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NF VALIDATION
Validation of alternative analytical methods
Application to food microbiology

Summary report

EN ISO 16140 validation of the IRIS Salmonella® method for the detection of salmonella

Qualitative method

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Version 0
06 July 2015

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Contents

Foreword

All information required to validate the analysis guarantee is made available to SOLABIA.

The results are summarised in tables and interpreted as per the EN ISO 16140 standard.

✓ **Manufacturer**:	BIOKAR DIAGNOSTICS Rue des Quarante Mines BP 10245 60002 BEAUVAIS Cedex
✓ **Expert laboratory**:	ADRIA Développement ZA Creac'h Gwen 29196 QUIMPER Cedex
✓ **Method to validate**:	**IRIS *Salmonella*® for the detection of Salmonella**
✓ **Validation standard**:	EN ISO 16140 (October 2003): microbiology of the food chain - Protocol for the validation of alternative methods
✓ **Reference method**♦:	ISO 6579:2002 - Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Salmonella* spp.
✓ **Validation scope**	**Human foods and animal feeds** Environmental samples (excluding primary production environment)
✓ **Certification body:**	AFNOR Certification

♦ Test conducted under accreditation

1 INTRODUCTION

1.1 Date of initial validation, extension and renewal studies

The IRIS *Salmonella*® method was validated on 07 October 2011 for human food, animal feed and environmental samples, for test specimens of up to 25 g (certificate no. BKR 23/07 - 10/11).

An extension of alternative method validation was obtained, in January 2014, for the detection of *Salmonellae* in milk powder, including infant formula with and without probiotics, and in animal feed meal and cubes for test specimens larger than 25 g.

For the 2014 extension study, 375 g and 125 g sample size were used respectively for milk powder and animal feed.

The method was renewed in July 2015 with no additional tests.

1.2 Reference method to which the alternative method was compared

The reference method is the ISO 6579 standard: Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Salmonella* spp. The protocol is given in **Appendix 1** .

It should be noted that the reference method was performed using the same sample size as the alternative method, i.e. 25 g for all categories during initial validation, 125 g for animal feed and 375 g for powdered milk during the extension study.

1.3 Alternative method

The IRIS *Salmonella*® method is based on a combination of enrichment in supplemented peptone water and isolation on selective agar.

Several protocols are available depending on the sample size used:

- pre-enrichment in *Salmonella* broth, Supplemented enrichment:

All categories	25 g + 225 ml 16 - 24 h at 41.5 °C ± 1 °C
Powdered milk	375 g + 3,375 ml 18 - 24 h at 41.5 °C ± 1 °C
Animal feed	125 g + 1,125 ml 18 - 24 h at 41.5 °C ± 1 °C

- isolation of 10 µl on IRIS *Salmonella* chromogenic agar, incubation for 24 ±3 h at 37 °C ±1 °C,
- confirmation by latex test (CONFIRM' *Salmonella* or OXOID latex text ref. FT0203A) on an isolated colony, or by means of the tests described in the reference method.

The enrichment can be stored for 72 h at 2-8 °C in all cases, except for animal feed with a 125 g sample size.

The protocols are given in **Appendix 2**.

2 MAIN RESULTS OBTAINED DURING INITIAL VALIDATION (2011) AND DURING THE EXTENSION STUDY (2014)

2.1 Method comparative study

2.1.1 Relative accuracy, relative specificity and relative sensitivity (Initial validation - 2011)

Accuracy is the closeness of fit between the test result and the accepted reference value.

Relative specificity is defined as the degree to which the method is affected (or not) by the other components in a multi-component sample. It represents the method's ability to accurately measure or quantify a given analyte in a sample without interference from other non-target components, such as for example a matrix effect or background noise.

Relative sensitivity is defined as the alternative method's ability to detect two different amounts of analyte previously measured by the reference method, using a given matrix, over the entire measurement range. The variation in minimum quantity (increase in analyte x concentration) that gives a significant variation in measured signal (response y).

2.1.1.1 Number and type of samples

389 samples were analysed both by the reference method and the alternative method. The distribution per category is given in table 1:

Table 1 - Product distribution per category

Category	Type	Positive*	Negative	Total
Meat products	Raw meat other than poultry	14	20	34
	Poultry	12	8	20
	Miscellaneous delicatessens	8	7	15
	Total	34	35	69
Dairy products	Raw milk	10	9	19
	Raw milk cheese	10	9	19
	Milk powder, ice-cream, miscellaneous	13	12	25
	Total	33	30	63
Vegetables, fishery products and miscellaneous	Frozen vegetables	8	10	18
	Ready meals	11	10	21
	Shellfish, fish	12	10	22
	Total	31	30	61
Egg products	Liquid egg portions	9	11	20
	Mayonnaise	9	12	21
	Powdered eggs, miscellaneous	13	10	23
	Total	31	33	64
Animal feed	Pet food	8	8	16
	Fresh products	12	11	23
	Cattle feed	11	20	31
	Total	31	39	70
Environmental samples	Cleaning water, dust	12	8	20
	Process water	11	15	26
	Surface samples	10	6	16
	Total	33	29	62
General total		193	196	389

* These samples are positive by one or other method

2.1.1.2 *Artificial sample contamination*

Samples were artificially contaminated by inoculation.

170 samples were inoculated. 144 samples gave a positive result by one or other of the methods. 75% of these samples were contaminated with a rate less than or equal to 5 CFU/25 g. The injury protocol and the injury measurement are given in **Appendix 3** . 43 strains were used, representing 22 different serotypes.

The naturally contaminated samples represented 25.4%.

2.1.1.3 *Test results*

The raw results are given in **Appendix 4** .

Interpretations for all confirmation tests (latex, reference tests) were performed after incubating the supplemented buffered peptone water for 16 and 24 h at 41.5 °C.

The results for all products are given in Table 2 and by category (tables 3 to 8).

The following abbreviations are used:

A+ = confirmed positive
A- = immediate negative and negative after confirmation when presumed positive
PA = positive agreement
NA = negative agreement
PD = positive deviation
ND = negative deviation
PPNC = presumed positive, not confirmed

Table 2 - Result pairs for the reference and alternative methods - <u>All products</u>

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	**Reference method negative (R-)**	**Reference method positive (R+)**	**Reference method negative (R-)**
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 153**	Positive deviation (R-/A+) **PD = 18**	Positive agreement (A+/R+) **PA = 154**	Positive deviation (R-/A+) **PD = 18**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 22**	Negative agreement (A+/R+) **NA = 196 (PPNA = 4)**	Negative deviation (A-/R+) **ND = 21 (PPND = 1)**	Negative agreement (A+/R+) **NA = 196 (PPNA = 1)**

Table 3 - Meat products

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 18**	Positive deviation (R-/A+) **PD = 7**	Positive agreement (A+/R+) **PA = 19**	Positive deviation (R-/A+) **PD = 7**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 9**	Negative agreement (A+/R+) **NA = 35**	Negative deviation (A-/R+) **ND = 8**	Negative agreement (A+/R+) **NA = 35**

Table 4 - Dairy products

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 28**	Positive deviation (R-/A+) **PD = 2**	Positive agreement (A+/R+) **PA = 28**	Positive deviation (R-/A+) **PD = 2**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 3**	Negative agreement (A+/R+) **NA = 30**	Negative deviation (A-/R+) **ND = 3**	Negative agreement (A+/R+) **NA = 30**

Table 5 - Vegetables, fishery products and miscellaneous

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 29**	Positive deviation (R-/A+) **PD = 1**	Positive agreement (A+/R+) **PA = 29**	Positive deviation (R-/A+) **PD = 1**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A+/R+) **NA = 30**	Negative deviation (A-/R+) **ND = 1**	Negative agreement (A+/R+) **NA = 30**

Table 6 - Egg products

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 28**	Positive deviation (R-/A+) **PD = 1**	Positive agreement (A+/R+) **PA = 27**	Positive deviation (R-/A+) **PD = 1**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 2**	Negative agreement (A+/R+) **NA = 33 (PPNA = 3)**	Negative deviation (A-/R+) **ND = 3 (PPND = 1)**	Negative agreement (A+/R+) **NA = 33 (PPNA = 1)**

Table 7 - Animal feed

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 26**	Positive deviation (R-/A+) **PD = 2**	Positive agreement (A+/R+) **PA = 27**	Positive deviation (R-/A+) **PD = 2**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 3**	Negative agreement (A+/R+) **NA = 39 (PPNA = 1)**	Negative deviation (A-/R+) **ND = 2**	Negative agreement (A+/R+) **NA = 39**

Table 8 - Environmental samples

Response	16 h incubation		24 h incubation	
	Reference method positive (R+)	Reference method negative (R-)	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 24**	Positive deviation (R-/A+) **PD = 5**	Positive agreement (A+/R+) **PA = 24**	Positive deviation (R-/A+) **PD = 5**
Alternative method negative (A-)	Negative deviation (A-/R+) **ND = 4**	Negative agreement (A+/R+) **NA = 29**	Negative deviation (A-/R+) **ND = 4**	Negative agreement (A+/R+) **NA = 29**

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

PA = Positive agreement (R+/A+) NA = Negative agreement (R-/A-)
PD = Positive deviation (R-/A+) ND = Negative deviation (A-/R+)

Table 9 - Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP) - 16 h incubation

Matrices	AP	NA	ND	PD	N	Accuracy Relative AC (%) [100x(PA+NA])/N]	N+ PA + ND	Sensitivity Relative SE (%) [100xPA]/N+]	N- NA + PD	Specificity Relative SP (%) [100xNA]/N-]
Meat products	18	35	9	7	69	76.8	27	66.7	42	83.3
Dairy products	28	30	3	2	63	92.1	31	90.3	32	93.8
Fishery products	29	30	1	1	61	96.7	30	96.7	31	96.8
Vegetables	28	33	2	1	64	95.3	30	93.3	34	97.1
Animal feed	26	39	3	2	70	92.9	29	89.7	41	95.1
Environment	24	29	4	5	62	85.5	28	85.7	34	85.3
TOTAL	**153**	**196**	**22**	**18**	**389**	**89.7**	**175**	**87.4**	**214**	**91.6**

Table 10 - Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP) - 24 h incubation

Matrices	AP	NA	ND	PD	N	Accuracy Relative AC (%) [100x(PA+NA])/N]	N+ PA + ND	Sensitivity Relative SE (%) [100xPA]/N+]	N- NA + PD	Specificity Relative SP (%) [100xNA]/N-]
Meat products	19	35	8	7	69	78.3	27	70.4	42	83.3
Dairy products	28	30	3	2	63	92.1	31	90.3	32	93.8
Fishery products	29	30	1	1	61	96.7	30	96.7	31	96.8
Vegetables	27	33	3	1	64	93.8	30	90.0	34	97.1
Animal feed	27	39	2	2	70	94.3	29	93.1	41	95.1
Environment	24	29	4	5	62	85.5	28	85.7	34	85.3
TOTAL	**154**	**196**	**21**	**18**	**389**	**90.0**	**175**	**88.0**	**214**	**91.6**

The percentage values calculated for the alternative method are as follows:

	16 h incubation	24 h incubation
Relative accuracy	89.7	90.0
Relative specificity	91.6	88.0
Relative sensitivity	87.4	91.6

The sensitivity of the two methods taking into account the additional positive results of the alternative method is as follows:

	16 h incubation	24 h incubation
Alternative method (SE)	88.6	89.1
Reference method (SE)	90.7	90.7

2.1.1.5 Analysis of discrepancies

After incubation for 16 h, 22 negative deviations were observed; these are listed in table 11:

Table 11 - Negative deviations

No. Spl.	Product	Results ISO 6579	Alternative method		Contamination (strain inoculated / inoculation rate)
			Result obtained after 16 h incubation of supplemented BPW	Result obtained after 24 h incubation of supplemented BPW	
1463	Pork meat	1 colony on XLD	-	-	Natural
1763	VS	+ on 4 plates	-	-	Natural
1764	Ground chicken meat	+ on 4 plates	-	-	Natural
1766	Duckling stuffed with mushrooms	+ on 4 plates	-	-	Natural
1770	Ground chicken meat	+ on 4 plates	-	+	Natural
2212	Dried sausage	+ on 4 plates	-	-	Natural
2222	Ground chicken meat	+ on 4 plates	-	-	Natural
2297	Pool of sausage	+ on 4 plates	-	-	Natural
2299	Sausage meat	+ on 4 plates	-	-	Natural
2173	Brie de Meaux	+ (XLD)	-	-	Artificial (S. Dublin Ad 531 / 3.4)
2744	Semi-skim powdered milk	+ on 4 plates	-	+	Artificial (S. Typhimurium 4 / 0.2)
2746	Skimmed powdered milk	+ on 4 plates	-	-	Artificial (S. anatum Ad 298 / 1.0)
2101	Salmon and scallop au gratin	+ on 4 plates	-	-	Artificial (S. Anatum Ad 1451 / 5.2)
2168	Mayonnaise	+ on 4 plates	-	-	Artificial (S. Enteritidis Ad 638 / 3.6)
2505	Liquid egg yoke portion	+ on 3 plates	-	-	Natural
2608	Poultry pâté	+ on 4 plates	-	+	Artificial (S. Livingstone F105 / 0.2)
2814	Wheat meal for pigs	+ (RVS)	-	+	Artificial (S. infantis 179 / 1.2)
2823	Mix cake	+ (RVS)	-	-	Artificial (S. Derby SD43 / 1.8)
2188	Cooling water	+ on 4 plates	-	-	Artificial (S. infantis Ad 1404 / 3.8)
2724	Swab	+ on 4 plates	-	-	Natural
2736	Wash water	+ on 4 plates	-	-	Artificial (S. Typhimurium 528 / 2.4)
2738	Wash water	+ on 4 plates	-	-	Artificial (S. Typhimurium Ad 1070 / 0.8)

Of these 22 negative deviations after incubating the supplemented buffered peptone water at 41.5 °C, 4 gave matching results after 24 h incubation.

11 samples were naturally contaminated and the other 11 were artificially contaminated at levels of 0.2 to 5.2 cells/25g. As the enrichments of the alternative method and of the reference method are different, we can assume that, for 18 of the samples, there was a sampling problem. It should be noted that for sample 1463, only one characteristic colony was isolated by the reference method, suggesting a very low sample contamination.

The 18 positive deviations are listed in table 12.

Table 12 - Positive deviations

No. Spl.	Product	Alternative method		Contamination (inoculated strain / inoculation rate)
		supplemented BPW incubated for 16 h at 41.5°C	supplemented BPW incubated for 24 h at 41.5°C	
1456	Pork sausage	+	+	Natural
1773	Minced beef	+	+	Natural
1776	Minced heifer meat	+	+	Natural
1777	Minced beef	+	+	Natural
2215	Sausage meat	+	+	Natural
2216	Chipolatas	+	+	Natural
2223	Plain poultry skewer	+	+	Natural
2389	Raw milk	+	+	Natural
2745	Whole powdered milk	+	+	Artificial (S. Typhimurium 4 / 0.2)
2720	Ratatouille vegetables	+	+	Artificial (S. kottbus 3 / 3.6)
2791	Powder for custard cream	+	+	Artificial (S. Typhimurium 776 / 0.6)
2808	Meal for poultry	+	+	Artificial (S. cerro Ad 689 / 2.0)
2826	Pellets for calves	+	-	Artificial (S. blockley Ad 923 / 1.8)
2742	Process water	+	+	Artificial (S. senftenberg 1 / 10.6)
2838	Process water	+	+	Artificial (S. Havana Ad 930 / 2.0)
2841	Cooling water	+	+	Artificial (S. blockley Ad 923 / 1.8)
2842	Cooling water	+	+	Artificial (S. Bovismorbificans / 2.8)
2843	Swab	+	+	Artificial (S. Typhimurium Ad 1070 / 13.0)

2.1.1.6 *Statistical tests as per appendix F of the EN ISO 16140 standard*

The results of the statistical tests obtained for 16 and 24h incubation are given in the table below:

Table 13 – Mc Nemar tests

	16 h incubation	24 h incubation
Y = ND + PD	40	39
d = ND - PD	4	3
$X^2 = d^2/Y$	0.400	0.231
Conclusion	$X^2 < 3,841$: **the two methods are not significantly different at $\alpha < 0.05$.**	

2.1.1.7 *Confirmation protocols*

The characteristic *Salmonella* colonies were confirmed by direct latex colony test (two latex tests were performed during validation: *Salmonella* latex test by OXOID and CONFIRM *Salmonella*) and by the tests described in the ISO 6579 reference method.

For 3 naturally contaminated raw milk samples (no. 2386, 2389 and 2390), the two latex tests gave negative results; for 2 raw milk samples artificially contaminated with *Salmonella diarizonae* Ad1280 (no. 2706 and 2707), only the *Salmonella* latex test by OXOID gave a positive result; it should be noted that this strain, used for the inclusivity test, gave a very weakly positive CONFIRM *Salmonella* latex test.

2.1.1.8 *Plate storage at 2-8 °C*

In order to assess the possibility of refrigerating the IRIS plates for 72 h after reading, a second isolation was performed from the buffered peptone water incubated for 16 h at 41.5 °C. The plates were read before and after storage.

A single change was observed with sample 2664 for which no characteristic colonies had been observed before storage and pale characteristic colonies had appeared after refrigerating the plate. The colonies were identified as being *Escherichia coli*.

During this study, it was noted that refrigerating the plates tended to improve the contrast between *Salmonella* colonies and the secondary flora.

2.1.1.9 Enrichment storage at 2-8 °C

The positive and conflicting sample enrichments were stored for 72 h at 2-8 °C before being re-isolated on IRIS agar.

6 result changes were observed:

Table 14

Spl. no.	Results of the ISO 6579 reference method	Result of the alternative method	
		Before storage	*After storage*
1461	+	+ (=)	- (ND)
1770	+	- (ND)	+ (=)
2743	+	+ (=)	- (ND)
2797	+	+ (=)	- (ND)
2822	+	+ (=)	- (ND)
2826	+	+ (PD)	- (=)

ND = 22 + (4 – 1) = 25 Y = ND + PD = 25 + 17 = 42

PD = 18 – 1 = 17 d = 8 $X^2 = 1.976$

2.1.1.10 Conclusion

The IRIS *Salmonella*® method gives satisfactory relative accuracy, specificity and sensitivity results, whatever the enrichment incubation period, whether the medium (enrichment broth or chromogenic agar) is refrigerated or not.

2.1.2 Relative accuracy, relative specificity and relative sensitivity (Extension study - 2014)

2.1.2.1 Number and type of samples

In total, 125 samples were analysed. The distribution per category is given in the following table:

Categories	Types	Positive* (number)	Negative (number)	Total (number)
Milk powder	✓ Caseinates, whey, powdered milk derivatives	9	13	22
	✓ Infant formula and other milk (with/without probiotics)	10	10	20
	✓ Hypoallergenic milk powder	13	10	23
	Total	*32*	*33*	*65*
Animal meals and cubes	✓ Meal	14	10	24
	✓ Cubes	11	11	22
	✓ Dried raw materials	5	9	14
	Total	*30*	*30*	*60*
TOTAL		**62**	**63**	**125**

* These results are positive by one or other method

2.1.2.2 Artificial sample contamination

Samples were artificially contaminated by inoculation.

81 samples were inoculated. 60 samples gave a positive result by one or other of the methods (see figures 1 and 2). The injury protocol and the injury measurement are given in **Appendix 5** –.

Figure 1 - Contamination levels used

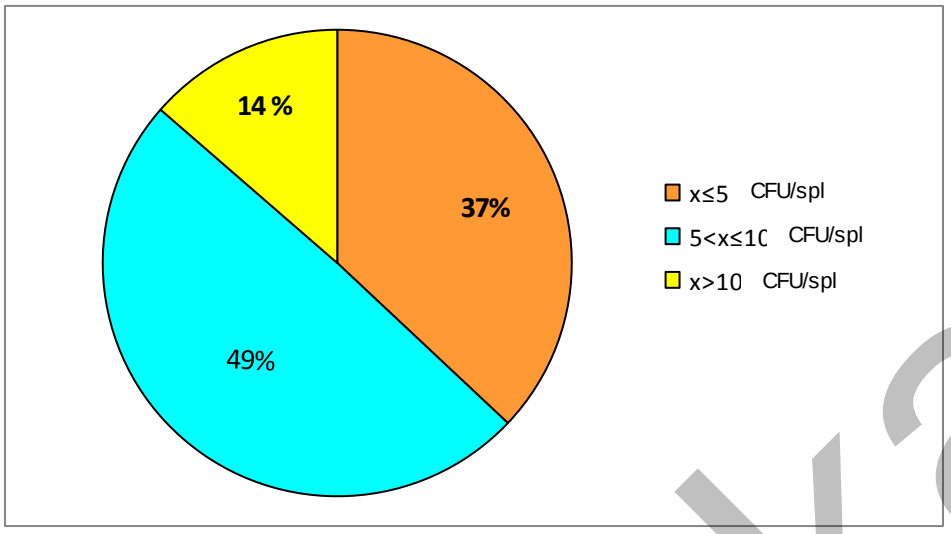
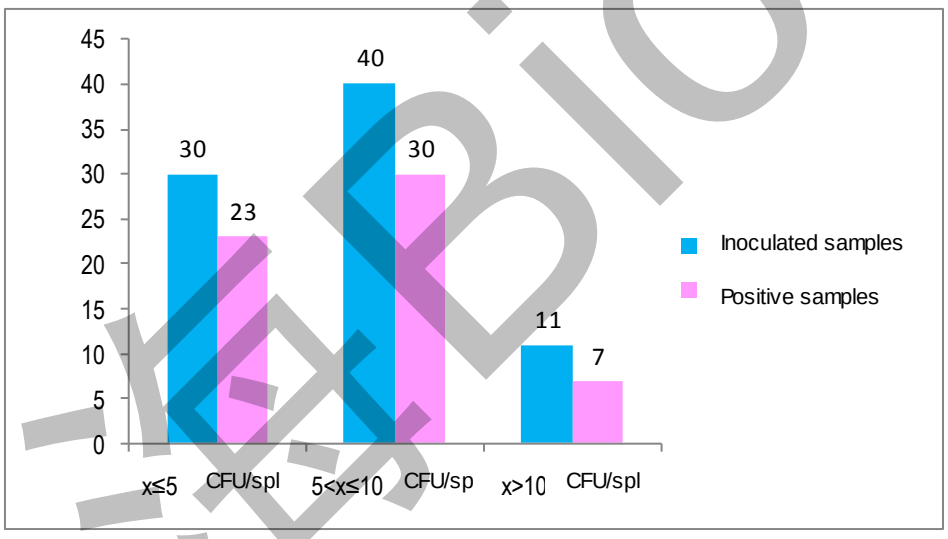


Figure 2 - Number of positive samples inoculated according to the contamination level



Only 2 naturally contaminated samples (no. 5116 and 5359) were analysed during this study.

2.1.2.3 Confirmation protocols

The characteristic colonies observed on IRIS agar were confirmed by the conventional tests of the reference method and by the CONFIRM Salmonella latex test.

2.1.2.4 *Test results*

The raw results are given in **Appendix 6** .

Table 15 - Result pairs for the reference and alternative methods - Milk powder

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 24**	Positive deviation (R-/A+) **PD = 5**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 3 (PPND = 0)**	Negative agreement (A+/R+) **NA = 33 (PPNA = 0)**

Table 16 - Result pairs for the reference and alternative methods - Animal feed

Answers	Reference method positive (R+)	Reference method negative (R-)
Positive alternative method (A+)	Positive agreement (A+/R+) **PA = 21**	Positive deviation (R-/A+) **PD = 3**
Negative alternative method (A-)	Negative deviation (A-/R+) **ND = 6 (PPND = 0)**	Negative agreement (A+/R+) **NA = 30 (PPNA = 0)**

A+ = confirmed positive
A- = immediate negative and negative after confirmation when presumed positive

Table 17 - Calculation of relative accuracy (AC), relative sensitivity (SE) and relative specificity (SP)

Matrices	AP	NA	ND	PD	N	Accuracy Relative AC (%) [100x(PA+NA])/N]	N+ PA + ND	Sensitivity Relative SE (%) [100xPA]/N+]	N- NA + PD	Specificity Relative SP (%) [100xNA]/N-]
Powdered milk	24	33	3	5	65	87.7	27	88.9	38	86.8
Animal meals and cubes	21	30	6	3	60	85.0	27	77.8	33	90.9
TOTAL	**45**	**63**	**9**	**8**	**125**	**86.4**	**54**	**83.3**	**71**	**88.7**

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

The percentage values calculated for the alternative method are as follows:

- *relative accuracy:* ***AC = 86.4%***
- *relative specificity:* ***SP = 88.7%***
- *relative sensitivity:* ***SE = 83.3%***

The sensitivity of the two methods taking into account the additional positive results of the alternative method is as follows:

Alternative method:	Reference method:
(PA + PD) / (PA + PD + ND) = 85.5%	(PA + ND) / (PA + PD + ND) = 87.1%

2.1.2.6 *Analysis of discrepancies*

The 17 conflicting samples are distributed as follows:

- **Negative deviations: 9**

Spl. no.	Product	Contamination	Strain (inoculation rate)
3039	Powdered milk	Artificial	*Salmonella* Ohio Ad 1482 (1.0)
3730	Whey protein	Artificial	*Salmonella* Montevideo 510 (5.8)
3731	Milk protein isolates	Artificial	*Salmonella* Mbandaka Ad 1722 (2.2)
4906	Guinea fowl feed	Artificial	*Salmonella* Infantis 179 (3.8)
4913	Fish meal	Artificial	*Salmonella* Kedougou Ad 1502 (6.0)
5000	Cattle feed (meal)	Artificial	*Salmonella* Montevideo Ad 1503 (9.2)
5002	Bran	Artificial	*Salmonella enterica* 6.7:-:- Ad1 844 (8.4)
5004	Maize dregs	Artificial	*Salmonella enterica* 18:-:- Ad1846 (8.4)
5006	Dairy cow feed	Artificial	*Salmonella enterica* 13,23:-:- Ad 1847 (9.0)

- **Positive deviations: 8**

Spl. no.	Product	Contamination	Strain (inoculation rate)
2356	Powdered milk with probiotics	Artificial	*Salmonella* Montevideo Ad 912 (1.2)
3993	Powdered skim milk	Artificial	*Salmonella* Mikawasima Ad 1811 (4.4)
3994	Powdered formula milk with ferment	Artificial	*Salmonella* Duisburg Ad 1812 (8.0)
3995	Powdered formula milk	Artificial	*Salmonella* Mbandaka Ad 1810 (4.8)
4121	Mild whey	Artificial	*Salmonella* Duisburg Ad 1812 (11.6)
5009	Cattle feed	Artificial	*Salmonella* enterica 18:-:- Ad1846 (8.4)
5119	Dried dog food	Artificial	*Salmonella* Cerro Ad 689 (7.2)
5359	Feed raw materials	Natural	*Salmonella* 4.5:i:

As the enrichments for the alternative method and reference method were different, the discrepancies observed were probably due to a sampling problem.

The number of discrepancies between the reference method and the alternative method is of:

y = ND + PD = 9 + 8 = 17
m = 8
M = 4

m > M: the two methods are not significantly different.

2.1.2.7 Enrichment storage for 72 h at 2-8 °C

Storage was tested for **milk powder** only. **No changes were observed.**

2.1.3 Relative limit of detection (Initial validation - 2011 and extension study - 2014)

The relative limit of detection corresponds to the smallest number of culturable micro-organisms that can be detected in the sample, with a probability of 50%, using the alternative and reference methods.

2.1.3.1 Matrices used

The purpose of this study was to determine the minimum amounts of *Salmonella* that can be detected in the food matrix and to compare them to those obtained by the reference method.

The limits of detection were determined by the analysis of 6 matrix/strain pairs at four different levels. Six replicates of each experimental condition were performed.

The matrix/strain pairs tested were as follows:

- *Initial validation (2011):*
  - minced steak inoculated with *Salmonella* Typhimurium A00C060,
  - raw milk inoculated with *Salmonella* Infantis 401 B,
  - pollack inoculated with *Salmonella* Derby Ad 1093,
  - liquid egg portion inoculated with *Salmonella* Enteritidis 657,
  - dried dog food inoculated with *Salmonella* Agona A00V038,
  - wash water inoculated with *Salmonella* Senftenberg 6.
- *Extension study (2014):*
  - infant formula with probiotics inoculated with *Salmonella* Anatum Ad 298, isolated from powdered milk,
  - soya cakes inoculated with *Salmonella* Agona A00V0038, isolated from animal feed,

2.1.3.2 Contamination protocol

Six 25 g bags were prepared per matrix and per rate. The bags were inoculated individually with a bacterial suspension.

The analyses were performed both by the reference method and the alternative method; the minimum enrichment broth incubation period (i.e. 16 h for the initial study and 18 h for the extension study) was tested.

The matrices used were analysed before inoculation by the reference method, in order to ensure that the samples were not already contaminated with *Salmonella*.

2.1.3.3 Results

Table 18 - Relative limit of detection results

	Pair (strain, matrix)	Relative limit of detection (CFU / specimen) according to the Spearman-Kärber test[1]	
		Reference method	Alternative method
Initial validation (2011)	Minced steak / *Salmonella* Typhimurium A00C060 (25 g)	0.5 [0.3; 0.7]	0.6 [0.4; 0.8]
	Raw milk / *Salmonella* Infantis 401 B (25 g)	0.5 [0.3; 0.9]	0.8 [0.4; 1.5]
	Pollack / *Salmonella* Derby Ad 1093 (25 g)	0.7 [0.4; 1.2]	0.4 [0.2; 0.7]
	Liquid egg portion / *Salmonella* Enteritidis 657 (25 g)	0.4 [0.3; 0.8]	0.7 [0.4; 1.5]
	Dried dog food / *Salmonella* Agona A00V038 (25 g)	0.8 [0.4; 1.5]	1.2 [0.7; 2.0]
	Wash water / *Salmonella* Senftenberg 6 (25 g)	0.6 [0.4; 1.0]	0.8 [0.5; 1.4]
Extension study (2014)	Infant formula with probiotics / *Salmonella* Anatum Ad 298 (375 g)	1.2 [0.6; 2.4]	0.8 [0.5; 1.3]
	Soya cakes / *Salmonella* Agona A00V0038 (125 g)	0.5 [0.3; 0.9]	0.6 [0.3; 1.2]

The relative limit of detection was of between 0.3 and 2.4 CFU/sample for the reference method and between 0.2 and 2.0 CFU/sample for the alternative method.

The limits of detection of the alternative and reference methods are equivalent.

[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".*

2.1.4 Inclusivity / Exclusivity

Inclusivity is the ability of the alternative method to detect the target analyte in a broad range of strains.

Exclusivity is the absence of interference to the alternative method by an appropriate range of non-target strains.

The purpose of the specificity study is to verify that all target strains are detected by the alternative method and that there are no cross-reactions with non-target strains.

2.1.4.1 Test protocols

Inclusivity protocol: The *Salmonella* strains were cultured at 37 °C in BHI broth. Dilutions were then made such as to inoculate the supplemented buffered peptone water with approximately 10 cells/225 ml. The full protocol of the alternative method was then applied. For one strain, milk (25 ml) had to be added to achieve growth in the enrichment medium (*Salmonella* Gallinarium biovar pullorum ad300).

Exclusivity protocol: the strains were cultured at 37 °C in BHI broth. Dilutions were then made such as to inoculate the buffered peptone water with approximately 105 CFU/225 ml. The full protocol of the alternative method was then applied.

2.1.4.2 Results

The results are presented in **PApendix 7** .

- ✓ **Inclusivity**

58 *Salmonella* strains were tested; these all gave a positive result by the IRIS *Salmonella*® method. 5 strains gave pale and occasionally smaller colonies on IRIS agar. These strains were: *Salmonella diarizonae* Ad 1280, *Salmonella* Gallinarum 1 and 2, along with *Salmonella houtenae* Ad 597.

All strains gave positive results with the OXOID *Salmonella* Latex Test and 3 strains (*Salmonella* Gallinarum 1 and 2 and *Salmonella* Paratyphi ATCC 9150) gave a negative result with the CONFIRM *Salmonella* kit, but a positive result with the OXOID latex test.

✓ **Exclusivity**

None of the 30 strains tested was detected by the IRIS *Salmonella*® method.

2.1.5 Conclusion

The IRIS Salmonella® method is specific and selective.

2.2 Practicability

Practicability is determined by entering the 13 criteria defined by the AFNOR technical rules.

Points 1, 2, 3 and 4 are given in the table below:

Reagent	Reference	1. Packaging method	2. Volume of reagents	3. Storage conditions	4. Details of use after first use
Salmonella Enrichment broth (EPT BKD)	BM13608	Pack of 10 bottles	10 x 225 ml	2-25 °C	Not applicable
IRIS agar	BM16008 or BM16108	x 20 plates x 120 plates	18 ml	2-8 °C	Not applicable
Supplements: IRIS *Salmonella*® liquid supplement IRIS *Salmonella*® tablet supplement	 BS07800 BS077	 Bottle Blister of tablets	 50 ml 12 units	 2-8 °C 2-8 °C	 to DLC to DLC
Latex test: CONFIRM *Salmonella*	BT01108	Kit for 50 tests	Latex reagent: 2.5 ml Positive control: 0.5 ml Negative control: 0.5 ml	2-8 °C	to DLC

5. Specific equipment or rooms required

No specific equipment is required, the equipment routinely used in a microbiology laboratory is sufficient.

6. Ready-to-use or powdered reagents

All reagents and media are ready-to-use.

7. Training time for uninitiated operators

Half a day

8. Actual manipulation time and method flexibility (in minutes)

Steps	Reference method ISO 6579	Alternative method IRIS Salmonella
	24 Samples	*24 Samples*
Sample collection	48	48
Stomachage	36	36
Subculture to RVS and MKTTn	45	/
Isolation on selective agar	75	24
Plate reading	30	10
Total / negative sample	9.8	3.7
Streaking on nutrient agar	20	/
Latex test	/	15
Confirmation test	120	/
Total / positive sample	15.6	5.5

For a positive or negative sample, the IRIS *Salmonella*® method takes approximately 3 times less manipulation time than the reference method.

9. Time to result

- **Negative sample**

Step	Reference method ISO 6579	Alternative method IRIS Salmonella
Pre-enrichment	D0	D0
Enrichment	D1	/
Streaking	D2	D1
Reading	D3	D2

- **Positive sample**

Step	Reference method ISO 6579	Alternative method IRIS Salmonella
Pre-enrichment	D0	D0
Enrichment	D1	/
Streaking	D2	D1
Reading	D3	D2
Latex test	/	D2
Confirmation test	D4 to D6	D2

A negative result is obtained in 2 days by the IRIS *Salmonella*® method.
A positive result is obtained in 2 days by the IRIS *Salmonella*® method versus 4 to 6 days for the reference method.

10. Type of operator qualification

No special qualifications are required

11. Steps common with the reference method

None

12. Analytical result traceability

Not applicable

13. Maintenance by the laboratory

Not applicable

2.3 Inter-laboratory study

2.3.1 Study organisation

2.3.1.1

Implementation

17 laboratories took part in the study.

The study focused on minced beef, inoculated with *Salmonella* Typhimurium A00C060.

The samples in Stomacher bags were individually inoculated at a rate of 8 bags per rate, per method and per laboratory. Each laboratory received 48 samples to analyse: 24 by the reference method and 24 by the alternative method.

2.3.1.2 Sample preparation and contamination (including contamination level)

All samples were dispensed into sterile bags by the expert laboratory, at a rate of 25 g per bag, before being contaminated.

✓ ***Contaminant suspension preparation***

Two suspensions (125 cells/ml and 25 cells/ml) were prepared from an overnight culture in BHI broth at 27 °C according to the protocol described in the requirements for preliminary and collaborative studies of the AFNOR technical rules.

✓ ***Sample contamination protocol***

The low rate inoculation was performed using 200 µl of the 25 cells/ml suspension, while the high rate inoculation was performed using 200 µL of the 125 cells/ml suspension.

After inoculation, the samples were refrigerated prior to shipment.

The target inoculation rates were as follows:

- 0 CFU/25 ml,
- 1-10 CFU/25 ml,
- 5-50 CFU/25 ml.

2.3.1.3 Shipment details: date and means implemented for temperature monitoring (during transport and upon receipt)

The samples were shipped on Monday 04 July 2011 and analysed on Wednesday 06 July 2011.

The coded samples (code known only to the expert laboratory) were placed in isothermal boxes containing refrigerant blocks and shipped to the various laboratories by means of an express transport system.

A temperature control bottle containing a temperature probe was added to the package, in order to monitor the temperature during transport and to measure it upon receipt.

Each laboratory, identified by a letter, received the following:

- 24 samples (25 g) encoded for the detection of *Salmonella* by the IRIS *Salmonella*® method (red sticker)
- 24 samples (25 g) encoded for the detection of *Salmonella* by the ISO 6579 (2002) method (blue sticker),
- 1 non-encoded sample for the enumeration of aerobic mesophilic flora in minced meat by the ISO 4833 method,
- 1 water bottle containing a temperature probe.

2.3.1.4 Elements required by the partner laboratories to conduct the tests

The reagents required for the alternative method and reference method were provided by SOLABIA.

The expert laboratory provided detailed instructions to the laboratories.

2.3.2 Experimental parameter control

2.3.2.1 Level of contamination before inoculation, levels obtained after artificial contamination and sample stability

- *Before inoculation*

The detection of target bacteria in the matrix was performed on five samples to ensure that they were absent.

- *Rates obtained after artificial contamination*

The contamination levels obtained in the matrix, along with precision estimates, are given in the following table:

Level	Samples	Inoculation concentration level (b/25 g)	Actual level (b/25 g of sample)	Estimation of the lower contamination contamination per 25 g of sample	Estimation of the upper contamination limit per 25 g of sample
Level 0	3 – 5 – 9 – 13 – 15 – 18 – 21 – 23	/	/	/	/
Low level	2 – 7 – 8 – 10 – 12 – 14 – 19 – 22	5	7.1	6.1	8.1
High rate	1 – 4 – 6 – 11 – 16 – 17 – 20 - 24	25	29.9	25.9	34.4

- *Sample stability*

Counts were performed on 3 samples inoculated at high rates. Detection was performed on three samples for the low inoculation rate. The results are presented in the following table:

Day	CFU/g (XLD)			Detection / 25 g		
	1	2	3	1	2	3
D0	100	110	100	+	+	+
D1	100	140	80	+	+	+
D2	100	140	120	+	+	+

No change inoculation rate was observed.

2.3.2.2 *Temperature measured during transport, temperature upon receipt and receipt times.*

The temperatures monitored during transport and measured upon receipt, along with sample receipt date are given in Table 19 .

Table 19 - Sample temperature upon receipt

Laboratories	Temperature read by the thermo-button (°C)	Temperature measured upon receipt (°C)	Sample receipt date and time	
A	4.0	2.5	05/07/2011	15:00
B	4.5	6.3	06/07/2011	10:30
C	4.0	13.3	05/07/2011	14:15
D	3.5	1.0	05/07/2011	09:40
E	4.0	5.5	05/07/2011	11:00
F	5.0	4.0	05/07/2011	14:30
G	3.0	4.0	05/07/2011	11:00
H	3.0	3.2	05/07/2011	08:00
I	4.5	5.8	05/07/2011	08:55
J	3.0	3.9	05/07/2011	11:30
K	3.0	5.7	05/07/2011	10:15
L	3.5	6.0	05/07/2011	10:00
M	2.5	6.3	05/07/2011	11:00
N	3.0	5.1	05/07/2011	16:00
O	3.0	4.3	05/07/2011	12:15
P	3.5	4.8	05/07/2011	09:30
R	0.0	0.5	05/07/2011	10:00

2.3.2.3 *Conclusion*

No anomalies were observed during transport; the temperature measured during transport was between 0 and 5 °C. Laboratory J measured a temperature of 13.3 °C upon receipt, though the temperature recording indicates a temperature of 4.0 °C upon receipt.

Laboratory N stored its samples at 5 °C ±3 °C, but the recording indicates a storage temperature of between 8 and 10 °C. This laboratory was not included in the interpretation.

2.3.3 Analysis results

2.3.3.1 Enumeration of the mesophilic aerobic flora

The mesophilic aerobic flora on the matrix was enumerated on one sample as per the ISO 4833 method. The result varied between 180 CFU/g (laboratory N) and 890,000 CFU/g (laboratory A).

2.3.3.2 Results obtained by the expert laboratory

All inoculated samples gave a positive result; the reference method and alternative method results matched.

Level	Reference method	Alternative method
L0	0/8	0/8
L1	8/8	8/8
L2	8/8	8/8

2.3.3.3 Results obtained by the partner laboratories

A summary of results obtained by all laboratories is given below:

Numerous level 0 contaminations

Samples stored between 8.5 and 10 °C

	Reference method			
	Laboratory	L0	L1	L2
Numerous level 0 contaminations	A	**5/8**	8/8	8/8
	B	0/8	8/8	8/8
	C	0/8	8/8	8/8
	D	0/8	8/8	8/8
	E	0/8	8/8	8/8
	F	**1/8**	8/8	8/8
	G	0/8	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
Samples stored between 8.5 and 10 °C	N	0/8	8/8	8/8
	O	0/8	8/8	8/8
	P	0/8	8/8	8/8
	R	0/8	8/8	8/8

	Alternative method			
	Laboratory	L0	L1	L2
Numerous level 0 contaminations	A	**6/8**	8/8	8/8
	B	0/8	8/8	8/8
	C	0/8	8/8	8/8
	D	0/8	8/8	8/8
	E	0/8	8/8	8/8
	F	0/8	8/8	8/8
	G	0/8	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
Samples stored between 8.5 and 10 °C	N	0/8	8/8	8/8
	O	0/8	8/8	8/8
	P	0/8	8/8	8/8
	R	0/8	8/8	8/8

15 laboratories obtained the expected results.

Laboratory A found 5 non-inoculated samples positive by the reference method (A3, A5, A15, A18 and A21) and 6 by the alternative method (A1, A5, A9, A13, A21 and A23).

Laboratory F confirmed the presence of *Salmonella* by the reference method in one non-inoculated sample (F9); the laboratory was unable to provide us with the strain for additional tests as it had discarded the plates.

Considering the particularly high number of contaminations obtained by laboratory A, it was decided to exclude this latter from the interpretation. Finally, the interpretation of results was performed on the following 15 laboratories: B, C, D, E, F, G, H, I, J, K, L, M, O, P and R.

2.3.4 Calculations

2.3.4.1 Calculation of percent specificity (%SP) and sensitivity (%SE) for both methods.

The percent specificity, for the L0 level and for each method, was calculated using the following equation:

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

where: N- = total number of all L0 tests
FP = number of false positives

The percent sensitivity, for each contamination level and for each method, was calculated using the following equation:

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

where: N+ = total number of all L1 or L2 tests
TP = number of true positives

The results are presented in the following table:

Level	Reference method		Alternative method	
	SP/SE %	LCL %	SP/SE %	LCL %
L0 (SP)	99.2	98.0	100.0	98.0
L1 (SE)	100.0	98.0	100.0	98.0
L1 + L2 (SE)	100.0	98.0	100.0	98.0

2.3.4.2 Calculation of relative accuracy (AC)

The results for all levels are given below:

Table 20 - Result pairs for the alternative method and the reference method in the context of the inter-laboratory study

Alternative method	Reference method		Total
	+	-	
+	PA = 240	PD = 0	**240**
-	ND = 1	NA = 119	**120**
Total	**N+ = 241**	**N- = 119**	**N = 360**

The relative accuracy (AC), expressed as a percentage, was calculated using the following equation: $$AC = \frac{(PA + NA)}{N} x\ 100\%$$

where: N = number of samples tested
PA = number of positive agreements
NA = number of negative agreements

The accuracy values of the alternative method relative to the reference method were calculated for each level and are given in the tables below:

Level	AC %	LCL %
L0	99.2	98.0
L1	100.0	98.0
L2	100.0	98.0
L1 + L2	100.0	98.0
Total	**99.7**	**98.0**

2.3.4.3 *Analysis of conflicting results*

A conflicting result was observed for laboratory F; one non-inoculated sample was found by the reference method.

2.3.5 *Interpretation*

2.3.5.1 *Comparison of relative accuracy, specificity and sensitivity values*

Accuracy is the closeness of fit between the test result and the accepted reference value.

Relative specificity is defined as the degree to which the method is affected (or not) by the other components in a multi-component sample. It represents the method's ability to accurately measure or quantify a given analyte in a sample without interference from other non-target components, such as for example a matrix effect or background noise.

Relative sensitivity is defined as the alternative method's ability to detect two different amounts of analyte previously measured by the reference method, using a given matrix, over the entire measurement range. The variation in minimum quantity (increase in analyte x concentration) that gives a significant variation in measured signal (response y).

The values obtained in both parts of the validation study (method comparative study and inter-laboratory study) are given in table 21:

Table 21 - Comparison of values obtained during the inter-laboratory study with those obtained in the context of the method comparative study, for the alternative method

	Inter-laboratory study	Method comparative study	
		Supplemented BPW incubated 16 h at 41.5 °C	Incubation 24 h at 41.5 °C
Relative accuracy (AC)	99.7	89.7	90.0
Sensitivity (SE)	100.0	87.4	88.0
Specificity (SP)	100.0	91.6	91.0

2.3.5.2 Degree of agreement (DA)

The degree of agreement is the percent chance of obtaining the same result (i.e. both positive or both negative) with two identical samples analysed by the same laboratory, under conditions of repeatability (i.e. by a single operator using the same instruments and reagents, within the shortest possible lapse of time).

The degree of agreement is thus equivalent to repeatability for quantitative methods.

The various tables used to infer the degree of agreement are given in **Appendix 8** . The degrees of agreement for the reference method and the alternative method, for each level, are given below:

Level	Reference method	Alternative method
L0	97.8	100.0
L1	100.0	100.0
L2	100.0	100.0

2.3.5.3 Fit

The fit is the percent chance of obtaining the same result for two identical samples analysed by two different laboratories.

The fit is thus equivalent to reproducibility for quantitative methods.

Fit calculations are given in **Appendix 9**. The percent fit values for the reference and alternative methods, for each level, are given in the table below:

Level	Reference method	Alternative method
L0	98.3	100.0
L1	100.0	100.0
L2	100.0	100.0

2.3.5.4 Odds Ratio (COR)

The odds ratio was calculated using the following formula:

$$COR = \frac{\deg ré\ d'accord\ x\left(100 - concordance\right)}{concordance\ x(100 - \deg ré\ d'accord)}$$

The odds ratios obtained for the reference and alternative methods are given below:

Level	Reference method	Alternative method
L0	0.76	1.0
L1	1.0	1.0
L2	1.0	1.0

2.3.6 Conclusion

The variability of the alternative method (degree of agreement, fit, odds ratio) is identical to that of the reference method.

2.4 Conclusion

- **The conclusions of the method comparative study are as follows:**

The IRIS *Salmonella*® method gives satisfactory relative accuracy, specificity and sensitivity results, whatever the enrichment incubation period, whether the medium (enrichment broth or chromogenic agar) is refrigerated or not.

The limits of detection of the alternative and reference methods are equivalent.

The IRIS *Salmonella*® method is specific and selective.

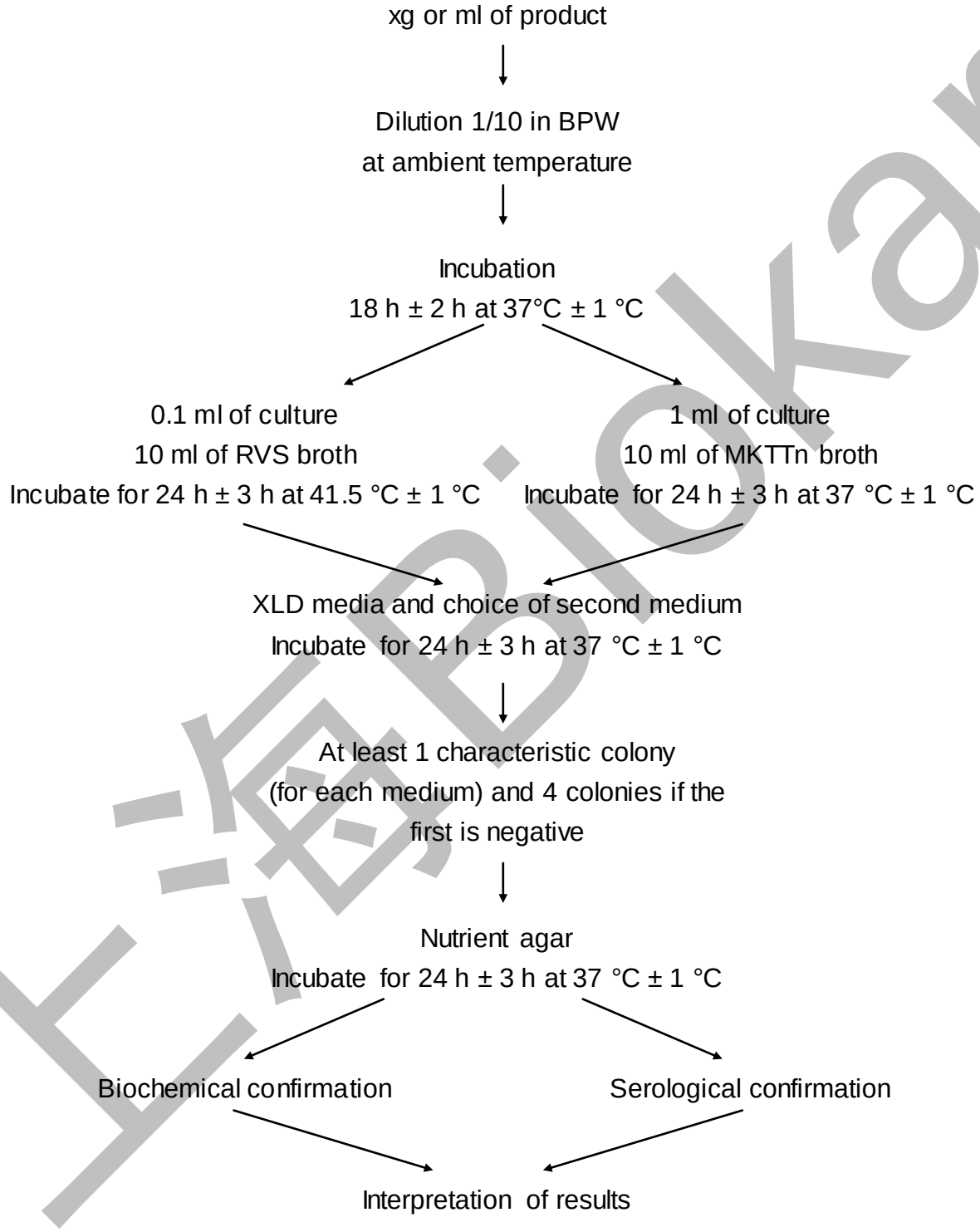
For a positive or negative sample, the IRIS *Salmonella*® method takes approximately 3 times less manipulation time than the reference method.

A negative result is obtained in 2 days by the IRIS *Salmonella*® method. A positive result is obtained in 2 days by the IRIS *Salmonella*® method versus 4 to 6 days for the reference method.

- **The conclusions of the inter-laboratory study are as follows:**

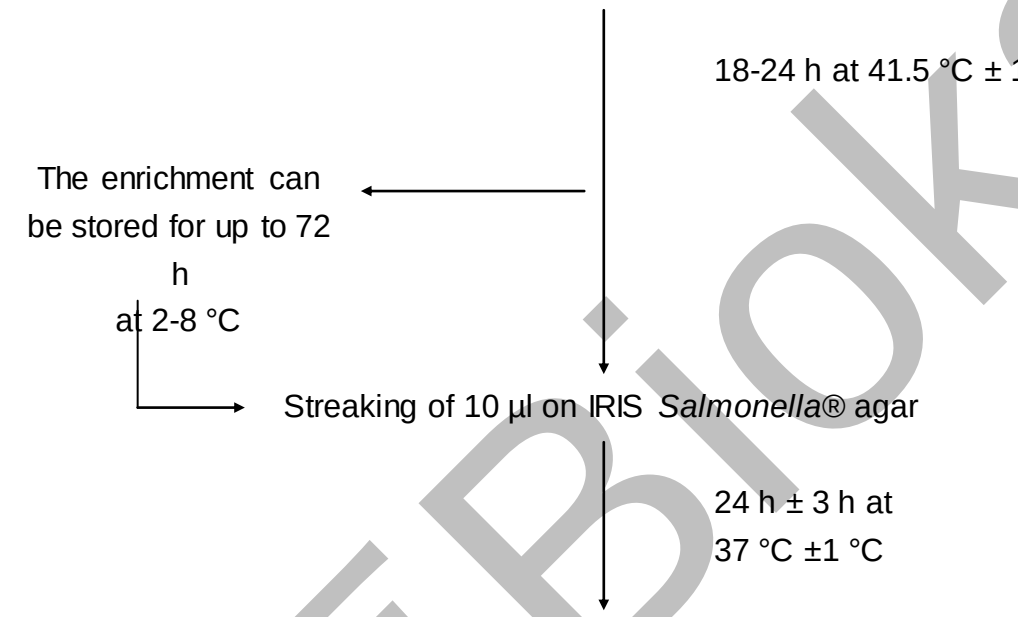
The variability of the alternative method (degree of agreement, fit, odds ratio) is identical to that of the reference method.

Appendix 1 - ISO 6579 reference method: 2002
Microbiology of food and animal feeding stuffs
Horizontal method for the detection of Salmonella spp.

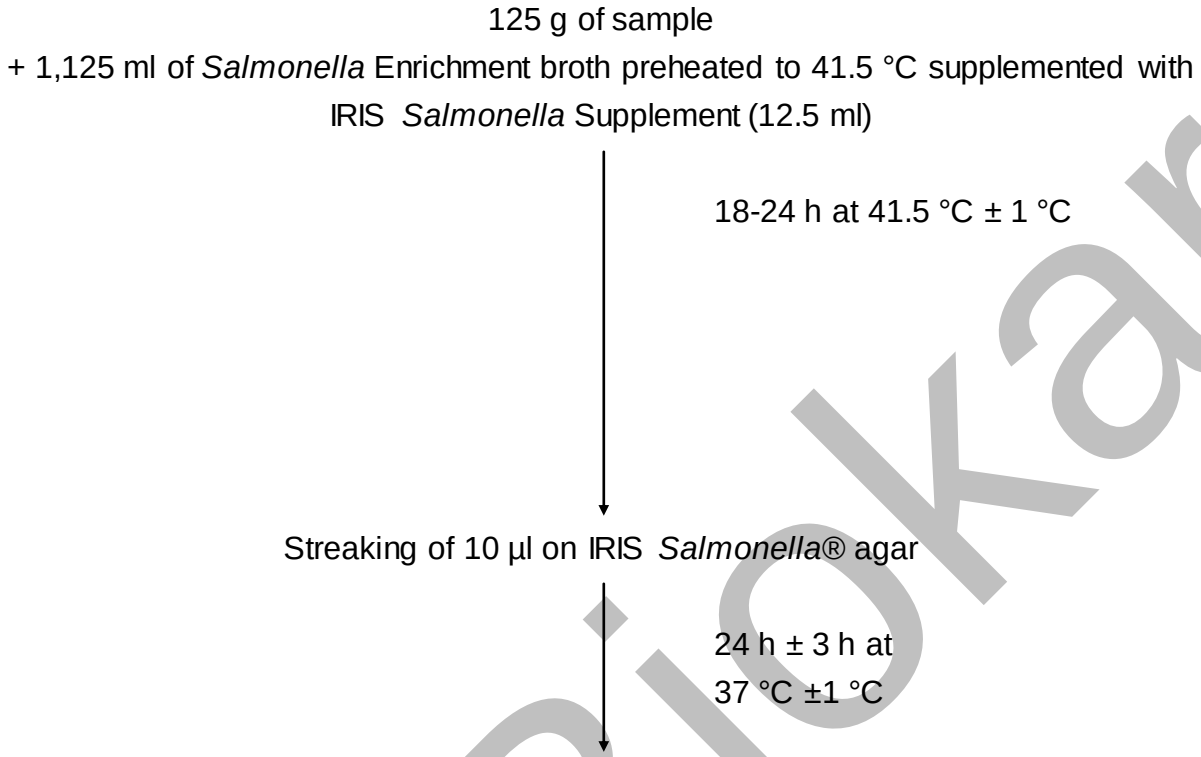


Appendix 2 - Protocols of the IRIS Salmonella® alternative method

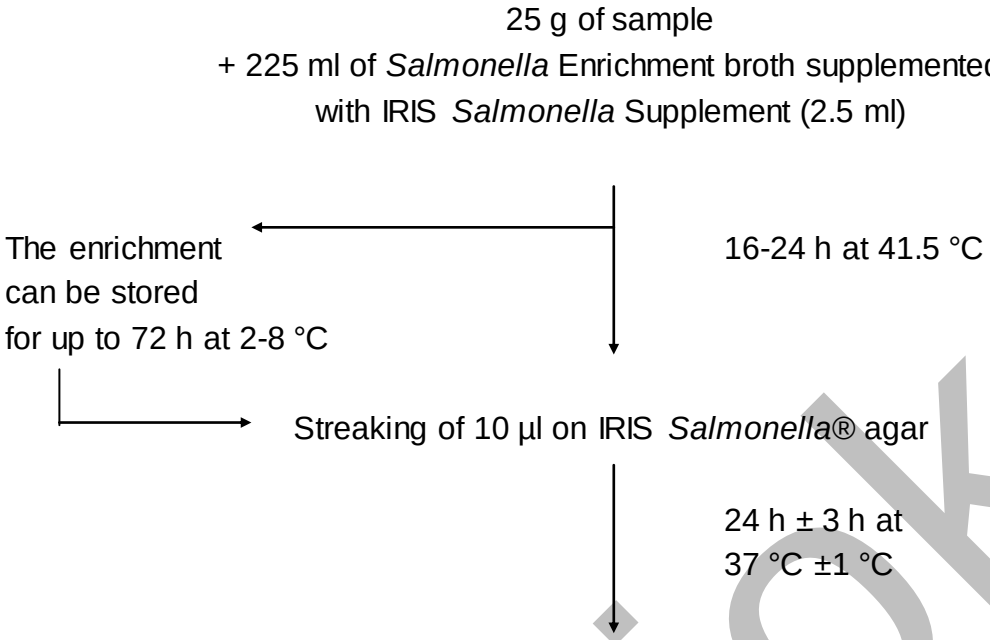
For Milk powder (sample size: 375 g)



For animal meal and cubes (sample size: 125 g)



For all categories (sample size: 25 g)



Appendix 3 – Artificial sample contamination (initial validation - 2011)

No. Sample	Product	Inoculations					Final global
		Strain		Stress applied	Stress log TSYEA-XLD	Inoculation rate	
		Reference	Origin				
2099	**Cauliflower**	*Salmonella* Virchow F276	Curry	-20 °C, 20 days	1.08	7-1-2-2-5 (3.4)	+
2100	**Sliced vegetables**	*Salmonella* Virchow F276	Curry	-20 °C, 20 days	1.08	7-1-2-2-5 (3.4)	+
2101	**Salmon and scallop au gratin**	*Salmonella* Anatum Ad1451	Dab fillet	4 °C, 20 days	0.42	9-1-6-6-4 (5.2)	+
2102	**Fresh cod**	*Salmonella* Anatum Ad1451	Dab fillet	4 °C, 20 days	0.42	9-1-6-6-4 (5.2)	+
2103	**Shrimp**	*Salmonella* Anatum Ad1451	Dab fillet	4 °C, 20 days	0.42	9-1-6-6-4 (5.2)	+
2104	**Salt cod steak**	*Salmonella* Anatum Ad1451	Dab fillet	4 °C, 20 days	0.42	9-1-6-6-4 (5.2)	+
2105	**Scallops**	*Salmonella* Seftenberg Ad355	Seafood cocktail	-20 °C, 20 days	1.52	7-5-6-2-1 (4.2)	+
2106	**Fresh whiting**	*Salmonella* Indiana Ad1409	Marinated fillets	-20 °C, 20 days	0.6	5-4-9-3-7 (5.6)	+
2107	**Fresh cod**	*Salmonella* indiana Ad1409	Marinated fillets	-20 °C, 20 days	0.6	5-4-9-3-7 (5.6)	+
2108	**Seafood cocktail**	*Salmonella* senftenberg Ad355	Seafood cocktail	-20 °C, 20 days	1.52	7-5-6-2-1 (4.2)	+
2116	**Peeled cooked shrimp**	*Salmonella* senftenberg Ad355	Seafood cocktail	-20 °C, 20 days	1.52	7-5-6-2-1 (4.2)	+
2117	**Alaska pollack fillet**	*Salmonella* senftenberg Ad355	Seafood cocktail	-20 °C, 20 days	1.52	7-5-6-2-1 (4.2)	+
2118	**Albacore tuna**	*Salmonella* indiana Ad1409	Marinated fillets	-20 °C, 20 days	0.6	5-4-9-3-7 (5.6)	+
2119	**Alaska pollack**	*Salmonella* indiana Ad1409	Marinated fillets	-20 °C, 20 days	0.6	5-4-9-3-7 (5.6)	+
2159	**Egg cream**	*Salmonella* typhimurium 206	Pasteurised liquid egg portion	19 at 4 °C then TT 15 min. at 56 °C	1.13	3-2-9-2-7 (4.6)	+
2160	**Semolina pudding**	*Salmonella* typhimurium 206	Pasteurised liquid egg portion	19 at 4 °C then TT 15 min. at 56 °C	1.13	3-2-9-2-7 (4.6)	+
2161	**Leek quiche**	*Salmonella* typhimurium 206	Pasteurised liquid egg portion	19 at 4 °C then TT 15 min. at 56 °C	1.13	3-2-9-2-7 (4.6)	+
2162	**Vegetable quiche**	*Salmonella* typhimurium 206	Pasteurised liquid egg portion	19 at 4 °C then TT 15 min. at 56 °C	1.13	3-2-9-2-7 (4.6)	+
2163	**Fresh whole cream**	*Salmonella* indiana Ad174	Fromage frais	TS+10% NaCl 8 days	0.66	3-5-6-4-4 (4.4)	+
2164	**Gros lait**	*Salmonella* indiana Ad174	Fromage frais	TS+10% NaCl 8 days	0.66	3-5-6-4-4 (4.4)	+
2165	**Buttermilk**	*Salmonella* indiana Ad174	Fromage frais	TS+10% NaCl 8 days	0.66	3-5-6-4-4 (4.4)	+
2166	**Drinking yoghurt**	*Salmonella* indiana Ad174	Fromage frais	TS+10% NaCl 8 days	0.66	3-5-6-4-4 (4.4)	+
2167	**Fine mayonnaise with lemon**	*Salmonella* enteritidis Ad 638	Mayonnaise	4 °C, 1 month	0.4	5-2-3-6-2 (3.6)	+
2168	**Plain mayonnaise**	*Salmonella* enteritidis Ad 638	Mayonnaise	4 °C, 1 month	0.4	5-2-3-6-2 (3.6)	+
2169	**Fresh mayonnaise**	*Salmonella* enteritidis Ad 638	Mayonnaise	4 °C, 1 month	0.4	5-2-3-6-2 (3.6)	+
2170	**Pasta salad with salmon and mayonnaise**	*Salmonella* enteritidis Ad 638	Mayonnaise	4 °C, 1 month	0.4	5-2-3-6-2 (3.6)	+
2171	**Saint Félicien made with raw milk**	*Salmonella* dublin Ad531	Raw milk cheese	TS+10% NaCl 1 month	0.6	2-2-5-3-5 (3.4)	-

No. Sample	Product	Inoculations					Final global
		Strain		Stress applied	Stress log TSYEA-XLD	Inoculation rate	
		Reference	Origin				
2172	**Goat's cheese**	*Salmonella* dublin Ad531	Raw milk cheese	TS+10% NaCl 1 month	0.6	2-2-5-3-5 (3.4)	+
2173	**Brie de Meaux made with raw milk**	*Salmonella* dublin Ad531	Raw milk cheese	TS+10% NaCl 1 month	0.6	2-2-5-3-5 (3.4)	+
2174	**Reblochon made with raw milk**	*Salmonella* dublin Ad531	Raw milk cheese	TS+10% NaCl 1 month	0.6	2-2-5-3-5 (3.4)	-
2175	**Beaufort made with raw milk**	*Salmonella* montevideo Ad912	Raw milk	4 °C, 8 days	0.6	3-2-3-7-5 (4.0)	+
2176	**Gruyère made with raw milk**	*Salmonella* montevideo Ad912	Raw milk	4 °C, 8 days	0.6	3-2-3-7-5 (4.0)	+
2177	**Comté made with raw milk**	*Salmonella* montevideo Ad912	Raw milk	4 °C, 8 days	0.6	3-2-3-7-5 (4.0)	+
2178	**Laguiole made with raw milk**	*Salmonella* montevideo Ad912	Raw milk	4 °C, 8 days	0.6	3-2-3-7-5 (4.0)	+
2187	**VSM mixer wash water**	*Salmonella* infantis Ad1404	Poultry environment	4°C, 63 days	0.96	5-3-7-1-3(3.8)	+
2188	**Chicken B cooling water**	*Salmonella* infantis Ad1404	Poultry environment	4°C, 63 days	0.96	5-3-7-1-3(3.8)	+
2191	**Brandade**	*Salmonella* derby Ad1093	Frozen pollack fillet	-20 °C, 1 month	0.41	7-2-3-1-3(3.2)	+
2192	**Seafood and pollack duo with rice**	*Salmonella* derby Ad1093	Frozen pollack fillet	-20 °C, 1 month	0.41	7-2-3-1-3(3.2)	+
2193	**Cod fillets**	*Salmonella* derby Ad1093	Frozen pollack fillet	-20 °C, 1 month	0.41	7-2-3-1-3(3.2)	+
2194	**Alaska pollack fillets**	*Salmonella* derby Ad1093	Frozen pollack fillet	-20 °C, 1 month	0.41	7-2-3-1-3(3.2)	+
2195	**Bones for animals A**	*Salmonella* livingstone F105	Animal feed	4°C, 52 days	0.94	6-3-4-3-6(4.4)	+
2196	**Bones for animals B**	*Salmonella* livingstone F105	Animal feed	4°C, 52 days	0.94	6-3-4-3-6(4.4)	+
2197	**Poultry bones**	*Salmonella* livingstone F105	Animal feed	4°C, 52 days	0.94	6-3-4-3-6(4.4)	+
2198	**Offcuts for dogs**	*Salmonella* livingstone F105	Animal feed	4°C, 52 days	0.94	6-3-4-3-6(4.4)	+
2199	**Bones for animals A**	*Salmonella* agona AOOV038	Animal feed	4°C, 52 days	1.06	5-6-7-1-5(4.8)	+
2200	**Bones for animals B**	*Salmonella* agona AOOV038	Animal feed	4°C, 52 days	1.06	5-6-7-1-5(4.8)	+
2202	**Offcuts for dogs**	*Salmonella* agona AOOV038	Animal feed	4°C, 52 days	1.06	5-6-7-1-5(4.8)	+
2203	**Tiramisu Italian recipe**	*Salmonella* typhimurium Ad1333	Tiramisu	4°C, 38 days	0.45	4-4-8-2-7(5.0)	+
2204	**Tiramisu**	*Salmonella* typhimurium Ad1333	Tiramisu	4°C, 38 days	0.45	4-4-8-2-7(5.0)	+
2207	**Mayonnaise with mustard**	*Salmonella* mbandaka Ad914	Mayonnaise	pH 4 13 days	0.49	3-2-4-6-6(4.2)	+
2208	**Fine mayonnaise**	*Salmonella* mbandaka Ad914	Mayonnaise	pH 4 13 days	0.49	3-2-4-6-6(4.2)	+
2209	**Mayonnaise with olive oil**	*Salmonella* mbandaka Ad914	Mayonnaise	pH 4 13 days	0.49	3-2-4-6-6(4.2)	+
2210	**Mayonnaise with mustard old style**	*Salmonella* mbandaka Ad914	Mayonnaise	pH 4 13 days	0.49	3-2-4-6-6(4.2)	+
2329	**Raw milk**	*Salmonella* montevideo Ad912	Raw milk	4°C, 21 days	0.54	3-2-1-2-5(2.6)	+
2330	**Raw milk**	*Salmonella* montevideo Ad912	Raw milk	4°C, 21 days	0.54	3-2-1-2-5(2.6)	+
2331	**Raw milk**	*Salmonella* montevideo Ad912	Raw milk	4°C, 21 days	0.54	3-2-1-2-5(2.6)	+
2332	**Raw milk**	*Salmonella* montevideo Ad912	Raw milk	4°C, 21 days	0.54	3-2-1-2-5(2.6)	+

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		Strain		Stress applied	Stress log TSYEA-XLD	Inoculation rate	
		Reference	Origin				
2343	**Bacon**	*Salmonella* enteritidis 2532	Cooked ham	TT 56 °C 15 min.	2.56	3-0-0-5-3(2.2)	+
2344	**Bacon**	*Salmonella* enteritidis 2532	Cooked ham	TT 56 °C 15 min.	2.56	3-0-0-5-3(2.2)	+
2345	**Whole powdered egg**	*Salmonella* arizonae CIP 5526	Egg powder	TT 56 °C 15 min.	>1.57	1-1-0-1-0(0.6)	-
2346	**Whole powdered egg**	*Salmonella* arizonae CIP 5526	Egg powder	TT 56 °C 15 min.	>1.57	1-1-0-1-0(0.6)	-
2347	**Whole powdered egg**	*Salmonella* arizonae CIP 5526	Egg powder	TT 56 °C 15 min.	>1.57	1-1-0-1-0(0.6)	-
2348	**Whole powdered egg**	*Salmonella* arizonae CIP 5526	Egg powder	TT 56 °C 15 min.	>1.57	1-1-0-1-0(0.6)	-
2349	**Powdered egg white**	*Salmonella* livingstone E1	Powdered egg white	TT 56 °C 15 min.	2.36	2-0-5-0-2(1.8)	+
2350	**Powdered egg white**	*Salmonella* livingstone E1	Powdered egg white	TT 56 °C 15 min.	2.36	2-0-5-0-2(1.8)	+
2351	**Powdered egg white**	*Salmonella* livingstone E1	Powdered egg white	TT 56 °C 15 min.	2.36	2-0-5-0-2(1.8)	+
2352	**Powdered egg white**	*Salmonella* livingstone E1	Powdered egg white	TT 56 °C 15 min.	2.36	2-0-5-0-2(1.8)	+
2355	**Coconut ice-cream**	*Salmonella* montevideo 606	Raw milk	-20°C	0.33	4-7-9-3-9(6.4)	+
2356	**Iced nougat**	*Salmonella* montevideo 606	Raw milk	-20°C	0.33	4-7-9-3-9(6.4)	+
2357	**Vanilla ice-cream**	*Salmonella* montevideo 606	Raw milk	-20°C	0.33	4-7-9-3-9(6.4)	+
2358	**Nougat ice-cream**	*Salmonella* montevideo 606	Raw milk	-20°C	0.33	4-7-9-3-9(6.4)	+
2359	**Dairy dust T1 OG**	*Salmonella* tennessee A00E006	Dairy dust	TT 56 °C 15 min.	2.9	0-1-0-1-0(0.4)	-
2360	**Dairy dust T2 12B**	*Salmonella* tennessee A00E006	Dairy dust	TT 56 °C 15 min.	2.9	0-1-0-1-0(0.4)	-
2361	**Dairy dust T2 OD**	*Salmonella* tennessee A00E006	Dairy dust	TT 56 °C 15 min.	2.9	0-1-0-1-0(0.4)	+
2362	**Dairy dust T2 7A**	*Salmonella* tennessee A00E006	Dairy dust	TT 56 °C 15 min.	2.9	0-1-0-1-0(0.4)	-
2603	**Seafood and rice duo**	*Salmonella* braendenburg Ad351	Seafood cocktail	TT 56 °C 15 min.	>1.85	0-1-2-1-0(0.6)	+
2604	**Brandade**	*Salmonella* braendenburg Ad351	Seafood cocktail	TT 56 °C 15 min.	>1.85	0-1-2-1-0(0.6)	+
2606	**Salmon and scallop au gratin**	*Salmonella* braendenburg Ad351	Seafood cocktail	TT 56 °C 15 min.	>1.85	0-1-2-1-0(0.6)	+
2607	**Cat food**	*Salmonella* livingstone F105	Animal feed	TT 56 °C 15 min.	>2.19	0-0-1-0-0(0.2)	+
2608	**Poultry-flavoured mash**	*Salmonella* livingstone F105	Animal feed	TT 56 °C 15 min.	>2.19	0-0-1-0-0(0.2)	+
2609	**Fish-flavoured mash**	*Salmonella* livingstone F105	Animal feed	TT 56 °C 15 min.	>2.19	0-0-1-0-0(0.2)	+
2610	**Beef-flavoured mash**	*Salmonella* livingstone F105	Animal feed	TT 56 °C 15 min.	>2.19	0-0-1-0-0(0.2)	+
2706	**Raw milk T33**	*Salmonella* diarizonae Ad1280	Raw ewe's milk	4°C, 5 days	1.51	6-6-4-5-4(5.0)	+
2707	**Raw milk T32**	*Salmonella* diarizonae Ad1280	Raw ewe's milk	4°C, 5 days	1.51	6-6-4-5-4(5.0)	+
2708	**Raw milk T36**	*Salmonella* montevideo 606	raw milk	4°C, 5 days	0.32	5-5-5-1-3(4.2)	+
2709	**Reblochon made with raw milk**	*Salmonella* infantis F401B	Cheese	NaCl 10% 4 days	0.63	0-3-2-1-2(1.6)	+
2710	**Saint Félicien made with raw milk**	*Salmonella* infantis F401B	Cheese	NaCl 10% 4 days	0.63	0-3-2-1-2(1.6)	+
2711	**Bethmale made with raw milk**	*Salmonella* infantis F401B	Cheese	NaCl 10% 4 days	0.63	0-3-2-1-2(1.6)	+

No. Sample	Product	Inoculations					Final global
		Strain		Stress applied	Stress log TSYEA-XLD	Inoculation rate	
		Reference	Origin				
2712	**Eggplant gratin**	*Salmonella* london A00P085	Egg roll	-20 °C, 4 days	0.6	7-7-4-3-8(5.8)	+
2713	**Cabbage gratin**	*Salmonella* london A00P085	Egg roll	-20 °C, 4 days	0.6	7-7-4-3-8(5.8)	+
2714	**Stuffed tomato style gratin**	*Salmonella* london A00P085	Egg roll	-20 °C, 4 days	0.6	7-7-4-3-8(5.8)	+
2715	**Fish and rice with vegetables**	*Salmonella* london A00P085	Egg roll	-20 °C, 4 days	0.6	7-7-4-3-8(5.8)	+
2716	**Frozen ratatouille vegetables**	*Salmonella* virchow F276	curry	-20 °C, 4 days	0.41	2-6-4-3-4(3.8)	+
2717	**Southern stir-fry**	*Salmonella* virchow F276	curry	-20 °C, 4 days	0.41	2-6-4-3-4(3.8)	+
2718	**Parisian stir-fry**	*Salmonella* kottbus 3	Environment	-20 °C, 4 days	0.54	4-3-4-3-4(3.6)	+
2719	**Vegetable and mushroom stir-fry**	*Salmonella* kottbus 3	Environment	-20 °C, 4 days	0.54	4-3-4-3-4(3.6)	+
2720	**Frozen ratatouille vegetables**	*Salmonella* kottbus 3	Environment	-20 °C, 4 days	0.54	4-3-4-3-4(3.6)	+
2721	**Southern stir-fry**	*Salmonella* kottbus 3	Environment	-20 °C, 4 days	0.54	4-3-4-3-4(3.6)	+
2735	**De-nerving table rinse water**	*Salmonella* typhimurium 528	brine	TT 56 °C 15 min.	3.22	2-2-3-1-4(2.4)	+
2736	**De-nerving table wash water**	*Salmonella* typhimurium 528	brine	TT 56 °C 15 min.	3.22	2-2-3-1-4(2.4)	+
2737	**Bowl system rinse water**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	TT 56 °C 15 min.	0.91	1-0-3-0-0(0.8)	+
2738	**Bowl machine wash water**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	TT 56 °C 15 min.	0.91	1-0-3-0-0(0.8)	+
2739	**Scalding tank process water**	*Salmonella* agona Ad1306	Poultry environment	TT 56 °C 15 min.	>2.58	2-3-3-2-1(2.2)	+
2740	**Plucker run-off process water**	*Salmonella* agona Ad1306	Poultry environment	TT 56 °C 15 min.	>2.58	2-3-3-2-1(2.2)	-
2741	**Polychiller outfeed rinse water**	*Salmonella* senftenberg 1	Poultry environment	TT 56 °C 15 min.	0.97	8-11-7-17-10(10.6)	+
2742	**Spinchiller process water**	*Salmonella* senftenberg 1	Poultry environment	TT 56 °C 15 min.	0.97	8-11-7-17-10(10.6)	+
2743	**Saint Marcellin**	*Salmonella* dublin Ad1336	Raw milk cheese	10% NaCl 4 days	0.58	6-5-6-4-3(4.8)	+
2744	**Semi-skim powdered milk**	*Salmonella* typhimurium 4	Powdered milk	TT 56 °C 15 min.	2.4	0-0-0-1-0(0.2)	+
2745	**Whole powdered milk**	*Salmonella* typhimurium 4	Powdered milk	TT 56 °C 15 min.	2.4	0-0-0-1-0(0.2)	+
2746	**Skimmed powdered milk**	*Salmonella* anatum Ad298	Powdered milk	TT 56 °C 15 min.	2.26	1-1-1-2-0(1.0)	+
2747	**Pasteurised whole liquid egg portion**	*Salmonella* infantis 14	Liquid egg portions	TT 56 °C 15 min.	2.4	1-1-1-2-1(1.2)	+
2748	**Pasteurised whole liquid egg portion**	*Salmonella* infantis 14	Liquid egg portions	TT 56 °C 15 min.	2.4	1-1-1-2-1(1.2)	+
2749	**Pasteurised whole liquid egg portion**	*Salmonella* infantis 14	Liquid egg portions	TT 56 °C 15 min.	2.4	1-1-1-2-1(1.2)	+
2750	**Pasteurised liquid egg yoke portion**	*Salmonella* typhimurium 776	Liquid egg portions	TT 56 °C 15 min.	3.1	3-2-1-3-1(2.0)	+
2751	**Pasteurised liquid egg yoke portion**	*Salmonella* typhimurium 776	Liquid egg portions	TT 56 °C 15 min.	3.1	3-2-1-3-1(2.0)	+
2752	**Flan preparation**	*Salmonella* enteritidis 10	Powdered egg white	TT 56 °C 15 min.	2.46	1-0-5-2-1(1.8)	+

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		Reference	Origin				
2753	**Custard preparation**	*Salmonella* enteritidis 10	Powdered egg white	TT 56 °C 15 min.	2.46	1-0-5-2-1(1.8)	+
2754	**Crème brûlée preparation**	*Salmonella* enteritidis 10	Powdered egg white	TT 56 °C 15 min.	2.46	1-0-5-2-1(1.8)	+
2791	**Powder for custard cream**	*Salmonella* typhimurium 776	Liquid egg portions	TT 56 °C 15 min.	1.97	1-1-0-1-0(0.6)	+
2792	**Egg cream powder**	*Salmonella* typhimurium 776	Liquid egg portions	TT 56 °C 15 min.	1.97	1-1-0-1-0(0.6)	+
2793	**Swab**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	TT 56 °C 15 min.	2.03	1-0-1-1-0(0.6)	+
2794	**Swab**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	TT 56 °C 15 min.	2.03	1-0-1-1-0(0.6)	-
2795	**Swab**	*Salmonella* agona Ad1306	Poultry environment	TT 56 °C 15 min.	1.58	0-2-0-0-3(1.0)	+
2796	**Swab**	*Salmonella* agona Ad1306	Poultry environment	TT 56 °C 15 min.	1.58	0-2-0-0-3(1.0)	-
2797	**Rape, sunflower and soya cake**	*Salmonella* infantis 179	Animal feed	TT 56 °C 15 min.	1.85	1-0-2-1-2(1.2)	+
2798	**Pellets for pigs**	*Salmonella* derby SD43	Pig abattoir environment	pH4	0.48	1-4-5-2-2(2.8)	-
2799	**Pellets for calves**	*Salmonella* infantis 179	Animal feed	TT 56 °C 15 min.	1.85	1-0-2-1-2(1.2)	-
2800	**Pellets for pigs**	*Salmonella* derby SD43	Pig abattoir environment	pH4	0.48	1-4-5-2-2(2.8)	-
2801	**Soya cakes for calves**	*Salmonella* braenderup F286	Animal feed	TT 56 °C 15 min.	1.59	0-0-2-1-0(0.6)	+
2802	**Wheat meal for pigs**	*Salmonella* derby SD43	Pig abattoir environment	pH4	0.48	1-4-5-2-2(2.8)	-
2803	**Meal for poultry**	*Salmonella* blockley Ad923	Environment	pH4	0.61	2-1-1-5-2(2.2)	-
2804	**Meal for poultry**	*Salmonella* derby SD43	Pig abattoir environment	pH4	0.48	1-4-5-2-2(2.8)	-
2805	**Soya cakes for calves**	*Salmonella* cerro Ad689	Animal feed	TT 56 °C 15 min.	1.84	3-0-3-3-1(2.0)	+
2806	**Rape, sunflower and soya cake**	*Salmonella* braenderup F286	Animal feed	TT 56 °C 15 min.	1.59	0-0-2-1-0(0.6)	-
2807	**Rape, sunflower and soya cake**	*Salmonella* cerro Ad689	Animal feed	TT 56 °C 15 min.	1.84	3-0-3-3-1(2.0)	-
2808	**Meal for poultry**	*Salmonella* cerro Ad689	Animal feed	TT 56 °C 15 min.	1.84	3-0-3-3-1(2.0)	+
2809	**Pellets for pigs**	*Salmonella* infantis 179	Animal feed	TT 56 °C 15 min.	1.85	1-0-2-1-2(1.2)	-
2810	**Pellets for pigs**	*Salmonella* braenderup F286	Animal feed	TT 56 °C 15 min.	1.59	0-0-2-1-0(0.6)	-
2811	**Pellets for pigs**	*Salmonella* braenderup F286	Animal feed	TT 56 °C 15 min.	1.59	0-0-2-1-0(0.6)	-
2812	**Pellets for pigs**	*Salmonella* blockley Ad923	Environment	pH4	0.61	2-1-1-5-2(2.2)	-
2813	**Wheat meal for pigs**	*Salmonella* cerro Ad689	Animal feed	TT 56 °C 15 min.	1.84	3-0-3-3-1(2.0)	+
2814	**Wheat meal for pigs**	*Salmonella* infantis 179	Animal feed	TT 56 °C 15 min.	1.85	1-0-2-1-2(1.2)	+
2821	**Wheat meal for pigs**	*Salmonella* derby SD43	Pig abattoir environment	TT 56 °C 15 min.	1.61	1-2-1-4-1(1.8)	+
2822	**Potato cake and pulp**	*Salmonella* havana Ad930	Environment	TT 56 °C 15 min.	1.82	2-2-1-3-2(2.0)	+
2823	**Mix cake**	*Salmonella* derby SD43	Pig abattoir environment	TT 56 °C 15 min.		1-2-1-4-1(1.8)	+
2824	**Pellets for pigs**	*Salmonella* derby SD43	Pig abattoir environment	TT 56 °C 15 min.		1-2-1-4-1(1.8)	-
2825	**Barley for pigs**	*Salmonella* blockley Ad923	Environment	TT 56 °C 15 min.	>1.62	1-1-2-0-2(1.8)	-

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		Reference	Origin				
2826	**Pellets for calves**	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	>1.62	1-1-2-0-2(1.8)	+
2827	**Pellets for pigs**	*Salmonella* havana Ad930	Environment	TT 56 °C 15 min.	1.82	2-2-1-3-2(2.0)	+
2828	**Dried poultry protein**	*Salmonella* bovismorbificans	Particulates	TT 56 °C 15 min.	>0.9	1-3-4-2-4(2.8)	+
2829	**Dried poultry protein**	*Salmonella* havana Ad930	Environment	TT 56 °C 15 min.	1.82	2-2-1-3-2(2.0)	+
2830	**Dried poultry protein**	*Salmonella* derby SD43	Pig abattoir environment	TT 56 °C 15 min.		1-2-1-4-1(1.8)	+
2831	**Bowl wash water**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	pH4	0.41	8-13-14-14-16(13.0)	+
2832	**Table wash water**	*Salmonella* agona Ad1306	Poultry environment	pH4	0.41	7-10-4-11-9(8.2)	+
2833	**Drain water**	*Salmonella* senftenberg 1	Poultry environment	pH4	0.57	12-10-10-11-4(9.4)	+
2834	**Washroom drain water**	*Salmonella* senftenberg 1	Poultry environment	pH4	0.57	12-10-10-11-4(9.4)	+
2835	**TA14 workshop sink drain water**	*Salmonella* agona Ad1306	Poultry environment	pH4	0.41	7-10-4-11-9(8.2)	+
2836	**TA8 workshop sink drain water**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	pH4	0.41	8-13-14-14-16(13.0)	+
2837	**Process water (scalding tank)**	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	>1.62	1-1-2-0-2(1.8)	+
2838	**Plucker process water**	*Salmonella* havana Ad930	Environment	TT 56 °C 15 min.	1.82	2-2-1-3-2(2.0)	+
2839	**Polychiller cooling water**	*Salmonella* bovismorbificans	Particulates	TT 56 °C 15 min.	>0.9	1-3-4-2-4(2.8)	+
2840	**Necks cooling water**	*Salmonella* bovismorbificans	Particulates	TT 56 °C 15 min.	>0.9	1-3-4-2-4(2.8)	+
2841	**Cooling water**	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	*Salmonella* blockley Ad923	>1.62	1-1-2-0-2(1.8)	+
2842	**Cooling water**	*Salmonella* bovismorbificans	Particulates	TT 56 °C 15 min.	>0.9	1-3-4-2-4(2.8)	+
2843	**Swab - truck after disinfection**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	pH4	0.41	8-13-14-14-16(13.0)	+
2844	**Swab - damp brushing machine**	*Salmonella* senftenberg 1	Poultry environment	pH4	0.57	12-10-10-11-4(9.4)	+
2845	**Swab - cutting table**	*Salmonella* typhimurium Ad1070	Pig abattoir environment	pH4	0.41	8-13-14-14-16(13.0)	+
2846	**Swab - TA8 preparation table**	*Salmonella* agona Ad1306	Poultry environment	pH4	0.41	7-10-4-11-9(8.2)	+
2847	**Swab - TA16 preparation table**	*Salmonella* agona Ad1306	Poultry environment	pH4	0.41	7-10-4-11-9(8.2)	+
2848	**Swab - dish washing tank**	*Salmonella* senftenberg 1	Poultry environment	pH4	0.57	12-10-10-11-4(9.4)	+

Appendix 4 - Relative accuracy: raw results (Initial validation - 2011)

Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

MEAT PRODUCTS																												
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		CHaracteristic colonies				Final result	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.				
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C				
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the reference method	Final result OXOID	Final result CONFIRM *Salmonella*	Final tests of the reference method	Agreement latex OXOID	Agreement Latex CONFIRM *Salmonella*	Agreement tests of the method	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final	Agreement	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*
1454	Lean pork	+m ni/+ (NC)	-	+ni/+ (NC)	-	-	-				-	-	-	=	=	=						-			-	-
1455	Stuffing	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1456	Pork sausage	-	-	-	-	-	+1/2	+	+	+	+	+	+	PD	PD	PD	+m	+	+	+	PD	+m	+	+	+	+
1457	Chorizo	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1458	Provençale style pork ribs	+M	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+M	+	+	+	+
1459	Lean pork	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1460	Pork fillet	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1461	Ground chicken meat	+m	+m	+1/2	+1/2	+	+1coIni/+	+	+	+	+	+	+	=	=	=	-	/	/	/	ND	+m	+	+	+	+
1462	Chipolatas	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1463	Pork tongue	+1col	-	-	-	+	-				-	-	-	ND	ND	ND	-	/	/	/	ND	-			-	-
1464	Pig's caul	+M	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1465	Pork rind	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1466	Pork tongue	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1467	Minced pork meat	-	-	-	-	-	-				-	-	-	=	=	=						+/-ni/-			-	-
1468	Shoulder fat	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1469	Pork trimming	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1470	Pig's caul	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1471	Pork fillet	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1472	Pork	-	+/-(NC)	-	-	-	-				-	-	-	=	=	=	-	/	/	/	=	-			-	-

◆ Test conducted under accreditation

MEAT PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																			
		CHaracteristic colonies				Final result	Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.				
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C				
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the reference method	Final result OXOID	Final result CONFIRM *Salmonella*	Final tests of the reference method	Agreement latex OXOID	Agreement Latex CONFIRM *Salmonella*	Agreement tests of the method	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final	Agreement	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*
	tongue																									
1473	Pork fillet	-	-	-	-	-	-				-	-	-	=	=	=						+/-ni/-	/	/	-	-
1474	Red meat	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1475	Red meat	+/-m	+m	+m	+m	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1476	Pig's caul	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1477	Provençale style pork ribs	+1/2	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1754	Hare meat	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-
1755	Ground turkey meat	+1/2	+1/2	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1756	Ground turkey loin	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1757	Marinated fillet (poultry)	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1758	Coarse chicken meat	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1759	Chicken meat	-	-	-	-	-	-				-	-	-	=	=	=						+/-1col ni/-	/	/	-	-
1760	Ground turkey meat	+m	+m	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1761	Ground white meat	+m	+m	+M	+1/2	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+
1762	Ground lean beef	+1col	+m	+1/2ni/+	+m	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1763	VS	+m	+m	+m	+m	+	-				-	-	-	ND	ND	ND	-			-	ND	-			-	-
1764	Ground chicken meat	+m ni/+	+m ni/+	+m ni/+	+m	+	-				-	-	-	ND	ND	ND	-			-	ND	-			-	-
1765	Veal délice with shallots	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1766	Duckling stuffed with mushrooms	+1/2	+m	+M	+M	+	-				-	-	-	ND	ND	ND	-			-	ND	-			-	-
1767	Chicken fillet skin	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1768	Ground chicken meat	-	-	1/2 ni/+	+m	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+
1769	VS2	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-

MEAT PRODUCTS																												
No. Sample	Product	ISO 6579 reference method♦					IRIS Salmonella method																					
		CHaracteristic colonies				Final result	Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.				
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C				
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the reference method	Final result OXOID	Final result CONFIRM *Salmonella*	Final tests of the reference method	Agreement latex OXOID	Agreement Latex CONFIRM *Salmonella*	Agreement tests of the method	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final	Agreement	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*
1770	Ground chicken meat	+m ni/+	+1col ni/+	+/-ni/+	+m ni/+	+	-				-	-	-	ND	ND	ND	+1col	+	+	+	=	+m	+	+	+	+
1771	Minced beef	+M	+m	+M	+M	+	+M	+	+ weak	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1772	Minced pork meat	+M	+m	+m	+m	+	+M	+	+ weak	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+
1773	Minced beef, 5% fat	-	-	-	-	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+
1774	Minced beef, 5% fat	+m	+m	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+
1775	Minced beef	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
1776	Minced heifer meat	-	-	-	-	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+
1777	Minced beef, 5% fat	-	-	-	-	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+
2211	Merguez	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-
2212	Dried sausage	+1/2	+1/2	+M	+M	+	-				-	-	-	ND	ND	ND	-				ND	-	/	/	-	-
2213	sausage	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-
2214	Chipolatas with herbs	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-
2215	Sausage meat	-	-	-	-	-	+	+	+	+	+	+	+	PD	PD	PD	+	+	+	+	PD	+	+	+	+	+
2216	Chipolatas	-	-	-	-	-	+	+	+	+	+	+	+	PD	PD	PD	+	+	+	+	PD	+	+	+	+	+
2217	Sausage	-	-	-	-	-	-					-	-	=	=	=						-	/	/	-	-
2218	Dried sausage	-	-	-	-	-	-st					-	-	=	=	=						-	/	/	-	-
2219	Toulouse sausage	+m	+m	+1/2	+1/2	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+
2220	Tomato stuffing	-	-	-	-	-	-					-	-	=	=	=						-	/	/	-	-
2221	Turkey cutlet	+m	+m	+M	+M	+	+1col ni/+	+	+	+	+	+	+	=	=	=	+ 1col	+	+	+	=	+ni/+	+	+	+	+

MEAT PRODUCTS																												
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		CHaracteristic colonies				Final result	Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.				
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C				
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the reference method	Final result OXOID	Final result CONFIRM *Salmonella*	Final tests of the reference method	Agreement latex OXOID	Agreement Latex CONFIRM *Salmonella*	Agreement tests of the method	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final	Agreement	Characteristic colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*
2222	Ground chicken meat	+m	+4col	+M	+1/2	+	-				-	-	-	ND	ND	ND	-				ND	-	/	/	-	-
2223	Plain poultry skewer	-	-	-	-	-	+	+	+	+	+	+	+	PD	PD	PD	+	+	+	+	PD	+	+	+	+	+
2297	Pool of sausage	+m	+m	+1/2	+m	+	-				-	-	-	ND	ND	ND	-			-	ND	-			-	-
2298	Chipolatas	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-
2299	Sausage meat	+M	+m	+M	+M	+	-				-	-	-	ND	ND	ND	-			-	ND	-			-	-
2300	Ground chicken meat	+/-m	+1colni/+	+1/2	+m	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+
2301	Ground turkey meat	-	-	+/-m (Hafnia alvei)	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-
2343	**Bacon**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+M	+	+	+	+
2344	**Bacon**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+M	+	+	+	+
2593	Turkey cutlet	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-

Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

DAIRY PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																			
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2163	**Fresh whole cream**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2164	**Gros lait**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2165	**Buttermilk**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2166	**Drinking yoghurt**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2171	**Saint Félicien made with raw milk**	-	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2172	**Goat's cheese**	3col ni/+	-	+/-ni/+	-	+	+ pale	+ weak	+	+	+	+	+	=	=	=	+ pale	+	+	+	=	+m	+	+	+	+	=
2173	**Brie de Meaux made with raw milk**	+	-	+	-	+	-				-	-	-	ND	ND	ND	-				ND	-	/	/	-	-	ND
2174	**Reblochon made with raw milk**	+/-ni/-	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-	/	/	-	-	=
2175	**Beaufort made with raw milk**	+	+	+	+	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2176	**Gruyère made with raw milk**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2177	**Comté made with raw milk**	+	+	+	+	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2178	**Laguiole made with raw milk**	+	+	+	+	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+M	+	+	+	+	=
2203	**Tiramisu Italian recipe**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2204	**Tiramisu**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2205	Tiramisu Italian	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-	=

◆ Test conducted under accreditation

DAIRY PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																				
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
	recipe																										
2206	Tiramisu	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-	=
2226	Buttermilk	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-	=
2227	Fermented milk	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2318	Powdered skim milk	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2319	Powdered skim milk	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2320	Powdered semi-skim milk	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2329	**Raw milk**	-	+m	+/-ni/	+m	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2330	**Raw milk**	+/-ni/	+m	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2331	**Raw milk**	+2col	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2332	**Raw milk**	+1col	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2333	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2334	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2335	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2336	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2355	**Coconut ice-cream**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2356	**Iced nougat**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2357	**Vanilla ice-cream**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2358	**Nougat ice-cream**	+	+	+	+	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2386	Raw milk	-	-	-	+/- pale	+	+ni/+	-	-	+	-	-	+	ND	ND	=	+ni/+	+weak	-	+	=	-			-	-	ND
2387	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2388	Raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-st			-	-	=
2389	Raw milk	-	-	-	-	-	+	-	-	+	-	-	+	=	=	PD	+p	-	-	+ (ref. tests)	PD	+	+	+	+	+	PD
2390	Raw milk	+	+	+	+	+	+	-	-	+	-	-	+	ND	ND	=	+p	-	-	+ (ref. tests)	=	+	+	-	+	-	=
2484	Selles sur cher	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2485	Saint Marcellin	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=

DAIRY PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																				
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C									IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2486	Camembert made with raw milk	-	-	-	-	-	-				-	-	-	=	=	=						+ni/-			-	-	=
2487	Morbier made with raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2492	Saint Nectaire	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2706	**Raw milk T33**	-	+/- 1col	-	+/-m ni/+	+	+m ni/+	+ weak	-	+	+	-	+	=	ND	=	+1col	+	+	+	=	+2col ni/+	+	-	+	-	=
2707	**Raw milk T32**	+m	+/-m pale	+/-1/2	+/- pale	+	+m ni/+	+ weak	-	+	+	-	+	=	ND	=	+m	+	+	+	=	+4col ni/+	+ weak	-	+	-	=
2708	**Raw milk T36**	+m	+m	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+p	+	+	+	+	=
2709	**Reblochon made with raw milk**	+m ni/	+m	+m ni/+	+1/2	+	+m ni/+	+	+	+	+	+	+	=	=	=	+3col	+	+	+	=	+m ni/ +	+	+	+	+	=
2710	**Saint Félicien made with raw milk**	+m	+1/2	+M	+M	+	+1/2	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+1/2	+	+	+	+	=
2711	**Bethmale made with raw milk**	+m	+1/2	+m	+1/2	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+1/2	+	+	+	+	=
2743	**Saint Marcellin**	-	-	+1/2	-	+	+/- 2 col pale	+	+ very weak	+	+	+	+	=	=	=	-			-	ND	+2col pale	+	+ very weak	+	+	=
2744	**Semi-skim powdered milk**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st			-	ND	+p	+	+	+	+	=
2745	**Whole powdered milk**	-st	-st	-st	-st	-	+3 col p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+	PD
2746	**Skimmed powdered milk**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st			-	ND	-st			-	-	ND
2849	Raw milk T35	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2850	Raw milk T37	-	-	+ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2851	Raw milk T39	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2852	Whole powdered milk	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-			-	-	=
2853	Organic skimmed powdered milk	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2854	Skimmed powdered milk	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

DAIRY PRODUCTS																													
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																						
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																	Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C									IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C						
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2855	Vanilla ice-cream	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2856	Nougat ice-cream	-	-	-	-st	-	-				-	-	-	=	=	=						-			-	-	=
2857	Saint Félicien made with raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2864	Camembert made with raw milk	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=

Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

VEGETABLES, FISHERY PRODUCTS AND MISCELLANEOUS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																			
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2099	**Cauliflower**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2100	**Sliced vegetables**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2101	**Salmon and scallop au gratin**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st			-	ND	-st			-	-	ND
2102	**Fresh cod**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2103	**Shrimp**	+M	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2104	**Salt cod steak**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2105	**Scallops**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2106	**Fresh whiting**	+M	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2107	**Fresh cod**	+M	+M	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2108	**Seafood cocktail**	+M	+M	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2116	**Peeled cooked shrimp**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2117	**Alaska pollack fillet**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2118	**Albacore tuna**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2119	**Alaska pollack**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2179	Pear tart	-st	-st	-st	-st	-	-st				-	-	-	=	=	=	-st			-	=	-st	/	/	-	-	=
2180	Bulgur and vegetable salad	-st	-st	-st	-st	-	-st				-	-	-	=	=	=	-st			-	=	-st	/	/	-	-	=
2181	Ratatouille	-st	-st	-st	-st	-	-st				-	-	-	=	=	=	-st			-	=	-st	/	/	-	-	=
2182	Sliced carrots	-st	-st	-st	-st	-	-st				-	-	-	=	=	=	-st			-	=	-st	/	/	-	-	=
2191	**Brandade**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2192	**Seafood and pollack duo with rice**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2193	**Cod fillets**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2194	**Alaska pollack fillets**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2302	Frozen peas and carrots	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2303	White cabbage	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2304	Leeks	+/-(ox+)	-		-	-	-st				-	-	-	=	=	=						-st			-	-	=
2305	Frozen cauliflower	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2306	Frozen mixed vegetables	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2307	Frozen ratatouille	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

◆ Test conducted under accreditation

VEGETABLES, FISHERY PRODUCTS AND MISCELLANEOUS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																				
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
	vegetables																										
2308	Frozen leek	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2309	Frozen mixed vegetables	-	-	-st	-st	-	-				-	-	-	=	=	=						-			-	-	=
2310	Frozen shrimp	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2311	Frozen pollack fillet	-	-	-	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2312	Frozen pollack steaks	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2313	Frozen cod	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2314	Frozen pollack	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2315	Fresh whiting	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2488	Pork and vegetable gratin	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2489	Salmon and scallop au gratin	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2490	Endives with ham	-	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2491	Lasagna Bolognaise	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2594	Cooked prawns	-st	-st	-st	-st	-	-				-	-	-	=	=	=						-			-	-	=
2595	Crayfish tails	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2596	Tuna steak	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2597	Squid rings	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2603	**Seafood and rice duo**	+m ni/+	+m	+m	+m	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2604	**Brandade**	+M	+M	+M	+M	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2605	Raw scallop cake	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2606	**Salmon and scallop au gratin**	+p	+p	+p	+p	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2675	Frozen mussels	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2712	**Eggplant gratin**	+M	+1/2	+p	+m	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2713	**Cabbage gratin**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2714	**Stuffed tomato style gratin**	+M	+1/2	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2715	**Fish and rice with vegetables**	+m	+1/2	+p	+M	+	+p	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2716	**Frozen ratatouille vegetables**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2717	**Southern stir-fry**	+1/2	+1/2	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2718	**Parisian stir-fry**	+M	+m	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2719	**Vegetable and mushroom**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=

VEGETABLES, FISHERY PRODUCTS AND MISCELLANEOUS																												
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		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
	stir-fry																											
2720	**Frozen ratatouille vegetables**	-st	-st	-st	-st	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+	PD
2721	**Southern stir-fry**	+m	+m	+M	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2858	Frozen chopped spinach	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2859	Frozen leek	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

EGG PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																		
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn		Final	IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2159	**Egg cream**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2160	**Semolina pudding**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2161	**Leek quiche**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2162	**Vegetable quiche**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2167	**Fine mayonnaise with lemon**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2168	**Plain mayonnaise**	+p	+p	+p	+p	+	-				-	-	-	ND	ND	ND	-st				ND	-st			-	-	ND
2169	**Fresh mayonnaise**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2170	**Pasta salad with salmon and mayonnaise**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+	=
2207	**Mayonnaise with mustard**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2208	**Fine mayonnaise**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2209	**Mayonnaise with olive oil**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2210	**Mayonnaise with old style mustard**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2228	Egg cream	-	-	-	-	-	-st				-	-	-	=	=	=	-st			-	=	-st	/	/	-	-	=
2229	Semolina pudding	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2230	Old style mustard	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2231	Mayonnaise	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=

◆ Test conducted under accreditation

EGG PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2232	Mayonnaise with olive oil	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2233	Leek tart	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2234	Powdered egg white	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2345	**Whole powdered egg**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2346	**Whole powdered egg**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2347	**Whole powdered egg**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2348	**Whole powdered egg**	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2349	**Powdered egg white**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2350	**Powdered egg white**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2351	**Powdered egg white**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2352	**Powdered egg white**	+	+	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2353	Whole powdered egg	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2354	Powdered egg white	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2371	Whole liquid egg portion	+/-ni/+	+	+ni/+	+	+	+ni/+	+	+ very weak	+	+	+	+	=	=	=	+m ni/+	+	+ very weak	+	=	-			-	-	ND
2372	Whole liquid egg portion	-	-	+/-ni/+ (Citrobacter braakii)	-	-	-				-	-	-	=	=	=						-			-	-	=
2373	Liquid egg yolk portion	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2374	Liquid egg yolk portion	-	-	+/-ni/+ (Citrobacter braakii)	-	-	-				-	-	-	=	=	=						-			-	-	=
2375	Liquid egg yolk portion	+/-ni/+ (Citrobacter braakii)	-	+/-ni/-	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2376	Liquid egg white portion	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2377	Liquid egg white portion	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=

EGG PRODUCTS																													
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																						
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C																		Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C						
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2378	Liquid egg white portion	-	-	+/-ni/+ (Citrobacter braakii)	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2379	Liquid egg white portion	-	-	+/-ni/+ (Citrobacter braakii)	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2380	Liquid egg white portion	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2381	Mayonnaise	-	-	-	-	-	+/- pale	-	-	E. coli	-	-	-	=	PPNA	PPNA						-			-	-	=
2382	Mayonnaise	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2383	Mayonnaise	+/-ni/	+	+	+	+	+ni/+	+	+	+	+	+	+	=	=	=	+m ni/+	+	+	+	=	+pale /+	+	+	+	+	=
2384	Mayonnaise	-	-	+/-ni/+ (Citrobacter youngae)	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2385	Mayonnaise	-	-	-	-	-	+ni/+	-	-	E. coli	-	-	-	=	PPNA	PPNA	-				=	-			-	-	=
2500	Mayonnaise with lemon	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2501	Mayonnaise with old style mustard	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

EGG PRODUCTS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																				
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C						IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2502	Traditional mayonnaise	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2503	Liquid egg yolk portion	-	-	+/-m/+ (Citrobacter braakii)	-	-	+ pale	-	-	E. coli	-	-	-	=	PPNA	PPNA	+pale	-	-	-	=	+m pale	-	-	-	-	PPNA
2504	Liquid egg yolk portion	+m	+m	+M	+1/2	+	+ pale	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+1/2	+	+	+	+	=
2505	Liquid egg yolk portion	+/-mni/+	+m	+m	-	+	-				-	-	-	ND	ND	ND	-			-	ND	+pale (E. coli)	-	-	-	-	ND
2506	Liquid egg portions	+m	+m	+1/2	+mni/	+	+	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+1/2	+	+	+	+	=
2507	Liquid egg portions	-	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2673	Mayonnaise	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2674	Mayonnaise	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2747	**Pasteurised whole liquid egg portion**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2748	**Pasteurised whole liquid egg portion**	+p	+p	+p	+p	+	+20 col p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2749	**Pasteurised whole liquid egg portion**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2750	**Pasteurised liquid egg yoke portion**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2751	**Pasteurised liquid egg yoke portion**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2752	**Flan preparation**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2753	**Custard preparation**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2754	**Crème brûlée preparation**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2791	**Powder for custard cream**	-st	-st	-st	-st	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+	PD
2792	**Egg cream powder**	+p	+p	+p	+p	+	+2col	+	+	+	+	+	+	=	=	=	+3col	+	+	+	=	+p	+	+	+	+	=

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Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

ANIMAL FEEDS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																			
		Characterisitc colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C															Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C									IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2109	Powdered plasma	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2112	Scalded menu used as raw material	-	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-st			-	-	=
2113	MC3 waste taken from abattoir for processing	+m	+m	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+1/2	+	+	+	+	=
2114	Off-cuts to be melted for lard	+/-m	+m	+m	+m	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2115	Citrated blood for dried plasma and haemoglobin manufacture	-	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2195	**Bones for animals A**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2196	**Bones for animals B**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2197	**Poultry bones**	+Mni/+	+p	+Mni/+	+Mni/+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2198	**Offcuts for dogs**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2199	**Bones for animals A**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2200	**Bones for animals B**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2202	**Offcuts for dogs**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2224	Bones for animals	+/- (Hafnia alvei)	+/-(Ox+)	+/- (Hafnia alvei)	-	-	-				-	-	-	=	=	=	-				=	-	/	/	-	-	=
2225	Beef off-cuts for dogs	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-	=
2316	Dried dog food	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2317	Stuffed dog biscuits	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2391	Pellets for pigs	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

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ANIMAL FEEDS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		Characterisitc colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C						IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2392	Pig meal	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2393	Pellets for horses	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2394	Pellets for pigs	-	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2493	Beef for animals	+/-m ni/+ (Citrobacter youngae)	-	+M (Citrobacter youngae)	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2494	Beef for animals	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2495	Boneless flank for animals	-	-	-	+/-ni/-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2496	Beef for animals	+/-mni/+ (Citrobacter braakii)	-	-	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2497	Meat with bones for animals	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2498	Dried pig feed	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2499	Pellets for pigs	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2598	Lamb terrine for dogs	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2599	Beef terrine for dogs	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2600	Mash	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2601	White meat mash	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2602	Fish-flavoured mash	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2607	**Cat food**	+p	+p	+p	+p	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2608	**Poultry-flavoured mash**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st			-	ND	+	+	+	+	+	=
2609	**Fish-flavoured mash**	+p	+p	+p	+p	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2610	**Beef-flavoured mash**	+p	+p	+p	+p	+	+	+	+	+	+	+	+	=	=	=	+	+	+	+	=	+	+	+	+	+	=
2728	Concentrated plasma	+1/2	+m	+M	+M	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+	=
2730	Kidneys (raw material for animal feed)	+m	+1/2	+m	+m	+	+m ni/+	+	+	+	+	+	+	=	=	=	+m ni/+	+	+	+	=	+m	+	+	+	+	=

ANIMAL FEEDS

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		Characterisitc colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C									IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2731	Skirt (raw material for animal feed)	+m	+m	+m	+M	+	+1/2	+	+	+	+	+	+	=	=	=	+1/2	+	+	+	=	+1/2	+	+	+	+	=
2732	Category 3 material	+m	+m	+m	+1/2	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+M	+	+	+	+	=
2733	Bleeding wound	-	-	+m (Citrobacter youngae)	-	-	+m	-	-	-(ox+, Vibrio fluvialis)	-	-	-	=	PPNA	PPNA	+ m ni/-			-	=	-			-	-	=
2734	Pork temple (raw material for animal feed)	-	-	+m ni/-	-	-	-				-	-	-	=	=	=	-			-	=	+ni/+	+	+	+	+	PD
2797	**Rape, sunflower and soya cake**	+p	+p	+ni/	+ni/	+	+1col	+	+	+	+	+	+	=	=	=	-			-	ND	+1col ni/+	+	+	+	+	=
2798	**Pellets for pigs**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2799	**Pellets for calves**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2800	**Pellets for pigs**	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2801	**Soya cakes for calves**	-	+1/2	-	-	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2802	**Wheat meal for pigs**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2803	**Meal for poultry**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2804	**Meal for poultry**	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2805	**Soya cakes for calves**	+p	+p	+ni/	+ni/	+	+p	+	+	+	+	+	+	=	=	=	+3col	+	+	+	=	+p	+	+	+	+	=
2806	**Rape, sunflower and soya cake**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2807	**Rape, sunflower and soya cake**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2808	**Meal for poultry**	-	-	-	-	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+	PD
2809	**Pellets for pigs**	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2810	**Pellets for pigs**	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

ANIMAL FEEDS																													
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																						
		Characterisitc colonies					Supplemented BPW incubated for 16 h at 41.5 °C																	Supplemented BPW incubated for 24 h at 41.5 °C						
		RVS		MKTTn		Final	IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C						
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2811	Pellets for pigs	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2812	Pellets for pigs	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2813	Wheat meal for pigs	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2814	Wheat meal for pigs	+p	+p	-	-	+	-st				-	-	-	ND	ND	ND	-st			-	ND	+2col	+	+	+	+	=
2821	Wheat meal for pigs	+m	+m	-	-	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2822	Potato cake and pulp	+M	+1/2	-	-	+	+1col	+	+	+	+	+	+	=	=	=	-			-	ND	-st			-	-	ND
2823	Mix cake	+M	+m	-	-	+	-				-	-	-	ND	ND	ND	-			-	ND	-st			-	-	ND
2824	Pellets for pigs	-	-	-	-	-	-st				-	-	-	=	=	=						-st			-	-	=
2825	Barley for pigs	-	-	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2826	Pellets for calves	-	-	-	-	-	+1col	+	+	+	+	+	+	PD	PD	PD	-st			-	=	-st			-	-	=
2827	Pellets for pigs	+p	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2828	Dried poultry protein	+p	+p	+p	+p	+	+M	+	+		+	+	+	=	=	=	+m	+	+	+	=	+M	+	+	+	+	=
2829	Dried poultry protein	+p	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2830	Dried poultry protein	+p	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=

Bold face: contaminated products
ni: non-isolated colony

+p: target organism in pure culture +m: target organism in minority +M: target organism in majority +st: sterile plate
NC: non-characteristic on nutrient agar +/-: questionable colony

ENVIRONMENTAL SAMPLES

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																				
		Characterisitic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C									IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2110	Bleeding table wash water	+/-ni/-	+/-(ox+)	-	-	-	-st				-	-	-	=	=	=	-			-	=	-st			-	-	=
2111	Bleeding table rinse water	+1/2	+M	+M	+M	+	+m	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2187	**VSM mixer wash water**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2188	**Chicken B cooling water**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st	/	/	-	ND	-st	/	/	-	-	ND
2189	Neck cooling water	-	-	-	-	-	-st				-	-	-	=	=	=						-st	/	/	-	-	=
2190	Polychiller AB 1st body cooling water	-	-	-	-	-	-				-	-	-	=	=	=						-	/	/	-	-	=
2339	Dairy dust T2 12C	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2340	Dairy dust T1 OH	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-	-	-	-	-	=
2341	Dairy dust T2 7A	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2342	Dairy dust T1 OG	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-			-	-	=
2359	**Dairy dust T1 OG**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2360	**Dairy dust T2 12B**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2361	**Dairy dust T2 OD**	-	-st	+	+	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2362	**Dairy dust T2 7A**	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2663	Process water 07/20	+/-m ni/-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2664	Process water 09/20	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=
2665	Process water 03/20	-	-	-	-	-	+ni/-				-	-	-	=	=	=						-			-	-	=
2666	Process water 08/20	+/-2col ni/	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2667	Process water 10/20	+/- m ni/-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2668	Process water 04/20	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=

◆ Test conducted under accreditation

ENVIRONMENTAL SAMPLES

No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		Characteristic colonies				Final	Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C						IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*		colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2669	Process water 02/20	-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2670	Process water 05/20	-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2671	Process water 06/20	+/- m ni/	-	+/-m ni/-	-	-	-				-	-	-	=	=	=						-			-	-	=
2672	Process water 01/20	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2722	Swab - truck before unloading	+m	+m	+m ni/+	+m	+	+m	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+	=
2723	Swab - truck after rinsing	+m ni/-	-	-	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2724	Swab - necks poly-line	+m	+m	+M	+M	+	-				-	-	-	ND	ND	ND	-				ND	-			-	-	ND
2725	Swab - stainless steel plate at cutting infeed	-	-	+/-ni/-	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2726	Swab - cutting cold room sewer drain	-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2727	Swab - boned ham pallet truck	+m ni/-	-	+/-2col (Citrobacter youngae)	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2729	Scalding tank water	+/-M (E. coli)	-	-	-	-	-				-	-	-	=	=	=	-				=	-			-	-	=
2735	**De-nerving table rinse water**	+m	+M	+1/2	+M	+	+1/2	+	+	+	+	+	+	=	=	=	+1/2	+	+	+	=	+M	+	+	+	+	=
2736	**De-nerving table wash water**	+p	+p	+p	+p	+	-st				-	-	-	ND	ND	ND	-st			-	ND	-st			-	-	ND
2737	**Bowl system rinse water**	+m	+m	+M	+M	+	+1/2	+	+	+	+	+	+	=	=	=	+m ni/+	+	+	+	=	+1/2	+	+	+	+	=
2738	**Bowl machine**	+m	+1/2	+m	+m	+	-st				-	-	-	ND	ND	ND	+m ni/+			-	ND	-			-	-	ND

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ENVIRONMENTAL SAMPLES																													
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																						
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C																	Supplemented BPW incubated for 24 h at 41.5 °C						
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C						
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
	wash water																												
2739	Scalding tank process water	+m	+M	+M	+M	+	+m	+	+	+	+	+	+	=	=	=	+m ni/+	+	+	+	=	+m	+	+	+	+	=
2740	Plucker run-off process water	-	-	+/-m ni/-	-	-	-				-	-	-	=	=	=	-			-	=	-			-	-	=
2741	Polychiller outfeed rinse water	+1/2	+M	+M	+1/2	+	+M	+	+	+	+	+	+	=	=	=	+M	+	+	+	=	+p	+	+	+	+	=
2742	Spinchiller process water	-	-	+/-m ni/-	-	-	+m	+	+	+	+	+	+	PD	PD	PD	+m	+	+	+	PD	+M	+	+	+	+	PD
2793	Swab	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2794	Swab	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2795	Swab	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2796	Swab	-st	-st	-st	-st	-	-st				-	-	-	=	=	=						-st			-	-	=
2831	Bowl wash water	+M	+M	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2832	Table wash water	+M	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2833	Drain water	+M	+1/2	+p	+m	+	+m	+	+		+	+	+	=	=	=	+M	+	+	+	=	+M	+	+	+	+	=
2834	Washroom drain water	+M	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2835	TA14 workshop sink drain water	+M	+p	+M	+m	+	+p	+weak	+ very weak		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+ very weak	+	+	=
2836	TA8 workshop sink drain water	+M	+m	+p	+m	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2837	Process water (scalding tank)	+M	+p	+p	+p	+	+p	+	+		+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2838	Plucker process water	-	-	+m ni/-	-	-	+ small	+	+	+	+	+	+	PD	PD	PD	+m	+	+	+	PD	+m	+	+	+	+	PD
2839	Polychiller cooling water	+m 3col	+p	+ni/-	-	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2840	Necks cooling water	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2841	Cooling water	-	-	+ni 3col/-	-	-	2col ni/+	+	+	+	+	+	+	PD	PD	PD	+2-3col ni/+	+	+	+	PD	+1col ni/+	+	+ very weak	+	+	PD
2842	Cooling water	-	-	+ni/-	-	-	+m	+	+	+	+	+	+	PD	PD	PD	+m	+	+	+	PD	+m	+	+	+	+	PD

ENVIRONMENTAL SAMPLES																												
No. Sample	Product	ISO 6579 reference method◆					IRIS Salmonella method																					
		Characteristic colonies					Supplemented BPW incubated for 16 h at 41.5 °C																Supplemented BPW incubated for 24 h at 41.5 °C					
		RVS		MKTTn			IRIS -Reading after 24 h at 37 °C										IRIS after storage in BPW for 72 h at 4 °C					IRIS -Reading after 24 h at 37 °C					
		XLD	COMPASS *Salmonella*	XLD	COMPASS *Salmonella*	Final	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Tests of the method	Final final OXOID	Final final CONFIRM *Salmonella*	Final final tests of the method	Fit dance latex OXOID	Fit dance Latex CONFIRM *Salmonella*	Fit dance tests of the method	colonies colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final	Fit dance	Questionable colonies	Latex OXOID	Latex CONFIRM *Salmonella*	Final final OXOID	Final final CONFIRM *Salmonella*	Fit dance
2843	**Swab - truck after disinfection**	-st	-st	-st	-st	-	+p	+	+	+	+	+	+	PD	PD	PD	+p	+	+	+	PD	+p	+	+	+	+	PD
2844	**Swab - damp brushing machine**	+m	+m	+M	+M	+	+M	+	+	+	+	+	+	=	=	=	+m	+	+	+	=	+m	+	+	+	+	=
2845	**Swab - cutting table**	+p	+p	+p	+M	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2846	**Swab - TA8 preparation table**	+p	+M	+p	+M	+	+p	+ weak	+ very weak	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+ very weak	+	+	=
2847	**Swab - TA16 preparation table**	+p	+p	+p	+M	+	+p	+ weak	+ very weak	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	-	+	-	=
2848	**Swab - dish washing tank**	+p	+p	+p	+p	+	+p	+	+	+	+	+	+	=	=	=	+p	+	+	+	=	+p	+	+	+	+	=
2895	Sampling sink drain water	-	-	-	-	-	-				-	-	-	=	=	=						-			-	-	=

MEAT PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Agreement Before/After storage
1454	Lean pork	-	-			-	=
1455	Stuffing	-	-			-	=
1456	Pork sausage	+	+	+	+	+	=
1457	Chorizo	-	-			-	=
1458	Provençale style pork ribs	+	+	+	+	+	=
1459	Lean pork	-	-			-	=
1460	Pork fillet	-	-			-	=
1461	Ground chicken meat	+/-1col	+1col	+	+	+	=
1462	Chipolatas	-	-			-	=
1463	Pork tongue	-	-			-	=
1464	Pig's caul	+	+	+	+	+	=
1465	Pork rind	-	-			-	=
1466	Pork tongue	-	-			-	=
1467	Minced pork meat	-	-			-	=
1468	Shoulder fat	-	-			-	=
1469	Pork trimming	-	-			-	=
1470	Pig's caul	-	-			-	=
1471	Pork fillet	-	-			-	=
1472	Pork tongue	-	-			-	=
1473	Pork fillet	-	-			-	=
1474	Red meat	-	-			-	=
1475	Red meat	+M	+M	+	+	+	=
1476	Pig's caul	-	-			-	=
1477	Provençale style pork ribs	+M	+M	+	+	+	=
1754	Hare meat	-	-			-	=
1755	Ground turkey meat	+M	+M	+	+	+	=
1756	Ground turkey loin	-	-			-	=
1757	Marinated fillet (poultry)	-	-			-	=
1758	Coarse chicken meat	-	-			-	=
1759	Chicken meat	-	-			-	=
1760	Ground turkey meat	+m	+m	+	+	+	=
1761	Ground white meat	+m	+m	+	+	+	=
1762	Ground lean beef	+M	+M	+	+	+	=
1763	VS	-	-			-	=
1764	Ground chicken meat	-	-			-	=

MEAT PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Agreement Before/After storage
1765	Veal délice with shallots	-	-			-	=
1766	Duckling stuffed with mushrooms	-	-			-	=
1767	Chicken fillet skin	-	-			-	=
1768	Ground chicken meat	+m	+m	+	+	+	=
1769	VS2	-	-			-	=
1770	Ground chicken meat	-	-			-	=
1771	Minced beef	+M	+M	+	+	+	=
1772	Minced pork meat	+M	+M	+	+	+	=
1773	Minced beef, 5% fat	+p	+p	+	+	+	=
1774	Minced beef, 5% fat	+p	+p	+	+	+	=
1775	Minced beef	-	-			-	=
1776	Minced heifer meat	+p	+p	+	+	+	=
1777	Minced beef, 5% fat	+p	+p	+	+	+	=
2211	Merguez	-	-			-	=
2212	Dried sausage	-	-			-	=
2213	sausage	-	-			-	=
2214	Chipolatas with herbs	-	-			-	=
2215	Sausage meat	+	+	+	+	+	=
2216	Chipolatas	+	+	+	+	+	=
2217	Sausage	-	-			-	=
2218	Dried sausage	-st	-st			-	=
2219	Toulouse sausage	+	+	+	+	+	=
2220	Tomato stuffing	-	-			-	=
2221	Turkey cutlet	-	-			-	=
2222	Ground chicken meat	-	-			-	=
2223	Plain poultry skewer	+	+	+	+	+	=
2297	Pool of sausage	-	-			-	=
2298	Chipolatas	-	-			-	=
2299	Sausage meat	-	-			-	=
2300	Ground chicken meat	+	+	+	+	+	=
2301	Ground turkey meat	-	-			-	=
2343	**Bacon**	+p	+p	+	+	+	=
2344	**Bacon**	+p	+p	+	+	+	=
2593	Turkey cutlet	-	-			-	=

DAIRY PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2163	**Fresh whole cream**	+p	+p	+	+	+	=
2164	**Gros lait**	+p	+p	+	+	+	=
2165	**Buttermilk**	+p	+p	+	+	+	=
2166	**Drinking yoghurt**	+p	+p	+	+	+	=
2171	**Saint Félicien made with raw milk**	-	-			-	=
2172	**Goat's cheese**	+ M pale	+M	+	+	+	=
2173	**Brie de Meaux made with raw milk**	-	-			-	=
2174	**Reblochon made with raw milk**	-	-			-	=
2175	**Beaufort made with raw milk**	+M	+M	+	+	+	=
2176	**Gruyère made with raw milk**	+p	+p	+	+	+	=
2177	**Comté made with raw milk**	+M	+M		+	+	=
2178	**Laguiole made with raw milk**	+m	+m	+	+	+	=
2203	**Tiramisu Italian recipe**	+p	+p	+	+	+	=
2204	**Tiramisu**	+p	+p	+	+	+	=
2205	Tiramisu Italian recipe	-	-			-	=
2206	Tiramisu	-	-			-	=
2226	Buttermilk	-	-			-	=
2227	Fermented milk	-st	-st			-	=
2318	Powdered skim milk	-st	-st			-	=
2319	Powdered skim milk	-st	-st			-	=
2320	Powdered semi-skim milk	-st	-st			-	=
2329	**Raw milk**	+p	+p	+	+	+	=
2330	**Raw milk**	+p	+p	+	+	+	=
2331	**Raw milk**	+p	+p	+	+	+	=
2332	**Raw milk**	+p	+p	+	+	+	=
2333	Raw milk	-	-			-	=
2334	Raw milk	-	-			-	=
2335	Raw milk	-	-			-	=
2336	Raw milk	-	-			-	=
2355	**Coconut ice-cream**	+p	+p	+	+	+	=
2356	**Iced nougat**	+p	+p	+	+	+	=
2357	**Vanilla ice-cream**	+p	+p	+	+	+	=
2358	**Nougat ice-cream**	+M	+M	+	+	+	=

DAIRY PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2386	Raw milk	+ni	+ni/+	-	-	+(Test ref.)	=
2387	Raw milk	-	-			-	=
2388	Raw milk	-	-			-	=
2389	Raw milk	+	+p	-	-	+(Test ref.)	=
2390	Raw milk	+	+p	+	+	+	=
2484	Selles sur cher	-	-			-	=
2485	Saint Marcellin	-	-			-	=
2486	Camembert made with raw milk	-	-			-	=
2487	Morbier made with raw milk	-	-			-	=
2492	Saint Nectaire	-	-			-	=
2706	**Raw milk T33**	+m ni	+m ni/+	+	-	+	=
2707	**Raw milk T32**	+m ni	+m ni/+	+ weak	-	+	=
2708	**Raw milk T36**	+p	+p	+	+	+	=
2709	**Reblochon made with raw milk**	+m ni/	+m ni/+	+	+	+	=
2710	**Saint Félicien made with raw milk**	+1/2	+1/2	+	+	+	=
2711	**Bethmale made with raw milk**	+M	+M	+	+	+	=
2743	**Saint Marcellin**	+1col ni	+1col ni	+	-	+	=
2744	**Semi-skim powdered milk**	-st	-st			-	=
2745	**Whole powdered milk**	+p 5col	+p 5col	+	+	+	=
2746	**Skimmed powdered milk**	-st	-st			-	=
2849	Raw milk T35	-	-			-	=
2850	Raw milk T37	-	-			-	=
2851	Raw milk T39	-	-			-	=
2852	Whole powdered milk	-st	-st			-	=
2853	Organic skimmed powdered milk	-st	-st			-	=
2854	Skimmed powdered milk	-st	-st			-	=
2855	Vanilla ice-cream	-	-			-	=
2856	Nougat ice-cream	-	-			-	=
2857	Saint Félicien made with raw milk	-	-			-	=
2864	Camembert made with raw milk	-	-			-	=

VEGETABLES, FISHERY PRODUCTS AND MISCELLANEOUS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2099	**Cauliflower**	+p	+p	+	+	+	=
2100	**Sliced vegetables**	+p	+p	+	+	+	=
2101	**Salmon and scallop au gratin**	-st	-st			-	=
2102	**Fresh cod**	+p	+p	+	+	+	=
2103	**Shrimp**	+p	+p	+	+	+	=
2104	**Salt cod steak**	+p	+p	+	+	+	=
2105	**Scallops**	+p	+p	+	+	+	=
2106	**Fresh whiting**	+M	+M	+	+	+	=
2107	**Fresh cod**	+p	+p	+	+	+	=
2108	**Seafood cocktail**	+p	+p	+	+	+	=
2116	**Peeled cooked shrimp**	+p	+p	+	+	+	=
2117	**Alaska pollack fillet**	+p	+p	+	+	+	=
2118	**Albacore tuna**	+p	+p	+	+	+	=
2119	**Alaska pollack**	+p	+p	+	+	+	=
2179	Pear tart	-st	-st			-	=
2180	Bulgur and vegetable salad	-st	-st			-	=
2181	Ratatouille	-st	-st			-	=
2182	Sliced carrots	-st	-st			-	=
2191	**Brandade**	+p	+p	+	+	+	=
2192	**Seafood and pollack duo with rice**	+p	+p	+	+	+	=
2193	**Cod fillets**	+p	+p	+	+	+	=
2194	**Alaska pollack fillets**	+p	+p	+	+	+	=
2302	Frozen peas and carrots	-st	-st			-	=
2303	White cabbage	-st	-st			-	=
2304	Leeks	-st	-st			-	=
2305	Frozen cauliflower	-st	-st			-	=
2306	Frozen mixed vegetables	-st	-st			-	=
2307	Frozen ratatouille vegetables	-st	-st			-	=
2308	Frozen leek	-st	-st			-	=
2309	Frozen mixed vegetables	-	-			-	=
2310	Frozen shrimp	-st	-st			-	=
2311	Frozen pollack fillet	-st	-st			-	=
2312	Frozen pollack steaks	-st	-st			-	=
2313	Frozen cod	-st	-st			-	=
2314	Frozen pollack	-st	-st			-	=

VEGETABLES, FISHERY PRODUCTS AND MISCELLANEOUS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2315	Fresh whiting	-st	-st			-	=
2488	Pork and vegetable gratin	-st	-st			-	=
2489	Salmon and scallop au gratin	-st	-st			-	=
2490	Endives with ham	-st	-st			-	=
2491	Lasagna Bolognaise	-st	-st			-	=
2594	Cooked prawns	-	-			-	=
2595	Crayfish tails	-st	-st			-	=
2596	Tuna steak	-	-			-	=
2597	Squid rings	-st	-st			-	=
2603	**Seafood and rice duo**	+	+	+	+	+	=
2604	**Brandade**	+	+	+	+	+	=
2605	Raw scallop cake	-	-			-	=
2606	**Salmon and scallop au gratin**	+	+	+	+	+	=
2675	Frozen mussels	-	-			-	=
2712	**Eggplant gratin**	+p	+p	+	+	+	=
2713	**Cabbage gratin**	+p	+p	+	+	+	=
2714	**Stuffed tomato style gratin**	+M	+M	+	+	+	=
2715	**Fish and rice with vegetables**	+p	+p	+	+	+	=
2716	**Frozen ratatouille vegetables**	+p	+p	+	+	+	=
2717	**Southern stir-fry**	+p	+p	+	+	+	=
2718	**Parisian stir-fry**	+M	+M	+	+	+	=
2719	**Vegetable and mushroom stir-fry**	+p	+p	+	+	+	=
2720	**Frozen ratatouille vegetables**	+p	+p	+	+	+	=
2721	**Southern stir-fry**	+p	+p	+	+	+	=
2858	Frozen chopped spinach	-st	-st			-	=
2859	Frozen leek	-st	-st			-	=

EGG PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2159	**Egg cream**	+p	+p	+	+	+	=
2160	**Semolina pudding**	+p	+p	+	+	+	=
2161	**Leek quiche**	+p	+p	+	+	+	=
2162	**Vegetable quiche**	+p	+p	+	+	+	=
2167	**Fine mayonnaise with lemon**	+p	+p	+	+	+	=
2168	**Plain mayonnaise**	-st	-st			-	=
2169	**Fresh mayonnaise**	+p	+p	+	+	+	=
2170	**Pasta salad with salmon and mayonnaise**	+m	+m	+	+	+	=
2207	**Mayonnaise with mustard**	+p	+p	+	+	+	=
2208	**Fine mayonnaise**	+p	+p	+	+	+	=
2209	**Mayonnaise with olive oil**	+p	+p	+	+	+	=
2210	**Mayonnaise with old style mustard**	+p	+p	+	+	+	=
2228	Egg cream	-st	-st			-	=
2229	Semolina pudding	-st	-st			-	=
2230	Old style mustard	-st	-st			-	=
2231	Mayonnaise	-st	-st			-	=
2232	Mayonnaise with olive oil	-st	-st			-	=
2233	Leek tart	-st	-st			-	=
2234	Powdered egg white	-st	-st			-	=
2345	**Whole powdered egg**	-st	-st			-	=
2346	**Whole powdered egg**	-st	-st			-	=
2347	**Whole powdered egg**	-st	-st			-	=
2348	**Whole powdered egg**	-st	-st			-	=
2349	**Powdered egg white**	+p	+p	+	+	+	=
2350	**Powdered egg white**	+p	+p	+	+	+	=
2351	**Powdered egg white**	+p	+p	+	+	+	=
2352	**Powdered egg white**	+p	+p	+	+	+	=
2353	Whole powdered egg	-st	-st			-	=
2354	Powdered egg white	-st	-st			-	=
2371	Whole liquid egg portion	+ni	+ni/+	+	+ very weak	+	=
2372	Whole liquid egg portion	-	-			-	=
2373	Liquid egg yoke portion	-	-			-	=
2374	Liquid egg yoke portion	-	-			-	=
2375	Liquid egg yoke portion	-	-			-	=
2376	Liquid egg white portion	-	-			-	=

EGG PRODUCTS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2377	Liquid egg white portion	-	-			-	=
2378	Liquid egg white portion	-	-			-	=
2379	Liquid egg white portion	-	-			-	=
2380	Liquid egg white portion	-	-			-	=
2381	Mayonnaise	-	+pale	-	-	-(PPNC)	=
2382	Mayonnaise	-	-			-	=
2383	Mayonnaise	+ni	+ni/+	+	+	+	=
2384	Mayonnaise	-	-			-	=
2385	Mayonnaise	-	-			-	=
2500	Mayonnaise with lemon	-st	-st			-	=
2501	Mayonnaise with old style mustard	-st	-st			-	=
2502	Traditional mayonnaise	-st	-st			-	=
2503	Liquid egg yoke portion	+pale	+pale	-	-	-	=
2504	Liquid egg yoke portion	+m	+m	+	+	+	=
2505	Liquid egg yoke portion	-	-			-	=
2506	Liquid egg portions	+m	+m	+	+	+	=
2507	Liquid egg portions	-	-			-	=
2673	Mayonnaise	-st	-st			-	=
2674	Mayonnaise	-st	-st			-	=
2747	**Pasteurised whole liquid egg portion**	+p	+p	+	+	+	=
2748	**Pasteurised whole liquid egg portion**	+p 10col	+p 10col	+	+	+	=
2749	**Pasteurised whole liquid egg portion**	+p	+p	+	+	+	=
2750	**Pasteurised liquid egg yoke portion**	+p	+p	+	+	+	=
2751	**Pasteurised liquid egg yoke portion**	+p	+p	+	+	+	=
2752	**Flan preparation**	+p	+p	+	+	+	=
2753	**Custard preparation**	+p	+p	+	+	+	=
2754	**Crème brûlée preparation**	+p	+p	+	+	+	=
2791	**Powder for custard cream**	+p	+p	+	+	+	=
2792	**Egg cream powder**	-st	-st			-	=

ANIMAL FEEDS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2109	Powdered plasma	-	-			-	=
2112	Scalded menu used as raw material	-	-	-	-	-	=
2113	MC3 waste taken from abattoir for processing	+M	+M	+	+	+	=
2114	Off-cuts to be melted for lard	+M	+M	+	+	+	=
2115	Citrated blood for dried plasma and haemoglobin manufacture	-	-			-	=
2195	**Bones for animals A**	+p	+p	+	+	+	=
2196	**Bones for animals B**	+p	+p	+	+	+	=
2197	**Poultry bones**	+p	+p	+	+	+	=
2198	**Offcuts for dogs**	+p	+p	+	+	+	=
2199	**Bones for animals A**	+p	+p	+	+	+	=
2200	**Bones for animals B**	+p	+p	+	+	+	=
2202	**Offcuts for dogs**	+p	+p	+	+	+	=
2224	Bones for animals	-	-			-	=
2225	Beef off-cuts for dogs	-	-			-	=
2316	Dried dog food	-st	-st			-	=
2317	Stuffed dog biscuits	-st	-st			-	=
2391	Pellets for pigs	-st	-st			-	=
2392	Pig meal	-st	-st			-	=
2393	Pellets for horses	-st	-st			-	=
2394	Pellets for pigs	-st	-st			-	=
2493	Beef for animals	-	-			-	=
2494	Beef for animals	-	-			-	=
2495	Boneless flank for animals	-	-			-	=
2496	Beef for animals	-	-			-	=
2497	Meat with bones for animals	-	-			-	=
2498	Dried pig feed	-st	-st			-	=
2499	Pellets for pigs	-st	-st			-	=
2598	Lamb terrine for dogs	-	-			-	=
2599	Beef terrine for dogs	-st	-st			-	=
2600	Mash	-st	-st			-	=
2601	White meat mash	-st	-st			-	=
2602	Fish-flavoured mash	-st	-st			-	=
2607	**Cat food**	+	+	+	+	+	=
2608	**Poultry-flavoured mash**	-st	-st			-	=
2609	**Fish-flavoured mash**	+	+	+	+	+	=

ANIMAL FEEDS							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2610	**Beef-flavoured mash**	+	+	+	+	+	=
2728	Concentrated plasma	+m	+m	+	+	+	=
2730	Kidneys (raw material for animal feed)	+m ni	+m	+	+	+	=
2731	Skirt (raw material for animal feed)	+1/2	+1/2	+	+	+	=
2732	Category 3 material	+m	+m	+	+	+	=
2733	Bleeding wound	+m	+m	-	-	-(OX+)	=
2734	Pork temple (raw material for animal feed)	-	-			-	=
2797	**Rape, sunflower and soya cake**	-	-			-	=
2798	**Pellets for pigs**	-st	-st			-	=
2799	**Pellets for calves**	-st	-st			-	=
2800	**Pellets for pigs**	-st	-st			-	=
2801	**Soya cakes for calves**	+p	+p	+	+	+	=
2802	**Wheat meal for pigs**	-st	-st			-	=
2803	**Meal for poultry**	-st	-st			-	=
2804	**Meal for poultry**	-st	-st			-	=
2805	**Soya cakes for calves**	+p	+p	+	+	+	=
2806	**Rape, sunflower and soya cake**	-st	-st			-	=
2807	**Rape, sunflower and soya cake**	-st	-st			-	=
2808	**Meal for poultry**	+p	+p	+	+	+	=
2809	**Pellets for pigs**	-st	-st			-	=
2810	**Pellets for pigs**	-st	-st			-	=
2811	**Pellets for pigs**	-st	-st			-	=
2812	**Pellets for pigs**	-st	-st			-	=
2813	**Wheat meal for pigs**	+p	+p	+	+	+	=
2814	**Wheat meal for pigs**	-st	-st			-	=
2821	**Wheat meal for pigs**	+p	+p	+	+	+	=
2822	**Potato cake and pulp**	+/-1col	+/-1col	-	-	-	=
2823	**Mix cake**	-	-			-	=
2824	**Pellets for pigs**	-st	-st			-	=
2825	**Barley for pigs**	-st	-st			-	=
2826	**Pellets for calves**	-st	-st			-	=
2827	**Pellets for pigs**	+p	+p	+	+	+	=
2828	**Dried poultry protein**	+M	+M	+	+	+	=
2829	**Dried poultry protein**	+p	+p	+	+	+	=
2830	**Dried poultry protein**	+p	+p	+	+	+	=

ENVIRONMENTAL SAMPLES							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2110	Bleeding table wash water	-st	-st			-	=
2111	Bleeding table rinse water	+M	+M	+	+	+	=
2187	**VSM mixer wash water**	+p	+p	+	+	+	=
2188	**Chicken B cooling water**	-st	-st			-	=
2189	Neck cooling water	-st	-st			-	=
2190	Polychiller AB 1st body cooling water	-	-			-	=
2339	Dairy dust T2 12C	-st	-st			-	=
2340	Dairy dust T1 OH	-st	-st			-	=
2341	Dairy dust T2 7A	-st	-st			-	=
2342	Dairy dust T1 OG	-st	-st			-	=
2359	**Dairy dust T1 OG**	-st	-st			-	=
2360	**Dairy dust T2 12B**	-st	-st			-	=
2361	**Dairy dust T2 OD**	+p	+p	+	+	+	=
2362	**Dairy dust T2 7A**	-st	-st			-	=
2663	Process water 07/20	-	-			-	=
2664	Process water 09/20	-	+pale (E. coli)	-	-	-(PPNC)	≠
2665	Process water 03/20	-	-			-	=
2666	Process water 08/20	-	-	-	-	-	=
2667	Process water 10/20	-	-			-	=
2668	Process water 04/20	-st	-st			-	=
2669	Process water 02/20	-	-			-	=
2670	Process water 05/20	-	-			-	=
2671	Process water 06/20	-	-			-	=
2672	Process water 01/20	-st	-st			-	=
2722	Swab - truck before unloading	+m	+m	+	+	+	=
2723	Swab - truck after rinsing	-	-			-	=
2724	Swab - necks poly-line	-	-			-	=
2725	Swab - stainless steel plate at cutting infeed	-	-			-	=
2726	Swab - cutting cold room sewer drain	-	-			-	=
2727	Swab - boned ham pallet truck	-	-			-	=
2729	Scalding tank water	-	-			-	=
2735	**De-nerving table rinse water**	+1/2	+1/2	+	+	+	=
2736	**De-nerving table wash water**	-st	-st			-	=

ENVIRONMENTAL SAMPLES							
Spl. no.	Product	Read plates after storage at 2-8 °C					
		Before storage	After storage	Latex OXOID	Latex CONFIRM *Salmonella*	Final result	Fit Before/After storage
2737	**Bowl system rinse water**	+1/2	+1/2	+	+	+	=
2738	**Bowl machine wash water**	-st	-st			-	=
2739	**Scalding tank process water**	+m ni	+m ni/+	+	+	+	=
2740	**Plucker run-off process water**	-	-			-	=
2741	**Polychiller outfeed rinse water**	+M	+M	+	+	+	=
2742	**Spinchiller process water**	+m	+m	+	+	+	=
2793	**Swab**	+p	+p	+	+	+	=
2794	**Swab**	-st	-st			-	=
2795	**Swab**	+p	+p	+	+	+	=
2796	**Swab**	-st	-st			-	=
2831	**Bowl wash water**	+p	+p	+	+	+	=
2832	**Table wash water**	+p	+p	+	+	+	=
2833	**Drain water**	+m	+m	+	+	+	=
2834	**Washroom drain water**	+p	+p	+	+	+	=
2835	**TA14 workshop sink drain water**	+p	+p	+	+	+	=
2836	**TA8 workshop sink drain water**	+p	+p	+	+	+	=
2837	**Process water (scalding tank)**	+p	+p	+	+	+	=
2838	**Plucker process water**	+ small	+ small	+	+	+	=
2839	**Polychiller cooling water**	+p	+p	+	+	+	=
2840	**Necks cooling water**	+p	+p	+	+	+	=
2841	**Cooling water**	+2col	+2col	+	+	+	=
2842	**Cooling water**	+m	+m	+	+	+	=
2843	**Swab - truck after disinfection**	+p	+p	+	+	+	=
2844	**Swab - damp brushing machine**	+M	+M	+	+	+	=
2845	**Swab - cutting table**	+p	+p	+	+	+	=
2846	**Swab - TA8 preparation table**	+p	+p	+	+	+	=
2847	**Swab - TA16 preparation table**	+p	+p	+	+	+	=
2848	**Swab - dish washing tank**	+p	+p	+	+	+	=
2895	Sampling sink drain water	-	-			-	=

Appendix 5 – – Artificial sample contamination (Extension study – 2014)

Spl. no.	Product	Inoculation					Overall result 1/10 dilution
		Strain		Injury protocol	Injury measurement	Inoculation level	
		Reference	Origin				
4918	Cakes for animals	S. Agona A00V038	Animal feed	TT 8 min /56 °C	1.43	6-12-4-11-5 (7.6)	+
4919	Poultry meat-based animal protein	S. agona A00V038	Animal feed	TT 8 min /56 °C	1.43	6-12-4-11-5 (7.6)	+
4920	Tuna/salmon/vegetable dried cat food	S. agona A00V038	Animal feed	TT 8 min /56 °C	1.43	6-12-4-11-5 (7.6)	+
4923	Dog biscuits stuffed with meat	S. agona A00V038	Animal feed	TT 8 min /56 °C	1.43	6-12-4-11-5 (7.6)	+
3998	Hypoallergenic powdered formula milk	S. anatum Ad1166	Dairy product	TT 8mn/56 °C	0.46	7-8-12-9-4 (9.4)	+
4002	Milk protein	S. anatum Ad1166	Dairy product	TT 8mn/56 °C	0.46	7-8-12-9-4 (9.4)	+
2355	Powdered milk with thick formula probiotics (Bifidobacteria, lactic ferments)	S. anatum Ad298	Powdered milk	TT 8mn/56 °C	>2.80	6-6-6-4-7 (5.8)	-
2357	Powdered milk with probiotics (Bifidobacteria, lactic ferments)	S. anatum Ad298	Powdered milk	TT 8mn/56 °C	>2.80	6-6-6-4-7 (5.8)	-
2359	Powdered milk without probiotics	S. anatum Ad298	Powdered milk	TT 8mn/56 °C	>2.80	6-6-6-4-7 (5.8)	+
2361	Hypoallergenic powdered milk	S. anatum Ad298	Powdered milk	TT 8mn/56 °C	>2.80	6-6-6-4-7 (5.8)	+
4907	Duck feed	S. braenderup F286	Animal feed	TT 8 min /56 °C	1.53	6-10-5-2-2 (5.0)	+
4912	Facility outfeed meal	S. braenderup F286	Animal feed	TT 8 min /56 °C	1.53	6-10-5-2-2 (5.0)	+
4917	Broken animal biscuits	S. braenderup F286	Animal feed	TT 8 min /56 °C	1.53	6-10-5-2-2 (5.0)	-
4922	Poultry/rice sterilised cat food	S. braenderup F286	Animal feed	TT 8 min /56 °C	1.53	6-10-5-2-2 (5.0)	+
5119	Dried dog food	S. cerro Ad689	Dried poultry protein	TT 8 min /56 °C	0.70	6-12-8-6-4(7.2)	+
5123	Dried dog food (poultry, vegetables, cereals)	S. cerro Ad689	Dried poultry protein	TT 8 min /56 °C	0.70	6-12-8-6-4(7.2)	+
4910	Pheasant-partridge feed	S. derby 630	Animal feed	TT 8 min /56 °C	1.17	12-14-13-13-13 (13.0)	+
4915	Milk premix	S. derby 630	Animal feed	TT 8 min /56 °C	1.17	12-14-13-13-13 (13.0)	-

Spl. no.	Product	Inoculation					Overall result 1/10 dilution
		Strain		Injury protocol	Injury measurement	Inoculation level	
		Reference	Origin				
4916	Wheat starch	S. derby 630	Animal feed	TT 8 min /56 °C	1.17	12-14-13-13-13 (13.0)	+
5124	Dried puppy food (chicken, rice)	S. derby 630	Animal feed	TT 8 min /56 °C	0.81	7-8-5-7-7(6.8)	+
4239	Hypoallergenic powdered formula milk	S. dublin Ad531	Raw milk cheese	TT 8mn/56 °C	0.77	5-12-7-13-7 (8.8)	+
3994	Powdered formula milk with 0.1% lactic ferments (S. thermophilus, Lactobacillus reuteri DSM17938)	S. duisburg Ad1812	Milk	TT 8mn/56 °C	0.49	11-12-6-4-7 (8.0)	+
4000	Whey protein	S. duisburg Ad1812	Milk	TT 8mn/56 °C	0.49	11-12-6-4-7 (8.0)	+
4121	Mild whey	S. duisburg Ad1812	Milk	TT 8mn/56 °C	1.75	12-15-11-11-9 (11.6)	+
4122	Mild whey	S. duisburg Ad1812	Milk	TT 8mn/56 °C	1.75	12-15-11-11-9 (11.6)	-
4123	Whey	S. duisburg Ad1812	Milk	TT 8mn/56 °C	1.75	12-15-11-11-9 (11.6)	-
4124	Whey	S. duisburg Ad1812	Milk	TT 8mn/56 °C	1.75	12-15-11-11-9 (11.6)	-
5005	Dried alfalfa	S. enterica 13,23:-:- Ad1847	Animal feed	TT 8 min /56 °C	1.09	6-8-10-9-12 (9.0)	-
5006	Dairy cow feed	S. enterica 13,23:-:- Ad1847	Animal feed	TT 8 min /56 °C	1.09	6-8-10-9-12 (9.0)	+
5010	Sheep feed	S. enterica 13,23:-:- Ad1847	Animal feed	TT 8 min /56 °C	1.09	6-8-10-9-12 (9.0)	-
5013	Rabbit feed	S. enterica 13,23:-:- Ad1847	Animal feed	TT 8 min /56 °C	1.32	8-8-10-9-7 (8.4)	-
5004	Maize dregs	S. enterica 18:-:- Ad1846	Animal feed	TT 8 min /56 °C	1.20	6-11-8-8-9 (8.4)	+
5009	Cattle feed, 28% protein	S. enterica 18:-:- Ad1846	Animal feed	TT 8 min /56 °C	1.20	6-11-8-8-9 (8.4)	+
5011	Duck feed	S. enterica 18:-:- Ad1846	Animal feed	TT 8 min /56 °C	1.20	6-11-8-8-9 (8.4)	-
5002	Bran	S. enterica 6,7:-:- Ad1844	Animal feed	TT 8 min /56 °C	1.32	8-8-10-9-7 (8.4)	+
5003	Sow feed	S. enterica 6,7:-:- Ad1844	Animal feed	TT 8 min /56 °C	1.32	8-8-10-9-7 (8.4)	-
5008	Ruminant feed	S. enterica 6,7:-:- Ad1844	Animal feed	TT 8 min /56 °C	1.32	8-8-10-9-7 (8.4)	-
3999	Hypoallergenic powdered formula milk	S. houtenae Ad1834	Milk	TT 8mn/56 °C	1.02	11-9-9-8-7 (8.8)	-
4003	Casein-rennet	S. houtenae Ad1834	Milk	TT 8mn/56 °C	1.02	11-9-9-8-7 (8.8)	+

Spl. no.	Product	Inoculation					Overall result 1/10 dilution
		Strain		Injury protocol	Injury measurement	Inoculation level	
		Reference	Origin				
3997	Hypoallergenic powdered formula milk	S. indiana Ad174	Dairy product	TT 8mn/56 °C	0.59	4-10-10-3-7 (6.8)	+
4001	Milk protein	S. indiana Ad174	Dairy product	TT 8mn/56 °C	0.59	4-10-10-3-7 (6.8)	+
4904	Piglet feed	S. infantis 179	Animal feed	TT 8 min /56 °C	1.88	3-5-3-4-4 (3.8)	-
4906	Guinea fowl finishing feed	S. infantis 179	Animal feed	TT 8 min /56 °C	1.88	3-5-3-4-4 (3.8)	+
4911	Pig feed	S. infantis 179	Animal feed	TT 8 min /56 °C	1.88	3-5-3-4-4 (3.8)	-
4925	Beef/cereal flavoured dried dog food	S. infantis 179	Animal feed	TT 8 min /56 °C	1.88	3-5-3-4-4 (3.8)	+
3729	Milk protein	S. infantis 401B	Raw milk	TT 8mn/56 °C	1.25	2-6-4-5-7 (4.8)	+
3733	Sodium caseinate	S. infantis 401B	Raw milk	TT 8mn/56 °C	1.57	2-0-1-2-0 (1.0)	+
4913	Fish meal	S. kedougou Ad1502	Animal feed	TT 8 min /56 °C	1.51	5-6-8-5-6 (6.0)	+
4914	Feed premix	S. kedougou Ad1502	Animal feed	TT 8 min /56 °C	1.51	5-6-8-5-6 (6.0)	-
4921	Chicken-flavoured dried young cat food	S. kedougou Ad1502	Animal feed	TT 8 min /56 °C	1.51	5-6-8-5-6 (6.0)	+
4924	Dried dog food	S. kedougou Ad1502	Animal feed	TT 8 min /56 °C	1.51	5-6-8-5-6 (6.0)	+
4903	Pig feed	S. livingstone F104	Animal feed	TT 8 min /56 °C	1.52	4-5-2-3-6 (4.0)	-
4905	Quail finishing feed	S. livingstone F104	Animal feed	TT 8 min /56 °C	1.52	4-5-2-3-6 (4.0)	+
4908	Sheep-lamb feed	S. livingstone F104	Animal feed	TT 8 min /56 °C	1.52	4-5-2-3-6 (4.0)	+
4909	Horse feed	S. livingstone F104	Animal feed	TT 8 min /56 °C	1.52	4-5-2-3-6 (4.0)	+
3041	Powdered infant formula milk	S. mbandaka Ad1483	Raw milk	TT 8mn/56 °C	0.70	1-2-0-1-0(0.8)	-
3731	Milk protein isolates	S. mbandaka Ad1722	Raw milk	TT 8mn/56 °C	0.80	3-3-2-2-1 (2.2)	+
3736	Hypoallergenic powdered milk	S. mbandaka Ad1722	Raw milk	TT 8mn/56 °C	0.80	3-3-2-2-1 (2.2)	+
3992	Powdered skim milk	S. mbandaka Ad1810	Cheese	TT 8mn/56 °C	0.67	4-4-4-5-7 (4.8)	+
3995	Powdered formula milk	S. mbandaka Ad1810	Cheese	TT 8mn/56 °C	0.67	4-4-4-5-7 (4.8)	+
3732	Milk protein	S. meleagridis 505	Raw milk	TT 8mn/56 °C	1.45	0-1-1-1-2 (1.0)	-

Spl. no.	Product	Inoculation					Overall result 1/10 dilution
		Strain		Injury protocol	Injury measurement	Inoculation level	
		Reference	Origin				
3737	**Hypoallergenic powdered milk**	S. meleagridis 505	Raw milk	TT 8mn/56 °C	1.45	0-1-1-1-2 (1.0)	+
3993	**Powdered skim milk**	S. mikawasima Ad1811	Milk	TT 8mn/56 °C	0.61	5-4-2-6-5 (4.4)	+
3996	**Powdered formula milk**	S. mikawasima Ad1811	Milk	TT 8mn/56 °C	0.61	5-4-2-6-5 (4.4)	+
3730	**Whey protein**	S. montevideo 510	Raw milk	TT 8mn/56 °C	0.70	2-5-7-7-8 (5.8)	+
3735	**Hypoallergenic powdered milk**	S. montevideo 510	Raw milk	TT 8mn/56 °C	0.70	2-5-7-7-8 (5.8)	+
2679	**Hypoallergenic powdered milk**	S. montevideo 604	Raw milk	TT 8mn/56 °C	0.57	4-0-2-1-3 (2.0)	+
2684	**Powdered infant formula milk**	S. montevideo 604	Raw milk	TT 8mn/56 °C	0.57	4-0-2-1-3 (2.0)	+
4235	**Hypoallergenic powdered formula milk**	S. montevideo 606	Raw milk	TT 8mn/56 °C	1.44	14-15-10-12-10 (12.2)	+
4236	**Hypoallergenic powdered formula milk**	S. montevideo 606	Raw milk	TT 8mn/56 °C	1.44	14-15-10-12-10 (12.2)	+
5000	**Cattle feed (meal)**	S. montevideo Ad1503	Animal feed	TT 8 min /56 °C	0.95	9-12-8-11-6 (9.2)	+
5001	**Barley**	S. montevideo Ad1503	Animal feed	TT 8 min /56 °C	0.95	9-12-8-11-6 (9.2)	+
2356	**Powdered milk with 0.1% probiotics (S. thermophilus, Lactobacillus reuteri DSM17938)**	S. montevideo Ad912	Raw milk	TT 8mn/56 °C	1.43	0-1-2-1-2 (1.2)	+
2358	**Powdered milk with probiotics (Bifidus lactis)**	S. montevideo Ad912	Raw milk	TT 8mn/56 °C	1.43	0-1-2-1-2 (1.2)	+
2360	**Hypoallergenic powdered milk**	S. montevideo Ad912	Raw milk	TT 8mn/56 °C	1.43	0-1-2-1-2 (1.2)	+
5121	**Dried cat food (wheat, chicken)**	S. newport 586	per Carcass	TT 8 min /56 °C	0.43	7-7-8-8-9(7.8)	+
3039	**Powdered anti-regurgitation milk, thickened formula**	S. ohio Ad1482	Raw cow's milk	TT 8mn/56 °C	0.77	0-2-0-0-3(1.0)	+
3040	**Powdered infant formula milk**	S. ohio Ad1482	Raw cow's milk	TT 8mn/56 °C	0.77	0-2-0-0-3(1.0)	-
4237	**Hypoallergenic powdered formula milk**	S. typhimurium 4	Powdered milk	TT 8mn/56 °C	1.54	8-11-5-14-13 (10.2)	+
4238	**Hypoallergenic powdered formula milk**	S. typhimurium 4	Powdered milk	TT 8mn/56 °C	1.54	8-11-5-14-13 (10.2)	+
5122	**Dried cat food (beef, wheat)**	S. typhimurium Ad1338	Pig's caul	TT 8 min /56 °C	0.60	12-8-10-9-7(9.2)	+

Appendix 6 – Relative accuracy: raw results (Extension study - 2014)

Legend:

Bold face: artificially contaminated sample
m: target strain in minority
M: target strain in majority
P: target strain in pure culture
1/2: target strain represents 50%
( ) number of characteristic colonies observed
-: no target strain colonies with presence of secondary flora
st: no colonies (target or secondary flora)
d: questionable characteristic colony
nc: non-characteristic
ni: non-isolated characteristic colony
PA: positive agreement
NA: negative agreement
ND: negative deviation
PD: positive deviation

ANIMAL FEED MEALS AND CUBES												
No. Sample	Product	Final global	ISO 6579 reference method♦				ISO 6579 result	IRIS Salmonella method				
			Characteristic colonies					Preheated supplemented BPW - 18h / 41.5 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final	Agreement
4903	**Pig feed**	-	-	-	-	-	-	-	/	/	-	**NA**
4904	**Piglet feed**	-	-	-	-	-	-	st	/	/	-	**NA**
4905	**Quail finishing feed**	+	+p	+p	+p	+p	+	+p	+	+	+	**AP**
4906	**Guinea fowl finishing feed**	+	+m	+m	-	-	+	-	/	/	-	**ND**
4907	**Duck feed**	+	+p	+p	+p	+p	+	+p	+	+	+	**AP**
4908	**Sheep-lamb feed**	+	+M	+M	+1/2	+M	+	+p	+	+	+	**AP**
4909	**Horse feed**	+	+1/2	+M	+p	+p	+	+p	+	+	+	**AP**
4910	**Pheasant-partridge feed**	+	+1/2	+M	+p	+p	+	+p	+	+	+	**AP**
4911	**Pig feed**	-	-	-	+m d (NC on TSA)	-	-	-	/	/	-	**NA**
4912	**Facility outfeed meal**	+	+M	+M	+M	+p	+	+p	+	+	+	**AP**
4913	**Fish meal**	+	+1/2	+M	+1/2	+M	+	-	/	/	-	**ND**
4914	**Feed premix**	-	st	st	st	st	-	st	/	/	-	**NA**
4915	**Milk premix**	-	st	st	st	st	-	st	/	/	-	**NA**
4916	**Wheat starch**	+	+M	+M	+M	+p	+	+M	+	+	+	**AP**
4917	**Broken animal biscuits**	-	-	-	-	-	-	-	/	/	-	**NA**
4918	**Cakes for animals**	+	+M	+M	-	-	+	+m	+	+	+	**AP**
4919	**Poultry meat-based animal protein**	+	+m	+M	+M	+p	+	+p	+	+	+	**AP**
4920	**Tuna/salmon/vegetable dried cat food**	+	+M	+M	+M	+p	+	+p	+	+	+	**AP**

♦ Test conducted under accreditation

ANIMAL FEED MEALS AND CUBES												
No. Sample	Product	Final global	ISO 6579 reference method♦				ISO 6579 result	IRIS Salmonella method				
			Characteristic colonies					Preheated supplemented BPW - 18h / 41.5 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final	Agreement
4921	**Chicken-flavoured dried young cat food**	+	+m ni	+m	+m	+m	+	+p	+	+	+	**AP**
4922	**Poultry/rice sterilised cat food**	+	+p	+M	+p	+p	+	+p	+	+	+	**AP**
4923	**Dog biscuits stuffed with meat**	+	+M	+M	+p	+p	+	+M	+	+	+	**AP**
4924	**Dried dog food**	+	+p	+p	+p	+p	+	+p	+	+	+	**AP**
4925	**Beef/cereal flavoured dried dog food**	+	+p	+p	+p	+p	+	+m	+	+	+	**AP**
5000	**Cattle feed (meal)**	+	+m d ni	+M d ni	+m d ni	+m	+	-	/	/	-	**ND**
5001	**Barley**	+	-	+m	-	-	+	+(1)	+	+	+	**AP**
5002	**Bran**	+	-	-	+m d ni	-	+	-	/	/	-	**ND**
5003	**Sow feed**	-	-	-	-	-	-	-	/	/	-	**NA**
5004	**Maize dregs**	+	+P	+P	+P	+P	+	st	/	/	-	**ND**
5005	**Dried alfalfa**	-	st	st	-	-	-	-	/	/	-	**NA**
5006	**Dairy cow feed**	+	+M	+M	-	-	+	-	/	/	-	**ND**
5008	**Ruminant feed**	-	st	st	st	st	-	st	/	/	-	**NA**
5009	**Cattle feed, 28% protein**	+	-	-	st	st	-	+P	+	+	+	**PD**
5010	**Sheep feed**	-	-	-	-	-	-	-	/	/	-	**NA**
5011	**Duck feed**	-	-	-	-	-	-	-	/	/	-	**NA**
5013	**Rabbit feed**	-	-	-	st	st	-	st	/	/	-	**NA**
5114	Dried raw materials	-	-	-	d (Citrobacter youngae)	-	-	-	/	/	-	**NA**
5115	Salmon meal	-	-	-	st	st	-	-	/	/	-	**NA**
5116	Lamb meal	+	+1/2	+M	+1/2	+M	+	+m	+	+	+	**AP**
5117	Digest	-	st	st	st	st	-	st	/	/	-	**NA**
5118	Tallow	-	-	-	-	-	-	-	/	/	-	**NA**

ANIMAL FEED MEALS AND CUBES												
No. Sample	Product	Final global	ISO 6579 reference method♦				ISO 6579 result	IRIS Salmonella method				
			Characteristic colonies					Preheated supplemented BPW - 18h / 41.5 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final	Agreement
5119	**Dried dog food**	+	st	st	st	st	-	+p	+	+	+	**PD**
5121	**Dried cat food (wheat, chicken)**	+	+p	+p	+p	+p	+	+p	+	+	+	**AP**
5122	**Dried cat food (beef, wheat)**	+	+p	+M	+p	+p	+	+M	+	+	+	**AP**
5123	**Dried dog food (poultry, vegetables, cereals)**	+	+p	+p	+p	+p	+	+p	+	+	+	**AP**
5124	**Dried puppy food (chicken, rice)**	+	+1/2	+M	+1/2	+1/2	+	+1/2	+	+	+	**AP**
5357	Raw material at drier outfeed	-	-	-	-	-	-	-	/	/	-	**NA**
5358	Raw material at drier outfeed	-	-	-	-	-	-	-	/	/	-	**NA**
5359	Sender raw material	+	-	-	-	-	-	+m ni	+	+	+	**PD**
5360	Sender raw material	-	-	-	-	-	-	-	/	/	-	**NA**
5361	Chicken/carrot/milk dried kitten food	-	st	st	st	st	-	st	/	/	-	**NA**
5362	Tuna/salmon/vegetables/cereals dried cat food	-	st	st	st	st	-	st	/	/	-	**NA**
5363	Poultry/rice sterilised cat food	-	st	st	st	st	-	st	/	/	-	**NA**
5364	Beef/chicken/liver dried cat food	-	st	st	st	st	-	st	/	/	-	**NA**
5365	Salmon/vegetable dried cat food	-	st	st	st	st	-	st	/	/	-	**NA**
5366	Chicken/rice dried puppy food	-	st	st	st	st	-	-	/	/	-	**NA**
5367	Cereals/beef/vegetables dried adult dog food	-	st	st	st	st	-	st	/	/	-	**NA**
5368	Poultry/vegetables/cereals dried soft dog food	-	st	st	st	st	-	st	/	/	-	**NA**
5369	Beef/cereals soft dried dog food	-	st	st	st	st	-	st	/	/	-	**NA**
5370	Dried dog food	-	st	st	st	st	-	st	/	/	-	**NA**
5586	Dried dog food	-	-	-	-	-	-	st	/	/	-	**NA**

POWDERED MILK																	
No. Sample	Product	Final global	ISO 6579 reference method♦					IRIS Salmonella method									
			Characteristic colonies				Final ISO 6579	Preheated supplemented BPW - 18h / 41.5 °C					Preheated supplemented BPW - 18h / 41.5 °C Storage 72h / 4 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C					IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final result	Agreement	Characteristic colonies	Latex direct CONFIRM *Salmonella*	Final result, 72 h	Agre 7
2355	**Powdered milk with thick formula probiotics (Bifidobacteria, lactic ferments)**	-	st	st	st	st	-	st	/	/	-	**NA**	st	/	-	N
2356	**Powdered milk with 0.1% probiotics (S. thermophilus, Lactobacillus reuteri DSM17938)**	+	st	st	st	st	-	+p	+	+	+	**PD**	+p	+	+	P
2357	**Powdered milk with probiotics (Bifidobacteria, lactic ferments)**	-	st	st	st	st	-	st	/	/	-	**NA**				
2358	**Powdered milk with probiotics (Bifidus lactis)**	+	+p	+p	+m	+p	+	+p	+	+	+	**PA**	+p	+	+	P
2359	**Powdered milk without probiotics**	+	+p	+p	+M	+p	+	+p	+	+	+	**PA**	+p	+	+	P
2360	**Hypoallergenic powdered milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
2361	**Hypoallergenic powdered milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
2679	**Hypoallergenic powdered milk**	+	+M	+M	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
2684	**Powdered infant formula milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3039	**Powdered anti-regurgitation milk, thickened formula**	+	+p	+p	+p	+p	+	st	/	/	-	**ND**	st	/	-	N
3040	**Powdered infant formula milk**	-	st	st	st	st	-	st	/	/	-	**NA**				
3041	**Powdered infant formula milk**	-	st	st	st	st	-	st	/	/	-	**NA**				
3729	**Milk protein**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3730	**Whey protein**	+	+p	+p	+p	+p	+	st	/	/	-	**ND**	st	/	-	N
3731	**Milk protein isolates**	+	st	st	+d	+M	+	st	/	/	-	**ND**	st	/	-	N
3732	**Milk protein**	-	-	-	-	-	-	-	/	/	-	**NA**	-	/	-	N

♦ Test conducted under accreditation

POWDERED MILK																	
No. Sample	Product	Final global	ISO 6579 reference method♦					IRIS Salmonella method									
			Characteristic colonies				Final ISO 6579	Preheated supplemented BPW - 18h / 41.5 °C					Preheated supplemented BPW - 18h / 41.5 °C Storage 72h / 4 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C					IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final result	Agreement	Characteristic colonies	Latex direct CONFIRM *Salmonella*	Final result, 72 h	Agre 7
3733	**Sodium caseinate**	+	+M	+p	+p	+p	+	+p (10)	+	+	+	**PA**	+p (10)	+	+	P
3734	Caseinate	-	st	st	st	st	-	st	/	/	-	**NA**				
3735	**Hypoallergenic powdered milk**	+	+p	+p	+p	+p	+	+p (9)	+	+	+	**PA**	+p (1)	+	+	P
3736	**Hypoallergenic powdered milk**	+	+d	+M	+d	+p	+	+p (5)	+	+	+	**PA**	+p (1)	+	+	P
3737	**Hypoallergenic powdered milk**	+	+p	+M	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3738	Hypoallergenic powdered milk	-	st	st	-	st	-	st	/	/	-	**NA**				
3739	Hypoallergenic powdered milk	-	st	st	st	st	-	st	/	/	-	**NA**				
3740	Hypoallergenic powdered milk	-	st	st	st	st	-	st	/	/	-	**NA**				
3880	Hypoallergenic powdered formula milk	-	-	-	st	st	-	st	/	/	-	**NA**				
3881	Hypoallergenic powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
3882	Powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
3883	Powdered formula milk with 0.1% probiotics (S. thermophilus, Lactobacillus reuteri DSM17938)	-	st	st	st	st	-	st	/	/	-	**NA**				
3884	Powdered formula milk with probiotics (Bifidobacteria + lactic ferments)	-	st	st	st	st	-	st	/	/	-	**NA**				
3885	Caseinate	-	st	st	-	-	-	st	/	/	-	**NA**				
3886	Milk protein isolates	-	-	-	-	-	-	-	/	/	-	**NA**				
3887	Whey protein	-	st	st	st	st	-	-	/	/	-	**NA**				
3888	Milk protein	-	st	st	st	st	-	st	/	/	-	**NA**				
3889	Milk protein isolates	-	st	st	st	st	-	-	/	/	-	**NA**				
3992	**Powdered skim milk**	+	+p	+p	+p	+p	+	+m	+	+	+	**PA**	+m	+	+	P
3993	**Powdered skim milk**	+	st	st	st	st	-	+p	+	+	+	**PD**	+p	+	+	P
3994	**Powdered formula milk with 0.1% lactic**	+	st	st	st	st	-	+p	+	+	+	**PD**	+p	+	+	P

POWDERED MILK																
No. Sample	Product	Final global	ISO 6579 reference method♦					IRIS Salmonella method								
			Characteristic colonies				Final ISO 6579	Preheated supplemented BPW - 18h / 41.5 °C					Preheated supplemented BPW - 18h / 41.5 °C Storage 72h / 4 °C			
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C					IRIS *Salmonella* - 21h / 37 °C			
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final result	Agreement	Characteristic colonies	Latex direct CONFIRM *Salmonella*	Final result, 72 h	Agre 7
	ferments (S. thermophilus, Lactobacillus reuteri DSM17938)															
3995	**Powdered formula milk**	+	st	st	st	st	-	+p	+	+	+	**PD**	+p	+	+	P
3996	**Powdered formula milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3997	**Hypoallergenic powdered formula milk**	+	+M	+M	+M	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3998	**Hypoallergenic powdered formula milk**	+	+p	+p	+m	+p	+	+p	+	+	+	**PA**	+p	+	+	P
3999	**Hypoallergenic powdered formula milk**	-	st	st	st	st	-	-	/	/	-	**NA**				
4000	**Whey protein**	+	-	+p	+M	+p	+	+p	+	+	+	**PA**	+p	+	+	P
4001	**Milk protein**	+	+p	+p	+m	+p	+	+p	+	+	+	**PA**	+p	+	+	P
4002	**Milk protein**	+	+p	+p	+m	+m	+	+p	+	+	+	**PA**	+p	+	+	P
4003	**Casein-rennet**	+	+m	+p	-	+p	+	+p	+	+	+	**PA**	+p	+	+	P
4121	**Mild whey**	+	st	st	st	st	-	+p	+	+	+	**PD**	+p	+	+	P
4122	**Mild whey**	-	st	st	st	st	-	st	/	/	-	**NA**				
4123	**Whey**	-	st	st	st	st	-	st	/	/	-	**NA**	st	/	-	N
4124	**Whey**	-	st	st	st	st	-	st	/	/	-	**NA**				
4125	Whey	-	st	st	st	st	-	st	/	/	-	**NA**				
4126	Whey	-	st	st	st	st	-	st	/	/	-	**NA**				
4127	Micro-filtration filtrate	-	st	st	st	st	-	st	/	/	-	**NA**				
4128	Micro-filtration filtrate	-	st	st	st	st	-	st	/	/	-	**NA**				
4129	Powdered growing up formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
4130	Powdered growing up formula milk with probiotics (Bifidobacteria)	-	st	st	st	st	-	st	/	/	-	**NA**				
4235	**Hypoallergenic powdered formula milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
4236	**Hypoallergenic powdered formula milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P
4237	**Hypoallergenic powdered formula milk**	+	+p	+p	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	P

POWDERED MILK																	
No. Sample	Product	Final global	ISO 6579 reference method♦					IRIS Salmonella method									
			Characteristic colonies				Final ISO 6579	Preheated supplemented BPW - 18h / 41.5 °C					Preheated supplemented BPW - 18h / 41.5 °C Storage 72h / 4 °C				
			RVS		MKTTn			IRIS *Salmonella* - 21h / 37 °C					IRIS *Salmonella* - 21h / 37 °C				
			XLD	IRIS	XLD	IRIS		Characteristic colonies	Latex direct CONFIRM *Salmonella*	Reference method method	Final result	Agreement	Characteristic colonies	Latex direct CONFIRM *Salmonella*	Final result, 72 h	Agre 7
4238	**Hypoallergenic powdered formula milk**	+	+p	+M	+p	+p	+	+p	+	+	+	**PA**	+p	+	+	**P**
4239	**Hypoallergenic powdered formula milk**	+	+p	+p	st	st	+	+p	+	+	+	**PA**	+p	+	+	**P**
4240	Hypoallergenic powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
4241	Hypoallergenic powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
4242	Hypoallergenic powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				
4243	Hypoallergenic powdered formula milk	-	st	st	st	st	-	st	/	/	-	**NA**				

PApendix 7 – Inclusivity and Exclusivity: results (Initial validation - 2011)

INCLUSIVITY								
	Strain		Reference	Origin	Counts CFU/225ml supplemented BPW	IRIS Salmonella	Latex OXOID	Latex CONFIRM Salmonella
1	*Salmonella*	Agona	A00V38	Animal feed	11	+	+	+
2	*Salmonella*	Anatum	6140	Beef bourguignon	24	+	+	+
3	*Salmonella*	arizonae SIIIa 51:z24,223:-	CIP 5523	Turkey	8	+	+	+
4	*Salmonella*	*diarizonae SIIIb 47:IV:253*	Ad478	Clams	14	+	+	+
5	*Salmonella*	*diarizonae SIIIb 38:IV:253*	Ad451	Raw ewe's milk	11	+	+	+
6	*Salmonella*	*diarizonae SIIIb 61:-:,1,5,7*	Ad1280	Raw ewe's milk	13	+ small pale colonies	+	+ very weak
7	*Salmonella*	diarizonae 38 :lv :253	Ad 453	Raw milk cheese	14	+	+	+
8	*Salmonella*	Blockley	Ad 923	Chicken	8	+	+	+
9	*Salmonella*	Bovismorbificans	728	Gelatine	11	+	+	+
10	*Salmonella*	Braenderup	178	Food	6	+	+	+
11	*Salmonella*	Brandenburg	Ad 351	Seafood	7	+	+	+
12	*Salmonella*	Bredeney	396	Minced steak	9	+	+	+
13	*Salmonella*	Cerro	Ad 689	Dried poultry protein	9	+	+	+
14	*Salmonella*	Cremieu	230	Hare	11	+	+	+
15	*Salmonella*	Derby	Ad 1093	Hare	10	+	+	+
16	*Salmonella*	Dublin	Ad 528	Pancake	16	+	+	+
17	*Salmonella*	Enteritidis	Ad 926	time	17	+	+	+
18	*Salmonella*	Gallinarum biovar pullorum	Ad 300	Poultry environment	3	-	/	/
					14	-(growth -in BPW +supplement)	/	/
					39(supplemented BPW + milk)	+ pale micro-colonies	+weak	+ very weak
19	*Salmonella*	Gallinarum	1	Poultry environment	6	+small colonies	+	-

INCLUSIVITY								
	Strain		Reference	Origin	Counts CFU/225ml supplemented BPW	IRIS Salmonella	Latex OXOID	Latex CONFIRM Salmonella
20	*Salmonella*	Gallinarum	2	Poultry environment	10	+very pale micro-colonies	+	-
21	*Salmonella*	Give/Newbrunswick	436	Minced steak	11	+	+	+
22	*Salmonella*	Hadar	35	Poultry	16	+	+	+
23	*Salmonella*	Havana	Ad 930	Poultry	13	+	+	+
24	*Salmonella*	Heidelberg	A00E005	Dairy environment	8	+	+	+
25	*Salmonella*	*houtenae* (sub-group IV) 43:z4z32	Ad 597	Fish	6	+pale colonies	+ weak	+ weak
26	*Salmonella*	Indiana	2	fish meal	6	+	+	+
27	*Salmonella*	*indica* (sub-group VI) 1,26,14,25:a:enx	Ad 600	Environment	10	+	+	+
28	*Salmonella*	Infantis	12	Terrine	7	+	+	+
29	*Salmonella*	kedougou	Ad 929	Cattle environment	11	+	+	+
30	*Salmonella*	kottbus	1	Poultry environment	11	+	+	+
31	*Salmonella*	Lagos	173	Sausage	13	+	+	+
32	*Salmonella*	Landau	Ad 499	Food	8	+	+	+
33	*Salmonella*	Livingstone	E1	Powdered egg white	9	+	+	+
34	*Salmonella*	London	326	Ham	11	+	+	+
35	*Salmonella*	Manhattan	900	Dairy environment	8	+	+	+
36	*Salmonella*	Mbandaka	Ad 914	Mayonnaise	8	+	+	+
37	*Salmonella*	Meleagridis	505	Raw milk	13	+	+	+
38	*Salmonella*	Montevideo	Ad 912	Raw milk	16	+	+	+
39	*Salmonella*	Napoli	Ad 928	Cattle	6	+	+	+
40	*Salmonella*	Newport	540	Toulouse sausage	17	+	+	+
41	*Salmonella*	Panama	195	Minced beef	10	+	+	+
42	*Salmonella*	Paratyphi A	ATCC 9150		1	+	+	-
43	*Salmonella*	Paratyphi B	Ad 301	Clinical aspects	6	+	+	+
44	*Salmonella*	Paratyphi C	ATCC 13428		2	+	+	+

INCLUSIVITY								
	Strain		Reference	Origin	Counts CFU/225ml supplemented BPW	IRIS Salmonella	Latex OXOID	Latex CONFIRM Salmonella
45	*Salmonella*	Regent	328	Duck	8	+	+	+
46	*Salmonella*	Rissen	39	Poultry	3	+	+	+
47	*Salmonella*	Saintpaul	F31	Sardine fillet	11	+	+	+
48	*Salmonella*	salamae (sub-group II) 42:b:enxz	Ad 593	Cereals	9	+	+	+
49	*Salmonella*	Senftenberg	Ad 355	Seafood cocktail	6	+	+	+
50	*Salmonella*	Tennessee	A00E006	Dairy environment	5	+	+	+
51	*Salmonella*	Thompson	AER301	Poultry	6	+	+	+
52	*Salmonella*	Typhi	Ad 302	Clinical aspects	2	+	+	+
53	*Salmonella*	Typhimurium	305	Paëlla	4	+	+	+
54	*Salmonella*	Typhimurium S1 1,4 [5], 12 :- :-	Ad 1233	Tiramisu	15	+	+	+
55	*Salmonella*	Typhimurium S1 1,4 [5], 12 : i : -	Ad 1234	Tahiti style pork	13	+	+	+
56	*Salmonella*	Urbana	Ad 501	Food	23	+	+	+
57	*Salmonella*	Virchow	F276	Curry	12	+	+	+
58	*Salmonella*	Typhimurium SI 1,4,[5],12:-:1,2 (monophasic variant)	Ad1335	Poultry (primary production)	7	+	+	+

EXCLUSIVITY					
	Strain		Origin	Counts CFU/ml BPW	IRIS Salmonella
1	*Citrobacter braakii*	Ad833	Beef collar	3,6.105	-
2	*Citrobacter diversus*	adria 140	Raw milk	3,7.105	-
3	*Citrobacter freundii*	adria 23	Toulouse sausage	3,9.105	-
4	*Citrobacter freundii*	adria 175	Duck meat	4,9.105	-
5	*Citrobacter koseri*	adria 71	Frozen vegetables	5,1.105	-
6	*Cronobacter sakazakii*	adria 95	Fromage frais	2,2.105	-
7	*Enterobacter agglomerans*	adria 11	Cheese	2,3.105	-
8	*Enterobacter amnigenus*	A00C068	Cockerel	2,5.105	-
9	*Enterobacter cloacae*	adria 10	Raw milk	1,6.105	-
10	*Enterobacter intermedius*	adria 60	Frozen mange-tout	6,4.105	-
11	*Enterobacter kobei*	Ad 342	Ham	1,8.105	-
12	*Erwinia carotovora*	CIP 8283	Potatoes	1,8.105	-
13	*Escherichia coli*	adria 19	Grated carrots	2,0.105	-
14	*Escherichia hermanii*	Ad 461	Custard	9,2.104	-
15	*Escherichia vulneris*	adria 127	Raw milk	4,6.105	-
16	*Hafnia alvei*	adria 167	Sausages	3,2.105	-
17	*Klebsiella oxytoca*	57	Food	2,6.105	-
18	*Klebsiella pneumoniae*	47	Turkey meat	4,0.105	-
19	*Kluyvera spp.*	adria 41	Raw milk	3,6.105	-
20	*Pantoea agglomerans*	adria 86	Frozen mixed vegetables	3,4.105	-
21	*Proteus mirabilis*	Ad639	Mayonnaise	4,7.105	-
22	*Proteus vulgaris*	adria 43	Sliced ham	1,4.104	-
23	*Providencia rettgeri*	adria 112	Liquid egg white portion	3,6.105	-
24	*Rhanella aquatilis*	adria 69	Shellfish	8,7.105	-
25	*Serratia liquefaciens*	26	Pasteurised liquid	9,8.104	-
26	*Serratia marcescens*	Ad447	Raw milk	2,9.105	-
27	*Serratia proteomaculans*	A00C056	Ham	3,4.104	-
28	*Shigella flexneri*	CIP 8248	/	1,7.105	-
29	*Shigella sonnei*	CIP 8249T (ATCC 29930)	/	2,0.105	-
30	*Yersinia enterocolitica*	adria 32	Bacon	2,2.105	-

Appendix 8 - Calculation of degree of agreement (Initial validation - 2011)

Reference method

Level L0

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	0	0	0	8	1	1	1
C	0	0	0	8	1	1	1
D	0	0	0	8	1	1	1
E	0	0	0	8	1	1	1
F	1	0.125	0.015625	7	0.875	0.765625	0.78125
G	0	0	0	8	1	1	1
H	0	0	0	8	1	1	1
I	0	0	0	8	1	1	1
J	0	0	0	8	1	1	1
K	0	0	0	8	1	1	1
L	0	0	0	8	1	1	1
M	0	0	0	8	1	1	1
O	0	0	0	8	1	1	1
P	0	0	0	8	1	1	1
R	0	0	0	8	1	1	1
						Mean	0.978125
						Degree of agreement	97.8%

Level L1

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
O	8	1	1	0	0	0	1
P	8	1	1	0	0	0	1
R	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100.0%

Level L2

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
O	8	1	1	0	0	0	1
P	8	1	1	0	0	0	1
R	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100%

Alternative method

Level L0

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
O	8	1	1	0	0	0	1
P	8	1	1	0	0	0	1
R	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100.0%

Level L1

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
O	8	1	1	0	0	0	1
P	8	1	1	0	0	0	1
R	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100.0%

Level L2

Laboratory	Number of positives obtained	Probability of positives	Probability of positive results	Number of negatives obtained	Probability of negatives	Probability of positive pairs	Probability of positive identical results
B	8	1	1	0	0	0	1
C	8	1	1	0	0	0	1
D	8	1	1	0	0	0	1
E	8	1	1	0	0	0	1
F	8	1	1	0	0	0	1
G	8	1	1	0	0	0	1
H	8	1	1	0	0	0	1
I	8	1	1	0	0	0	1
J	8	1	1	0	0	0	1
K	8	1	1	0	0	0	1
L	8	1	1	0	0	0	1
M	8	1	1	0	0	0	1
O	8	1	1	0	0	0	1
P	8	1	1	0	0	0	1
R	8	1	1	0	0	0	1
						Mean	1
						Degree of agreement	100%

Appendix 9 - Calculation of fit (Initial validation - 2011)

Reference method

Level L0

Number of laboratories 15

Number of negative results per laboratory 8

Laboratory	Number of negatives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	888	896
C	8	888	896
D	8	888	896
E	8	888	896
F	7	784	896
G	8	888	896
H	8	888	896
I	8	888	896
J	8	888	896
K	8	888	896
L	8	888	896
M	8	888	896
O	8	888	896
P	8	888	896
R	8	888	896
Total		13,216	13,440
Fit		98.3%	

Total + 1
Total - 119

Level L1

Number of laboratories 15

Number of positive results per laboratory 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	896	896
C	8	896	896
D	8	896	896
E	8	896	896
F	8	896	896
G	8	896	896
H	8	896	896
I	8	896	896
J	8	896	896
K	8	896	896
L	8	896	896
M	8	896	896
O	8	896	896
P	8	896	896
R	8	896	896
Total		13,440	13,440
Fit		100.0%	

Total + 120
Total - 0

Level L2

Number of laboratories 15

Number of positive results per laboratory 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	896	896
C	8	896	896
D	8	896	896
E	8	896	896
F	8	896	896
G	8	896	896
H	8	896	896
I	8	896	896
J	8	896	896
K	8	896	896
L	8	896	896
M	8	896	896
O	8	896	896
P	8	896	896
R	8	896	896
Total		13,440	13,440
Fit		100.0%	

Total + 120
Total - 0

Alternative method

Level L0

Number of laboratories 15

Number of negative results per laboratory 8

Laboratory	Number of negatives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	896	896
C	8	896	896
D	8	896	896
E	8	896	896
F	8	896	896
G	8	896	896
H	8	896	896
I	8	896	896
J	8	896	896
K	8	896	896
L	8	896	896
M	8	896	896
O	8	896	896
P	8	896	896
R	8	896	896
Total		13,440	13,440
Fit		100.0%	

Total + 0
Total - 120

Level L1

Number of laboratories 15

Number of positive results per laboratory 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	896	896
C	8	896	896
D	8	896	896
E	8	896	896
F	8	896	896
G	8	896	896
H	8	896	896
I	8	896	896
J	8	896	896
K	8	896	896
L	8	896	896
M	8	896	896
O	8	896	896
P	8	896	896
R	8	896	896
Total		13,440	13,440
Fit		100.0%	

Total + 120
Total - 0

Level L2

Number of laboratories 15

Number of positive results per laboratory 8

Laboratory	Number of positives	Inter-laboratory pairs with same result	Total number of inter-laboratory pairs
B	8	896	896
C	8	896	896
D	8	896	896
E	8	896	896
F	8	896	896
G	8	896	896
H	8	896	896
I	8	896	896
J	8	896	896
K	8	896	896
L	8	896	896
M	8	896	896
O	8	896	896
P	8	896	896
R	8	896	896
Total		13,440	13,440
Fit		100.0%	

Total + 120
Total - 0