result

OD: Optical Density result at 450 nm

+: positive sample (presence of *Salmonella* in 25 g or 25 ml)

-: negative sample (absence of *Salmonella* in 25 g or 25 ml)

d: doubtful sample

Comparison

In black : corresponding result with regard to reference method (=), positive or negative agreement

In blue : additional positive result (PS) with regard to reference method

In red : false negative result (FN) with regard to reference method

Used media

RVS : Rappaport-Vassiliadis medium with soja (RVS broth)

MKTTn : Muller-Kauffmann tetrathionate/novobiocin broth (MKTTn broth)

XLD : Xylose Lysine Deoxycholate agar

Edel: Edel Kampelmacher medium (brilliant green agar)

Identifications

Cf : *Citrobacter freundii*

Cd : *Citrobacter diversus*

Ec : *Escherichia coli*

En : *Enterobacter*

Ha : *Hafnia alvei*

Ps : *Pseudomonas*

Pm : *Proteus mirabilis*

Categories of samples (cat.)

MP : Meat Products (MP1 : raw meats - MP2 : poultry - MP3 : delicatessen)

DP : Dairy Products (DP1 : cheeses - DP2 : pastries - DP3 : milks and milk powders)

DIV: Miscellaneous (DIV1 : eggs products - DIV2 : ready-to-eat meals - DIV3 : pastries)

SF : Seafood products (SF1 : fish fillet and shellfish)

V : Vegetables (V1 : raw vegetables, spices, herbs - V2 : ready-to eat vegetables)

F : Animal feed (F1 : cattle cakes - F2 : meals and dry pet foods - F3 : wet pet foods and raw meat for animals)

EN : Environment (EN1 : various waters - EN2 : surface samplings - EN3 : residues and scraps)

MEAT PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)						Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison	
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation		Final result		OD	Positive threshold	Test result	Confirmation		Final result		
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
B57	Beef liver	MP1	No	- ME	- ME	- HE	- HE	-	0.083	0.159	-	/	/	-	=								
B58	Beef liver	MP1	No	- HE	- LE	- HE	- HE	-	0.088	0.159	-	/	/	-	=								
B59	Beef liver	MP1	No	- ME	- LE	- HE	- HE	-	0.084	0.159	-	/	/	-	=								
B60	Grounded beef	MP1	No	- HE	- HE	- HE	- HE	-	0.094	0.159	-	/	/	-	=								
B61	Beef carpaccio	MP1	No	- HE	- ME	- HE	- ME	-	0.090	0.159	-	/	/	-	=								
D9	Pork for pâté	MP1	No	- LE	Ø	- HE	- LE	-	0.061	0.145	-	/	/	-	=								
D13	Pork heart	MP1	No	- LE		- HE		-	0.072	0.145	-	/	/	-	=								
D16	Pork kidneys	MP1	No	- ME	- LE	- HE	- HE	-	0.064	0.145	-	/	/	-	=								
D17	Kangaroo meat	MP1	No	+ MD	+ MD	+ HB	+ HC	+	0.808	0.145	+	+ MD	+ MD	+	=	0.888	0.152	+	+ MC	+ MC	+	=	
D18	Kangaroo meat	MP1	No	- LE	- ME	- HE	- HE	-	0.067	0.145	-	/	/	-	=								
D21	Kangaroo steak	MP1	No	- LE	- LE	- HE	- HE	-	0.081	0.145	-	/	/	-	=								
D22	Kangaroo steak	MP1	No	- LE	- LE	- HE	- HE	-	0.031	0.145	-	/	/	-	=								
D24	Kangaroo meat	MP1	No	- ME	- LE	- HE	- HE	-	0.068	0.145	-	/	/	-	=								
D26	Pork kidneys	MP1	No	- HE (Ps)	- LE	- HE (Ps)	- HE	-	0.065	0.145	-	/	/	-	=								
D27	Grounded beef for bolognaise sauce	MP1	No	- LE	Ø	Ø	Ø	-	0.071	0.145	-	/	/	-	=								
D28	Beef meat	MP1	No	- ME	- ME	- HE	- HE	-	0.074	0.145	-	/	/	-	=								
E4	Pork heart	MP1	No	- HE	- ME	- HE	- HE	-	0.062	0.143	-	/	/	-	=								
E7	Pork tongue	MP1	No	+ HD (1)	+ MD	+ HB	+ HD	+	0.747	0.143	+	+ HD (1)	+ MD	+	=	0.951	0.139	+	+ HD	+ HD	+	=	
E8	Kangaroo	MP1	No	+ HD (3)	+ MD (1)	+ HC	+ MB	+	0.596	0.143	+	+ HD (3)	+ MD (1)	+	=	0.877	0.139	+	+ HD	+ HD	+	=	
E9	Pork kidneys	MP1	No	+ HC	+ MC	+ HB	+ HC	+	0.464	0.143	+	+ HC	+ MC	+	=	0.494	0.139	+	+ HC	+ HD	+	=	
E10	Beef	MP1	No	+ MC	+ MC	+ HC	+ HC	+	0.206	0.143	+	+ MC	+ MC	+	=	0.252	0.139	+	+ HC	+ HD	+	=	
E11	Wild boar meat	MP1	No	+ HD	+ MC	+ HB	+ HB	+	1.086	0.143	+	+ HD	+ MC	+	=	1.273	0.139	+	+ HD	+ HD	+	=	
E14	Pork meat	MP1	No	- HE	- LE	- HE	- HE	-	0.064	0.143	-	/	/	-	=								
E20	Beef tongue	MP1	No	- HE	- LE	- LE	Ø	-	0.061	0.139	-	/	/	-	=								
E21	Horse meat	MP1	No	- HE	- LE	- HE	Ø	-	0.066	0.139	-	/	/	-	=								
E22	Pork meat	MP1	No	- HE	- LE	- HE	- HE	-	0.071	0.139	-	/	/	-	=								
F8	Pork meat	MP1	No	- HE	Ø	- HE	Ø	-	0.065	0.147	-	/	/	-	=								
F11	Pork cheek	MP1	No	- HE	- LE	- HE (Cf)	- ME	-	0.069	0.147	-	/	/	-	=								
H1	Pork tongue	MP1	No	+ MB	+ MB	+ HC	+ MB	+	0.687	0.140	+	+ MB	+ MB	+	=	0.773	0.132	+	+ MB	+ HB	+	=	
H2	Pork kidneys	MP1	No	- ME	- ME	- HE	- HE	-	0.055	0.140	-	/	/	-	=								
I1	Pork liver	MP1	No	- LE	- LE	- ME	- ME	-	0.056	0.138	-	/	/	-	=								
I9	Beef meat	MP1	No	+ MA	+ HA	+ MA	+ HA	+	0.997	0.138	+	+ MA	+ HA	+	=	1.208	0.136	+	+ LA	+ MB	+	=	
J32	Wild boar meat	MP1	No	+ MC	+ MC	+ MB	+ HA	+	1.156	0.141	+	+ MC	+ MC	+	=	1.048	0.137	+	+ MC	+ MC	+	=	
J33	Pork tongue	MP1	No	+ MC	+ MB	+ HD	+ HB	+	0.880	0.141	+	+ MC	+ MB	+	=	0.805	0.137	+	+ HC	+ HB	+	=	
J34	Pork minced meat	MP1	No	- HE	+ MB	+ HD	+ MD	+	0.708	0.141	+	- HE	+ MB	+	=	0.742	0.137	+	+ HD (2)	+ MB	+	=	
K20	Pork kidneys	MP1	No	- ME	- ME	- HE	- HE	-	0.063	0.140	-	/	/	-	=								
K22	Pork liver	MP1	No	- HE	- HE	- HE	- HE	-	0.082	0.140	-	/	/	-	=								
L4	Beef meat	MP1	No	- ME	Ø	- HE	Ø	-	0.093	0.168	-	/	/	-	=								
L5	Beef	MP1	No	- HE	- LE	- HE	- LE	-	0.111	0.168	-	/	/	-	=								
L8	Grounded meat	MP1	No	- HE	- ME	- HE	- HE	-	0.052	0.143	-	/	/	-	=								
P16	Pork liver	MP1	No	+ MB	+ MB	+ HB	+ HB	+	0.948	0.147	+	+ MB	+ MB	+	=	1.154	0.135	+	+ HB	+ HB	+	=	

MEAT PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison		
				RVS		MKTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
D7	Duck breast	MP2	No	+ MB	+ MC	+ HB	+ HB	+	1.065	0.145	+	+ MB	+ MC	+	=	1.255	0.152	+	+ MB	+ HB	+	=	
D8	Quail	MP2	No	- ME	- ME	- HE	- HE	-	0.065	0.145	-	/	/	-	=								
D15	Poultry livers	MP2	No	- ME	- LE	- HE	- HE	-	0.065	0.145	-	/	/	-	=								
D25	Duck hearts	MP2	No	- HE	- ME	- HE	- HE	-	0.066	0.145	-	/	/	-	=								
D30	Kebab turkey	MP2	No	- ME	- LE	- ME	Ø	-	0.075	0.145	-	/	/	-	=								
D31	Duck meat	MP2	No	- ME	- ME	- HE	- HE	-	0.065	0.143	-	/	/	-	=								
D32	Turkey meat	MP2	No	- ME	- ME	- HE	- HE	-	0.062	0.143	-	/	/	-	=								
D33	Turkey meat	MP2	No	- ME	Ø	- HE	Ø	-	0.060	0.143	-	/	/	-	=								
D34	Turkey meat	MP2	No	- LE	Ø	- LE	Ø	-	0.063	0.143	-	/	/	-	=								
E2	Foie gras	MP2	No	- HE	Ø	- HE	Ø	-	0.062	0.143	-	/	/	-	=								
E6	Turkey meat	MP2	No	+ HC	+ MA	+ HA	+ HA	+	0.755	0.143	+	+ HC	+ MA	+	=	0.764	0.139	+	+ HB	+ HA	+	=	
E12	Turkey meat	MP2	No	+ MD (3)	+ MD (1)	+ HD (3)	+ HB	+	0.265	0.143	+	+ MD (3)	+ MD (1)	+	=	0.281	0.139	+	+ HD	+ HD	+	=	
E13	Foie gras	MP2	No	- ME	Ø	- HE	Ø	-	0.067	0.143	-	/	/	-	=								
E15	Quail	MP2	No	- ME	Ø	- HE	- LE	-	0.064	0.143	-	/	/	-	=								
E16	Chicken leg	MP2	No	+ HD (1)	+ MC	- HE	+ HD (4)	+	0.699	0.143	+	+ HD (1)	+ MC	+	=	0.848	0.139	+	+ HD (5)	+ MC	+	=	
E19	Quail	MP2	No	- HE	Ø	- HE	- LE	-	0.059	0.139	-	/	/	-	=								
E24	Turkey meat	MP2	No	- HE	- ME	- HE	- LE	-	0.069	0.139	-	/	/	-	=								
E25	Turkey meat	MP2	No	- HE	Ø	- HE	Ø	-	0.064	0.139	-	/	/	-	=								
E26	Turkey meat	MP2	No	- HE	- ME	- HE	- HE	-	0.062	0.139	-	/	/	-	=								
E27	Turkey meat	MP2	No	- HE	- HE	- HE	- HE	-	0.072	0.139	-	/	/	-	=								
F4	Quail	MP2	No	- HE	Ø	- HE	- LE	-	0.065	0.147	-	/	/	-	=								
F5	Chicken wings	MP2	No	- HE (Pm)	Ø	- HE (Pm)	Ø	-	0.067	0.147	-	/	/	-	=								
F6	Chicken wings	MP2	No	- HE	- LE	- HE	Ø	-	0.067	0.147	-	/	/	-	=								
F9	Chicken	MP2	No	- ME	- ME	- HE (Cf)	- MA	-	0.065	0.147	-	/	/	-	=								
F12	Rabbit meat	MP2	No	- ME	- LE	- HE	- LE	-	0.066	0.147	-	/	/	-	=								
G1	Chicken meat	MP2	No	- HE	- ME	- HE (Pm)	- HE	-	0.069	0.133	-	/	/	-	=								
G3	Duck breast	MP2	No	- HE	- LE	- HE	- ME	-	0.069	0.133	-	/	/	-	=								
H4	Duck breast	MP2	No	+ HB	+ HB	+ HC	+ HB	+	0.838	0.140	+	+ HB	+ HB	+	=	0.948	0.132	+	+ HB	+ HB	+	=	
H5	Chicken legs	MP2	No	+ MB	+ MB	+ HD (3)	+ HB	+	0.699	0.140	+	+ MB	+ MB	+	=	0.758	0.132	+	+ HB	+ HB	+	=	
H49	Turkey meat	MP2	No	- HE	- ME	- HE	- LE	-	0.056	0.132	-	/	/	-	=								
H50	Poultry merguez	MP2	No	- HE	- HE	- HE	- HE	-	0.055	0.132	-	/	/	-	=								
H51	Poultry sausage	MP2	No	- HE	- HE	- HE	- HE	-	0.056	0.132	-	/	/	-	=								
H52	Turkey gizzard	MP2	No	- HE	- ME	- HE	- HE	-	0.055	0.132	-	/	/	-	=								
H53	Turkey leg	MP2	No	- HE	- HE	- HE	- HE	-	0.053	0.132	-	/	/	-	=								
H54	Chicken neck skin	MP2	No	+ HB	+ MB	+ MC	+ MC	+	1.006	0.132	+	+ HB	+ MB	+	=	1.214	0.145	+	+ MB	+ MB	+	=	
I7	Turkey nuggets	MP2	No	+ MA	+ MA	+ HA	+ HA	+	0.978	0.138	+	+ MA	+ MA	+	=	1.209	0.136	+	+ MA	+ MA	+	=	
K17	Chicken meat	MP2	No	+ HD	+ MB	+ HD	+ HB	+	1.118	0.140	+	+ HD	+ MB	+	=	1.341	0.148	+	+ HD	+ HB	+	=	
K18	Chicken neck skin	MP2	No	+ HD (1)	+ HC	+ HD	+ MC	+	0.731	0.140	+	+ HD (1)	+ HC	+	=	0.797	0.148	+	+ HD	+ HC	+	=	
K19	Turkey leg	MP2	No	- HE	- LE	- HE	- HE	-	0.064	0.140	-	/	/	-	=								

MEAT PRODUCTS

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				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation		Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD			RVS Edel
A36	Pâté	MP3	No	- HE	- HE	- HE	- HE	-	0.085	0.149	-	/	/	-	=							
B32	Rabbit terrine	MP3	No	Ø	Ø	Ø	Ø	-	0.078	0.155	-	/	/	-	=							
C24	Pie	MP3	No	- ME	- ME	- HE	- HE	-	0.072	0.149	-	/	/	-	=							
D10	Ham	MP3	No	Ø	Ø	Ø	Ø	-	0.061	0.145	-	/	/	-	=							
D12	Andouillette	MP3	No	- HE	- ME	- HE	- HE	-	0.064	0.145	-	/	/	-	=							
D14	Smoked ham	MP3	No	- HE	- HE	- HE	- HE	-	0.022	0.145	-	/	/	-	=							
D19	Pork delicatessen	MP3	No	- ME	- ME	- HE	- HE	-	0.070	0.145	-	/	/	-	=							
D20	Pork belly stuffed	MP3	No	+ HA	+ HA	+ HA	+ HA	+	0.825	0.145	+	+ HA	+ HA	+	=	0.898	0.152	+	+ HA	+ HA	+	=
D23	Chorizo	MP3	No	Ø	Ø	Ø	Ø	-	0.071	0.145	-	/	/	-	=							
D29	Pimented saucisson	MP3	No	- ME	- ME	- HE	- HE	-	0.075	0.145	-	/	/	-	=							
D35	Raw sausage	MP3	No	- ME	- ME	- ME	- ME	-	0.061	0.143	-	/	/	-	=							
D36	Toulouse sausage	MP3	No	- HE	- LE	- HE	- LE	-	0.065	0.143	-	/	/	-	=							
D38	Sausage with mushrooms	MP3	No	- HE	- HE	- HE	- HE	-	0.084	0.143	-	/	/	-	=							
D39	Stuffing for tomatoes	MP3	No	- ME	- ME	- HE	- HE	-	0.067	0.143	-	/	/	-	=							
E18	Pork delicatessen	MP3	No	- HE	- LE	- HE	Ø	-	0.060	0.143	-	/	/	-	=							
E23	Smoked sausages	MP3	No	- HE	- LE	- HE	- LE	-	0.082	0.139	-	/	/	-	=							
F7	Chipolatas	MP3	No	- LE (En)	- LE (En)	- HE (En)	- ME (En)	-	0.066	0.147	-	/	/	-	=							
G2	Saucisson	MP3	No	- HE (Pm)	- HE	- HE (Pm)	- ME	-	0.069	0.133	-	/	/	-	=							
G4	Chipolatas	MP3	No	- HE (Cf)	- HE (Cf)	- HE (Cf)	- HE (Cf)	-	0.082	0.133	-	/	/	-	=							
G5	Sliced saucisson	MP3	No	+ MB	+ MB	+ HC	+ HC	+	1.211	0.133	+	+ MB	+ MB	+	=	0.826	0.140	+	+ MB	+ MC	+	=
H3	Marinated kangaroo	MP3	No	- ME	- ME	- HE	- ME	-	0.055	0.140	-	/	/	-	=							
I2	Merguez	MP3	No	+ MB	+ MC	+ MC	+ MC	+	0.774	0.138	+	+ MB	+ MC	+	=	0.908	0.136	+	+ HB	+ MC	+	=
I8	Herb sausages	MP3	No	+ MA	+ HA	+ HA	+ HA	+	1.020	0.138	+	+ MA	+ HA	+	=	1.286	0.136	+	+ MA	+ MA	+	=
I10	Ham	MP3	No	+ HB	+ HC	+ HB	+ HC	+	0.913	0.138	+	+ HB	+ HC	+	=	1.162	0.136	+	+ MB	+ MB	+	=
K21	Merguez	MP3	No	- HE	- ME	- HE	- HE	-	0.067	0.140	-	/	/	-	=							
L1	Marinated pork meat	MP3	No	+ HB	+ HB	+ HB	+ HB	+	1.245	0.168	+	+ HB	+ HB	+	=	1.105	0.136	+	+ HB	+ HB	+	=
L2	Bacon	MP3	No	+ HD	- HE	+ HD	+ HD	+	1.103	0.168	+	+ HD	- HE	+	=	1.026	0.136	+	+ HD (1)	+ HD	+	=
L3	Saucisson	MP3	No	+ HD	+ MC	+ HD	+ HB	+	0.945	0.168	+	+ HD	+ MC	+	=	0.811	0.136	+	+ HD	+ MB	+	=
L9	Saucisson	MP3	No	+ HB	+ HB	+ HB	+ HB	+	0.948	0.143	+	+ HB	+ HB	+	=	1.069	0.152	+	+ MC	+ HC	+	=

DAIRY PRODUCTS

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				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation		Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD			RVS Edel
A34	Epoisses "raw milk cheese"	DP1	No	- LE	- LE	- HE	- HE	-	0.101	0.149	-	/	/	-	=							
A35	Soumaintrain "raw milk cheese"	DP1	No	- ME	Ø	- ME	- LE	-	0.085	0.149	-	/	/	-	=							
B26	Reblochon "raw milk cheese"	DP1	No	- ME	- ME	- HE	- HE	-	0.077	0.155	-	/	/	-	=							
B27	Cantal "raw milk cheese"	DP1	No	- LE	Ø	- LE	Ø	-	0.080	0.155	-	/	/	-	=							
B44	Cantal "raw milk cheese"	DP1	No	- ME	- ME	- HE	- HE	-	0.086	0.159	-	/	/	-	=							
B46	Morbier "raw milk cheese"	DP1	No	- ME	- ME	- HE	- ME	-	0.094	0.159	-	/	/	-	=							
B49	Brie de Meaux "raw milk cheese"	DP1	No	- HE	- LE	- HE	- LE	-	0.081	0.159	-	/	/	-	=							
F17	Epoisses "raw milk cheese"	DP1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.016	0.147	+	+ HA	+ HA	+	=	1.211	0.140	+	+MA	+MA	+	=
F18	Munster "raw milk cheese"	DP1	Yes	+ HA	+ HA	+ HA	+ HA	+	0.985	0.147	+	+ HA	+ HA	+	=	1.026	0.140	+	+MA	+ HA	+	=
F19	Epoisses "raw milk cheese"	DP1	Yes	+ MA	+ MB	+ HB	+ MB	+	1.048	0.147	+	+ MA	+ MB	+	=	1.213	0.140	+	+ MA	+ MB	+	=
F24	Maroilles "raw milk cheese"	DP1	Yes	+ HB	+ MB	+ HA	+ HA	+	1.752	0.147	+	+ HB	+ MB	+	=	2.154	0.140	+	+HA	+HB	+	=
F30	Reblochon "raw milk cheese"	DP1	Yes	+ HB	+ HB	+ HB	- HE	+	1.028	0.147	+	+ HB	+ HB	+	=	1.147	0.140	+	+MA	+ HB	+	=
F31	Raw goat milk cheese	DP1	Yes	+ HB	+ HB	+ HB	+ HB	+	1.036	0.147	+	+ HB	+ HB	+	=	1.111	0.140	+	+MB	+ HB	+	=
F32	Raw goat milk cheese	DP1	Yes	+ HB	+ HB	+ HB	+ HB	+	0.994	0.147	+	+ HB	+ HB	+	=	1.098	0.140	+	+MB	+MB	+	=
F33	Camembert "raw milk cheese"	DP1	Yes	+ HB	+ HA	+ HA	+ HA	+	0.837	0.147	+	+ HB	+ HA	+	=	1.055	0.140	+	+HB	+MA	+	=
F34	St Nectaire "raw milk cheese"	DP1	Yes	+ HB	+ MB	+ HB	+ HC	+	0.871	0.147	+	+ HB	+ MB	+	=	0.999	0.140	+	+MB	+ MB	+	=
F37	Chèvre au lait cru	DP1	Yes	+ HB	+ HB	+ HB	+ HB	+	0.973	0.147	+	+ HB	+ HB	+	=	1.215	0.140	+	+ MB	+MB	+	=
G32	Reblochon "raw milk cheese"	DP1	No	- ME	- ME	- HE	- HE	-	0.055	0.140	-	/	/	-	=							
H32	St Nectaire "raw milk cheese"	DP1	Yes	+ HB	+ HB	+ HC	+ HB	+	1.088	0.141	+	+ HB	+ HB	+	=	0.980	0.145	+	+ MB	+ MB	+	=
H33	Livarot "raw milk cheese"	DP1	Yes	+ MB	+ HB	+ HC	+ HB	+	0.955	0.141	+	+ MB	+ HB	+	=	0.915	0.145	+	+ MB	+ MB	+	=
I42	Munster "raw milk cheese"	DP1	Yes	+ MA	+ MB	+ HB	+ HB	+	1.008	0.138	+	+ MA	+ MB	+	=	1.170	0.136	+	+ MA	+ MB	+	=
A1	Powder milk	DP2	No	Ø	Ø	Ø	Ø	-	0.089	0.149	-	/	/	-	=							
A8	Raw milk	DP2	No	- ME	Ø	- HE	- LE	-	0.090	0.149	-	/	/	-	=							
A9	Raw milk	DP2	No	- ME	- LE	- ME	- LE	-	0.075	0.149	-	/	/	-	=							
B22	Raw milk	DP2	No	- LE	Ø	- HE	- LE	-	0.092	0.155	-	/	/	-	=							
B23	Raw milk	DP2	No	- LE	Ø	- ME	- LE	-	0.087	0.155	-	/	/	-	=							
B24	Raw milk	DP2	No	- LE	Ø	- LE	Ø	-	0.091	0.155	-	/	/	-	=							
B25	Raw milk	DP2	No	- ME	Ø	- ME	Ø	-	0.086	0.155	-	/	/	-	=							
B41	Powder milk	DP2	No	Ø	Ø	Ø	Ø	-	0.092	0.159	-	/	/	-	=							
F27	Raw milk	DP2	Yes	+ HB	+ MB	+ HB	+ HB	+	1.841	0.147	+	+ HB	+ MB	+	=	2.156	0.140	+	+ MB	+MB	+	=
F35	Raw milk	DP2	Yes	+ HC	+ HD	- HE	+ HD	+	0.843	0.147	+	+ HC	+ HD	+	=	0.987	0.140	+	+HC	+HC	+	=
F36	Raw milk	DP2	No	- HE	- ME	- HE	- HE	-	0.082	0.147	-	/	/	-	=							
F38	Powder milk	DP2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.014	0.147	+	+ HA	+ HA	+	=	1.056	0.140	+	+MA	+MA	+	=
F39	Powder milk	DP2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.021	0.147	+	+ HA	+ HA	+	=	1.102	0.140	+	+MA	+MA	+	=
F40	Powder milk	DP2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.695	0.147	+	+ HA	+ HA	+	=	1.709	0.140	+	+MA	+MA	+	=
I33	Raw milk	DP2	Yes	+ HB	+ MB	+ HC	+ HB	+	0.822	0.138	+	+ HB	+ MB	+	=	1.009	0.136	+	+ MB	+ MA	+	=
I44	Powder milk	DP2	Yes	+ MA	+ HB	+ MA	+ HB	+	0.863	0.138	+	+ MA	+ HB	+	=	0.981	0.136	+	+ MA	+ LA	+	=
K1	Powder milk	DP2	No	Ø	Ø	Ø	Ø	-	0.062	0.140	-	/	/	-	=							
T1	Raw milk	DP2	Yes	+ HD	+ MC	+ HB	+ HB	+	0.157	0.139	+	+ HD	+ MC	+	=	0.252	0.147	+	+ HB	+ HB	+	=
T2	Raw milk	DP2	Yes	+ HD	+ MB	+ HB	+ HB	+	0.376	0.139	+	+ HD	+ MB	+	=	0.405	0.147	+	+ MB	+ MB	+	=
T3	Raw milk	DP2	Yes	+ HD	+ MB	+ HB	+ HC	+	0.675	0.139	+	+ HD	+ MB	+	=	0.785	0.147	+	+ HB	+ HB	+	=
T4	Raw milk	DP2	Yes	+ HC	+ MC	+ HB	+ HA	+	0.571	0.139	+	+ HC	+ MC	+	=	0.612	0.147	+	+ MB	+ MB	+	=
T5	Raw milk	DP2	Yes	+ HD	+ MB	+ HB	+ HB	+	0.236	0.139	+	+ HD	+ MB	+	=	0.333	0.147	+	+ HB	+ HB	+	=

DAIRY PRODUCTS

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				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
A27	Chocolate ice cream	DP3	No	- ME	- ME	- ME	- ME	-	0.082	0.149	-	/	/	-	=								
A38	Pasteurized milk cheese	DP3	No	- ME	Ø	Ø	Ø	-	0.093	0.159	-	/	/	-	=								
A39	Pasteurized goat milk cheese	DP3	No	- HE	Ø	- LE	Ø	-	0.092	0.159	-	/	/	-	=								
A40	Pasteurized milk cheese	DP3	No	Ø	Ø	Ø	Ø	-	0.095	0.159	-	/	/	-	=								
A41	Camembert pasteurized	DP3	No	- LE	Ø	Ø	Ø	-	0.093	0.159	-	/	/	-	=								
A42	Blue cheese	DP3	No	Ø	Ø	- HE	- HE	-	0.094	0.159	-	/	/	-	=								
B45	Edam cheese	DP3	No	Ø	Ø	Ø	Ø	-	0.091	0.159	-	/	/	-	=								
B47	Edam cheese	DP3	No	- HE	- ME	- HE	- ME	-	0.105	0.159	-	/	/	-	=								
B53	Ossau Iraty pasteurized	DP3	No	- HE	- LE	- HE	- LE	-	0.091	0.159	-	/	/	-	=								
C22	Caramel ice cream	DP3	No	Ø	Ø	Ø	Ø	-	0.087	0.149	-	/	/	-	=								
F15	Pasteurized milk cheese	DP3	Yes	+ HA	+ HA	+ HA	+ HA	+	1.085	0.147	+	+ HA	+ HA	+	=	1.121	0.140	+	+ MA	+ MA	+	=	
F16	Pasteurized milk cheese	DP3	Yes	+ HA	+ HA	+ HA	+ HA	+	0.984	0.147	+	+ HA	+ HA	+	=	0.995	0.140	+	+ HA	+ HA	+	=	
F20	Coulommiers pasteurized cheese	DP3	Yes	+ MB	+ MA	+ HA	+ HA	+	0.939	0.147	+	+ MB	+ MA	+	=	0.963	0.140	+	+ MB	+ MB	+	=	
F21	Châmois d'Or pasteurized cheese	DP3	Yes	+ MA	+ MB	+ HA	+ HB	+	0.922	0.147	+	+ MA	+ MB	+	=	0.978	0.140	+	+ MB	+ MB	+	=	
F22	Chaumes pasteurized cheese	DP3	Yes	+ HA	+ HA	+ HB	+ HB	+	0.904	0.147	+	+ HA	+ HA	+	=	1.005	0.140	+	+ HA	+ HA	+	=	
F23	Tomme des Pyrénées pasteurized cheese	DP3	Yes	+ HA	+ MA	+ HA	+ HA	+	0.903	0.147	+	+ HA	+ MA	+	=	0.951	0.140	+	+ MA	+ MA	+	=	
F25	Vanillia ice cream	DP3	Yes	+ HA	+ HA	+ HA	+ HA	+	1.808	0.147	+	+ HA	+ HA	+	=	1.854	0.140	+	+ MA	+ MA	+	=	
F26	Crème glacée rhum raisins	DP3	Yes	+ HA	+ HA	+ HA	+ HA	+	0.945	0.147	+	+ HA	+ HA	+	=	1.006	0.140	+	+ MA	+ MA	+	=	
G31	Maroilles pasteurized cheese	DP3	No	- ME	- ME	- HE	- HE	-	0.056	0.140	-	/	/	-	=								
I41	Pont l'Evêque pasteurized cheese	DP3	Yes	+ HB	+ HC	+ HB	+ HB	+	0.980	0.138	+	+ HB	+ HC	+	=	1.148	0.136	+	+ MB	+ MB	+	=	
I43	Maroilles pasteurized cheese	DP3	Yes	+ MB	+ HB	+ HB	+ HC	+	0.954	0.138	+	+ MB	+ HB	+	=	1.189	0.136	+	+ MA	+ MB	+	=	
K2	Pont l'Evêque pasteurized cheese	DP3	No	- HE	- HE	- HE	- HE	-	0.060	0.140	-	/	/	-	=								

EGG PRODUCTS, READY-TO-EAT MEALS AND PASTRIES

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)						Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison	
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation		Final result		OD	Positive threshold	Test result	Confirmation		Final result		
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
A2	Liquid white egg	DIV1	No	- LE	Ø	- HE	- LE	-	0.078	0.149	-	/	/	-	=								
A3	Liquid white egg	DIV1	No	Ø	Ø	Ø	Ø	-	0.076	0.149	-	/	/	-	=								
A4	Liquid white egg	DIV1	No	- ME	Ø	- ME	Ø	-	0.077	0.149	-	/	/	-	=								
A5	Yellow liquid egg	DIV1	No	Ø	Ø	Ø	Ø	-	0.078	0.149	-	/	/	-	=								
A6	Whole liquid egg	DIV1	No	- LE	- LE	- LE	Ø	-	0.081	0.149	-	/	/	-	=								
A9	Whole liquid egg	DIV1	No	- ME	- ME	- ME	- ME	-	0.075	0.149	-	/	/	-	=								
A10	Whole liquid egg	DIV1	No	- LE	Ø	Ø	Ø	-	0.076	0.149	-	/	/	-	=								
A11	Whole liquid egg	DIV1	No	Ø	Ø	Ø	Ø	-	0.073	0.149	-	/	/	-	=								
B11	Egg powder	DIV1	No	- ME	- LE	- LE	- LE	-	0.080	0.155	-	/	/	-	=								
B12	Egg powder	DIV1	No	Ø	Ø	- LE	Ø	-	0.087	0.155	-	/	/	-	=								
B13	Egg powder	DIV1	No	Ø	Ø	Ø	Ø	-	0.078	0.155	-	/	/	-	=								
B34	Mayonnaise	DIV1	No	- HE	- ME	- HE	- HE	-	0.079	0.155	-	/	/	-	=								
D1	Whole liquid egg	DIV1	No	+ HD	+ MC	+ HD	+ HD (1)	+	1.269	0.145	+	+ HD	+ MC	+	=	1.426	0.152	+	+ HD	+ MB	+	=	
D2	Whole liquid egg	DIV1	No	+ HD	+ MC	+ HD	+ HD (1)	+	1.357	0.145	+	+ HD	+ MC	+	=	1.548	0.152	+	+ HD	+ MC	+	=	
D3	Whole liquid egg	DIV1	No	+ MC	+ MC	- HE	- HE	+	1.627	0.145	+	+ MC	+ MC	+	=	1.593	0.152	+	+ MC	+ MC	+	=	
D4	Whole liquid egg	DIV1	No	+ MD	+ MD	+ HD	+ HD (1)	+	1.114	0.145	+	+ MD	+ MD	+	=	1.424	0.152	+	+ HD	+ MC	+	=	
D5	Liquid white egg	DIV1	No	+ HD	+ MD	+ HC	+ HD (1)	+	1.880	0.145	+	+ HD	+ MD	+	=	1.892	0.152	+	+ HC	+ MC	+	=	
D6	Liquid white egg	DIV1	No	+ HD	+ MB	+ HD	+ HC	+	1.605	0.145	+	+ HD	+ MB	+	=	1.632	0.152	+	+ MC	+ MB	+	=	
F14	Liquid white egg	DIV1	Yes	+ MB	+ HB	+ HD (2)	+ MD (1)	+	1.365	0.148	+	+ MB	+ HB	+	=	1.387	0.140	+	+MB	+MB	+	=	
H6	Whole liquid egg	DIV1	No	+ MB	+ MB	+ HD	+ HB	+	1.103	0.140	+	+ MB	+ MB	+	=	1.198	0.132	+	+ MB	+ MB	+	=	
H24	Egg powder	DIV1	Yes	+ MB	+ MB	+ HB	+ HB	+	1.778	0.141	+	+ MB	+ MB	+	=	1.800	0.145	+	+ MB	+ MB	+	=	
H25	Egg powder	DIV1	Yes	+ HB	+ HC	+ HB	+ HB	+	1.356	0.141	+	+ HB	+ HC	+	=	1.426	0.145	+	+ HB	+ HC	+	=	
H26	White egg powder	DIV1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.289	0.141	+	+ HA	+ HA	+	=	1.438	0.145	+	+ HA	+ HA	+	=	
T6	Mayonnaise	DIV1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.356	0.139	+	+ HA	+ HA	+	=	1.554	0.142	+	+ HA	+ HA	+	=	
T7	Mayonnaise	DIV1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.213	0.139	+	+ HA	+ HA	+	=	1.489	0.142	+	+ HA	+ HA	+	=	
T8	Mayonnaise with lemon	DIV1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.189	0.139	+	+ HA	+ HA	+	=	1.479	0.142	+	+ HA	+ HA	+	=	
A19	Leg of lamb with herbs	DIV2	No	- HE	- HE	- HE	- HE	-	0.068	0.149	-	/	/	-	=								
A20	Ready to eat meal "coquille St Jacques"	DIV2	No	- LE	- LE	Ø	Ø	-	0.081	0.149	-	/	/	-	=								
A21	Chicken with chinese sauce	DIV2	No	Ø	Ø	Ø	Ø	-	0.081	0.149	-	/	/	-	=								
A22	Sausages with Lentils	DIV2	No	Ø	Ø	Ø	Ø	-	0.075	0.149	-	/	/	-	=								
B28	Sauté of turkey	DIV2	No	- ME	- ME	- HE	- HE	-	0.079	0.155	-	/	/	-	=								
B29	Smoked fillet of hake cooked	DIV2	No	- ME	- ME	- HE	- HE	-	0.079	0.155	-	/	/	-	=								
B30	Roasted beef	DIV2	No	- ME	- ME	- HE	- HE	-	0.083	0.155	-	/	/	-	=								
B33	Chopped steak au poivre	DIV2	No	- HE	- HE	- HE	- HE	-	0.078	0.155	-	/	/	-	=								
B39	Lamb saté with curry sauce	DIV2	No	- LE	- LE	Ø	Ø	-	0.069	0.155	-	/	/	-	=								
B40	Vol au vent sauce	DIV2	No	Ø	Ø	Ø	Ø	-	0.078	0.155	-	/	/	-	=								
I3	Fillet of hake with vegetables	DIV2	Yes	+ HB	+ MC	+ MC	+ MC	+	0.985	0.138	+	+ HB	+ MC	+	=	1.209	0.136	+	+ LB	+ MB	+	=	
I4	Tagliatelle with seafood	DIV2	Yes	+ MA	+ MA	+ MA	+ MA	+	0.879	0.138	+	+ MA	+ MA	+	=	1.054	0.136	+	+ MA	+ MA	+	=	
I5	Paella	DIV2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.029	0.138	+	+ HA	+ HA	+	=	1.156	0.136	+	+ LA	+ MA	+	=	
I6	Chicken with lemon sauce	DIV2	Yes	+ HA	+ HA	+ HA	+ HA	+	0.971	0.138	+	+ HA	+ HA	+	=	1.251	0.136	+	+ LA	+ MA	+	=	
I11	Fish terrine	DIV2	Yes	+ HA	+ HA	+ HA	+ HA	+	0.843	0.138	+	+ HA	+ HA	+	=	1.049	0.136	+	+ LA	+ MA	+	=	
I12	Minced beef with sauce	DIV2	Yes	+ HA	+ HA	+ HA	+ HA	+	0.927	0.138	+	+ HA	+ HA	+	=	1.163	0.136	+	+ HA	+ HA	+	=	

EGG PRODUCTS, READY-TO-EAT MEALS AND PASTRIES

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)					Comparison			
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation		Final result		
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD			RVS Edel	
A26	Coffee pastry	DIV3	No	- HE	- HE	- HE	- HE	-	0.084	0.149	-	/	/	-	=								
A28	Cream puff	DIV3	No	- ME	- ME	- ME	- ME	-	0.084	0.149	-	/	/	-	=								
A29	Ananas tart	DIV3	No	- ME	- ME	- HE	- HE	-	0.084	0.149	-	/	/	-	=								
A30	Apple pie	DIV3	No	- ME	- ME	Ø	Ø	-	0.107	0.149	-	/	/	-	=								
A31	Pear Belle Hélène	DIV3	No	- HE	- HE	- HE	- HE	-	0.098	0.149	-	/	/	-	=								
A33	Chocolate pastry	DIV3	No	- HE	- HE	- HE	- HE	-	0.098	0.149	-	/	/	-	=								
A43	Fruits pastry	DIV3	No	- HE	- HE	- HE	- HE	-	0.103	0.159	-	/	/	-	=								
A47	Coffee pastry	DIV3	No	- ME	- LE	- ME	- HE	-	0.099	0.159	-	/	/	-	=								
B51	Chocolate tart	DIV3	No	Ø	Ø	Ø	Ø	-	0.077	0.159	-	/	/	-	=								
B52	Custard	DIV3	No	Ø	Ø	Ø	Ø	-	0.079	0.159	-	/	/	-	=								
H34	Paris Brest pastry	DIV3	Yes	+ MB	+ HB	+ HB	+ HB	+	1.616	0.141	+	+ MB	+ HB	+	=	1.606	0.145	+	+ MA	+ HA	+	=	
H35	Versailles pastry with 3 chocolates	DIV3	Yes	+ HA	+ HA	+ HB	+ HC	+	0.330	0.141	+	+ HA	+ HA	+	=	0.361	0.145	+	+ MA	+ HA	+	=	
H36	Pastry with custard	DIV3	Yes	+ MA	+ HA	+ HA	+ HA	+	1.651	0.141	+	+ MA	+ HA	+	=	1.833	0.145	+	+ MA	+ MA	+	=	
H37	Millefeuille pastry	DIV3	Yes	+ MB	+ HB	+ HB	+ HC	+	0.318	0.141	+	+ MB	+ HB	+	=	0.267	0.145	+	+ MB	+ HB	+	=	
H38	Chocolate tart	DIV3	Yes	+ MA	+ MA	+ HA	+ HA	+	1.661	0.141	+	+ MA	+ MA	+	=	1.768	0.145	+	+ MA	+ MA	+	=	
H39	Raspberries tart	DIV3	Yes	+ MA	+ MA	+ HA	+ HA	+	0.251	0.141	+	+ MA	+ MA	+	=	0.156	0.145	+	+ MA	+ HA	+	=	
I22	Coffee pastry	DIV3	Yes	+ MA	+ HA	+ HB	+ HB	+	1.732	0.138	+	+ MA	+ HA	+	=	1.857	0.136	+	+ MA	+ MA	+	=	
I23	Cream puff	DIV3	Yes	+ MA	+ MB	+ HB	+ HB	+	1.707	0.138	+	+ MA	+ MB	+	=	1.849	0.136	+	+ MA	+ MA	+	=	
I24	Pastry with strawberries	DIV3	Yes	+ MB	+ MB	+ HB	+ HB	+	1.715	0.138	+	+ MB	+ MB	+	=	1.832	0.136	+	+ MB	+ MB	+	=	
I25	Versailles pastry with 3 chocolates	DIV3	Yes	+ MA	+ HB	+ HB	+ HC	+	1.587	0.138	+	+ MA	+ HB	+	=	1.701	0.136	+	+ MA	+ MA	+	=	

VEGETABLES AND SEAFOOD PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)					Comparison		
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation		Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD			RVS Edel
A23	Dogfish fillet	SF1	No	- ME	- ME	- ME	- ME	-	0.088	0.149	-	/	/	-	=							
A24	Fillet ling	SF1	No	- ME	- HE	- ME	- HE	-	0.084	0.149	-	/	/	-	=							
A25	Tuna fillet	SF1	No	- ME	- HE	- ME	- ME	-	0.082	0.149	-	/	/	-	=							
A44	Fillet of cod	SF1	No	- ME	- ME	- HE (Cf)	- HE	-	0.091	0.159	-	/	/	-	=							
A45	Salmon steak	SF1	No	- HE	- ME	- ME (Cf)	- ME	-	0.089	0.159	-	/	/	-	=							
A46	Codfish	SF1	No	- ME	- ME	- HE	- HE	-	0.087	0.159	-	/	/	-	=							
B42	Almond shells	SF1	No	- ME	- ME	- ME	- ME	-	0.079	0.159	-	/	/	-	=							
B54	Salmon Fillet	SF1	No	- HE	- HE (Ps)	- HE	- HE (Ps)	-	0.085	0.159	-	/	/	-	=							
B55	Sardine Fillets	SF1	No	- ME	- LE	- HE	- LE	-	0.083	0.159	-	/	/	-	=							
B56	Seafoodboard	SF1	No	- ME	- LE	- ME	Ø	-	0.082	0.159	-	/	/	-	=							
E1	Cuttlefish	SF1	No	Ø	Ø	Ø	Ø	-	0.059	0.143	-	/	/	-	=							
F2	Crab claws	SF1	No	- HE (Pm)	Ø	- HE	Ø	-	0.064	0.147	-	/	/	-	=							
F13	Gambas	SF1	No	Ø	Ø	Ø	Ø	-	0.073	0.147	-	/	/	-	=							
H27	Mackerel Fillets	SF1	Yes	+ MB	+ MB	+ HC	+ MA	+	1.241	0.141	+	+ MB	+ MB	+	=	1.343	0.145	+	+ MB	+ HB	+	=
H28	Salmon Fillet	SF1	Yes	+ MB	+ MB	+ HC	+ HC	+	1.261	0.141	+	+ MB	+ MB	+	=	1.423	0.145	+	+ MB	+ HB	+	=
H29	Net pomegranate	SF1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.304	0.141	+	+ HA	+ HA	+	=	1.313	0.145	+	+ MA	+ HA	+	=
H30	Fillet of sailthe	SF1	Yes	+ HB	+ HA	+ HB	+ HA	+	1.354	0.141	+	+ HB	+ HA	+	=	1.399	0.145	+	+ MA	+ HA	+	=
H31	Hake Fillet	SF1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.341	0.141	+	+ HA	+ HA	+	=	1.252	0.145	+	+ MA	+ MA	+	=
I21	Almond shells	SF1	Yes	+ MA	+ MA	+ HB	+ HB	+	0.997	0.138	+	+ MA	+ MA	+	=	1.119	0.136	+	+ MA	+ MA	+	=
I26	Fillet of whiting	SF1	Yes	+ MB	+ LA	+ HB	+ MB	+	1.186	0.138	+	+ MB	+ LA	+	=	1.496	0.136	+	+ MB	+ MB	+	=
I27	Fillet of cod	SF1	Yes	+ MB	+ MC	+ MC	+ MC	+	1.097	0.138	+	+ MB	+ MC	+	=	1.392	0.136	+	+ MC	+ MC	+	=
I28	Mackerel fillet with pepper	SF1	Yes	+ HA	+ MB	+ MB	+ MB	+	1.293	0.138	+	+ HA	+ MB	+	=	1.446	0.136	+	+ MB	+ MB	+	=
I29	Smoked haddock fillet	SF1	Yes	+ MA	+ MA	+ MB	+ MB	+	1.322	0.138	+	+ MA	+ MA	+	=	1.530	0.136	+	+ HA	+ HA	+	=
A32	Mushrooms	V1	No	- HE	- HE	- HE	- HE	-	0.090	0.149	-	/	/	-	=							
A48	Salad	V1	No	- ME	- LE	- ME	- HE	-	0.088	0.159	-	/	/	-	=							
B31	Red cabbage	V1	No	- HE	- ME	- HE	- HE	-	0.079	0.155	-	/	/	-	=							
B36	Raw carrots	V1	No	- ME	- ME	- HE	- HE	-	0.071	0.155	-	/	/	-	=							
B37	Cucumber	V1	No	- ME	- ME	- HE	- HE	-	0.077	0.155	-	/	/	-	=							
B38	Eggplant sliced	V1	No	- ME	- HE	- HE	- HE	-	0.088	0.155	-	/	/	-	=							
B48	Salad	V1	No	- HE	- HE	- H	- HE	-	0.075	0.159	-	/	/	-	=							
E28	Spices	V1	No	- HE	Ø	Ø	Ø	-	0.076	0.167	-	/	/	-	=							
E29	Spices	V1	No	- ME	- HE	- HE	- HE	-	0.078	0.167	-	/	/	-	=							
F28	Mixed vegetables	V1	Yes	+ HA	+ HB	+ HB	+ HB	+	0.895	0.147	+	+ HA	+ HB	+	=	0.900	0.140	+	+ MA	+ MB	+	=
F29	Salad	V1	Yes	+ MB	+ MB	+ HB	+ HB	+	0.921	0.147	+	+ MB	+ MB	+	=	1.059	0.140	+	+ MB	+ MB	+	=
G34	Parsley	V1	No	- HE	- ME	- HE	- HE	-	0.052	0.140	-	/	/	-	=							
G35	Curry	V1	No	- HE	- ME	- LE	Ø	-	0.055	0.140	-	/	/	-	=							
H45	Grated carrots	V1	Yes	+ MB	+ HC	+ HD	+ HD	+	1.406	0.141	+	+ MB	+ HC	+	=	1.422	0.145	+	+ MB	+ MB	+	=
I17	Cucumber	V1	Yes	+ MB	+ MB	+ MB	+ MC	+	0.984	0.138	+	+ MB	+ MB	+	=	1.165	0.136	+	+ MA	+ MB	+	=
I18	Grated carrots	V1	Yes	+ MB	+ MC	+ MB	+ MB	+	0.910	0.138	+	+ MB	+ MC	+	=	1.192	0.136	+	+ MB	+ LB	+	=
I19	Mushrooms	V1	Yes	+ MA	+ MB	+ MC	+ MC	+	1.047	0.138	+	+ MA	+ MB	+	=	1.146	0.136	+	+ MB	+ LB	+	=
I20	Salad	V1	Yes	+ MB	+ MB	+ HB	+ HB	+	0.968	0.138	+	+ MB	+ MB	+	=	1.253	0.136	+	+ MB	+ LB	+	=
I30	Curry	V1	Yes	+ HA	+ MA	+ MA	+ HA	+	0.845	0.138	+	+ HA	+ MA	+	=	0.943	0.136	+	+ MA	+ MA	+	=
I31	Paprika	V1	Yes	+ HA	+ MA	+ MA	+ MA	+	0.779	0.138	+	+ HA	+ MA	+	=	1.043	0.136	+	+ MA	+ MA	+	=
I32	Chives	V1	Yes	+ MA	+ MA	+ MA	+ MA	+	0.786	0.138	+	+ MA	+ MA	+	=	0.939	0.136	+	+ LA	+ MA	+	=

VEGETABLES AND SEAFOOD PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #				Alternative method TPSG (OD after RVS incubation)						Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison	
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation			Final result
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel		
A12	Fresh orange juice	V2	No	Ø	Ø	Ø	Ø	-	0.075	0.149	-	/	/	-	=							
A13	Fruit juice and milk	V2	No	Ø	Ø	Ø	Ø	-	0.078	0.149	-	/	/	-	=							
A37	Fruit salad	V2	No	- ME	- ME	- HE	- HE	-	0.087	0.149	-	/	/	-	=							
B18	Apple juice	V2	No	Ø	Ø	Ø	Ø	-	0.075	0.155	-	/	/	-	=							
B19	Pomelos juice	V2	No	- ME	- LE	Ø	Ø	-	0.073	0.155	-	/	/	-	=							
B20	Fruit salad	V2	No	- ME	- ME	- LE	- LE	-	0.068	0.155	-	/	/	-	=							
B21	Ananas	V2	No	- ME	- LE	Ø	Ø	-	0.074	0.155	-	/	/	-	=							
B35	Soup	V2	No	- LE	- ME	- HE	- HE	-	0.076	0.155	-	/	/	-	=							
B50	Tomatoes soup	V2	No	Ø	Ø	Ø	Ø	-	0.079	0.159	-	/	/	-	=							
G33	Fruit salad	V2	No	- HE	- ME	- HE	- HE	-	0.055	0.140	-	/	/	-	=							
H40	Fruit salad	V2	Yes	+ MA	+ MB	+ HC	+ HD	+	1.404	0.141	+	+ MA	+ MB	+	=	1.409	0.145	+	+ HA	+ MA	+	=
H41	Fresh orange juice	V2	Yes	+ MB	+ HB	+ HB	+ HB	+	1.356	0.141	+	+ MB	+ HB	+	=	1.462	0.145	+	+ MA	+ HB	+	=
H42	Apple juice	V2	Yes	+ MA	+ MA	+ MA	+ HA	+	1.332	0.141	+	+ MA	+ MA	+	=	1.410	0.145	+	+ MA	+ HA	+	=
H43	Pomelos juice	V2	Yes	+ HB	+ HB	+ HB	+ HB	+	1.316	0.141	+	+ HB	+ HB	+	=	1.420	0.145	+	+ MB	+ MB	+	=
H44	Mashed vegetables	V2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.308	0.141	+	+ HA	+ HA	+	=	1.476	0.145	+	+ HA	+ HA	+	=
I13	Fruit compote	V2	Yes	+ HB	+ HC	+ HB	+ HC	+	0.849	0.138	+	+ HB	+ HC	+	=	0.967	0.136	+	+ LC	+ LB	+	=
I14	Fruit salad	V2	Yes	+ HB	+ HB	+ HA	+ HA	+	0.850	0.138	+	+ HB	+ HB	+	=	1.034	0.136	+	+ LA	+ LA	+	=
I15	Vegetables juice	V2	Yes	+ MA	+ MA	+ MA	+ MA	+	0.834	0.138	+	+ MA	+ MA	+	=	0.980	0.136	+	+ MA	+ LA	+	=
I16	Vegetables soup	V2	Yes	+ MA	+ MA	+ HA	+ HA	+	0.750	0.138	+	+ MA	+ MA	+	=	0.904	0.136	+	+ LA	+ MA	+	=
K23	Vegetables juice	V2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.004	0.140	+	+ HA	+ HA	+	=	1.079	0.148	+	+ HA	+ HA	+	=

ANIMAL FEED PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison		
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
B5	Fishmeal	F1	No	- ME	- ME	- ME	- ME	-	0.077	0.155	-	/	/	-	=								
B6	Fishmeal	F1	No	- LE	Ø	Ø	Ø	-	0.081	0.155	-	/	/	-	=								
B7	Fishmeal	F1	No	- ME	Ø	- LE	Ø	-	0.074	0.155	-	/	/	-	=								
B8	Fishmeal	F1	No	- ME	- LE	- ME	- ME	-	0.074	0.155	-	/	/	-	=								
B14	Animal meal	F1	No	- HE	- ME	- LE	Ø	-	0.088	0.155	-	/	/	-	=								
B15	Animal meal	F1	No	- LE	Ø	- LE	Ø	-	0.078	0.155	-	/	/	-	=								
C5	Fishmeal	F1	No	- ME	- ME	- HE	- HE	-	0.068	0.149	-	/	/	-	=								
C6	Fishmeal	F1	No	Ø	Ø	Ø	Ø	-	0.076	0.149	-	/	/	-	=								
C7	Fishmeal	F1	No	Ø	Ø	Ø	Ø	-	0.071	0.149	-	/	/	-	=								
C8	Fishmeal	F1	No	Ø	Ø	Ø	Ø	-	0.071	0.149	-	/	/	-	=								
C9	Fishmeal	F1	No	Ø	Ø	Ø	Ø	-	0.065	0.149	-	/	/	-	=								
C11	Animal meal	F1	No	Ø	Ø	Ø	Ø	-	0.066	0.149	-	/	/	-	=								
C12	Animal meal	F1	No	- HE	- HE	Ø	Ø	-	0.068	0.149	-	/	/	-	=								
H7	Fishmeal	F1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.178	0.141	+	+ HA	+ HA	+	=	1.138	0.145	+	+ HA	+ HA	+	=	
H8	Fishmeal	F1	Yes	+ HA	+ HA	+ HA	+ HA	+	0.958	0.141	+	+ HA	+ HA	+	=	0.981	0.145	+	+ HA	+ HA	+	=	
H9	Fishmeal	F1	Yes	+ MB	+ HB	+ HB	+ HC	+	1.451	0.141	+	+ MB	+ HB	+	=	1.457	0.145	+	+ HB	+ HB	+	=	
H10	Fishmeal	F1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.085	0.141	+	+ HA	+ HA	+	=	1.154	0.145	+	+ HA	+ HA	+	=	
H11	Fishmeal	F1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.423	0.141	+	+ HA	+ HA	+	=	1.501	0.145	+	+ HA	+ HA	+	=	
H12	Fishmeal	F1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.062	0.141	+	+ HA	+ HA	+	=	1.165	0.145	+	+ HA	+ HA	+	=	
H23	Fishmeal	F1	Yes	+ MA	+ MA	+ HA	+ HA	+	1.567	0.141	+	+ HA	+ HA	+	=	1.419	0.145	+	+ HA	+ HA	+	=	
J7	Fishmeal	F1	No	+ HA	+ HA	+ HA	+ HA	+	1.202	0.141	+	+ HA	+ HA	+	=	1.012	0.137	+	+ HA	+ HA	+	=	
J8	Fishmeal	F1	No	+ HA	+ HA	+ HA	+ HA	+	0.478	0.141	+	+ HA	+ HA	+	=	0.364	0.137	+	+ HA	+ HA	+	=	
J9	Fishmeal	F1	No	+ HA	+ HA	+ HA	+ HA	+	0.905	0.141	+	+ HA	+ HA	+	=	0.689	0.137	+	+ HA	+ HA	+	=	

ANIMAL FEED PRODUCTS

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison		
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	OD	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
B1	Soy cattle cake	F2	No	- LE	- LE	- LE	- LE	-	0.074	0.155	-	/	/	-	=								
B2	Soy cattle cake	F2	No	- ME	- ME	- ME	- ME	-	0.083	0.155	-	/	/	-	=								
B3	Rape cattle cake	F2	No	Ø	Ø	Ø	Ø	-	0.072	0.155	-	/	/	-	=								
B4	Rape cattle cake	F2	No	+ MC	+ LB	+ HB	+ HB	+	1.849	0.155	+	+ MC	+ LB	+	=	1.547	0.159	+	+ MC	+ MB	+	=	
B5	Fishmeal	F2	No	- ME	- ME	- ME	- ME	-	0.077	0.155	-	/	/	-	=								
B6	Fishmeal	F2	No	- LE	Ø	Ø	Ø	-	0.081	0.155	-	/	/	-	=								
B7	Fishmeal	F2	No	- ME	Ø	- LE	Ø	-	0.074	0.155	-	/	/	-	=								
B8	Fishmeal	F2	No	- ME	- LE	- ME	- ME	-	0.074	0.155	-	/	/	-	=								
B9	Rape cattle cake	F2	No	- LE	Ø	Ø	Ø	-	0.073	0.155	-	/	/	-	=								
B10	Rape cattle cake	F2	No	- ME	- ME	- LE	- LE	-	0.077	0.155	-	/	/	-	=								
B16	Soy cattle cake	F2	No	- ME	- ME	- HE	- HE	-	0.075	0.155	-	/	/	-	=								
C1	Rape cattle cake	F2	No	- HE	- HE	- HE	- HE	-	0.067	0.149	-	/	/	-	=								
C2	Rape cattle cake	F2	No	Ø	Ø	Ø	Ø	-	0.070	0.149	-	/	/	-	=								
C3	Rape cattle cake	F2	No	- ME	- ME	- ME	- ME	-	0.070	0.149	-	/	/	-	=								
C4	Rape cattle cake	F2	No	- LE	Ø	Ø	Ø	-	0.068	0.149	-	/	/	-	=								
H13	Rape cattle cake	F2	Yes	+ HA	+ HA	+ MA	+ HA	+	1.344	0.141	+	+ HA	+ HA	+	=	1.351	0.145	+	+ HA	+ HA	+	=	
H14	Rape cattle cake	F2	Yes	+ HA	+ HA	+ HB	+ HA	+	0.842	0.141	+	+ HA	+ HA	+	=	0.851	0.145	+	+ HA	+ HA	+	=	
H15	Rape cattle cake	F2	Yes	+ MB	+ HC	+ HB	+ HC	+	1.436	0.141	+	+ MB	+ HC	+	=	1.359	0.145	+	+ HC	+ HD	+	=	
H16	Soy cattle cake	F2	Yes	+ MB	+ MB	+ HB	+ HC	+	1.058	0.141	+	+ MB	+ MB	+	=	0.997	0.145	+	+ MB	+ MB	+	=	
H20	Cattle cake	F2	Yes	+ HA	+ HA	+ HA	+ HA	+	0.917	0.141	+	+ HA	+ HA	+	=	0.995	0.145	+	+ HA	+ HA	+	=	
H46	Soy cattle cake	F2	No	- ME	- ME	- HE	- HE	-	0.057	0.132	-	/	/	-	=								
J28	Cattle cake	F2	No	+ HA	+ HA	+ HA	+ HA	+	1.304	0.141	+	+ HA	+ HA	+	=	0.964	0.137	+	+ HA	+ HA	+	=	
J29	Cattle cake	F2	No	+ HB	+ HB	+ HA	+ HA	+	0.221	0.141	+	+ HB	+ HB	+	=	0.226	0.137	+	+ HB	+ HB	+	=	
J30	Cattle cake	F2	No	+ MA	+ MA	+ HA	+ HA	+	0.934	0.141	+	+ MA	+ MA	+	=	0.921	0.137	+	+ HA	+ HA	+	=	
J31	Cattle cake	F2	No	+ MB	+ HB	+ HB	+ HB	+	0.970	0.141	+	+ MB	+ HB	+	=	0.898	0.137	+	+ HB	+ HC	+	=	
L7	Rape cattle cake	F2	No	- HE	- ME	- HE	- HE	-	0.052	0.143	-	/	/	-	=								
B17	Granules for Pets	F3	No	Ø	Ø	Ø	Ø	-	0.074	0.155	-	/	/	-	=								
B43	Pig feed	F3	No	- ME	- ME	- ME	- ME	-	0.079	0.159	-	/	/	-	=								
C10	Seed Malt	F3	No	- ME	- ME	- ME	- ME	-	0.069	0.149	-	/	/	-	=								
C13	Dry Cat Food	F3	No	- ME	- ME	- LE	- LE	-	0.073	0.149	-	/	/	-	=								
C25	Seeds of alfalfa for horses	F3	No	- ME	- ME	- HE	- HE	-	0.088	0.159	-	/	/	-	=								
C26	Blend granules rabbit	F3	No	- HE	- HE	- HE	- HE	-	0.083	0.159	-	/	/	-	=								
F3	Dog Food	F3	No	Ø	Ø	Ø	Ø	-	0.064	0.147	-	/	/	-	=								
F10	Paté Dog	F3	No	Ø	Ø	Ø	Ø	-	0.065	0.147	-	/	/	-	=								
H17	Cat food	F3	Yes	+ HA	+ HA	+ HA	+ HA	+	1.368	0.141	+	+ HA	+ HA	+	=	1.307	0.145	+	+ MA	+ MA	+	=	
H18	Rabbit Food	F3	Yes	+ HB	+ HC	+ HB	+ HD	+	0.941	0.141	+	+ HB	+ HC	+	=	0.891	0.145	+	+ MB	+ HC	+	=	
H19	Alfalfa for horses	F3	Yes	+ MB	+ MB	+ HC	+ HB	+	1.165	0.141	+	+ MB	+ MB	+	=	1.227	0.145	+	+ HB	+ HC	+	=	
H21	Mix granulated fish	F3	Yes	+ MB	+ HB	+ HC	+ HB	+	1.295	0.141	+	+ MB	+ HB	+	=	1.291	0.145	+	+ HB	+ HB	+	=	
H22	Fine crushed seeds	F3	Yes	+ HA	+ HA	+ HA	+ HA	+	0.821	0.141	+	+ HA	+ HA	+	=	0.867	0.145	+	+ HA	+ HA	+	=	
H47	Pig feed	F3	No	- HE	- HE	- HE	- HE	-	0.056	0.132	-	/	/	-	=								
H48	Pig feed	F3	No	Ø	Ø	- LE	Ø	-	0.052	0.132	-	/	/	-	=								
J10	Granules for Pets	F3	No	+ HA	+ HA	+ HA	+ HA	+	1.238	0.141	+	+ HA	+ HA	+	=	1.031	0.137	+	+ HA	+ HA	+	=	
J11	Granules for Pets	F3	No	+ HA	+ HA	+ HA	+ HA	+	0.217	0.141	+	+ HA	+ HA	+	=	0.203	0.137	+	+ HA	+ HA	+	=	
K13	Soup to pig	F3	No	+ HA	+ HA	+ HA	+ HA	+	0.969	0.141	+	+ MB	+ HB	+	=	1.031	0.148	+	+ HA	+ HA	+	=	
K14	Food for chicks	F3	Yes	+ HD	- HE	+ HC	+ HD	+	0.075	0.141	-	+ HD	- HE	-	FN	0.078	0.148	-	+ HD	+ HD	-	FN	
K16	Paté Dog	F3	Yes	+ MA	+ HA	+ HA	+ HA	+	0.506	0.141	+	+ MB	+ HB	+	=	0.748	0.148	+	+ HA	+ HA	+	=	

ENVIRONMENTAL SAMPLES

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison		
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	DO	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
A14	Water pipe 3 before drying	EN1	No	- ME	- LE	- HE	Ø	-	0.084	0.149	-	/	/	-	=								
A15	Water pipe 3 after drying	EN1	No	- ME	- LE	Ø	Ø	-	0.080	0.149	-	/	/	-	=								
A16	Water Prewash	EN1	No	- HE	- ME	- ME	- ME	-	0.077	0.149	-	/	/	-	=								
A17	Water washing	EN1	No	Ø	Ø	- LE	Ø	-	0.079	0.149	-	/	/	-	=								
A18	Water rinsing	EN1	No	Ø	- LE	Ø	Ø	-	0.076	0.149	-	/	/	-	=								
C14	Water Sewer	EN1	No	+ MB	+ MB	+ HB	+ HB	+	0.795	0.149	+	+ MB	+ HB	+	=	1.111	0.139	+	+ MB	+ HD	+	=	
C15	Water Sewer	EN1	No	- ME	- ME	- HE	- HE	-	0.074	0.149	-	/	/	-	=								
E17	Prewash water tanks	EN1	No	- ME	- ME	- HE	- ME	-	0.060	0.143	-	/	/	-	=								
I34	Water network	EN1	No	Ø	Ø	Ø	Ø	-	0.063	0.138	-	Ø	/	/	-	=							
I35	Water drying	EN1	No	Ø	Ø	Ø	Ø	-	0.057	0.138	-	/	/	-	=								
I36	Water sheet	EN1	No	Ø	Ø	Ø	Ø	-	0.062	0.138	-	/	/	-	=								
J3	Water drying	EN1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.146	0.141	+	+ HA	+ HA	+	=	0.935	0.137	+	+ HA	+ HA	+	=	
J5	Water sheet	EN1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.219	0.141	+	+ HA	+ HA	+	=	1.006	0.137	+	+ HA	+ HA	+	=	
J20	Water Sewer workshop shells	EN1	No	+ HB	+ HC	- HE	- HE	+	1.173	0.141	+	+ HB	+ HC	+	=	0.932	0.137	+	+ HB	+ HB	+	=	
J21	Water Sewer workshop shells	EN1	No	- HE	- HE	- HE	- HE	-	0.071	0.141	-	/	/	-	=								
K3	Water Sewer	EN1	No	+ MB	+ HB	+ HB	+ HD	+	1.138	0.140	+	+ MB	+ HB	+	=	1.318	0.148	+	+ HB	+ HB	+	=	
K4	Water Prewash	EN1	Yes	+ HA	+ HA	+ HA	+ HA	+	0.932	0.140	+	+ HA	+ HA	+	=	1.055	0.148	+	+ HA	+ HA	+	=	
K5	Water tank rinse mushrooms	EN1	Yes	+ HA	+ HA	+ HA	+ HA	+	1.023	0.140	+	+ HA	+ HA	+	=	1.168	0.148	+	+ HA	+ HA	+	=	
K6	Water network	EN1	Yes	+ HA	+ HA	+ HA	+ HA	+	0.942	0.140	+	+ HA	+ HA	+	=	1.035	0.148	+	+ HA	+ HA	+	=	
K7	Water Sewer workshop mushrooms	EN1	No	+ HB	+ HC	+ MB	+ HD	+	1.336	0.140	+	+ HB	+ HC	+	=	1.684	0.148	+	+ HB	+ HB	+	=	
K8	Water washing	EN1	No	+ MA	+ MLA	+ HA	+ HA	+	0.963	0.140	+	+ MA	+ MLA	+	=	1.155	0.148	+	+ HA	+ HA	+	=	
C18	Surface	EN2	No	Ø	Ø	Ø	Ø	-	0.072	0.149	-	/	/	-	=								
C19	Surface	EN2	No	- ME	- ME	- HE	- ME	-	0.071	0.149	-	/	/	-	=								
C20	Sink surface	EN2	No	+ HD	+ MD (1)	+ HD	+ HD	+	0.446	0.149	+	+ HD	+ MD	+	=	0.538	0.139	+	+ MD	+ MD	+	=	
C21	Washing room surface	EN2	No	- ME	- ME	- HE	- HE	-	0.073	0.149	-	/	/	-	=								
H55	Chifonnette	EN2	No	- HE	- ME	- HE	- ME	-	0.058	0.132	-	/	/	-	=								
H56	Chifonnette	EN2	No	- HE	- LE	- HE	- HE	-	0.063	0.132	-	/	/	-	=								
H57	Chifonnette	EN2	No	- ME	- ME	- HE	- HE	-	0.057	0.132	-	/	/	-	=								
H58	Chifonnette	EN2	No	- HE	- ME	- HE	- HE	-	0.058	0.132	-	/	/	-	=								
H59	Chifonnette	EN2	No	- HE	- ME	- HE	- HE	-	0.063	0.132	-	/	/	-	=								
I37	Surface	EN2	No	Ø	Ø	Ø	Ø	-	0.066	0.138	-	/	/	-	=								
I38	Sink Sponge	EN2	No	+ HB	+ HC	+ HC	+ MC	+	1.064	0.138	+	+ HB	+ HC	+	=	1.079	0.136	+	+ MB	+ LB	+	=	
I39	Sponge soil bins	EN2	No	+ MD	+ MD	+ HD	+ HC	+	1.295	0.138	+	+ MD	+ MD	+	=	1.108	0.136	+	+ LD	+ LD	+	=	
I40	Sponge hamburger shop	EN2	No	+ MD	- LE	+ HD	+ HD	+	1.409	0.138	+	+ MD	- LE	+	=	1.424	0.136	+	+ MC	+ MC	+	=	
J1	Pipe before drying	EN2	Yes	+ HA	+ HA	+ HA	+ HA	+	1.069	0.141	+	+ HA	+ HA	+	=	0.858	0.137	+	+ HA	+ HA	+	=	
J15	Sponge siphon	EN2	No	- HE	- HE	- HE	- HE	-	0.068	0.141	-	/	/	-	=								
J16	Sponge workplan	EN2	No	+ MB	+ MB	+ HD	+ HD	+	1.063	0.141	+	+ MB	+ MB	+	=	0.936	0.137	+	+ MB	+ MB	+	=	
J17	Sponge cart storage	EN2	No	+ HB	+ HB	+ HB	+ HD	+	0.949	0.141	+	+ HB	+ HB	+	=	0.859	0.137	+	+ HB	+ HB	+	=	
K9	Sponge siphon	EN2	Yes	+ HB	+ HD	- HE	- HE	+	0.884	0.140	+	+ HB	+ HD	+	=	1.007	0.148	+	+ HB	+ HD	+	=	
K10	Sponge shelf storage	EN2	Yes	+ MA	+ HA	+ MA	+ HA	+	0.868	0.140	+	+ MA	+ HA	+	=	0.966	0.148	+	+ HA	+ HA	+	=	
K11	Sponge cutting	EN2	Yes	+ HA	+ HA	+ HA	+ HA	+	0.868	0.140	+	+ HA	+ HA	+	=	0.941	0.148	+	+ HA	+ HA	+	=	
L6	Sponge soil residues	EN2	No	+ MB	+ HC	+ HB	+ HC	+	2.269	0.168	+	+ MB	+ HC	+	=	1.851	0.136	+	+ HC	+ HC	+	=	

ENVIRONMENTAL SAMPLES

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 #					Alternative method TPSG (OD after RVS incubation)					Comparison	Alternative method TPSG (OD after RVS incubation and storage 48 hours at 2-8°C)						Comparison		
				RVS		MKTTn		Final result	OD	Positive threshold	Test result	Confirmation			Final result	DO	Positive threshold	Test result	Confirmation			Final result	
				XLD	Edel	XLD	Edel					RVS XLD	RVS Edel						RVS XLD	RVS Edel			
C16	Siphon scraps	EN3	No	- ME	- ME	- HE	- HE	-	0.071	0.149	-	/	/	-	=								
C17	Siphon scraps	EN3	No	+ MC	+ HC	+ HC	+ HC	+	0.551	0.149	+	+ MC	+ HC	+	=	0.693	0.139	+	+ HC	+ HC	+	=	
C23	Siphon scraps	EN3	No	- ME	- ME	- HE (Cf)	- HE (Ha)	-	0.075	0.149	-	/	/	-	=								
J18	Eggshells	EN3	No	+ HB	+ MB	+ HB	+ HB	+	0.784	0.141	+	+ HB	+ MB	+	=	0.827	0.137	+	+ HC	+ HB	+	=	
J19	Eggshells	EN3	No	+ MB	+ MB	+ HB	+ MB	+	0.783	0.141	+	+ MB	+ MB	+	=	0.742	0.137	+	+ HB	+ HB	+	=	
J22	Food scraps	EN3	No	+ HB	+ MB	+ HB	+ HC	+	1.202	0.141	+	+ HB	+ MB	+	=	1.022	0.137	+	+ HB	+ HB	+	=	
J23	Food scraps	EN3	No	+ HA	+ MA	+ HA	+ HA	+	1.090	0.141	+	+ HA	+ MA	+	=	0.871	0.137	+	+ HA	+ HA	+	=	
J24	Food scraps	EN3	No	Ø	Ø	- ME	- HE	-	0.065	0.141	-	/	/	-	=								
J25	Eggshells	EN3	No	- HE	- LE	- HE	- LE	-	0.070	0.141	-	/	/	-	=								
J26	Eggshells	EN3	No	- HE	- LE	- HE	- LE	-	0.069	0.141	-	/	/	-	=								
J27	Food scraps	EN3	No	+ HB	+ HB	+ HB	+ MC	+	1.103	0.141	+	+ HB	+ HB	+	=	0.976	0.137	+	+ HB	+ HC	+	=	
K12	Scraps	EN3	No	+ MC	+ HD	+ HC	+9 HD	+	1.413	0.140	+	+ MC	+ HD	+	=	1.551	0.148	+	+ MC	+ HD	+	=	
K24	Scraps from gambas	EN3	Yes	+ MB	+ HB	+ HB	+ HB	+	0.858	0.140	+	+ MB	+ HB	+	=	1.022	0.148	+	+ HB	+ HB	+	=	
K25	Scraps from shrimps	EN3	Yes	+ MB	+ HB	+ HB	+ HB	+	0.187	0.148	+	+ MB	+ HB	+	=	0.176	0.155	+	+ HA	+ HB	+	=	
K26	Dust scraps	EN3	Yes	- ME	- ME	- HE	- HE	-	0.065	0.148	-	/	/	-	=								
K27	Food scraps	EN3	Yes	+ MB	+ MC	+ HD	+ HD	+	0.170	0.148	+	+ MB	+ MC	+	=	0.171	0.155	+	+ HB	+ HC	+	=	
M1	Dust scraps	EN3	No	Ø	Ø	Ø	Ø	-	0.063	0.148	-	/	/	-	=								
M2	Food scraps	EN3	No	Ø	Ø	Ø	Ø	-	0.074	0.148	-	/	/	-	=								

ANNEX D

COMPLEMENTARY ASSAYS - 2009

RELATIVE ACCURACY, RELATIVE SENSITIVITY AND RELATIVE SPECIFICITY

DETAILED RESULTS

COMPLEMENTARY ASSAYS (2009)
Change in positive threshold calculation (2011)

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 (#)					Alternative method TPSG (OD after RVS incubation)								Comparison	
				RVS		MKTTn		Final result	OD	Results with current threshold (NC+0.1)		Results with modification of positive threshold (NC+0.2)			Confirmation			Final result
				XLD	BGAM	XLD	BGAM			Positive threshold	Test result	Positive threshold	Negative threshold	Test result	RVS XLD	RVS BGAM		
A5	Carry chicken	MP	No	-LE	Ø	Ø	-LE	-	0.020	0.153	-	0.243	0.219	-	/	/	-	=
C17	Chipolata sausage	MP	No	-ME	-ME	-HE	-HE	-	0.041	0.145	-	0.235	0.212	-	/	/	-	=
C18	Chipolata sausage	MP	No	+MB	+MB	+HB	+HB	+	1.603	0.145	+	0.235	0.212	+	+MB	+MB	+	=
D12	Chicken legs	MP	No	+MB	+MB	+MB	+MB	+	3.068	0.141	+	0.231	0.208	+	+MB	+MB	+	=
D13	Rabbit legs	MP	No	-ME	Ø	-ME	-LE	-	0.032	0.141	-	0.231	0.208	-	/	/	-	=
D14	Pork throat	MP	No	-ME	-LE	-ME	-ME	-	0.037	0.141	-	0.231	0.208	-	/	/	-	=
D15	Pork shoulder	MP	No	-ME	Ø	-ME	-LE	-	0.033	0.141	-	0.231	0.208	-	/	/	-	=
D18	Pork meat	MP	No	-LE	-LE	-HE	-ME	-	0.036	0.141	-	0.231	0.208	-	/	/	-	=
D23	Chicken legs	MP	No	-ME	-LE	-ME	-ME	-	0.030	0.141	-	0.231	0.208	-	/	/	-	=
D24	Turkey cutlet	MP	No	+MB	+MB	+MB	+MB	+	0.876	0.141	+	0.231	0.208	+	+MB	+MB	+	=
D25	Calf liver	MP	No	+HB	+MB	+MB	+MB	+	0.325	0.141	+	0.231	0.208	+	+HB	+MB	+	=
D26	Brochette (Turkey)	MP	No	-ME	-ME	-ME	-ME	-	0.040	0.141	-	0.231	0.208	-	/	/	-	=
E6	Ham	MP	No	Ø	-LE	Ø	-ME	-	0.022	0.145	-	0.235	0.212	-	/	/	-	=
E7	Delicatessen	MP	No	-ME	-ME	-ME	-ME	-	0.026	0.145	-	0.235	0.212	-	/	/	-	=
E8	Sausisson	MP	No	-ME	-LE	-ME	-ME	-	0.025	0.145	-	0.235	0.212	-	/	/	-	=
F6	Dry sausage	MP	Yes	+MA	+MA	+HA	+HA	+	2.861	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F7	Duck "rillettes"	MP	Yes	+MA	+MA	+MA	+HA	+	3.081	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F8	Pâté	MP	Yes	+MA	+MA	+MA	+HA	+	2.713	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F9	Beef grounded meat	MP	Yes	+MA	+MA	+HA	+HA	+	3.034	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F11	Raw milk	MP	Yes	+MA	+MA	+HA	+MA	+	3.105	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F12	Chicken	MP	Yes	+MB	+MB	+HB	+HB	+	0.341	0.162	+	0.252	0.227	+	+MB	+MB	+	=
F13	Pork meat	MP	Yes	+LB	+MB	+HB	+HB	+	2.381	0.162	+	0.252	0.227	+	+LB	+MB	+	=
A1	Munster cheese	DP	No	-ME	-ME	-ME	-ME	-	0.026	0.153	-	0.243	0.219	-	/	/	-	=
A2	Raw milk cheese	DP	No	-ME	-ME	-ME	-ME	-	0.026	0.153	-	0.243	0.219	-	/	/	-	=
A3	Emmental cheese	DP	No	Ø	Ø	Ø	Ø	-	0.027	0.153	-	0.243	0.219	-	/	/	-	=
A10	Neufchâtel cheese	DP	No	-ME	-ME	-ME	-ME	-	0.030	0.153	-	0.243	0.219	-	/	/	-	=
A11	Munster cheese	DP	No	-ME	-ME	-ME	-ME	-	0.023	0.153	-	0.243	0.219	-	/	/	-	=
C1	Milk powder	DP	Yes	+MA	+MA	+HA	+HA	+	2.253	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C3	Raw milk	DP	Yes	-ME	-ME	-ME	-ME	-	0.024	0.145	-	0.235	0.212	-	/	/	-	=
C5	Reblochon cheese	DP	Yes	-ME	-ME	-HE	-ME	-	0.032	0.145	-	0.235	0.212	-	/	/	-	=
E9	Gouda cheese	DP	No	-ME	Ø	-ME	-ME	-	0.028	0.145	-	0.235	0.212	-	/	/	-	=
E10	Milk powder	DP	No	Ø	Ø	Ø	Ø	-	0.031	0.145	-	0.235	0.212	-	/	/	-	=
F1	Camembert cheese	DP	Yes	+MB	+MB	+HA	+HA	+	2.948	0.162	+	0.252	0.227	+	+MB	+MB	+	=
F2	Milk powder	DP	Yes	+MA	+MA	+HA	+HA	+	2.952	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F4	Cantal cheese	DP	Yes	+MB	+MB	+MB	+MB	+	2.788	0.162	+	0.252	0.227	+	+MB	+MB	+	=
F5	Goat' milk cheese	DP	Yes	+MA	+MA	+MA	+HA	+	3.024	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F10	Raw milk cheese	DP	Yes	+MA	+MA	+HA	+HA	+	2.972	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F14	Goat' milk cheese	DP	Yes	+MA	+MA	+HA	+HA	+	3.025	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F15	Neufchâtel cheese	DP	Yes	+MB	+MB	+MB	+MB	+	0.519	0.162	+	0.252	0.227	+	+MB	+MB	+	=
F16	Goat' milk cheese	DP	No	Ø	Ø	Ø	Ø	-	0.033	0.162	-	0.252	0.227	-	Ø	Ø	-	=
F17	Ewe's milk cheese	DP	No	Ø	Ø	Ø	Ø	-	0.038	0.162	-	0.252	0.227	-	Ø	Ø	-	=
F18	Angeroux cheese	DP	No	Ø	Ø	Ø	Ø	-	0.036	0.162	-	0.252	0.227	-	Ø	Ø	-	=
F19	Morbier cheese	DP	No	-ME	-ME	-HE	-ME	-	0.035	0.162	-	0.252	0.227	-	-ME	-ME	-	=
F20	Epoisses cheese	DP	No	Ø	Ø	Ø	Ø	-	0.045	0.162	-	0.252	0.227	-	Ø	Ø	-	=
F21	Raw milk	DP	No	Ø	Ø	Ø	Ø	-	0.036	0.162	-	0.252	0.227	-	Ø	Ø	-	=
F22	Raw milk	DP	No	-LE	-LE	-ME	-ME	-	0.039	0.162	-	0.252	0.227	-	-LE	-LE	-	=
F23	Raw milk	DP	No	+MA	+MA	+HA	+HA	+	3.108	0.162	+	0.252	0.227	+	+MA	+MA	+	=
F24	Raw milk	DP	No	+MB	+MC	+MB	+MB	+	0.225	0.162	+	0.252	0.227	-	+MB	+MC	+	FN
F25	Raw milk	DP	No	+LA	+LA	+HA	+HA	+	3.037	0.162	+	0.252	0.227	+	+LA	+LA	+	=

COMPLEMENTARY ASSAYS (2009)
Change in positive threshold calculation (2011)

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 (#)				Alternative method TPSG (OD after RVS incubation)										Comparison
				RVS		MKTTn		Final result	OD	Results with current threshold (NC+0.1)		Results with modification of positive threshold (NC+0.2)			Confirmation		Final result	
				XLD	BGAM	XLD	BGAM			Positive threshold	Test result	Positive threshold	Negative threshold	Test result	RVS XLD	RVS BGAM		
A19	Pastry Raspberries and passion fruit	DIV1	No	-ME	-ME	-LE	-LE	-	0.022	0.153	-	0.243	0.219	-	/	/	-	=
B8	Yellow egg powder	DIV1	Yes	+MA	+MA	+MA	+MA	+	2.977	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B9	Eggproduct	DIV1	Yes	+MA	+MA	+HA	+HA	+	2.852	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B10	Liquid whole egg	DIV1	Yes	+MA	+MA	+HA	+HA	+	3.077	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B11	Mayonnaise	DIV1	Yes	+MA	+MA	+HA	+HA	+	2.709	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B12	Mayonnaise with raw eggs	DIV1	Yes	+MA	+MA	+HA	+HA	+	3.049	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B13	Light mayonnaise	DIV1	Yes	+LA	+MA	+MA	+HA	+	2.963	0.149	+	0.239	0.215	+	+MA	+MA	+	=
B25	White egg powder	DIV1	No	Ø	Ø	Ø	Ø	-	0.030	0.149	-	0.239	0.215	-	/	/	-	=
B26	Eggproduct	DIV1	No	Ø	Ø	Ø	Ø	-	0.028	0.149	-	0.239	0.215	-	/	/	-	=
B27	Pasteurized white egg	DIV1	No	Ø	Ø	Ø	Ø	-	0.030	0.149	-	0.239	0.215	-	/	/	-	=
B28	Mayonnaise with raw eggs	DIV1	No	Ø	Ø	Ø	Ø	-	0.020	0.149	-	0.239	0.215	-	/	/	-	=
B29	Light mayonnaise	DIV1	No	Ø	Ø	Ø	Ø	-	0.016	0.149	-	0.239	0.215	-	/	/	-	=
B30	Mayonnaise	DIV1	No	Ø	Ø	Ø	Ø	-	0.016	0.149	-	0.239	0.215	-	/	/	-	=
C13	Pastry 'Paris-Brest'	DIV1	Yes	+HA	+MA	+HA	+HA	+	2.691	0.145	+	0.235	0.212	+	+HA	+MA	+	=
C14	Strawberry tart	DIV1	Yes	Ø	Ø	Ø	Ø	-	0.141	0.145	d	0.235	0.212	-	Ø(a)	Ø(a)	-	=
C15	Vanilla ice-cream	DIV1	Yes	+MA	+MA	+MA	+MA	+	2.730	0.145	+	0.235	0.212	+	+MA	+MA	+	=
E11	Pastry 3 chocolates	DIV1	No	-LE	Ø	Ø	Ø	-	0.031	0.145	-	0.235	0.212	-	/	/	-	=
F3	Pastry with whipped cream and raspberries	DIV1	Yes	+LA	+LA	+MA	+MA	+	3.079	0.162	+	0.252	0.227	+	+LA	+LA	+	=
G11	Strawberries tart	DIV1	No	-ME	-LE	-ME	-ME	-	0.032	0.162	-	0.252	0.227	-	-ME	-LE	-	=
A8	Couscous Merguez	DIV2	No	Ø	Ø	Ø	Ø	-	0.022	0.153	-	0.243	0.219	-	/	/	-	=
A9	Coquilles Saint Jacques au gratin	DIV2	No	Ø	Ø	Ø	-LE	-	0.020	0.153	-	0.243	0.219	-	/	/	-	=
A18	Paella	DIV2	No	-LE	-LE	Ø	Ø	-	0.019	0.153	-	0.243	0.219	-	/	/	-	=
B14	Pizza chicken	DIV2	Yes	+MB	+MB	+MB	+MB	+	3.104	0.149	+	0.239	0.215	+	+MB	+MB	+	=
B15	Toasts	DIV2	No	-ME	-ME	-ME	-ME	-	0.017	0.149	-	0.239	0.215	-	/	/	-	=
B16	Smoked salmon toast	DIV2	No	-ME	-ME	-ME	-ME	-	0.019	0.149	-	0.239	0.215	-	/	/	-	=
B17	Toasts	DIV2	No	-LE	-LE	-ME	-ME	-	0.016	0.149	-	0.239	0.215	-	/	/	-	=
G12	Ready to eat meal (beef tongue / potatoes)	DIV2	Yes	+MA	+MA	+HA	+MA	+	3.103	0.162	+	0.252	0.227	+	+MA	+MA	+	=
A4	Whiting fillet	SF	No	-ME	-ME	-ME	-ME	-	0.022	0.153	-	0.243	0.219	-	/	/	-	=
A6	Pollock fillet	SF	No	-LE	-LE	-ME	-ME	-	0.027	0.153	-	0.243	0.219	-	/	/	-	=
A7	Cooked squids	SF	No	Ø	Ø	Ø	Ø	-	0.023	0.153	-	0.243	0.219	-	/	/	-	=
A12	Salmon fillet	SF	No	-LE	-LE	-ME	-ME	-	0.021	0.153	-	0.243	0.219	-	/	/	-	=
A13	Shrimps	SF	No	-ME	-LE	-ME	-ME	-	0.020	0.153	-	0.243	0.219	-	/	/	-	=
A14	Shrimps	SF	No	-ME	-LE	-ME	-ME	-	0.026	0.153	-	0.243	0.219	-	/	/	-	=
A15	"Grenadier" fillet	SF	No	-LE	-LE	-ME	-ME	-	0.020	0.153	-	0.243	0.219	-	/	/	-	=
A16	Crab pincers	SF	No	-LE	Ø	-LE	Ø	-	0.024	0.153	-	0.243	0.219	-	/	/	-	=
A17	Whiting fillet	SF	No	-LE	-LE	-ME	-ME	-	0.021	0.153	-	0.243	0.219	-	/	/	-	=
D1	Shrimps	SF	Yes	+LA	+LA	+MA	+MA	+	3.068	0.141	+	0.231	0.208	+	+LA	+LA	+	=
D2	Shrimps	SF	Yes	+MA	+MA	+MA	+MA	+	3.002	0.141	+	0.231	0.208	+	+MA	+MA	+	=
D3	Whiting fillet	SF	Yes	+MA	+LA	+MA	+MA	+	2.841	0.141	+	0.231	0.208	+	+MA	+LA	+	=
D4	Fish fillet	SF	Yes	+MB	+MB	+MA	+MA	+	2.886	0.141	+	0.231	0.208	+	+MB	+MB	+	=
G1	Fish fillet	SF	No	-ME	Ø	-ME	-LE	-	0.035	0.162	-	0.252	0.227	-	-ME	Ø	-	=
G2	Whiting fillet	SF	No	-ME	-ME	-ME	-ME	-	0.037	0.162	-	0.252	0.227	-	-ME	-ME	-	=
G3	Shrimps	SF	No	-ME	-LE	-ME	-ME	-	0.030	0.162	-	0.252	0.227	-	-ME	-LE	-	=
C7	Grated carrots	V	Yes	+MA	+MA	+HA	+MA	+	2.894	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C8	Red cabbage	V	Yes	+MA	+MA	+MA	+MA	+	2.707	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C9	Vegetables for couscous	V	Yes	+MA	+MA	+HA	+MA	+	2.765	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C10	Stew cooked vegetables	V	Yes	+MA	+MA	+MA	+MA	+	2.255	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C11	Mixed vegetables	V	Yes	+MA	+MA	+MA	+HA	+	2.459	0.145	+	0.235	0.212	+	+MA	+MA	+	=
C12	Cucumber	V	Yes	+MB	+MB	+HB	+MB	+	1.716	0.145	+	0.235	0.212	+	+MB	+MB	+	=
D27	Spinashes	V	No	-ME	-LE	-ME	-ME	-	0.023	0.141	-	0.231	0.208	-	/	/	-	=
E1	Mixed vegetables	V	No	Ø	Ø	Ø	Ø	-	0.024	0.145	-	0.235	0.212	-	/	/	-	=
E2	Betroot	V	No	Ø	Ø	Ø	Ø	-	0.026	0.145	-	0.235	0.212	-	/	/	-	=
E3	Green beans	V	No	Ø	Ø	Ø	Ø	-	0.028	0.145	-	0.235	0.212	-	/	/	-	=
E4	Carrots Vichy	V	No	Ø	Ø	Ø	Ø	-	0.029	0.145	-	0.235	0.212	-	/	/	-	=
E5	Grated carrots	V	No	Ø	Ø	Ø	Ø	-	0.030	0.145	-	0.235	0.212	-	/	/	-	=

COMPLEMENTARY ASSAYS (2009)
Change in positive threshold calculation (2011)

Code sample	Product	Cat.	Artif.	Reference method EN ISO 6579 (#)					Alternative method TPSG (OD after RVS incubation)										Comparison
				RVS		MKTTn		Final result	OD	Results with current threshold (NC+0.1)		Results with modification of positive threshold (NC+0.2)			Confirmation		Final result		
				XLD	BGAM	XLD	BGAM			Positive threshold	Test result	Positive threshold	Negative threshold	Test result	RVS XLD	RVS BGAM			
B1	Feed with poultry	F	Yes	+MA	+MA	+HA	+HA	+	0.435	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B2	Salmon biscuits for cat	F	Yes	+MA	+MA	+HA	+HA	+	1.022	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B3	Poultry biscuits for cat	F	Yes	+MA	+MA	+MA	+MA	+	0.858	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B4	Fishmeal	F	Yes	+MA	+MA	+HA	+HA	+	1.339	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B5	Birds feed	F	Yes	+MB	+MB	+HB	+HB	+	3.104	0.149	+	0.239	0.215	+	+MB	+MB	+	=	
B6	Soy cattle cake	F	Yes	+MA	+MA	+HA	+HA	+	0.353	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B7	Cattle cake	F	Yes	+MA	+MA	+HA	+HA	+	1.443	0.149	+	0.239	0.215	+	+MA	+MA	+	=	
B18	Cattle cake	F	No	Ø	Ø	Ø	Ø	-	0.018	0.149	-	0.239	0.215	-	/	/	-	=	
B19	Beef biscuits for dog	F	No	-LE	Ø	Ø	Ø	-	0.017	0.149	-	0.239	0.215	-	/	/	-	=	
B20	Meat biscuits for cat	F	No	Ø	Ø	Ø	Ø	-	0.020	0.149	-	0.239	0.215	-	/	/	-	=	
B21	Beef and vegetables biscuits for cat	F	No	Ø	Ø	Ø	Ø	-	0.017	0.149	-	0.239	0.215	-	/	/	-	=	
B22	Feed with poultry	F	No	Ø	Ø	Ø	Ø	-	0.017	0.149	-	0.239	0.215	-	/	/	-	=	
B23	Birds feed	F	No	-ME	-ME	-ME	-ME	-	0.019	0.149	-	0.239	0.215	-	/	/	-	=	
B24	Chicken feed	F	No	-ME	-ME	-ME	-ME	-	0.020	0.149	-	0.239	0.215	-	/	/	-	=	
D9	Meat for dogs	F	Yes	+MA	+MA	+HA	+MA	+	2.918	0.141	+	0.231	0.208	+	+MA	+MA	+	=	
D10	Meat for cats	F	Yes	+MA	+MA	+MA	+MA	+	2.809	0.141	+	0.231	0.208	+	+MA	+MA	+	=	
D11	Wet feed (beef)	F	Yes	+LA	+MA	+MA	+MA	+	3.072	0.141	+	0.231	0.208	+	+LA	+MA	+	=	
D20	Meat for cats	F	No	Ø	Ø	Ø	Ø	-	0.023	0.141	-	0.231	0.208	-	/	/	-	=	
D21	Wet feed (beef)	F	No	Ø	Ø	Ø	Ø	-	0.026	0.141	-	0.231	0.208	-	/	/	-	=	
D22	Meat for dogs	F	No	-LE	-LE	Ø	Ø	-	0.024	0.141	-	0.231	0.208	-	/	/	-	=	
C19	Scraps	EN	No	+MB	+LB	+MB	+MB	+	0.333	0.145	+	0.235	0.212	+	+MB	+LB	+	=	
C20	Surface plant	EN	No	-ME	-ME	-HE	-HE	-	0.034	0.145	-	0.235	0.212	-	/	/	-	=	
D5	Scraps from fish	EN	Yes	+MB	+MB	+MB	+MB	+	3.100	0.141	+	0.231	0.208	+	+MB	+MB	+	=	
D6	Process water	EN	Yes	+MA	+MA	+MA	+MA	+	3.004	0.141	+	0.231	0.208	+	+MA	+MA	+	=	
D7	Process water	EN	Yes	+MA	+MA	+MA	+MA	+	3.028	0.141	+	0.231	0.208	+	+MA	+MA	+	=	
D8	Surface from butcher shop	EN	No	+MB	+MB	+MB	+MB	+	2.659	0.141	+	0.231	0.208	+	+MB	+MB	+	=	
D16	Surface from butcher shop	EN	No	-LE	Ø	-ME	-ME	-	0.033	0.141	-	0.231	0.208	-	/	/	-	=	
D17	Scraps from poultry	EN	No	-ME	Ø	-ME	-ME	-	0.042	0.141	-	0.231	0.208	-	/	/	-	=	
D19	Surface from poultry plant	EN	No	-ME	-LE	-ME	-ME	-	0.030	0.141	-	0.231	0.208	-	/	/	-	=	
D28	Surface from dirty container	EN	No	-ME	-ME	-ME	-ME	-	0.036	0.141	-	0.231	0.208	-	/	/	-	=	
D29	Cutting table surface	EN	No	-ME	-LE	-ME	-ME	-	0.030	0.141	-	0.231	0.208	-	/	/	-	=	
D30	Stagnant water	EN	No	-LE	-ME	-ME	-ME	-	0.033	0.141	-	0.231	0.208	-	/	/	-	=	
E12	Process water	EN	No	Ø	Ø	Ø	Ø	-	0.027	0.145	-	0.235	0.212	-	/	/	-	=	
E13	Process water	EN	No	Ø	Ø	Ø	Ø	-	0.028	0.145	-	0.235	0.212	-	/	/	-	=	
E14	Stainless steel table surface	EN	No	-LE	-LE	-LE	Ø	-	0.027	0.145	-	0.235	0.212	-	/	/	-	=	
E15	Scraps from dirty stainless table	EN	No	-ME	-ME	-HE	-ME	-	0.028	0.145	-	0.235	0.212	-	/	/	-	=	
E16	Cutting table surface	EN	No	-ME	-LE	-ME	-LE	-	0.037	0.145	-	0.235	0.212	-	/	/	-	=	
G4	Surface from fishmonger shop	EN	Yes	+MA	+MA	+MA	+MA	+	2.571	0.162	+	0.252	0.227	+	+MA	+MA	+	=	
G5	Surface dirty knife cheese shop	EN	Yes	+MA	+MA	+MA	+MA	+	2.936	0.162	+	0.252	0.227	+	+MA	+MA	+	=	
G6	Process water	EN	Yes	+MA	+MA	+HA	+MA	+	2.978	0.162	+	0.252	0.227	+	+MA	+MA	+	=	
G7	Ice Water	EN	Yes	+MA	+MA	+MA	+MA	+	2.359	0.162	+	0.252	0.227	+	+MA	+MA	+	=	
G8	Scraps from dirty container	EN	Yes	+MA	+MA	+HB	+HB	+	2.501	0.162	+	0.252	0.227	+	+MA	+MA	+	=	
G9	Process water	EN	No	Ø	Ø	Ø	Ø	-	0.036	0.162	-	0.252	0.227	-	Ø	Ø	-	=	
G10	Process water	EN	No	Ø	Ø	Ø	Ø	-	0.034	0.162	-	0.252	0.227	-	Ø	Ø	-	=	

NC: Negative Control

ANNEX E

INCLUSIVITY AND EXCLUSIVITY 2001 and 2005

Inclusivity study 2001 Salmonella strains

Strain	Origin	O.D. _{450nm}	Positive threshold	Result
<i>Salmonella</i> ser. Agona	Yeast	0.542	0.126	+
<i>Salmonella</i> ser. Agona	Yeast	0.500	0.131	+
<i>Salmonella</i> ser. Amsterdam	Vegetables	0.368	0.122	+
<i>Salmonella</i> ser. Anatum	Beef meat	0.513	0.121	+
<i>Salmonella arizonae</i> (IIIa) :				
<i>Salmonella</i> IIIa 48:z4 z23 : -	Collection	0.036	0.217	-
<i>Salmonella</i> IIIa 48:z4 z23 : -	Goose slaughterhouse	0.052	0.155	-
<i>Salmonella diarizonae</i> (IIIb) :				
<i>Salmonella</i> IIIb 38:r:z	Poultry slaughterhouse	0.288	0.155	+
<i>Salmonella</i> IIIb 6 : i:-	Poultry meat	0.466	0.121	+
<i>Salmonella</i> IIIb 61 imm	Poultry meat	0.767	0.121	+
<i>Salmonella</i> IIIb 61 imm	Poultry meat	0.771	0.121	+
<i>Salmonella</i> IIIb 61:1 z53	Poultry meat	0.838	0.121	+
<i>Salmonella</i> IIIb 61:i:-	Poultry meat	0.891	0.121	+
* <i>Salmonella</i> IIIb 61:k 1, 5,7	Lamb (brain)	0.552	0.155	+
* <i>Salmonella</i> IIIb 61 k:1, 5,7	Lamb (offals)	0.626	0.121	+
* <i>Salmonella</i> IIIb 61 z:1, 5	Lamb (tongue)	0.953	0.121	+
<i>Salmonella</i> ser. Brandenburg	Terrine	0.366	0.118	+
<i>Salmonella</i> ser. Brandenburg	Calf liver	0.718	0.122	+
<i>Salmonella</i> ser. Brandenburg	Pork liver	0.765	0.122	+
<i>Salmonella</i> ser. Brandenburg	Kangaroo meat	0.698	0.122	+
<i>Salmonella</i> ser. Brandenburg	Sausage	0.724	0.122	+
<i>Salmonella</i> ser. Bredeney	Pork offals	0.959	0.122	+
<i>Salmonella</i> ser. Derby	Horse meat	0.636	0.122	+
<i>Salmonella</i> ser. Derby	Pork liver	0.773	0.122	+
<i>Salmonella</i> ser. Derby	Sausage	0.788	0.122	+
<i>Salmonella</i> ser. Derby	Chipolatas	0.718	0.117	+
<i>Salmonella</i> ser. Enteritidis	Noiselia (pastry)	0.598	0.102	+
<i>Salmonella</i> ser. Enteritidis	Egg product	0.668	0.131	+
<i>Salmonella</i> ser. Enteritidis	Egg product	0.673	0.118	+
<i>Salmonella</i> ser. Enteritidis	Meat product	0.933	0.118	+
<i>Salmonella</i> ser. Enteritidis	Egg product	0.858	0.118	+
<i>Salmonella</i> ser. Hadar	Poultry meat	0.673	0.102	+
<i>Salmonella</i> ser. Hadar	Poultry meat	0.862	0.102	+
<i>Salmonella</i> ser. Hadar	Poultry meat	0.776	0.125	+
<i>Salmonella</i> ser. Hadar	Poultry meat	0.685	0.117	+
<i>Salmonella</i> ser. Havana	Poultry meat	0.432	0.155	+
<i>Salmonella</i> ser. Heidelberg	Poultry meat	0.387	0.131	+
<i>Salmonella</i> ser. Indiana	Brie de Meaux cheese	0.344	0.131	+
<i>Salmonella</i> ser. Infantis	Pork tongue	0.793	0.125	+
<i>Salmonella</i> ser. Infantis	Poultry meat	0.870	0.125	+
<i>Salmonella</i> ser. Kedougou	Gelatin	0.096	0.125	-
<i>Salmonella</i> ser. Kedougou	Fish	0.440	0.121	+
<i>Salmonella</i> ser. Kedougou	Feed	1.080	0.121	+
<i>Salmonella</i> ser. Kedougou	Feed	0.338	0.121	+
<i>Salmonella</i> ser. Kottbus	Poultry meat	0.405	0.118	+
<i>Salmonella</i> ser. Llandoff	Feed	0.290	0.155	+
<i>Salmonella</i> ser. Mbandaka	Calf heart	0.914	0.125	+
<i>Salmonella</i> ser. Michigan	Horse meat	0.267	0.125	+
<i>Salmonella</i> ser. Montevideo	Poultry meat	0.867	0.125	+
<i>Salmonella</i> ser. Montevideo	Beef liver	0.956	0.125	+
<i>Salmonella</i> ser. Newport	Poultry meat	0.766	0.125	+
<i>Salmonella</i> ser. Saint-Paul	Meat product	0.663	0.117	+
* <i>Salmonella</i> ser. Senftenberg	Fish	0.345	0.121	+
<i>Salmonella</i> ser. Senftenberg	Chicken	0.196	0.121	+
<i>Salmonella</i> ser. Senftenberg	Dairy product	1.440	0.121	+
<i>Salmonella</i> ser. Typhimurium	Pork liver	0.346	0.141	+
<i>Salmonella</i> ser. Typhimurium	Pork liver	0.575	0.117	+
<i>Salmonella</i> ser. Typhimurium	Pork kidneys	0.564	0.117	+
<i>Salmonella</i> ser. Typhimurium	Wild boar	0.699	0.117	+
<i>Salmonella</i> ser. Typhimurium	Egg product	0.664	0.117	+
<i>Salmonella</i> ser. Typhimurium	Bacon	1.377	0.117	+
<i>Salmonella</i> ser. Typhimurium	Egg product	0.608	0.117	+
<i>Salmonella</i> ser. Typhimurium	Sausage	0.454	0.118	+
<i>Salmonella</i> ser. Typhimurium	Pork cheek	0.402	0.118	+
<i>Salmonella</i> ser. Typhimurium	Ovoproduit	0.337	0.118	+
<i>Salmonella</i> ser. Typhimurium	Pork tongue	0.472	0.118	+
<i>Salmonella</i> ser. Typhimurium	Pork liver	0.541	0.125	+
<i>Salmonella</i> ser. Virchow	Shellfish	0.477	0.131	+
<i>Salmonella</i> immobile	Meat product	0.472	0.131	+
<i>Salmonella</i> spp.	Meat product	0.428	0.131	+
<i>Salmonella</i> spp.	Meat product	0.259	0.094	+

* atypical strains + : positive test

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Exclusivity study 2001 Non-target strains

Strain	Origin	O.D. _{450nm}	Positive threshold	Result
<i>Citrobacter diversus</i>	Collection	0.032	0.116	-
<i>Citrobacter freundii</i>	Meat product	0.029	0.120	-
<i>Citrobacter freundii</i>	Vegetables	0.060	0.123	-
<i>Citrobacter freundii</i>	Vegetables	0.023	0.123	-
<i>Citrobacter freundii</i>	Meat product	0.034	0.131	-
<i>Citrobacter freundii</i>	Meat product	0.029	0.131	-
<i>Citrobacter freundii</i>	Végétaux	0.033	0.131	-
<i>Citrobacter freundii</i>	Meat product	0.035	0.131	-
<i>Citrobacter freundii</i>	Seafood	0.036	0.131	-
<i>Citrobacter freundii</i>	Seafood	0.024	0.116	-
<i>Citrobacter freundii</i>	Dairy product	0.021	0.116	-
<i>Enterobacter agglomerans</i>	Meat product	0.053	0.141	-
<i>Enterobacter cloacae</i>	Dairy product	0.039	0.217	-
<i>Enterobacter cloacae</i>	Vegetables	0.057	0.123	-
<i>Enterobacter cloacae</i>	Dairy environment	0.047	0.141	-
<i>Enterobacter cloacae</i>	Dairy product	0.039	0.217	-
<i>Escherichia coli</i>	Meat product	0.050	0.141	-
<i>Escherichia coli</i>	Vegetables	0.048	0.141	-
<i>Escherichia coli</i> O157:H7	Collection	0.048	0.141	-
<i>Escherichia hermanii</i>	Collection	0.053	0.123	-
<i>Hafnia alvei</i>	Meat product	0.046	0.131	-
<i>Hafnia alvei</i>	Dairy product	0.058	0.141	-
<i>Hafnia alvei</i>	Collection	0.039	0.126	-
<i>Klebsiella oxytoca</i>	Vegetables	0.024	0.131	-
<i>Klebsiella oxytoca</i>	Vegetables	0.024	0.131	-
<i>Klebsiella pneumoniae</i>	Vegetables	0.031	0.131	-
<i>Proteus mirabilis</i>	Meat product	0.043	0.131	-
<i>Proteus mirabilis</i>	Meat product	0.035	0.131	-
<i>Proteus mirabilis</i>	Meat product	0.027	0.116	-
<i>Proteus mirabilis</i>	Meat product	0.028	0.116	-
<i>Proteus mirabilis</i>	Meat product	0.026	0.116	-
<i>Proteus mirabilis</i>	Meat product	0.031	0.116	-
<i>Pseudomonas aeruginosa</i>	Meat product	0.023	0.116	-
<i>Pseudomonas fluorescens</i>	Meat product	0.038	0.131	-
<i>Pseudomonas fluorescens</i>	Meat product	0.028	0.217	-
<i>Serratia marcescens</i>	Dairy product	0.051	0.141	-
<i>Shigella sonnei</i>	Meat product	0.060	0.123	-
<i>Bacillus cereus</i>	Vegetables	0.052	0.141	-
<i>Bacillus cereus</i>	Ovoproduit	0.048	0.141	-
<i>Bacillus licheniformis</i>	Dairy product	0.028	0.131	-
<i>Staphylococcus aureus</i>	Dairy product	0.077	0.123	-
<i>Staphylococcus epidermidis</i>	Dairy product	0.034	0.120	-
<i>Staphylococcus saprophyticus</i>	Meat product	0.057	0.123	-
<i>Yersinia enterocolitica</i>	Ovoproduit	0.065	0.141	-
<i>Candida albicans</i>	Collection	0.023	0.116	-
<i>Rhodotorula rubra</i>	Pastry	0.027	0.131	-
<i>Saccharomyces cerevisiae</i>	Fruit juice	0.024	0.116	-

- : negative test

Strain	Origin	Inoculation level in 225 ml BPW	Alternative method TPSG			
			OD	Positive threshold	Result	
S2	<i>Salmonella</i> ser. Amsterdam	Vegetables	2.5	1.809	0.166	+
S63	<i>Salmonella</i> ser. Agona	Yeast	1.85	0.869	0.133	+
S86	<i>Salmonella</i> ser. Anatum	Chocolate	1.5	1.251	0.159	+
S68	<i>Salmonella arizonae</i> III b 38 r:z	Geese Breeding	2.0	0.169	0.143	+
S74	<i>Salmonella arizonae</i> III b 61:-:-	Turkey	1.5	1.281	0.159	+
S75	<i>Salmonella arizonae</i> III b 61:i:z53	Chicken leg	2.5	0.806	0.159	+
S70	<i>Salmonella arizonae</i> III b 61:k:1,5,7	Lamb brains	1.0	1.272	0.159	+
S78	<i>Salmonella arizonae</i> III b 61:z:1,5	Blanquette of Turkey	1.0	0.835	0.159	+
S79	<i>Salmonella arizonae</i> III b 61:z:1,5	Language Lamb	1.0	1.513	0.159	+
S87	<i>Salmonella</i> ser. Blockley	Basil	0.9	0.962	0.143	+
S4	<i>Salmonella</i> ser. Brandenburg	Calf liver	2.1	0.801	0.143	+
S6	<i>Salmonella</i> ser. Brandenburg	Kangaroo meat	2.0	1.007	0.153	+
S5	<i>Salmonella</i> ser. Brandenburg	Pork liver	2.7	1.029	0.133	+
S86	<i>Salmonella</i> ser. Bredeney	Pork offals	1.0	1.545	0.159	+
S103	<i>Salmonella</i> ser. Cerro	Chou pastry	2.9	0.273	0.167	+
S10	<i>Salmonella</i> ser. Derby	Horse meat	1.0	1.236	0.159	+
S37	<i>Salmonella</i> ser. Derby	Sausage	1.75	0.826	0.167	+
S14	<i>Salmonella</i> ser. Enteritidis	Pastry	1.0	1.855	0.159	+
S38	<i>Salmonella</i> ser. Enteritidis	Egg product	1.0	1.944	0.159	+
S44	<i>Salmonella</i> ser. Enteritidis	Egg product	2.0	0.996	0.167	+
S15	<i>Salmonella</i> ser. Hadar	Poultry meat	2.0	2.336	0.166	+
S66	<i>Salmonella</i> ser. Havana	Poultry meat	3.9	0.217	0.139	+
S50	<i>Salmonella</i> ser. Heidelberg	Poultry meat	3.1	1.459	0.159	+
S45	<i>Salmonella</i> ser. Indiana	Brie de Meaux cheese	1.5	1.388	0.166	+
S19	<i>Salmonella</i> ser. Infantis	Poultry meat	3.25	1.404	0.159	+
S52	<i>Salmonella</i> ser. Infantis	Environment	1.5	1.778	0.159	+
S80	<i>Salmonella</i> ser. Kedougou	Tuna	2.0	2.128	0.166	+
S82	<i>Salmonella</i> ser. Kedougou	Feed	1.7	0.188	0.143	+
S85	<i>Salmonella</i> ser. Liverpool	Feed	2.65	1.223	0.153	+
S67	<i>Salmonella</i> ser. Llandoff	Feed	2.5	1.509	0.159	+
S21	<i>Salmonella</i> ser. Mbandoka	Veal heart	1.8	0.941	0.167	+
S22	<i>Salmonella</i> ser. Michigan	Horse meat	2.9	0.311	0.153	+
S23	<i>Salmonella</i> ser. Montevideo	Poultry meat	3.25	1.486	0.159	+
S25	<i>Salmonella</i> ser. Newport	Poultry meat	2.5	0.903	0.139	+
S90	<i>Salmonella</i> ser. Orianenburg	Feed	1.4	0.903	0.143	+
S99	<i>Salmonella</i> ser. Paratyphi A	Collection	0.9	1.579	0.133	+
S100	<i>Salmonella</i> ser. Paratyphi B	Collection	2.9	0.951	0.133	+
S101	<i>Salmonella</i> ser. Paratyphi C	Collection	1.0	0.258	0.141	+
S13	<i>Salmonella</i> ser. SaintPaul	Meat product	2.65	1.036	0.133	+
S59	<i>Salmonella</i> ser. San Diego	Dried herbs	1.3	0.85	0.167	+
S71	<i>Salmonella</i> ser. Senftenberg	Fish	2.5	1.403	0.166	+
S84	<i>Salmonella</i> ser. Senftenberg	Fishmeal	3.0	1.553	0.159	+
S102	<i>Salmonella</i> ser. Typhi Typhi	Collection	1.8	0.309	0.133	+
S55	<i>Salmonella</i> ser. Typhimurium	Milk	1.5	1.737	0.166	+
S97	<i>Salmonella</i> ser. Typhimurium	Saint Nectaire cheese	2.0	1.131	0.166	+
S26	<i>Salmonella</i> ser. Typhimurium	Pork liver	1.2	0.842	0.143	+
S42	<i>Salmonella</i> ser. Typhimurium	Egg product	1.5	1.778	0.159	+
S31	<i>Salmonella</i> ser. Virchow	Shellfish	2.5	1.674	0.159	+
S83	<i>Salmonella</i> ser. Westhampton	Feed	2.4	1.109	0.153	+
S65	<i>Salmonella</i> immobile	Meat product	2.4	1.571	0.153	+
S(D11)	<i>Salmonella</i> ser. Bergdorf	Marinated kangaroo	2.5	0.837	0.167	+

	Strain	Origin	Inoculation BPW (CFU/ml)	Alternative method TPSG		
				OD	Positive threshold	Result
18	<i>Aeromonas hydrophila</i>	Collection	1.2E+07	0.084	0.159	-
BA1	<i>Bacillus cereus</i>	Egg product	1.0E+06	0.089	0.159	-
BA16	<i>Bacillus licheniformis</i>	Custard	7.0E+06	0.072	0.159	-
LE3	<i>Candida albicans</i>	Pastry	1.0E+05	0.069	0.159	-
CIT31	<i>Citrobacter diversus</i>	Feed	4.0E+06	0.088	0.166	-
CIT24	<i>Citrobacter freundii</i>	Meat product	8.3E+05	0.091	0.166	-
CIT23	<i>Citrobacter freundii</i>	Vegetables	1.2E+06	0.086	0.166	-
CIT26	<i>Citrobacter freundii</i>	Fish	1.2E+06	0.089	0.166	-
EN51	<i>Enterobacter cloacae</i>	Milk product	2.2E+07	0.078	0.159	-
EN59	<i>Enterobacter sakazakii</i>	Pastry	1.5E+07	0.075	0.159	-
17	<i>Erwinia spp</i>	Meat product	1.5E+07	0.074	0.159	-
EC17	<i>Escherichia coli</i>	Pork kidneys	7.9E+06	0.071	0.159	-
EC19	<i>Escherichia coli</i>	Red cabbage	5.5E+06	0.073	0.159	-
EC23	<i>Escherichia coli</i> O157	Collection	6.7E+05	0.089	0.166	-
HA34	<i>Hafnia alvei</i>	Pork kidneys	2.0E+05	0.08	0.166	-
HA54	<i>Hafnia alvei</i>	Reblochon cheese	3.3E+06	0.087	0.166	-
EN71	<i>Klebsiella oxytoca</i>	Milk	8.1E+05	0.083	0.166	-
KL77	<i>Klebsiella pneumoniae</i>	Milk powder	5.5E+06	0.076	0.159	-
EN44	<i>Proteus mirabilis</i>	Poultry liver	2.4E+06	0.092	0.166	-
PS30	<i>Pseudomonas aeruginosa</i>	Fillet mullet	1.7E+06	0.082	0.159	-
PS33	<i>Pseudomonas fluorescens</i>	Grounded meat	2.0E+06	0.075	0.159	-
LE1	<i>Rhodotorula rubra</i>	Yoghourt	5.0E+06	0.096	0.166	-
LE5	<i>Saccharomyces cerevisiae</i>	Coffee extract	5.0E+05	0.079	0.159	-
EN49	<i>Serratia marcescens</i>	Raw milk	6.5E+06	0.082	0.159	-
EN72	<i>Shigella flexneri</i>	Collection	6.2E+05	0.082	0.166	-
EN73	<i>Shigella sonnei</i>	Meat product	1.1E+06	0.085	0.166	-
ST17	<i>Staphylococcus aureus</i>	Ice Yoghourt	5.1E+05	0.099	0.166	-
ST15	<i>Staphylococcus epidermidis</i>	Collection ATCC 12228	4.5E+04	0.088	0.166	-
ST12	<i>Staphylococcus hyicus</i>	Meat product	5.4E+06	0.080	0.159	-
YE7	<i>Yersinia enterocolitica</i>	Egg product	3.8E+06	0.076	0.159	-

ANNEX F1

COMPLEMENTARY ASSAYS - 2009

INCLUSIVITY AND EXCLUSIVITY

BIOCONTROL RESULTS

TRANSIA Plate Salmonella Gold - Inclusivity Table

Salmonella Strain	O-serotype	Separate Substrate and Chromogen		Pre-mixed Substrate and Chormogen	
		No Additive	Additive	No Additive	Additive
<i>Salmonella salford</i>	I	0.064	2.146	0.077	2.315
<i>Salmonella salford</i>	I	0.067	2.225	0.093	2.599
<i>Salmonella salford</i>	I	0.085	2.419	0.094	2.588
<i>Salmonella salford</i>	I	0.137	2.523	0.161	2.639
<i>Salmonella poona</i>	G	0.370	2.419	0.366	2.924
<i>Salmonella poona</i>	G	0.236	2.453	0.593	2.934
<i>Salmonella champagne</i>	Q	0.089	2.159	0.102	2.235
<i>Salmonella nottingham</i>		0.095	2.066	0.084	2.099
<i>Salmonella agona</i>	B	1.201	1.412	1.322	1.554
<i>Salmonella anatum</i>	E1	1.941	1.803	2.135	1.984
<i>Salmonella braenderup</i>	C1	1.920	1.589	2.112	1.747
<i>Salmonella brandenburg</i>	B	1.017	1.269	1.118	1.396
<i>Salmonella choleraesuis</i>	C1	1.901	1.883	2.091	2.072
<i>Salmonella derby</i>	B	1.319	1.454	1.451	1.599
<i>Salmonella enteritidis</i>	D1	1.288	1.197	1.417	1.317
<i>Salmonella gallinarum</i>	D1	1.035	1.188	1.139	1.307
<i>Salmonella hadar</i>	C2	0.597	1.739	0.657	1.913
<i>Salmonella inverness</i>		1.359	1.480	1.495	1.628
<i>Salmonella javiana</i>	D1	1.875	1.621	2.063	1.783
<i>Salmonella manila</i>	E2	1.652	2.139	1.817	2.353
<i>Salmonella meleagridis</i>	E1	1.414	0.922	1.556	1.014
<i>Salmonella montevideo</i>	C1	1.806	1.807	1.987	1.988
<i>Salmonella muenchen</i>	C2	0.657	1.188	0.723	1.307
<i>Salmonella newport</i>	C2	1.650	1.265	1.815	1.392
<i>Salmonella paratyphi</i>	A	1.194	1.102	1.313	1.212
<i>Salmonella pullorum</i>	D1	0.959	1.620	1.055	1.782
<i>Salmonella senftenberg</i>	E4	1.221	1.563	1.343	1.719
<i>Salmonella typhimurium</i>	B	1.158	1.337	1.274	1.471
<i>Salmonella typhimurium</i>	B	0.976	1.316	1.074	1.447
<i>Salmonella typhimurium</i>	B	1.044	1.441	1.149	1.585
<i>Salmonella bornum</i>	C1	2.109	2.169	2.824	2.817
<i>Salmonella bredeney</i>	B	1.839	2.521	2.703	2.714
<i>Salmonella choleraesui</i>	C	2.556	2.541	2.841	2.836
<i>Salmonella colindale</i>	C1	2.396	2.337	2.855	2.765
<i>Salmonella decatur</i>	C1	2.532	2.564	2.883	2.886
<i>Salmonella derby</i>	B	1.957	2.663	2.761	2.952
<i>Salmonella derby</i>	B	1.922	2.460	2.735	2.832
<i>Salmonella drypool</i>	E2	1.558	1.969	2.350	2.237
<i>Salmonella e/ch/Paratyphi A</i>	A	1.136	2.270	1.816	2.358
<i>Salmonella enteritidis</i>	D1	2.094	2.171	2.710	2.478
<i>Salmonella enteritidis</i>	D1	2.122	2.155	2.725	2.520
<i>Salmonella enteritidis</i>	D1	2.080	2.330	2.657	2.664
<i>Salmonella enteritidis</i>	D1	2.162	2.359	2.745	2.680
<i>Salmonella enteritidis</i>	D1	2.133	2.620	2.741	2.722
<i>Salmonella ferlac</i>	H	2.162	2.622	2.550	2.646
<i>Salmonella heidelberg</i>	B	1.470	2.360	2.086	2.690
<i>Salmonella Illinois</i>	E3	1.877	2.312	2.750	2.759
<i>Salmonella lagos</i>	B	1.423	2.567	1.926	2.551
<i>Salmonella lille</i>	C1	2.415	2.449	2.847	2.779
<i>Salmonella lille</i>	C1	1.595	2.326	2.169	2.268
<i>Salmonella livingstone</i>	C1	2.033	2.402	2.668	2.345
<i>Salmonella london</i>	E1	2.241	2.549	2.787	2.562

TRANSIA Plate Salmonella Gold - Inclusivity Table

Salmonella Strain	O-serotype	Separate Substrate and Chromogen		Pre-mixed Substrate and Chormogen	
		No Additive	Additive	No Additive	Additive
<i>Salmonella manchester</i>	C2	0.816	2.522	1.194	2.665
<i>Salmonella manhattan</i>	C2	0.831	2.593	1.225	2.493
<i>Salmonella mbandaka</i>	C1	2.017	2.503	2.628	2.397
<i>Salmonella meleagridis</i>	E1	1.935	1.978	2.742	2.480
<i>Salmonella montevideo</i>	C1	0.654	2.041	0.987	2.707
<i>Salmonella montevideo</i>	C1	1.910	1.935	2.707	2.432
<i>Salmonella muenchen</i>	B	1.033	2.606	1.445	2.774
<i>Salmonella napoli</i>	E2	0.990	2.467	1.432	2.800
<i>Salmonella newbrunswick</i>	E2	2.181	2.364	2.783	2.790
<i>Salmonella newhaw</i>	E2	2.109	2.329	2.750	2.766
<i>Salmonella newington</i>	E2	2.163	2.469	2.756	2.716
<i>Salmonella newport</i>	C2	0.772	2.326	1.167	2.704
<i>Salmonella nienstedten</i>	C1	2.551	2.488	2.886	2.833
<i>Salmonella norwich</i>	C1	2.518	2.579	2.859	2.911
<i>Salmonella ohio</i>	C1	2.542	2.608	2.908	2.871
<i>Salmonella ohio</i>	C1	2.054	2.280	2.745	2.739
<i>Salmonella ohio</i>	C1	2.527	2.577	2.879	2.506
<i>Salmonella orion</i>	E1	1.074	2.560	1.671	2.806
<i>Salmonella ouakam</i>	D2	0.982	2.184	1.567	2.494
<i>Salmonella panama</i>	D1	2.336	2.620	2.816	2.778
<i>Salmonella paratyphi A</i>	A	1.597	2.304	2.478	2.671
<i>Salmonella paratyphi B</i>	C2	1.689	2.399	2.243	2.683
<i>Salmonella portsmouth</i>	E2	2.060	2.466	2.718	2.794
<i>Salmonella potsdam</i>	C1	2.577	2.644	2.839	2.669
<i>Salmonella quentin</i>	D2	1.680	2.515	2.594	2.663
<i>Salmonella reading</i>	B	1.028	2.547	1.569	2.847
<i>Salmonella rissen</i>	C1	1.995	2.591	2.757	2.790
<i>Salmonella saint Paul</i>	50	0.770	1.847	1.049	1.898
<i>Salmonella schottmuelleri</i>	B	1.732	2.590	2.562	2.778
<i>Salmonella schwarzengrund</i>	I	0.931	2.586	1.324	2.718
<i>Salmonella senftenberg</i>	I	1.941	2.153	2.636	2.608
<i>Salmonella senftenberg</i>	E4	1.946	2.121	2.698	2.523
<i>Salmonella senftenberg</i>	E4	2.075	2.331	2.692	2.759
<i>Salmonella singapore</i>	C1	1.679	2.524	2.576	2.913
<i>Salmonella spp</i>	B	1.617	2.628	2.333	2.743
<i>Salmonella spp</i>	B	1.471	2.263	2.309	2.862
<i>Salmonella spp</i>	C1	2.520	2.480	2.857	2.778
<i>Salmonella spp</i>	C1	2.436	2.587	2.838	2.560
<i>Salmonella spp</i>	C1	2.475	2.585	2.859	2.668
<i>Salmonella spp</i>	B	2.305	2.407	2.842	2.877
<i>Salmonella spp</i>	B	1.764	2.511	2.634	2.835
<i>Salmonella spp</i>	B	1.298	2.502	1.997	2.822
<i>Salmonella spp</i>	B	1.270	2.639	1.983	2.882
<i>Salmonella spp</i>	B	2.001	2.658	2.779	2.816
<i>Salmonella spp</i>	B	1.637	2.383	2.634	2.890
<i>Salmonella spp</i>	B	1.687	2.434	2.679	2.810
<i>Salmonella spp</i>	B	1.804	2.583	2.670	2.776
<i>Salmonella stockholm</i>	B	2.250	2.638	2.765	2.716
<i>Salmonella stuivenberg</i>	E1	2.026	2.434	2.734	2.743
<i>Salmonella tennessee</i>	E4	2.090	2.172	2.719	2.487
<i>Salmonella thalassae</i>	C1	0.566	2.164	0.677	2.495
<i>Salmonella thompson</i>	C2	2.190	2.387	2.758	2.610

TRANSIA Plate Salmonella Gold - Inclusivity Table

Salmonella Strain	O-serotype	Separate Substrate and Chromogen		Pre-mixed Substrate and Chromogen	
		No Additive	Additive	No Additive	Additive
<i>Salmonella thompson,</i>	C1	2.560	2.588	2.881	2.853
<i>Salmonella typhimurium</i>	E4	1.536	1.990	2.189	2.375
<i>Salmonella typhimurium</i>	B	2.048	2.357	2.731	2.597
<i>Salmonella typhimurium</i>	B	1.788	2.544	2.661	2.891
<i>Salmonella typhimurium</i>	B	1.475	2.617	2.319	2.836
<i>Salmonella virchow</i>	C1	2.636	2.639	2.897	2.888

TRANSIA Plate Salmonella Gold Exclusivity Table

Organism	Separate Substrate and Chromogen		Pre-mixed Substrate and Chromogen	
	No Additive	Additive	No Additive	Additive
<i>Citrobacter koseri/amalonicus</i>	0.037	0.035	0.075	0.053
<i>Citrobacter braakii</i>	0.041	0.035	0.076	0.051
<i>Citrobacter freundii</i>	0.037	0.035	0.076	0.047
<i>Citrobacter koseri/farmerii</i>	0.037	0.035	0.074	0.048
<i>Citrobacter freundii</i>	0.038	0.037	0.076	0.047
<i>Citrobacter freundii</i>	0.074	0.036	0.108	0.049
<i>Citrobacter freundii</i>	0.036	0.034	0.079	0.047
<i>Citrobacter koseri/amalonicus</i>	0.039	0.035	0.083	0.047
<i>Citrobacter freundii</i>	0.037	0.037	0.075	0.048
<i>Citrobacter freundii</i>	0.038	0.035	0.076	0.046
<i>Citrobacter koseri/amalonicus</i>	0.037	0.035	0.075	0.050
<i>Citrobacter koseri/amalonicus</i>	0.039	0.035	0.073	0.052
<i>Citrobacter freundii</i>	0.038	0.036	0.081	0.046
<i>Citrobacter freundii</i>	0.038	0.040	0.077	0.048
<i>Citrobacter koseri</i>	0.036	0.035	0.075	0.051
<i>Enterobacter cloacae</i>	0.036	0.035	0.075	0.044
<i>Enterobacter asburiae</i>	0.036	0.035	0.074	0.046
<i>Enterobacter spp</i>	0.036	0.037	0.074	0.047
<i>Enterobacter cloacae</i>	0.041	0.047	0.078	0.069
<i>Enterobacter cloacae/cloacae</i>	0.040	0.036	0.072	0.046
<i>Enterobacter spp</i>	0.037	0.037	0.073	0.044
<i>Enterobacter spp</i>	0.037	0.035	0.080	0.045
<i>Enterobacter sakazakii</i>	0.038	0.035	0.076	0.046
<i>Enterobacter sakazakii</i>	0.036	0.035	0.061	0.045
<i>Escherichia coli</i>	0.036	0.037	0.075	0.046
<i>Escherichia coli</i>	0.037	0.035	0.073	0.047
<i>Escherichia coli</i>	0.041	0.038	0.075	0.047
<i>Escherichia coli</i>	0.036	0.055	0.074	0.046
<i>Escherichia coli</i>	0.037	0.036	0.077	0.047
<i>Escherichia coli</i>	0.038	0.060	0.075	0.113
<i>Escherichia coli</i>	0.037	0.036	0.056	0.077
<i>Escherichia coli</i>	0.037	0.053	0.055	0.118
<i>Escherichia coli</i>	0.037	0.036	0.051	0.071
<i>Escherichia coli</i>	0.038	0.048	0.053	0.120
<i>Escherichia coli</i>	0.037	0.056	0.052	0.125
<i>Escherichia coli</i>	0.037	0.036	0.050	0.072
<i>Hafnia alvei</i>	0.037	0.036	0.051	0.074
<i>Klebsiella pneumoniae</i>	0.038	0.037	0.051	0.087
<i>Klebsiella oxytoca</i>	0.036	0.035	0.053	0.077
<i>Klebsiella pneumoniae</i>	0.037	0.035	0.050	0.075
<i>Leclercia adecarboxylata</i>	0.037	0.036	0.050	0.072
<i>Serratia liquefaciens</i>	0.036	0.034	0.051	0.073
<i>Serratia marcescens</i>	0.036	0.038	0.050	0.076
<i>pantoae spp</i>	0.038	0.038	0.052	0.078
<i>pantoae agglomerans</i>	0.037	0.036	0.052	0.077
<i>Proteus penneri</i>	0.037	0.036	0.051	0.074
<i>Proteus penneri</i>	0.037	0.035	0.051	0.076
<i>Proteus mirabilis</i>	0.038	0.036	0.052	0.075
<i>Proteus mirabilis</i>	0.037	0.036	0.050	0.074
<i>Proteus vulgaris</i>	0.037	0.035	0.052	0.075

ANNEX F2

COMPLEMENTARY ASSAYS 2009

INCLUSIVITY
addition of strains of the new *Salmonella* list

EXPERT LABORATORY

INCLUSIVITY
COMPLEMENTARY ASSAYS (2009)
Change in threshold calculation (2011)

Strain	Origin	Inoculation level in 225 ml BPW	Alternative method TPSG						
			OD	Results with current threshold (NC+0.1)		Results with modification of positive threshold (NC+0.2)			
				Positive threshold	Test result	Positive threshold	Negative threshold	Test result	
S64	<i>Salmonella</i> ser. Kottbus	Casein	7.3	2.877	0.154	+	0.244	0.220	+
S139	<i>Salmonella</i> ser. Gallinarum	Collection	8.7	3.107	0.154	+	0.244	0.220	+
S148	<i>Salmonella</i> ser. Dublin	Cow raw milk	6.5	2.971	0.154	+	0.244	0.220	+
S149	<i>Salmonella</i> ser. Regent	Poultry offals	7.0	3.046	0.154	+	0.244	0.220	+
S150	<i>Salmonella</i> ser. Manhattan	Sausage	6.7	2.991	0.154	+	0.244	0.220	+
S151	<i>Salmonella</i> ser. Rissen	Environment	3.5	1.520	0.154	+	0.244	0.220	+
S153	<i>Salmonella</i> ser. London	Poultry slaughterhouse	9.8	3.037	0.154	+	0.244	0.220	+
S156	<i>Salmonella</i> ser. Livingstone	Environment	3.8	0.544	0.154	+	0.244	0.220	+
S158	<i>Salmonella</i> IIIa 48:z4,z23:-	Duck	5.0	0.028	0.154	-	0.244	0.220	-
			8.0	0.053	0.144	-	0.234	0.211	-
S159	<i>Salmonella</i> IIIa 51:z4,z23:-	Duck	5.8	3.108	0.154	+	0.244	0.220	+
			7.0	3.040	0.144	+	0.234	0.211	+

ANNEX G

INTERLABORATORY STUDY - DETAILED RESULTS OF PARTICIPANT LABORATORIES

result +: positive result (presence in 25 ml)
 result -: negative result (absence in 25 ml)
 = : corresponding result
 # : discrepant result
 / : not realized

Individual results of participating laboratories

Laboratory A

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison	
	RVS		MKTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTn XLD	MKTn BGA			
1	+	+	+	+	+	1.128	0.137	+	+	+	+	+	+	+	=
2	+	+	+	+	+	1.084	0.137	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.052	0.137	-	/	/	/	/	/	-	=
4	-	-	-	-	-	0.056	0.137	-	/	/	/	/	/	-	=
5	+	+	+	+	+	1.190	0.137	+	+	+	+	+	+	+	=
6	+	+	+	+	+	1.059	0.137	+	+	+	+	+	+	+	=
7	+	+	+	+	+	1.131	0.137	+	+	+	+	+	+	+	=
8	+	+	+	+	+	1.195	0.137	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.048	0.137	-	/	/	/	/	/	-	=
10	-	-	-	-	-	0.050	0.137	-	/	/	/	/	/	-	=
11	+	+	+	+	+	1.023	0.137	+	+	+	+	+	+	+	=
12	+	+	+	+	+	1.121	0.137	+	+	+	+	+	+	+	=
13	+	+	+	+	+	1.038	0.137	+	+	+	+	+	+	+	=
14	+	+	+	+	+	1.106	0.137	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.050	0.137	-	/	/	/	/	/	-	=
16	-	-	-	-	-	0.047	0.137	-	/	/	/	/	/	-	=
17	+	+	+	+	+	1.088	0.137	+	+	+	+	+	+	+	=
18	+	+	+	+	+	1.081	0.137	+	+	+	+	+	+	+	=
19	+	+	+	+	+	1.227	0.137	+	+	+	+	+	+	+	=
20	+	+	+	+	+	1.157	0.137	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.056	0.137	-	/	/	/	/	/	-	=
22	-	-	-	-	-	0.052	0.137	-	/	/	/	/	/	-	=
23	+	+	+	+	+	1.166	0.137	+	+	+	+	+	+	+	=
24	+	+	+	+	+	1.167	0.137	+	+	+	+	+	+	+	=

Laboratory B

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison	
	RVS		MKTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTn XLD	MKTn BGA			
1	+	+	+	+	+	1.086	0.154	+	+	+	+	+	+	+	=
2	+	+	+	+	+	1.077	0.154	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.082	0.154	-	/	/	/	/	/	-	=
4	-	-	-	-	-	0.088	0.154	-	/	/	/	/	/	-	=
5	+	+	+	+	+	1.051	0.154	+	+	+	+	+	+	+	=
6	+	+	+	+	+	1.109	0.154	+	+	+	+	+	+	+	=
7	+	+	+	+	+	1.064	0.154	+	+	+	+	+	+	+	=
8	+	+	+	+	+	1.096	0.154	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.076	0.154	-	/	/	/	/	/	-	=
10	-	-	-	-	-	0.086	0.154	-	/	/	/	/	/	-	=
11	+	+	+	+	+	1.118	0.154	+	+	+	+	+	+	+	=
12	+	+	+	+	+	1.052	0.154	+	+	+	+	+	+	+	=
13	+	+	+	+	+	1.093	0.154	+	+	+	+	+	+	+	=
14	+	+	+	+	+	1.028	0.154	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.091	0.154	-	/	/	/	/	/	-	=
16	-	-	-	-	-	0.101	0.154	-	/	/	/	/	/	-	=
17	+	+	+	+	+	1.131	0.154	+	+	+	+	+	+	+	=
18	+	+	+	+	+	1.165	0.154	+	+	+	+	+	+	+	=
19	+	+	+	+	+	1.140	0.154	+	+	+	+	+	+	+	=
20	+	+	+	+	+	1.046	0.154	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.103	0.154	-	/	/	/	/	/	-	=
22	-	-	-	-	-	0.095	0.154	-	/	/	/	/	/	-	=
23	+	+	+	+	+	1.069	0.154	+	+	+	+	+	+	+	=
24	+	+	+	+	+	1.075	0.154	+	+	+	+	+	+	+	=

Laboratory C

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison	
	RVS		MKTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTn XLD	MKTn BGA			
1	+	+	+	+	+	0.583	0.130	+	+	+	+	+	+	+	=
2	+	+	+	+	+	0.586	0.130	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.037	0.130	-	/	/	/	/	/	-	=
4	-	-	-	-	-	0.011	0.130	-	/	/	/	/	/	-	=
5	+	+	+	+	+	0.559	0.130	+	+	+	+	+	+	+	=
6	+	+	+	+	+	0.675	0.130	+	+	+	+	+	+	+	=
7	+	+	+	+	+	0.665	0.130	+	+	+	+	+	+	+	=
8	+	+	+	+	+	0.636	0.130	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.037	0.130	-	/	/	/	/	/	-	=
10	-	-	-	-	-	0.042	0.130	-	/	/	/	/	/	-	=
11	+	+	+	+	+	0.651	0.130	+	+	+	+	+	+	+	=
12	+	+	+	+	+	0.710	0.130	+	+	+	+	+	+	+	=
13	+	+	+	+	+	0.635	0.130	+	+	+	+	+	+	+	=
14	+	+	+	+	+	0.646	0.130	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.045	0.130	-	/	/	/	/	/	-	=
16	-	-	-	-	-	0.035	0.130	-	/	/	/	/	/	-	=
17	+	+	+	+	+	0.649	0.130	+	+	+	+	+	+	+	=
18	+	+	+	+	+	0.666	0.130	+	+	+	+	+	+	+	=
19	+	+	+	+	+	0.604	0.130	+	+	+	+	+	+	+	=
20	+	+	+	+	+	0.590	0.130	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.042	0.130	-	/	/	/	/	/	-	=
22	-	-	-	-	-	0.041	0.130	-	/	/	/	/	/	-	=
23	+	+	+	+	+	0.604	0.130	+	+	+	+	+	+	+	=
24	+	+	+	+	+	0.609	0.130	+	+	+	+	+	+	+	=

result +: positive result (presence in 25 ml)
 result -: negative result (absence in 25 ml)
 = : corresponding result
 # : discrepant result
 / : not realized

Individual results of participating laboratories

Laboratory F

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD									Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA			
1	+	+	+	+	+	1.277	0.148	+	+	+	+	+	+	+	=
2	+	+	+	+	+	1.323	0.148	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.074	0.148	-	/	/	/	/	-	=	
4	-	-	-	-	-	0.069	0.148	-	/	/	/	/	-	=	
5	+	+	+	+	+	1.077	0.148	+	+	+	+	+	+	+	=
6	+	+	+	+	+	1.093	0.148	+	+	+	+	+	+	+	=
7	+	+	+	+	+	1.324	0.148	+	+	+	+	+	+	+	=
8	+	+	+	+	+	1.098	0.148	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.085	0.148	-	/	/	/	/	-	=	
10	-	-	-	-	-	0.078	0.148	-	/	/	/	/	-	=	
11	+	+	+	+	+	1.128	0.148	+	+	+	+	+	+	+	=
12	+	+	+	+	+	1.220	0.148	+	+	+	+	+	+	+	=
13	+	+	+	+	+	1.185	0.148	+	+	+	+	+	+	+	=
14	+	+	+	+	+	1.178	0.148	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.073	0.148	-	/	/	/	/	-	=	
16	-	-	-	-	-	0.076	0.148	-	/	/	/	/	-	=	
17	+	+	+	+	+	1.301	0.148	+	+	+	+	+	+	+	=
18	+	+	+	+	+	1.254	0.148	+	+	+	+	+	+	+	=
19	+	+	+	+	+	1.252	0.148	+	+	+	+	+	+	+	=
20	+	+	+	+	+	1.195	0.148	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.076	0.148	-	/	/	/	/	-	=	
22	-	-	-	-	-	0.074	0.148	-	/	/	/	/	-	=	
23	+	+	+	+	+	1.231	0.148	+	+	+	+	+	+	+	=
24	+	+	+	+	+	1.289	0.148	+	+	+	+	+	+	+	=

Laboratory G

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD									Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA			
1	+	+	+	+	+	1.404	0.155	+	+	+	+	+	+	+	=
2	+	+	+	+	+	1.387	0.155	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.101	0.155	-	/	/	/	/	-	=	
4	-	-	-	-	-	0.104	0.155	-	/	/	/	/	-	=	
5	+	+	+	+	+	1.228	0.155	+	+	+	+	+	+	+	=
6	+	+	+	+	+	1.369	0.155	+	+	+	+	+	+	+	=
7	+	+	+	+	+	1.295	0.155	+	+	+	+	+	+	+	=
8	+	+	+	+	+	1.343	0.155	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.097	0.155	-	/	/	/	/	-	=	
10	-	-	-	-	-	0.094	0.155	-	/	/	/	/	-	=	
11	+	+	+	+	+	1.294	0.155	+	+	+	+	+	+	+	=
12	+	+	+	+	+	1.316	0.155	+	+	+	+	+	+	+	=
13	+	+	+	+	+	1.417	0.155	+	+	+	+	+	+	+	=
14	+	+	+	+	+	1.425	0.155	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.091	0.155	-	/	/	/	/	-	=	
16	-	-	-	-	-	0.097	0.155	-	/	/	/	/	-	=	
17	+	+	+	+	+	1.281	0.155	+	+	+	+	+	+	+	=
18	+	+	+	+	+	1.349	0.155	+	+	+	+	+	+	+	=
19	+	+	+	+	+	1.310	0.155	+	+	+	+	+	+	+	=
20	+	+	+	+	+	1.390	0.155	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.105	0.155	-	/	/	/	/	-	=	
22	-	-	-	-	-	0.105	0.155	-	/	/	/	/	-	=	
23	+	+	+	+	+	1.178	0.155	+	+	+	+	+	+	+	=
24	+	+	+	+	+	1.393	0.155	+	+	+	+	+	+	+	=

Laboratory H

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD									Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result		
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA			
1	+	+	+	+	+	0.947	0.142	+	+	+	+	+	+	+	=
2	+	+	+	+	+	0.970	0.142	+	+	+	+	+	+	+	=
3	-	-	-	-	-	0.059	0.142	-	/	/	/	/	-	=	
4	-	-	-	-	-	0.070	0.142	-	/	/	/	/	-	=	
5	-	-	-	-	-	0.075	0.142	-	/	/	/	/	-	=	
6	+	+	+	+	+	0.870	0.142	+	+	+	+	+	+	+	=
7	+	+	+	+	+	0.870	0.142	+	+	+	+	+	+	+	=
8	+	+	+	+	+	0.817	0.142	+	+	+	+	+	+	+	=
9	-	-	-	-	-	0.072	0.142	-	/	/	/	/	-	=	
10	-	-	-	-	-	0.064	0.142	-	/	/	/	/	-	=	
11	+	+	+	+	+	0.910	0.142	+	+	+	+	+	+	+	=
12	+	+	+	+	+	0.828	0.142	+	+	+	+	+	+	+	=
13	+	+	+	+	+	0.923	0.142	+	+	+	+	+	+	+	=
14	+	+	+	+	+	0.897	0.142	+	+	+	+	+	+	+	=
15	-	-	-	-	-	0.075	0.142	-	/	/	/	/	-	=	
16	-	-	-	-	-	0.070	0.142	-	/	/	/	/	-	=	
17	+	+	+	+	+	0.878	0.142	+	+	+	+	+	+	+	=
18	+	+	+	+	+	0.901	0.142	+	+	+	+	+	+	+	=
19	+	+	+	+	+	0.847	0.142	+	+	+	+	+	+	+	=
20	+	+	+	+	+	0.894	0.142	+	+	+	+	+	+	+	=
21	-	-	-	-	-	0.083	0.142	-	/	/	/	/	-	=	
22	-	-	-	-	-	0.080	0.142	-	/	/	/	/	-	=	
23	+	+	+	+	+	0.967	0.142	+	+	+	+	+	+	+	=
24	+	+	+	+	+	0.989	0.142	+	+	+	+	+	+	+	=

result +: positive result (presence in 25 ml)
 result -: negative result (absence in 25 ml)
 = : corresponding result
 # : discrepant result
 / : not realized

Individual results of participating laboratories

Laboratory I

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result	
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA		
1	+	+	+	+	+	1.090	0.143	+	+	+	+	+	+	=
2	+	+	+	+	+	1.044	0.143	+	+	+	+	+	+	=
3	-	-	-	-	-	0.061	0.143	-	/	/	/	/	-	=
4	-	-	-	-	-	0.060	0.143	-	/	/	/	/	-	=
5	+	+	+	+	+	1.069	0.143	+	+	+	+	+	+	=
6	+	+	+	+	+	1.047	0.143	+	+	+	+	+	+	=
7	+	+	+	+	+	1.087	0.143	+	+	+	+	+	+	=
8	+	+	+	+	+	1.128	0.143	+	+	+	+	+	+	=
9	-	-	-	-	-	0.066	0.143	-	/	/	/	/	-	=
10	-	-	-	-	-	0.066	0.143	-	/	/	/	/	-	=
11	-	-	+	+	+	0.065	0.143	-	-	-	+	+	-	#
12	+	+	+	+	+	1.076	0.143	+	+	+	+	+	+	=
13	+	+	+	+	+	1.006	0.143	+	+	+	+	+	+	=
14	+	+	+	+	+	1.118	0.143	+	+	+	+	+	+	=
15	-	-	-	-	-	0.071	0.143	-	/	/	/	/	-	=
16	-	-	-	-	-	0.069	0.143	-	/	/	/	/	-	=
17	+	+	+	+	+	1.012	0.143	+	+	+	+	+	+	=
18	+	+	+	+	+	1.119	0.143	+	+	+	+	+	+	=
19	+	+	+	+	+	1.113	0.143	+	+	+	+	+	+	=
20	+	+	+	+	+	1.052	0.143	+	+	+	+	+	+	=
21	-	-	-	-	-	0.067	0.143	-	/	/	/	/	-	=
22	-	-	-	-	-	0.068	0.143	-	/	/	/	/	-	=
23	+	+	+	+	+	1.129	0.143	+	+	+	+	+	+	=
24	+	+	+	+	+	1.121	0.143	+	+	+	+	+	+	=

Laboratory J

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result	
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA		
1	+	+	+	+	+	1.093	0.133	+	+	+	+	+	+	=
2	+	+	+	+	+	1.086	0.133	+	+	+	+	+	+	=
3	-	-	-	-	-	0.044	0.133	-	/	/	/	/	-	=
4	-	-	-	-	-	0.048	0.133	-	/	/	/	/	-	=
5	+	+	+	+	+	1.224	0.133	+	+	+	+	+	+	=
6	-	-	-	-	-	0.050	0.133	-	-	-	-	-	-	=
7	+	+	+	+	+	1.175	0.133	+	+	+	+	+	+	=
8	+	+	+	+	+	1.165	0.133	+	+	+	+	+	+	=
9	-	-	-	-	-	0.051	0.133	-	/	/	/	/	-	=
10	-	-	-	-	-	0.049	0.133	-	/	/	/	/	-	=
11	-	-	-	-	-	0.051	0.133	-	-	-	-	-	-	=
12	+	+	+	+	+	0.929	0.133	+	+	+	+	+	+	=
13	+	+	+	+	+	1.274	0.133	+	+	+	+	+	+	=
14	+	+	+	+	+	1.084	0.133	+	+	+	+	+	+	=
15	-	-	-	-	-	0.049	0.133	-	/	/	/	/	-	=
16	-	-	-	-	-	0.050	0.133	-	/	/	/	/	-	=
17	+	+	+	+	+	1.069	0.133	+	+	+	+	+	+	=
18	-	-	-	-	-	0.050	0.133	-	-	-	-	-	-	=
19	+	+	+	+	+	1.125	0.133	+	+	+	+	+	+	=
20	+	+	+	+	+	1.039	0.136	+	+	+	+	+	+	=
21	-	-	-	-	-	0.053	0.133	-	/	/	/	/	-	=
22	-	-	-	-	-	0.051	0.133	-	/	/	/	/	-	=
23	+	+	+	+	+	1.208	0.133	+	+	+	+	+	+	=
24	+	+	+	+	+	1.103	0.133	+	+	+	+	+	+	=

Laboratory K

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result	
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA		
1	+	+	+	+	+	0.968	0.136	+	+	+	+	+	+	=
2	+	+	+	+	+	0.983	0.136	+	+	+	+	+	+	=
3	-	-	-	-	-	0.054	0.136	-	/	/	/	/	-	=
4	-	-	-	-	-	0.063	0.136	-	/	/	/	/	-	=
5	+	+	+	+	+	0.961	0.136	+	+	+	+	+	+	=
6	+	+	+	+	+	0.996	0.136	+	+	+	+	+	+	=
7	+	+	+	+	+	0.961	0.136	+	+	+	+	+	+	=
8	+	+	+	+	+	0.947	0.136	+	+	+	+	+	+	=
9	-	-	-	-	-	0.052	0.136	-	/	/	/	/	-	=
10	-	-	-	-	-	0.055	0.136	-	/	/	/	/	-	=
11	+	+	+	+	+	0.971	0.136	+	+	+	+	+	+	=
12	+	+	+	+	+	0.898	0.136	+	+	+	+	+	+	=
13	+	+	+	+	+	0.910	0.136	+	+	+	+	+	+	=
14	+	+	+	+	+	0.904	0.136	+	+	+	+	+	+	=
15	-	-	-	-	-	0.052	0.136	-	/	/	/	/	-	=
16	-	-	-	-	-	0.056	0.136	-	/	/	/	/	-	=
17	+	+	+	+	+	1.099	0.136	+	+	+	+	+	+	=
18	+	+	+	+	+	1.018	0.136	+	+	+	+	+	+	=
19	+	+	+	+	+	0.989	0.136	+	+	+	+	+	+	=
20	+	+	+	+	+	0.964	0.136	+	+	+	+	+	+	=
21	-	-	-	-	-	0.054	0.136	-	/	/	/	/	-	=
22	-	-	-	-	-	0.052	0.136	-	/	/	/	/	-	=
23	+	+	+	+	+	0.974	0.136	+	+	+	+	+	+	=
24	+	+	+	+	+	0.940	0.136	+	+	+	+	+	+	=

result +: positive result (presence in 25 ml)
 result -: negative result (absence in 25 ml)
 = : corresponding result
 # : discrepant result
 / : not realized

Individual results of participating laboratories

Laboratory L

Code	Reference method EN ISO 6579					Alternative method TRANSIA Plate <i>Salmonella</i> GOLD								Comparison
	RVS		MKTTn		Final result	Test		Test result	Confirmation				Final result	
	XLD	BGA	XLD	BGA		OD	Threshold		RVS XLD	RVS BGA	MKTTn XLD	MKTTn BGA		
1	+	+	+	+	+	0.984	0.146	+	+	+	+	+	+	=
2	+	+	+	+	+	0.970	0.146	+	+	+	+	+	+	=
3	-	-	-	-	-	0.050	0.146	-	/	/	/	/	-	=
4	-	-	-	-	-	0.055	0.146	-	/	/	/	/	-	=
5	+	+	+	+	+	0.932	0.146	+	+	+	+	+	+	=
6	+	+	+	+	+	1.007	0.146	+	+	+	+	+	+	=
7	+	+	+	+	+	0.953	0.146	+	+	+	+	+	+	=
8	+	+	+	+	+	0.865	0.146	+	+	+	+	+	+	=
9	-	-	-	-	-	0.055	0.146	-	/	/	/	/	-	=
10	-	-	-	-	-	0.051	0.146	-	/	/	/	/	-	=
11	+	+	+	+	+	0.801	0.146	+	+	+	+	+	+	=
12	+	+	+	+	+	0.952	0.146	+	+	+	+	+	+	=
13	+	+	+	+	+	0.985	0.146	+	+	+	+	+	+	=
14	+	+	+	+	+	1.006	0.146	+	+	+	+	+	+	=
15	-	-	-	-	-	0.057	0.146	-	/	/	/	/	-	=
16	-	-	-	-	-	0.051	0.146	-	/	/	/	/	-	=
17	+	+	+	+	+	0.723	0.146	+	+	+	+	+	+	=
18	+	+	+	+	+	1.033	0.146	+	+	+	+	+	+	=
19	+	+	+	+	+	1.036	0.146	+	+	+	+	+	+	=
20	+	+	+	+	+	1.020	0.146	+	+	+	+	+	+	=
21	-	-	-	-	-	0.059	0.146	-	/	/	/	/	-	=
22	-	-	-	-	-	0.056	0.146	-	/	/	/	/	-	=
23	+	+	+	+	+	1.043	0.146	+	+	+	+	+	+	=
24	+	+	+	+	+	0.894	0.146	+	+	+	+	+	+	=

ANNEX H

INTERLABORATORY STUDY - ACCORDANCE

ALTERNATIVE METHOD

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negative pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	8	1.00	1.00	0.00	0.00	1.00
I	8	8	1.00	1.00	0.00	0.00	1.00
J	8	8	1.00	1.00	0.00	0.00	1.00
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance							100%

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	7	0.88	0.77	0.13	0.02	0.78
I	8	7	0.88	0.77	0.13	0.02	0.78
J	8	5	0.63	0.39	0.38	0.14	0.53
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							0.91
Accordance							91%

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	8	1.00	1.00	0.00	0.00	1.00
I	8	8	1.00	1.00	0.00	0.00	1.00
J	8	8	1.00	1.00	0.00	0.00	1.00
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance							100%

REFERENCE METHOD

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negative pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	8	1.00	1.00	0.00	0.00	1.00
I	8	8	1.00	1.00	0.00	0.00	1.00
J	8	8	1.00	1.00	0.00	0.00	1.00
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance							100%

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	7	0.88	0.77	0.13	0.02	0.78
I	8	8	1.00	1.00	0.00	0.00	1.00
J	8	5	0.63	0.39	0.38	0.14	0.53
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							0.93
Accordance							93%

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positive pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
A	8	8	1.00	1.00	0.00	0.00	1.00
B	8	8	1.00	1.00	0.00	0.00	1.00
C	8	8	1.00	1.00	0.00	0.00	1.00
F	8	8	1.00	1.00	0.00	0.00	1.00
G	8	8	1.00	1.00	0.00	0.00	1.00
H	8	8	1.00	1.00	0.00	0.00	1.00
I	8	8	1.00	1.00	0.00	0.00	1.00
J	8	8	1.00	1.00	0.00	0.00	1.00
K	8	8	1.00	1.00	0.00	0.00	1.00
L	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance							100%

ANNEX I

INTERLABORATORY STUDY - CONCORDANCE

CONCORDANCE

ALTERNATIVE METHOD

Number of laboratories 10

Number of positives per laboratory 8

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	576	576
B	8	8	576	576
C	8	8	576	576
F	8	8	576	576
G	8	8	576	576
H	8	8	576	576
I	8	8	576	576
J	8	8	576	576
K	8	8	576	576
L	8	8	576	576
Total			5760	5760
Concordance	100.00%			

Number of laboratories 10

Number of positives per laboratory 8

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	536	576
B	8	8	536	576
C	8	8	536	576
F	8	8	536	576
G	8	8	536	576
H	8	7	480	576
I	8	7	480	576
J	8	5	356	576
K	8	8	536	576
L	8	8	536	576
Total			5068	5760
Concordance	87.99%			

Number of laboratories 10

Number of positives per laboratory 8

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	576	576
B	8	8	576	576
C	8	8	576	576
F	8	8	576	576
G	8	8	576	576
H	8	8	576	576
I	8	8	576	576
J	8	8	576	576
K	8	8	576	576
L	8	8	576	576
Total			5760	5760
Concordance	100.00%			

CONCORDANCE

REFERENCE METHOD

Number of laboratories 10

Number of positives per laboratory 8

Level L0

Laboratory	Nb of negatives expected	Nb of negatives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	576	576
B	8	8	576	576
C	8	8	576	576
F	8	8	576	576
G	8	8	576	576
H	8	8	576	576
I	8	8	576	576
J	8	8	576	576
K	8	8	576	576
L	8	8	576	576
Total			5760	5760
Concordance	100.00%			

Number of laboratories 10

Number of positives per laboratory 8

Level L1

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	544	576
B	8	8	544	576
C	8	8	544	576
F	8	8	544	576
G	8	8	544	576
H	8	7	486	576
I	8	8	544	576
J	8	5	358	576
K	8	8	544	576
L	8	8	544	576
Total			5196	5760
Concordance	90.21%			

Number of laboratories 10

Number of positives per laboratory 8

Level L2

Laboratory	Nb of positives expected	Nb of positives obtained	Inter-laboratory pairs with the same result	Total number of inter-laboratory pairs
A	8	8	576	576
B	8	8	576	576
C	8	8	576	576
F	8	8	576	576
G	8	8	576	576
H	8	8	576	576
I	8	8	576	576
J	8	8	576	576
K	8	8	576	576
L	8	8	576	576
Total			5760	5760
Concordance	100.00%			