



bioMérieux

Chemin de l'Orme

F-69280 MARCY L'ETOILE

NF VALIDATION

Validation study according to the EN ISO 16140 standard

Summary report

**ISO 16140 study validation of
VIDAS SALMONELLA method
(Single selective enrichment
for the rapid detection of *Salmonella*)
(BIO 12/10 - 09/02)**

Qualitative method

This report includes 45 pages, with 7 appendixes.

Only copies including the totality of this report are authorised.








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The technical protocol and the result interpretation were realized according to the EN ISO 16140 and the AFNOR technical rules.

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- **Expert Laboratory:** ADRIA Développement
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- **Studied method:** **VIDAS SALMONELLA method**
(Single selective enrichment for the rapid
detection of *Salmonella*) (BIO 12/10 – 09/02)
- **Validation standard:** EN ISO 16140 (October 2003): Food microbiology
– Protocol for the validation of alternative methods
- **Standard method:** ISO 6579 (2002) - Microbiology of food and animal
feeding stuffs. Horizontal method for the detection
of *Salmonella* spp.
- **Scope:** **All human food products and pet foods**
- **Certification organism:** AFNOR Certification

1 INTRODUCTION

1.1 Protocol and principle of the alternative method

1.1.1 Protocol

The method consists of:

- A pre-enrichment of x g (or x ml) sample in 9 x ml of Buffered Peptone Water (BPW) incubated for 16 to 20 hours at 37°C ± 1°C,
- Then, an enrichment
 - ↷ Transfer of 0.1 ml pre-enrichment into 10 ml of Rappaport Vassiliadis Soy broth (RVS), incubated 6 to 8 hours at 41.5°C ± 1.0°C
- Followed by a post-enrichment
 - ↷ Inoculation of 1 ml RVS broth into 10 ml M broth, incubated 16 to 20 hours at 41.5°C ± 1.0°C

After incubation, homogenize the M Broth and transfer 1 ml of M broth in a tube and heat for 15 min ± 1 min at 95°C – 100°C

VIDAS SLM test is then performed on the cooled boiled M broth. Store the M and RVS broths at 2 - 8°C if confirmation is required or prolong incubation of the RVS broth at 41.5°C for a total of 16 - 20 hours.

Positive results with VIDAS SLM tests have to be confirmed by streaking the RVS broth (stored at 2-8°C or incubated for 16 - 20 hours) on *Salmonella* selective medium and by applying the tests described in the standardized methods by the CEN, ISO or AFNOR (including the purification step) on the characteristic colonies.

1.1.2 Principle of the alternative method

The flow diagram is given in **Appendix 1**.

The VIDAS[®] *Salmonella* (SLM) assay is an enzyme- immunoassay, for use on the automated VIDAS[®] instruments (see the Operator's Manual) for the detection of *Salmonella* antigens using the ELFA technique (Enzyme Linked Fluorescent Assay).

Each test is composed of two parts:

- the Solid Phase Receptacle (SPR[®]) serves as the solid phase as well as the pipetting device. The interior of the SPR[®] is coated with anti-*Salmonella* antibodies adsorbed onto its surface.
- the strip which contains all the ready-to-use for the assay : pre-wash solution, wash buffer, antibodies anti- *Salmonella* conjugate with alkaline phosphatase and substrate.

All the assay steps are performed automatically by the instrument. The reaction medium is cycled in and out of the SPR[®] several times.

Part of the enrichment broth is dispensed into the reagent strip. The antigens present will bind to the anti- *Salmonella* antibodies coating the interior of the SPR[®].

Unbound sample components are eliminated during the washing steps. Antibodies conjugated with alkaline phosphatase are cycled in and out of the SPR[®] and will bind to any *Salmonella* antigens which are themselves bound to the antibodies on the SPR[®] wall. A final wash step removes unbound conjugate.

During the final detection step, the substrate (4-Methyl-umbelliferyl phosphate) is cycled in and out of the SPR[®]. The conjugate enzyme catalyzes the hydrolysis of this substrate into a fluorescent product (4-Methyl-umbelliferone), the fluorescence of which is measured at 450 nm.

At the end of the assay, the results are automatically analyzed by the instrument which calculates a test value for each sample. This value is compared to internal references (thresholds) and each result is interpreted (positive, negative). The RFV (Relative Fluorescence Value) is calculated by subtracting the background reading from the final result. The RFV obtained for each sample is interpreted by the VIDAS[®] system as follows:

Test value(TV) = sample RFV / standard RFV.

If TV < 0.23, Test is negative
and

If TV \geq 0.23, Test is positive

1.2 Standard method

The reference method is the ISO 6579 (2002) - Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Salmonella* spp. (See **Appendix 2**).

2 INITIAL VALIDATION STUDY AND RENEWAL STUDIES RESULTS

The studies were performed by Institut Pasteur de Lille.

2.1 Method Comparison Study

2.1.1 **Relative accuracy, relative specificity and relative sensitivity**

The accuracy is the closeness of agreement between a test result and the accepted reference value.

The relative specificity is defined as the degree to which a method is affected (or not) by the other components present in a multi-component sample; that is, it is the ability of the method to measure exactly a given analyte, or its amount, within the sample without interference from non-target components such as matrix effect or background noise.

The relative sensitivity is defined as the ability of the alternative method to detect two different amounts of analyte measured by the reference method within a given matrix over the whole measurement range; that is, it is the minimal quantity variation (increase of the analyte concentration x) which gives a significant variation of the measured signal (response y).

Number and nature of the samples

In 2002 (initial validation study) and 2006 (extension study according to the ISO 16140 standard protocol), five categories were analyzed according to the EN ISO 6579: 2002 standard.

189 results of the initial validation study (2002) were kept (134 negative results and 55 naturally positive samples) and were completed for the renewal study (2006) by 139 results, to obtain the required 60 products by category, distributed in the various types.

The repartition of the samples per tested category and type are provided in the table 1.

Table 1

Categories	Types	Positive*		Negative		Total
		2002	2006	2002	2006	
Meat products	Raw meats	16	0	17	0	33
	Poultry	10	0	8	0	18
	Delicatessen, ...	4	0	8	0	12
	Total	30	0	33	0	63
Dairy products	Raw milk cheeses	2	8	15	0	25
	Pasteurized milk cheeses and ice cream	0	10	8	0	18
	Milks and milk powders	4	6	8	5	23
	Total	6	24	31	5	66
Seafood products and vegetables	Fish fillets and shellfish	0	10	9	1	20
	Raw vegetables and spices	0	10	10	8	28
	Ready-to-eat vegetables	0	10	3	4	17
	Total	0	30	22	13	65
Miscellaneous	Egg products	7	5	8	0	20
	Pastries / chocolate	5	5	26	0	36
	Ready-to-eat meals	0	10	2	4	16
	Total	12	20	36	4	72
Feed	Pâtés	2	10	2	9	23
	Meals and dry pet foods	0	10	3	7	20
	Raw meat for animals	5	3	7	4	19
	Total	7	23	12	20	62
TOTAL		55	97	134	42	328

*these are positive results by either one or two methods

Artificial contamination of the samples

Artificial contamination was performed by using injured bacterial suspensions; the injury treatment and efficiency were determined according to the EN ISO 16140 and AFNOR validation rules.

87 samples were positive after artificial contamination among 152 positive samples. 57 % of the positive results were obtained with naturally contaminated samples. The inoculated strains, the inoculation level are provided in the **Appendix 3**.

Results

All samples were analyzed **in single** by the **two methods**.

Raw data (328 samples) are presented in **Appendix 4**.

Table 2 – All products

Responses	Positive reference method (R+)	Negative reference method (R-)	Total
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 150	Positive deviation (R-/A+) PD = 0	150
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 2 (PPND = 0)	Negative agreement (A-/R-) NA = 176 (PPNA = 0)	178
Total	152	176	328

Legend:

A+ = positive confirmed

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

PP: positive presumptive not confirmed sample

Results per category of sample

Table 3 – Meat products

Responses	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 = 33

Table 4 – Dairy products

Responses	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 = 1	Negative agreement (A-/R-) NA = 36

Table 5 – Seafood and vegetables


Responses	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 = 35

Table 6 – Miscellaneous

Responses	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 = 1	Negative agreement (A-/R-) NA = 40

Table 7 – Feed stuff

Responses	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

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

Categories	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	30	33	0	0	63	100.0	30	100.0	33	100.0
Dairy products	29	36	1	0	66	98.5	30	96.7	36	100.0
Seafood & vegetables	30	35	0	0	65	100.0	30	100.0	35	100.0
Miscellaneous	31	40	1	0	72	98.6	32	96.9	40	100.0
Feed	30	32	0	0	62	100.0	30	100.0	32	100.0
TOTAL	150	176	2	0	328	99.4	152	98.7	176	100.0

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>	99.4 %
Relative specificity : <i>SP</i>	100.0 %
Relative sensitivity : <i>SE</i>	98.7 %

Taking into account the alternative method positive deviations, sensitivity of both tested methods was the following:

	Alternative method	Reference method
Sensitivity	$(PA + PD) / (PA + PD + ND) = 98.7 \%$	$(PA + ND) / (PA + PD + ND) = 100.0 \%$

 **Analysis of discordant results**

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.

The number of discrepant results between the reference method and the alternative method was 2. No statistical test was performed.

Both methods are **not different**.

2.1.2 Relative detection level

The relative detection level is the smallest number of culturable micro-organisms that can be detected in the sample in 50% of occasions by the alternative and reference methods.

Five matrix/strain pairs were analysed with the reference method and the VIDAS SLM method (simple enrichment).

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

Detection levels are presented Table 8.

Table 8 – Relative detection level results

Strain / matrix pairs	Relative detection level (CFU / 25 g or 25 ml) according to Spearman-Kärber test ¹	
	Reference method	Alternative method
Poultry minced meat / <i>Salmonella</i> Hadar	0.5 [0.3 – 0.9]	0.5 [0.3 – 0.9]
Raw meat / <i>Salmonella</i> Typhimurium	0.7 [0.4 – 1.1]	0.9 [0.5 – 1.7]
Fish fillet / <i>Salmonella</i> Enteritidis	0.7 [0.3 – 1.4]	0.7 [0.3 – 1.4]
Liquid raw egg / <i>Salmonella</i> Virchow	0.4 [0.3 – 0.5]	0.4 [0.3 – 0.5]
Pâté for pet / <i>Salmonella</i> Senftenberg	0.7 [0.5 – 1.1]	0.7 [0.5 – 1.1]

The VIDAS SLM method (single enrichment) and the reference method show similar detection levels; they are comprised between 0.3 and 1.4 CFU/25 g or 25 ml for the reference method and between 0.3 and 1.7 CFU/25 g or 25 ml for the alternative method.

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".

2.1.3 Inclusivity / exclusivity

The inclusivity is the ability of the alternative method to detect the target analyte from a wide range of strains.

The exclusivity is the lack of interference from a relevant range of non-target strains of the alternative method.

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 2006. Additional tests were performed on 11 target strains in 2010 for the renewal study.

In order to be in agreement with the AFNOR technical rules, the following strains were also tested in 2014:

- *Salmonella* Typhimurium SI 1,4,[5],12:-:- (non-motile variant) Ad 1233
- *Salmonella* Typhimurium SI 1,4,[5],12:i:- (monophasic variant) Ad 1334
- *Salmonella* Typhimurium SI 1,4,[5],12:-:1,2 (monophasic variant) Ad 1335

Protocols

- Protocol for inclusivity: *Salmonella* strains were grown in Buffered Peptone Water (BPW). Dilutions were done in order to inoculate around 10 cells/225 ml BPW. The enrichment step was performed at 37°C. The protocol of the alternative method was then applied, i.e. subculture in RVS broth and M broth prior to VIDAS SLM test.
- Protocol for exclusivity: The different negative strains were cultured in non selective broth. Dilutions were realised in order to inoculate 10⁵ cells/ml before performing the VIDAS SLM test.

Results and conclusion

The raw data are given in **Appendix 5**.

All the 65 strains of *Salmonella* tested were detected.

Among the 30 non targeted strains tested, cross reactions were observed with three strains of *Citrobacter* (*Citrobacter diversus* and *Citrobacter freundii*). These strains were not detected by the reference method.

2.2 Inter-laboratory study

The aim of the inter-laboratory 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.

2.2.1 Study organization

The inter-laboratory study was conducted in 2006 with 15 laboratories. The matrix was a pasteurized milk sample (25 ml) inoculated with *Salmonella* Typhimurium (origin “dairy products”).

24 samples per laboratory were prepared to represent 3 levels of contamination, with 8 samples per level for each method.

2.2.2 Control of experimental parameters

Contamination levels obtained after artificial contamination

The contamination levels and the confidence intervals are:

Level	Samples	Theoretical target level (CFU/25ml)	True level (CFU/25ml)	Low limit / 25 ml sample	High limit / 25 ml sample
Level 0 (L0)	1-4-7-10- 11-16-19-22	0	0	/	/
Low level (L1)	2-5-8-12 13-17-20-23	3	4.0	1.1	10.3
High level (L2)	3-6-9-14- 15-18-21-24	30	42.9	30.6	58.4

Logistic conditions

Temperatures registered by the temperature probe during the shipment were stable and inferior to 8°C until the reception date.

The temperatures on receipt and reception times obtained are recorded in the following table:

Table 9

Laboratory	Temperatures at receipt (°C)		Comments
	Measured by the laboratory	Temperature probe	
A	16.4	8.8	Reception at D2
B	/	/	Reception at D2
C	8.0	7.7	
D	9.7	3.7	
E	7.0	8.2	
F	Not communicated	2.7	
G	/	16.3	Reception at D2
H	Not communicated	Not received	
I	3.9	4.5	
J	1.1	5.2	
K	1.0	1.2	
L	3.0	2.7	
M	8.0	3.7	
N	3.4	7.7	
O	8.8	3.7	

Conclusion

Among the 15 laboratories, 12 laboratories received samples the day after the shipment.

After analysis of temperature curves, the delivery temperatures were acceptable for all of them.

Note: The laboratory H received samples in the deadlines, but did not communicate the temperature at receipt. The temperature probe was not returned to the expert lab. Nevertheless, considering temperature at receipt obtained by the other laboratories and the profiles of temperature during the transport, its results were kept for interpretation.

12 laboratories performed the analysis.

2.2.3 Results

Collaborator lab results

Laboratory F did not analyze samples according to VIDAS SLM single enrichment method. The results are summarized in the following tables for 11 laboratories.

Table 10 - 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
C	0	8	8	8	8	8
D	0	8	8	8	8	8
E	8	8	8	8	8	8
H	0	8	8	8	8	8
I	0	7	8	8	8	8
J	0	8	8	8	8	8
K	0	8	8	8	8	8
L	0	8	8	8	8	8
M	0	8	8	8	8	8
N	0	8	8	8	8	8
O	0	8	8	8	8	8
Total	8 (a)	87	88 (b)	88	88 (c)	88

Table 11 - 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
C	0	8	8	8	8	8
D	0	8	8	8	8	8
E	7	8	8	8	8	8
H	0	8	8	8	8	8
I	0	8	8	8	8	8
J	0	8	8	8	8	8
K	0	8	8	8	8	8
L	0	8	8	8	8	8
M	0	8	8	8	8	8
N	0	8	8	8	8	8
O	0	8	8	8	8	8
Total	7 (a)	88	88 (b)	88	88 (c)	88

(a) : False positive

(b) : True positive at level 1

(c) : True positive at level 2

Conclusion

Results of lab E were all positive including not contaminated samples.

The *Salmonella* strain found in the control samples was the same that introduced into the contaminated samples. Cross contamination probably occurred for this lab during manipulation. Lab E was excluded for interpretation.

The **results** of the reference method and the alternative method **were in agreement** for 10 laboratories.

2.2.4 Calculations

The results of 10 laboratories were considered.

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

Specificity and sensitivity for each method

For the L0 level and for each method, specificity percentages are calculated according to:

$$SP = \left[1 - \left(\frac{FP}{N-} \right) \times 100\% \right]$$

with: N- = total number of all L0 essays

FP = number of false positive

For each contamination level and each method, the sensitivity percentages are calculated according to:

$$SE = \frac{TP}{N+} \times 100\%$$

with: N+ = total number of all L1 or L2 essays

TP = number of true positive

Results are reported in the following table:

Table 12

Level	Reference method		Alternative method	
	SP/SE	LCL* %	SP/SE	LCL* %
L0	SP% = 100	98	SP% = 100	98
L1	SE% = 100	98	SE% = 100	98
L2	SE% = 100	98	SE% = 100	98
L1+L2	SE% = 100	98	SE% = 100	98

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

Relative accuracy (AC)

Results for all levels are given below:

Table 13 - Paired results of the alternative and reference methods

Responses	Positive reference method (R+)	Negative reference method (R-)	Total
Positive alternative method (A+)	Positive agreement (A+/R+) PA = 160	Positive deviation (R-/A+) PD = 0	(N+) = 160
Negative alternative method (A-)	Negative deviation (A-/R+) ND = 0 (PPND = 0)	Negative agreement (A-/R-) NA = 79* (PPNA = 0)	(N-) = 79
Total	(N+) = 160	(N-) = 79	N = 239

* including none not confirmed positive VIDAS SLM test

Relative accuracy (AC) (in %) is calculated according to:

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

with: N = number of samples analysed
PA = number of positive agreement
NA = number of negative agreement

In this study, **relative accuracy was 100%**.

Analysis of discordant results

No discordant result was observed; no statistical test was performed. The two methods are considered equivalent.

2.2.5 Interpretation

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 following table:

	Inter-laboratory study	Comparative study
Relative accuracy (AC)	100.0 %	99.4 %
Sensitivity (SE)	100.0 %	98.7 %
Specificity (SP)	100.0 %	100.0 %

The values obtained following the inter-laboratory study are similar to the values obtained during the preliminary study.

The AFNOR Technical Committee requests the calculation of the **sensitivity** of the both methods with consideration of all confirmed positives (true positive results):

Alternative method	Reference method
$(PA + PD) / (PA + PD + ND) = 100 \%$	$(PA + ND) / (PA + PD + ND) = 100\%$

Accordance (DA)

Accordance values for both methods (See **Appendix 6** for the raw data) are:

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

Concordance

Both methods concordance values (See **Appendix 7** for the raw data) are:

Level	Reference method	Alternative method
L0	Concordance % = 98.8 %*	Concordance % = 100.0 %
L1	Concordance % = 100.0 %	Concordance % = 100.0 %
L2	Concordance % = 100.0 %	Concordance % = 100.0 %

* The percentage of concordance of L0 level was lower than 100 %, due to the fact that the laboratory I supplied only 7 results on 8, because of a problem during the assays.

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:

Level	Reference method	Alternative method
L0	COR % = 1.00	COR % = 1.00
L1	COR % = 1.00	COR % = 1.00
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 inter-laboratory variation becomes more predominant.

2.3 Practicability

1.Packaging 2.Reagent volumes	The VIDAS SLM kits contain the quantity of reagent necessary for 60 analyses : <ul style="list-style-type: none"> - the SLM strips composed of 10 wells covered with a labelled, foil seal, with ready-to-use reagents - the SLM SPR® in 30 units per pouch (ready-to-use) - one vial of SLM standard (S1) : ready-to-use 1× 6 ml - one vial of SLM Positive Control (C1) : ready-to-use 1× 6 ml - one vial of SLM Negative Control (C2) : ready-to-use 1× 6 ml 			
3. Storage conditions and kit	The storage temperature of the VIDAS SLM kit is at 2°C - 8°C. Store all unused reagent at 2°C - 8°C. The kit expiry date is shown on the box label and on the different vials.			
4. Use after having open the kit	The kit components should be stored between +2°C and +8°C. If stored according to the recommended conditions (pouch correctly resealed with desiccant after use...), all components are stable until the expiration date indicated on the label.			
5. Required equipments	Normal configuration of and common material of a laboratory of microbiology Necessary equipment : <ul style="list-style-type: none"> - mixer typifies to stomacher, - an air incubator at 37°C ± 1°C, - an air incubator at 41.5°C ± 1.0°C, - a water bath at 95-100°C or equivalent system, - a VIDAS® instrument 			
6. Reagents	All the reagents are ready-to-use.			
7. Training courses	For an operator trained in standard techniques of microbiology, training in the technique requires less than 1 day.			
8. Workflow study (time required for analyses in minutes)				
Steps	Average time for a sample (min)		Average time for 30 samples(min)	
	Reference method	Alternative method	Reference method	Alternative method
Preparation, weighing, dilution in BPW and crushing	7	7	90	90
Transfer to selective broths:	3	1	45	25
- RVS and MKTTn		1		25
- RVS and M broth		1	/	25
VIDAS SLM test (heating, washing, OD reading...)	/	1	/	25
Streaking of RVS and MKTTn after 24h incubation on two selective media, including plates notes and readings	10	/	150	/
TOTAL	20 minutes 0h20	9 minutes 0h09	285 minutes 4h40	140 minutes 2h20
	These times correspond to negative samples for which no confirmation is necessary. In the case of <u>positive samples</u> , it is necessary to add the time necessary for the confirmations. For alternative method, in case of positive samples, the requested time for isolation of enrichment onto selective media must be added (approximately 1 minute per sample). And the average time for the confirmation of a typical colony by reference method tests can be evaluated to approximately 5 minutes.			

	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		
Step	<u>Time required (Day)</u> VIDAS SLM single enrichment method	<u>Time required (Day)</u> Reference method ISO 6579
Realization of pre-enrichment	D0	D0
Inoculations of enrichment broths (Rappaport-Vassiliadis Soja, MKTTn, M)	D1	D1
VIDAS SLM test procedure	D2	/
Streaking of RVS and MKTTn on selective media	/	D2
Reading the plates	/	D3 to D4
Test result Obtaining negative results (if negative test, if no characteristic colony or after negative confirmation if necessary)	D2	D3 to D7
Confirmatory tests	/	D3 to D7
Obtaining positive results (after confirmation of typical colonies)	D5 to D7	D5 to D7
Confirmation by reference method tests (including purification)	D5 to D7	D5 to D7
10. Technician qualification	Same as for the reference method.	
11. Common step with reference method	Pre-enrichment in BPW Confirmations	
12.Traceability	1 MLE card (Master Lot Entry): specifications sheet containing the factory master calibration data required to calibrate the test. A result sheet is printed with the reagents lot numbers, time, test result, and sample identification and interpretation.	
13.Maintenance	The VIDAS user's guide explains some problems. BioMérieux offers a phone customer technical support for the possible problems. Different maintenance contracts are possible.	

3 CONCLUSION

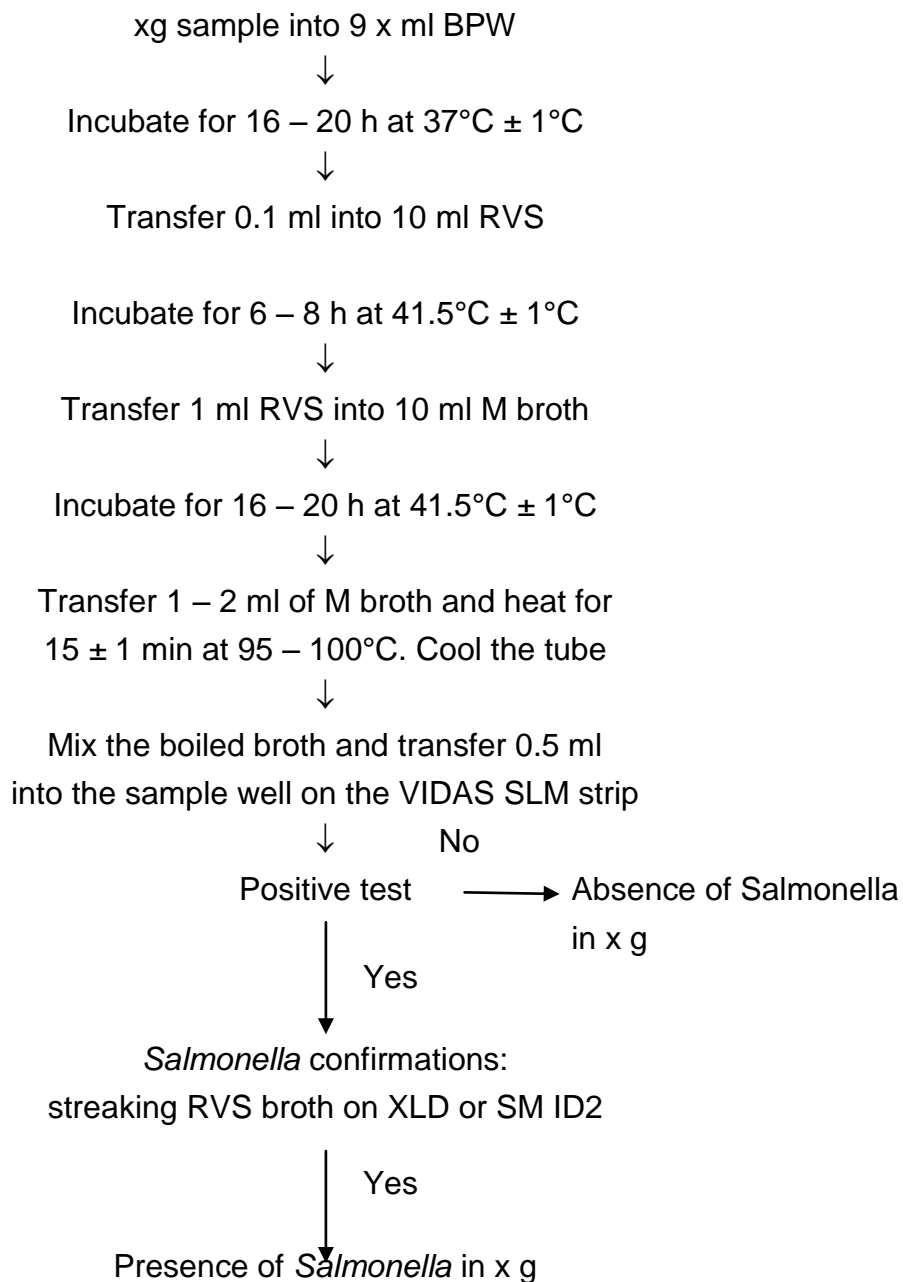
The **methods comparative study conclusions** are:

- ☒ The relative accuracy obtained was 99.4 %, the relative sensitivity 98.7 % and the relative specificity 100.0 %, according to the calculations required by the EN ISO 16140 standard.
- ☒ 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 are of 98.7 % for the alternative method and 100.0 % for the reference method.
In final, no discordance was observed, both methods were considered as statistically equivalent.
- ☒ The relative level of detection of the VIDAS SLM single enrichment method and of the reference method was evaluated by artificial contaminations of five different products, representative of five categories tested.
- ☒ It was between 0.3 and 1.7 *Salmonella* cells per 25 g or ml for alternative method and between 0.3 and 1.4 *Salmonella* cells per 25 g or ml for the reference method.
- ☒ All the *Salmonella* strains were detected (inclusivity) and one cross reaction was observed with a strain of *Citrobacter diversus* (exclusivity).

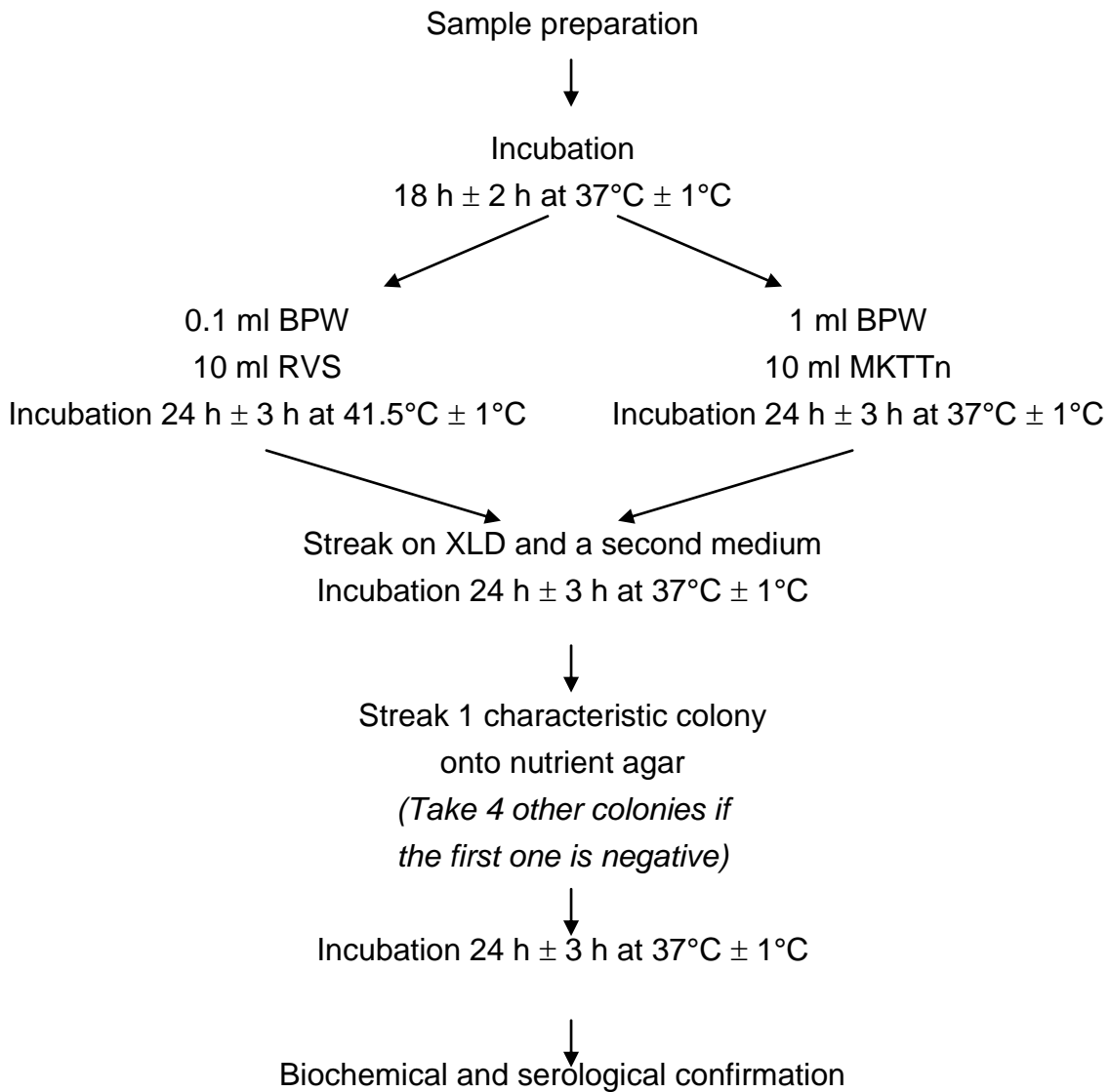
The **inter-laboratory study conclusions** are:

- ☒ The observed data and results confirmed that the alternative method and reference method show equivalent performances (accordance, concordance, odds ratio).

Appendix 1 – Flow diagram of the alternative method



**Appendix 2 – Flow diagram of the ISO 6579 reference method
Microbiology of food and animal feeding stuffs – Horizontal method for the
detection of *Salmonella* spp.**



Appendix 3 - Artificial contaminations

Code	Product (French name)	Category	Artificial contamination						Result
			Strain			Injury protocol	Injury measurement	CFUC/25g	
			N°	Name	Origin				
A1	Whiting filet	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°c 30min -80°c	0,35	3,4	+
A2	Scallops	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°c 30min -80°c	0,35	3,4	+
A3	Salmon filet	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°c 30min -80°c	0,35	4,0	+
A4	Smoked mackerel	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°c 30min -80°c	0,35	4,7	+
A5	Seafoods	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°c 30min -80°c	0,35	5,4	+
A6	FSaithe filet	PP1	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,78	6,9	+
A7	Shrimps	PP1	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,78	6,9	+
A13	Cooked lens	PV2	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°c 30min -80°c	0,41	6,3	+
A14	Cooked broccoli	PV2	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°c 30min -80°c	0,41	6,3	+
A15	Cooked green beans	PV2	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°c 30min -80°c	0,41	11,1	+
A17	Raw endive	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°c 30min -80°c	0,41	9,5	+
A19	Cooked saithe filet	DV3	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,78	6,9	+
B1	Red fruits pastry	DV2	14	<i>Salmonella</i> Enteritidis	Pastry	30min 55°c 30min -80°c	0,57	8,4	+
B2	Baba au rhum	DV2	14	<i>Salmonella</i> Enteritidis	Pastry	30min 55°c 30min -80°c	0,57	10,0	+
B3	Versillais	DV2	14	<i>Salmonella</i> Enteritidis	Pastry	30min 55°c 30min -80°c	0,57	10,0	+
B4	Forêt noire	DV2	14	<i>Salmonella</i> Enteritidis	Pastry	30min 55°c 30min -80°c	0,57	11,7	+
B5	Baked custard	DV2	14	<i>Salmonella</i> Enteritidis	Pastry	30min 55°c 30min -80°c	0,57	8,4	+
B6	Cooked green beans	DV2	87	<i>Salmonella</i> Blockley	Basil	30min 55°c 30min -80°c	1,84	12,9	+
B7	Carott puree	DV2	87	<i>Salmonella</i> Blockley	Basil	30min 55°c 30min -80°c	1,84	12,9	+
B8	Roasted potaoes	DV2	87	<i>Salmonella</i> Blockley	Basil	30min 55°c 30min -80°c	1,84	10,3	+
B9	Vegetables pancake	DV2	87	<i>Salmonella</i> Blockley	Basil	30min 55°c 30min -80°c	1,84	10,3	+
B10	Scallops with Cognac	DV3	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,59	5,5	+
B11	Hake with curry	DV3	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,59	6,4	+
B12	Salmon + mushrooms	DV3	80	<i>Salmonella</i> Kedougou	Tuna	30min 55°c 30min -80°c	0,59	6,4	+
B13	Viennetta mint	PL2	45	<i>Salmonella</i> Indiana	Cheese (Brie de Meaux)	30min 55°c 30min -80°c	0,35	7,3	+
B14	St Félicien	PL2	45	<i>Salmonella</i> Indiana	Cheese (Brie de Meaux)	30min 55°c 30min -80°c	0,35	8,2	+
B15	Fromage de chèvre	PL2	45	<i>Salmonella</i> Indiana	Cheese (Brie de Meaux)	30min 55°c 30min -80°c	0,35	8,2	+
B16	Brillat savarin	PL2	45	<i>Salmonella</i> Indiana	Cheese (Brie de Meaux)	30min 55°c 30min -80°c	0,35	4,6	+
B17	Goat cheese	PL2	45	<i>Salmonella</i> Indiana	Cheese (Brie de Meaux)	30min 55°c 30min -80°c	0,35	6,5	+
B18	Rollot de Picardie	PL2	97	<i>Salmonella</i> Typhimurium	Cheese (St Nectaire)	30min 55°c 30min -80°c	0,50	6,1	+
B19	Morbier	PL1	97	<i>Salmonella</i> Typhimurium	Cheese (St Nectaire)	30min 55°c 30min -80°c	0,50	7,6	+
B20	Neufchâtel	PL1	97	<i>Salmonella</i> Typhimurium	Cheese (St Nectaire)	30min 55°c 30min -80°c	0,50	7,6	+
B21	Roquefort	PL1	97	<i>Salmonella</i> Typhimurium	Cheese (St Nectaire)	30min 55°c 30min -80°c	0,50	9,1	+
B22	Munster fermier	PL1	97	<i>Salmonella</i> Typhimurium	Cheese (St Nectaire)	30min 55°c 30min -80°c	0,50	9,1	+
C5	Stuffed squids	DV3	71	<i>Salmonella</i> Senftenberg	Poisson	48H fridge 30min 55°c 30min -80°c	0,71	3,0	+

Code	Product (French name)	Category	Artificial contamination						Result
			Strain			Injury protocol	Injury measurement	CFUC/25g	
			N°	Name	Origin				
C6	Salmon roulades	DV3	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°c 30min -80°c	0,71	3,4	+
C7	Stuffed squids	DV3	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°c 30min -80°c	0,71	3,7	+
C8	Cooked salmon	DV3	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°c 30min -80°c	0,71	3,7	+
C9	Cooked salmon	DV3	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°c 30min -80°c	0,71	4,1	+
C10	White fish lemon	DV3	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°c 30min -80°c	0,71	4,5	+
C11	Goat cheese	PL2	73	<i>Salmonella</i> Senftenberg	Dairy product	48H fridge 30min 55°c 30min -80°c	0,64	3,3	+
C12	Ewe cheese	PL2	73	<i>Salmonella</i> Senftenberg	Dairy product	48H fridge 30min 55°c 30min -80°c	0,61	3,3	+
C13	Cœur à cœur	PL2	73	<i>Salmonella</i> Senftenberg	Dairy product	48H fridge 30min 55°c 30min -80°c	0,61	3,7	+
C14	La crémier	PL2	73	<i>Salmonella</i> Senftenberg	Dairy product	48H fridge 30min 55°c 30min -80°c	0,61	3,7	+
C15	Crottin de chavignol	PL1	54	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,64	4,8	+
C16	Valencay	PL1	54	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,64	4,8	+
C17	Selles sur cher	PL1	54	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,64	4,8	+
C18	Crottin au lait cru	PL1	54	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,64	5,2	+
C19	Poudre de lait	PL3	55	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,57	3,0	+
C20	Poudre de lait	PL3	55	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,57	3,0	+
C21	Dry milk	PL3	55	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,57	3,3	+
C22	Dry milk	PL3	55	<i>Salmonella</i> Typhimurium	Half skim milk	48H fridge 30min 55°c 30min -80°c	0,57	3,3	+
D2	raw beef	AN3	1	<i>Salmonella</i> Anatum	Beef meat	30min 55°c 30min -80°c 15min 45°c	1,02	0,0	-
D3	raw beef	AN3	1	<i>Salmonella</i> Anatum	Beef meat	30min 55°c 30min -80°c 15min 45°c	1,02	0,0	-
D4	Beef pate for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	1,4	+
D5	Beef paté for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	1,7	+
D6	Chicken paté for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	1,7	+
D7	Chicken paté for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	1,9	+
D8	Lamb paté for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	2,0	+
D9	Lamb paté for dog	AN1	3	<i>Salmonella</i> Brandenburg	Pâté	30min 55°c 30min -80°c 15min 45°c	0,96	2,0	+
D14	Pellets	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°c 30min -80°c 15min 45°c	1,09	1,3	+
D15	Meal	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°c 30min -80°c 15min 45°c	1,09	1,4	-
D16	Meal	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°c 30min -80°c 15min 45°c	1,09	1,4	+
D18	Fish meal	AN2	85	<i>Salmonella</i> Liverpool	Fish meal	30min 55°c 30min -80°c 15min 45°c	1,02	0,2	+
D21	Meal	AN2	81	<i>Salmonella</i> Kedougou	Pet food	30min 55°c 30min -80°c 15min 45°c	0,91	0,8	+
D22	Meal	AN2	81	<i>Salmonella</i> Kedougou	Pet food	30min 55°c 30min -80°c 15min 45°c	0,91	0,9	+
D23	Pellets	AN2	81	<i>Salmonella</i> Kedougou	Pet food	30min 55°c 30min -80°c 15min 45°c	0,91	0,9	-
D24	Pellets	AN2	81	<i>Salmonella</i> Kedougou	Pet food	30min 55°c 30min -80°c 15min 45°c	0,91	1,0	+
E1	Waste beef	AN3	1	<i>Salmonella</i> Anatum	Beef meat	30min 55°c 30min -80°c 15min 45°c	0,95	8,2	+
E2	Waste beef	AN3	1	<i>Salmonella</i> Anatum	Beef meat	30min 55°c 30min -80°c 15min 45°c	0,95	12,3	+
E3	Waste beef	AN3	1	<i>Salmonella</i> Anatum	Beef meat	30min 55°c 30min -80°c 15min 45°c	0,95	4,1	+
E4	Fish paté for cat	AN1	90	<i>Salmonella</i> Oranienburg	Pet food	30min 55°c 30min -80°c 15min 45°c	0,81	1,0	+

Code	Product (French name)	Category	Artificial contamination						Result
			Strain			Injury protocol	Injury measurement	CFUC/25g	
			N°	Name	Origin				
E5	Liver and poultry paté for cat	AN1	90	<i>Salmonella</i> Oranienburg	Pet food	30min 55°C 30min -80°C 15min 45°C	0,81	1,0	+
E6	Chicken paté for cat	AN1	90	<i>Salmonella</i> Oranienburg	Pet food	30min 55°C 30min -80°C 15min 45°C	0,81	1,2	+
E7	Salmon paté for cat	AN1	90	<i>Salmonella</i> Oranienburg	Pet food	30min 55°C 30min -80°C 15min 45°C	0,81	1,2	+
E15	Dry cat foods	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°C 30min -80°C 15min 45°C	0,66	3,2	+
E16	Dry cat foods	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°C 30min -80°C 15min 45°C	0,66	3,2	+
E17	Dry cat foods	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°C 30min -80°C 15min 45°C	0,66	3,8	+
E18	Dry cat foods	AN2	67	<i>Salmonella</i> Llandoff	Pet food	30min 55°C 30min -80°C 15min 45°C	0,66	3,8	+
F1	Dry milk	PL3	54	<i>Salmonella</i> Typhimurium	Half skim milk	30min 55°C 30min -80°C 15min 45°C	0,51	3,4	+
F2	Dry milk	PL3	54	<i>Salmonella</i> Typhimurium	Half skim milk	30min 55°C 30min -80°C 15min 45°C	0,51	4,1	+
F3	Dry milk	PL3	54	<i>Salmonella</i> Typhimurium	Half skim milk	30min 55°C 30min -80°C 15min 45°C	0,51	4,8	+
F4	Chef crawfish	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°C 30min -80°C 15min 45°C	0,55	1,9	+
F5	Perch filet	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°C 30min -80°C 15min 45°C	0,55	1,9	-
F6	fish filet	PP1	31	<i>Salmonella</i> Virchow	Cockle	30min 55°C 30min -80°C 15min 45°C	0,55	2,3	+
F7	Spinach	PV2	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	1,8	-
F8	Vegetables for couscous	PV2	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	1,8	+
F9	Cauliflower	PV2	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	2,2	+
F13	Salad	PV1	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	1,4	-
F14	Salad	PV1	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	1,8	+
F16	Catalan pan fried	PV1	59	<i>Salmonella</i> San Diego	Dried herbs	30min 55°C 30min -80°C 15min 45°C	0,57	2,2	-
F17	Catalan pan fried	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	1,8	-
F18	Catalan pan fried	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	1,8	-
F19	Red cabbage	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	2,2	+
F20	Red cabbage	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	2,2	+
F21	Red cabbage	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	2,7	+
F22	Red cabbage	PV1	2	<i>Salmonella</i> Amsterdam	Vegetables	30min 55°C 30min -80°C 15min 45°C	0,53	2,7	+
G1	Cooked whelks	PP1	71	<i>Salmonella</i> Senftenberg	Fish	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,73	6,0	+
G2	Ratatouille	PV2	2	<i>Salmonella</i> Amsterdam	Vegetables	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,45	6,8	+
G3	Red cabbage	PV1	87	<i>Salmonella</i> Blockley	Basil	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,46	4,6	+
G4	Tomatoes	PV1	87	<i>Salmonella</i> Blockley	Basil	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,46	5,8	+
G5	Provençal pan fried	PV1	87	<i>Salmonella</i> Blockley	Basil	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,46	6,9	+
G6	Provençal pan fried	PV1	87	<i>Salmonella</i> Blockley	Basil	48H fridge 30min 55°C 30min -80°C 5min 46°C	0,46	6,9	+

Appendix 4 – Relative accuracy, relative specificity, relative sensitivity: raw data (Study realized by IPL)

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 typical colonies of *Salmonella* if $x \leq 5$

Cf : *Citrobacter freundii*
Ec : *Escherichia coli*
En : *Enterobacter*
Ha : *Hafnia alvei*
Pm : *Proteus mirabilis*

a : incubation of *M* broth for 24h of overtime
b : realization of a new *M* broth from RVS broth incubated 24h

CA : artificial contamination

Categories of samples :

MP : Meat Products
DP : Dairy Products
SF : Seafood
V : Vegetables
D : Diverse food products
F : Animal feed

MEAT PRODUCTS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method						Comparison	
				RVS		MKTTn		Identification	Result	RFV	VT	Test result	Confirmation				Result
				XLD	SM ID2	XLD	SM ID2						RVS		Identification		
								XLD	SM ID2	XLD	SM ID2						
2002	Pork belly	MP1	No	-ME	-ME	-HE	-ME	/	-		0.03	-	/	/	/	-	=
2002	Pork tongue	MP1	No	-ME	-LE	-ME	-ME	/	-		0.03	-	/	/	/	-	=
2002	Heart of ox	MP1	No	-HE	-ME	-HE	-LE	/	-		0.03	-	/	/	/	-	=
2002	Pork cheeks	MP1	No	-HE	-LE	-HE	-LE	/	-		0.04	-	/	/	/	-	=
2002	Pork kidneys	MP1	No	-LE	-LE	-HE	-LE	/	-		0.04	-	/	/	/	-	=
2002	Pork cheeks	MP1	No	-LE	-LE	-LE	-ME	/	-		0.04	-	/	/	/	-	=
2002	Pork tongue	MP1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Pork tongue	MP1	No	-ME	-ME	-HD (En)	-HD (Ha)	/	-		0.04	-	/	/	/	-	=
2002	Kidneys of ox	MP1	No	-LE	Ø	-LE	-HD (Ha)	/	-		0.10	-	/	/	/	-	=
2002	Kidneys of ox	MP1	No	-ME	-LE	-HD (Cf)	-HD (Cf,Ha)	/	-		0.05	-	/	/	/	-	=
2002	Calf's liver	MP1	No	-LD (Cf)	-MD (Ha)	-HE	-HE	/	-		0.09	-	/	/	/	-	=
2002	Pork's liver	MP1	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Beefsteak of horse	MP1	No	-ME	-ME	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Horse meat	MP1	No	-LE	-LE	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Bovine meat	MP1	No	-ME	-ME	-HE	-HE	/	-		0.03	-	/	/	/	-	=
2002	Pork chop	MP1	No	-ME	-ME	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Sirloin	MP1	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Pork cheek	MP1	No	+MD	-LD (En)	+MB	+MB	Salmonella spp	+		1.70	+	+MD	-LD (En)	Salmonella spp	+	=
2002	Pork tongue	MP1	No	+LD	+LD	+MD	+LD	Salmonella spp	+		2.60	+	+LD	+LD	Salmonella spp	+	=
2002	Roast pork	MP1	No	+LB	+LB	+HB	+MB	Salmonella spp	+		2.25	+	+LB	+LB	Salmonella spp	+	=
2002	Pork tongue	MP1	No	+LB	+LC	+LC	+LB	Salmonella spp	+		2.68	+	+LB	+LC	Salmonella spp	+	=
2002	Pork's liver	MP1	No	+LB	+LC	+HC	+MB	Salmonella spp	+		2.15	+	+LB	+LC	Salmonella spp	+	=
2002	Pork tongue	MP1	No	+MB	+MC	+HC	+HC	Salmonella spp	+		2.94	+	+MB	+MC	Salmonella spp	+	=
2002	Veal breast	MP1	No	+LC	+LC	+MB	+MB	Salmonella spp	+		2.29	+	+LC	+LC	Salmonella spp	+	=
2002	Bacon	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.49	+	+MB	+MB	Salmonella spp	+	=
2002	Pork tongue	MP1	No	+MB	+MC	+HC	+HC	Salmonella spp	+		2.94	+	+MB	+MC	Salmonella spp	+	=
2002	Pork cheeks	MP1	No	+MB	+MB	+MB	+LB	Salmonella spp	+		2.45	+	+MB	+MB	Salmonella spp	+	=
2002	Kidneys	MP1	No	+MB	+MB	+HB	+HB	Salmonella spp	+		2.20	+	+MB	+MB	Salmonella spp	+	=
2002	Minced meat	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.61	+	+MB	+MB	Salmonella spp	+	=
2002	Minced meat	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.48	+	+MB	+MB	Salmonella spp	+	=
2002	Pork kidneys	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.36	+	+MB	+MB	Salmonella spp	+	=
2002	Pork kidneys	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.92	+	+MB	+MB	Salmonella spp	+	=
2002	Minced meat of horse	MP1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		3.19	+	+MB	+MB	Salmonella spp	+	=
2002	Hen	MP2	No	-ME	-LE	-HE	-LE	/	-		0.03	-	/	/	/	-	=
2002	Chicken	MP2	No	-ME	-LE	-LE	-LE	/	-		0.03	-	/	/	/	-	=
2002	Chicken liver	MP2	No	-ME	-LE	-ME	-LE	/	-		0.04	-	/	/	/	-	=
2002	Chicken liver	MP2	No	-ME	-LE	-HE	-ME	/	-		0.03	-	/	/	/	-	=
2002	Chicken liver	MP2	No	-ME	-LE	-ME	-LE	/	-		0.04	-	/	/	/	-	=
2002	Duck liver	MP2	No	-ME	-LE	-ME	-MD (En)	/	-		0.04	-	/	/	/	-	=
2002	Chicken breasts	MP2	No	-HE	-LE	-HE	-LD (En)	/	-		0.04	-	/	/	/	-	=
2002	Chicken	MP2	No	-ME	-LE	-LE	-LE	/	-		0.04	-	/	/	/	-	=
2002	Thigh of guinea fowl	MP2	No	+HD	+MB	-ME	+MB	Salmonella spp	+		2.69	+	+HD	+MB	Salmonella spp	+	=
2002	Chicken liver	MP2	No	+MB	+LC	+MC	+HB	Salmonella spp	+		2.44	+	+MB	+LC	Salmonella spp	+	=
2002	Chicken liver	MP2	No	+HB	+LB	+HB	+HB	Salmonella spp	+		2.46	+	+HB	+LB	Salmonella spp	+	=
2002	Thigh of poultry	MP2	No	+LB	+LB	+HB	+HB	Salmonella spp	+		2.66	+	+LB	+LB	Salmonella spp	+	=
2002	Thigh of can	MP2	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.75	+	+MB	+MB	Salmonella spp	+	=
2002	Chicken giblets	MP2	No	+LB	+LB	+HB	+HB	Salmonella spp	+		2.35	+	+LB	+LB	Salmonella spp	+	=
2002	Hen	MP2	No	+MB	+MB	+HB	+HB	Salmonella spp	+		2.81	+	+MB	+MB	Salmonella spp	+	=
2002	Duck	MP2	No	+MB	+MB	+MA	+MB	Salmonella spp	+		2.34	+	+MB	+MB	Salmonella spp	+	=
2002	Quails	MP2	No	+MB	+MB	+MB	+MB	Salmonella spp	+		1.68	+	+MB	+MB	Salmonella spp	+	=
2002	Turkey cutlet	MP2	No	+MB	+MB	+HB	+MB	Salmonella spp	+		3.11	+	+MB	+MB	Salmonella spp	+	=
2002	Sausage	MP3	No	-LE	-LE	-LE	-LE	/	-		0.05	-	/	/	/	-	=
2002	Lardons	MP3	No	-ME	-LE	Ø	-LE	/	-		0.08	-	/	/	/	-	=

MEAT PRODUCTS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method						Comparison	
				RVS		MKTTn		Identification	Result	RFV	VT	Test result	Confirmation				Result
				XLD	SM ID2	XLD	SM ID2						RVS		Identification		
								XLD	SM ID2	XLD	SM ID2	Identification	Result				
2002	Lardons	MP3	No	-LE	∅	∅	∅	/	-		0.03	-	/	/	/	-	=
2002	Calf sausage	MP3	No	-ME	-LE	-ME	-LE	/	-		0.03	-	/	/	/	-	=
2002	Bacon	MP3	No	-LE	-LE	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Bacon	MP3	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Smoked lardons	MP3	No	-LE	-LE	-HE	-HE	/	-		0.03	-	/	/	/	-	=
2002	Bacon	MP3	No	-ME	-ME	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Bacon	MP3	No	+LB	+MB	+HB	+HD	<i>Salmonella spp</i>	+		2.89	+	+LB	+MB	<i>Salmonella spp</i>	+	=
2002	Caul of pork	MP3	No	+MB	+MD	+MB	+MB	<i>Salmonella spp</i>	+		2.33	+	+MB	+MD	<i>Salmonella spp</i>	+	=
2002	Coarse pork sausage	MP3	No	+MB	+MB	+MB	+MB	<i>Salmonella spp</i>	+		2.78	+	+MB	+MB	<i>Salmonella spp</i>	+	=
2002	Chipolatas	MP3	No	+HB	+HB	+HB	+MB	<i>Salmonella spp</i>	+		2.80	+	+HB	+HB	<i>Salmonella spp</i>	+	=

DAIRY PRODUCTS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method							Comparison
				RVS		MKTn		Identification	Result	RFV	VT	Test result	Confirmation			Result	
				XLD	SM ID2	XLD	SM ID2						RVS		Identification		
													XLD	SM ID2			
B19	Morbier cheese	DP1	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	9998	2.92	+	+MB	+MB	Salmonella spp	+	=
B20	Neufchâtel cheese	DP1	Yes	+HA	+MB	+HA	+HA	Salmonella spp	+	10240	2.99	+	+HA	+MB	Salmonella spp	+	=
B21	Roquefort	DP1	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	10679	3.12	+	+MB	+MB	Salmonella spp	+	=
B22	Munster farmer	DP1	Yes	+HB	+HB	+HB	+HB	Salmonella spp	+	10457	3.06	+	+HB	+HB	Salmonella spp	+	=
C15	Crottin de chavignol cheese	DP1	Yes	+HB	+HB	+HB	+HB	Salmonella spp	+	10525	3.08	+	+HB	+HB	Salmonella spp	+	=
C16	Valencay cheese	DP1	Yes	+HB	+HB	+HC	+HB	Salmonella spp	+	10611	3.10	+	+HB	+HB	Salmonella spp	+	=
C17	Selles sur cher cheese	DP1	Yes	+HB	+HB	+HC	+HC	Salmonella spp	+	10588	3.09	+	+HB	+HB	Salmonella spp	+	=
C18	Raw milk Crottin cheese	DP1	Yes	+HB	+HB	+HC	+HB	Salmonella spp	+	10244	2.99	+	+HB	+HB	Salmonella spp	+	=
2002	Raw milk cheese	DP1	No	-ME	-ME	+MD	+MD	Salmonella spp	+		0.04	-	-ME	-ME	-	-	ND
2002	Raw milk cheese	DP1	No	-ME	+MD	-ME	+MD	Salmonella spp	+		2.65	+	-ME	+MD	Salmonella spp	+	=
2002	St Nectaire cheese	DP1	No	-LE	-LE	-ME	-ME	/	-		0.07	-	/	/	/	-	=
2002	Fourme d'Ambert cheese	DP1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Carré du vinage cheese	DP1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Carré du vinage cheese	DP1	No	-ME	-ME	-ME	-ME	/	-		0.07	-	/	/	/	-	=
2002	Morbier in the raw milk	DP1	No	-ME	-ME	-ME	-ME	/	-		0.05	-	/	/	/	-	=
2002	Reblochon	DP1	No	-ME	-ME	-ME	-ME	/	-		0.07	-	/	/	/	-	=
2002	Époisses cheese	DP1	No	-LE	-LE	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Munster farmer	DP1	No	-LE	-LE	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Reblochon	DP1	No	-ME	-ME	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Maroilles cheese	DP1	No	-ME	-ME	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Brie de Meaux cheese	DP1	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Cheese farmer of goat	DP1	No	-LE	Ø	-HE	-LE	/	-		0.05	-	/	/	/	-	=
2002	Reblochon	DP1	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Reblochon	DP1	No	-MD (Pm)	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Raw milk cheese	DP1	No	-ME	-ME	Ø	Ø	/	-		0.04	-	/	/	/	-	=
B13	Ice cream	DP2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10046	2.94	+	+MA	+MA	Salmonella spp	+	=
B14	Soft cheese	DP2	Yes	+HB	+HB	+HB	+HB	Salmonella spp	+	9570	2.80	+	+HB	+HB	Salmonella spp	+	=
B15	Goat cheese	DP2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	9922	2.90	+	+MA	+MA	Salmonella spp	+	=
B16	Brillat savarin	DP2	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	9832	2.87	+	+HA	+HA	Salmonella spp	+	=
B17	Goat cheese	DP2	Yes	+HA	+HA	+HA	+MA	Salmonella spp	+	10220	2.99	+	+HA	+HA	Salmonella spp	+	=
B18	Rollot de Picardie cheese	DP2	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	10079	2.94	+	+HA	+HA	Salmonella spp	+	=
C11	Goat cheese	DP2	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	10482	3.06	+	+HA	+HA	Salmonella spp	+	=
C12	Ewe milk cheese	DP2	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	10283	3.00	+	+HA	+MA	Salmonella spp	+	=
C13	Soft cheese	DP2	Yes	+HB	+HB	+HA	+HA	Salmonella spp	+	9972	2.91	+	+HB	+HB	Salmonella spp	+	=
C14	Soft cheese	DP2	Yes	+MB	+MB	+HA	+HA	Salmonella spp	+	9953	2.91	+	+MB	+MB	Salmonella spp	+	=
2002	Soft cheese	DP2	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Livarot	DP2	No	-HE	-HE	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Emmenthal cheese	DP2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Edam	DP2	No	-LE	-LE	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Pont l'Evêque cheese	DP2	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Tomme cheese of Savoy	DP2	No	Ø	Ø	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Cantal	DP2	No	-ME	-ME	-ME	-ME	/	-		0.03	-	/	/	/	-	=
2002	Comté cheese	DP2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
A20	Milk powder	DP3	No	-ME	-LE	-HE	-ME	/	-	154	0.04	-	-ME	-LE	/	-	=
A21	Milk powder	DP3	No	-LE	-LE	-ME	-ME	/	-	114	0.03	-	-LE	-LE	/	-	=
C19	Milk powder	DP3	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	10041	2.93	+	+HA	+HA	Salmonella spp	+	=
C20	Milk powder	DP3	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10134	2.96	+	+MA	+MA	Salmonella spp	+	=
C21	Milk powder	DP3	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10025	2.93	+	+MA	+MA	Salmonella spp	+	=
C22	Milk powder	DP3	Yes	-LE	Ø	-ME	Ø	/	-	113	0.03	-	-LE	Ø	/	-	=
C23	Milk powder	DP3	No	-ME	-ME	-ME	Ø	/	-	113	0.03	-	-ME	-ME	/	-	=
C24	Milk powder	DP3	No	-ME	-LE	-ME	Ø	/	-	218	0.06	-	-ME	-LE	/	-	=
F1	Milk powder	DP3	Yes	+MB	+MB	+MA	+MA	Salmonella spp	+	11052	2.90	+	+MB	+MB	Salmonella spp	+	=
F2	Milk powder	DP3	Yes	+MA	+MA	+MA	+MA	Salmonella spp	+	11335	2.97	+	+MA	+MA	Salmonella spp	+	=

DAIRY PRODUCTS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method						Comparison	
				RVS		MKTn		Identification	Result	RFV	VT	Test result	Confirmation		Result		
				XLD	SM ID2	XLD	SM ID2						XLD	SM ID2			Identification
								XLD	SM ID2	Identification	Result						
F3	Milk powder	DP3	Yes	+MB	+MB	+HB	+MB	<i>Salmonella spp</i>	+	11436	3.00	+	+MB	+MB	<i>Salmonella spp</i>	+	=
2002	Milk powder	DP3	No	+MB	+LB	+MB	+HB	<i>Salmonella spp</i>	+		2.34	+	+MB	+LB	<i>Salmonella spp</i>	+	=
2002	Raw milk	DP3	No	+MB	+MB	+MB	+MB	<i>Salmonella spp</i>	+		2.49	+	+MB	+MB	<i>Salmonella spp</i>	+	=
2002	Milk powder	DP3	No	+HB	+MB	+MB	+MB	<i>Salmonella spp</i>	+		2.34	+	+HB	+MB	<i>Salmonella spp</i>	+	=
2002	Raw milk	DP3	No	+MA	+MA	+MA	+MA	<i>Salmonella spp</i>	+		2.44	+	+MA	+MA	<i>Salmonella spp</i>	+	=
2002	Raw milk	DP3	No	Ø	Ø	-LE	-LE	/	-		0.04	-	/	/	/	-	=
2002	Raw milk	DP3	No	-LE	-LE	-HE	-HE	/	-		0.07	-	/	/	/	-	=
2002	Raw milk	DP3	No	-ME	-ME	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Raw milk	DP3	No	-ME	-ME	-HE	-HE	/	-		0.09	-	/	/	/	-	=
2002	Raw milk	DP3	No	-ME	-ME	-HE	-HE	/	-		0.09	-	/	/	/	-	=
2002	Raw milk	DP3	No	-LE	-LE	-ME	-ME	/	-		0.07	-	/	/	/	-	=
2002	Milk powder	DP3	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Whole powder milk	DP3	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=

SEAFOOD AND VEGETABLES																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method							Comparison
				RVS		MKTn		Identification	Result	RFV	VT	Test result	Confirmation				
				XLD	SM ID2	XLD	SM ID2						RVS		Identification	Result	
													XLD	SM ID2			
A1	Whiting filet	SF1	Yes	+MA	+MA	+MA	+MA	Salmonella spp	+	11198	3.20	+	+MA	+MA	Salmonella spp	+	=
A2	Scallops	SF1	Yes	+MB	+LA	+HA	+HB	Salmonella spp	+	11421	3.26	+	+MB	+LA	Salmonella spp	+	=
A3	Piece of salmon	SF1	Yes	+MB	+MB	+MB	+HA	Salmonella spp	+	10853	3.10	+	+MB	+MB	Salmonella spp	+	=
A4	Net of smoked mackerels	SF1	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	10984	3.14	+	+HA	+HA	Salmonella spp	+	=
A5	Mix seafoods	SF1	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	11128	3.18	+	+MB	+MB	Salmonella spp	+	=
A6	Coley filet	SF1	Yes	+MB	+MB	+HA	+HA	Salmonella spp	+	11025	3.15	+	+MB	+MB	Salmonella spp	+	=
A7	Shrimps	SF1	Yes	+MB	+MA	+HB	+HA	Salmonella spp	+	11085	3.17	+	+MB	+MA	Salmonella spp	+	=
F4	Tails of crawfishes	SF1	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	11393	2.99	+	+HA	+MA	Salmonella spp	+	=
F5	Fillet of perch	SF1	Yes	-ME	-LE	-HE	-ME	/	-	126	0.03	-	-ME	-LE	/	-	=
F6	Net of pomegranate	SF1	Yes	+MA	+MA	+HB	+HA	Salmonella spp	+	11896	3.12	+	+MA	+MA	Salmonella spp	+	=
G1	Cooked whelks	SF1	Yes	+MA	+LA	+HA	+HA	Salmonella spp	+	8306	2.43	+	+MA	+LA	Salmonella spp	+	=
2002	Smoked salmon	SF1	No	-LE	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Net of sole	SF1	No	Ø	Ø	-LE	-LE	/	-		0.05	-	/	/	/	-	=
2002	Salmon	SF1	No	Ø	Ø	-LE	-LE	/	-		0.09	-	/	/	/	-	=
2002	Fish filet	SF1	No	Ø	Ø	-ME	-ME	/	-		0.05	-	/	/	/	-	=
2002	Net of cod	SF1	No	-LE	-HE	-ME	-HE	/	-		0.05	-	/	/	/	-	=
2002	Net of smoked haddock	SF1	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Fillet of perch	SF1	No	-MD (Ec)	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Net of cod	SF1	No	Ø	Ø	-LE	-LE	/	-		0.04	-	/	/	/	-	=
2002	Net of conger	SF1	No	Ø	Ø	-HE	-ME	/	-		0.07	-	/	/	/	-	=
A17	Raw endives	V1	Yes	+MB	+MB	+HB	+MB	Salmonella spp	+	10226	2.92	+	+MB	+MB	Salmonella spp	+	=
A22	Raw red cabbage	V1	No	-ME	-LE	-ME	-ME	/	-	164	0.04	-	-ME	-LE	/	-	=
F11	Leeks	V1	No	-ME	-ME	-HE	-HE	/	-	515	0.13	-	-ME	-ME	/	-	=
F12	Lettuce	V1	No	-LE	-ME	-HE	-HE	/	-	850	0.22	-	-LE	-ME	/	-	=
F13	Lettuce	V1	Yes	-LE	-LE	-HE	-HE	/	-	602	0.15	-	-LE	-LE	/	-	=
F14	Lettuce	V1	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	10663	2.79	+	+MB	+MB	Salmonella spp	+	=
F15	Catalan mixture	V1	No	-ME	-LE	-HE	-HE	/	-	190	0.04	-	-ME	-LE	/	-	=
F16	Catalan mixture	V1	Yes	-ME	-ME	-HE	-HE	/	-	157	0.04	-	-ME	-ME	/	-	=
F17	Catalan mixture	V1	Yes	-ME	-ME	-HE	-HE	/	-	164	0.04	-	-ME	-ME	/	-	=
F18	Catalan mixture	V1	Yes	-LE	-LE	-HE	-HE	/	-	152	0.03	-	-LE	-LE	/	-	=
F19	Red cabbage	V1	Yes	+LA	+MA	+MA	+MA	Salmonella spp	+	9906	2.60	+	+LA	+MA	Salmonella spp	+	=
F20	Red cabbage	V1	Yes	+MA	+MB	+HA	+MA	Salmonella spp	+	10428	2.73	+	+MA	+MB	Salmonella spp	+	=
F21	Red cabbage	V1	Yes	+MA	+LA	+HA	+HA	Salmonella spp	+	10390	2.72	+	+MA	+LA	Salmonella spp	+	=
F22	Red cabbage	V1	Yes	+MA	+LA	+HA	+MA	Salmonella spp	+	10375	2.72	+	+MA	+LA	Salmonella spp	+	=
G3	Raw red cabbage	V1	Yes	+MB	+MB	+HA	+HA	Salmonella spp	+	9921	2.91	+	+MB	+MB	/	+	=
G4	Raw tomato	V1	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10043	2.94	+	+MA	+MA	Salmonella spp	+	=
G5	Provençal mixture	V1	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	10124	2.96	+	+MB	+MB	Salmonella spp	+	=
G6	Provençal mixture	V1	Yes	+MB	+MB	+MB	+HB	Salmonella spp	+	10062	2.95	+	+MB	+MB	Salmonella spp	+	=
2002	Paprika	V1	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Mixture of spices	V1	No	-ME	-ME	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Mixture of spices	V1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Curry	V1	No	-LE	-LE	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Paprika	V1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Rosemary	V1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Mixed salad	V1	No	-LE	-LE	-HE	-HE	/	-		0.06	-	/	/	/	-	=
2002	Frizzy salad	V1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Salad of lamb's lettuce	V1	No	-LE	-LE	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Tomatoes in slices	V1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
A13	Cooked lenses	V2	Yes	+MA	+LA	+HA	+HA	Salmonella spp	+	10576	3.02	+	+MA	+LA	Salmonella spp	+	=
A14	Cooked broccolis	V2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10982	3.14	+	+MA	+MA	Salmonella spp	+	=
A15	Cooked French beans	V2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	9939	2.84	+	+MA	+MA	Salmonella spp	+	=
A16	Cooked carrots	V2	No	Ø	Ø	Ø	Ø	/	-	114	0.03	-	Ø	Ø	/	-	=
A18	Cooked red cabbage	V2	No	Ø	Ø	Ø	Ø	/	-	112	0.03	-	Ø	Ø	/	-	=
B6	Cooked French beans	V2	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	10805	3.16	+	+MB	+MB	Salmonella spp	+	=
B7	Carrot purée	V2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10494	3.07	+	+MA	+MA	Salmonella spp	+	=

SEAFOOD AND VEGETABLES																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method							Comparison
				RVS		MKTTn		Identification	Result	RFV	VT	Test result	Confirmation			Result	
				XLD	SM ID2	XLD	SM ID2						RVS		Identification		
													XLD	SM ID2			
B8	Roasted Potatoes	V2	Yes	+HA	+MA	+MA	+HA	<i>Salmonella spp</i>	+	10450	3.05	+	+HA	+MA	<i>Salmonella spp</i>	+	=
B9	Pancake of vegetables	V2	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	10153	2.97	+	+MA	+MA	<i>Salmonella spp</i>	+	=
F7	Spinach	V2	Yes	Ø	Ø	Ø	Ø	/	-	115	0.03	-	Ø	Ø	/	-	=
F8	Vegetables for couscous	V2	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	11007	2.88	+	+MA	+MA	<i>Salmonella spp</i>	+	=
F9	Cabbage flower	V2	Yes	+HA	+HA	+HA	+HA	<i>Salmonella spp</i>	+	11014	2.89	+	+HA	+HA	<i>Salmonella spp</i>	+	=
F10	Lenses	V2	No	Ø	Ø	Ø	Ø	/	-	120	0.03	-	Ø	Ø	/	-	=
G2	Ratatouille	V2	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	8680	2.54	+	+MA	+MA	<i>Salmonella spp</i>	+	=
2002	Celery	V2	No	Ø	Ø	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Carrot	V2	No	-LE	-LE	-ME	-ME	/	-		0.06	-	/	/	/	-	=
2002	Raw vegetables	V2	No	Ø	Ø	Ø	Ø	/	-		0.09	-	/	/	/	-	=

MISCELLANEOUS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method						Comparison	
				RVS		MKTn		Identification	Result	RFV	VT	Test result	Confirmation				Result
				XLD	SM ID2	XLD	SM ID2						XLD	SM ID2	Identification		
A8	Whole liquid eggs	D1	No	+MB	+LB	+HB	+HB	Salmonella spp	+	310 1972 8040	0.08 0.57a 2.35b	- + +	+MB	+LB	Salmonella spp	-	FN
A9	Runny egg	D1	No	+HC	-LE	+HB	+HB	Salmonella spp	+	10981	3.14	+	+HC +MB	-LE +MB	Salmonella spp Salmonella spp	+	=
A10	Runny egg	D1	No	+MB	+LB	+HB	+HB	Salmonella spp	+	10091	2.88	+	+MB	+LB	Salmonella spp	+	=
A11	Runny egg	D1	No	+HB	+MC	+HB	+HB	Salmonella spp	+	11256	3.22	+	+HB	+MC	Salmonella spp	+	=
A12	Runny egg	D1	No	+MB	+LB	+HC	+MB	Salmonella spp	+	10786	3.08	+	+MB	+LB	Salmonella spp	+	=
2002	Runny egg	D1	No	+MB	+HB	+HC	+HC	Salmonella spp	+		2.50	+	+MB	+HB	Salmonella spp	+	=
2002	Whole runny egg	D1	No	+HB	+MB	+HC	+HC	Salmonella spp	+		2.43	+	+HB	+MB	Salmonella spp	+	=
2002	Egg yolks	D1	No	+HB	+HB	+HC	+HC	Salmonella spp	+		2.21	+	+HB	+HB	Salmonella spp	+	=
2002	Egg yolks	D1	No	+MB	+HC	+HC	+HC	Salmonella spp	+		2.22	+	+MB	+HC	Salmonella spp	+	=
2002	Egg whites	D1	No	+MA	+MB	+HC	+HC	Salmonella spp	+		2.10	+	+MA	+MB	Salmonella spp	+	=
2002	Runny egg	D1	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.17	+	+MB	+MB	Salmonella spp	+	=
2002	Egg whites	D1	No	+MA	+MA	-HE	-HE	Salmonella spp	+		2.28	+	+MA	+MA	Salmonella spp	+	=
2002	Runny egg	D1	No	-LE	-LE	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Runny egg	D1	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Runny egg	D1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Runny egg	D1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Runny egg	D1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	traditional mayonnaise	D1	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Egg whites	D1	No	-LE	-LE	-LE	-LE	/	-		0.04	-	/	/	/	-	=
B1	Red fruit éclair pastry	D2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	9927	2.90	+	+MA	+MA	Salmonella spp	+	=
B2	Baba au rhum	D2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10008	2.92	+	+MA	+MA	Salmonella spp	+	=
B3	Versailles cake	D2	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	9857	2.88	+	+MB	+MB	Salmonella spp	+	=
B4	Black forest cake	D2	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	9722	2.84	+	+MB	+MB	Salmonella spp	+	=
B5	Custard tart	D2	Yes	+MA	+MB	+HA	+HA	Salmonella spp	+	10504	3.07	+	+MA	+MB	Salmonella spp	+	=
2002	Chocolate chips	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Powder with cocoa	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Shavings of chocolate	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Chocolate-brown soft margarine	D2	No	-ME	-ME	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	Coffee éclair pastry	D2	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.32	+	+MB	+MB	Salmonella spp	+	=
2002	Custard	D2	No	+MB	+MB	+HB	+MB	Salmonella spp	+		2.26	+	+MB	+MB	Salmonella spp	+	=
2002	Chocolate éclair	D2	No	+MB	+MB	+MB	+MB	Salmonella spp	+		2.24	+	+MB	+MB	Salmonella spp	+	=
2002	Custard	D2	No	+MB	+MB	+HB	+HB	Salmonella spp	+		2.21	+	+MB	+MB	Salmonella spp	+	=
2002	Coffee éclair pastry	D2	No	+MA	+MA	+HA	+HA	Salmonella spp	+		2.24	+	+MA	+MA	Salmonella spp	+	=
2002	"Mille feuille" pastry	D2	No	-LE	-LE	-ME	-ME	/	-		0.05	-	/	/	/	-	=
2002	Egg custard	D2	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Chou pastry	D2	No	Ø	Ø	-ME	-HE	/	-		0.04	-	/	/	/	-	=
2002	Chocolate éclair pastry	D2	No	Ø	Ø	-ME	-ME	/	-		0.04	-	/	/	/	-	=
2002	Religious Chocolate	D2	No	-LE	Ø	-LE	Ø	/	-		0.03	-	/	/	/	-	=
2002	Egg custard	D2	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Whipped cream	D2	No	-LE	Ø	-LE	Ø	/	-		0.04	-	/	/	/	-	=
2002	"St Honoré" cake	D2	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Choux chantilly	D2	No	-LE	Ø	-HE	-HE	/	-		0.04	-	/	/	/	-	=
2002	"St Honoré" cake	D2	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Cream puff	D2	No	-LE	Ø	-HE	-HE	/	-		0.03	-	/	/	/	-	=
2002	Coffee éclair pastry	D2	No	Ø	Ø	-ME	-MD (En)	/	-		0.03	-	/	/	/	-	=
2002	"Religieuse au chocolat" pastry	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Profiteroles	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Choux chantilly	D2	No	Ø	Ø	-HE	Ø	/	-		0.03	-	/	/	/	-	=
2002	Coffee éclair	D2	No	-LE	-LE	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	"Religieuse" pastry	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=

MISCELLANEOUS																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method							Comparison
				RVS		MKTn		Identification	Result	RFV	VT	Test result	Confirmation			Result	
				XLD	SM ID2	XLD	SM ID2						RVS		Identification		
													XLD	SM ID2			
2002	"Noiselia" cake	D2	No	Ø	Ø	-LE	-LE	/	-		0.03	-	/	/	/	-	=
2002	Princess of islands pastry	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	Parisian pastry cabbage	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	"Merveilleux" cake	D2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=
2002	"Versaillais" cake	D2	No	Ø	Ø	-ME	-ME	/	-		0.04	-	/	/	/	-	=
A19	Cooked coley filet	D3	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	11180	3.19	+	+MA	+MA	<i>Salmonella spp</i>	+	=
B10	Scallop in the cognac	D3	Yes	+HA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	9613	2.81	+	+HA	+MA	<i>Salmonella spp</i>	+	=
B11	Hake in the curry	D3	Yes	+LA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	9623	2.81	+	+LA	+MA	<i>Salmonella spp</i>	+	=
B12	Salmon in mushrooms	D3	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	9691	2.83	+	+MA	+MA	<i>Salmonella spp</i>	+	=
C1	Salad of squids	D3	No	Ø	Ø	Ø	Ø	/	-	117	0.03	-	Ø	Ø	/	/	=
C2	Poached fish wipes océane	D3	No	Ø	Ø	Ø	Ø	/	-	113	0.03	-	Ø	Ø	/	/	=
C3	Olive of salmon	D3	No	-HE	-HE	Ø	Ø	/	-	77	0.02	-	-HE	-HE	/	/	=
C4	Cod brandade	D3	No	Ø	Ø	Ø	Ø	/	-	115	0.03	-	Ø	Ø	/	/	=
C5	Stuffed squids	D3	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	10105	2.95	+	+MA	+MA	<i>Salmonella spp</i>	+	=
C6	Olive of salmon	D3	Yes	+MB	+MB	+HB	+HB	<i>Salmonella spp</i>	+	10263	3.00	+	+MB	+MB	<i>Salmonella spp</i>	+	=
C7	Stuffed squids	D3	Yes	+HB	+HB	-HE	-HE	<i>Salmonella spp</i>	+	10048	2.94	+	+HB	+HB	<i>Salmonella spp</i>	+	=
C8	Sausage of cooked salmon	D3	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	10051	2.94	+	+MA	+MA	<i>Salmonella spp</i>	+	=
C9	Delight of salmon in the champagne	D3	Yes	+MA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	9984	2.92	+	+MA	+MA	<i>Salmonella spp</i>	+	=
C10	White fish in the lemon	D3	Yes	+HA	+MA	+HA	+HA	<i>Salmonella spp</i>	+	10032	2.93	+	+HA	+MA	<i>Salmonella spp</i>	+	=
2002	Salad of shrimps	D3	No	Ø	Ø	-HE	-HE	/	-		0.03	-	/	/	/	-	=
2002	Fondant of salmon	D3	No	Ø	Ø	Ø	Ø	/	-		0.06	-	/	/	/	-	=

FEED																		
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method								Comparison
				RVS		MKTTn		Identification	Result	RFV	VT	Test result	Confirmation					
				XLD	SM ID2	XLD	SM ID2						RVS		Identification	Result		
													XLD	SM ID2				
D4	Pâté in the beef	F1	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	11013	3.10	+	+HA	+MA	Salmonella spp	+	=	
D5	Pâté in the beef	F1	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	11065	3.11	+	+HA	+MA	Salmonella spp	+	=	
D6	Pâté in the chicken	F1	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	11053	3.11	+	+HA	+MA	Salmonella spp	+	=	
D7	Pâté in the chicken	F1	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	11305	3.18	+	+MA	+MA	Salmonella spp	+	=	
D8	Pâté in the lamb	F1	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	11529	3.24	+	+HA	+HA	Salmonella spp	+	=	
D9	Pâté in the lamb	F1	Yes	+HA	+MA	+HA	+HA	Salmonella spp	+	10761	3.03	+	+HA	+MA	Salmonella spp	+	=	
D10	Pâté in the beef	F1	No	Ø	Ø	Ø	Ø	/	-	116	0.03	-	Ø	Ø	/	-	=	
D11	Pâté in the chicken	F1	No	Ø	Ø	Ø	Ø	/	-	117	0.03	-	Ø	Ø	/	-	=	
D12	Pâté in the lamb	F1	No	Ø	Ø	Ø	Ø	/	-	116	0.03	-	Ø	Ø	/	-	=	
E4	Pâté for cat in the trout and cod	F1	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10688	2.80	+	+MA	+MA	Salmonella spp	+	=	
E5	Pâté for cat in the liver and poultry	F1	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	10694	2.80	+	+HA	+HA	Salmonella spp	+	=	
E6	Pâté for cat in the chicken	F1	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	11014	2.89	+	+MA	+MA	Salmonella spp	+	=	
E7	Pâté for cat in the salmon	F1	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10285	2.70	+	+MA	+MA	Salmonella spp	+	=	
E8	Pâté for cat in the trout and cod	F1	No	Ø	Ø	Ø	Ø	/	-	127	0.03	-	Ø	Ø	/	-	=	
E9	Pâté for cat in the liver and poultry	F1	No	Ø	Ø	Ø	Ø	/	-	131	0.03	-	Ø	Ø	/	-	=	
E10	Pâté for cat in the chicken	F1	No	Ø	Ø	Ø	Ø	/	-	130	0.03	-	Ø	Ø	/	-	=	
E11	Pâté for cat in the salmon	F1	No	Ø	Ø	Ø	Ø	/	-	129	0.03	-	Ø	Ø	/	-	=	
E12	Pâté for dog in the beef	F1	No	Ø	Ø	Ø	Ø	/	-	118	0.03	-	Ø	Ø	/	-	=	
E13	Pâté for dog in the lamb	F1	No	Ø	Ø	Ø	Ø	/	-	118	0.03	-	Ø	Ø	/	-	=	
2002	Pâté in the beef for dog	F1	No	+LB	+MA	+MC	+HB	Salmonella spp	+		2.32	+	+LB	+MA	Salmonella spp	+	=	
2002	Pâté in the beef for cat	F1	No	+MB	+MA	+HA	+HA	Salmonella spp	+		1.99	+	+MB	+MA	Salmonella spp	+	=	
2002	Pâté in the beef with pieces	F1	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=	
D13	Granules	F2	No	Ø	Ø	Ø	Ø	/	-	116	0.03	-	Ø	Ø	/	-	=	
D14	Granules	F2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	11107	3.13	+	+MA	+MA	Salmonella spp	+	=	
D15	Flours for animals	F2	Yes	Ø	Ø	Ø	Ø	/	-	112	0.03	-	Ø	Ø	/	-	=	
D16	Flours for animals	F2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10611	2.99	+	+MA	+MA	Salmonella spp	+	=	
D17	Flours for animals	F2	No	Ø	Ø	Ø	Ø	/	-	121	0.03	-	Ø	Ø	/	-	=	
D18	Fish meal for animals	F2	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	11250	3.17	+	+HA	+HA	Salmonella spp	+	=	
D19	Fish meal for animals	F2	No	Ø	Ø	Ø	Ø	/	-	121	0.03	-	Ø	Ø	/	-	=	
D20	Fish meal for animals	F2	No	Ø	Ø	Ø	Ø	/	-	114	0.03	-	Ø	Ø	/	-	=	
D21	Flours for animals	F2	Yes	+MB	+LB	+HB	+HB	Salmonella spp	+	10335	2.91	+	+MB	+LB	Salmonella spp	+	=	
D22	Flours for animals	F2	Yes	+HB	+MB	+HA	+HA	Salmonella spp	+	9928	2.79	+	+HB	+MB	Salmonella spp	+	=	
D23	Granules	F2	Yes	Ø	Ø	Ø	Ø	/	-	112	0.03	-	Ø	Ø	/	-	=	
D24	Granules	F2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10415	2.93	+	+MA	+MA	Salmonella spp	+	=	
E14	Dry cat food	F2	No	Ø	Ø	Ø	Ø	/	-	119	0.03	-	Ø	Ø	/	-	=	
E15	Dry cat food	F2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10891	2.85	+	+MA	+MA	Salmonella spp	+	=	
E16	Dry cat food	F2	Yes	+MA	+MA	+HA	+HA	Salmonella spp	+	10991	2.88	+	+MA	+MA	Salmonella spp	+	=	
E17	Dry cat food	F2	Yes	+MA	+HA	+HA	+HA	Salmonella spp	+	10943	2.87	+	+MA	+HA	Salmonella spp	+	=	
E18	Dry cat food	F2	Yes	+HA	+HA	+HA	+HA	Salmonella spp	+	112269	2.95	+	+HA	+HA	Salmonella spp	+	=	
2002	Granules	F2	No	-ME	-ME	-HE	-LE	/	-		0.08	-	/	/	/	-	=	
2002	Dry cat food	F2	No	Ø	Ø	Ø	Ø	/	-		0.03	-	/	/	/	-	=	
2002	Flour for fishes	F2	No	-ME	-HE	-HE	-HE	/	-		0.03	-	/	/	/	-	=	
D1	Bovine meat for animals	F3	No	-LA(Ha)	-MA(Ha)	-HA(Ha)	-HA(Ha)	/	-	144	0.04	-	-LE	-ME	Hafnia alvei	-	=	
D2	Bovine meat for animals	F3	Yes	-LA(Ha)	-LA(Ha)	-HA(Ha)	-HA(Ha)	/	-	144	0.04	-	-LE	-LE	Hafnia alvei	-	=	
D3	Bovine meat for animals	F3	Yes	-LE	-LE	-HE	-HE	/	-	161	0.04	-	-LE	-LE	/	-	=	
E1	Waste bovine meat for animals	F3	Yes	+MA	+MB	+HB	+HB	Salmonella spp	+	10355	2.71	+	+MA	+MB	Salmonella spp	+	=	
E2	Waste bovine meat for animals	F3	Yes	+MA	+MB	+HB	+HB	Salmonella spp	+	10431	2.73	+	+MA	+MB	Salmonella spp	+	=	
E3	Waste bovine meat for animals	F3	Yes	+MB	+MB	+HB	+HB	Salmonella spp	+	10493	2.75	+	+MB	+MB	Salmonella spp	+	=	
E19	Waste bovine meat for animals	F3	No	-ME	-ME	-HE	-HE	/	-	182	0.04	-	-ME	-ME	/	-	=	
2002	Meat for dog	F3	No	+MB	+MB	+MB	+HA	Salmonella spp	+		2.38	+	+MB	+MB	Salmonella spp	+	=	
2002	Meat for dog	F3	No	+MB	+MB	+HB	+HA	Salmonella spp	+		2.10	+	+MB	+MB	Salmonella spp	+	=	
2002	Meat for cat	F3	No	+HB	+MB	+HB	+HB	Salmonella spp	+		2.32	+	+HB	+MB	Salmonella spp	+	=	
2002	Minced meat for animals	F3	No	+MC	+LB	+HB	+MB	Salmonella spp	+		2.39	+	+MC	+LB	Salmonella spp	+	=	
2002	Meatball in the beef for dog	F3	No	+MB	+MB	+HA	+HA	Salmonella spp	+		2.27	+	+MB	+MB	Salmonella spp	+	=	

FEED																	
Reference	Sample	Cat.	CA	EN ISO 6579 standard						VIDAS SLM Single Enrichment Alternative method						Comparison	
				RVS		MKTTn		Identification	Result	RFV	VT	Test result	Confirmation		Result		
				XLD	SM ID2	XLD	SM ID2						XLD	SM ID2			Identification
								XLD	SM ID2								
2002	Pâté for dog in the tuna	F3	No	-HE	-HE	-HE	-HE	/	-		0.05	-	/	/	/	-	=
2002	Giblets in the ox for animals	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Giblets in the ox for animals	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Meatball in the beef for dog	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Meatball for cat	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Meatball for cat	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Meatball for dog	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=
2002	Giblets in the ox for animals	F3	No	Ø	Ø	Ø	Ø	/	-		0.04	-	/	/	/	-	=

Appendix 5 – Inclusivity / exclusivity: raw data (Study realized by IPL)

INCLUSIVITY (2010 complement)						
Strain	Origin	Inoculation rate in 225 ml BPW	Alternative method			
			RFV	Test value	Result	
S158	<i>Salmonella</i> III a 48 :z4, z23 : -	Duck	16.0	10379	2.95	+
S159	<i>Salmonella</i> III a 51 :z4, z23 : -	Duck	7.5	1689	0.48	+
S160	<i>Salmonella</i> III b 38:l,v:z53	Semolina of wheat	11.0	11188	3.18	+
S148	<i>Salmonella</i> Dublin	Cow raw milk	29.0	11532	3.28	+
S49	<i>Salmonella</i> Kottbus	Olive of turkey pout	17.0	12547	3.56	+
S154	<i>Salmonella</i> London	Environment	31.0	11493	3.26	+
S156	<i>Salmonella</i> Livingstone	Environment	20.0	12033	3.42	+
S150	<i>Salmonella</i> Manhattan	Dried sausage	15.0	11610	3.30	+
S152	<i>Salmonella</i> Napoli	Duck	12.0	10163	2.89	+
S149	<i>Salmonella</i> Regent	Muscovy (internal organs)	16.0	10167	2.89	+
S151	<i>Salmonella</i> Rissen	Environment	17.0	11231	3.19	+

INCLUSIVITY (2006)						
Strain	Origin	Inoculation rate in 225 ml BPW	Alternative method			
			RFV	Test value	Result	
S63	<i>Salmonella</i> Agona	Beef	13.2	10193	2.93	+
S2	<i>Salmonella</i> Amsterdam	Plants	11.6	9999	2.83	+
S1	<i>Salmonella</i> Anatum	Chocolate	27.0	10294	2.92	+
S68	<i>Salmonella arizonae</i> III b 38 r:z	Breeding of goose	8.8	6202	1.78	+
S76	<i>Salmonella arizonae</i> III b 61:z:-	Turkey	9.6	4921	1.41	+
S75	<i>Salmonella arizonae</i> III b 61:i:z53	Chicken leg	10.8	6110	1.75	+
S70	<i>Salmonella arizonae</i> III b 61:k:1,5,7	Lamb's brains	8.4	10545	3.03	+
S78	<i>Salmonella arizonae</i> III b 61:z:1,5	Turkey stew	6.8	2140	0.61	+
S87	<i>Salmonella</i> Blockley	Basil	8.0	10717	3.08	+
S3	<i>Salmonella</i> Brandenburg	Country terrine	10.4	10800	3.06	+
S5	<i>Salmonella</i> Brandenburg	Pork's liver	8.8	10589	3.04	+
S6	<i>Salmonella</i> Brandenburg	Meat of kangaroo	16.4	10446	3.00	+
S8	<i>Salmonella</i> Bredeney	Pork offal	10.8	10952	3.10	+
S103	<i>Salmonella</i> Cerro	Cabbage pastry cook	8.0	10292	2.95	+
S9	<i>Salmonella</i> Cubana	Soy meal	10.0	11321	3.21	+
S10	<i>Salmonella</i> Derby	Horse meat	11.2	10980	3.11	+
S11	<i>Salmonella</i> Derby	Pork's liver	7.6	10084	2.89	+
S14	<i>Salmonella</i> Enteritidis	Pastry	11.6	10070	2.85	+
S38	<i>Salmonella</i> Enteritidis	Egg product	9.2	9091	2.61	+
S41	<i>Salmonella</i> Enteritidis	Meat-based product	8.4	9143	2.62	+
S43	<i>Salmonella</i> Enteritidis	Egg product	12.8	10062	2.89	+
S119	<i>Salmonella</i> Gallinarum	Collection	4.0	11091	3.25	+
S15	<i>Salmonella</i> Hadar	Meat of poultry	9.2	11155	3.20	+
S66	<i>Salmonella</i> Havana	Poultry farm	10.4	10075	2.95	+
S50	<i>Salmonella</i> Heidelberg	Poultry	8.0	10628	3.05	+
S65	<i>Salmonella</i> immobile	Meat-based product	11.2	11222	3.29	+
S45	<i>Salmonella</i> Indiana	Brie de Meaux cheese	5.6	10869	3.12	+
S19	<i>Salmonella</i> Infantis	Meat of poultry	9.2	11159	3.20	+
S52	<i>Salmonella</i> Infantis	Environment	8.4	11180	3.21	+

INCLUSIVITY (2006)						
Strain		Origin	Inoculation rate in 225 ml BPW	Alternative method		
				RFV	Test value	Result
S80	<i>Salmonella</i> Kedougou	Tuna	9.2	9098	2.66	+
S81	<i>Salmonella</i> Kedougou	Feed	8.0	10023	2.94	+
S85	<i>Salmonella</i> Liverpool	Feed	12.8	9106	2.67	+
S67	<i>Salmonella</i> Llandoff	Feed	7.6	11158	3.27	+
S21	<i>Salmonella</i> Mbandoka	Heart of calf	4.8	10043	2.94	+
S22	<i>Salmonella</i> Michigan	Horse meat	15.6	11083	3.25	+
S23	<i>Salmonella</i> Montevideo	Meat of poultry	7.6	9566	2.80	+
S25	<i>Salmonella</i> Newport	Meat of poultry	8.4	10726	3.14	+
S90	<i>Salmonella</i> Orianenburg	Feed	8.8	9080	2.66	+
S99	<i>Salmonella</i> Paratyphi A	Collection	6.0	6324	1.85	+
S100	<i>Salmonella</i> Paratyphi B	Collection	5.2	11417	3.34	+
S101	<i>Salmonella</i> Paratyphi C	Collection	8.8	11302	3.31	+
S120	<i>Salmonella</i> Pullorum	Collection	5.3	10496	2.95	+
S13	<i>Salmonella</i> SaintPaul	Meat-based product	19.6	10608	3.01	+
S59	<i>Salmonella</i> San Diego	Dried herbs	8.4	10365	3.04	+
S111	<i>Salmonella</i> Senftenberg	Fish meal	11.2	9215	2.70	+
S71	<i>Salmonella</i> Senftenberg	Fish	7.2	9099	2.66	+
S102	<i>Salmonella</i> Typhi Typhi	Collection	17.5	11477	3.24	+
S26	<i>Salmonella</i> Typhimurium	Pork's liver	12.8	11019	3.23	+
S33	<i>Salmonella</i> Typhimurium	Egg product	8.4	10495	3.07	+
S31	<i>Salmonella</i> Virchow	Shell	8.0	11165	3.21	+
S83	<i>Salmonella</i> Westhampton	Feed	8.0	8488	2.48	+

INCLUSIVITY (2014) – Study realised by ADRIA Développement								
Strain		Reference	Origin	Inoculation level CFU / 225ml	RFV	VT	Result	ChromID Salmonella
<i>Salmonella</i>	Typhimurium S1 1,4 [5], 12 :- :-	Ad 1333	Tiramisu	14	8142	2.61	+	+
<i>Salmonella</i>	Typhimurium S1 1,4 [5], 12 : i : -	Ad 1334	Ready to reheat meal (Pork)	9	10958	3.51	+	+
<i>Salmonella</i>	Typhimurium SI 1,4,[5],12:-:1,2	Ad 1335	Environmental sample (Poultry)	8	11438	3.66	+	+

EXCLUSIVITY										
Strain		Origin	Inoculation rate in 225 ml BPW	Alternative method			Reference method			
				RFV	Test value	Result	RVS plating on		MKTTn plating on	
							XLD	SMID2	XLD	SMID2
CIT30	<i>Citrobacter diversus</i>	Feed	1.8E+06	11150	3.27	+	-	-	-	-
			1.4E+06	10376	3.04	+	-	-	-	-
EN52	<i>Citrobacter diversus</i>	Dried herbs	1.8E+06	11427	3.35	+	-	-	-	-
CIT24	<i>Citrobacter freundii</i>	Meat-based product	1.0E+06	278	0.08	-				
CIT23	<i>Citrobacter freundii</i>	Vegetables	1.0E+06	2269	0.66	+	-	-	-	-
			2.3E+05	292	0.08	-	-	-	-	-
CIT26	<i>Citrobacter freundii</i>	Fish	1.0E+06	262	0.07	-				
CIT27	<i>Citrobacter freundii</i>	Milk	1.4E+06	281	0.08	-				
ENT51	<i>Enterobacter cloacae</i>	Dairy product	4.0E+05	271	0.07	-				
ENT59	<i>Enterobacter sakazakii</i>	Pastry	1.8E+06	274	0.08	-				
EC17	<i>Escherichia coli</i>	Pork's kidney	1.4E+06	254	0.07	-				
EC19	<i>Escherichia coli</i>	Red cabbage	7.5E+05	316	0.09	-				
EC15	<i>Escherichia coli</i>	Caul	1.9E+06	271	0.07	-				
HA31	<i>Hafnia alvei</i>	Minced meat	1.9E+06	246	0.06	-				
HA32	<i>Hafnia alvei</i>	Raw milk	1.8E+06	273	0.07	-				
EN71	<i>Klebsiella oxytoca</i>	Milk	6.6E+05	270	0.07	-				
KL77	<i>Klebsiella pneumoniae</i>	Milk powder	1.1E+06	278	0.08	-				
EN44	<i>Proteus mirabilis</i>	Chicken liver	1.5E+06	246	0.06	-				
PS30	<i>Pseudomonas aeruginosa</i>	Red mullet filet	1.4E+05	290	0.07	-				
PS33	<i>Pseudomonas fluorescens</i>	Minced meat	9.4E+04	288	0.08	-				
EN49	<i>Serratia marcescens</i>	Raw milk	9.3E+05	270	0.07	-				
EN73	<i>Shigella sonnei</i>	Meat product	7.1E+05	393	0.10	-				
EN72	<i>Shigella flexneri</i>	Meat product	1.2E+06	353	0.09	-				
BA1	<i>Bacillus cereus</i>	Egg product	6.2E+04	168	0.04	-				
ST1	<i>Staphylococcus aureus</i>	Collection	3.5E+05	178	0.05	-				
ST20	<i>Staphylococcus epidermidis</i>	Collection ATCC 12228	2.0E+05	293	0.08	-				
LE1	<i>Rhodotorula rubra</i>	Pastry	3.7E+05	300	0.08	-				
LE5	<i>Saccharomyces cerevisiae</i>	Extract of coffee	3.5E+05	304	0.08	-				
LE3	<i>Candida albicans</i>	Pastry	3.5E+04	374	0.10	-				
BA16	<i>Bacillus licheniformis</i>	Custard	1.2E+05	228	0.06	-				
17	<i>Erwinia spp</i>	Meat-based product	6.2E+04	261	0.07	-				
20	<i>Arthrobacter nicotianae</i>	Collection	3.9E+05	294	0.08	-				

Complete alternative method (BPW + RVS, MKTTn + M broth) and reference method

CIT30	<i>Citrobacter diversus</i>	Feed	3.1E+08	9728	2.77	+	-	-	-	-
EN52	<i>Citrobacter diversus</i>	Dried herbs	2.8E+08	12005	3.42	+	-	-	-	-
CIT23	<i>Citrobacter freundii</i>	Plants	3.7E+08	332	0.09	-	-	-	-	-

Appendix 6 - Accordance

ALTERNATIVE METHOD

Level L0

Lab	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negatives pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

Level L1

Lab	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positives pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

Level L2

Lab	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positives pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

REFERENCE METHOD

Level L0

Lab	Nb of negatives expected	Nb of negatives obtained	Probability of negatives	Probability of negatives pairs	Probability of positives	Probability of positive pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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	7	7	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

Level L1

Lab	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positives pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

Level L2

Lab	Nb of positives expected	Nb of positives obtained	Probability of positives	Probability of positives pairs	Probability of negatives	Probability of negative pairs	Probability of identical result pairs
C	8	8	1.00	1.00	0.00	0.00	1.00
D	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
M	8	8	1.00	1.00	0.00	0.00	1.00
N	8	8	1.00	1.00	0.00	0.00	1.00
O	8	8	1.00	1.00	0.00	0.00	1.00
Mean :							1.00
Accordance :							100%

Appendix 7 - Concordance

ALTERNATIVE METHOD

Number of laboratories 10
 Number of negatives 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
C	8	8	576	576
D	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
M	8	8	576	576
N	8	8	576	576
O	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
C	8	8	576	576
D	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
M	8	8	576	576
N	8	8	576	576
O	8	8	576	576
Total			5760	5760
Concordance	100.00%			

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
C	8	8	576	576
D	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
M	8	8	576	576
N	8	8	576	576
O	8	8	576	576
Total			5760	5760
Concordance	100.00%			

REFERENCE METHOD

Number of laboratories 10

Number of negatives 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
C	8	8	568	576
D	8	8	568	576
H	8	8	568	576
I	7	7	504	504
J	8	8	568	576
K	8	8	568	576
L	8	8	568	576
M	8	8	568	576
N	8	8	568	576
O	8	8	568	576
Total			5616	5688
Concordance	98.73%			

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
C	8	8	576	576
D	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
M	8	8	576	576
N	8	8	576	576
O	8	8	576	576
Total			5760	5760
Concordance	100.00%			

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
C	8	8	576	576
D	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
M	8	8	576	576
N	8	8	576	576
O	8	8	576	576
Total			5760	5760
Concordance	100.00%			