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Summary Report

for the ISO 16140-2 validation of
Salmo*fast* PCR method
for the detection of *Salmonella* spp. in broad range of food products (excluding raw poultry) and production environmental samples (excluding dust)

MicroVal study number	**2023LR125**
Method/Kit names	**Salmo*fast* PCR method**
Report version	**MCS & ILS Report – version 1** 02 March 2026
Manufacturer	**Microbial Systems S.L.** Pic de Peguera 15, Parc Científic i Tecnològic de Girona, Edifici Jaume Casademont E, 17003 Girona (Spain)
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This report consists of 130 pages, including 8 appendices.
Only copies including the totality of this report are authorised.

The results in this report relate only to the item(s) submitted for testing.
Competencies of the laboratory are certified by COFRAC accreditation for the analyses marked with the symbol◆.

Standardized report - Qualitative methods

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Foreword

The technical protocol and the result interpretation were carried out according to the ISO 16140-2:2016, ISO 16140-2/A1:2024 and the MicroVal technical rules.

Validation protocols	▪ ISO 16140-1:2016 - Microbiology of the food chain - Method validation - *Part 1: Vocabulary* ▪ ISO 16140-2:2016 & ISO 16140-2/A1:2024 - Microbiology of the food chain - Method validation - *Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method* ▪ MicroVal Technical Committee interpretation of ISO 16140-2 v.2.6.
Reference method♦	▪ ISO 6579-1: 2017 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* -Part 1: Detection of *Salmonella* spp. *Annex D was not carried out during the validation study.* ▪ ISO 6579-1/A1:2020 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella spp. - Part 1: detection of *Salmonella* spp. Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC
Alternative method	**Salmo*fast* PCR method**
Scope	> **Broad range of food products (excluding raw poultry) – up to 25g** > **Production environmental samples (excluding dust) – up to 25g or ml or sampling devices**
Certification organism	Lloyd's Register

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

LIST OF ABBREVIATIONS

Method & protocol	
CFU	Colony Forming Units
DW	Deep Well
IAC	Internal Amplification Control
ILS	Interlaboratory Study
MCS	Method Comparison Study
Novo	Novobiocin
RLOD	Relative Level of Detection
RT	Relative Trueness
RTC	Ready to cook
RTE	Ready to eat
RTRH	Ready to reheat
SE	Relative Sensitivity
SP	Relative Specificity
QS5	QuantStudio 5
Interpretation	
AL	Acceptability Limit
alt	Alternative method
$\overline{D}$	Average difference
FN	False Negative results
FNR	False Negative Ratio
FP	False Positive results
FPR	False Positive Ratio
LOD	Limit of Detection
NA	Negative agreement
$NA_{FN\ (alt)}$	Negative Agreement due to false negative alternative-method results
ND	Negative Deviation
$ND_{FN\ (alt)}$	Negative Deviation due to false negative alternative-method results
PA	Positive Agreement
$PA_{FP\ (alt)}$	Positive Agreement due to false positive alternative-method results
PD	Positive deviation
$PD_{FP\ (alt)}$	Positive Deviation due to false positive alternative-method results
ref	Reference method
TNA	Total Negative Agreement
TND	Total Negative Deviation
Raw data	
-A	No typical colonies but presence of high level of background microflora
-B	No typical colonies but presence of medium level of background microflora
-C	No typical colonies but presence of low level of background microflora
(x)	Number of colonies in the plate
*	Dilution of the extract in case of inhibition according to the alternative protocol (1/10)
**	Dilution of the extract in case of inhibition according to the alternative protocol (1/100)
1/2	50% level of target analyte
at	Atypical curve
d	Doubtful result
i	Inhibition
ne	New DNA extraction
NC	Non-characteristic colony
ni	Not isolated colony
m	Minority level of target analyte
M	Majority level of target analyte
p	Pure culture level of target analyte
st	Plate without any colony
w	Weak reaction
Bold typing	**Artificially inoculated samples**

1 INTRODUCTION

In this project, a MicroVal validation study, based on ISO 16140-2 (2016) & ISO 16140-2/A1 (2024), of alternative method, the **Salmo*fast* PCR method** from Microbial Systems S.L. for the detection of *Salmonella* spp. in broad range of food products, and production environmental samples was carried out by ADRIA as the MicroVal Expert laboratory.

The following protocol is concerned by this validation study:

- Two enrichment protocols are available depending on the tested items: Enrichment step in Buffered peptone water supplemented or not with novobiocin (20 mg/L) incubated for 16-20 h at 34-38°C
- DNA extraction using DNA ready reagent.
- PCR using the **Salmo*fast* PCR kit**
- Confirmation by direct streaking onto selective agar plates and performing a latex test on isolated typical colonies or using the tests described in the ISO 6579-1 method.

The reference method used is:

- ISO 6579-1: 2017 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 1: detection of *Salmonella* spp.
- ISO 6579-1/A1:2020 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* spp. - Part 1: detection of *Salmonella* spp. Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC.

Three thermocyclers were included in the validation:

- QS5 from Thermo Fisher Scientific
- CFX96 standard from Bio-Rad
- CFX Opus DW from Bio-Rad.

The 6 categories included are:

- Raw, RTC, RTE and RTRH meat products (excluding raw poultry)
- Raw and heat-processed milk and dairy products
- Fresh produces and fruits
- Multicomponent foods or meal components
- Raw and RTC fish and seafood
- Production environmental samples (excluding dust).

Four criteria are evaluated during the validation study according to the ISO 16140-2:2016 & ISO 16140-2/A1:2024:

- Method comparison study
  - Sensitivity study,
  - Relative level of detection study,
  - Inclusivity / Exclusivity,
- Inter-laboratory study.

2 METHOD PROTOCOLS

The Method Comparison Study was carried out using 25 gram portions of sample material.

2.1 Reference method♦

See the flow diagram in **Appendix 1**.

Sample preparations used in the reference method and the alternative method were done according to ISO 6887-series.

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

The reference method used for this study was the following:

- ISO 6579-1: 2017 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* spp. - Part 1: detection of *Salmonella* spp.
- ISO 6579-1/A1:2020 - Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* spp. - Part 1: detection of *Salmonella* spp. Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC.

2.2 Alternative method

2.2.1 Principle

Salmo*fast*® has been specifically designed to provide a simple and reliable method for detecting the presence of *Salmonella* in various samples by real-time PCR. The kit contains all the necessary components to perform PCR amplification and detection: master mix including primers and probes and an internal control, and positive and negative controls for quality assurance. This user-friendly kit allows for accurate and sensitive detection of *Salmonella* in a variety of sample types, including food, water, and environmental swabs.

2.2.2 Protocol

See the flow diagram of the alternative method in **Appendix 2**.

See attached the kit instruction in **Appendix 3**: Instrucciones Salmofast_v20.pdf.

The different steps are the following:

- Enrichment in BPW for all food products (except raw poultry, raw dairy, raw fish and seafood) and production environmental samples.
- BPW + novobiocin (20 mg/L) for raw dairy, raw fish and seafood for 16-20 h at 34-38°C.
- The preparation of the samples is performed according to the ISO 6887 parts.

- Lysis step: 55 µL of enriched sample + 55 µL DNA ready, heat treatment for 56°C 10 min, 95°C 15 min, 25°C 10 min. Centrifugation for 1 min between 2000 and 4000g.
- PCR on 5µL of DNA extract + 15 µL mix PCR with the Salmo*fast* kit using QS5 from Thermo Fisher Scientific or CFX96 standard or CFX Opus DW from Bio-Rad.
- Confirmation by:
    - Direct streaking onto XLD and Oxoid™ Brilliance™ *Salmonella*. The typical colonies are confirmed by Thermo Scientific *Salmonella* Latex Agglutination or test from the ISO 6579-1 method (serological test and biochemical gallery) on well isolated colonies.
    - ISO 6579-1 test: subculture RVS and MKTTn before streaking onto XLD and a second selective agar plate. The typical colonies are confirmed biochemical and serological test.

It is possible to store the enriched samples for 72 h at 5°C ± 3°C before performing the lysis step and confirmatory tests.
In case of PCR inhibition, the following strategy can be applied: extract can be diluted 1/10 in water.

2.2.3 Restriction

Based on results obtained during the MCS study, dust and raw poultry meat samples were excluded from the scope of the method.

For dust samples, a total of 12 samples were evaluated (10 positive and 2 negative). The analysis showed a high level of interference, with 33% inhibition and two false-negative results. It is suspected that the high particle contents in these samples negatively impacted PCR performance. Following discussions with the manufacturer and considering the limited interest in testing this type of product in the field, it was decided to remove dust samples from the scope of the method.

Regarding raw poultry meat, a high number of negative deviations was obtained when testing this type of product using the BPW + novobiocin protocol (ND= 5; TND-PD = 4). As a result, this matrix was also excluded from the scope. Additional investigations conducted by Microbial suggested that the novobiocin protocol is not suitable for poultry products, as it does not effectively suppress the specific microbiota associated with this matrix. Consequently, *Salmonella* spp. may not grow sufficiently to reach the detection threshold required for both PCR and plating methods.

Moreover, several studies have documented the prevalence of antimicrobial resistance in poultry microbiota, often showing higher resistance levels compared to other meats—largely attributed to intensive antibiotic use in poultry farming (Grobbel et al., 2022; Johnson et al., 2017; Hedman et al., 2020). These findings, in conjunction with Microbial observations, suggest that the poor performance observed is likely due to the limited effectiveness of novobiocin in this specific food matrix.

2.3 Study design

The study is **a paired study design** when BPW is used for the enrichment step of the alternative method, as the reference and the alternative methods have the same enrichment procedure.

The study is **an unpaired study design** when BPW + novobiocin is used for the enrichment step of the alternative method (addition of the novobiocin supplement), as the reference and the alternative methods have different enrichment procedures.

3 METHOD COMPARISON STUDY

3.1 Sensitivity study

The sensitivity (SE) is the ability of the method to detect the analyte by either the reference or alternative method.

3.1.1 Categories and sample types

Five food categories, and one production environmental samples category were included in this validation study with a total of **390 samples** analysed. A minimum of 60 items for each category were tested by both the reference method and the alternative method in the sensitivity study, with a minimum of 30 positive samples per category. Each category was made up of 3 types, with at least 20 items representative for each type.
The distribution per tested category and type is given in Table 1. Positive results were considered if being found positives confirmed with at least one of the tested methods (reference or one of the alternative protocols).

Table 1 - Categories, types and number of samples

Category		Type		Alternative method protocol	Positive samples	Negative samples	Total
1	Raw, RTC, RTE and RTRH meat products (excluding raw poultry) (combined)	a	RTE and RTRH meats	BPW	13	8	21
		b	Raw and RTC meat (except poultry)	BPW	14	11	25
		c	Raw meat delicatessen	BPW	11	11	22
			Total		38	30	68
2	Raw and heat-processed milk and dairy products Combined	a	Raw milk-based products	BPW + novobiocin	12	8	20
		b	Pasteurized milk products	BPW	12	13	25
		c	Milk powders	BPW	8	12	20
			Total		32	33	65
3	Fresh produce and fruits	a	Raw vegetables	BPW	11	11	22
		b	Raw fruits	BPW	10	11	21
		c	Sprouts	BPW	11	9	20
			Total		32	31	63
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	BPW	10	10	20
		b	Ready to eat and reheat foods refrigerated	BPW	14	10	24
		c	Ready to eat and reheat foods frozen	BPW	8	12	20
			Total		32	32	64
5	Raw and RTC fish and seafood	a	Raw fish	BPW + novobiocin	13	10	23
		b	Raw seafood	BPW + novobiocin	12	10	22
		c	Ready to cook fish and seafood (processed)	BPW	11	10	21
			Total		36	30	66
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	BPW	11	12	23
		b	Waste and residues	BPW	8	12	20
		c	Process water	BPW	12	9	21
			Total		31	33	64
Total					**201**	**189**	**390**

3.1.2 Test sample preparation

Naturally contaminated samples were preferentially analyzed. A total of 96 samples were tested uncontaminated. Six samples were found positive with four originated from meat and two linked to meat industry (multicompnent with meat or process water with meat).

Due to the low level of natural contamination, artificial contaminations were required. They were obtained by:

- **Spiking** with injured cells after heat treatment
- **Seeding** by direct inoculations of high moisture matrices using liquid cell suspensions, followed by storage periods of 48-72 h at 5 ± 3°C or 1 to 2 weeks at -20°C. For low moisture products, lyophilized strains were used for inoculation and, the samples were stored for 2 weeks at ambient temperature before analysis.

When spiking the strains were stressed using various injury protocols. The injury efficiency was evaluated by comparing enumeration results onto selective and non-selective agars (respectively PCA and XLD). The artificial contaminations are presented in **Appendix 4**.

The same strain was not used to inoculate more than 6 samples.

Twenty-two samples were artificially contaminated by *spiking* after a heat treatment between 10 and 12 min at 56°C, using 10 different strains. Eighteen gave a positive result. All the spiking inoculations, after injury protocols on the inoculum, were lower or equal to 5 CFU/sample.

272 samples were artificially contaminated by *seeding*, using 88 different strains and three seeding protocols (liquid at 5 ± 3°C or frozen -20°C or lyophilized). 177 gave a positive result. Most of the seeding inoculations were lower or equal to 5 CFU/sample.

The repartition of the positive samples per inoculation protocol and inoculation level is given in Table 2.

Table 2 - Repartition of the positive samples per inoculation protocol and inoculation level

	Naturally contaminated	Artificial contamination				Total
		Seeding protocol		Spiking protocol		
		≤ 3 CFU	3 < x ≤ 10 CFU	≤ 5 CFU	5 < x ≤ 10 CFU	
Number of positive samples	6	172	5	18	0	201
%	3.0%	85.6%	2.5%	9.0%	0.0%	100.0%

3.0% of the samples were naturally contaminated. A large majority of the positive samples were tested with an artificial contamination at low level of inoculation (below 3 or 5 CFU/test portion).

3.1.3 Protocols applied during the validation study

> *Incubation times*

The minimum incubation time was applied for the enrichment step: 16 h at 37 ± 1°C and the two enrichment protocols were evaluated depending on the categories and type tested as described in Table 1.

> PCR

All samples were tested on the three thermocyclers and interpretation was made using their associated software and following Salmo*fast*® IFU – Annex 1:

- QS5 from Thermo Fisher Scientific with the QuantStudio™ Design & Analysis v.1.5.2
- CFX 96 standard from Bio-Rad with CFX Manager™ Software v 3.1
- CFX Opus DW from Bio-Rad with CFX Manager™ Software v 3.1

Different channels are used depending on the thermocycler: Cy5 and VIC for QS5 and Cy5 and HEX for CFX 96 standard and CFX OPUS DW.

Interpretations are made according to the kit insert as follow:

- For QS5, the threshold is automatically given by the software and a cut off at 39 is applied manually.
- For CFX96 and Opus, the analysis is done manually by determining the threshold based on the maximum RFU of the positive control for the Cy5 channel or of the negative control for the HEX channel:
    - If the threshold of the automatically is placed above the 10% of the maximum RFU, no modification is applied
    - If not, the threshold is manually adjusted at 10% of the maximum RFU

A positive result is obtained when an amplification is obtained in the Cy5 channel (Cq value available). For CFX96 and CFX Opus Deepwell, curves showing a low sigmoidal shape below the threshold must be considered as potentially positive. The end user must proceed to confirmation.

A negative result is obtained when no amplification is observed in the Cy5 channel, and an amplification is observed in the VIC or HEX channel with a Cq not greater than 3 Cq units compared to the NTC. If more than 3 Cq or no amplification is observed in the VIC/HEX channel and no amplification is observed on the Cy5 channel, the sample should be considered as inhibited.
In case of PCR inhibition, the extract was diluted 1/10 in water and tested again.

As the CFX Opus was not included at the beginning of the study, it was agreed with the technical committee to use frozen DNA extracts generated previously to complete the dataset for this instrument.

> ***Confirmation***

For the purpose of the validation, all the samples were confirmed by direct streaking onto XLD and Oxoid™ Brilliance™ Salmonella and following ISO 6579-1 (subculture in RVS and MKTTn and streaking into XLD and a chromogenic media). The typical colonies will be confirmed by Thermo Scientific Salmonella Latex Agglutination and test from the ISO 6579-1 method (serological test and biochemical gallery).

> ***Enrichment broths storage for 72 h at 5°C ± 3°C***

The enrichment broths from positive and discordant samples were stored for 72 h at 5°C ± 3°C and the PCR was tested again. Storage for 72h at 5°C ± 3 °C is a possibility offered in the ISO 6579-1 method, the confirmatory tests were thus not tested again except for samples enriched in BPW + novobiocin and in case of change is observed between both PCR results (before / after storage).

3.1.4 Sensitivity study results

All raw data per category are given in **Appendix 5**. Sample numbers in **bold** indicate artificial inoculation of the sample.

Table 3 shows the summary of results of the reference method and the alternative methods for **all Categories**.

Table 3 – Summary of sensitivity study results – *all categories and protocols*

		Reference method positive (R+)	Reference method negative (R-)
QS5	Alternative method positive (A+)	Positive agreement (R+/A+) **PA= 177**	Positive deviation (R-/A+) **PD= 10**
	Alternative method negative (A-)	Total Negative deviation (R+/A-) **TND= 12** **(with $ND_{FN(alt)}$= 5 and $PA_{FP(alt)}$= 1)**	Total Negative agreement (R-/A-) **TNA= 191** **(with $NA_{FN(alt)}$= 2 and $PD_{FP(alt)}$= 12)**
CFX96	Alternative method positive (A+)	Positive agreement (R+/A+) **PA= 177**	Positive deviation (R-/A+) **PD= 11**
	Alternative method negative (A-)	Total Negative deviation (R+/A-) **TND= 12** **(with $ND_{FN(alt)}$= 5 and $PA_{FP(alt)}$= 1)**	Total Negative agreement (R-/A-) **TNA = 190** **(with $NA_{FN(alt)}$=1 and $PD_{FP(alt)}$=16)**
CFX Opus DW	Alternative method positive (A+)	Positive agreement (R+/A+) **PA= 175**	Positive deviation (R-/A+) **PD= 12**
	Alternative method negative (A-)	Total Negative deviation (R+/A-) **TND = 14** **(with $ND_{FN(alt)}$= 7 and $PA_{FP(alt)}$= 2)**	Total Negative agreement (R-/A-) **TNA = 189** **(with $NA_{FN(alt)}$= 0 and $PD_{FP(alt)}$= 17)**

With $TND = ND + ND_{FN\,(alt)} + PA_{FP\,(alt)}$ $TNA = NA + NA_{FN\,(alt)} + PD_{FP\,(alt)}$

3.1.5 Sensitivity study calculations

The sensitivity study parameters as specified in Table 4 were calculated for all categories and types, and the overview is given in Table 5.

Table 4 – Formula to calculate the sensitivity parameters – All categories

		QS5	CFX96	CFX Opus DW
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)}\ x\ 100\ \%$	94.0%	94.0%	93.0%
Sensitivity for the reference method	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)}\ x\ 100\ \%$	95.0%	94.0%	94.0%
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100\ \%$	94.4%	93.8%	93.3%
False positive ratio for the alternative method	$FPR = \frac{PA_{FP(alt)} + PD_{FP\,(alt)}}{TNA}\ x\ 100\ \%$	6.8%	9.0%	10.1%
False negative ratio for the alternative method	$FNR = \frac{NA_{FN(alt)} + ND_{FN(alt)}}{PA+TND+PD}\ x\ 100\ \%$	3.5%	2.5%	3.5%

Table 5 – Overview calculated sensitivity parameters per category and type

QS5																			
Categories		Types		Study design	PA	$PA_{FP(alt)}$	NA	$NA_{FN(alt)}$	PD	ND	$ND_{FN(alt)}$	$PD_{FP(alt)}$	TND	TNA	SE_{alt} %	SE_{ref} %	RT %	FPR %	FNR %
1	Raw, RTC, RTE and RTRH meat products (excluding raw poultry) (combined)	a	RTE and RTRH meats	Paired	13	0	8	0	0	0	0	0	0	8	100.0	100.0	100.0	0.0	0.0
		b	Raw and RTC meat except poultry	Paired	14	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
		c	Raw meat delicatessen	Paired	11	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
				Total	38	0	30	0	0	0	0	0	0	30	100.0	100.0	100.0	0.0	0.0
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	8	0	8	1	2	1	0	0	1	9	90.9	81.8	85.0	0.0	9.1
		b	Pasteurized milk products	Paired	12	0	12	0	0	0	0	1	0	13	100.0	100.0	100.0	7.7	0.0
		c	Milk powders	Paired	7	0	12	0	0	0	1	0	1	12	87.5	100.0	95.0	0.0	12.5
				Total	27	0	32	1	2	1	1	1	2	34	93.55	93.55	93.85	2.94	6.5
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	9	0	0	0	0	2	0	11	100.0	100.0	100.0	18.2	0.0
		b	Raw fruits	Paired	10	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
		c	Sprouts	Paired	9	0	9	0	0	0	2	0	2	9	81.8	100.0	90.0	0.0	18.2
				Total	30	0	29	0	0	0	2	2	2	31	93.8	100.0	96.8	6.5	6.3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	9	0	10	0	0	0	1	0	1	10	90.0	100.0	95.0	0.0	10.0
		b	Ready to eat and reheat foods refrigerated	Paired	13	0	9	0	0	0	1	1	1	10	92.9	100.0	95.8	10.0	7.1
		c	Ready to eat and reheat foods frozen	Paired	8	0	12	0	0	0	0	0	0	12	100.0	100.0	100.0	0.0	0.0
				Total	30	0	31	0	0	0	2	1	2	32	93.8	100.0	96.9	3.1	6.3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	6	1	9	0	4	2	0	1	3	10	76.9	69.2	69.6	20.0	0.0
		b	Raw seafood	Unpaired	5	0	9	0	4	3	0	1	3	10	75.0	66.7	68.2	10.0	0.0
		c	Ready to cook fish and seafood (processed)	Paired	11	0	9	0	0	0	0	1	0	10	100.0	100.0	100.0	10.0	0.0
				Total	22	1	27	0	8	5	0	3	6	30	83.3	77.8	78.8	13.3	0.0
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	12	0	0	0	0	0	0	12	100.0	100.0	100.0	0.0	0.0
		b	Waste and residues	Paired	8	0	9	0	0	0	0	3	0	12	100.0	100.0	100.0	25.0	0.0
		c	Process water	Paired	11	0	7	1	0	0	0	2	0	10	100.0	100.0	100.0	20.0	9.1
				Total	30	0	28	1	0	0	0	5	0	34	100.0	100.0	100.0	14.7	3.3
Protocol paired					**158**	**0**	**151**	**1**	**0**	**0**	**5**	**10**	**5**	**162**	**96.9**	**100.0**	**98.5**	**6.2**	**3.7**
Protocol unpaired					**19**	**1**	**26**	**1**	**10**	**6**	**0**	**2**	**7**	**29**	**80.6**	**72.2**	**73.8**	**10.3**	**2.8**
All categories					**177**	**1**	**177**	**2**	**10**	**6**	**5**	**12**	**12**	**191**	**94.0**	**95.0**	**94.4**	**6.8**	**3.5**

CFX96																			
Categories		Types		Study design	PA	$PA_{FP(alt)}$	NA	$NA_{FN(alt)}$	PD	ND	$ND_{FN(alt)}$	$PD_{FP(alt)}$	TND	TNA	SE_{alt} %	SE_{ref} %	RT %	FPR %	FNR %
1	Raw, RTC, RTE and RTRH meat products (excluding raw poultry) (combined)	a	RTE and RTRH meats	Paired	13	0	8	0	0	0	0	0	0	8	100.0	100.0	100.0	0.0	0.0
		b	Raw and RTC meat except poultry	Paired	14	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
		c	Raw meat delicatessen	Paired	11	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
				Total	38	0	30	0	0	0	0	0	0	30	100.0	100.0	100.0	0.0	0.0
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	8	0	6	0	3	1	0	2	1	8	91.7	75.0	80.0	25.0	0.0
		b	Pasteurized milk products	Paired	12	0	13	0	0	0	0	0	0	13	100.0	100.0	100.0	0.0	0.0
		c	Milk powders	Paired	7	0	12	0	0	0	1	0	1	12	87.5	100.0	95.0	0.0	12.5
				Total	27	0	31	0	3	1	1	2	2	33	93.75	90.63	92.31	6.06	3.1
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	9	0	0	0	0	2	0	11	100.0	100.0	100.0	18.2	0.0
		b	Raw fruits	Paired	10	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
		c	Sprouts	Paired	9	0	9	0	0	0	2	0	2	9	81.8	100.0	90.0	0.0	18.2
				Total	30	0	29	0	0	0	2	2	2	31	93.8	100.0	96.8	6.5	6.3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	9	0	9	0	0	0	1	1	1	10	90.0	100.0	95.0	10.0	10.0
		b	Ready to eat and reheat foods refrigerated	Paired	13	0	10	0	0	0	1	0	1	10	92.9	100.0	95.8	0.0	7.1
		c	Ready to eat and reheat foods frozen	Paired	8	0	11	0	0	0	0	1	0	12	100.0	100.0	100.0	8.3	0.0
				Total	30	0	30	0	0	0	2	2	2	32	93.8	100.0	96.9	6.3	6.3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	6	1	8	0	4	2	0	2	3	10	76.9	69.2	69.6	30.0	0.0
		b	Raw seafood	Unpaired	5	0	9	0	4	3	0	1	3	10	75.0	66.7	68.2	10.0	0.0
		c	Ready to cook fish and seafood (processed)	Paired	11	0	9	0	0	0	0	1	0	10	100.0	100.0	100.0	10.0	0.0
				Total	22	1	26	0	8	5	0	4	6	30	83.3	77.8	78.8	16.7	0.0
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	11	0	0	0	0	1	0	12	100.0	100.0	100.0	8.3	0.0
		b	Waste and residues	Paired	8	0	8	0	0	0	0	4	0	12	100.0	100.0	100.0	33.3	0.0
		c	Process water	Paired	11	0	8	0	0	0	0	1	0	10	100.0	91.7	95.2	11.1	0.0
				Total	30	0	27	0	0	0	0	6	0	34	100.0	96.8	98.4	18.2	0.0
Protocol paired					**158**	**0**	**150**	**0**	**0**	**0**	**5**	**11**	**5**	**161**	**97.0**	**99.4**	**98.2**	**6.8**	**3.0**
Protocol unpaired					**19**	**1**	**23**	**0**	**11**	**6**	**0**	**5**	**7**	**28**	**81.1**	**70.3**	**72.3**	**21.4**	**0.0**
All categories					**177**	**1**	**173**	**0**	**12**	**6**	**5**	**16**	**12**	**189**	**94.0**	**94.0**	**93.8**	**9.0**	**2.5**

CFX Opus DW																				
Categories		Types		Study design	PA	$PA_{FP(alt)}$	NA	$NA_{FN(alt)}$	PD	ND	$ND_{FN(alt)}$	$PD_{FP(alt)}$	TND	TNA	SE_{alt} %	SE_{ref} %	RT %	FPR %	FNR %
1	Raw, RTC, RTE and RTRH meat products excluding (raw poultry) (combined)	a	RTE and RTRH meats	Paired	13	0	8	0	0	0	0	0	0	8	100.0	100.0	100.0	0.0	0.0
		b	Raw and RTC meat except poultry	Paired	14	0	11	0	0	0	0	0	0	11	100.0	100.0	100.0	0.0	0.0
		c	Raw meat delicatessen	Paired	11	0	10	0	0	0	0	1	0	11	100.0	100.0	100.0	9.1	0.0
				Total	38	0	29	0	0	0	0	1	0	30	100.0	100.0	100.0	3.3	0.0
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	8	0	8	0	3	1	0	0	1	8	91.7	75.0	80.0	0.0	0.0
		b	Pasteurized milk products	Paired	12	0	11	0	0	0	0	2	0	13	100.0	100.0	100.0	15.4	0.0
		c	Milk powders	Paired	7	0	12	0	0	0	1	0	1	12	87.5	100.0	95.0	0.0	12.5
				Total	27	0	31	0	3	1	1	2	2	33	93.75	90.63	92.31	6.06	3.1
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	9	0	0	0	0	2	0	11	100.0	100.0	100.0	18.2	0.0
		b	Raw fruits	Paired	10	0	10	0	0	0	0	1	0	11	100.0	100.0	100.0	9.1	0.0
		c	Sprouts	Paired	8	0	8	0	0	0	3	1	3	9	72.7	100.0	85.0	11.1	27.3
				Total	29	0	27	0	0	0	3	4	3	31	90.6	100.0	95.2	12.9	9.4
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	9	0	9	0	0	0	1	1	1	10	90.0	100.0	95.0	10.0	10.0
		b	Ready to eat and reheat foods refrigerated	Paired	13	0	9	0	0	0	1	1	1	10	92.9	100.0	95.8	10.0	7.1
		c	Ready to eat and reheat foods frozen	Paired	8	0	12	0	0	0	0	0	0	12	100.0	100.0	100.0	0.0	0.0
				Total	30	0	30	0	0	0	2	2	2	32	93.8	100.0	96.9	6.3	6.3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	6	1	9	0	4	2	0	1	3	10	76.9	69.2	69.6	20.0	0.0
		b	Raw seafood	Unpaired	5	1	9	0	4	2	0	1	3	10	75.0	66.7	68.2	20.0	0.0
		c	Ready to cook fish and seafood (processed)	Paired	10	0	9	0	0	0	1	1	1	10	90.9	100.0	95.2	10.0	9.1
				Total	21	2	27	0	8	4	1	3	7	30	80.6	77.8	77.3	16.7	2.8
6	Production environmental samples (excluding dust samples)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	12	0	0	0	0	0	0	12	100.0	100.0	100.0	0.0	0.0
		b	Waste and residues	Paired	8	0	9	0	0	0	0	3	0	12	100.0	100.0	100.0	25.0	0.0
		c	Process water	Paired	11	0	7	0	1	0	0	2	0	9	100.0	91.7	95.2	22.2	0.0
				Total	30	0	28	0	1	0	0	5	0	33	100.0	96.8	98.4	15.2	0.0
Protocol paired					**156**	**0**	**146**	**0**	**1**	**0**	**7**	**15**	**7**	**161**	**95.7**	**99.4**	**97.5**	**9.3**	**4.3**
Protocol unpaired					**19**	**2**	**26**	**0**	**11**	**5**	**0**	**2**	**7**	**28**	**81.1**	**70.3**	**72.3**	**14.3**	**0.0**
All categories					**175**	**2**	**172**	**0**	**12**	**5**	**7**	**17**	**14**	**189**	**93.0**	**94.0**	**93.3**	**10.1**	**3.5**

3.1.6 Discordant results

> Negative deviations

Between 12 to 14 total negative deviations (TND) were observed depending on the thermocycler tested, all coming from artificially contaminated samples.

The presence of *Salmonella* spp in the enrichment broth was confirmed for 5 samples with the QS5 and CFX 96 ($ND_{FN(alt)}$ = 5) and for 7 samples with the CFX Opus DW ($ND_{FN(alt)}$ = 7). All of those samples were tested with a paired protocol with 3 of them coming from sprouts type. For 5 of them, no typical colonies or few number of typical colonies (below 10) were observed after direct streaking. Replicate of the PCR was carried on but in most of the cases, negative PCR results were obtained again. However, after storage, four samples became positive with all the thermocycler evaluated.

The samples are listed Table 6.

> Negative agreement (False negative)

According to ISO 16140-2, samples in negative agreement were also evaluated by the confirmation method. For two of them with QS5, the *Salmonella* strain was confirmed in the enriched broth ($NA_{FN(alt)}$). Samples originated from two different categories (1561: Raw cow milk; 253: Process water before cleaning). The DNA extract was tested two additional times and fractional positive results were obtained indicating that the level growth was just at the limit of detection of the method.

The samples are listed Table 7.

> Positive deviations

Between 10 and 12 positive deviations were observed depending on the thermocycler tested, all coming from artificially contaminated samples.
As expected, they concern only samples tested with the unpaired protocol.
Most of the results were consistent between the three thermocyclers. Only two samples showed negative results in some conditions ($NA_{FN(alt)}$).

The samples are listed Table 8.

Table 6 - Negative deviations

Year of analysis	Sample N°	Product	Artificial contamination		Final result ISO 6579-1	Protocol : P = paired U=unpaired	Salmofas®t PCR Kit																													Category	Type
							16 h at 37 ± 1°C													16 h at 37 ± 1°C +72 h at 5 ± 3°C																		
							PCR result								Agreement			PCR result										Agreement - 72 h at 5°C ± 3°C							
			Strain	CFU/test portion			QS5			CFX96 standard			CFX Opus DW			All confirmatory tests	QS5	CFX 96	CFX OPUS DW	QS5			CFX96 standard			CFX Opus Deepwell					All confirmatory tests	QS5	CFX 96	CFX OPUS DW		
							Salmonella (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result					*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Frozen DNA extract	*Salmonella* (Cq)	IAC (Cq)	Result									
2024	**1564**	**Raw cow's milk cheese**	*S.* Montevideo 510	1.4	+	U	N/A	31.55	-	N/A	34.28	-	N/A	33.45	-	-	**ND**	**ND**	**ND**	N/A	33.43	-	N/A	34.09	-	No	N/A	34.47	-	-	**ND**	**ND**	**ND**	2	a
2024	**138**	**Semi-skimmed milk powder**	*S.* Anatum Ad2718	3.0	+	P	N/A/ N/A/ N/A	33.35/ 34.05/ 33.67	-/-/-	N/A/ N/A/ N/A	34.72/ 34.69/ 34.34	-/-/-	N/A/at/ 37.27	34.63/ 35.2/ 34.1	-/at/+	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	30.54	33.57	+	35.08	34.62	+	No	34.16	34.27	+	+	**PA**	**PA**	**PA**	2	c
2023	**4982**	**Sprouts (organic alfalfa, leeks, lentils)**	*S.* Virchow Ad2569	1.6	+	P	23,99	28.73	+	34.57	32.55	+	N/A (at)/ N/A/ 35.07	34.03/ 35.15/ 34.48	at/-/+/-(ne)	+	**PA**	**PA**	**ND$_{FN(alt)}$**	26.57	31.01	+	34.39	32.52	+	Yes	36.05	34.86	+	+	**PA**	**PA**	**PA**	3	c
2023	**5488**	**Sprouts**	*S.* Oranienburg Ad1724	1.2	+	P	N/A/ N/A/ N/A	28.01/ 31.54/ 31.63	-/-/-	N/A/ N/A/ N/A	29.69/ 32.18/ 32.15	-/-/-	N/A/ N/A/ N/A	35.29/ 34.15/ 34.93	-/-/-	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	N/A/ N/A/ N/A	27.85/ 31.97/ 32.77	-/-/-	N/A/ N/A/ N/A	30.38/ 32.47/ 32.54	-/-/-	Yes	N/A/ N/A/ N/A	34.3/ 34.46/ 34.09	-/-/-	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	3	c
2023	**5491**	**Sprouts**	*S.* Panama Ad1733	0.8	+	P	N/A / N/A / N/A	28.27/ 31.27/ 31.27	-/-/-	N/A/ 36.42(at)/ N/A	29.86/ 33.5/ 33.94	-/at/-	N/A/ N/A/ N/A	35.3/ 34.53/ 34.61	-/-/-	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	N/A/ N/A/ N/A	28.76/ 32.13/ 31.17	-/-/-	N/A/ 36.57(at)/ N/A	30.19/ 33.7/ 33.82	-/at/-	Yes	N/A/ N/A/ N/A	34.38/ 34.4/ 34.96	-/-/-	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	3	c
2023	**5161**	**Chocolate mousse**	*S.* Montevideo Ad1686	2.2	+	P	N/A/ N/A*/ N/A*/ N/A*	31.97/ 30.11/ 32.02/ 31.55	i/-*/-*/-*	N/A/ N/A*/ N/A*/ N/A*	30.54/ 32.95*/ 31.82*/ N/A*	-/-*/-*/i*	N/A/ N/A*/ N/A*/ N/A*	N/A/ 33.97*/ 34*/-*	i/-*/-*/i*	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	N/A/ N/A/ N/A	32.71/ 32.13/ 32.69	-/-/-	N/A/ N/A/ N/A/ 35.81*/ N/A*	33.06/ N/A/ N/A/ 33.61*/ 33.14*	-/i/i/+*/-*	Yes	6.92/ N/A*/ N/A*/ N/A*	37.48/ 33.96*/ 35.21*/ 33.8*	i/-*/-*/-*	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	4	a
2024	**5168**	**RTE (lasagne)**	*S.* Infantis 12	0.8	+	P	N/A/ N/A/ N/A	33.43/ 34.76/ N/A	-/-/i	N/A/ 38.94/ 34.71	34.74/ 34.71/ 35.3	-/+/+	N/A/ N/A/ N/A	34.38/ 34.71/ 34.46	-/-/-	+	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	19.32	33.06	+	25.54	34.61	+	Yes	25.05	34.14	+	+	**PA**	**PA**	**PA**	4	b
2024	**1747**	**Raw fish fillet (salmon)**	*S.* Hadar F106	1.8	+	U	N/A	29.26	-	N/A	33.65	-	N/A	33.68	-	-	**ND**	**ND**	**ND**	N/A	30.54	-	N/A	33.62	-	No	N/A	32.05	-	-	**ND**	**ND**	**ND**	5	a
2024	**1753**	**Raw fish filet (saithe)**	*S.* Derby Ad1093	0.6	+	U	30.84/ 28.53/ 28.24	27.44/ 35.15/ 33.36	+/+/+	33.24/ 30.39/ 30.23	34.26/ 35.31/ 36.02	+/+/+	32.65/ 30.16/ 30.51	34.83/ 35.36/ 37.77	+/+/+	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	N/A	32.21	-	N/A	34.78	-	No	N/A	33.68	-	-	**ND**	**ND**	**ND**	5	a
2023	**4799**	**Raw fish fillet (salmon)**	*S.* Wandworth Ad2335	2.6	+	U	N/A	31.57	-	NA	32.48	-	N/A	35.49	-	-	**ND**	**ND**	**ND**	N/A	32.06	-	N/A	32.65	-	No	N/A	34.78	-	-	**ND**	**ND**	**ND**	5	a
2023	**4973**	**Raw squid**	*S.* Indiana Ad1409	1.4	+	U	N/A	30.63	-	N/A	32.26	-	N/A	35.42	-	-	**ND**	**ND**	**ND**	N/A	30.77	-	N/A	31.28	-	Yes	N/A	34.28	-	-	**ND**	**ND**	**ND**	5	b
2023	**4974**	**Raw langoustine**	*S.* Rubislaw Ad2332	1.2	+	U	N/A	31.44	-	N/A	32.67	-	38.91/ 37.75/ N/A	35.03/ 34.58/ 36.51	+/+/-	-	**ND**	**ND**	**ND**	N/A	31.99	-	N/A	32.24	-	Yes	N/A	35.06	-	-	**ND**	**ND**	**ND**	5	b
2023	**4978**	**Raw mussel**	*S.* Rubislaw Ad2332	1.2	+	U	N/A	31.38	-	N/A	32.21	-	N/A	37.73	-	-	**ND**	**ND**	**ND**	N/A	30.78	-	N/A	31.5	-	Yes	6.29 (at)/ N/A/ 4.93 (no amp)	37.94/ 35.74/ 35.11	-/-/-	-	**ND**	**ND**	**ND**	5	b
2024	**384**	**Salted cod flakes**	*S.* Agona F118	1.0	+	P	37,09	/	+	N/A/ 33.01*	N/A/ 33.06*	i/+*	N/A/ N/A*/ 36.75*/ 36.38*	N/A/ 32.14*/ 32.83*/ 32.7*	i/-*/+*/+*	+	**PA**	**PA**	**ND$_{FN(alt)}$**	N/A/ 29.96*	/ 32.04*	i/+*	N/A/ 29.01*	N/A/ 33.19*	i/+*	No	N/A/ 27.93*	/32.84*	i/+*	+	**PA**	**PA**	**PA**	5	c

Table 7 - Negative agreement (false negative)

Year of analysis	Sample N°	Product	Artificial contamination		Final result ISO 6579-1	Protocol : P = paired U=unpaired	Salmofas®t PCR Kit																											Category	Type
							16 h at 37 ± 1°C															16 h at 37 ± 1°C +72 h at 5 ± 3°C															
							PCR result									All confirmatory tests	Agreement			PCR result									All confirmatory tests	Agreement - 72 h at 5°C ± 3°C					
							QS5			CFX96 standard			CFX Opus DW							QS5			CFX96 standard			CFX Opus Deepwell									
			Strain	CFU/test portion			*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result		QS5	CFX 96	CFX OPUS DW	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Frozen DNA extract	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96	CFX OPUS DW		
2024	**1561**	**Raw cow's milk**	*S.* Meleagridis 505	1.6	-	U	N/A/ 31.82/ 32.08	32.47/ 33.68/3 3.48	-/+/+	33.81	33.94	+	34.60	33.91	+	+	$NA_{FN(alt)}$	PD	PD	30.71	32.77	+	32.46	33.28	+	No	31.92	33.35	+	+	PD	PD	PD	2	a
2024	**253**	**Process water before cleaning (seafood products industry)**	*S.* Derby F81	0.6	-	P	N/A/ N/A/ N/A	33.79/ 33.07/ 34.23	-/-/-	13.14/ 38.66/ N/A	34.36/ 34.35/ 33.8	+/+/-	22.74	33.59	+	+	$NA_{FN(alt)}$	PD	PD	N/A	34.79	-	N/A	35.07	-	No	N/A	30.25	-	-	NA	NA	NA	6	c

Table 8 - Positive deviations

Year of analysis	Sample N°	Product	Artificial contamination		Final result ISO 6579-1	Protocol: P = paired U=unpaired	Salmofast® PCR Kit																										Category	Type
							16 h at 37 ± 1°C														16 h at 37 ± 1°C +72 h at 5 ± 3°C															
							PCR result									Agreement			PCR result									Agreement - 72 h at 5°C ± 3°C									
							QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests				QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests						
			Strain	CFU/test portion			*Salmonella* (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result	Frozen DNA extract	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96	CFX OPUS DW	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Frozen DNA extract	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96	CFX OPUS DW		
2024	**1561**	**Raw cow's milk**	*S.* Meleagridis 505	1.6	-	U	N/A/ 31.82/ 32.08	32.47/ 33.68/ 33.48	-/+/+	33.81	33.94	+	No	34.60	33.91	+	+	$NA_{FN(alt)}$	PD	PD	30.71	32.77	+	32.46	33.28	+	No	31.92	33.35	+	+	PD	PD	PD	2	a
2024	**1569**	**Raw butter**	*S.* Montevideo 510	1.4	-	U	16.59	33.00	+	19.44	35.91	+	No	17.96	35.50	+	+	PD	PD	PD	16.85	32.7	+	19.02	34.45	+	No	18.48	34.53	+	+	PD	PD	PD	2	a
2023	**4806**	**Raw cow milk cheese**	*S.* Cerro Ad2707	0.8	-	U	17.86	33.16	+	19.02	33.46	+	Yes	18.57	38.40	+	+	PD	PD	PD	20.92	36.38	+	2037	32.93	+	Yes	23.66	34.92	+	+	PD	PD	PD	2	a
2024	**1755**	**Raw fish fillet (sea bream)**	*S.* Hadar F106	1.8	-	U	17.89	30.94	+	20.12	/	+	No	19.77	37.73	+	+	PD	PD	PD	18.35	32.81	+	20.33	36.88	+	No	19.85	33	+	+	PD	PD	PD	5	a
2023	**4797**	**Raw tuna**	*S.* Wandworth Ad2335	2.6	-	U	29.42	31.61	+	32.30	32.46	+	Yes	32.65	35.73	+	+	PD	PD	PD	28.83	30.92	+	22.57	N/A	+	Yes	31.56	33.66	+	+	PD	PD	PD	5	a
2023	**4798**	**Raw fish fillet (julienne)**	*S.* Wandworth Ad2335	2.6	-	U	22.39	31.99	+	25.02	32.80	+	Yes	23.92	36.16	+	+	PD	PD	PD	22.55	30.44	+	27.33	N/A	+	Yes	25.7	36.05	+	+	PD	PD	PD	5	a
2023	**4801**	**Raw fish fillet (saithe)**	*S.* Wandworth Ad2335	2.6	-	U	19.36	31.04	+	24.13	32.84	+	Yes	24.51	36.00	+	+	PD	PD	PD	22.34	32.74	+	23.49	31.2	+	Yes	24.12	35.32	+	+	PD	PD	PD	5	a
2024	**1759**	**Raw hollow oysters**	*S.* Hadar F106	1.8	-	U	24.65	31.18	+	26.45	35.04	+	No	27.31	35.00	+	+	PD	PD	PD	N/A/ N/A/ N/A	32.67/ 33.68/ 33.85	-/-/-	N/A/ N/A/ N/A	34.98/ 35.68/ 34.64	-/-/-	No	N/A/ N/A/ N/A	33.07/ 35.55/ 36.85	-/-/-	+	$NA_{FN(alt)}$	$NA_{FN(alt)}$	$NA_{FN(alt)}$	5	b
2023	**4977**	**Raw shrimp**	*S.* Indiana Ad1409	1.4	-	U	19.54	31.28	+	22.91	33.21	+	Yes	22.57	36.30	+	+	PD	PD	PD	17.63	30.99	+	20.98	32.49	+	Yes	20.88	35.56	+	+	PD	PD	PD	5	b
2023	**4979**	**Raw cuttlefish**	*S.* Rubislaw Ad2332	1.2	-	U	18.03	31.79	+	21.54	35.35	+	Yes	21.29	37.03	+	+	PD	PD	PD	19.26	31.75	+	20.48	32.17	+	Yes	21.18	38.66	+	+	PD	PD	PD	5	b
2023	**4981**	**Raw cockles**	*S.* Indiana Ad1409	1.4	-	U	24.15	31.35	+	26.57	32.82	+	Yes	27.23	36.18	+	+	PD	PD	PD	26.69	31.75	+	27.98	32.49	+	Yes	32.28	34.72	+	+	PD	PD	PD	5	b
2024	**253**	**Process water before cleaning (seafood products industry)**	*S.* Derby F81	0.6	-	P	N/A/ N/A/ N/A	33.79/ 33.07/ 34.23	-/-/-	N/A/ 38.66/ N/A	34.36/ 34.35/ 33.8	+/+/-	No	22.74	33.59	+	+	$NA_{FN(alt)}$	$NA_{FN(alt)}$	PD	N/A	34.79	-	N/A	35.07	-	No	N/A	30.25	-	-	NA	NA	NA	6	c

The analyses of discordant results according to the ISO 16140-2:2016 and ISO 16140-2/A1 for a mixed study is the following (See Table 9).

With the agreement of the technical committee, the calculation of TND+PD for the mixed analysis was not included in the report.

Table 9 - Interpretation of the sensitivity study results

QS5																	
									Paired study				Unpaired study		Mixed study	
Category		Type		Study design	N+	TND	PD	TND-PD	AL	TND - PD	AL	TND - PD	AL	TND - PD	AL
1	Raw, RTC, RTE and RTRH meat products (excluding raw poultry) (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	0	0	0		0				0	
		Total			38	0	0	0	3	0	6	/	3	0	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	11	1	2					-1		-1	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	1	0	1		1				1	
		Total			31	2	2	/	3	/	6	/	3	0	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	2	0	2		2				2	
		Total			32	2	0	2	3	2	6	/		2	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	1	0	1		1				1	
		b	Ready to eat and reheat foods refrigerated	Paired	14	1	0	1		1				1	
		c	Ready to eat and reheat foods frozen	Paired	8	0	0	0		0				0	
		Total			32	2	0	2	3	2	6	/		2	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	12	3	4					-1		-1	
		c	Ready to cook fish and seafood (processed)	Paired	11	0	0	0		0				0	
		Total			36	6	8	/	3	/	6	/	3	-2	3
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	11	0	0	0		0				0	
		Total			30	0	0	0	3	0	6	/	3	0	3
Protocol paired (BPW)					163	5	0	5	5	5	14				
Protocol unpaired (BPW + novobiocin)					36	7	10					-3	3		
All categories					199	12	10							2	6

CFX 96 standard

Category		Type		Study design	N+	TND	PD	Paired				Unpaired		Mixed study	
								TND-PD	AL	TND-PD	AL	TND-PD	AL	TND-PD	AL
1	Raw, RTC, RTE and RTRH meat products (excluding raw poultry) (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	0	0	0		0				0	
		Total			38	0	0	0	3	0	6	/	3	0	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	12	1	3					-2		-2	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	1	0	1		1				1	
		Total			32	2	3	/	3	/	6	/	3	-1	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	2	0	2		2				2	
		Total			32	2	0	2	3	2	6	/		2	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	1	0	1		1				1	
		b	Ready to eat and reheat foods refrigerated	Paired	14	1	0	1		1				1	
		c	Ready to eat and reheat foods frozen	Paired	8	0	0	0		0				0	
		Total			32	2	0	2	3	2	6	/		2	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	12	3	4					-1		-1	
		c	Ready to cook fish and seafood (processed)	Paired	11	0	0	0		0				0	
		Total			36	6	8	/	3	/	6	/	3	-2	3
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	12	0	1	-1		1				-1	
		Total			31	0	1	-1	3	1	6	/	3	-1	3
Protocol paired (BPW)					**164**	**5**	**1**	4	5	6	14				
Protocol unpaired (BPW + novobiocin)					**37**	**7**	**11**					-4	3		
All categories					**201**	**12**	**12**							0	6

CFX Opus DW

									Paired				Unpaired		Mixed study	
Category		Types		Study design	N+	TND	PD	TND-PD	AL	TND-PD	AL	TND-PD	AL	TND-PD	AL
1	Raw, RTC, RTE and RTRH meat products (excluding rawpoultry) (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	0	0	0		0				0	
		Total			38	0	0	0	3	0	6	/	3	0	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	12	1	3					-2		-2	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	1	0	1		1				1	
		Total			32	2	3	/	3	/	6	/	3	-1	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	3	0	3		3				3	
		Total			32	3	0	3	3	3	6	/		3	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	1	0	1		1				1	
		b	Ready to eat and reheat foods refrigerated	Paired	14	1	0	1		1				1	
		c	Ready to eat and reheat foods frozen	Paired	8	0	0	0		0				0	
		Total			32	2	0	2	3	2	6	/		2	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	12	3	4					-1		-1	
		c	Ready to cook fish and seafood (processed)	Paired	11	1	0	1		1				1	
		Total			36	7	8	/	3	/	6	/	3	-1	3
6	Production environmental samples (excluding dust samples)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	12	0	1	-1		1				-1	
		Total			31	0	1	-1	3	1	6	/	3	-1	3
Protocol paired (BPW)					164	7	1	6	5	8	14				
Protocol unpaired (BPW + novobiocin)					37	7	11					-4	3		
All categories / protocols					201	14	12							2	6

For QS5 and CFX96, the individual category, paired and unpaired protocols and all categories/protocols combined meet the acceptability limits.

For CFX Opus DW, the individual category as well as, the unpaired protocol and all categories/protocol combined met the acceptability limits.

However, the combined paired protocol failed the criteria (TND-PD = 6 for an AL at 5).

A root cause analysis was conducted in order to investigate those differences.

> *Root cause analysis*

Four samples among the 390 samples tested (2.5%) showed a difference in the PCR results between the CFX Opus and at least one of the other cyclers, with all of them being different from the QS5 and 2 in comparison to the CFX96. Three differences concerned the paired protocol This resulted in a TND-PD = 6 for the paired protocol instead of 5 for the other thermocyclers.

They are listed in Table 10.

Table 10 – Observed discrepancies between cyclers

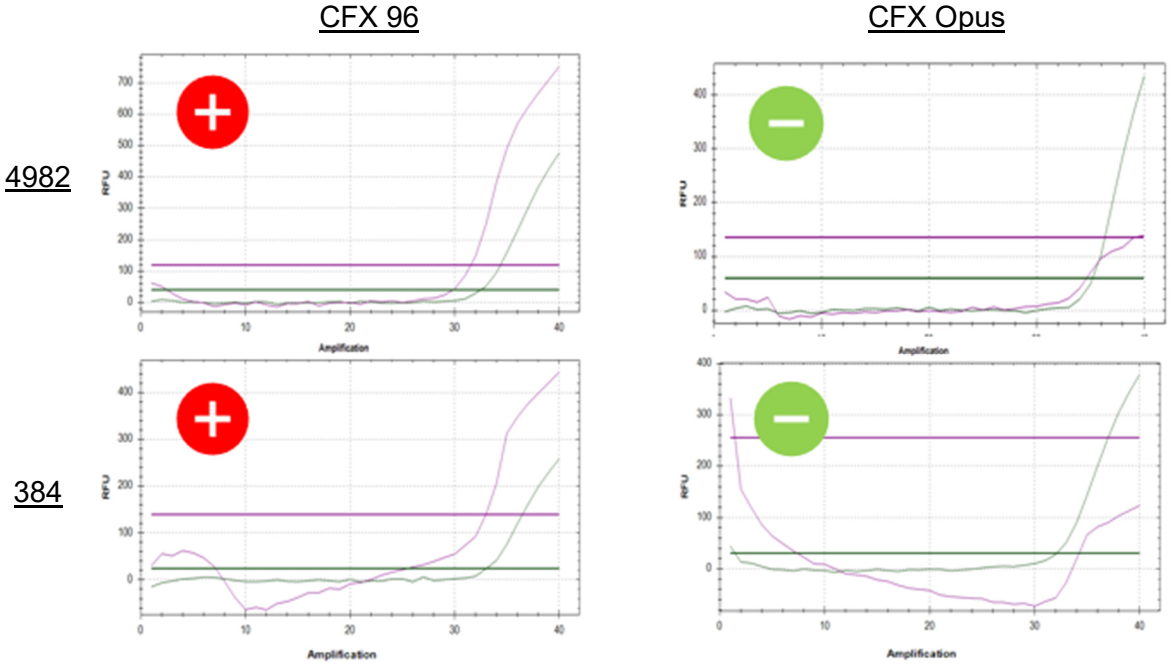
Sample N°	Product	DNA extract Frozen for CFX Opus DW evaluation	Protocol P = paired U=unpaired	Agreement									Category	Type
				QS5			CFX 96			CFX OPUS DW				
				Target Cq	IAC Cq	Agreement	Target Cq	IAC Cq	Agreement	Target Cq	IAC Cq	Agreement		
1561	**Raw cow's Milk**	No	**U**	N/A 31.82 32.08	32.47 33.68 33.48	**NA** FN(alt)	33.81	33.94	**PD**	34.60	33.91	**PD**	2	a
4982	**Sprouts (organic alfalfa, leeks, lentils)**	Yes	**P**	23.99	28.73	**PA**	34.57	32.55	**PA**	N/A (at) N/A 35.07	34.03 35.15 34.48	**ND** FN(alt)	3	c
384	**Salted cod flakes**	No	**P**	37.09	/	**PA**	N/A 33.01*	N/A 33.06*	**PA**	N/A NA* 36.75* 36.38*	N/A 32.14* 32.83* 32.7*	**ND** FN(alt)	5	c
253	**Process water before cleaning (seafood products industry)**	No	**P**	N/A N/A N/A	33,79 33,07 34,23	**NA** FN(alt)	13.14 38.66 N/A	34.36 34.35 33.8	**PD**	22.74	33.59	**PD**	6	c

** 1/10 dilution following inhibition during the first assay*

Retest was performed on the two samples found negative using the CFX Opus. Note that, one of them was tested from frozen lysates. The other one was found inhibited during the first testing; therefore, the results was obtained after 1/10 dilution of the sample. After retest, fractional positive results were obtained, suggesting a presence of *Salmonella* at the limit of detection of the method.

Further investigations were conducted on the initial curves obtained using CFX 96 and CFX Opus for those two samples (4982 and 394). The curves are showed in Figure 1 below.

Figure 1- Curves obtained for two samples with different results between CFX 96 and CFX Opus



In both cases, very late positive can be observed. The main differences between cyclers are due to the baseline analysis and threshold positioning, leading to false negative with the CFX Opus. Therefore, in agreement with the technical committee, a warming sentence was added into the IFU in order for the end user to consider low sigmoidal signal below the threshold as potential positive curves and proceed to confirmation for both CFX 96 and CFX Opus.

This phenomenon was not observed on the QS5 probably because of the automated analysis.

The observed values for TND - PD and TND + PD (paired study only) for the individual categories and for all categories meet the acceptability limits (observed values ≤ AL) except for the CFX OPUS DW with the unpaired protocol. This instrument will be kept to the scope of the method with a warning for the end user to consider low sigmoidal signal as potential positive curves.

3.1.7 Enrichment broth storage at 5 ± 3 °C for 72 h

Enrichment broth storage was done at 5°C ± 3°C for 72 h.

219 samples were tested again after enrichment broth storage. The following changes were observed (See Table 11).

Table 11 - Observed changes in results before and after storage of the enrichment broth

Sample N°	Product	Agreement Before storage			Agreement After storage 72 h at 5°C ± 3°C			Category	Type
		QS5	CFX 96	CFX OPUS DW	QS5	CFX 96	CFX OPUS DW		
5714	Raw merguez	PA	PA	PA	PA	PA	$ND_{FN(alt)}$	1	c
1561	Raw cow's milk	$NA_{FN(alt)}$	PD	PD	PD	PD	PD	2	a
138	Semi-skimmed milk powder	$ND_{FN(alt)}$	$ND_{FN(alt)}$	$ND_{FN(alt)}$	PA	PA	PA	2	c
4982	Sprouts (organic alfalfa, leeks, lentils)	PA	PA	$ND_{FN(alt)}$	PA	PA	PA	3	c
4984	Sprouts (organic radish, fennel)	PA	PA	PA	$ND_{FN(alt)}$	PA	PA	3	c
4532	Sandwich (with delicatessen)	PA	PA	PA	PA	PA	$ND_{FN(alt)}$	4	a
5168	RTE (lasagne)	$ND_{FN(alt)}$	$ND_{FN(alt)}$	$ND_{FN(alt)}$	PA	PA	PA	4	b
290	Frozen pizza (Bolognese)	PA	PA	PA	PA	$ND_{FN(alt)}$	PA	4	c
1759	Raw hollow oysters	PD	PD	PD	$NA_{FN(alt)}$	$NA_{FN(alt)}$	$NA_{FN(alt)}$	5	b
1760	Raw mussels	PA	PA	PA	PA	PA	$ND_{FN(alt)}$	5	b
384	Salted cod flakes	PA	PA	$ND_{FN(alt)}$	PA	PA	PA	5	c
253	Process water before cleaning (seafood products industry)	$NA_{FN(alt)}$	PD	PD	NA	NA	NA	6	c

The analyses of discordant become (See Table 12).

Table 12 - Interpretation of the sensitivity study results after storage of the enrichment broth at 5°C ± 3°C

QS5 - 72h

	Category		Type	Study design	N+	TND	PD	Paired				Unpaired		Mixed study	
								TND-PD	AL	TND-PD	AL	TND-PD	AL	TND-PD	AL
1	Raw, RTC, RTE and RTRH meat products excluding raw poultry (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	0	0	0		0				0	
			Total		38	0	0	0	3	0	6	/	3	0	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	12	1	3					-2		-2	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	0	0	0		0				0	
			Total		32	1	3	/	3	/	6	/	3	-2	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	3	0	3		3				3	
			Total		32	3	0	3	3	3	6	/		3	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	1	0	1		1				1	
		b	Ready to eat and reheat foods refrigerated	Paired	14	0	0	0		0				0	
		c	Ready to eat and reheat foods frozen	Paired	8	0	0	0		0				0	
			Total		32	1	0	1	3	1	6	/		1	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	11	3	3					0		0	
		c	Ready to cook fish and seafood (processed)	Paired	11	0	0	0		0				0	
			Total		35	6	7	/	3	/	6	/	3	-1	3
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	11	0	0	0		0				0	
			Total		30	0	0	0	3	0	6	/	3	0	3
Protocol paired (BPW)					**163**	**4**	**0**	**4**	**5**	**4**	**14**				
Protocol unpaired (BPW + novobiocin)					**36**	**7**	**10**					**-3**	**3**		
All categories					**199**	**11**	**10**							**1**	**6**

CFX 96 standard - 72h

Category		Type		Study design	N+	TN D	PD	Paired				Unpaired		Mixed study	
								TND-PD	AL	TND-PD	AL	TND-PD	AL	TND-PD	AL
1	Raw, RTC, RTE and RTRH meat products excluding raw poultry (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	0	0	0		0				0	
		Total			38	0	0	0	3	0	6	/	3	0	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	12	1	3					-2		-2	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	0	0	0		0				0	
		Total			32	1	3	/	3	/	6	/	3	-2	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	2	0	2		2				2	
		Total			32	2	0	2	3	2	6	/		2	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	1	0	1		1				1	
		b	Ready to eat and reheat foods refrigerated	Paired	14	0	0	0		0				0	
		c	Ready to eat and reheat foods frozen	Paired	8	1	0	1		1				1	
		Total			32	2	0	2	3	2	6	/		2	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	11	3	3					0		0	
		c	Ready to cook fish and seafood (processed)	Paired	11	0	0	0		0				0	
		Total			35	6	7	/	3	/	6	/	3	-1	3
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	11	0	0	0		0				0	
		Total			30	0	0	0	3	0	6	/	3	0	3
Protocol paired (BPW)					**163**	**4**	**0**	4	5	4	14				
Protocol unpaired (BPW + novobiocin)					**36**	**7**	**10**					-3	3		
All categories					**199**	**11**	**10**							1	6

CFX OPUS DeepWell - 72h

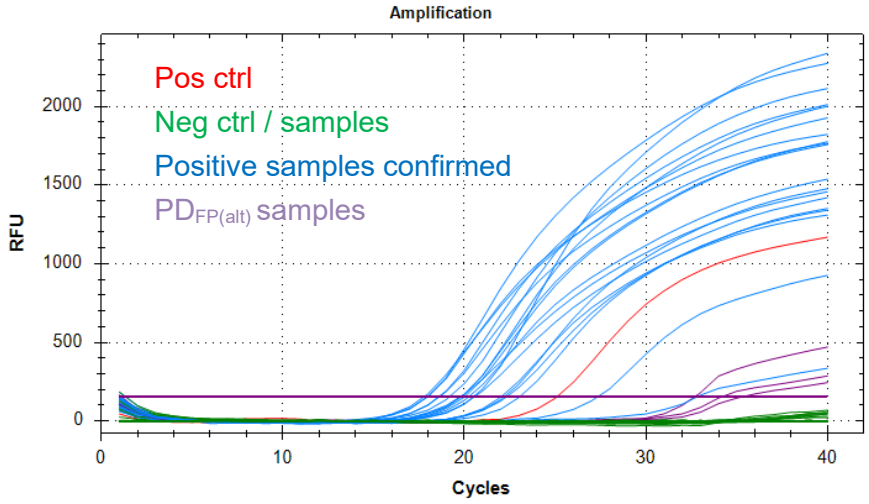
Category		Type		Study design	N+	TN D	PD	Paired				Unpaired		Mixed study	
								TND-PD	AL	TND-PD	AL	TND-PD	AL	TND-PD	
1	Raw, RTC, RTE and RTRH meat products excluding raw poultry (combined)	a	RTE and RTRH meats	Paired	13	0	0	0		0				0	
		b	Raw and RTC meat except poultry	Paired	14	0	0	0		0				0	
		c	Raw meat delicatessen	Paired	11	1	0	1		1				1	
		Total			38	1	0	1	3	1	6	/	3	1	3
2	Raw and heat-processed milk and dairy products (combined)	a	Raw milk-based products	Unpaired	12	1	3					-2		-2	
		b	Pasteurized milk products	Paired	12	0	0	0		0				0	
		c	Milk powders	Paired	8	0	0	0		0				0	
		Total			32	1	3	/	3	/	6	/	3	-2	3
3	Fresh produce and fruits	a	Raw vegetables	Paired	11	0	0	0		0				0	
		b	Raw fruits	Paired	10	0	0	0		0				0	
		c	Sprouts	Paired	11	2	0	2		2				2	
		Total			32	2	0	2	3	2	6	/		2	3
4	Multicomponent foods or meal components	a	Composite foods with substantial raw ingredients (excluding patisseries)	Paired	10	2	0	2		2				2	
		b	Ready to eat and reheat foods refrigerated	Paired	14	0	0	0		0				0	
		c	Ready to eat and reheat foods frozen	Paired	8	0	0	0		0				0	
		Total			32	2	0	2	3	2	6	/		2	3
5	Raw and ready-to-cook fish and seafood	a	Raw fish	Unpaired	13	3	4					-1		-1	
		b	Raw seafood	Unpaired	11	4	3					1		1	
		c	Ready to cook fish and seafood (processed)	Paired	11	0	0	0		0				0	
		Total			35	7	7	/	3	/	6	/	3	0	3
6	Production environmental samples (excluding dust)	a	Surfaces (swabs, sponges, wipes)	Paired	11	0	0	0		0				0	
		b	Waste and residues	Paired	8	0	0	0		0				0	
		c	Process water	Paired	11	0	0	0		0				0	
		Total			30	0	0	0	3	0	6	/	3	0	3
Protocol paired (BPW)					163	5	0	5	5	5	14				
Protocol unpaired (BPW + novobiocin)					36	8	10					-2	3		
All categories					199	13	10							3	6

The observed values for TND - PD and TND + PD (paired study only) for the individual categories and for all categories meet the acceptability limits (observed values ≤ AL) after storage of the broth for 72h at 5 ± 3°C

3.1.8 Confirmation

It was impossible to confirm the presence of *Salmonella* spp. in the enrichment broth after incubation time for 12 to 17 samples depending on the cycler tested ($PD_{FP(alt)}$ and $PA_{FP(alt)}$). The higher number of false positive results were obtained with the CFX Opus DW. Some categories seem to create a higher number of false positive results (Raw and ready-to-cook fish and seafood and production environmental samples). Only 4 $PD_{FP(alt)}$ were consistent between all cyclers and most of the false positive results decrease after storage ($PD_{FP(alt)}$ + $PA_{FP(alt)}$= 0 to 2). In many cases, very late positives curves, close to the threshold limit was obtained for those samples as shown in the figure below.

Figure 2 - Examples of PCR curves for $PD_{FP(alt)}$ samples with CFX Opus DW



In the absence of treatment to remove the DNA, the presence of free DNA in the samples could not be investigated.

All samples are presented in Table 13.

Table 13 – Unconfirmed positive PCR results

Year of analysis	Sample N°	Product (French name)	Product	Final result ISO 6579-1	Protocol: P = paired U=unpaired	Salmofast® PCR Kit																											Category	Type
						16 h at 37 ± 1°C															16 h at 37 ± 1°C +72 h at 5 ± 3°C															
						PCR result									All confirmatory tests	Agreement			PCR result									All confirmatory tests	Agreement – 72 h at 5°C ± 3°C					
						QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard	CFX OPUS DeepWell	QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard	CFX OPUS DeepWell		
						Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result					*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result							
2023	4480	Merguez	Merguez	-	P	N/A	29.11	-	NA	32.83	-	39.76/ 35.52 (at)/ N/A	32.19/ 34.85/ 34.84	+/at/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**															1	c
2024	1685	Reblochon de Savoie au lait cru de vache	Raw cow's milk cheese	-	U	N/A	31.26	-	38.89/ N/A /N/A	33.42/ 34.38/ 34.33	+/-/-	N/A	33.57	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**															2	a
2024	1686	Parmigiano reggiano au lait cru	Raw cow's milk cheese	-	U	N/A	32.56	-	39.11/ N/A/ N/A	34.31/ 34.4/ 34.96	+/-/-	N/A	34.19	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**															2	a
2023	**4529**	**Crème fraiche légère (lait pasteurisé)**	**Pasteurized cream**	-	P	34.34/ -(37.00)/ N/A/ N/A*/ N/A*/ N/A*	30.54/ 30.31/ 31.36/ 30.00/ 30.62/ 30.04	+/-/i/-*/-*/-*	NA	33.40	-	N/A	33.71	-	-	**PD$_{FP(alt)}$**	**NA**	**NA**	38.73	31.82	-	N/A	29.41	-	28.7 (at)/ N/A/ 12.88(at)	35.13/ 35.01/ 35.49	-/-/-	-	**NA**	**NA**	**NA**	2	b
2023	**5618**	**Emmental râpé**	**Grated Emmental cheese**	-	P	N/A	28.41	-	N/A	30.04	-	37.28/ 39.43/ N/A	34.36/ 34.96/ 34.92	+/+/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**	N/A	32.02	-	N/A	32.63	-	N/A	35.5	-	-	**NA**	**NA**	**NA**	2	b
2023	**5619**	**Choux chantilly**	**Dairy dessert**	-	P	N/A	28.14	-	N/A	30.13	-	38.97/ N/A/ 3.07(at)	34.38/ 34.27/ 34.85	+/-/at	-	**NA**	**NA**	**PD$_{FP(alt)}$**															2	b
2024	126	Champignon	Mushrooms	-	P	N/A	32.04	-	39.37/N/A/ N/A	33.25/ 33.76/ 34.28	+/-/-	N/A	32.90	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**	N/A	32.43	-	N/A	32.9	-	N/A	32.56	-	-	**NA**	**NA**	**NA**	3	a
2023	**5472**	**Carotte**	**Raw carrot**	-	P	27.35/ 28.99/ 28.77	28.57/ 32.17/ 32.17	+/+/+	31.52/ 31.81/ 32.33	29.85/ 32.40/ 32.57	+/+/+	32.38/ 32.6/ 32.49	34.7/ 34.76/ 34.82	+/+/+	-	**PD$_{FP(alt)}$**	**PD$_{FP(alt)}$**	**PD$_{FP(alt)}$**	N/A	28.72	-	N/A	30.42	-	39.97/ N/A/ N/A	35.1/ 34.55/ 35.06	+/-/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**	3	a
2023	**5473**	**Poireau**	**Raw leek**	-	P	28.60/ 12.60/ 29.39	28.15/ 29.51/ 31.97	+/i/+	N/A	30.24	-	31.9 (at)/ 32.54/ 32.08	35.39/ 34.42/ 34.35	-/+/+	-	**PD$_{FP(alt)}$**	**NA**	**NA**	N/A	28.58	-	N/A	30.06	-	1.06 (at)/ N/A/ N/A	34.83/ 34.71/ 35.38	-/-/-	-	**NA**	**NA**	**NA**	3	a
2023	**5477**	**Poivron rouge**	**Raw red pepper**	-	P	N/A	29.51	-	N/A	30.19	-	34.58/ 34.84/ 34.72	34.7/ 34.9/ 34.78	+/+/+	-	**NA**	**NA**	**PD$_{FP(alt)}$**	N/A	29.10	-	N/A	30.39	-	N/A	34.19	-	-	**NA**	**NA**	**NA**	3	a
2023	**5481**	**Banane**	**Banana**	-	P	N/A	28.61	-	N/A	30.30	-	34.67/ N/A/ N/A	35.12/ 34.85/ 35.15.	+/-/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**															3	b
2023	**5485**	**Graines germées Alfalfa**	**Sprouts**	-	P	N/A	27.63	-	N/A	30.18	-	38.29/ 36.65/ N/A	35.81/ 34.49/ 34.5	+/+/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**	N/A	28.08	-	N/A	30.34	-	N/A	34.57	-	-	**NA**	**NA**	**NA**	3	c

Year of analysis	Sample N°	Product (French name)	Product	Final result ISO 6579-1	Protocol: P = paired U=unpaired	Salmofast® PCR Kit																						Category	Type
						16 h at 37 ± 1°C													16 h at 37 ± 1°C +72 h at 5 ± 3°C											
						PCR result									All confirmatory tests	Agreement			PCR result								All confirmatory tests	Agreement – 72 h at 5°C ± 3°C				
						QS5			CFX96 standard			CFX Opus Deepwell							QS5			CFX96 standard			CFX Opus Deepwell							
						Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard	CFX OPUS DeepWell		
2023	**5160**	**Mousse au chocolat**	**Chocolate mousse**	-	P	N/A/ N/A*/ N/A**	N/A/ N/A*/ 31.26**	i/i*/-**	N/A/ 36.40*/ N/A*/ N/A*/ N/A**/ N/A**	N/A/ 32.40*/ N/A*/ N/A*/ 33.44**/ 32.78**	i/+*/i*/i* /-**/-**	N/A/ N/A*/ 31.23**/ N/A**/ N/A**	-/-*/ 34.65**/ 34.36**/ 34.81**	i/i*/+**/ -**/-**	-	**NA**	**$PD_{FP(alt)}$**	**$PD_{FP(alt)}$**	N/A	32.35	-	N/A	33.11	-	6.19/ N/A*	3.87/ 34.07*	i/-	-	**NA**	**NA**	**NA**	4	a
2023	**4535**	**Matelote de thon et petits légumes, carottes, champignons**	**RTRH food (tuna, vegetables, mushrooms, carrot)**	-	P	N/A	31.93	-	NA	33.14	-	38.73/ N/A/ N/A	33.85/ 34.8/ 35.31	+/-/-	-	**NA**	**NA**	**$PD_{FP(alt)}$**														4	b
2023	6130	Box festonate carbonara	RTRH product (carbonara pasta)	-	P	36.23/ N/A/ N/A	32.26/ 31.15/ 31.09	+/-/-	N/A	33.33	-	N/A	33.79	-	-	**$PD_{FP(alt)}$**	**NA**	**NA**	N/A	31.39	-	N/A	33.04	-	N/A	33.12	-	-	**NA**	**NA**	**NA**	4	b
2024	**802**	**Quiches lorraines, emmental, jambon, lardons fumés**	**Frozen RTRH (quiches cheese, ham, bacon)**	-	P	N/A/ N/A*	/32.50*	i/-*	31.81/ N/A/ N/A	33.32/ 33.9/ 34.17	+/-/-	N/A	34.66	-	-	**NA**	**$PD_{FP(alt)}$**	**NA**	N/A	33.41	-	N/A	34.14	-	N/A	33.65	-	-	**NA**	**NA**	**NA**	4	c
2024	**1751**	**Filet d'aiglefin**	**Raw fish (haddock)**	-	U	33.07/ 28.14/ 328.48	30.69/ 34.33/ N/ A	+/+/+	36.03/ 30.15/ 30.75	34.51/ 36.26/ 35.4	+/+/+	35.23/ 30.32/ 29.77	33.69/ 37.39/ 36.31	+/+/+	-	**$PD_{FP(alt)}$**	**$PD_{FP(alt)}$**	**$PD_{FP(alt)}$**	N/A	31.91	-	N/A	34.35	-	N/A	33.02	-	-	**NA**	**NA**	**NA**	5	a
2024	**1753**	**Dos de lieu noir**	**Raw fish filet (saithe)**	+	U	30.84/ 28.53/ 28.24	27.44/ 35.15/ 33.36	+/+/+	33.24/ 30.39/ 30.23	34.26/ 35.31/ 36.02	+/+/+	32.65/ 30.16/ 30.51	34.83/ 35.36/ 37.77	+/+/+	-	**$PA_{FP(alt)}$**	**$PA_{FP(alt)}$**	**$PA_{FP(alt)}$**	N/A	32.21	-	N/A	34.78	-	N/A	33.68	-	-	**ND**	**ND**	**ND**	5	a
2024	1759	Filet de saumon	Raw fish filet (salmon)	-	U	N/A/ N/A*	/33.43*	i/-*	38.05/ N/A/ N/A	34.48/ 34.36/ 35.31	+/-/-	N/A	35.27	-	-	**NA**	**$PD_{FP(alt)}$**	**NA**														5	a
2024	1762	Bulots	Raw whelk	-	U	N/A/N/A *	/33.15*	i/-*	N/A/ 37.31*/ 31.35*/ 30.22*	N/A/ 34.13*/ 34.47*/ 34.12*	i/+*/+*/ +*	N/A/ 39.43*/ 29.04*/ 29.68*	N/A/ 33.35*/ 33.67*/ 34.02*	i/+*/+*/ +*	-	**NA**	**$PD_{FP(alt)}$**	**$PD_{FP(alt)}$**														5	b
2024	1766	Amandes de mer	Raw sea almonds	-	U	N/A/ 33.95*/ N/A* N/A*	/ 32.78*/ 31.96*/ 32.30*	i/+*/-*/-*	N/A	34.07	-	N/A	35.00	-	-	**$PD_{FP(alt)}$**	**NA**	**NA**														5	b
2023	**4974**	**Langoustine crue**	**Raw langoustine**	+	U	N/A	31.44	-	N/A	32.67	-	38.91/ 37.75/ N/A	35.03/ 34.58/ 36.51	+/+/-	-	**ND**	**ND**	**$PA_{FP(alt)}$**	N/A	31.99	-	N/A	32.24	-	N/A	35.06	-	-	**ND**	**ND**	**ND**	5	b
2024	1775	Anchois marinés à l'ail	Anchovies marinated	-	P	34.97/ N/A/ N/A	34.67/ 34.14/ N/A	+/-/i	39.04/ N/A/ N/A	35.55/ 38.18/ 35.67	+/-/-	N/A	34.42	-	-	**$PD_{FP(alt)}$**	**$PD_{FP(alt)}$**	**NA**														5	c

Year of analysis	Sample N°	Product (French name)	Product	Final result ISO 6579-1	Protocol: P = paired U=unpaired	Salmofast® PCR Kit																						Category	Type
						16 h at 37 ± 1°C													16 h at 37 ± 1°C +72 h at 5 ± 3°C											
						PCR result								All confirmatory tests	Agreement			PCR result							All confirmatory tests	Agreement – 72 h at 5°C ± 3°C				
						QS5			CFX96 standard			CFX Opus Deepwell			QS5	CFX 96 standard	CFX OPUS DeepWell	QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard	CFX OPUS DeepWell		
						Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result							*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result						
2023	**5608**	**Miettes salées de colin d'Alaska**	**Salted hake crumbs**	-	P	N/A	32.43	-	N/A	34.84	-	N/A/ 33.99*/ 35.28*/ N/A*	/ 34.08*/ 34.05*/ 34.35*	i/+*/+*/ -*	-	**NA**	**NA**	**PD$_{FP(alt)}$**											5	c
2024	2200	Ecouvillon pâte madeleine (après nettoyage)	Swab after cleaning (pastry)	-	P	N/A	34.41	-	36.92/ N/A/ N/A	35.07/ 34.69/ 34.64	+/-/-	N/A	34.89	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**											6	a
2024	**243**	**Déchet sauce champignon (usine de produits transformés)**	**Mushroom sauce residue (RTRH products industry)**	-	P	38.21/ N/A/ N/A	33.69/ 27.04/ 31.33	+/-/-	N/A	31.93	-	38.37/ N/A/ N/A	36.26/ 35.02/ 33.91	+/-/-	-	**PD$_{FP(alt)}$**	**NA**	**PD$_{FP(alt)}$**	N/A	33.69	-	N/A	32.86	-	38.15/ N/A/ N/A	31.58/ 33.98/ 35.30	+/-/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**	6	b
2024	1769	Déchets chipolata	Residues of chipolata	-	P	31.55/ 31.00/ 31.46	31.52/ 34.21/ 33.72	+/+/+	33.58/ 33.14/ 31.08	34.55/ 36.39/ N/A	+/+/+	34.13/ 32.17/ 32.44	34.77/ 34.66/ 35.16	+/+/+	-	**PD$_{FP(alt)}$**	**PD$_{FP(alt)}$**	**PD$_{FP(alt)}$**	N/A	33.13	-	N/A	34.56	-	N/A	32.74	-	-	**NA**	**NA**	**NA**	6	b
2024	1771	Déchets pâte fine porc	**Residues of pork**	-	P	35.62/ 29.32/ 29.63	33.32/ 33.35/ 34.04	+/+/+	N/A	35.07	-	N/A	34.18	-	-	**PD$_{FP(alt)}$**	**NA**	**NA**	N/A	33.91	-	N/A	34.76	-	N/A	33.75	-	-	**NA**	**NA**	**NA**	6	b
2024	4341	Déchets sol parmentier	Residues of parmentier	-	P	N/A	32.94	-	37.3/ N/A/ N/A	36.93/ 34.46/ 33.53	+/-/-	N/A	36.60	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**											6	b
2024	4342	Déchets effiloché de bœuf	Residues of shredded beef	-	P	39.53 (-)	34.17	-	37.15/ N/A	32.8/ 35.5/ 35.8/ 34.86	+/-/-	38.56/ N/A/ N/A	23.18/ 33.84/ 34.38	+/-/-	-	**NA**	**PD$_{FP(alt)}$**	**PD$_{FP(alt)}$**											6	b
2024	4343	Déchets saumon (trancheur)	Residues of salmon	-	P	N/A	27.90	-	37.22/ 4.63/ N/A	33/ 34.03/ 34.78	+/+/-	N/A	36.63	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**											6	b
2024	**251**	**Eau laveur verrine avant nettoyage (usine de produits transformés)**	**Water before cleaning (RTRH products industry)**	-	P	N/A	33.62	-	37.03/ N/A/ N/A	34.76/ 34.48/ 34.08	+/-/-	N/A	34.50	-	-	**NA**	**PD$_{FP(alt)}$**	**NA**	N/A	35.39	-	N/A	33.79	-	N/A	34.43	-	-	**NA**	**NA**	**NA**	6	c
2024	**254**	**Eau de process avant nettoyage (usine de produits de la mer)**	**Process water before cleaning (seafood products industry)**	-	P	N/A	34.52	-	N/A	34.04	-	18.70/ 6.95/ N/A	34.80/ 35.11/ 34.70	+/-/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**	N/A	32.59	-	N/A	34.24	-	N/A	29.84	-	-	**NA**	**NA**	**NA**	6	c
2024	**821**	**Eau après rinçage final**	**Rinse water after cleaning**	-	P	N/A	30.58	-	N/A	33.04	-	39.6/ N/A/ N/A	33.41/ 33.59/ 33.43	+/-/-	-	**NA**	**NA**	**PD$_{FP(alt)}$**											6	c

Year of analysis	Sample N°	Product (French name)	Product	Final result ISO 6579-1	Protocol: P = paired U=unpaired	Salmofast® PCR Kit																						Category	Type
						16 h at 37 ± 1°C														16 h at 37 ± 1°C +72 h at 5 ± 3°C											
						PCR result									Agreement			PCR result									Agreement – 72 h at 5°C ± 3°C				
						QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests	QS5	CFX 96 standard	CFX OPUS DeepWell	QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests	QS5	CFX 96 standard	CFX OPUS DeepWell		
						Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result					*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result						
2024	**1843**	**Eau de rinçage (après nettoyage industrie porcine)**	**Rinse water (pork industry)**	-	P	32.33/ N/A/ N/A	33.66/ 34.13/ 34.56	+/-/-	N/A	34.72	-	N/A	34.94	-	-	**$PD_{FP(alt)}$**	**NA**	**NA**										6	c
2023	4472	Eau de process (usine alimentation animale)	Process water (feed industry)	-	P	37.92/ N/A/ N/A/ N/A*/ N/A*/ N/A*	31.07/ 29.87/ 28.57/ 30.74/ 29.96/ 30.53	+/i/i/i/-*/-*/-*	NA	33.01	-	N/A	34.10	-	-	**$PD_{FP(alt)}$**	**NA**	**NA**	N/A	31.98	-	N/A	33.02	-	N/A	34.45	-	-	**NA**	**NA**	**NA**	6	c

3.1.9 PCR inhibition

For this study, 1827 PCR test were performed considering the three thermocycler and the test before and after storage of the enrichment broth. A total 35 PCR inhibitions (1,9% of the PCR results) were observed and concern 17 samples distributed among all categories. A repetition of the testing was carried out after 1/10 dilution and this was sufficient to remove the inhibition except for one sample that required 1/100 dilution (5160: chocolate mousse).

All samples are presented in Table 14.

Table 14 – Inhibited samples

Sample N°	Product	Type of test	PCR result									Category	Type
			QS5			CFX96 standard			CFX Opus Deepwell				
			Salmonella (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result		
4478	Sausage	W/o storage	N/A (with amp.)/28.0/27.56	33.98/27.99/27.62	i/+*/+*	36.38	28.99	+	30.16	33.14	+	1	c
		Storage 72h	N/A/32.01*	35.65/27.31*	i/+*	31.95	32.33	+	34.8	33.65	+		
4548	**Bacon**	W/o storage	17.92	30.91	+	6.68 (AT)/25.64*	NA/31.02*	i/+*	24.32	35.12	+	1	c
5156	**Dairy dessert (panna cotta)**	W/o storage	19.00	34.54	+	21.14	N/A	+	N/A/19.17	/34.51	i/+	2	b
145	**Milk powder (for coffee)**	Storage 72h	i/17.25/i/23.23*	i/i/33.97*	i/+/i/+*	20.28	N/A	+	19.49	/	+	2	c
152	Skimmed milk powder	W/o storage	N/A/N/A	N/A/33.40	i/-	3.56 (at)/N/A/N/A	35.26/35.21/36.31	at/-/-	N/A	34.69	-	2	c
4963	**Clementine**	W/o storage	N/A/N/A*	31.05/29.46	i/-*	N/A	33.30	-	N/A	34.85	-	3	b
4534	**Chocolate mousse**	W/o storage	N/A/20.22*	N/A/26.43*	i/+*	NA/20.56*	NA/33.24*	i/+*	N/A/22.51	3.02/39.14	i/+	4	a
		Storage 72h	N/A/16.77*	N/A/N/A*	i/+*	N/A/17.69*	N/A/33.18*	i/+*	N/A/15.51*	/15.45*	i/+*		
5160	**Chocolate mousse**	W/o storage	N/A/N/A*/N/A**	N/A/N/A*/31.26**	i/i*/-**	N/A/36.40*/N/A*/ N/A*/N/A**/N/A**	N/A/32.40*/N/A*/N/A*/ 33.44**/32.78**	i/+*/i*/i*/-**/-**	N/A/N/A*/31.23**/ N/A**/N/A**	-/-*/34.65**/34.36**/ 34.81**	i/i*/+**/-**/-**	4	a
		Storage 72h	N/A	32.35	-	N/A	33.11	-	6.19/N/A*	3.87/34.07*	i/-		
5161	**Chocolate mousse**	W/o storage	N/A/N/A*/N/A*/N/A*	31.97/30.11/ 32.02/31.55	i/-*/-*/-*	N/A/N/A*/N/A*/N/A*	30.54/32.95*/31.82*/N/A*	-/-*/-*/i*	N/A/N/A*/N/A*/N/A*	/33.97*/34*/-*	i/-*/-*/i*	4	a
		Storage 72h	N/A/N/A/N/A	32.71/32.13/32.69	-/-/-	N/A/N/A/N/A/ 35.81*/N/A*	33.06/N/A/N/A/ 33.61*/33.14*	-/i/i/+*/-*	6.92/N/A*/N/A*/N/A*	37.48/33.96*/ 35.21*/33.8*	i/-*/-*/-*		
4484	RTRH meat with sauce	Storage 72h	N/A/23.90*	36.23/25.93*	i/+*	29.54	32.52	+	29.97	33.2	+	4	b
802	**Frozen RTRH (quiches cheese. ham. bacon)**	W/o storage	N/A/N/A*	/32.50*	i/-*	31.81/N/A/N/A	33.32/33.9/34.17	+/-/-	N/A	34.66	-	4	c
1759	Raw fish filet (salmon)	W/o storage	N/A/N/A*	/33.43*	i/-*	38.05/N/A/N/A	34.48/34.36/35.31	+/-/-	N/A	35.27	-	5	a
1762	Raw whelk	W/o storage	N/A/N/A*	/33.15*	i/-*	N/A/37.31*/ 31.35*/30.22*	N/A/34.13*/ 34.47*/34.12*	i/+*/+*/+*	N/A/39.43*/29.04*/ 29.68*	N/A/33.35*/ 33.67*/34.02*	i/+*/+*/+*	5	b
1766	Raw sea almonds	W/o storage	N/A/33.95*/N/A*N/A*	/32.78*/ 31.96*/32.30*	i/+*/-*/-*	N/A	34.07	-	N/A	35.00	-	5	b
384	**Salted cod crumbs**	W/o storage	37.09	/	+	N/A/33.01*	N/A/33.06*	i/+*	N/A/N/A*/36.75*/36.38*	/32.14*/ 32.83*/32.7*	i/-*/+*/+*	5	c
		Storage 72h	N/A/29.96*	/32.04*	i/+*	N/A/29.01*	N/A/33.19*	i/+*	N/A/27.93*	/32.84*	i/+*		
244	**Sardines residue (Seafood products production)**	W/o storage	i/i/N/A*	i/i/34.50*	i/i/-*	N/A	36.67	-	N/A/N/A	N/A/31.72	i/-*	6	b
1842	**Rinse water (pastry product)**	Storage 72h	16.86	/	+	N/A/17.39*	/-	i/+*	17.71	/	+	6	c

* 1/10 dilution in water
** 1/100 dilution in water

3.2 Relative level of detection

The relative level of detection is the level of detection at P = 0.50 (LOD_{50}) of the alternative (proprietary) method divided by the level of detection at P = 0.50 (LOD_{50}) of the reference method.

The RLOD is defined as the ratio of the alternative and reference methods:

$$RLOD = \frac{LOD_{Alt.}}{LOD_{Ref.}}$$

3.2.1 Categories, sample types and strains

Six (matrix/strain) pairs were analyzed by the reference method and by the alternative method (See Table 15):

Table 15 - List of selected types and strains per category, as tested within the relative level of detection study

Category		Matrix	Strain	Origin	Inoculation and storage condition	Enrichment protocol
1	**Raw, RTC, RTE and RTRH meat products excluding raw poultry (combined)**	Ground beef	*S.* Typhimurium A00C060	Ground beef	Liquid suspension 48-72 h at 3 ± 2°C	BPW
2	**Raw and heat-processed milk and dairy products (combined)**	Raw milk	*S.* Ohio Ad1482	Raw cow milk	Liquid suspension 48-72 h at 3 ± 2°C	BPW + novobiocin
3	**Fruits and vegetables**	Fresh spinach	*S.* Virchow Ad2569	Zucchini	Liquid suspension 48-72 h at 3 ± 2°C	BPW
4	**Multicomponent foods or meal components**	Spanish Tortilla (eggs, potatoes, onions)	*S.* Havana Ad1728	Liquid egg product	Spiking after heat-treatment	BPW
5	**Raw and ready-to-cook fish and seafood**	Raw fish filet	*S.* Anatum Ad1451	Fish fillet	Liquid suspension 48-72 h at 3 ± 2°C	BPW + novobiocin
6	**Production environmental samples (excluding dust)**	Stainless steel surface 4"x 4" (sponge used as sampling device)	*S.* Livingstone Ad2702+ co-inoculation with 10 x *Citrobacter freundii* 39	Dairy industry	Liquid inoculum Storage overnight at ambient temperature	BPW

3.2.2 Test sample preparations

Three levels of artificial contamination were prepared for each type:

- Negative control level: one non-inoculated in order to get 5 test portions,
- Low level: one inoculated between 1 and 2 CFU/sample in order to get 20 test portions providing fractional recovery,
- Higher level: one inoculated between 3 and 5 CFU/sample in order to get 5 test portions contaminated at a higher level.

For processed food type, a spiking of the strain after heat-treatment was performed.
For high moisture products, the samples were individually inoculated with the strain suspension and stored for 48-72h at 3°C ± 2°C before analysis.
For stainless stell surface, a liquid inoculum will be spread on the surface and stored overnight before analysis.

A total plate count determination on each matrix will be performed to estimate the total microbial load on the day of analysis (except for stainless steel).

3.2.3 RLOD study results

The tabulated raw data on the RLOD are given in **Appendix 6**.

The RLOD calculations were performed using the Excel spreadsheet available at http://standards.iso.org/iso/16140 - RLOD version 4 (2024-01-10). The RLOD before confirmation are given in Table 16. The RLOD after confirmation are given in Table 17.

Table 16 – Presentation of RLOD before confirmation of the alternative method results

Category	Name: (Strain / matrix) pair	AL	RLOD		
			QS5	CFX96	Opus DW
1	Ground beef S. Typhimurium A00C060	1.5	1.0	0.8	1.0
2	Raw milk S. Ohio Ad1482	2.5	1.0	1.3	1.5
3	Fresh spinach S.Virchow Ad2569	1.5	1.1	1.0	1.1
4	Tortilla S. Havana Ad1728	1.5	1.1	1.1	1.0
5	Raw fish filet S. Anatum Ad1451	2.5	1.5	1.5	1.5
6	Stainless steel S. Livingstone Ad2702	1.5	0.9	0.9	0.9
Combined		/	**1.1**	**1.1**	**1.1**

Table 17 – Presentation of RLOD after confirmation of the alternative method results

Category	Name: (Strain / matrix) pair	AL	RLOD		
			QS5	CFX96	Opus DW
1	Ground beef S. Typhimurium A00C060	1.5	1.0	1.0	1.0
2	Raw milk S. Ohio Ad1482	2.5	1.2	1.3	1.5
3	Fresh spinach S.Virchow Ad2569	1.5	1.1	1.0	1.1
4	Tortilla S. Havana Ad1728	1.5	1.1	1.1	1.0
5	Raw fish filet S. Anatum Ad1451	2.5	1.7	1.7	1.7
6	Stainless steel S. Livingstone Ad2702	1.5	1.0	1.0	1.0
Combined		/	**1.2**	**1.2**	**1.1**

The LOD_{50} calculations were done using the Excel spreadsheet available at http://standards.iso.org/iso/16140 POD-LOD calculation program - version 12, 2024-03-05. The tests are given in Table 18.

Table 18 – LOD_{50} results of the reference and alternative method with the different instruments

Category	Name: (Strain / matrix) pair	Level of detection at 50 % (CFU / sample size)			
		Reference method	Alternative method		
			QS5	CFX96	CFX Opus
1	Ground beef S. Typhimurium A00C060	0.5 [0.3 ; 1.0]	0.5 [0.3 ; 1.0]	0.5 [0.3 ; 1.0]	0.5 [0.3 ; 1.0]
2	Raw milk S. Ohio Ad1482	1.1 [0.6 ; 2.0]	1.3 [0.7 ; 2.5]	1.5 [0.8 ; 2.9]	1.8 [0.9 ; 3.6]
3	Fresh spinach S. Virchow Ad2569	0.3 [0.2 ; 0.7]	0.4 [0.2 ; 0.8]	0.3 [0.2 ; 0.7]	0.4 [0.2 ; 0.8]
4	Tortilla S. Havana Ad1728	0.4 [0.2 ; 0.9]	0.5 [0.3 ; 1.0]	0.5 [0.3 ; 1.0]	0.5 [0.3 ; 0.9]
5	Raw fish filet S. Anatum Ad1451	0.6 [0.3 ; 1.0]	1.1 [0.6 ; 2.0]	1.1 [0.6 ; 2.0]	1.1 [0.6 ; 2.0]
6	Stainless steel [1] S. Livingstone Ad2702	/	/	/	/
Combined		**0.6 [0.5 ; 0.8]**	**0.8 [0.6 ; 1.0]**	**0.8 [0.6 ; 1.0]**	**0.8 [0.6 ; 1.0]**

[1] For this matrix, it is not possible to calculate the LOD_{50} as the contamination level do not take into account the die-off of the inoculated strain during the overnight storage

3.2.4 Conclusion

The RLOD values (using the confirmed alternative method results) meet the acceptability limit 2.5 for unpaired studies, for all matrix/strain pairs tested.

The LOD_{50} varies from 0.4 to 1.1 CFU/test portion for the reference method and from 0.3 to 1.8 CFU/test portion for the alternative method.

3.3 Inclusivity / exclusivity

The inclusivity is the ability of the alternative method to detect the target analyte from a wide range of strains. The exclusivity is the lack of interference from a relevant range of non-target strains of the alternative method.

3.3.1 Protocols

Inclusivity

Salmonella strain cultures were performed in BHI medium at 37°C. Dilutions were done in order to inoculate 10 - 100 cells/225 ml of BPW + novobiocin broth. The broth was incubated for 16 h at 37 ± 1°C before performing the alternative method protocol

(PCR and confirmation). Addition of 25 mL of milk into the broth prior to adding the strain and enrichment was performed for some strains to investigate the absence of detection.

> **Exclusivity**

Negative strains cultures were performed in BHI at 37°C. Dilutions were realized in order to inoculate 10^5 cells/ml BPW. The BPW was incubated for 24h at 34 - 38°C. The alternative method was then performed (PCR).

3.3.2 Results

Raw data are given in **Appendix 7**.

> **Inclusivity**

A total of one hundred strains were tested for **inclusivity**. Ninety-six of these strains showed the expected positive result for all three cyclers and confirmation tests. One strain was found positive by PCR on all three cyclers and by direct streaking on XLD, but no growth was observed on Brillance *Salmonella*. Among all the strain growing on XLD, eight didn't have the expected color.

For 3 strains, negative PCR and confirmatory tests were observed:

- *Salmonella Abotusovis* Ad2320
- *Salmonella* Gallinarum biovar pullorum Ad300
- *Salmonella Typhi* Ad302.

Additional investigations were carried on by testing the strain with the addition of milk in the enrichment prior to incubation. All were then found positive by PCR and confirmation.

> **Exclusivity**

A total of 30 strains were tested for **exclusivity**. 29 of these strains showed the expected negative result by PCR and confirmation. 1 strain was found late positive by PCR with the QS5 and the CFX Opus but negative by confirmation. A repetition of the PCR gave negative results.

The alternative *Salmo*fast PCR method detection method is selective and specific.

4 INTER-LABORATORY STUDY

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

4.1 Study organisation

Collaborators number

Samples were sent to 15 laboratories from 3 countries; 2 collaborators were involved in the study for Laboratories B and I.

Matrix and strain used

Raw fish filet (raw salmon filet) was contaminated by a *Salmonella* Anatum Ad1451 strain isolated from seafood.

Samples

Samples were prepared and inoculated on Monday 29th of September 2025, as described below:

- 24 blind coded samples (25 g) for *Salmonella* spp. detection by the ISO 6579-1 reference method.
- 24 blind coded samples (25 g) for *Salmonella* spp. detection by the Salmo*fast* PCR method alternative method.
- 1 sample (labelled “Aerobic mesophilic flora”) for the total viable count microflora enumeration by the ISO 4833-1 (2013).
- 1 water flask labelled “Temperature Control” with a temperature probe.

Inoculation

The targeted inoculation levels were the following:

- Level: 0 CFU/25 g,
- Level 1: 1.0 CFU/25 g, inoculation level providing as much as possible fractional positive recovery data,

- Level 2: 4.0 CFU/25 g.

> *Labelling and shipping*

Blind coded samples were placed in isothermal boxes, which contained cooling blocks, and express-shipped to the different laboratories.

A temperature sensor was added to the package in order to register the temperature profile during the transport, the package delivery and storage until analyses. A temperature control flask with water was also included in the packages, to allow collaborators to verify the temperature upon receipt.

Samples were shipped in 24 h to 48 h to the involved laboratories. The temperature conditions had to stay lower or equal to 8°C during transport, and between 0°C – 8°C in the labs.

> *Analyses*

Collaborative study laboratories and the expert laboratory carried out the analyses with the alternative and reference methods the same day. The collaborators were supposed to start the analyses at Day 1 or Day 2 at the latest: on Tuesday 30th of September or Wednesday1st of October 2025 with the alternative and reference methods.

For the alternative method, the protocol with BPW + novobiocin (20 mg/L) was evaluated.

4.2 Experimental parameters controls

4.2.1 Detection of Salmonella spp. in the matrix before inoculation

In order to ensure the absence of *Salmonella* spp. in the raw fish filet, the reference method was performed on five portions (25 g) before the inoculation. All the results were negative.

4.2.2 Strain stability during transport

Strain stability was checked at ADRIA by inoculating the matrix at 1 000 CFU/g and 1 CFU/ 25g. Enumerations were performed for the high contamination level and detection analyses were performed for the low contamination level after 24 h, 48 h and 72 h storage at 5 ± 3°C. Triplicates were analysed. The mesophilic aerobic flora was also enumerated; the results are given in Table 19.

Table 19 – *Salmonella* spp. sample stability

Day	Detection analyses						Enumeration analyses (onto *Brilliance* Salmonella) CFU/g			Aerobic mesophilic flora - ISO 4833-2 (CFU/g)
	Reference method (ISO 6579-1)			Alternative method (Salmo*fast*®)						
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	
Day 0	-	+	+	-	+	+	6.40E+02	1.90E+03	1.60E+03	1.40E+05
Day 1	-	+	+	-	+	+	9.10E+02	2.10E+03	3.60E+03	1.60E+03
Day 2	+	-	+	+	+	+	4.80E+03	1.60E+03	2.30E+03	1.40E+04
Day 3	+	+	+	-	-	+	1.60E+03	2.20E+03	1.20E+03	6.10E+05

No evolution of the detection and the enumeration of *Salmonella* spp. was observed during storage at 5°C ± 3°C nor in the enumeration of the mesophilic flora.

4.2.3 Contamination levels

The contamination levels and the codification of the samples send to the participants were the following (see Table 20).

Table 20 - Contamination levels

Level	Samples	Theoretical target level (CFU/test portion)	True level (CFU/ test portion)	Low limit (CFU/test portion)	High limit (CFU/test portion)
Level 0	2-5-8-9-13-19-20-22 28-30-31-36-39-42-44-47	0.0	/	/	/
Level 1	3-4-7-11-14-16-18-24 25-26-29-33-37-38-43-46	1.0	0.9	0.63	0.97
Level 2	1-6-10-12-15-17-21-23 27-32-34-35-40-41-45-48	4.0	4.3	3.78	4.99

The obtained levels are within the expected range to reach fractional recovery at level 1.

4.2.4 Logistic conditions

The temperatures measured at reception by the collaborators, the temperatures registered by the thermo-probe, and the receipt and analysis dates are given in Table 21.

Table 21 - Sample temperatures at receipt

Collaborator	Temperature measured by the probe (°C)			Temperature measured by the collaborator	Receipt date and time		Analysis date		
	At receipt	Average	[min;max]	At receipt			Day (D=contamination)	Date	Hour
A	2.6°C	3.8°C	[2.0-9.7°C]	3.2°C	30/09/2025	9:30 AM	D+1	30/09/2025	9:30 AM
B1	4.6°C	4.7°C	[2.5-8°C]	7.1°C	30/09/2025	10:10 AM	D+1	30/09/2025	3:00 PM
B2	5.6°C	5.1°C	[2.7-13.9°C]	6.9°C	30/09/2025	10:10 AM	D+1	30/09/2025	3:00 PM
C	3.7°C	4.6°C	[2.2-10.5°C]	5.5°C	30/09/2025	11:00 AM	D+2	01/10/2025	1:24 PM
D	4.3°C	5.1°C	[3.0-5.5°C]	5.1°C	30/09/2025	3:30 PM	D+1	30/09/2025	4:00 PM
E	5.1°C	3.1°C	[1.6-8.9°C]	5.1°C	30/09/2025	3:30 PM	D+1	30/09/2025	4:05 PM
F	3.7°C	4.6°C	[3.0-14.8°C]	7°C	30/09/2025	1:30 PM	D+2	01/10/2025	1:00 PM
G	5.3°C	4.4°C	[1.9-6.0°C]	8.7°C	30/09/2025	2:00 PM	D+1	30/09/2025	2:00 PM
H	3.0°C	3.5°C	[2.3-6.0°C]	4.5°C	30/09/2025	11:15 AM	D+1	30/09/2025	1:00 PM
I1	4.0°C	3.1°C	[1.0-4.1°C]	3°C	30/09/2025	5:00 PM	D+2	01/10/2025	8:00 AM
I2	4.1°C	3.2°C	[1.3-4.3°C]	3°C	30/09/2025	5:00 PM	D+2	01/10/2025	8:00 AM
J	3.5°C	3.6°C	[1.9-6.1°C]	4.9°C	30/09/2025	12:50 PM	D+1	30/09/2025	1:00 PM
K	8.9°C	4.4°C	[1.8-8.9°C]	11,55°C	01/10/2025	1:45 PM	D+2	01/10/2025	2:10 PM
L	7.6°C	6.3°C	[3.4-12.1°C]	7.6°C	30/09/2025	7:00 PM	D+2	01/10/2025	11:15 AM
M	6.8°C	5.2°C	[2.4-10.5°C]	9.1°C	01/10/2025	10:10 AM	D+2	01/10/2025	3:00 PM
N	7.2°C	7.3°C	[2.9-10.8°C]	4.7°C	30/09/2025	11:15 AM	D+4	03/09/2025	11:15 AM
O	7.6°C	5.5°C	[1.8-9.6°C]	7°C	30/09/2025	3:56 PM	D+2	01/10/2025	1:12 PM
P (ADRIA)	5.4°C	4.0°C	[1.4-5.6°C]	7.8°C	01/10/2025	8:00 AM	D+2	01/10/2025	3:45 PM

No problems were encountered during the transport or receipt of samples for 13 collaborators. The samples were delivered on time and in appropriate conditions and the analysis were performed at Day 1 or 2.

Three collaborators (G, K and M) received the samples on time (Day 1 for G and Day 2 for K and M) but temperatures measured by the collaborator on the water flask at receipt were above the acceptability limit fixed at 8.0°C (8.7°C, 11.6°C and 9.1°C). The temperature measured remains lower than 8.0°C for collaborators G and M when

measured by the probe suggesting that the higher temperature measured in the water flask is not relevant.
For collaborator K, the higher temperature measured by the probe was 8.9°C but the probe has registered temperature higher than 8.0°C only for 1h before storage at 5±3°C. This remains acceptable as neither the mesophilic flora nor the *Salmonella* contamination will have time to grow in such condition.

Moreover, the aerobic mesophilic flora of collaborators G, K and M have not evolved (1.7×10^4, 5.7×10^5, 4.1×10^5 CFU/g) compared with the other collaborators. It was decided to keep these collaborators due to the analysis carried out on time, the small increase in the temperature and the low impact of the temperature increased on the recovery of the strain.

One collaborator (N) received the samples on time and in good conditions but did not receive all the media on time. He was able to perform the analyses only on Day 4 and a important increase of the mesophilic flora was observed. This set of data was not taken into account for the final interpretation.

4.2.5 Thermocyclers used by the collaborators

Thermocyclers used by the collaborators are given in Table 22.

Table 22 – Thermocyclers tested during the interlaboratory study

Collaborators	Thermocycler
A	CFX 96
B1	QS5
B2	QS5
C	CFX 96
D	QS5
E	QS5
F	CFX Opus Deepwell
G	QS5
H	CFX 96
I1	CFX 96
I2	QS5
J	CFX 96
K	QS5
L	CFX Opus Deepwell
M	CFX 96
N	CFX Opus Deepwell
O	CFX Opus Deepwell
Total CFX 96	**6**
Total QS5	**7**
Total CFX Opus Deepwell	**4**

4.3 Calculation and summary of data

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

4.3.1 MicroVal Expert laboratory results

The results obtained by the expert laboratory are given in Table 23.

Table 23 – Results obtained by the expert Lab.

Level	Reference method	Alternative method with: the CFX 96, the CFX Opus DW and the QS5 (Fast)
L0	0+/8	0+/8
L1	5+/8	6+/8
L2	7+/8	8+/8

Fractional positive results were obtained with the reference and the alternative methods at level 1.
At Level L0, late positive PCR results with negative confirmation ($PD_{FP(alt)}$ samples) were observed, three using the CFX Opus (samples n°2, 5 and 9) and one using the QS5 PCR instrument (sample n°8). PCR replicates were performed, yielding both positive and negative results. A new DNA extraction subsequently produced negative results for all concerned samples.
At Level L1, one sample with PCR negative result (sample n°16) obtained positive confirmation after RVS and MKTTn subcultures. In this case, the level of detection of the alternative method was probably not reached.

It can be noted that it was required to perform several PCR prior to obtained an interpretable data set due to an invalid negative control (late positive curves). This situation was also encountered by another collaborator (J).

4.3.2 Results observed by the collaborative laboratories

> *Mesophilic aerobic flora enumeration*

Depending on the Lab results, the enumeration levels varied from $1.7.10^4$ CFU/g to $3.6.10^6$ CFU/g for collaborators who performed the analyses at Day 1 or Day 2.
The collaborator N, who performed the analyses at Day 4, obtained a high aerobic mesophilic flora enumeration (2.6×10^8 CFU/g). See Table 24.

Table 24 - Mesophilic flora enumeration

Collaborators	Mesophilic flora enumeration (CFU/g)
A	2.4E+06
B1	2.9E+05
B2	3.1E+05
C	1.9E+05
D	1.4E+05
E	7.3E+04
F	4.1E+05
G	1.7E+04
H	1.1E+05
I1	7.3E+05
I2	3.2E+06
J	3.27E+05
K	5.73E+05
L	3.05E+05
M	4.09E+05
N	2.60E+08
O	3.64E+06
P (ADRIA)	1.40E+04

> *Salmonella* spp. *detection*

17 collaborators participated to the study, with 16 performing the analysis on time. The results obtained by the 16 individual collaborators in the inter-laboratory are summarised in Table 25 (reference method) and Table 26 (alternative method).

Table 25 - Positive results by the reference method (ALL the collaborators)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B1	0	6	8
B2	0	5	8
C	2	4	8
D	2	5	8
E	0	6	8
F	0	6	8
G	5	7	8
H	0	7	8
I1	0	3	8
I2	0	6	7
J	0	6	8
K	0	4	8
L	0	4	8
M	0	6	8
O	0	6	8
Total	P_0= 9	P_1= 89	P_2= 127

Table 26 - Positive results (before and after confirmation) by the alternative method (ALL the collaborators)

Collabo-rators	Contamination level								
	L0			L1			L2		
	PCR result	Confirmation result	Final result	PCR result	Confirmation result	Final result	PCR result	Confirmation result	Final result
A	0	0	0	8	8	8	8	8	8
B1	1	0	0	4	4	4	7	8	7
B2	0	0	0	8	8	8	8	8	8
C	0	4	0	6	7	6	8	8	8
D	2	1	1	5	5	3	8	8	8
E	2	0	0	5	4	4	8	8	8
F	0	0	0	5	5	5	6	6	6
G	8	2	2	8	8	8	8	8	8
H	1	0	0	6	6	6	8	8	8
I1	2	0	0	5	5	5	7	7	7
I2	0	0	0	6	6	6	8	8	8
J	0	0	0	3	3	3	8	8	8
K	0	0	0	2	2	2	8	8	8
L	2	0	0	5	5	5	8	8	8
M	0	0	0	5	5	5	8	8	8
O	0	0	0	7	7	7	7	7	7
Total	P_0 = 18	C_0 =7	CP_0 =3	P_1 = 88	C_1 = 88	CP_1 = 85	P_2 = 123	C_2 = 124	CP_2 =123

Three collaborators (C, D and G) obtained more than one positive sample at level L0 with the reference method (2, 2 and 5 positive samples respectively onto 8 no contaminated samples). For alternative method, these collaborators obtained also positive results at level L0:

- Collaborator C: 4 samples with negative PCR results gave positive confirmations after RVS and MKTTn subculture (n°2, 13, 19 and 22).
- Collaborator D: 2 samples gave positive PCR results, with negative confirmation for one sample (n°13) and positive confirmation after RVS and MKTTn subcultures for the other sample (n°22).
- Collaborator G: the 8 samples gave positive PCR results, with positive confirmation for two of them (n°8 and n°13).

These datasets will not be considered for the final interpretation, as the results obtained may have been affected by improper handling practices.

Five other collaborators (B1, E, H, I1, L) have obtained presumptive positive sample with negative confirmation at level L0 with the alternative method. PCR replicates were performed and gave negative PCR results for all samples except for the sample n°9 from collaborator L. These results can be due to cross-contaminations during the extraction process or late positive curves due to threshold placement. It can be noted that some late positive curves have also been found by the expert lab and a root cause analysis will be performed to better understand these observations.

For the final interpretation, it is proposed to exclude data from collaborators E, I1 and L but keep collaborators B1 and H with only one presumptive positive at Level 0 observed and zero at level L1 or L2. This will allow to obtain the appropriate number of datasets for the study.

Among the ten datasets retained for interpretation, two collaborators from the same laboratory (B1 and B2) did not follow the instructions regarding result interpretation and the modification of the default Cq cutoff value from 35 to 39 for the QS5 PCR instrument. These collaborators have used same software for PCR Setup and post PCR data analysis (QuantStudio™Desing&Analysys) instead of two different softwares (QuantStudio™Desing&Analysys for PCR Setup and Design&Analysys for post PCR data analysis) as indicated in the IFU.
Consequently, the data were reanalyzed by ADRIA using the right software for the analysis. Both sets of interpretations are available in the raw data. For most of the samples, this does not impact the final outcome. However, for sample 1, results were considered negative (ND_{FNalt}) with the new interpretation while initially found positive by the laboratory. The interpretation carried out by ADRIA was used for the final analysis.

4.3.3 *Results of the collaborators retained for interpretation*

The results obtained with the 10 collaborators kept for interpretation are presented in Table 27 (reference method) and Table 28 (alternative method).

Table 27 - Positive results by the reference method
(Without collaborators C, D, E, G, I1, L and N)

Collaborators	Contamination level		
	L0	L1	L2
A	0	8	8
B1	0	6	8
B2	0	5	8
F	0	6	8
H	0	7	8
I2	0	6	7
J	0	6	8
K	0	4	8
M	0	6	8
O	0	6	8
Total	$P_0 = 0$	$P_1 = 60$	$P_2 = 79$

Table 10 - Positive results (before and after confirmation)
by the alternative methods (Without collaborators C, D, E, G, I1, L and N)

Collabo-rators	Contamination level								
	L0			L1			L2		
	PCR result	Confirmation result	Final result	PCR result	Confirmation result	Final result	PCR result	Confirmation result	Final result
A	0	0	0	8	8	8	8	8	8
B1	1	0	0	4	4	4	7	8	7
B2	0	0	0	8	8	8	8	8	8
F	0	0	0	5	5	5	6	6	6
H	1	0	0	6	6	6	8	8	8
I2	0	0	0	6	6	6	8	8	8
J	0	0	0	3	3	3	8	8	8
K	0	0	0	2	2	2	8	8	8
M	0	0	0	5	5	5	8	8	8
O	0	0	0	7	7	7	7	7	7
Total	$P_0 = 2$	$C_0 = 0$	$CP_0 = 0$	$P_1 = 54$	$C_1 = 54$	$CP_1 = 54$	$P_2 = 76$	$C_2 = 77$	$CP_2 = 76$

4.3.4 Calculation of the specificity percentage (SP)

The percentage specificities (SP) of the reference method and of the alternative method, using the data after confirmation, based on the results of level L0, are the following (See Table 28).

Table 28 - Percentage specificity

Specificity for the reference method	$SP_{ref} = \left(1 - \left(\frac{P_0}{N_-}\right)\right) x\ 100\ \% =$	100.0 %
Specificity for the alternative method *before confirmation*	$SP_{alt} = \left(1 - \left(\frac{CP_0}{N_-}\right)\right) x\ 100\ \% =$	97.5 %
Specificity for the alternative method *after confirmation*	$SP_{alt} = \left(1 - \left(\frac{CP_0}{N_-}\right)\right) x\ 100\ \% =$	100.0 %

N: number of all L0 tests
P_0 = total number of false-positive results obtained with the blank samples before confirmation
CP_0 = total number of false-positive results obtained with the blank samples

4.3.5 Calculation of sensitivity (SE_{alt}), sensitivity for the reference method (SE_{ref}), relative trueness (RT, false positive ratio for the alternative method (FPR) and false negative ratio for the alternative method (FNR)

Fractional positive results were obtained for the low inoculation level L1: 67.5 %. Both inoculation levels L1 were retained for calculation.

A summary of the results of the collaborators retained for interpretation and obtained with the reference and the alternative methods for Level 1 is provided in Table 29.

Table 29 - Summary of results for all collaborators obtained with the reference and alternative methods for Level 1

Level	Response	Reference method positive (R+)	Reference method negative (R-)
L1	Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 45**	Positive deviation (R-/A+) **PD = 9**
	Alternative method negative (A-)	Total Negative deviation (A-/R+) **TND = 15** **(0 $ND_{FN(alt)}$ and 0 $PA_{FP(alt)}$)**	Total Negative agreement (A-/R-) **TNA = 11** **(0 $NA_{FN(alt)}$ and 0 $PD_{FP(alt)}$)**

Based on the data summarized in Table 29, the values of sensitivity of the alternative and reference methods, as well as the relative trueness and false positive ratio for the alternative method taking account the confirmations, are the following (See Table 30).

Table 30 - Sensitivity, relative trueness, false positive ratio and false negative ratio percentages

		Level L1
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)} x\ 100\ \%$	78.3 %
Sensitivity for the reference method	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)} x\ 100\ \%$	87.0 %
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100\ \%$	70.0 %
False positive ratio for the alternative method (unpaired evaluation)	$FPR = \frac{PA_{FP(alt)} + PD_{FP\,(alt)}}{TNA} x\ 100\ \%$	0.0 %
False negative ratio for the alternative method (unpaired evaluation)	$FNR = \frac{NA_{FN(alt)} + ND_{FN(alt)}}{PA + TND + PD}$	0.0 %

Unpaired study

With $TNA = NA + NA_{FN\,(alt)} + PD_{FP\,(alt)}$ $TND = ND + ND_{FN\,(alt)} + PA_{FP\,(alt)}$

4.3.6 Interpretation of trueness data

Negative deviations are listed in Table 31 for Level 1.

Positive deviations are listed in Table 32 for Level 1.

Table 31 - Negative deviations for Level 1

Level	Collaborator	Sample	Reference method	Alternative method	
				PCR result	Confirmation result
L1	B1	**4**	+	-	-
		7	+	-	-
		18	+	-	-
	F	**4**	+	-	-
	H	**11**	+	-	-
	I2	**43**	+	-	-
	J	**3**	+	-	-
		7	+	-	-
		14	+	-	-
		16	+	-	-
	K	**11**	+	-	-
		18	+	-	-
		24	+	-	-
	M	**16**	+	-	-
		24	+	-	-

Table 32 - Positive deviations for Level 1 and for Level 2

Level	Collaborator	Sample	Reference method	Alternative method	
				PCR result	Confirmation result
1	B1	**16**	-	+	+
	B2	**26**	-	+	+
		37	-	+	+
		38	-	+	+
	I2	**46**	-	+	+
	J	**18**	-	+	+
	K	**7**	-	+	+
	M	**11**	-	+	+
	O	**24**	-	+	+

For an **unpaired study design**, the difference between (TND – PD) is calculated for the level(s) where fractional recovery is obtained (so L_1 and possibly L_2). The observed value found for (TND – PD) shall not be higher than the AL. The AL is defined as $[(TND - PD)_{max}]$ and calculated per level where fractional recovery is obtained as described below using the following three parameters:

$$(p+)_{ref} = \frac{P_{x\,(ref)}}{N_{x\,(ref)}}$$

where

$P_{x(ref)}$ = is number of samples with a positive result obtained with the reference method at level *x* (L_1 or L_2) for all laboratories

$N_{x(ref)}$ = is number of samples tested at level *x* (L_1 or L_2) with the reference method by all laboratories

$$(p+)_{alt} = \frac{CP_{x\,(alt)}}{N_{x\,(alt)}}$$

where

$CP_{x(alt)}$ = is number of samples with a confirmed positive result obtained with the alternative method at level *x* (L_1 or L_2) for all laboratories

$N_{x(alt)}$ = is number of samples tested at level *x* (L_1 or L_2) with the alternative method by all laboratories

$$(TND - PD)_{max} = \sqrt{3N_{x\,(ref)}\; x\; ((p+)_{ref} + (p+)_{alt} - 2((p+)_{ref}\; x\; (p+)_{alt}))}$$

where

$N_{x(ref)}$ = is number of samples tested for level *x* (L_1 or L_2) with the reference method by all laboratories.

The AL is not met when the observed value is higher than the AL. When the AL is not met, investigations should be made (e.g. root cause analysis) in order to provide an explanation of the observed results. Based on the AL and the additional information, it is decided whether the alternative method is regarded as not fit for purpose. The reasons for acceptance of the alternative method when the AL is not met shall be stated in the study report.

In this study, fractional recovery was observed at Level 1. The calculations are the following, according to the ISO 16140-2:2016 and ISO 16140-2/A1:2024 (See Table 33).

Table 33 - Calculations

	Level 1	Level 2
N_X	80	88
$(p+)_{ref}$	0.750	0.988
$(p+)_{alt}$	0.675	0.950
AL = (TND - PD) max	9.95	3.83
TND - PD	6	3
Conclusion	TND-PD < AL	TND-PD < AL

The ISO 16140-2:2016 and ISO 16140-2/A1:2024 requirements are fulfilled as (TND - PD) is below the Acceptability limit (AL) for Level 1 and Level 2.

4.3.7 *Evaluation of the LOD $_{50\%}$ and RLOD between laboratories*

The LOD $_{50\%}$, was calculated using the EN ISO 16140-2 Excel spreadsheet available at https://standards.iso.org/iso/16140/-2/ed-1/en/amd/1/PODLOD-interlab_ver2.xlsm
The RLOD is defined as the ratio of the LODs of the alternative method and the reference method: **RLOD = LOD_{alt}/LOD_{ref}.**
The results are given in Table 34.

Table 34 - LOD $_{50\%}$ and RLOD

Method	LOD 50%	RLOD
Reference	0.5 [0.4; 0.7]	1.5
Alternative	0.7 [0.5; 1.0]	

5 GENERAL CONCLUSION

The **method comparison study conclusions** are:

Overall, the conclusions for the Method Comparison Study are:

- The scope of the method is broad range of food and production environmental samples with an exclusion on raw poultry and dust samples. Five food categories and one production environmental category were tested.
- The observed values for TND-PD and TND+PD for the individual categories and for all categories and protocols meet the acceptability limits (observed values ≤ AL) for QS5 and CFX96.
- For CFX Opus, the results meet the acceptability limits for the individual category and the mixed protocol but are just above the limits for the combined paired protocol. This instrument will be kept in the scope of the method. A mention is added in the IFU for both CFX Opus and CFX 96 in order to consider all curves with a sigmoidal shape (even below the threshold) as a potential positive result.
- It is possible to store the enrichment broth for 72h at 5 ± 3°C.
- The RLOD values (using the confirmed alternative method results) meet the acceptability limit of 1.5 for paired studies and 2.5 for unpaired studies.
- All target strains have been detected, with sometimes the requirement to add milk in the enrichment broth. None of the non-target strain have been detected.

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

- Despite some cross-contamination observed during the study and presumptive positive results observed at level 0 by the collaborator and the expert laboratory, the data retained for interpretation showed acceptable performance with no false positive nor false negative observed at the fractional recovery level (level 1).
- The observed value for TND-PD is lower than the acceptability limits.

- The data and interpretations comply with the ISO 16140-2:2016, ISO 16140-2/A1:2024 requirements.
- The Salmo*fast* PCR method is considered equivalent to the ISO standard.

Quimper, 02 March 2026

Noémie COSSEC
Technical Study Manager
Method performance in food microbiology

I hereby attest to the validation of the results of the analyses carried out under the COFRAC accreditation.

Astrid CARIOU
Manager
Method performance in food microbiology

I hereby attest to the validation of the verification of the conformity of the report (opinion and interpretation).

6 REFERENCES

- ISO 6579-1; Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Detection of Salmonella spp.

- ISO 4833-1:2013; Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30 degrees C by the pour plate technique

- ISO 6579-1; Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Detection of Salmonella spp.

- ISO 6887; Microbiology of the food chain -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – All parts.

- ISO 7218; Microbiology of food and animal feeding stuffs -- General requirements and guidance for microbiological examinations.

- ISO 16140-2:2016; Microbiology of the food chain -- Method validation -- Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method.

- 2016-028 (GC) Proposed MicroVal Technical committee interpretation of ISO 16140-2 and ISO

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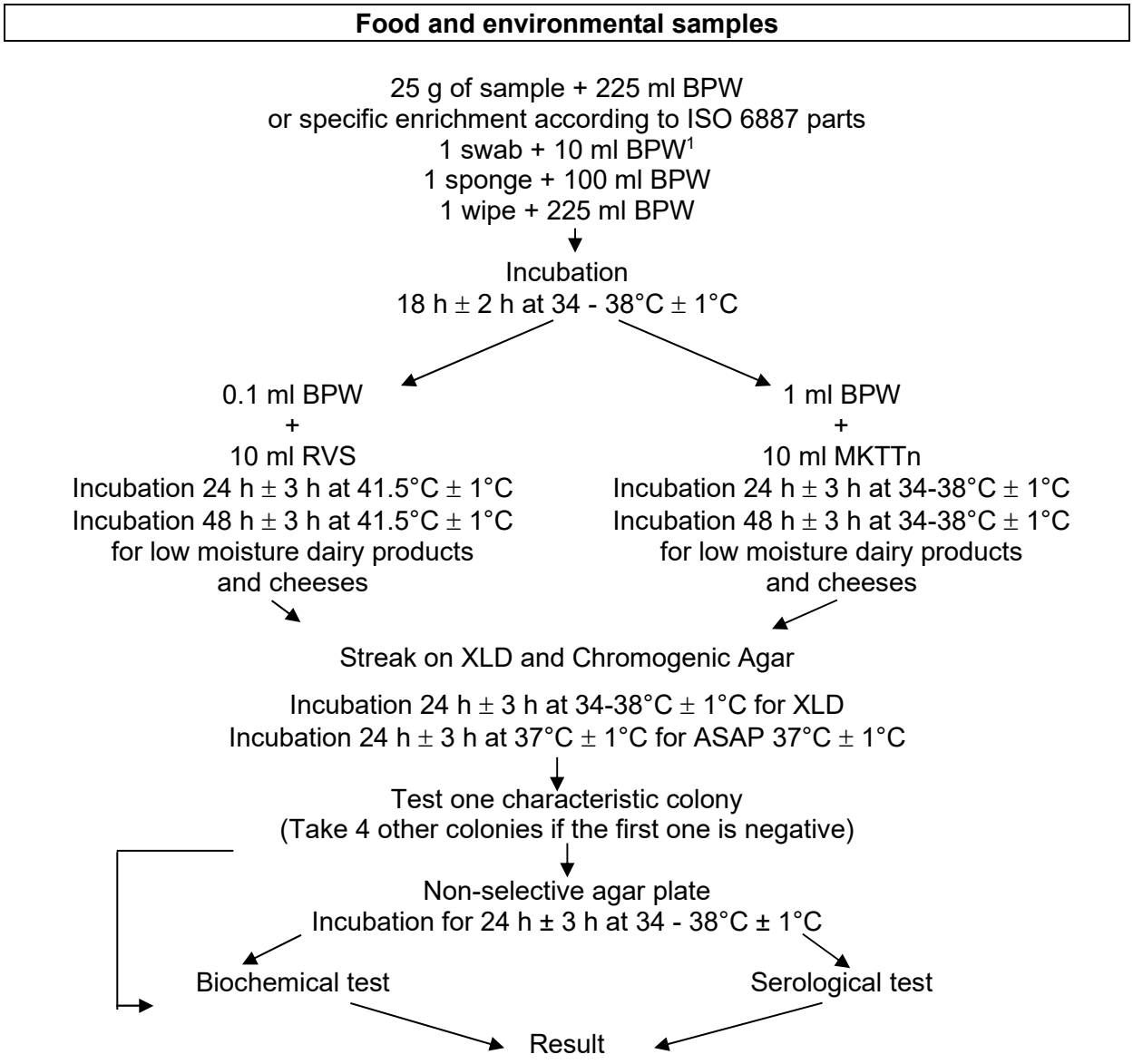
- Grobbel, M., Hammerl, J. A., Alt, K., Irrgang, A., Kaesbohrer, A., & Tenhagen, B. A. (2022). Comparison of antimicrobial resistances in Escherichia coli from conventionally and organically farmed poultry in Germany. Antibiotics

- Johnson, J. R., Porter, S. B., Johnston, B., Thuras, P., Clock, S. A., Crupain, M., & Rangan, U. (2017). Extraintestinal pathogenic and antimicrobial-resistant Escherichia coli, including sequence type 131 (ST131), from retail chicken breasts in the United States in 2013. Applied and Environmental Microbiology

- Hedman, H., Vasco, K., & Zhang, L. (2020). A review of antimicrobial resistance in poultry farming within low-resource settings. Animals

Appendix 1 - Flow diagram of the reference method

- **ISO 6579-1:2017**: Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* spp. - Part 1: detection of *Salmonella* spp.
- **ISO 6579-1/A1:2020**: Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* spp. - Part 1: detection of *Salmonella* spp. Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC



[1] For sampling after cleaning process premoisten
- 1 swab + 1 ml broth universal neutralizing (+ 9 ml BPW)
- 1 sponge + 10 ml broth universal neutralizing (+ 90 ml BPW)
- 1 wipe + BPW + 10 % neutralizing agent (+ 225 ml BPW)

Appendix 2 - Flow diagram of the alternative method: Salmo*fast* PCR

25 g of sample + 225 ml BPW
For all foods, except raw dairy, raw fish and seafood
Environmental samples: 25 g + 225 mL BPW
Swab + 10 ml BPW[2]
Sponge + 100 ml BPW[2,3]
Wipe + 225 ml BPW[3]

25 g of sample + 225 ml BPW + novobiocin (20 mg/L)
For raw dairy, raw fish and seafood
according to ISO 6887 parts

↓

Incubation
16-20 h at 34 - 38°C ± 1°C

↓ Direct streaking (10µL) onto XLD and Oxoid Brillance *Salmonella*

↓ ISO 6579-1 protocol

↓ Lysis (55 µL enriched sample)

↓ PCR test (5µL) using QS5 or CFX96 or CFX Opus DW

↓ Positive result

↓ Confirmation of typical colonies by

Thermo Scientific *Salmonella* Latex Agglutination
or biochemical and serological test according to ISO 6579-1

[2] For sampling after cleaning process pre-moisten
- 1 swab + 1 mL broth universal neutralizing (+ 9 mL BPW)
- 1 sponge + 10 mL broth universal neutralizing (+ 90 mL BPW)
- 1 wipe + BPW + 10% neutralizing agent (+ 215 mL BPW).

Note: Neutralizing agent is composed of phosphate disodique, Thiosulfate de sodium, Lécithine, Tween® 80, - L - Histidine

Appendix 3 - Kit insert(s)

See attached

Appendix 4 - Artificial contamination of the samples

Year of analysis	Sample N°	Product	Artificial contamination						Global result *Salmonella* spp.			Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation level CFU/test portion		QS5	CFX 96 standard	CFX OPUS DeepWell		
							Enumeration	Mean					
2025	**118479**	**Pork roast slice**	*S.* London Ad2422	Roast pork	Seeding 48h 5±3°C	/	0-1-1-1-3	1.2	+	+	+	1	a
2025	**118480**	**Haw without rind**	*S.* London Ad2422	Roast pork	Seeding 48h 5±3°C	/	0-1-1-1-3	1.2	-	-	-	1	a
2025	**118481**	**Cervelas salad**	*S.* London Ad2422	Roast pork	Seeding 48h 5±3°C	/	0-1-1-1-3	1.2	-	-	-	1	a
2025	**118482**	**Pork snout salad**	*S.* Kedougou Ad2227	Sausage	Seeding 48h 5±3°C	/	1-4-1-1-1	1.6	-	-	-	1	a
2025	**118483**	**Pork knack (22.9%FT)**	*S.* Kedougou Ad2227	Sausage	Seeding 48h 5±3°C	/	1-4-1-1-1	1.6	+	+	+	1	a
2025	**118484**	**Terrine (25%FT)**	*S.* Derby Ad1879	Pork tenderloin	Seeding 48h 5±3°C	/	3-2-1-1-0	1.4	-	-	-	1	a
2025	**118485**	**Pork RTE**	*S.* Derby Ad1879	Pork tenderloin	Seeding 48h 5±3°C	/	3-2-1-1-0	1.4	-	-	-	1	a
2025	**118586**	**Beef tongue**	*S.* Ohio Ad2224	Beef meat	Spiking 12min at 56°C	1.1	0-0-1-0-0	0.2	+	+	+	1	a
2025	**118587**	**Veal meat**	*S.* Ohio Ad2224	Beef meat	Spiking 12min at 56°C	1.1	0-0-1-0-0	0.2	+	+	+	1	a
2025	**118588**	**Beef with win preparation**	*S.* Typhimurium 911	Merguez	Spiking 12min at 56°C	1.18	1-1-2-0-1	1.0	+	+	+	1	a
2025	**119842**	**Ham with rind**	*S.* Agona Ad2281	Pork	Spiking 12min at 56°C	1.2	0-1-0-2-1	0.8	+	+	+	1	a
2025	**119843**	**Pate**	*S.* Agona Ad2281	Pork	Spiking 12min at 56°C	1.2	0-1-0-2-1	0.8	-	-	-	1	a
2025	**119844**	**Pork tenderloin with porcini mushroom sauce**	*S.* Agona Ad2281	Pork	Spiking 12min at 56°C	1.2	0-1-0-2-1	0.8	+	+	+	1	a
2025	**119845**	**Beef with onions**	*S.* Agona Ad2281	Pork	Spiking 12min at 56°C	1.2	0-1-0-2-1	0.8	-	-	-	1	a
2025	**119846**	**Diced ham**	*S.* Typhimurium Ad2226	Merguez	Spiking 12min at 56°C	1.9	1-1-1-0-0	0.6	+	+	+	1	a
2025	**119847**	**Veal meat**	*S.* Typhimurium Ad2226	Merguez	Spiking 12min at 56°C	1.9	1-1-1-0-0	0.6	+	+	+	1	a
2025	**119848**	**Pork snout salad**	*S.* Typhimurium Ad2226	Merguez	Spiking 12min at 56°C	1.9	1-1-1-0-0	0.6	+	+	+	1	a
2025	**119849**	**RTE (beef meet with pepper)**	*S.* Typhimurium Ad2226	Merguez	Spiking 12min at 56°C	1.9	1-1-1-0-0	0.6	+	+	+	1	a
2025	**119850**	**Beef bourguignon**	*S.* Bredeney 912	Sausage	Spiking 12min at 56°C	1.7	0-1-1-0-1	0.6	+	+	+	1	a
2025	**119851**	**Cervelas with vinaigrette sauce**	*S.* Bredeney 912	Sausage	Spiking 12min at 56°C	1.7	0-1-1-0-1	0.6	-	-	-	1	a
2025	**119852**	**Pork roast 100% tenderloin**	*S.* Bredeney 912	Sausage	Spiking 12min at 56°C	1.7	0-1-1-0-1	0.6	+	+	+	1	a
2024	**2491**	**Frozen raw veal**	*S.* Typhimurium 22	Beef meat	Seeding 1 week at -20°C	/	1-0-3-0-3	1.4	-	-	-	1	b
2024	**2492**	**Frozen raw pork**	*S.* Derby 539	Merguez	Seeding 1 week at -20°C	/	0-2-4-0-3	1.8	+	+	+	1	b
2024	**2530**	**Marinated beef meat**	*S.* Typhimurium 22	Beef meat	Seeding 48h 3±2°C	/	0-0-0-0-1	0.2	+	+	+	1	b
2024	**2531**	**Marinated pork meat**	*S.* Derby 539	Merguez	Seeding 48h 3±2°C	/	0-1-2-2-2	1.4	+	+	+	1	b
2024	**2532**	**Marinated beef carpaccio**	*S.* Enteritidis Ad926	Veal	Seeding 48h 3±2°C	/	3-3-2-1-2	2.2	+	+	+	1	b
2023	**4782**	**Raw fresh beef meat**	S. Bredeney Ad3309	Beef meat	Seeding 48h 3±2°C	/	2-0-5-2-2	2.2	+	+	+	1	b
2023	**4783**	**Raw fresh beef meat**	S. Bredeney Ad3309	Beef meat	Seeding 48h 3±2°C	/	2-0-5-2-2	2.2	+	+	+	1	b
2023	**4784**	**Raw fresh beef meat**	S. Bredeney Ad3309	Beef meat	Seeding 48h 3±2°C	/	2-0-5-2-2	2.2	+	+	+	1	b
2023	**4785**	**Raw fresh pork meat**	S. Agona Ad2281	Pork meat	Seeding 48h 3±2°C	/	0-6-5-2-4	3.4	+	+	+	1	b
2023	**4786**	**Raw fresh pork meat**	S. Agona Ad2281	Pork meat	Seeding 48h 3±2°C	/	0-6-5-2-4	3.4	-	-	-	1	b
2023	**5700**	**Raw beef meet (steak)**	*S.* Panama Ad195	Beef meat	Seeding 48h 3±2°C	/	4-2-1-3-1	2.2	+	+	+	1	b
2023	**5701**	**Raw lamb meat**	*S.* Bovismorbificans Ad6629	Pork meat	Seeding 48h 3±2°C	/	1-1-2-1-3	1.6	+	+	+	1	b
2023	**5702**	**Raw beef meat (balls)**	*S.* Panama Ad195	Beef meat	Seeding 48h 3±2°C	/	4-2-1-3-1	2.2	+	+	+	1	b
2023	**5703**	**Raw veal meat**	*S.* Schwarzengrund Ad2859	Pork meat	Seeding 48h 3±2°C	/	0-2-1-2-1	1.2	-	-	-	1	b
2023	**5704**	**Raw pork meat**	*S.* Typhimurium 702	Pork meat	Seeding 48h 3±2°C	/	1-3-3-3-3	2.6	-	-	-	1	b
2024	**376**	**Raw sausage**	*S.* Infantis 2556	Pork meat	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	+	+	+	1	c
2024	**377**	**Raw smoked bacon**	*S.* Infantis 2556	Pork meat	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	-	-	-	1	c

Year of analysis	Sample N°	Product	Artificial contamination						Global result *Salmonella* spp.			Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation level CFU/test portion		QS5	CFX 96 standard	CFX OPUS DeepWell		
							Enumeration	Mean					
2024	**378**	**Raw slices of smoked bacon**	*S.* Infantis 2556	Pork meat	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	+	+	+	1	c
2023	**4545**	**Raw bacon**	S. Branderup Ad2420	Meat product	Seeding 48h 3±2°C	/	2-1-3-1-0	1.4	-	-	-	1	c
2023	**4546**	**Merguez**	S. Branderup Ad2420	Meat product	Seeding 48h 3±2°C	/	2-1-3-1-0	1.4	+	+	+	1	c
2023	**4547**	**Sausage**	S. Branderup Ad2420	Meat product	Seeding 48h 3±2°C	/	2-1-3-1-0	1.4	+	+	+	1	c
2023	**4548**	**Bacon**	S. Branderup Ad2420	Meat product	Seeding 48h 3±2°C	/	2-1-3-1-0	1.4	+	+	+	1	c
2023	**4549**	**Raw fresh pork meat**	S. Branderup Ad2420	Meat product	Seeding 48h 3±2°C	/	2-1-3-1-0	1.4	+	+	+	1	c
2023	**5705**	**Dry-cured ham**	*S.* Typhimurium 702	Pork meat	Seeding 48h 3±2°C	/	1-3-3-3-3	2.6	+	+	+	1	c
2023	**5706**	**Raw sausage**	*S.* Bovismorbificans Ad6629	Pork meat	Seeding 48h 3±2°C	/	1-1-2-1-3	1.6	+	+	+	1	c
2023	**5707**	**Raw smoked bacon**	*S.* Schwarzengrund Ad2859	Pork meat	Seeding 48h 3±2°C	/	0-2-1-2-1	1.2	+	+	+	1	c
2023	**5713**	**Raw sausage**	*S.* Typhimurium 702	Pork meat	Seeding 48h 3±2°C	/	1-3-3-3-3	2.6	-	-	-	1	c
2023	**5714**	**Raw merguez**	*S.* Bovismorbificans Ad6629	Pork meat	Seeding 48h 3±2°C	/	1-1-2-1-3	1.6	+	+	+	1	c
2024	**1560**	**Raw cow's milk**	*S.*Meleagridis 505	Dairy product	Seeding 48h 3±2°C	/	0-4-1-1-2	1.6	+	+	+	2	a
2024	**1561**	**Raw cow's milk**	*S.*Meleagridis 505	Dairy product	Seeding 48h 3±2°C	/	0-4-1-1-2	1.6	-	+	+	2	a
2024	**1562**	**Raw cow's milk cheese**	*S.*Meleagridis 505	Dairy product	Seeding 48h 3±2°C	/	0-4-1-1-2	1.6	+	+	+	2	a
2024	**1563**	**Raw cow's milk cheese**	*S.*Montevideo 510	Dairy product	Seeding 48h 3±2°C	/	1-3-1-1-1	1.4	+	+	+	2	a
2024	**1564**	**Raw cow's milk cheese**	*S.*Montevideo 510	Dairy product	Seeding 48h 3±2°C	/	1-3-1-1-1	1.4	+	+	+	2	a
2024	**1565**	**Raw cow's milk cheese**	*S.*Infantis 401B	Dairy product	Seeding 48h 3±2°C	/	1-1-2-5-2	2.2	+	+	+	2	a
2024	**1566**	**Raw cream**	*S.*Infantis 401B	Dairy product	Seeding 48h 3±2°C	/	1-1-2-5-2	2.2	-	-	-	2	a
2024	**1567**	**Raw butter**	*S.*Infantis 401B	Dairy product	Seeding 48h 3±2°C	/	1-1-2-5-2	2.2	+	+	+	2	a
2024	**1568**	**Raw butter**	*S.*Infantis 401B	Dairy product	Seeding 48h 3±2°C	/	1-1-2-5-2	2.2	+	+	+	2	a
2024	**1569**	**Raw butter**	*S.*Montevideo 510	Dairy product	Seeding 48h 3±2°C	/	1-3-1-1-1	1.4	+	+	+	2	a
2023	**4802**	**Raw butter**	S. Cerro Ad2707	Dairy product	Seeding 48h 3±2°C	/	2-1-1-0-0	0.8	+	+	+	2	a
2023	**4803**	**Raw cream**	S. Cerro Ad2707	Dairy product	Seeding 48h 3±2°C	/	2-1-1-0-0	0.8	-	-	-	2	a
2023	**4804**	**Raw cow milk cheese**	S. Cerro Ad2707	Dairy product	Seeding 48h 3±2°C	/	2-1-1-0-0	0.8	-	-	-	2	a
2023	**4805**	**Raw cow milk cheese**	S. Cerro Ad2707	Dairy product	Seeding 48h 3±2°C	/	2-1-1-0-0	0.8	+	+	+	2	a
2023	**4806**	**Raw cow milk cheese**	S. Cerro Ad2707	Dairy product	Seeding 48h 3±2°C	/	2-1-1-0-0	0.8	+	+	+	2	a
2024	**119**	**Pasteurized cow milk cheese**	*S.* Dublin Ad531	Raw milk cheese	Seeding 48h 3±2°C	/	2-4-3-3-5	3.4	-	-	-	2	b
2024	**120**	**Pasteurized cream**	*S.* Indiana Ad174	White cheese	Seeding 48h 3±2°C	/	1-0-1-0-2	0.8	-	-	-	2	b
2024	**121**	**Pasteurized cow milk cheese**	*S.*Meleagridis 505	Dairy product	Spiking 10min at 56°C	1.11	1-0-1-3-0	1.0	+	+	+	2	b
2024	**122**	**Dairy dessert (panna cotta)**	*S.*Meleagridis 505	Dairy product	Spiking 10min at 56°C	1.11	1-0-1-3-0	1.0	+	+	+	2	b
2024	**123**	**Pasteurized cheese milk (garlic, herbs)**	*S.*Montevideo 510	Dairy product	Spiking 10min at 56°C	1.66	0-1-0-0-0	0.2	+	+	+	2	b
2024	**124**	**Pasteurized ewe milk cheese**	*S.*Infantis 401B	Dairy product	Spiking 10min at 56°C	1.88	0-1-1-3-0	1.0	+	+	+	2	b
2023	**4525**	**Pasteurized cow milk cheese**	S. Livingstone Ad2150	Dairy product	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	2	b
2023	**4526**	**Pasteurized cow milk cheese**	S. Livingstone Ad2150	Dairy product	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	2	b
2023	**4527**	**Pasteurized ewe milk cheese**	S. Livingstone Ad2150	Dairy product	Seeding 48h 3±2°C	/	0-0-0-0-0	<1,0	+	+	+	2	b
2023	**4528**	**Pasteurized cream**	S. Livingstone Ad2150	Dairy product	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	2	b
2023	**4529**	**Pasteurized cream**	S. Livingstone Ad2150	Dairy product	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	2	b
2023	**5152**	**White cheese (fat level 3%)**	S. Typhimurium 4	Dairy product	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	-	-	-	2	b
2023	**5153**	**Dairy dessert**	S. Anatum 26	Dairy product	Seeding 48h 3±2°C	/	2-0-2-0-2	1.2	+	+	+	2	b
2023	**5154**	**Dairy dessert**	S. Typhimurium 4	Dairy product	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	-	-	-	2	b
2023	**5155**	**White cheese (fat level 0%)**	S. Typhimurium 4	Dairy product	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	-	-	-	2	b

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2023	**5156**	**Dairy dessert (panna cotta)**	S. Typhimurium 4	Dairy product	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	+	+	+	2	b
2023	**5157**	**Dairy dessert (panna cotta)**	S. Anatum 26	Dairy product	Seeding 48h 3±2°C	/	2-0-2-0-2	1.2	-	-	-	2	b
2023	**5158**	**Dairy dessert (vanilla milk shake)**	S. Anatum 26	Dairy product	Seeding 48h 3±2°C	/	2-0-2-0-2	1.2	+	+	+	2	b
2023	**5159**	**Dairy dessert (chocolate milk shake)**	S. Anatum 26	Dairy product	Seeding 48h 3±2°C	/	2-0-2-0-2	1.2	+	+	+	2	b
2023	**5618**	**Grated Emmental cheese**	S. Stourbridge Ad2297	Raw milk cheese	Seeding 48h 3±2°C	/	1-2-1-3-1	1.6	-	-	-	2	b
2023	**5619**	**Dairy dessert**	S. Ohio Ad2213	Raw cream	Seeding 48h 3±2°C	/	3-1-2-3-3	2.4	-	-	-	2	b
2023	**5620**	**Pasteurized cheese**	S. Mbandaka Ad2296	Raw milk	Seeding 48h 3±2°C	/	2-3-3-2-1	2.2	+	+	+	2	b
2023	**5621**	**Pasteurized goat milk cheese**	S. Stourbridge Ad2297	Raw milk cheese	Seeding 48h 3±2°C	/	1-2-1-3-1	1.6	-	-	-	2	b
2023	**5622**	**Fresh pasteurized milk**	S. Mbandaka Ad2296	Raw milk	Seeding 48h 3±2°C	/	2-3-3-2-1	2.2	+	+	+	2	b
2023	**5623**	**Fresh pasteurized milk**	S. Montevideo Ad912	Raw milk	Seeding 48h 3±2°C	/	1-0-1-1-2	1.0	+	+	+	2	b
2024	**136**	**Semi-skimmed milk powder**	S. Goldcoast Ad3006	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	2.3	+	+	+	2	c
2024	**137**	**Semi-skimmed milk powder**	S. Derby Ad3381	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**138**	**Semi-skimmed milk powder**	S. Anatum Ad2718	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**139**	**Semi-skimmed milk powder with calcium, vitamins**	S. Duisburg Ad1812	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**140**	**Whole milk powder**	S. Goldcoast Ad3006	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	2.3	-	-	-	2	c
2024	**141**	**Whole milk powder**	S. Derby Ad3381	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**142**	**Whole milk powder**	S. Anatum Ad2718	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**143**	**Skimmed milk powder**	S. Duisburg Ad1812	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**144**	**Organic skimmed milk powder**	S. Goldcoast Ad3006	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	2.3	-	-	-	2	c
2024	**145**	**Milk powder (for coffee)**	S. Derby Ad3381	Dairy product	Seeding with lyophilised strain 2 weeks at ambient temperature	/	/	3.0	+	+	+	2	c
2024	**121**	**Brussels cabbage**	S. Virchow Ad1721	Cereals	Seeding 48h 3±2°C	/	4-2-4-1-2	2.6	+	+	+	3	a
2024	**122**	**Broccoli**	S. Lexington 2003S16	Soya	Seeding 48h 3±2°C	/	2-1-2-0-1	1.2	-	-	-	3	a
2024	**379**	**Leek**	S. Virchow F276	Vegetables	Seeding 48h 3±2°C	/	4-6-1-4-2	3.4	+	+	+	3	a
2024	**380**	**Tomato**	S. Virchow F276	Vegetables	Seeding 48h 3±2°C	/	4-6-1-4-2	3.4	+	+	+	3	a
2023	**4787**	**Raw cucumber**	S. Kasenyi Ad2921	Vegetables	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	+	+	+	3	a
2023	**4788**	**Raw tomato**	S. Kasenyi Ad2921	Vegetables	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	+	+	+	3	a
2023	**4789**	**Raw mushrooms**	S. Kasenyi Ad2921	Vegetables	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	+	+	+	3	a
2023	**4790**	**Raw red cabbage**	S. Kasenyi Ad2921	Vegetables	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	+	+	+	3	a
2023	**4791**	**Raw mix vegetables**	S. Kasenyi Ad2921	Vegetables	Seeding 48h 3±2°C	/	0-2-1-2-2	1.4	-	-	-	3	a

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2023	**5471**	**Raw mushroom**	*S.* Livingstone Ad2566	Potato	Seeding 48h 3±2°C	/	3-3-1-1-4	2.4	+	+	+	3	a
2023	**5472**	**Raw carrot**	*S.* Caracas Ad2322	Vegetables	Seeding 48h 3±2°C	/	2-3-2-2-3	2.4	-	-	-	3	a
2023	**5473**	**Raw leek**	*S.* Derby Ad3057	Spinach	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	3	a
2023	**5474**	**Raw tomato**	*S.* Caracas Ad2322	Vegetables	Seeding 48h 3±2°C	/	2-3-2-2-3	2.4	+	+	+	3	a
2023	**5475**	**Raw aubergine**	*S.* Derby Ad3057	Spinach	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	+	+	+	3	a
2023	**5476**	**Raw cucumber**	*S.* Livingstone Ad2566	Potato	Seeding 48h 3±2°C	/	3-3-1-1-4	2.4	+	+	+	3	a
2023	**5477**	**Raw red pepper**	*S.* Derby Ad3057	Spinach	Seeding 48h 3±2°C	/	0-0-0-0-0	0.0	-	-	-	3	a
2024	**123**	**Pomelos**	*S.* Agona Ad1725	Cereals	Seeding 48h 3±2°C	/	1-2-4-0-2	1.8	-	-	-	3	b
2024	**381**	**Banana**	*S.* Virchow F276	Vegetables	Seeding 48h 3±2°C	/	4-6-1-4-2	3.4	+	+	+	3	b
2023	**4792**	**Orange**	S. Enteritidis 2003SAL06400	Vegetables	Seeding 48h 3±2°C	/	5-0-0-1-1	1.4	+	+	+	3	b
2023	**4793**	**Pear**	S. Enteritidis 2003SAL06400	Vegetables	Seeding 48h 3±2°C	/	5-0-0-1-1	1.4	-	-	-	3	b
2023	**4794**	**Plum**	S. Enteritidis 2003SAL06400	Vegetables	Seeding 48h 3±2°C	/	5-0-0-1-1	1.4	+	+	+	3	b
2023	**4795**	**Apple**	S. Enteritidis 2003SAL06400	Vegetables	Seeding 48h 3±2°C	/	5-0-0-1-1	1.4	+	+	+	3	b
2023	**4796**	**Banana**	S. Enteritidis 2003SAL06400	Vegetables	Seeding 48h 3±2°C	/	5-0-0-1-1	1.4	+	+	+	3	b
2023	**4963**	**Clementine**	S. Typhimurium Ad2034	Vegetables	Seeding 48h 3±2°C	/	3-2-0-1-1	1.4	-	-	-	3	b
2023	**4964**	**Banana**	S. Typhimurium Ad2034	Vegetables	Seeding 48h 3±2°C	/	3-2-0-1-1	1.4	+	+	+	3	b
2023	**4965**	**Apple**	S. Typhimurium Ad2034	Vegetables	Seeding 48h 3±2°C	/	3-2-0-1-1	1.4	+	+	+	3	b
2023	**4966**	**Grapes**	S. Typhimurium Ad2034	Vegetables	Seeding 48h 3±2°C	/	3-2-0-1-1	1.4	+	+	+	3	b
2023	**4967**	**Kiwi**	S. Typhimurium Ad2034	Vegetables	Seeding 48h 3±2°C	/	3-2-0-1-1	1.4	+	+	+	3	b
2023	**5478**	**Apple**	*S.* Typhimurium 2014LSAL04138	River	Seeding 48h 3±2°C	/	0-1-0-1-0	0.4	-	-	-	3	b
2023	**5479**	**Clementine**	*S.* Derby Ad1683	Strawberry tart	Seeding 48h 3±2°C	/	0-1-1-0-0	0.4	+	+	+	3	b
2023	**5480**	**Pear**	*S.* Odozi Ad2860	Vegetables	Seeding 48h 3±2°C	/	0-1-0-0-0	0.2	-	-	-	3	b
2023	**5481**	**Banana**	*S.* Typhimurium 2014LSAL04138	River	Seeding 48h 3±2°C	/	0-1-0-1-0	0.4	-	-	-	3	b
2023	**5482**	**White grapes**	*S.* Derby Ad1683	Strawberry tart	Seeding 48h 3±2°C	/	0-1-1-0-0	0.4	-	-	-	3	b
2023	**5483**	**Orange**	*S.* Typhimurium 2014LSAL04138	River	Seeding 48h 3±2°C	/	0-1-0-1-0	0.4	-	-	-	3	b
2023	**5484**	**Persimmon**	*S.* Odozi Ad2860	Vegetables	Seeding 48h 3±2°C	/	0-1-0-0-0	0.2	-	-	-	3	b
2023	**4958**	**Sprouts (organic alfalfa, leeks, lentils)**	S. Havana Ad2728	Vegetables	Seeding 48h 3±2°C	/	3-2-1-1-1	1.6	+	+	+	3	c
2023	**4959**	**Sprouts (organic alfalfa)**	S. Havana Ad2728	Vegetables	Seeding 48h 3±2°C	/	3-2-1-1-1	1.6	+	+	+	3	c
2023	**4960**	**Sprouts (organic radish, fennel)**	S. Havana Ad2728	Vegetables	Seeding 48h 3±2°C	/	3-2-1-1-1	1.6	+	+	+	3	c
2023	**4961**	**Sprouts (alfalfa)**	S. Havana Ad2728	Vegetables	Seeding 48h 3±2°C	/	3-2-1-1-1	1.6	+	+	+	3	c
2023	**4962**	**Sprouts (radish)**	S. Havana Ad2728	Vegetables	Seeding 48h 3±2°C	/	3-2-1-1-1	1.6	+	+	+	3	c
2023	**4982**	**Sprouts (organic alfalfa, leeks, lentils)**	S. Virchow Ad2569	Vegetables	Seeding 48h 3±2°C	/	2-2-2-0-2	1.6	+	+	+	3	c
2023	**4983**	**Sprouts (organic alfalfa)**	S. Virchow Ad2569	Vegetables	Seeding 48h 3±2°C	/	2-2-2-0-2	1.6	-	-	-	3	c
2023	**4984**	**Sprouts (organic radish, fennel)**	S. Virchow Ad2569	Vegetables	Seeding 48h 3±2°C	/	2-2-2-0-2	1.6	+	+	+	3	c
2023	**4985**	**Sprouts (alfalfa)**	S. Virchow Ad2569	Vegetables	Seeding 48h 3±2°C	/	2-2-2-0-2	1.6	-	-	-	3	c
2023	**4986**	**Sprouts (radish)**	S. Virchow Ad2569	Vegetables	Seeding 48h 3±2°C	/	2-2-2-0-2	1.6	+	+	+	3	c
2023	**5485**	**Sprouts**	*S.* Panama Ad1733	Vegetables	Seeding 48h 3±2°C	/	0-0-0-3-1	0.8	-	-	-	3	c
2023	**5486**	**Sprouts**	*S.* Lexington 2003S03	Oilseeds	Seeding 48h 3±2°C	/	0-0-0-2-0	0.4	+	+	+	3	c
2023	**5487**	**Sprouts**	*S.* Panama Ad1733	Vegetables	Seeding 48h 3±2°C	/	0-0-0-3-1	0.8	-	-	-	3	c
2023	**5488**	**Sprouts**	*S.* Oranienburg Ad1724	Vegetables	Seeding 48h 3±2°C	/	0-3-2-0-1	1.2	+	+	+	3	c
2023	**5489**	**Sprouts**	*S.* Lexington 2003S03	Oilseeds	Seeding 48h 3±2°C	/	0-0-0-2-0	0.4	-	-	-	3	c

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2023	**5490**	**Sprouts**	*S.* Oranienburg Ad1724	Vegetables	Seeding 48h 3±2°C	/	0-3-2-0-1	1.2	-	-	-	3	c
2023	**5491**	**Sprouts**	*S.* Panama Ad1733	Vegetables	Seeding 48h 3±2°C	/	0-0-0-3-1	0.8	+	+	+	3	c
2023	**4530**	**RTE salad (dry-cured ham, mozzarella, penne salad)**	S. London A00P085	RTE food	Seeding 48h 3±2°C	/	3-3-1-1-2	2.0	+	+	+	4	a
2023	**4531**	**RTE salad (chicken, cheese, pasta salad)**	S. London A00P085	RTE food	Seeding 48h 3±2°C	/	3-3-1-1-2	2.0	+	+	+	4	a
2023	**4532**	**Sandwich (with delicatessen)**	S. London A00P085	RTE food	Seeding 48h 3±2°C	/	3-3-1-1-2	2.0	+	+	+	4	a
2023	**4533**	**Sandwich (tuna, raw vegetables)**	S. London A00P085	RTE food	Seeding 48h 3±2°C	/	3-3-1-1-2	2.0	-	-	-	4	a
2023	**4534**	**Chocolate mousse**	S. London A00P085	RTE food	Seeding 48h 3±2°C	/	3-3-1-1-2	2.0	+	+	+	4	a
2023	**5160**	**Chocolate mousse**	S. Worthington 3506	RTE food	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	-	-	-	4	a
2023	**5161**	**Chocolate mousse**	S. Montevideo Ad1686	RTE food	Seeding 48h 3±2°C	/	0-6-2-3-0	2.2	+	+	+	4	a
2023	**5162**	**RTE salad (cucumber, salmon, pasta salad)**	S. Worthington 3506	RTE food	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	+	+	+	4	a
2023	**5163**	**RTE salad (pasta, surimi salad)**	S. Worthington 3506	RTE food	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	+	+	+	4	a
2023	**5164**	**RTE salad (rice, salmon, cucumber salad)**	S. Montevideo Ad1686	RTE food	Seeding 48h 3±2°C	/	0-6-2-3-0	2.2	-	-	-	4	a
2023	**5165**	**RTE salad (rice salad, tuna, basil)**	S. Montevideo Ad1686	RTE food	Seeding 48h 3±2°C	/	0-6-2-3-0	2.2	+	+	+	4	a
2023	**5166**	**Sandwich (ham, Emmental)**	S. Worthington 3506	RTE food	Seeding 48h 3±2°C	/	2-1-0-1-2	1.2	+	+	+	4	a
2023	**5167**	**Sandwich (rosette, gherkin)**	S. Montevideo Ad1686	RTE food	Seeding 48h 3±2°C	/	0-6-2-3-0	2.2	+	+	+	4	a
2024	**5168**	**RTE (lasagne)**	*S.*Infantis 12	RTE	Spiking 10min at 56°C	1.35	0-0-0-4-0	0.8	+	+	+	4	b
2024	**5169**	**RTE (pasta, pork, cream)**	*S.*Infantis 12	RTE	Spiking 10min at 56°C	1.35	0-0-0-4-0	0.8	+	+	+	4	b
2024	**5170**	**RTE (pasta, meat, cheese)**	*S.*Heidelberg 285	RTRH	Spiking 10min at 56°C	1.04	1-3-0-0-2	1.2	+	+	+	4	b
2024	**5171**	**RTE (pasta, chicken, cream)**	*S.*Heidelberg 285	RTRH	Spiking 10min at 56°C	1.04	1-3-0-0-2	1.2	-	-	-	4	b
2023	**4535**	**RTRH food (tuna, vegetables, mushrooms, carrot)**	S. Anatum Ad2727	Seafood product	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	-	-	-	4	b
2023	**4539**	**RTRH food (fish parmentier, chives)**	S. Anatum Ad2727	Seafood product	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	-	-	-	4	b
2023	**5168**	**RTRH (Cooked rice, pepper, red beans)**	S. Hvittingfoss Ad2325	Raviolis	Seeding 48h 3±2°C	/	1-0-2-2-1	1.2	+	+	+	4	b
2023	**5169**	**RTRH (rice, onions peppers aromatic herbs)**	S. Typhimurium 305	RTRH	Seeding 48h 3±2°C	/	2-4-1-3-0	2.0	+	+	+	4	b
2023	**5170**	**RTRH (beef ravioli)**	S. Hvittingfoss Ad2325	Raviolis	Seeding 48h 3±2°C	/	1-0-2-2-1	1.2	+	+	+	4	b
2023	**5171**	**RTRH (tortellini, cheese, tomato sauce)**	S. Typhimurium 305	RTRH	Seeding 48h 3±2°C	/	2-4-1-3-0	2.0	-	-	-	4	b
2023	**5172**	**RTRH ("bouchée à la Reine" chicken)**	S. Hvittingfoss Ad2325	Raviolis	Seeding 48h 3±2°C	/	1-0-2-2-1	1.2	-	-	-	4	b
2023	**5173**	**RTRH ("bouchée à la Reine" chicken)**	S. Typhimurium 305	RTRH	Seeding 48h 3±2°C	/	2-4-1-3-0	2.0	+	+	+	4	b
2023	**5174**	**RTRH (chicken, mushroom risotto, cream sauce)**	S. Hvittingfoss Ad2325	Raviolis	Seeding 48h 3±2°C	/	1-0-2-2-1	1.2	+	+	+	4	b
2023	**5175**	**RTRH (chicken, mushroom risotto)**	S. Typhimurium 305	RTRH	Seeding 48h 3±2°C	/	2-4-1-3-0	2.0	+	+	+	4	b

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2023	**5176**	**RTRH (salmon steak, rice, dill sauce)**	S. Senftenberg Ad355	Seafood product	Seeding 48h 3±2°C	/	1-1-4-0-0	1.2	+	+	+	4	b
2023	**5177**	**RTRH (Alaska pollack, Armorican sauce, rice duo)**	S. Senftenberg Ad355	Seafood product	Seeding 48h 3±2°C	/	1-1-4-0-0	1.2	+	+	+	4	b
2023	**5178**	**RTRH (white hake, salmon, vegetable, rice)**	S. Senftenberg Ad355	Seafood product	Seeding 48h 3±2°C	/	1-1-4-0-0	1.2	-	-	-	4	b
2023	**5179**	**RTRH (prawns, parsley, penne, vegetables)**	S. Senftenberg Ad355	Seafood product	Seeding 48h 3±2°C	/	1-1-4-0-0	1.2	+	+	+	4	b
2023	**5180**	**RTRH (shrimp noodles, mushrooms, vegetables)**	S. Senftenberg Ad355	Seafood product	Seeding 48h 3±2°C	/	1-1-4-0-0	1.2	+	+	+	4	b
2024	**286**	**Frozen French fries, fluffy matchstick chips**	*S.* Typhimurium Ad1603	RTRH	Seeding 2 weeks at -20°C	/	4-3-2-1-1	2.2	+	+	+	4	c
2024	**287**	**Frozen French fries with skin**	*S.* Anatum 6140	RTRH	Seeding 2 weeks at -20°C	/	0-1-2-1-1	1.0	-	-	-	4	c
2024	**288**	**Frozen pizza (ham, cheese)**	*S.* Heidelberg 285	RTRH	Seeding 2 weeks at -20°C	/	1-3-4-1-2	2.2	+	+	+	4	c
2024	**289**	**Frozen pizza (4 cheeses)**	*S.* Typhimurium Ad1603	RTRH	Seeding 2 weeks at -20°C	/	4-3-2-1-1	2.2	+	+	+	4	c
2024	**290**	**Frozen pizza (Bolognese)**	*S.* Anatum 6140	RTRH	Seeding 2 weeks at -20°C	/	0-1-2-1-1	1.0	+	+	+	4	c
2024	**291**	**Frozen RTRH product (pasta, chicken, mushroom sauce)**	*S.* Heidelberg 285	RTRH	Seeding 2 weeks at -20°C	/	1-3-4-1-2	2.2	-	-	-	4	c
2024	**292**	**Frozen RTRH product (fish, rice, vegetables)**	*S.* Typhimurium Ad1603	RTRH	Seeding 2 weeks at -20°C	/	4-3-2-1-1	2.2	-	-	-	4	c
2024	**293**	**Frozen puff pastry RTRH with ham and cheese**	*S.* Anatum 6140	RTRH	Seeding 2 weeks at -20°C	/	0-1-2-1-1	1.0	-	-	-	4	c
2024	**294**	**Frozen lasagne**	*S.* Heidelberg 285	RTRH	Seeding 2 weeks at -20°C	/	1-3-4-1-2	2.2	-	-	-	4	c
2024	**295**	**Frozen gratin with bacon, cream, cheese**	*S.* Typhimurium Ad1603	RTRH	Seeding 2 weeks at -20°C	/	4-3-2-1-1	2.2	+	+	+	4	c
2024	**296**	**Frozen puff pastry RTRH with tomato and salmon**	*S.* Anatum 6140	RTRH	Seeding 2 weeks at -20°C	/	0-1-2-1-1	1.0	-	-	-	4	c
2024	**297**	**Frozen puff pastry RTRH with spinach and goat cheese**	*S.* Heidelberg 285	RTRH	Seeding 2 weeks at -20°C	/	1-3-4-1-2	2.2	-	-	-	4	c
2024	**802**	**Frozen RTRH (quiches cheese, ham, bacon)**	*S.*Kentucky 2011S20	Food product	Seeding 2 weeks at -20°C	/	2-2-0-2-4	2.0	-	-	-	4	c
2024	**803**	**Frozen RTRH (Emmental leek tart)**	*S.*Typhimurium 167	Food product	Seeding 2 weeks at -20°C	/	3-4-2-1-2	2.4	-	-	-	4	c
2024	**804**	**Frozen RTRH (spinach, goat's cheese)**	*S.*Infantis 12	RTE product	Seeding 2 weeks at -20°C	/	3-2-4-2-1	2.4	+	+	+	4	c
2024	**805**	**Frozen RTRH (pizza, bacon, cream)**	*S.*Kentucky 2011S20	Food product	Seeding 2 weeks at -20°C	/	2-2-0-2-4	2.0	+	+	+	4	c
2024	**806**	**Frozen puff pastry RTRH with ham and cheese**	*S.*Typhimurium 167	Food product	Seeding 2 weeks at -20°C	/	3-4-2-1-2	2.4	+	+	+	4	c
2024	**807**	**Frozen RTRH (chicken, mushroom, risotto)**	*S.* Infantis 12	RTE product	Seeding 2 weeks at -20°C	/	3-2-4-2-1	2.4	-	-	-	4	c
2024	**808**	**Frozen RTRH (chicken, rice, coco, curry)**	*S.*Kentucky 2011S20	Food product	Seeding 2 weeks at -20°C	/	2-2-0-2-4	2.0	-	-	-	4	c

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2024	**809**	**Frozen lasagne**	S.Typhimurium 167	Food product	Seeding 2 weeks at -20°C	/	3-4-2-1-2	2.4	-	-	-	4	c
2024	**1747**	**Raw fish fillet (salmon)**	S.Hadar F106	Seafood product	Seeding 48h 3±2°C	/	0-4-0-3-2	1.8	+	+	+	5	a
2024	**1748**	**Raw fish fillet (pollack)**	S.Brandenburg Ad351	Seafood product	Seeding 48h 3±2°C	/	1-0-3-3-2	1.8	+	+	+	5	a
2024	**1749**	**Raw fish fillet (cod)**	S.Derby Ad1093	Seafood product	Seeding 48h 3±2°C	/	1-1-0-0-1	0.6	+	+	+	5	a
2024	**1750**	**Raw fish (trout)**	S.Anatum Ad1451	Seafood product	Seeding 48h 3±2°C	/	0-5-0-0-1	1.2	-	-	-	5	a
2024	**1751**	**Raw fish (haddock)**	S.Hadar F106	Seafood product	Seeding 48h 3±2°C	/	0-4-0-3-2	1.8	-	-	-	5	a
2024	**1752**	**Raw fish fillet (salmon)**	S.Brandenburg Ad351	Seafood product	Seeding 48h 3±2°C	/	1-0-3-3-2	1.8	+	+	+	5	a
2024	**1753**	**Raw fish filet (saithe)**	S.Derby Ad1093	Seafood product	Seeding 48h 3±2°C	/	1-1-0-0-1	0.6	+	+	+	5	a
2024	**1754**	**Raw fish (monkfish tail)**	S.Anatum Ad1451	Seafood product	Seeding 48h 3±2°C	/	0-5-0-0-1	1.2	+	+	+	5	a
2024	**1755**	**Raw fish fillet (sea bream)**	S.Hadar F106	Seafood product	Seeding 48h 3±2°C	/	0-4-0-3-2	1.8	+	+	+	5	a
2024	**1756**	**Raw fish (skate wing)**	S.Brandenburg Ad351	Seafood product	Seeding 48h 3±2°C	/	1-0-3-3-2	1.8	+	+	+	5	a
2023	**4797**	**Raw tuna**	S. Wandworth Ad2335	Fish product	Seeding 48h 3±2°C	/	0-3-4-1-5	2.6	+	+	+	5	a
2023	**4798**	**Raw fish fillet (julienne)**	S. Wandworth Ad2335	Fish product	Seeding 48h 3±2°C	/	0-3-4-1-5	2.6	+	+	+	5	a
2023	**4799**	**Raw fish fillet (salmon)**	S. Wandworth Ad2335	Fish product	Seeding 48h 3±2°C	/	0-3-4-1-5	2.6	+	+	+	5	a
2023	**4800**	**Raw fish filet (cod)**	S. Wandworth Ad2335	Fish product	Seeding 48h 3±2°C	/	0-3-4-1-5	2.6	+	+	+	5	a
2023	**4801**	**Raw fish fillet (saithe)**	S. Wandworth Ad2335	Fish product	Seeding 48h 3±2°C	/	0-3-4-1-5	2.6	+	+	+	5	a
2023	**4968**	**Raw trout steak**	S. Urbana Ad2334	Seafood product	Seeding 48h 3±2°C	/	0-0-2-0-0	0.4	-	-	-	5	a
2023	**4969**	**Raw tuna**	S. Urbana Ad2334	Seafood product	Seeding 48h 3±2°C	/	0-0-2-0-0	0.4	-	-	-	5	a
2023	**4970**	**Raw fish fillet (haddock)**	S. Urbana Ad2334	Seafood product	Seeding 48h 3±2°C	/	0-0-2-0-0	0.4	-	-	-	5	a
2023	**4971**	**Raw fish fillet (saithe)**	S. Urbana Ad2334	Seafood product	Seeding 48h 3±2°C	/	0-0-2-0-0	0.4	-	-	-	5	a
2024	**1757**	**Raw prawns**	S.Derby Ad1093	Seafood product	Seeding 48h 3±2°C	/	1-1-0-0-1	0.6	+	+	+	5	b
2024	**1758**	**Raw scallops**	S.Anatum Ad1451	Seafood product	Seeding 48h 3±2°C	/	0-5-0-0-1	1.2	+	+	+	5	b
2024	**1759**	**Raw hollow oysters**	S.Hadar F106	Seafood product	Seeding 48h 3±2°C	/	0-4-0-3-2	1.8	+	+	+	5	b
2024	**1760**	**Raw mussels**	S.Brandenburg Ad351	Seafood product	Seeding 48h 3±2°C	/	1-0-3-3-2	1.8	+	+	+	5	b

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2023	**4972**	**Raw squid**	S. Rubislaw Ad2332	Seafood product	Seeding 48h 3±2°C	/	2-0-1-0-3	1.2	+	+	+	5	b
2023	**4973**	**Raw squid**	S. Indiana Ad1409	Seafood product	Seeding 48h 3±2°C	/	1-4-0-1-1	1.4	+	+	+	5	b
2023	**4974**	**Raw langoustine**	S. Rubislaw Ad2332	Seafood product	Seeding 48h 3±2°C	/	2-0-1-0-3	1.2	+	+	+	5	b
2023	**4975**	**Raw langoustine**	S. Indiana Ad1409	Seafood product	Seeding 48h 3±2°C	/	1-4-0-1-1	1.4	+	+	+	5	b
2023	**4976**	**Raw shrimp**	S. Rubislaw Ad2332	Seafood product	Seeding 48h 3±2°C	/	2-0-1-0-3	1.2	-	-	-	5	b
2023	**4977**	**Raw shrimp**	S. Indiana Ad1409	Seafood product	Seeding 48h 3±2°C	/	1-4-0-1-1	1.4	+	+	+	5	b
2023	**4978**	**Raw mussel**	S. Rubislaw Ad2332	Seafood product	Seeding 48h 3±2°C	/	2-0-1-0-3	1.2	+	+	+	5	b
2023	**4979**	**Raw cuttlefish**	S. Rubislaw Ad2332	Seafood product	Seeding 48h 3±2°C	/	2-0-1-0-3	1.2	+	+	+	5	b
2023	**4980**	**Raw scallops**	S. Indiana Ad1409	Seafood product	Seeding 48h 3±2°C	/	1-4-0-1-1	1.4	-	-	-	5	b
2023	**4981**	**Raw cockles**	S. Indiana Ad1409	Seafood product	Seeding 48h 3±2°C	/	1-4-0-1-1	1.4	+	+	+	5	b
2024	**382**	**Tuna steak in brine**	*S.* Agona F118	Seafood product	Seeding 48h 3±2°C	/	1-2-0-1-1	1.0	+	+	+	5	c
2024	**383**	**Cod with almonds and pistachios**	*S.* Agona F118	Seafood product	Seeding 48h 3±2°C	/	1-2-0-1-1	1.0	-	-	-	5	c
2024	**384**	**Salted cod flakes**	*S.* Agona F118	Seafood product	Seeding 48h 3±2°C	/	1-2-0-1-1	1.0	+	+	+	5	c
2024	**385**	**Giant squid ring in brine**	*S.* Agona F118	Seafood product	Seeding 48h 3±2°C	/	1-2-0-1-1	1.0	+	+	+	5	c
2024	**1772**	**Tuna in brine**	*S.*Derby Ad1093	Seafood product	Seeding 48h 3±2°C	/	1-1-0-0-1	0.6	+	+	+	5	c
2024	**1773**	**Anchovies marinated (garlic/parsley)**	*S.*Anatum Ad1451	Seafood product	Seeding 48h 3±2°C	/	0-5-0-0-1	1.2	-	-	-	5	c
2024	**1774**	**Marinated salmon (Moroccan spices)**	*S.*Hadar F106	Seafood product	Seeding 48h 3±2°C	/	0-4-0-3-2	1.8	+	+	+	5	c
2023	**4536**	**Fish ready to cook (fish, lemon sauce, rice)**	S. Anatum Ad2727	Seafood product	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	+	+	+	5	c
2023	**4537**	**Fish ready to cook (salmon steak, rice, dill sauce)**	S. Anatum Ad2727	Seafood product	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	-	-	-	5	c
2023	**4538**	**Fish ready to cook (fish, vegetables)**	S. Anatum Ad2727	Seafood product	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	+	+	+	5	c
2023	**5600**	**Shellfish mix**	*S.* Hadar F106	Molds	Seeding 48h 3±2°C	/	4-1-1-5-5	3.2	+	+	+	5	c
2023	**5601**	**Mussels stuffed with parsley**	*S.* Saintpaul F31	Fish fillet	Seeding 48h 3±2°C	/	3-3-1-4-4	3.0	-	-	-	5	c
2023	**5606**	**Marinated fish**	*S.* Saintpaul F31	Fish fillet	Seeding 48h 3±2°C	/	3-3-1-4-4	3.0	+	+	+	5	c

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2023	**5607**	**Chunks of desalted cod**	*S.* Brandenburg Ad351	Shellfish	Seeding 48h 3±2°C	/	1-0-0-1-2	0.8	+	+	+	5	c
2023	**5608**	**Salted hake crumbs**	*S.* Derby Ad1451	Fish fillet	Seeding 48h 3±2°C	/	0-2-0-0-0	0.4	-	-	-	5	c
2023	**5610**	**Marinated squid**	*S.* Anatum Ad1451	Fish fillet	Seeding 48h 3±2°C	/	1-1-2-1-1	1.2	+	+	+	5	c
2024	**231**	**Swab before cleaning (dairy products industry)**	*S.* Senftenberg Ad2149	Dairy product	Seeding 48h 3±2°C	/	1-1-0-2-4	1.6	-	-	-	6	a
2024	**232**	**Swab before cleaning (dairy products industry)**	*S.* Senftenberg Ad2149	Dairy product	Seeding 48h 3±2°C	/	1-1-0-2-4	1.6	+	+	+	6	a
2024	**233**	**Swab before cleaning (seafood industry)**	*S.* Indiana 2	Seafood product	Seeding 48h 3±2°C	/	0-1-1-0-1	0.6	+	+	+	6	a
2024	**234**	**Swab after cleaning (seafood industry)**	*S.* Indiana 2	Seafood product	Seeding 48h 3±2°C	/	0-1-1-0-1	0.6	+	+	+	6	a
2024	**235**	**Wipe before cleaning (meat products production)**	*S.* Rissen Ad2510	Environment	Seeding 48h 3±2°C	/	1-2-0-0-0	0.6	-	-	-	6	a
2024	**236**	**Wipe after cleaning (chocolate mousse production)**	*S.* Rissen Ad2510	Environment	Seeding 48h 3±2°C	/	1-2-0-0-0	0.6	+	+	+	6	a
2024	**237**	**Wipe after cleaning (seafood products industry)**	*S.* Indiana 2	Seafood product	Seeding 48h 3±2°C	/	0-1-1-0-1	0.6	-	-	-	6	a
2024	**238**	**Wipe after cleaning (seafood products industry)**	*S.* Indiana 2	Seafood product	Seeding 48h 3±2°C	/	0-1-1-0-1	0.6	+	+	+	6	a
2024	**239**	**Wipe before cleaning (RTRH products industry)**	*S.* Rissen Ad2510	Environment	Seeding 48h 3±2°C	/	1-2-0-0-0	0.6	+	+	+	6	a
2024	**240**	**Sponge after cleaning (RTRH products industry)**	*S.* Rissen Ad2510	Environment	Seeding 48h 3±2°C	/	1-2-0-0-0	0.6	+	+	+	6	a
2024	**814**	**Swab before cleaning**	*S.* Mbandaka Ad1723	Environment	Seeding 48h 3±2°C	/	1-0-1-2-2	1.2	+	+	+	6	a
2024	**815**	**Swab after cleaning**	*S.*Ouakam Ad1647	Environment	Seeding 48h 3±2°C	/	0-4-6-1-3	2.8	+	+	+	6	a
2024	**816**	**Wipe before cleaning (pork product industry)**	*S.*Mbandaka Ad1723	Environment	Seeding 48h 3±2°C	/	1-0-1-2-2	1.2	+	+	+	6	a
2024	**817**	**Bootsocks after sampling campaign**	*S.*Ouakam Ad1647	Environment	Seeding 48h 3±2°C	/	0-4-6-1-3	2.8	+	+	+	6	a
2024	**241**	**Spanish-style rice residue (RTRH products industry)**	*S.* Typhimurium Ad1070	Environment	Seeding 48h 3±2°C	/	0-2-2-1-0	1.0	+	+	+	6	b
2024	**242**	**Pancakes residue (RTRH products industry)**	*S.* Typhimurium Ad1070	Environment	Seeding 48h 3±2°C	/	0-2-2-1-0	1.0	+	+	+	6	b
2024	**243**	**Mushroom sauce residue (RTRH products industry)**	*S.* Cubana Ad2323	Environment	Seeding 48h 3±2°C	/	1-1-0-1-2	1.0	-	-	-	6	b
2024	**244**	**Sardines residue (Seafood products production)**	*S.* Cubana Ad2323	Environment	Seeding 48h 3±2°C	/	1-1-0-1-2	1.0	-	-	-	6	b
2024	**245**	**Pork meat residue (meat products industry)**	*S.* Typhimurium Ad1070	Environment	Seeding 48h 3±2°C	/	0-2-2-1-0	1.0	+	+	+	6	b
2024	**1764**	**Residues of shredded beef**	*S.*Bredeney 912	Pork meat	Seeding 48h 3±2°C	/	1-0-4-3-3	2.2	+	+	+	6	b
2024	**1765**	**Residues of shredded beef**	*S.*Newport Adria 586	Beef meat	Seeding 48h 3±2°C	/	3-1-1-0-1	1.2	+	+	+	6	b
2024	**1766**	**Residues of parmentier**	*S.*Newport Adria 586	Beef meat	Seeding 48h 3±2°C	/	3-1-1-0-1	1.2	+	+	+	6	b
2024	**1767**	**Residues of chipolata**	*S.*Indiana 538	Pork meat	Seeding 48h 3±2°C	/	0-0-0-2-0	0.4	+	+	+	6	b

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							Enumeration	Mean					
2024	**1768**	**Residues of chipolata**	S.Typhimurium Ad2508	Pork environment	Seeding 48h 3±2°C	/	1-0-2-1-1	1.0	+	+	+	6	b
2024	**246**	**Process water before cleaning (meat products production)**	S. Lexington 2003S16	Soya	Seeding 48h 3±2°C	/	1-3-1-2-0	1.4	+	+	+	6	c
2024	**247**	**Process water before cleaning (turkey meat production)**	S. Amsterdam Ad1767	Meat product environment	Seeding 48h 3±2°C	/	3-0-1-2-3	1.8	+	+	+	6	c
2024	**248**	**Rinse water before cleaning (meat products production)**	S. Amsterdam Ad1767	Meat product environment	Seeding 48h 3±2°C	/	3-0-1-2-3	1.8	+	+	+	6	c
2024	**249**	**Process water before cleaning (chicken meat production)**	S. Amsterdam Ad1767	Meat product environment	Seeding 48h 3±2°C	/	3-0-1-2-3	1.8	+	+	+	6	c
2024	**250**	**Rinse water before cleaning (brioche bakery production)**	S. Lexington 2003S16	Soya	Seeding 48h 3±2°C	/	1-3-1-2-0	1.4	+	+	+	6	c
2024	**251**	**Water before cleaning (RTRH products industry)**	S. Amsterdam Ad1767	Meat product environment	Seeding 48h 3±2°C	/	3-0-1-2-3	1.8	-	-	-	6	c
2024	**252**	**Process water before cleaning (meat products industry)**	S. Amsterdam Ad1767	Meat product environment	Seeding 48h 3±2°C	/	3-0-1-2-3	1.8	+	+	+	6	c
2024	**253**	**Process water before cleaning (seafood products industry)**	S. Derby F81	Seafood product	Seeding 48h 3±2°C	/	1-1-1-0-0	0.6	-	-	+	6	c
2024	**254**	**Process water before cleaning (seafood products industry)**	S. Derby F81	Seafood product	Seeding 48h 3±2°C	/	1-1-1-0-0	0.6	-	-	-	6	c
2024	**255**	**Process water after cleaning (seafood products industry)**	S. Derby F81	Seafood product	Seeding 48h 3±2°C	/	1-1-1-0-0	0.6	+	+	+	6	c
2024	**818**	**Process water after cleaning (meat products industry)**	S.Mbandaka Ad1723	Environment	Seeding 48h 3±2°C	/	1-0-1-2-2	1.2	-	-	-	6	c
2024	**819**	**Rinse water after cleaning**	S.Ouakam Ad1647	Environment	Seeding 48h 3±2°C	/	0-4-6-1-3	2.8	+	+	+	6	c
2024	**820**	**Rinse water after cleaning (vegetable meat product)**	S.Mbandaka Ad1723	Environment	Seeding 48h 3±2°C	/	1-0-1-2-2	1.2	-	-	-	6	c
2024	**821**	**Rinse water after cleaning**	S.Ouakam Ad1647	Environment	Seeding 48h 3±2°C	/	0-4-6-1-3	2.8	-	-	-	6	c
2024	**1763**	**Process water after cleaning (pork meat industry)**	S.Kedougou Ad929	Beef environment	Seeding 48h 3±2°C	/	1-1-1-1-1	1.0	-	-	-	6	c
2024	**1841**	**Rinse water (pastry product)**	S.Typhimurium 633	Pastry product	Seeding 48h 3±2°C	/	1-1-4-0-2	1.6	+	+	+	6	c
2024	**1842**	**Rinse water (pastry product)**	S.Derby Ad1683	Pastry product	Seeding 48h 3±2°C	/	1-1-2-1-1	1.2	+	+	+	6	c
2024	**1843**	**Rinse water (pork industry)**	S.Brandenburg Ad2420	Sausage	Seeding 48h 3±2°C	/	0-1-3-2-3	1.8	-	-	-	6	c

Appendix 5 - Sensitivity study: raw data

RAW, RTC, RTE AND RTRH MEAT PRODUCTS EXCLUDING POULTRY (COMBINED)

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result								*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result									
2025	**118479**	**Pork roast slice**	+	P	16.53	33.81	+	16.41	39.25	+	16.80	36.98	+	+	+	+	+	**PA**	**PA**	**PA**	16.42	33.48	+	17.41	35.55	+	17.04	38.76	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**118480**	**Haw without rind**	-	P	N/A	32.25	-	N/A	34.22	-	N/A	36.27	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**118481**	**Cervelas salad**	-	P	N/A	32.30	-	N/A	35.08	-	N/A	36.94	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**118482**	**Pork snout salad**	-	P	N/A	32.72	-	N/A	35.02	-	N/A	35.67	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**118483**	**Pork knack (22.9%FT)**	+	P	19.26	33.74	+	18.02	36.93	+	20.67	37.68	+	+	+	+	+	**PA**	**PA**	**PA**	16.93	34.06	+	18.06	37.15	+	16.35	38.75	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**118484**	**Terrine (25%FT)**	-	P	N/A	30.75	-	N/A	34.58	-	N/A	38.18	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**118485**	**Pork RTE**	-	P	N/A	33.31	-	N/A	35.54	-	N/A	32.58	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**118586**	**Beef tongue**	+	P	28.16	33.17	+	29.82	34.29	+	27.54	33.28	+	+	+	+	+	**PA**	**PA**	**PA**	25.72	33.48	+	26.51	33.98	+	26.4	37.45	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**118587**	**Veal meat**	+	P	26.84	32.79	+	28.76	34.27	+	26.90	32.88	+	+	+	+	+	**PA**	**PA**	**PA**	23.21	33.36	+	24.05	35.34	+	23.38	37.43	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**118588**	**Beef with win preparation**	+	P	35.82	33.11	+	35.47	34.78	+	33.60	33.23	+	+	+	+	+	**PA**	**PA**	**PA**	33.65	33.40	+	34.69	33.98	+	36.87	36.48	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119842**	**Ham with rind**	+	P	30.58	32.47	+	32.47	33.41	+	34.53	32.37	+	+	+	+	+	**PA**	**PA**	**PA**	21.32	27.71	+	29.61	33.32	+	30.99	32.77	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119843**	**Pate**	-	P	N/A	32.85	-	N/A	33.42	-	N/A	32.48	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**119844**	**Pork tenderloin with porcini mushroom sauce**	+	P	18.10	33.94	+	19.17	37.23	+	18.25	33.83	+	+	+	+	+	**PA**	**PA**	**PA**	14.22	35.27	+	15.04	38.73	+	17.31	36.31	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119845**	**Beef with onions**	-	P	N/A	33.99	-	N/A	33.60	-	N/A	33.64	-	-	-	-	-	**NA**	**NA**	**NA**	N/A	32.96	-	N/A	34.43	-	N/A	33.75	-	-	-	-	-	**NA**	**NA**	**NA**	1	a
2025	**119846**	**Diced ham**	+	P	25.99	32.58	+	31.04	33.69	+	30.14	33.87	+	+	+	+	+	**PA**	**PA**	**PA**	27.27	32.64	+	29.98	33.77	+	29.5	33.45	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119847**	**Veal meat**	+	P	28.55	33.48	+	29.61	33.71	+	29.02	34.10	+	+	+	+	+	**PA**	**PA**	**PA**	26.28	33.22	+	27.04	34.9	+	26.69	33.13	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119848**	**Pork snout salad**	+	P	18.57	33.45	+	23.48	35.83	+	22.03	34.70	+	+	+	+	+	**PA**	**PA**	**PA**	21.27	32.78	+	22.76	35.38	+	22.39	33.89	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119849**	**RTE (beef meet with pepper)**	+	P	18.44	32.91	+	24.95	34.53	+	23.41	33.04	+	+	+	+	+	**PA**	**PA**	**PA**	18.51	32.52	+	23.4	34.3	+	22.74	33.08	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119850**	**Beef bourguignon**	+	P	16.95	35.59	+	18.18	36.99	+	17.29	37.20	+	+	+	+	+	**PA**	**PA**	**PA**	16.60	34.48	+	16.3	36.17	+	17.26	36.01	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2025	**119851**	**Cervelas with vinaigrette sauce**	-	P	N/A	32.41	-	N/A	33.27	-	N/A	33.28	-	-	-	-	-	**NA**	**NA**	**NA**																	1	a
2025	**119852**	**Pork roast 100% tenderloin**	+	P	20.11	32.55	+	19.74	36.14	+	20.00	35.45	+	+	+	+	+	**PA**	**PA**	**PA**	17.42	33.41	+	19.17	36.22	+	18.63	35.59	+	+	+	+	+	**PA**	**PA**	**PA**	1	a
2024	**2491**	**Frozen raw veal**	-	P	N/A	31.92	-	N/A	32.54	-	N/A	32.43	-	-	-	-	-	**NA**	**NA**	**NA**																	1	b
2024	**2492**	**Frozen raw pork**	+	P	26.61	31.33	+	28.34s	32.11	+	27.55	32.05	+	+	+	+	+	**PA**	**PA**	**PA**	22.60	29.87	+	28.76	N/A	+	34.26 (at)/ 33.66/ 30.29	32.53/ 34.99/ 35.44	at/ +/+	+	+	+	+	**PA**	**PA**	**PA**	1	b
2024	**2530**	**Marinated beef meat**	+	P	32.26	31.82	+	33.62	32.84	+	34.02	32.41	+	+	+	+	+	**PA**	**PA**	**PA**	31.42	30.89	+	33.3	33.11	+	32.97	32.47	+	+	+	+	+	**PA**	**PA**	**PA**	1	b
2024	**2531**	**Marinated pork meat**	+	P	28.00	31.03	+	29.49	32.48	+	29.28	32.19	+	+	+	+	+	**PA**	**PA**	**PA**	29.22	27.57	+	32.33	32.74	+	31.29	31.63	+	+	+	+	+	**PA**	**PA**	**PA**	1	b
2024	**2532**	**Marinated beef carpaccio**	+	P	20.95	32.27	+	22.34	32.91	+	21.85	32.56	+	+	+	+	+	**PA**	**PA**	**PA**	20.88	30.55	+	22.3	32.55	+	20.23	31.74	+	+	+	+	+	**PA**	**PA**	**PA**	1	b
2023	**4782**	**Raw fresh beef meat**	+	P	26.76	27.36	+	31.87	32.68	+	26.68	35.42	+	+	+	+	+	**PA**	**PA**	**PA**	26.11	29.68	+	29.35	32.58	+	39.04	35.21	+	+	+	+	+	**PA**	**PA**	**PA**	1	b

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♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

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RAW, RTC, RTE AND RTRH MEAT PRODUCTS EXCLUDING POULTRY (COMBINED)																																						
					Alternative method: Salmofast® PCR Kit																																			
					16 h at 37 ± 1°C																	16 h at 37 ± 1°C +72 h at 5 ± 3°C																			
					PCR result										Final result			Agreement			PCR result									Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C					
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests	QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests	QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result								*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result										
2023	**4783**	**Raw fresh beef meat**	+	P	24.82	28.84	+	28.79	32.42	+	33.76	34.33	+	+	+	+	+	PA	PA	PA	23.77	30.98	+	25.98	32.56	+	32.54	35.07	+	+	+	+	+	PA	PA	PA	1	b
2023	**4784**	**Raw fresh beef meat**	+	P	26.76	29.56	+	32.67	32.48	+	26.38	34.39	+	+	+	+	+	PA	PA	PA	29.33	30.98	+	31.26	31.87	+	35.67	34.79	+	+	+	+	+	PA	PA	PA	1	b
2023	**4785**	**Raw fresh pork meat**	+	P	29.17	29.69	+	30.75	32.19	+	31.54	34.01	+	+	+	+	+	PA	PA	PA	27.18	31.00	+	30.01	32.12	+	34.23	34.63	+	+	+	+	+	PA	PA	PA	1	b
2023	**4786**	**Raw fresh pork meat**	-	P	N/A	25.68	-	N/A	32.28	-	N/A	33.74	-	-	-	-	-	NA	NA	NA																1	b
2023	**5700**	**Raw beef meet (steak)**	+	P	19.90	30.30	+	21.27	32.54	+	16.35	/	+	+	+	+	+	PA	PA	PA	21.03	30.54	+	22.95	33.59	+	25.06	35.62	+	+	+	+	+	PA	PA	PA	1	b
2023	**5701**	**Raw lamb meat**	+	P	23.55	30.36	+	25.58	31.90	+	32.09	35.16	+	+	+	+	+	PA	PA	PA	25.42	31.36	+	26.72	32.36	+	27.05	35.52	+	+	+	+	+	PA	PA	PA	1	b
2023	**5702**	**Raw beef meat (balls)**	+	P	19.13	32.37	+	20.10	33.60	+	22.20	37.64	+	+	+	+	+	PA	PA	PA	19.89	32.05	+	20.75	34.45	+	21.86	35.96	+	+	+	+	+	PA	PA	PA	1	b
2023	**5703**	**Raw veal meat**	-	P	N/A	31.27	-	N/A	32.20	-	N/A	35.33	-	-	-	-	-	NA	NA	NA																1	b
2023	**5704**	**Raw pork meat**	-	P	N/A	31.79	-	N/A	33.07	-	36.14(at)/ N/A	35.36/ 34.89	at/-	-	-	-	-	NA	NA	NA																1	b
2023	6010	Raw pork meat	+	P	24.40	31.86	+	24.26	31.75	+	24.32	31.37	+	+	+	+	+	PA	PA	PA	24.07	32.14	+	24.75	32.29	+	24.15	31.9	+	+	+	+	+	PA	PA	PA	1	b
2023	6011	Raw pork meat	+	P	26.15	31.84	+	26.35	30.98	+	26.23	31.45	+	+	+	+	+	PA	PA	PA	25.51	31.08	+	26.37	31.98	+	25.83	32.06	+	+	+	+	+	PA	PA	PA	1	b
2023	6012	Raw pork meat	-	P	N/A	31.85	-	N/A	31.96	-	N/A	31.80	-	-	-	-	-	NA	NA	NA																1	b
2023	6014	Raw pork meat	-	P	N/A	31.54	-	N/A	31.33	-	N/A	31.61	-	-	-	-	-	NA	NA	NA																1	b
2023	6015	Raw pork meat	+	P	38.88	32.53	+	36.40	31.72	+	35.04	31.92	+	+	+	+	+	PA	PA	PA	33.16	34.86	+	36.74	32.32	+	38.38	32.12	+	+	+	+	+	PA	PA	PA	1	b
2023	6120	Raw beef meat	-	P	N/A	32.22	-	N/A	32.19	-	N/A	32.03	-	-	-	-	-	NA	NA	NA																1	b
2023	6121	Raw pork meat	-	P	N/A	32.09	-	N/A	32.14	-	N/A	32.09	-	-	-	-	-	NA	NA	NA																1	b
2023	6122	Raw veal meat	-	P	N/A	32.33	-	N/A	31.56	-	N/A	31.27	-	-	-	-	-	NA	NA	NA																1	b
2023	6123	Raw beef meat	-	P	N/A	31.66	-	N/A	31.71	-	N/A	32.08	-	-	-	-	-	NA	NA	NA																1	b
2023	6124	Raw lamb meat	-	P	N/A	31.77	-	N/A	31.70	-	N/A	31.52	-	-	-	-	-	NA	NA	NA																1	b
2024	**376**	**Raw sausage**	+	P	25.22	29.81	+	26.64	39.99	+	26.24	34.32	+	+	+	+	+	PA	PA	PA	25.12	31.77	+	27.38	33.49	+	25.51	33.75	+	+	+	+	+	PA	PA	PA	1	c
2024	**377**	**Raw smoked bacon**	-	P	N/A	29.03	-	N/A	33.35	-	N/A	32.03	-	-	-	-	-	NA	NA	NA																1	c
2024	**378**	**Raw slices of smoked bacon**	+	P	17.08	/	+	18.98	35.93	+	18.01	34.50	+	+	+	+	+	PA	PA	PA	17.86	31.57	+	20.49	34.95	+	18.43	33.45	+	+	+	+	+	PA	PA	PA	1	c
2023	4477	Chorizo	-	P	N/A	30.30	-	NA	33.37	-	N/A	34.23	-	-	-	-	-	NA	NA	NA																1	c
2023	4478	Sausage	+	P	N/A (with amp,)/ 28.0/27.56	33.98/ 27.99/ 27.62	i/+*/+*	36.38	28.99	+	30.16	33.14	+	+	+	+	+	PA	PA	PA	N/A /32,01*	35,65/ 27,31*	i/+*	31.95	32.33	+	34.8	33.65	+	+	+	+	+	PA	PA	PA	1	c
2023	4479	Sausage	-	P	N/A	32.67	-	NA	32.48	-	N/A	33.39	-	-	-	-	-	NA	NA	NA																1	c
2023	4480	Merguez	-	P	N/A	29.11	-	NA	32.83	-	39.76/ 35.52 (at)/ N/A	32.19/ 34.85/ 34.84	+/at/-	-	-	-	-	NA	NA	PD FP(alt)																1	c
2023	4481	Smoked chorizo	-	P	N/A	29.15	-	NA	33.83	-	N/A	34.18	-	-	-	-	-	NA	NA	NA																1	c
2023	4482	Sausage	-	P	N/A	28.84	-	NA	34.35	-	N/A	34.09	-	-	-	-	-	NA	NA	NA																1	c
2023	**4545**	**Raw bacon**	-	P	N/A	30.93	-	NA	33.16	-	N/A	35.31	-	-	-	-	-	NA	NA	NA																1	c
2023	**4546**	**Merguez**	+	P	18.02	33.41	+	23.55	33.16	+	28.11	34.44	+	+	+	+	+	PA	PA	PA	20.57	30.11	+	23.69	30.3	+	24.43	35.34	+	+	+	+	+	PA	PA	PA	1	c
2023	**4547**	**Sausage**	+	P	17.92	31.86	+	21.13	33.33	+	24.48	34.67	+	+	+	+	+	PA	PA	PA	18.41	32.24	+	22.54	31.29	+	23.17	35	+	+	+	+	+	PA	PA	PA	1	c
2023	**4548**	**Bacon**	+	P	17.92	30.91	+	6.68 (AT)/ 25.64*	NA/ 31.02*	i/+*	24.32	35.12	+	+	+	+	+	PA	PA	PA	19.08	31.88	+	21.42	29.67	+	22.01	35.19	+	+	+	+	+	PA	PA	PA	1	c
2023	**4549**	**Raw fresh pork meat**	+	P	16.48	30.08	+	20.15	32.42	+	23.19	34.54	+	+	+	+	+	PA	PA	PA	16.28	31.79	+	20.33	29.44	+	23.06	35.01	+	+	+	+	+	PA	PA	PA	1	c

MICROVAL® NEN

RAW, RTC, RTE AND RTRH MEAT PRODUCTS EXCLUDING POULTRY (COMBINED)

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																														Category	Type
					16 h at 37 ± 1°C															16 h at 37 ± 1°C +72 h at 5 ± 3°C																		
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell											QS5			CFX96 standard			CFX Opus Deepwell									
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
2023	**5705**	**Dry-cured ham**	+	P	20.31	31.54	+	20.86	32.83	+	22.88	35.73	+	+	+	+	+	PA	PA	PA	20.31	32.09	+	21.15	33.76	+	20.62	37.3	+	+	+	+	+	PA	PA	PA	1	c
2023	**5706**	**Raw sausage**	+	P	24.25	30.31	+	25.79	31.75	+	26.58	34.48	+	+	+	+	+	PA	PA	PA	24.83	32.65	+	25.33	32.37	+	24.98	34.96	+	+	+	+	+	PA	PA	PA	1	c
2023	**5707**	**Raw smoked bacon**	+	P	19.26	30.96	+	20.51	32.79	+	21.81	39.38	+	+	+	+	+	PA	PA	PA	19.69	31.91	+	21.09	33.58	+	21.46	38.56	+	+	+	+	+	PA	PA	PA	1	c
2023	**5713**	**Raw sausage**	-	P	N/A	28.22	-	N/A	32.37	-	N/A	35.09	-	-	-	-	-	NA	NA	NA																	1	c
2023	**5714**	**Raw merguez**	+	P	32.93	27.99	+	34.13	31.96	+	36.38	35.34	+	+	+	+	+	PA	PA	PA	34.60	31.50	+	38.95	32.31	+	N/A/ N/A/ N/A	35.19/ -/3 5.27	-/i/-	+	+	+	-	PA	PA	ND FN(alt)	1	c
2023	6125	Raw sausage	-	P	N/A	31.73	-	N/A	32.85	-	N/A	33.05	-	-	-	-	-	NA	NA	NA																	1	c
2023	6126	Raw serrano ham	-	P	N/A	32.64	-	N/A	32.15	-	N/A	32.44	-	-	-	-	-	NA	NA	NA																	1	c
2023	6127	Raw beef merguez	-	P	N/A	33.29	-	N/A	32.04	-	N/A	33.02	-	-	-	-	-	NA	NA	NA																	1	c

MICROVAL® NEN

RAW AND HEAT-PROCESSED MILK AND DAIRY PRODUCTS (COMBINED)																																						
					Alternative method: Salmofast® PCR Kit																																			
					16 h at 37 ± 1°C																	16 h at 37 ± 1°C +72 h at 5 ± 3°C																			
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C			Category	Type
					QS5			CFX96 standard			CFX Opus Deepwell											QS5			CFX96 standard			CFX Opus Deepwell										
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
2024	**1560**	**Raw cow's milk**	+	U	29.93	32.55	+	34.93	33.68	+	34.88	33.38	+	+	+	+	+	PA	PA	PA	28.04	27.64	+	36.47	33.13	+	33.96	33.45	+	+	+	+	+	PA	PA	PA	2	a
2024	**1561**	**Raw cow's milk**	-	U	N/A/ 31.82/ 32.08	32.47/ 33.68/ 33.48	-/+/+	33.81	33.94	+	34.60	33.91	+	+	-	+	+	NA FN(alt)	PD	PD	30.71	32.77	+	32.46	33.28	+	31.92	33.35	+	+	+	+	+	PD	PD	PD	2	a
2024	**1562**	**Raw cow's milk cheese**	+	U	19.84	32.92	+	23.64	34.23	+	24.59	32.80	+	+	+	+	+	PA	PA	PA	22.06	32.16	+	23.17	35.62	+	22.61	34.39	+	+	+	+	+	PA	PA	PA	2	a
2024	**1563**	**Raw cow's milk cheese**	+	U	26.96	32.31	+	32.32	33.51	+	32.39	33.55	+	+	+	+	+	PA	PA	PA	30.42	31.11	+	31.59	33.34	+	31.36	33.36	+	+	+	+	+	PA	PA	PA	2	a
2024	**1564**	**Raw cow's milk cheese**	+	U	N/A	31.55	-	N/A	34.28	-	N/A	33.45	-	-	-	-	-	ND	ND	ND	N/A	33.43	-	N/A	34.09	-	N/A	34.47	-	-	-	-	ND	ND	ND	2	a
2024	**1565**	**Raw cow's milk cheese**	+	U	17.35	33.93	+	18.95	36.23	+	19.47	35.48	+	+	+	+	+	PA	PA	PA	18.92	32.39	+	19.88	34.56	+	19.51	34.23	+	+	+	+	+	PA	PA	PA	2	a
2024	**1566**	**Raw cream**	-	U	N/A	32.46	-	N/A	33.57	-	N/A	33.16	-	-	-	-	-	NA	NA	NA																	2	a
2024	**1567**	**Raw butter**	+	U	17.24	33.39	+	20.11	35.55	+	20.60	33.06	+	+	+	+	+	PA	PA	PA	16.92	30.2	+	18.32	36.45	+	18.14	35.94	+	+	+	+	+	PA	PA	PA	2	a
2024	**1568**	**Raw butter**	+	U	18.54	32.96	+	21.13	34.85	+	20.12	34.45	+	+	+	+	+	PA	PA	PA	16.9	32.35	+	18.62	36.82	+	18.07	34.1	+	+	+	+	+	PA	PA	PA	2	a
2024	**1569**	**Raw butter**	-	U	16.59	33.00	+	19.44	35.91	+	17.96	35.50	+	+	+	+	+	PD	PD	PD	16.85	32.7	+	19.02	34.45	+	18.48	34.53	+	+	+	+	+	PD	PD	PD	2	a
2024	1684	Raw butter	-	U	N/A	31.50	-	N/A	33.44	-	N/A	34.35	-	-	-	-	-	NA	NA	NA																	2	a
2024	1685	Raw cow's milk cheese	-	U	N/A	31.26	-	38.89/ N/A/ N/A	33.42/ 34.38/ 34.33	+/-/-	N/A	33.57	-	-	-	-	-	NA	PD FP(alt)	NA																	2	a
2024	1686	Raw cow's milk cheese	-	U	N/A	32.56	-	39.11/ N/A/ N/A	34.31/ 34.4/ 34.96	+/-/-	N/A	34.19	-	-	-	-	-	NA	PD FP(alt)	NA																	2	a
2024	1687	Raw cow's milk cheese	-	U	N/A	33.03	-	N/A	34.27	-	N/A	34.02	-	-	-	-	-	NA	NA	NA																	2	a
2024	1688	Raw cow's milk	-	U	N/A	31.42	-	N/A	33.65	-	N/A	33.83	-	-	-	-	-	NA	NA	NA																	2	a
2023	**4802**	**Raw butter**	+	U	21.72	31.56	+	24.03	33.21	+	24.60	34.53	+	+	+	+	+	PA	PA	PA	21.78	32.82	+	23.05	31.13	+	23.63	34.85	+	+	+	+	+	PA	PA	PA	2	a
2023	**4803**	**Raw cream**	-	U	N/A	33.08	-	NA	32.46	-	N/A	35.25	-	-	-	-	-	NA	NA	NA																	2	a
2023	**4804**	**Raw cow milk cheese**	-	U	N/A	32.67	-	NA	32.48	-	N/A	35.00	-	-	-	-	-	NA	NA	NA																	2	a
2023	**4805**	**Raw cow milk cheese**	+	U	16.82	32.24	+	18.21	33.96	+	21.14	37.24	+	+	+	+	+	PA	PA	PA	22.58	32.39	+	21.87	32.3	+	25.5	34.73	+	+	+	+	+	PA	PA	PA	2	a
2023	**4806**	**Raw cow milk cheese**	-	U	17.86	33.16	+	19.02	33.46	+	18.57	38.40	+	+	+	+	+	PD	PD	PD	20.92	36.38	+	2037	32.93	+	23.66	34.92	+	+	+	+	+	PD	PD	PD	2	a
2024	**119**	**Pasteurized cow milk cheese**	-	P	N/A	31.75	-	N/A	32.94	-	N/A	32.09	-	-	-	-	-	NA	NA	NA																	2	b
2024	**120**	**Pasteurized cream**	-	P	N/A	31.95	-	N/A	32.20	-	N/A	31.77	-	-	-	-	-	NA	NA	NA																	2	b
2024	**121**	**Pasteurized cow milk cheese**	+	P	28.66	33.03	+	31.23	33.42	+	31.25	33.39	+	+	+	+	+	PA	PA	PA	23.54	32.52	+	27.49	33.01	+	27.03	34.05	+	+	+	+	+	PA	PA	PA	2	b
2024	**122**	**Dairy dessert (panna cotta)**	+	P	27.30	33.19	+	33.54	34.00	+	33.94	34.01	+	+	+	+	+	PA	PA	PA	20.02	38.43	+	21.07	/	+	20.29	38.17	+	+	+	+	+	PA	PA	PA	2	b
2024	**123**	**Pasteurized cheese milk (garlic, herbs)**	+	P	27.30	32.72	+	28.83	33.61	+	29.18	33.44	+	+	+	+	+	PA	PA	PA	24.92	33.72	+	25.92	34.6	+	25.3	34.23	+	+	+	+	+	PA	PA	PA	2	b
2024	**124**	**Pasteurized ewe milk cheese**	+	P	21.90	31.29	+	26.74	33.51	+	27.20	32.80	+	+	+	+	+	PA	PA	PA	19.21	32.72	+	21.89	35.24	+	21.89	34.44	+	+	+	+	+	PA	PA	PA	2	b
2023	**4525**	**Pasteurized cow milk cheese**	-	P	N/A	31.12	-	NA	33.71	-	N/A	33.60	-	-	-	-	-	NA	NA	NA																	2	b
2023	**4526**	**Pasteurized cow milk cheese**	-	P	N/A	30.87	-	NA	33.08	-	N/A	33.41	-	-	-	-	-	NA	NA	NA																	2	b

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

MICROVAL® NEN

RAW AND HEAT-PROCESSED MILK AND DAIRY PRODUCTS (COMBINED)

Alternative method: Salmofast® PCR Kit

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	16 h at 37 ± 1°C														16 h at 37 ± 1°C +72 h at 5 ± 3°C														Category	Type
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell											QS5			CFX96 standard			CFX Opus Deepwell								
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
2023	**4527**	**Pasteurized ewe milk cheese**	+	P	26.09	29.20	+	32.68	32.51	+	31.08	33.12	+	+	+	+	+	PA	PA	PA	30.42	31.77	+	32.61	30.12	+	32.43	34.35	+	+	+	+	+	PA	PA	PA	2	b
2023	**4528**	**Pasteurized cream**	-	P	N/A	31.33	-	NA	32.98	-	N/A	32.72	-	-	-	-	-	NA	NA	NA																	2	b
2023	**4529**	**Pasteurized cream**	-	P	34.34/ - (37.00) / N/A/ N/A*/ N/A*/ N/A*	30.54/ 30.31/ 31.36/ 30.00/ 30.62/ 30.04	+/-/i/-*/-*/-*	NA	33.40	-	N/A	33.71	-	-	-	-	-	PD FP(alt)	NA	NA	38.73	31.82	-	N/A	29.41	-	28.7 (at)/ N/A/12.88 (at)	35.13/ 35.01/ 35.49	-/-/-	-	-	-	-	NA	NA	NA	2	b
2023	**5152**	**White cheese (fat level 3%)**	-	P	N/A	30.54	-	N/A	33.10	-	N/A	35.16	-	-	-	-	-	NA	NA	NA																	2	b
2023	**5153**	**Dairy dessert**	+	P	15.38	32.20	+	16.50	36.25	+	16.41	/	+	+	+	+	+	PA	PA	PA	15.83	33.31	+	17.82	37.21	+	8.19 (at)/ 19.56/ 18.72	/ 5.57/ 8.79	-/+/+	+	+	+	+	PA	PA	PA	2	b
2023	**5154**	**Dairy dessert**	-	P	N/A	30.57	-	N/A	32.53	-	N/A	35.23	-	-	-	-	-	NA	NA	NA																	2	b
2023	**5155**	**White cheese (fat level 0%)**	-	P	N/A	30.81	-	N/A	32.47	-	37.79 (at)/ N/A/ N/A	34.43/ 34.3/ 34.75	at/-/-	-	-	-	-	NA	NA	NA																	2	b
2023	**5156**	**Dairy dessert (panna cotta)**	+	P	19.00	34.54	+	21.14	N/A	+	N/A/19.17	/34.51	i/+	+	+	+	+	PA	PA	PA	17.16	33.65	+	20.38	N/A	+	19.77	/	+	+	+	+	+	PA	PA	PA	2	b
2023	**5157**	**Dairy dessert (panna cotta)**	-	P	N/A	29.76	-	N/A	33.15	-	N/A	36.62	-	-	-	-	-	NA	NA	NA																	2	b
2023	**5158**	**Dairy dessert (vanilla milk shake)**	+	P	17.20	31.47	+	18.19	35.78	+	18.03	/	+	+	+	+	+	PA	PA	PA	15.94	32.21	+	17.92	35.14	+	18.14	/	+	+	+	+	+	PA	PA	PA	2	b
2023	**5159**	**Dairy dessert (chocolate milk shake)**	+	P	16.88	34.03	+	17.99	N/A	+	18.94	/	+	+	+	+	+	PA	PA	PA	16.33	34.28	+	17.93	37.79	+	17.98	/	+	+	+	+	+	PA	PA	PA	2	b
2023	**5618**	**Grated Emmental cheese**	-	P	N/A	28.41	-	N/A	30.04	-	37.28/ 39.43/ N/A	34.36/ 34.96/ 34.92	+/+/-	-	-	-	-	NA	NA	PD FP(alt)	N/A	32.02	-	N/A	32.63	-	N/A	35.5	-	-	-	-	-	NA	NA	NA	2	b
2023	**5619**	**Dairy dessert**	-	P	N/A	28.14	-	N/A	30.13	-	38.97/ N/A/ 3.07(at)	34.38/ 34.27/ 34.85	+/-/at	-	-	-	-	NA	NA	PD FP(alt)																	2	b
2023	**5620**	**Pasteurized cheese**	+	P	17.19	27.95	+	19.02	31.06	+	19.35	36.13	+	+	+	+	+	PA	PA	PA	16.62	32.67	+	20.01	33.69	+	19.44	/	+	+	+	+	+	PA	PA	PA	2	b
2023	**5621**	**Pasteurized goat milk cheese**	-	P	N/A	29.98	-	N/A	29.82	-	N/A	35.13	-	-	-	-	-	NA	NA	NA																	2	b
2023	**5622**	**Fresh pasteurized milk**	+	P	20.38	28.59	+	21.67	30.14	+	21.01	36.05	+	+	+	+	+	PA	PA	PA	17.56	33.14	+	19.17	34.13	+	19.23	38.99	+	+	+	+	+	PA	PA	PA	2	b
2023	**5623**	**Fresh pasteurized milk**	+	P	18.96	28.69	+	20.36	30.21	+	21.32	35.55	+	+	+	+	+	PA	PA	PA	22.71	32.58	+	24.25	32.36	+	23.57	36.57	+	+	+	+	+	PA	PA	PA	2	b
2024	**136**	**Semi-skimmed milk powder**	+	P	21.27	/	+	23.87	34.61	+	22.99	34.58	+	+	+	+	+	PA	PA	PA	18.56	N/A	+	21.36	N/A	+	21.65	35.33	+	+	+	+	+	PA	PA	PA	2	c

MICROVAL® NEN

RAW AND HEAT-PROCESSED MILK AND DAIRY PRODUCTS (COMBINED)																																									
					Alternative method: Salmofast® PCR Kit																																						
					16 h at 37 ± 1°C																					16 h at 37 ± 1°C +72 h at 5 ± 3°C																			
					PCR result										Final result			Agreement			PCR result										Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C							
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests								QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests									
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2024	**137**	**Semi-skimmed milk powder**	+	P	19.29	/	+	21.47	38.78	+	20.54	38.82	+	+	+	+	+	PA	PA	PA	18.08	32.74	+	19.94	34.58	+	18.72	34.8	+	+	+	+	+	PA	PA	PA	2	c
2024	**138**	**Semi-skimmed milk powder**	+	P	N/A/ N/A/ N/A	33.35/ 34.05/ 33.67	-/-/-	N/A/ N/A/ N/A	34.72/ 34.69/ 34.34	-/-/-	N/A /at/3 7.27	34.63/ 35.2/3 4.1	-/at/+	+	-	-	-	ND FN(alt)	ND FN(alt)	ND FN(alt)	30.54	33.57	+	35.08	34.62	+	34.16	34.27	+	+	+	+	+	PA	PA	PA	2	c
2024	**139**	**Semi-skimmed milk powder with calcium, vitamins**	+	P	19.86	/	+	22.35	38.33	+	21.26	37.54	+	+	+	+	+	PA	PA	PA	18.32	N/A	+	20.63	35.77	+	20.01	34.68	+	+	+	+	+	PA	PA	PA	2	c
2024	**140**	**Whole milk powder**	-	P	N/A	32.50	-	N/A	33.44	-	N/A	33.48	-	-	-	-	-	NA	NA	NA																	2	c
2024	**141**	**Whole milk powder**	+	P	19.81	/	+	21.98	35.80	+	21.48	36.13	+	+	+	+	+	PA	PA	PA	16.26	N/A	+	18.64	N/A	+	18.32	36.58	+	+	+	+	+	PA	PA	PA	2	c
2024	**142**	**Whole milk powder**	+	P	21.09	/	+	23.97	38.36	+	22.80	36.42	+	+	+	+	+	PA	PA	PA	14.94	N/A	+	21.62	N/A	+	19.93	37.15	+	+	+	+	+	PA	PA	PA	2	c
2024	**143**	**Skimmed milk powder**	+	P	19.30	31.79	+	28.79	35.43	+	28.52	34.93	+	+	+	+	+	PA	PA	PA	19.32	N/A	+	24.04	38.63	+	23.78	36.65	+	+	+	+	+	PA	PA	PA	2	c
2024	**144**	**Organic skimmed milk powder**	-	P	N/A	32.44	-	N/A	34.50	-	N/A	34.55	-	-	-	-	-	NA	NA	NA																	2	c
2024	**145**	**Milk powder (for coffee)**	+	P	12.23	/	+	25.41	N/A	+	24.54	37.21	+	+	+	+	+	PA	PA	PA	i/17.25/ i/23.23*	i//i/ 33.97*	i/+/ i/+ *	20.28	N/A	+	19.49	/	+	+	+	+	+	PA	PA	PA	2	c
2024	146	Whole milk powder	-	P	N/A	28.78	-	N/A	33.77	-	N/A	34.07	-	-	-	-	-	NA	NA	NA																	2	c
2024	147	Whole milk powder	-	P	N/A	27.35	-	N/A	33.82	-	N/A	35.37	-	-	-	-	-	NA	NA	NA																	2	c
2024	148	Semi-skimmed milk powder	-	P	N/A	28.96	-	N/A	34.21	-	N/A	34.28	-	-	-	-	-	NA	NA	NA																	2	c
2024	149	Semi-skimmed milk powder	-	P	N/A	30.82	-	N/A	34.06	-	N/A	34.45	-	-	-	-	-	NA	NA	NA																	2	c
2024	150	Skimmed milk powder	-	P	N/A	22.26	-	N/A	33.85	-	N/A	33.86	-	-	-	-	-	NA	NA	NA																	2	c
2024	151	Skimmed milk powder	-	P	N/A	22.19	-	N/A	34.00	-	N/A	34.73	-	-	-	-	-	NA	NA	NA																	2	c
2024	152	Skimmed milk powder	-	P	N/A/ N/A	N/A/ 33.40	i/-	3.56 (at)/ N/A/ N/A	35.26/ 35.21/ 36.31	at/-/-	N/A	34.69	-	-	-	-	-	NA	NA	NA																	2	c
2024	153	Skimmed milk powder	-	P	N/A	30.70	-	N/A	34.21	-	N/A	35.66	-	-	-	-	-	NA	NA	NA																	2	c
2024	154	Skimmed milk powder	-	P	N/A	26.80	-	N/A	34.28	-	N/A	34.47	-	-	-	-	-	NA	NA	NA																	2	c
2024	155	Skimmed milk powder	-	P	N/A	33.54	-	N/A	34.16	-	17.46(at)/ N/A/ N/A	34.81/ 34.85/ 34.77	at/-/-	-	-	-	-	NA	NA	NA																	2	c

FRESH PRODUCE AND FRUITS

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																													Category	Type
					16 h at 37 ± 1°C															16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result							All confirmatory tests	Final result			Agreement			PCR result								All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell									QS5			CFX96 standard			CFX Opus Deepwell									
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
2024	**121**	**Brussels cabbage**	+	P	26.63	31.72	+	26.79	32.06	+	25.72	31.51	+	+	+	+	+	PA	PA	PA	26.29	31.66	+	26.63	31.92	+	26.2	31.64	+	+	+	+	+	PA	PA	PA	3	a
2024	**122**	**Broccoli**	-	P	N/A	32.18	-	N/A	32.31	-	N/A	32.33	-	-	-	-	-	NA	NA	NA																3	a
2024	124	Cucumber	-	P	N/A	31.48	-	N/A	32.82	-	N/A	32.48	-	-	-	-	-	NA	NA	NA																3	a
2024	125	Tomato	-	P	N/A	31.93	-	N/A	32.59	-	N/A	32.39	-	-	-	-	-	NA	NA	NA																3	a
2024	126	Mushrooms	-	P	N/A	32.04	-	39.37/ N/A/ N/A	33.25/ 33.76/ 34.28	+/-/-	N/A	32.90	-	-	-	-	-	NA	PD FP(alt)	NA	N/A	32.43	-	N/A	32.9	-	N/A	32.56	-	-	-	-	-	NA	NA	NA	3	a
2024	127	Aubergine	-	P	N/A	31.68	-	N/A	32.51	-	N/A	32.11	-	-	-	-	-	NA	NA	NA																3	a
2024	128	Yellow pepper	-	P	N/A	31.09	-	N/A	32.70	-	N/A	32.29	-	-	-	-	-	NA	NA	NA																3	a
2024	129	Shallot	-	P	N/A	31.58	-	N/A	32.48	-	N/A	32.12	-	-	-	-	-	NA	NA	NA																3	a
2024	**379**	**Leek**	+	P	18.17	32.75	+	19.07	37.61	+	18.57	35.06	+	+	+	+	+	PA	PA	PA	18.33	33.68	+	19.72	35.98	+	18.65	35.15	+	+	+	+	+	PA	PA	PA	3	a
2024	**380**	**Tomato**	+	P	16.17	/	+	17.25	37.67	+	15.51	34.35	+	+	+	+	+	PA	PA	PA	15.818	/	+	17.24	39.21	+	15.68	35.84	+	+	+	+	+	PA	PA	PA	3	a
2023	**4787**	**Raw cucumber**	+	P	16.90	28.70	+	18.70	34.39	+	19.35	36.70	+	+	+	+	+	PA	PA	PA	16.50	30.79	+	18.85	34.16	+	19.43	37.18	+	+	+	+	+	PA	PA	PA	3	a
2023	**4788**	**Raw tomato**	+	P	26.37	30.10	+	27.91	32.63	+	29.95	34.02	+	+	+	+	+	PA	PA	PA	22.95	31.29	+	25.37	32.87	+	30.28	35.39	+	+	+	+	+	PA	PA	PA	3	a
2023	**4789**	**Raw mushrooms**	+	P	31.38	30.57	+	33.53	33.03	+	33.70	34.10	+	+	+	+	+	PA	PA	PA	31.29	31.60	+	32.76	33.49	+	33.72	35.05	+	+	+	+	+	PA	PA	PA	3	a
2023	**4790**	**Raw red cabbage**	+	P	25.24	30.44	+	27.44	33.28	+	27.54	34.19	+	+	+	+	+	PA	PA	PA	25.09	31.16	+	27.18	32.69	+	28.54	35.88	+	+	+	+	+	PA	PA	PA	3	a
2023	**4791**	**Raw mix vegetables**	-	P	N/A	30.54	-	N/A	32.75	-	N/A	34.32	-	-	-	-	-	NA	NA	NA																3	a
2023	**5471**	**Raw mushroom**	+	P	19.87	28.57	+	21.76	30.74	+	21.20	36.86	+	+	+	+	+	PA	PA	PA	19.85	28.26	+	21.77	30.4	+	22.57	36.04	+	+	+	+	+	PA	PA	PA	3	a
2023	**5472**	**Raw carrot**	-	P	27,35/ 28,99/ 28,77	28,57/ 32,17/ 32,17	+/+/+	31.52/ 31.81/ 32.33	29.85/ 32.40/ 32.57	+/+/+	32.38/ 32.6/ 32.49	34.7/ 34.76/ 34.82	+/+/+	-	-	-	-	PD FP(alt)	PD FP(alt)	PD FP(alt)	N/A	28.72	-	N/A	30.42	-	39.97/ N/A/ N/A	35.1/ 34.55/ 35.06	+/- /-	-	-	-	-	NA	NA	PD FP(alt)	3	a
2023	**5473**	**Raw leek**	-	P	28,60/ 12,60/ 29,39	28,15/ 29,51/ 31,97	+/i/+	N/A	30.24	-	31.9 (at)/ 32.54/ 32.08	35.39/ 34.42/ 34.35	-/+/+	-	-	-	-	PD FP(alt)	NA	NA	N/A	28.58	-	N/A	30.06	-	1.06 (at)/ N/A/ N/A	34.83/3 4.71/ 35.38	-/-/-	-	-	-	-	NA	NA	NA	3	a
2023	**5474**	**Raw tomato**	+	P	23.06	27.41	+	27.07	29.80	+	27.68	35.18	+	+	+	+	+	PA	PA	PA	22.95	28.14	+	25.14	29.94	+	26.99	34.4	+	+	+	+	+	PA	PA	PA	3	a
2023	**5475**	**Raw aubergine**	+	P	18.59	28.41	+	21.43	30.77	+	22.14	36.20	+	+	+	+	+	PA	PA	PA	22.53	29.33	+	23.22	30.13	+	27.26	34.56	+	+	+	+	+	PA	PA	PA	3	a
2023	**5476**	**Raw cucumber**	+	P	14.56	27.48	+	16.66	31.33	+	15.85	/	+	+	+	+	+	PA	PA	PA	16.53	28.75	+	17.06	31.02	+	35.55	/	+	+	+	+	+	PA	PA	PA	3	a
2023	**5477**	**Raw red pepper**	-	P	N/A	29.51	-	N/A	30.19	-	34.58/ 34.84/ 34.72	34.7/ 34.9/ 34.78	+/+/+	-	-	-	-	NA	NA	PD FP(alt)	N/A	29.10	-	N/A	30.39	-	N/A	34.19	-	-	-	-	-	NA	NA	NA	3	a
2024	**123**	**Pomelos**	-	P	N/A	32.11	-	N/A	33.08	-	N/A	32.56	-	-	-	-	-	NA	NA	NA																3	b
2024	130	Kiwi	-	P	N/A	31.93	-	N/A	33.01	-	N/A	32.29	-	-	-	-	-	NA	NA	NA																3	b
2024	131	Mango	-	P	N/A	32.18	-	N/A	32.64	-	N/A	32.90	-	-	-	-	-	NA	NA	NA																3	b
2024	**381**	**Banana**	+	P	20.43	35.06	+	21.62	N/A	+	20.97	36.72	+	+	+	+	+	PA	PA	PA	21.38	35.59	+	22.19	36.14	+	20.65	32.96	+	+	+	+	+	PA	PA	PA	3	b
2023	**4792**	**Orange**	+	P	20.70	30.21	+	23.80	33.17	+	27.07	34.93	+	+	+	+	+	PA	PA	PA	19.82	31.55	+	24.3	33.4	+	27	35.93	+	+	+	+	+	PA	PA	PA	3	b
2023	**4793**	**Pear**	-	P	N/A	30.92	-	N/A	32.98	-	N/A	34.46	-	-	-	-	-	NA	NA	NA																3	b
2023	**4794**	**Plum**	+	P	19.66	32.44	+	20.71	35.23	+	16.45	6.29	+	+	+	+	+	PA	PA	PA	18.35	32.98	+	21.26	35.4	+	25.79	36.18	+	+	+	+	+	PA	PA	PA	3	b
2023	**4795**	**Apple**	+	P	19.95	30.04	+	22.57	33.35	+	24.23	34.78	+	+	+	+	+	PA	PA	PA	19.46	30.71	+	25.34	32.2	+	23.75	36.94	+	+	+	+	+	PA	PA	PA	3	b
2023	**4796**	**Banana**	+	P	26.76	30.70	+	28.02	32.85	+	24.91	N/A	+	+	+	+	+	PA	PA	PA	23.76	31.88	+	25.92	33.5	+	24.86	36.93	+	+	+	+	+	PA	PA	PA	3	b

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

FRESH PRODUCE AND FRUITS

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit – 16 h at 37 ± 1°C – PCR result – QS5 – *Salmonella* (Cq)	QS5 – IAC (Cq)	QS5 – Result	CFX96 standard – *Salmonella* (Cq)	CFX96 standard – IAC (Cq)	CFX96 standard – Result	CFX Opus Deepwell – *Salmonella* (Cq)	CFX Opus Deepwell – IAC (Cq)	CFX Opus Deepwell – Result	All confirmatory tests	Final result – QS5	Final result – CFX 96 standard reanalysed	Final result – CFX OPUS DeepWell reanalysed	Agreement – QS5	Agreement – CFX 96 standard	Agreement – CFX OPUS DeepWell	16 h at 37 ± 1°C +72 h at 5 ± 3°C – PCR result – QS5 – *Salmonella* (Cq)	QS5 – IAC (Cq)	QS5 – Result	CFX96 standard – *Salmonella* (Cq)	CFX96 standard – IAC (Cq)	CFX96 standard – Result	CFX Opus Deepwell – *Salmonella* (Cq)	CFX Opus Deepwell – IAC (Cq)	CFX Opus Deepwell – Result	All confirmatory tests	Final result - 72 h at 5°C ± 3°C – QS5	Final result - 72 h at 5°C ± 3°C – CFX 96 standard reanalysed	Final result - 72 h at 5°C ± 3°C – CFX OPUS DeepWell reanalysed	Agreement – 72 h at 5°C ± 3°C – QS5	Agreement – 72 h at 5°C ± 3°C – CFX 96 standard	Agreement – 72 h at 5°C ± 3°C – CFX OPUS DeepWell	Category	Type
2023	**4963**	**Clementine**	-	P	N/A/ N/A*	31,05/ 29,46	i/-*	N/A	33.30	-	N/A	34.85	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2023	**4964**	**Banana**	+	P	18.33	29.74	+	21.73	33.67	+	19.29	N/A	+	+	+	+	+	**PA**	**PA**	**PA**	18.64	32.35	+	21.69	32.95	+	22.31	36.32	+	+	+	+	+	**PA**	**PA**	**PA**	3	b
2023	**4965**	**Apple**	+	P	20.10	36.06	+	17.98	35.12	+	19.50	N/A	+	+	+	+	+	**PA**	**PA**	**PA**	15.92	31.42	+	18.74	35.29	+	16.25	/	+	+	+	+	+	**PA**	**PA**	**PA**	3	b
2023	**4966**	**Grapes**	+	P	18.27	29.97	+	20.29	34.61	+	23.01	35.99	+	+	+	+	+	**PA**	**PA**	**PA**	18.68	31.95	+	21.09	34.15	+	21.44	37.81	+	+	+	+	+	**PA**	**PA**	**PA**	3	b
2023	**4967**	**Kiwi**	+	P	16.64	30.36	+	18.66	35.31	+	21.20	N/A	+	+	+	+	+	**PA**	**PA**	**PA**	15.94	31.69	+	19.2	34.68	+	21.42	36.46	+	+	+	+	+	**PA**	**PA**	**PA**	3	b
2023	**5478**	**Apple**	-	P	N/A	29.43	-	N/A	30.47	-	N/A	35.41	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2023	**5479**	**Clementine**	+	P	19.44	29.25	+	19.83	30.47	+	17.02	/	+	+	+	+	+	**PA**	**PA**	**PA**	20.97	29.02	+	21.16	30.63	+	22.59	36.52	+	+	+	+	+	**PA**	**PA**	**PA**	3	b
2023	**5480**	**Pear**	-	P	N/A	29.73	-	N/A	30.45	-	N/A	35.18	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2023	**5481**	**Banana**	-	P	N/A	28.61	-	N/A	30.30	-	34.67/ N/A/ N/A	35.12/ 34.85/ 35.15.	+/-/-	-	-	-	-	**NA**	**NA**	**PD** FP(alt)																		3	b
2023	**5482**	**White grapes**	-	P	N/A	29.13	-	N/A	30.11	-	N/A	34.84	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2023	**5483**	**Orange**	-	P	N/A	29.23	-	N/A	30.19	-	N/A	35.92	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2023	**5484**	**Persimmon**	-	P	N/A	29.20	-	N/A	30.37	-	N/A	35.13	-	-	-	-	-	**NA**	**NA**	**NA**																		3	b
2024	386	Sprouts	-	P	N/A	32.98	-	N/A	35.31	-	N/A	33.59	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c
2024	387	Sprouts	-	P	N/A	35.03	-	N/A	38.54	-	N/A	34.33	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c
2024	388	Sprouts	-	P	N/A	32.44	-	N/A	35.36	-	N/A	34.33	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c
2023	**4958**	**Sprouts (organic alfalfa, leeks, lentils)**	+	P	29.40	29.45	+	35.06	32.61	+	36.55	34.19	+	+	+	+	+	**PA**	**PA**	**PA**	29.82	31.15	+	33.45	31.76	+	34.27	34.83	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4959**	**Sprouts (organic alfalfa)**	+	P	24.25	29.41	+	30.50	32.36	+	30.06	34.07	+	+	+	+	+	**PA**	**PA**	**PA**	26.73	30.49	+	29.43	32.03	+	30.01	34.98	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4960**	**Sprouts (organic radish, fennel)**	+	P	25.81	29.08	+	31.25	32.39	+	31.21	34.11	+	+	+	+	+	**PA**	**PA**	**PA**	28.38	30.74	+	30.74	31.86	+	31	35.07	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4961**	**Sprouts (alfalfa)**	+	P	27.23	29.58	+	30.52	32.57	+	29.30	34.67	+	+	+	+	+	**PA**	**PA**	**PA**	26.81	30.61	+	30.15	31.79	+	30.13	34.44	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4962**	**Sprouts (radish)**	+	P	26.87	30.09	+	30.16	32.76	+	29.73	34.02	+	+	+	+	+	**PA**	**PA**	**PA**	28.80	31.64	+	30.45	32.12	+	30.15	34.56	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4982**	**Sprouts (organic alfalfa, leeks, lentils)**	+	P	23.99	28.73	+	34.57	32.55	+	N/A (at)/ N/A/ 35.07	34.03/ 35.15/ 34.48	at/-/+/- (ne)	+	+	+	-	**PA**	**PA**	**ND** FN(alt)	26.57	31.01	+	34.39	32.52	+	36.05	34.86	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**4983**	**Sprouts (organic alfalfa)**	-	P	N/A	29.21	-	N/A	32.40	-	N/A	34.15	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c
2023	**4984**	**Sprouts (organic radish, fennel)**	+	P	30.75	30.02	+	34.44	32.43	+	34.74	34.43	+	+	+	+	+	**PA**	**PA**	**PA**	N/A/ 31,91/ 32,36	31,01/ 31,94/ 32,54	-/+/+	35.43	32.36	+	39.98	34.49	+	+	-	+	+	**ND** FN(alt)	**PA**	**PA**	3	c
2023	**4985**	**Sprouts (alfalfa)**	-	P	N/A	29.91	-	N/A	32.45	-	N/A	33.69	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c
2023	**4986**	**Sprouts (radish)**	+	P	25.68	30.14	+	31.66	32.67	+	31.60	33.98	+	+	+	+	+	**PA**	**PA**	**PA**	31.17	32.35	+	33.53	32.22	+	31.92	34.3	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**5485**	**Sprouts**	-	P	N/A	27.63	-	N/A	30.18	-	38.29/ 36.65/ N/A	35.81/ 34.49/ 34.5	+/+/-	-	-	-	-	**NA**	**NA**	**PD** FP(alt)	N/A	28.08	-	N/A	30.34	-	N/A	34.57	-	-	-	-	-	**NA**	**NA**	**NA**	3	c
2023	**5486**	**Sprouts**	+	P	27.81	28.19	+	31.27	29.86	+	29.41	34.76	+	+	+	+	+	**PA**	**PA**	**PA**	28.00	28.08	+	30.11	30.41	+	28.94	33.92	+	+	+	+	+	**PA**	**PA**	**PA**	3	c
2023	**5487**	**Sprouts**	-	P	N/A	28.11	-	N/A	29.73	-	N/A	34.60	-	-	-	-	-	**NA**	**NA**	**NA**																		3	c

FRESH PRODUCE AND FRUITS

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1* Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell										QS5			CFX96 standard			CFX Opus Deepwell											
					Salmonella (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**		
2023	**5488**	**Sprouts**	+	P	N/A / N/A / N/A	28,01/ 31,54/ 31,63	-/-/-	N/A/N/A /N/A	29.69/ 32.18/ 32.15	-/-/-	N/A/ N/A/ N/A	35.29/ 34.15/3 4.93	-/-/-	+	-	-	-	**ND** **FN(alt)**	**ND** **FN(alt)**	**ND** **FN(alt)**	N/A / N/A / N/A	27,85/ 31,97/ 32,77	-/- /-	N/A/ N/A/ N/A	30.38/ 32.47/ 32.54	-/-/-	N/A/ N/A/ N/A	34.3/ 34.46/ 34.09	-/-/-	+	-	-	-	**ND** **FN(alt)**	**ND** **FN(alt)**	**ND** **FN(alt)**	3	c
2023	**5489**	**Sprouts**	-	P	N/A	28.37	-	N/A	30.03	-	N/A	35.21	-	-	-	-	-	**NA**	**NA**	**NA**																	3	c
2023	**5490**	**Sprouts**	-	P	N/A	28.85	-	N/A	30.30	-	N/A	35.26	-	-	-	-	-	**NA**	**NA**	**NA**																	3	c
2023	**5491**	**Sprouts**	+	P	N/A / N/A / N/A	28,27/ 31,27/ 31,27	-/-/-	N/A/ 36.42(at)/ N/A	29.86/ 33.5/ 33.94	-/at/-	N/A/ N/A/ N/A	35.3/ 34.53/ 34.61	-/-/-	+	-	-	-	**ND** **FN(alt)**	**ND** **FN(alt)**	**ND** **FN(alt)**	N/A / N/A / N/A	28,76/ 32,13/ 31,17	-/- /-	N/A/ 36.57(at)/ N/A	30.19/ 33.7 /33.82	- /at/-	N/A/ N/A/ N/A	34.38/ 34.4/ 34.96	-/-/-	+	-	-	-	**ND** **FN(alt)**	**ND** **FN(alt)**	**ND** **FN(alt)**	3	c

MULTICOMPONENT FOODS OR MEAL COMPONENTS

Alternative method: Salmofast® PCR Kit

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	16 h at 37 ± 1°C: PCR result – QS5 – *Salmonella* (Cq)	16 h at 37 ± 1°C: PCR result – QS5 – IAC (Cq)	16 h at 37 ± 1°C: PCR result – QS5 – Result	16 h at 37 ± 1°C: PCR result – CFX96 standard – *Salmonella* (Cq)	16 h at 37 ± 1°C: PCR result – CFX96 standard – IAC (Cq)	16 h at 37 ± 1°C: PCR result – CFX96 standard – Result	16 h at 37 ± 1°C: PCR result – CFX Opus Deepwell – *Salmonella* (Cq)	16 h at 37 ± 1°C: PCR result – CFX Opus Deepwell – IAC (Cq)	16 h at 37 ± 1°C: PCR result – CFX Opus Deepwell – Result	16 h at 37 ± 1°C: All confirmatory tests	16 h at 37 ± 1°C: Final result – QS5	16 h at 37 ± 1°C: Final result – CFX 96 standard reanalysed	16 h at 37 ± 1°C: Final result – CFX OPUS DeepWell reanalysed	16 h at 37 ± 1°C: Agreement – QS5	16 h at 37 ± 1°C: Agreement – CFX 96 standard	16 h at 37 ± 1°C: Agreement – CFX OPUS DeepWell	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – QS5 – *Salmonella* (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – QS5 – IAC (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – QS5 – Result	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX96 standard – *Salmonella* (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX96 standard – IAC (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX96 standard – Result	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX Opus Deepwell – *Salmonella* (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX Opus Deepwell – IAC (Cq)	16 h at 37 ± 1°C +72 h at 5 ± 3°C: PCR result – CFX Opus Deepwell – Result	16 h at 37 ± 1°C +72 h at 5 ± 3°C: All confirmatory tests	Final result - 72 h at 5°C ± 3°C – QS5	Final result - 72 h at 5°C ± 3°C – CFX 96 standard reanalysed	Final result - 72 h at 5°C ± 3°C – CFX OPUS DeepWell reanalysed	Agreement – 72 h at 5°C ± 3°C – QS5	Agreement – 72 h at 5°C ± 3°C – CFX 96 standard	Agreement – 72 h at 5°C ± 3°C – CFX OPUS DeepWell	Category	Type
2024	132	RTE product (sandwich ham cheese)	-	P	N/A	32.2	-	N/A	32.23	-	N/A	32.60	-	-	-	-	-	NA	NA	NA																4	a
2024	133	RTE product (sandwich chicken)	-	P	N/A	32.62	-	N/A	32.65	-	N/A	31.96	-	-	-	-	-	NA	NA	NA																4	a
2024	134	RTE product (pasta, surimi, chives)	-	P	N/A	32.48	-	N/A	32.61	-	N/A	32.17	-	-	-	-	-	NA	NA	NA																4	a
2024	135	RTE product (rice, tuna, parsley)	-	P	N/A	32.23	-	N/A	32.60	-	N/A	32.35	-	-	-	-	-	NA	NA	NA																4	a
2023	4474	RTE salad (eggs, mayonnaise salad)	-	P	N/A	30.41	-	NA	33.03	-	29.9 (at)/ 33.96 (at)/ 39.62 (at)/ N/A*	34.1/ 35.33/ 35.06/ 34.58*	-/-/-/-*	-	-	-	-	-	NA	NA	NA																4	a
2023	4475	RTE salad (eggs, mayonnaise salad)	-	P	N/A	30.42	-	NA	32.59	-	38.36 (at)/ N/A/ N/A	33.67/ 35.01/ 34.73	-/-/-	-	-	-	-	-	NA	NA	NA																4	a
2023	4476	RTE salad (eggs, mayonnaise salad)	-	P	N/A	29.28	-	NA	32.19	-	N/A	34.01	-	-	-	-	-	-	NA	NA	NA																4	a
2023	**4530**	**RTE salad (dry-cured ham, mozzarella, penne salad)**	+	P	31.15	32.26	+	32.80	33.42	+	35.04	33.58	+	+	+	+	+	PA	PA	PA	30.15	31.78	+	33.07	30.29	+	34.49	33.62	+	+	+	+	+	PA	PA	PA	4	a
2023	**4531**	**RTE salad (chicken, cheese, pasta salad)**	+	P	23.27	32.03	+	27.49	33.47	+	27.47	34.20	+	+	+	+	+	PA	PA	PA	23.17	31.52	+	27.8	30.27	+	30.41	34.94	+	+	+	+	+	PA	PA	PA	4	a
2023	**4532**	**Sandwich (with delicatessen)**	+	P	28.26	31.69	+	31.86	32.76	+	35.81	32.57	+	+	+	+	+	PA	PA	PA	31.02	31.66	+	33.93	30.79	+	N/A/ N/A/ N/A	35.37/ 34.94/ 34.72	-/-/-	+	+	+	-	PA	PA	ND FN(alt)	4	a
2023	**4533**	**Sandwich (tuna, raw vegetables)**	-	P	N/A	32.94	-	NA	33.14	-	N/A	34.30	-	-	-	-	-	NA	NA	NA																4	a
2023	**4534**	**Chocolate mousse**	+	P	N/A/ 20,22*	N/A/ 26,43*	i/+*	NA/ 20.56*	NA/33.24*	i/+*	N/A/22.51	3.02/39.14	i/+	+	+	+	+	PA	PA	PA	N/A/ 16,77*	N/A/ N/A*	i/+ *	N/A/ 17.69*	N/A/ 33.18 *	i/+*	N/A/ 15.51*	/ 15.45*	i/+*	+	+	+	+	PA	PA	PA	4	a
2023	**5160**	**Chocolate mousse**	-	P	N/A/ N/A*/ N/A**	N/A/ N/A*/ 31,26**	i/i*/- **	N/A/ 36.40*/ N/A*/ N/A*/ N/A**/ N/A**	N/A/ 32.40*/ N/A*/ N/A*/ 33.44**/ 32.78**	i/+*/i*/i*/ -**/-**	N/A/ N/A*/ 31.23**/ N/A**/ N/A**	-/ -*/ 34.65**/ 34.36**/ 34.81**	i/i*/+** /-**/-**	-	-	-	-	-	NA	PD FP(alt)	PD FP(alt)	N/A	32.35	-	N/A	33.11	-	6.19/ N/A*	3.87/ 34.07*	i/-	-	-	-	-	NA	NA	NA	4	a

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

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MULTICOMPONENT FOODS OR MEAL COMPONENTS																																								
					Alternative method: Salmofast® PCR Kit																																					
					16 h at 37 ± 1°C																					16 h at 37 ± 1°C +72 h at 5 ± 3°C																		
					PCR result										Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C					
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests							QS5			CFX96 standard			CFX Opus Deepwell													
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2023	**5161**	**Chocolate mousse**	+	P	N/A/ N/A*/ N/A*/ N/A*	31,97/ 30,11/ 32,02 /31,55	i/-*/- */-*	N/A/ N/A*/ N/A*/ N/A*	30.54 */N/A*	-/-*/-*/i*	N/A/ N/A*/ N/A*/ N/A*	/ 33.97*/ 34*/-*	i/-*/- */i*	+	-	-	-	ND FN(alt)	ND FN(alt)	ND FN(alt)	N/A/ N/A/ N/A	32,71/ 32,13/ 32,69	-/- /-	N/A/ N/A/ N/A/ 35.81*/ N/A*	33.06/ N/A/ N/A/ 33.61 */ 33.14 *	- /i/i/ +*/- *	6.92/ N/A*/ N/A*/ N/A*	37.48/ 33.96*/ 35.21*/ 33.8*	i/- */- */-*	+	-	-	-	ND FN(alt)	ND FN(alt)	ND FN(alt)	4	a
2023	**5162**	**RTE salad (cucumber, salmon, pasta salad)**	+	P	25.54	30.49	+	27.72	32.49	+	28.18	34.11	+	+	+	+	+	PA	PA	PA	23.89	31.39	+	26.99	32.65	+	26.53	34.62	+	+	+	+	+	PA	PA	PA	4	a
2023	**5163**	**RTE salad (pasta, surimi salad)**	+	P	23.95	31.17	+	25.04	32.63	+	29.47	34.05	+	+	+	+	+	PA	PA	PA	21.85	32.09	+	23.48	33.01	+	26.96	34.74	+	+	+	+	+	PA	PA	PA	4	a
2023	**5164**	**RTE salad (rice, salmon, cucumber salad)**	-	P	N/A	30.73	-	N/A	32.68	-	N/A	35.23	-	-	-	-	-	NA	NA	NA																	4	a
2023	**5165**	**RTE salad (rice salad, tuna, basil)**	+	P	25.72	31.13	+	25.24	33.03	+	10.51 (at)/ 30.56/ 30.28	36.57/ 34.74/ 35.49	-/+/+	+	+	+	+	PA	PA	PA	23.67	31.73	+	25.18	32.79	+	30.6	34.09	+	+	+	+	+	PA	PA	PA	4	a
2023	**5166**	**Sandwich (ham, Emmental)**	+	P	19.54	30.58	+	21.80	33.88	+	24.53	34.24	+	+	+	+	+	PA	PA	PA	20.25	32.40	+	21.42	32.68	+	23.2	33.86	+	+	+	+	+	PA	PA	PA	4	a
2023	**5167**	**Sandwich (rosette, gherkin)**	+	P	21.24	30.51	+	21.52	33.83	+	25.88	34.09	+	+	+	+	+	PA	PA	PA	22.64	32.02	+	23.45	33.15	+	28.43	34.01	+	+	+	+	+	PA	PA	PA	4	a
2024	**5168**	**RTE (lasagne)**	+	P	N/A/ N/A/ N/A	33.43/ 34.76/ N/A	-/-/i	N/A/ 38.94/ 34.71	34.74/ 34.71/ 35.3	-/+/+	N/A/ N/A/ N/A	34.38/ 34.71/ 34.46	-/-/-	+	-	-	-	ND FN(alt)	ND FN(alt)	ND FN(alt)	19.32	33.06	+	25.54	34.61	+	25.05	34.14	+	+	+	+	+	PA	PA	PA	4	b
2024	**5169**	**RTE (pasta, pork, cream)**	+	P	17.13	33.80	+	18.77	37.47	+	18.64	35.47	+	+	+	+	+	PA	PA	PA	14.38	34.14	+	16.3	37.75	+	15.69	36.53	+	+	+	+	+	PA	PA	PA	4	b
2024	**5170**	**RTE (pasta, meat, cheese)**	+	P	23.93	32.23	+	32.15	33.91	+	32.12	34.02	+	+	+	+	+	PA	PA	PA	18.87	33.19	+	20.89	35.67	+	20.41	35.5	+	+	+	+	+	PA	PA	PA	4	b
2024	**5171**	**RTE (pasta, chicken, cream)**	-	P	N/A	32.93	-	N/A	34.31	-	N/A	34.11	-	-	-	-	-	NA	NA	NA																	4	b
2023	4484	RTRH meat with sauce	+	P	21.74	32.06	+	26.79	32.99	+	31.11	34.18	+	+	+	+	+	PA	PA	PA	N/A/ 23,90*	36,23/ 25,93*	i/+ *	29.54	32.52	+	29.97	33.2	+	+	+	+	+	PA	PA	PA	4	b
2023	**4535**	**RTRH food (tuna, vegetables, mushrooms, carrot)**	-	P	N/A	31.93	-	NA	33.14	-	38.73/ N/A/ N/A	33.85/ 34.8/ 35.31	+/-/-	-	-	-	-	NA	NA	PD FP(alt)																	4	b
2023	**4539**	**RTRH food (fish parmentier, chives)**	-	P	N/A	30.77	-	NA	33.65	-	N/A	35.37	-	-	-	-	-	NA	NA	NA																	4	b
2023	**5168**	**RTRH (Cooked rice, pepper, red beans)**	+	P	14.49	32.10	+	16.25	36.06	+	16.55	39.03	+	+	+	+	+	PA	PA	PA	15.29	33.04	+	16.38	35.45	+	16.83	6.33	+	+	+	+	+	PA	PA	PA	4	b
2023	**5169**	**RTRH (rice, onions peppers aromatic herbs)**	+	P	14.98	31.15	+	16.56	35.05	+	17.59	39.65	+	+	+	+	+	PA	PA	PA	15.47	33.07	+	16.42	35.26	+	17.5	6.88	+	+	+	+	+	PA	PA	PA	4	b
2023	**5170**	**RTRH (beef ravioli)**	+	P	15.65	32.15	+	16.89	36.36	+	19.06	36.97	+	+	+	+	+	PA	PA	PA	15.70	34.19	+	16.12	38.27	+	26.04	/	+	+	+	+	+	PA	PA	PA	4	b

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MULTICOMPONENT FOODS OR MEAL COMPONENTS																																											
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					PCR result										Final result			Agreement			PCR result										Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C								
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests									QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests										
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2023	**5171**	**RTRH (tortellini, cheese, tomato sauce)**	-	P	N/A	30.26	-	N/A	32.62	-	34.81 (at)/ N/A/ N/A	9.77/ 35.15/ 35.19	-/-/-	-	-	-	-	NA	NA	NA																		4	b
2023	**5172**	**RTRH ("bouchée à la Reine" chicken)**	-	P	N/A	31.17	-	N/A	32.63	-	N/A	34.80	-	-	-	-	-	NA	NA	NA																		4	b
2023	**5173**	**RTRH ("bouchée à la Reine" chicken)**	+	P	21.14	31.36	+	22.31	33.14	+	23.23	38.13	+	+	+	+	+	PA	PA	PA	19.19	31.74	+	22.35	32.89	+	22.37	36.11	+	+	+	+	+	PA	PA	PA	4	b
2023	**5174**	**RTRH (chicken, mushroom risotto, cream sauce)**	+	P	15.86	32.26	+	16.44	35.84	+	15.74	/	+	+	+	+	+	PA	PA	PA	15.62	32.84	+	17.13	34.82	+	16	39.69	+	+	+	+	+	PA	PA	PA	4	b
2023	**5175**	**RTRH (chicken, mushroom risotto)**	+	P	16.04	31.91	+	16.57	37.00	+	16.71	39.39	+	+	+	+	+	PA	PA	PA	15.31	32.13	+	16.99	34.57	+	16.43	39.22	+	+	+	+	+	PA	PA	PA	4	b
2023	**5176**	**RTRH (salmon steak, rice, dill sauce)**	+	P	15.63	31.70	+	16.98	35.84	+	16.83	39.69	+	+	+	+	+	PA	PA	PA	16.12	32.48	+	17.46	34.59	+	17.24	/	+	+	+	+	+	PA	PA	PA	4	b
2023	**5177**	**RTRH (Alaska pollack, Armorican sauce, rice duo)**	+	P	15.83	32.14	+	16.73	35.29	+	17.92	37.95	+	+	+	+	+	PA	PA	PA	14.91	32.41	+	16.73	35.08	+	17.19	/	+	+	+	+	+	PA	PA	PA	4	b
2023	**5178**	**RTRH (white hake, salmon, vegetable, rice)**	-	P	N/A	30.48	-	N/A	32.69	-	N/A	35.17	-	-	-	-	-	NA	NA	NA																		4	b
2023	**5179**	**RTRH (prawns, parsley, penne, vegetables)**	+	P	12.65	32.33	+	12.82	35.70	+	18.01	37.54	+	+	+	+	+	PA	PA	PA	14.72	32.25	+	17.31	34.91	+	18.99	/	+	+	+	+	+	PA	PA	PA	4	b
2023	**5180**	**RTRH (shrimp noodles, mushrooms, vegetables)**	+	P	15.79	32.07	+	16.66	36.67	+	11.81 (at)/ 19.36/ 17.59	37.77/ 36.91/ N/A	-/+/+	+	+	+	+	PA	PA	PA	15.74	33.90	+	16.72	35.27	+	24.02	/	+	+	+	+	+	PA	PA	PA	4	b
2023	6128	RTRH product (couscous)	-	P	N/A	33.29	-	N/A	31.74	-	N/A	33.35	-	-	-	-	-	NA	NA	NA																		4	b
2023	6129	RTRH product (mashed beef potatoes)	-	P	N/A	32.14	-	N/A	33.45	-	N/A	33.24	-	-	-	-	-	NA	NA	NA																		4	b
2023	6130	RTRH product (carbonara pasta)	-	P	36,23/ N/A/ N/A	32,26/ 31,15/ 31,09	+/-/-	N/A	33.33	-	N/A	33.79	-	-	-	-	-	PD FP(alt)	NA	NA	N/A	31.39	-	N/A	33.04	-	N/A	33.12	-	-	-	-	-	NA	NA	NA	4	b
2023	6131	RTRH product (chicken, mushroom risotto)	-	P	N/A	32.68	-	N/A	33.20	-	N/A	33.67	-	-	-	-	-	NA	NA	NA																		4	b
2024	**286**	**Frozen French fries, fluffy matchstick chips**	+	P	16.83	32.81	+	18.69	38.19	+	18.38	37.23	+	+	+	+	+	PA	PA	PA	17.5	34.08	+	19.74	35.62	+	18.01	37.61	+	+	+	+	+	PA	PA	PA	4	c
2024	**287**	**Frozen French fries with skin**	-	P	N/A	31.42	-	N/A	34.35	-	N/A	35.21	-	-	-	-	-	NA	NA	NA																		4	c
2024	**288**	**Frozen pizza (ham, cheese)**	+	P	17.17	/	+	18.62	38.41	+	18.10	37.98	+	+	+	+	+	PA	PA	PA	18.2	35.59	+	20.12	39.34	+	18.65	38.27	+	+	+	+	+	PA	PA	PA	4	c
2024	**289**	**Frozen pizza (4 cheeses)**	+	P	28.44	32.57	+	30.03	34.13	+	29.82	34.06	+	+	+	+	+	PA	PA	PA	28.44	32.73	+	31.1	34.18	+	29.58	34.12	+	+	+	+	+	PA	PA	PA	4	c

MICROVAL® NEN

MULTICOMPONENT FOODS OR MEAL COMPONENTS																																										
					Alternative method: Salmofast® PCR Kit																																						
					16 h at 37 ± 1°C																		16 h at 37 ± 1°C +72 h at 5 ± 3°C																						
					PCR result										Final result			Agreement			PCR result										Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C							
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests									QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests										
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2024	**290**	**Frozen pizza (Bolognese)**	+	P	31.80	32.85	+	33.75	35.07	+	33.35	34.60	+	+	+	+	+	**PA**	**PA**	**PA**	30.9	33.7	+	N/A/ 34.76/ N/A	37.14/ 33.82/ 34.21	-/+/-	32.55	34.72	+	+	+	-	+	**PA**	**ND$_{FN(alt)}$**	**PA**	4	c
2024	**291**	**Frozen RTRH product (pasta, chicken, mushroom sauce)**	-	P	N/A	30.46	-	N/A	33.84	-	N/A	34.55	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**292**	**Frozen RTRH product (fish, rice, vegetables)**	-	P	N/A	30.00	-	N/A	34.40	-	N/A	34.23	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**293**	**Frozen puff pastry RTRH with ham and cheese**	-	P	N/A	32.77	-	N/A	34.29	-	N/A	34.05	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**294**	**Frozen lasagne**	-	P	N/A	30.24	-	N/A	34.71	-	N/A	34.36	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**295**	**Frozen gratin with bacon, cream, cheese**	+	P	21.09	33.39	+	21.16	N/A	+	20.77	35.37	+	+	+	+	+	**PA**	**PA**	**PA**	20.37	33.86	+	22.27	35.45	+	20.64	34.38	+	+	+	+	+	**PA**	**PA**	**PA**	4	c
2024	**296**	**Frozen puff pastry RTRH with tomato and salmon**	-	P	N/A	33.07	-	N/A	36.36	-	N/A	34.52	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**297**	**Frozen puff pastry RTRH with spinach and goat cheese**	-	P	N/A	32.61	-	N/A	34.66	-	N/A	34.05	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**802**	**Frozen RTRH (quiches cheese, ham, bacon)**	-	P	N/A/N/ A*	/32.50*	i/-*	31.81/ N/A/ N/A	33.32/ 33.9/ 34.17	+/-/-	N/A	34.66	-	-	-	-	-	**NA**	**PD** FP(alt)	**NA**	N/A	33.41	-	N/A	34.14	-	N/A	33.65	-	-	-	-	-	**NA**	**NA**	**NA**	4	c
2024	**803**	**Frozen RTRH (Emmental leek tart)**	-	P	N/A	33.41	-	N/A	32.75	-	N/A	33.26	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**804**	**Frozen RTRH (spinach, goat's cheese)**	+	P	21.49	/	+	22.46	35.44	+	22.21	34.74	+	+	+	+	+	**PA**	**PA**	**PA**	21.87	33.97	+	24.08	35.98	+	22.29	33.3	+	+	+	+	+	**PA**	**PA**	**PA**	4	c
2024	**805**	**Frozen RTRH (pizza, bacon, cream)**	+	P	17.84	/	+	18.59	36.70	+	18.06	34.52	+	+	+	+	+	**PA**	**PA**	**PA**	18.92	35.8	+	20.09	N/A	+	19.12	36.41	+	+	+	+	+	**PA**	**PA**	**PA**	4	c
2024	**806**	**Frozen puff pastry RTRH with ham and cheese**	+	P	31.31	33.71	+	32.53	33.05	+	30.66	32.71	+	+	+	+	+	**PA**	**PA**	**PA**	26.9	32.98	+	32.54	33.83	+	31.8	33.64	+	+	+	+	+	**PA**	**PA**	**PA**	4	c
2024	**807**	**Frozen RTRH (chicken, mushroom, risotto)**	-	P	N/A	33.48	-	N/A	33.79	-	N/A	33.54	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**808**	**Frozen RTRH (chicken, rice, coco, curry)**	-	P	N/A	33.19	-	N/A	33.02	-	N/A	32.71	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c
2024	**809**	**Frozen lasagne**	-	P	N/A	33.47	-	N/A	33.05	-	N/A	33.51	-	-	-	-	-	**NA**	**NA**	**NA**																	4	c

RAW AND RTC FISH AND SEAFOOD

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell										QS5			CFX96 standard			CFX Opus Deepwell											
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell		
2024	**1747**	**Raw fish fillet (salmon)**	+	U	N/A	29.26	-	N/A	33.65	-	N/A	33.68	-	-	-	-	-	ND	ND	ND	N/A	30.54	-	N/A	33.62	-	N/A	32.05	-	-	-	-	-	ND	ND	ND	5	a
2024	**1748**	**Raw fish fillet (pollack)**	+	U	16	31.32	+	18.13	/	+	17.92	37.71	+	+	+	+	+	PA	PA	PA	16.32	/	+	17.85	N/A	+	18	34.27	+	+	+	+	+	PA	PA	PA	5	a
2024	**1749**	**Raw fish fillet (cod)**	+	U	19.10	31.62	+	20.93	/	+	20.46	36.90	+	+	+	+	+	PA	PA	PA	18.6	32.6	+	20.64	36.78	+	20.49	34.16	+	+	+	+	+	PA	PA	PA	5	a
2024	**1750**	**Raw fish (trout)**	-	U	N/A	27.79	-	N/A	34.59	-	N/A	34.07	-	-	-	-	-	NA	NA	NA																	5	a
2024	**1751**	**Raw fish (haddock)**	-	U	33.07/ 28.14/ 328.48	30.69/ 34.33/ N/A	+/+/+	36.03/ 30.15/ 30.75	34.51/ 36.26/ 35.4	+/+/+	35.23/ 30.32/ 29.77	33.69/ 37.39/ 36.31	+/+/+	-	-	-	-	PD FP(alt)	PD FP(alt)	PD FP(alt)	N/A	31.91	-	N/A	34.35	-	N/A	33.02	-	-	-	-	-	NA	NA	NA	5	a
2024	**1752**	**Raw fish fillet (salmon)**	+	U	18.68	19.84	+	21.77	N/A	+	22.00	36.65	+	+	+	+	+	PA	PA	PA	18.95	30.55	+	21.03	37.51	+	21.07	30.81	+	+	+	+	+	PA	PA	PA	5	a
2024	**1753**	**Raw fish filet (saithe)**	+	U	30.84/ 28.53/ 28.24	27.44/ 35.15/ 33.36	+/+/+	33.24/ 30.39/ 30.23	34.26/ 35.31/ 36.02	+/+/+	32.65/ 30.16/ 30.51	34.83/ 35.36/ 37.77	+/+/+	-	-	-	-	PA FP(alt)	PA FP(alt)	PA FP(alt)	N/A	32.21	-	N/A	34.78	-	N/A	33.68	-	-	-	-	-	ND	ND	ND	5	a
2024	**1754**	**Raw fish (monkfish tail)**	+	U	16.71	29.85	+	18.54	/	+	18.55	37.99	+	+	+	+	+	PA	PA	PA	16.81	32.79	+	18.93	38.04	+	18.43	33.7	+	+	+	+	+	PA	PA	PA	5	a
2024	**1755**	**Raw fish fillet (sea bream)**	-	U	17.89	30.94	+	20.12	/	+	19.77	37.73	+	+	+	+	+	PD	PD	PD	18.35	32.81	+	20.33	36.88	+	19.85	33	+	+	+	+	+	PD	PD	PD	5	a
2024	**1756**	**Raw fish (skate wing)**	+	U	17.50	32.76	+	19.16	/	+	19.15	37.24	+	+	+	+	+	PA	PA	PA	16.8	/	+	19.49	37.22	+	18.97	33.38	+	+	+	+	+	PA	PA	PA	5	a
2024	1757	Raw fish fillet (pollack)	-	U	N/A	33.62	-	N/A	34.69	-	N/A	34.91	-	-	-	-	-	NA	NA	NA																	5	a
2024	1758	Raw fish filet (saithe)	-	U	N/A	32.61	-	N/A	34.57	-	N/A	35.32	-	-	-	-	-	NA	NA	NA																	5	a
2024	1759	Raw fish filet (salmon)	-	U	N/A/ N/A*	/33.43*	i/-*	38.05/ N/A/ N/A	34.48/ 34.36/ 35.31	+/-/-	N/A	35.27	-	-	-	-	-	NA	PD FP(alt)	NA																	5	a
2024	1760	Raw fish (haddock)	-	U	N/A	34.36	-	N/A	34.05	-	N/A	33.88	-	-	-	-	-	NA	NA	NA																	5	a
2023	**4797**	**Raw tuna**	-	U	29.42	31.61	+	32.30	32.46	+	32.65	35.73	+	+	+	+	+	PD	PD	PD	28.83	30.92	+	22.57	N/A	+	31.56	33.66	+	+	+	+	+	PD	PD	PD	5	a
2023	**4798**	**Raw fish fillet (julienne)**	-	U	22.39	31.99	+	25.02	32.80	+	23.92	36.16	+	+	+	+	+	PD	PD	PD	22.55	30.44	+	27.33	N/A	+	25.7	36.05	+	+	+	+	+	PD	PD	PD	5	a
2023	**4799**	**Raw fish fillet (salmon)**	+	U	N/A	31.57	-	NA	32.48	-	N/A	35.49	-	-	-	-	-	ND	ND	ND	N/A	32.06	-	N/A	32.65	-	N/A	34.78	-	-	-	-	-	ND	ND	ND	5	a
2023	**4800**	**Raw fish filet (cod)**	+	U	17.91	32.89	+	19.31	33.46	+	18.40	39.08	+	+	+	+	+	PA	PA	PA	16.79	36.92	+	18.31	37.65	+	18.86	39.88	+	+	+	+	+	PA	PA	PA	5	a
2023	**4801**	**Raw fish fillet (saithe)**	-	U	19.36	31.04	+	24.13	32.84	+	24.51	36.00	+	+	+	+	+	PD	PD	PD	22.34	32.74	+	23.49	31.2	+	24.12	35.32	+	+	+	+	+	PD	PD	PD	5	a
2023	**4968**	**Raw trout steak**	-	U	N/A	31.14	-	N/A	32.93	-	N/A	35.99	-	-	-	-	-	NA	NA	NA																	5	a
2023	**4969**	**Raw tuna**	-	U	N/A	31.00	-	N/A	32.76	-	N/A	35.39	-	-	-	-	-	NA	NA	NA																	5	a
2023	**4970**	**Raw fish fillet (haddock)**	-	U	N/A	31.24	-	N/A	32.55	-	N/A	35.38	-	-	-	-	-	NA	NA	NA																	5	a
2023	**4971**	**Raw fish fillet (saithe)**	-	U	N/A	32.06	-	N/A	32.70	-	N/A	35.24	-	-	-	-	-	NA	NA	NA																	5	a
2024	**1757**	**Raw prawns**	+	U	18.38	/	+	20.38	/	+	20.20	35.61	+	+	+	+	+	PA	PA	PA	18.81	32.36	+	20.57	35.79	+	20.05	32.39	+	+	+	+	+	PA	PA	PA	5	b
2024	**1758**	**Raw scallops**	+	U	17.47	31.52	+	19.40	/	+	19.73	37.14	+	+	+	+	+	PA	PA	PA	18.63	32.23	+	21.2	36.55	+	20.69	32.32	+	+	+	+	+	PA	PA	PA	5	b
2024	**1759**	**Raw hollow oysters**	-	U	24.65	31.18	+	26.45	35.04	+	27.31	35.00	+	+	+	+	+	PD	PD	PD	N/A/ N/A/ N/A	32.67/ 33.68/ 33.85	-/-/-	N/A/ N/A/ N/A	34.98/ 35.68/ 34.64	-/-/-	N/A/ N/A /N/A	33.07/ 35.55/ 36.85	-/-/-	+	-	-	-	NA FN(alt)	NA FN(alt)	NA FN(alt)	5	b
2024	**1760**	**Raw mussels**	+	U	31.15	30.45	+	32.41	35.13	+	32.78	34.39	+	+	+	+	+	PA	PA	PA	31.56	29.52	+	39.39	33.62	+	N/A/ N/A/ N/A	33.15/ 35.85/ 34.12	-/-/-	+	+	+	-	PA	PA	ND FN(alt)	5	b
2024	1761	Raw oysters	-	U	N/A	33.48	-	N/A	33.66	-	N/A	33.37	-	-	-	-	-	NA	NA	NA																	5	b

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♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

RAW AND RTC FISH AND SEAFOOD

Alternative method: Salmofast® PCR Kit

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	16 h at 37 ± 1°C — PCR result — QS5 — *Salmonella* (Cq)	QS5 — IAC (Cq)	QS5 — Result	CFX96 standard — *Salmonella* (Cq)	CFX96 standard — IAC (Cq)	CFX96 standard — Result	CFX Opus Deepwell — *Salmonella* (Cq)	CFX Opus Deepwell — IAC (Cq)	CFX Opus Deepwell — Result	All confirmatory tests	Final result — QS5	Final result — CFX 96 standard reanalysed	Final result — CFX OPUS DeepWell reanalysed	Agreement — QS5	Agreement — CFX 96 standard	Agreement — CFX OPUS DeepWell	16 h at 37 ± 1°C +72 h at 5 ± 3°C — PCR result — QS5 — *Salmonella* (Cq)	QS5 — IAC (Cq)	QS5 — Result	CFX96 standard — *Salmonella* (Cq)	CFX96 standard — IAC (Cq)	CFX96 standard — Result	CFX Opus Deepwell — *Salmonella* (Cq)	CFX Opus Deepwell — IAC (Cq)	CFX Opus Deepwell — Result	All confirmatory tests	Final result - 72 h at 5°C ± 3°C — QS5	Final result - 72 h at 5°C ± 3°C — CFX 96 standard reanalysed	Final result - 72 h at 5°C ± 3°C — CFX OPUS DeepWell reanalysed	Agreement – 72 h at 5°C ± 3°C — QS5	Agreement – 72 h at 5°C ± 3°C — CFX 96 standard	Agreement – 72 h at 5°C ± 3°C — CFX OPUS DeepWell	Category	Type
2024	1762	Raw whelk	-	U	N/A/N/A*	/33.15*	i/-*	N/A/37.31*/31.35*/30.22*	N/A/34.13*/34.47*/34.12*	i/+*/+*/+*	N/A/39.43*/29.04*/29.68*	N/A/33.35*/33.67*/34.02*	i/+*/+*/+*	-	-	-	-	NA	PD FP(alt)	PD FP(alt)																		5	b
2024	1763	Raw mussels	-	U	N/A	30.87	-	N/A	33.74	-	N/A	34.65	-	-	-	-	-	NA	NA	NA																		5	b
2024	1764	Raw scallops	-	U	N/A	33.97	-	N/A	34.90	-	N/A	34.04	-	-	-	-	-	NA	NA	NA																		5	b
2024	1765	Raw giant squid slice	-	U	N/A	34.01	-	N/A	35.56	-	N/A	35.45	-	-	-	-	-	NA	NA	NA																		5	b
2024	1766	Raw sea almonds	-	U	N/A/33.95*/N/A*/N/A*	/32.78*/31.96*/32.30*	i/+*/-*/-*	N/A	34.07	-	N/A	35.00	-	-	-	-	-	PD FP(alt)	NA	NA																		5	b
2024	1767	Raw prawns	-	U	N/A	33.88	-	N/A	34.35	-	N/A	35.31	-	-	-	-	-	NA	NA	NA																		5	b
2024	1768	Raw prawns	-	U	N/A	35.00	-	N/A	35.62	-	37.71(at)/N/A/N/A	35.31/35.08/35.56	at/-/-	-	-	-	-	NA	NA	NA																		5	b
2023	**4972**	**Raw squid**	+	U	27.80	31.40	+	32.81	32.38	+	32.60	34.95	+	+	+	+	+	PA	PA	PA	24.59	30.65	+	32.12	31.64	+	33.44	34.33	+	+	+	+	+	PA	PA	PA	5	b
2023	**4973**	**Raw squid**	+	U	N/A	30.63	-	N/A	32.26	-	N/A	35.42	-	-	-	-	-	ND	ND	ND	N/A	30.77	-	N/A	31.28	-	N/A	34.28	-	-	-	-	-	ND	ND	ND	5	b
2023	**4974**	**Raw langoustine**	+	U	N/A	31.44	-	N/A	32.67	-	38.91/37.75/N/A	35.03/34.58/36.51	+/+/-	-	-	-	-	ND	ND	PA$_F$ P(alt)	N/A	31.99	-	N/A	32.24	-	N/A	35.06	-	-	-	-	-	ND	ND	ND	5	b
2023	**4975**	**Raw langoustine**	+	U	17.76	30.91	+	22.09	33.00	+	21.29	38.07	+	+	+	+	+	PA	PA	PA	21.25	31.13	+	22.15	32.91	+	21.93	35.43	+	+	+	+	+	PA	PA	PA	5	b
2023	**4976**	**Raw shrimp**	-	U	N/A	31.07	-	N/A	32.01	-	N/A	34.68	-	-	-	-	-	NA	NA	NA																		5	b
2023	**4977**	**Raw shrimp**	-	U	19.54	31.28	+	22.91	33.21	+	22.57	36.30	+	+	+	+	+	PD	PD	PD	17.63	30.99	+	20.98	32.49	+	20.88	35.56	+	+	+	+	+	PD	PD	PD	5	b
2023	**4978**	**Raw mussel**	+	U	N/A	31.38	-	N/A	32.21	-	N/A	37.73	-	-	-	-	-	ND	ND	ND	N/A	30.78	-	N/A	31.5	-	6.29 (at)/N/A/4.93 (no amp)	37.94/35.74/35.11	-/-/-	-	-	-	-	ND	ND	ND	5	b
2023	**4979**	**Raw cuttlefish**	-	U	18.03	31.79	+	21.54	35.35	+	21.29	37.03	+	+	+	+	+	PD	PD	PD	19.26	31.75	+	20.48	32.17	+	21.18	38.66	+	+	+	+	+	PD	PD	PD	5	b
2023	**4980**	**Raw scallops**	-	U	N/A	32.41	-	N/A	32.43	-	N/A	35.20	-	-	-	-	-	NA	NA	NA																		5	b
2023	**4981**	**Raw cockles**	-	U	24.15	31.35	+	26.57	32.82	+	27.23	36.18	+	+	+	+	+	PD	PD	PD	26.69	31.75	+	27.98	32.49	+	32.28	34.72	+	+	+	+	+	PD	PD	PD	5	b
2024	**382**	**Tuna steak in brine**	+	P	23.17	20.29	+	25.58	35.30	+	24.08	31.89	+	+	+	+	+	PA	PA	PA	21.18	30.05	+	23.28	34.58	+	22.09	34.22	+	+	+	+	+	PA	PA	PA	5	c
2024	**383**	**Cod with almonds and pistachios**	-	P	N/A	29.64	-	N/A	35.08	-	N/A	34.18	-	-	-	-	-	NA	NA	NA																		5	c
2024	**384**	**Salted cod flakes**	+	P	37.09	/	+	N/A/33.01*	N/A/33.06*	i/+*	N/A/N/A*/36.75*/36.38*	/32.14*/32.83*/32.7*	i/-*/+*/+*	+	+	+	-	PA	PA	ND FN(alt)	N/A/29.96*	/32.04*	i/+*	N/A/29.01*	N/A/33.19*	i/+*	N/A/27.93*	/32.84*	i/+*	+	+	+	+	PA	PA	PA	5	c
2024	**385**	**Giant squid ring in brine**	+	P	25.07	28.83	+	26.89	36.29	+	26.05	33.81	+	+	+	+	+	PA	PA	PA	24.87	32.89	+	27.16	35.49	+	25.63	33.58	+	+	+	+	+	PA	PA	PA	5	c
2024	386	Ring of pickled squid	-	P	N/A	33.41	-	N/A	34.49	-	N/A	34.81	-	-	-	-	-	NA	NA	NA																		5	c

RAW AND RTC FISH AND SEAFOOD

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1* Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell										QS5			CFX96 standard			CFX Opus Deepwell											
					Salmonella (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**		
2024	387	Marinated tuna	-	P	N/A	32.35	-	N/A	33.42	-	N/A	34.32	-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2024	388	Pickled squid tentacle	-	P	N/A	32.43	-	1.11 (at)/ N/A/ N/A	32.9/ 34.8/ 35.42	at/-/-	N/A	34.32	-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2024	389	Marinated salmon and cod skewer	-	P	N/A	33.12	-	N/A	34.17	-	N/A	34.61	-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2024	**1772**	**Tuna in brine**	+	P	20.41	24.03	+	22.86	/	+	23.02	36.12	+	+	+	+	+	**PA**	**PA**	**PA**	21.48	29.28	+	23.28	36.37	+	23.12	31.92	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2024	**1773**	**Anchovies marinated (garlic/parsley)**	-	P	N/A	31.59	-	N/A	34.98	-	N/A	34.58	-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2024	**1774**	**Marinated salmon (Moroccan spices)**	+	P	18.32	31.34	+	20.01	34.34	+	19.99	37.87	+	+	+	+	+	**PA**	**PA**	**PA**	18.47	/	+	20.85	/	+	20.31	33.15	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2024	1775	Anchovies marinated	-	P	34.97/ N/A/ N/A	34.67/ 34.14/ N/A	+/-/i	39.04/ N/A/ N/A	35.55/ 38.18/ 35.67	+/-/-	N/A	34.42	-	-	-	-	-	**PD** FP(alt)	**PD** FP(alt)	**NA**																	5	c
2023	**4536**	**Fish ready to cook (fish, lemon sauce, rice)**	+	P	15.17	33.05	+	16.62	36.30	+	14.60	35.16	+	+	+	+	+	**PA**	**PA**	**PA**	16.05	33.98	+	16.51	34.06	+	14.13	/	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2023	**4537**	**Fish ready to cook (salmon steak, rice, dill sauce)**	-	P	N/A	32.03	-	NA	32.95	-	N/A	34.07	-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2023	**4538**	**Fish ready to cook (fish, vegetables)**	+	P	15.16	34.55	+	16.21	36.75	+	17.08	36.19	+	+	+	+	+	**PA**	**PA**	**PA**	14.92	34.29	+	16.44	33.7	+	14.9	/	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2023	**5600**	**Shellfish mix**	+	P	25.59	29.00	+	28.45	30.33	+	25.67	35.42	+	+	+	+	+	**PA**	**PA**	**PA**	23.78	31.79	+	36.9	32.63	+	34.54	35.42	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2023	**5601**	**Mussels stuffed with parsley**	-	P	N/A	28.64	-	N/A	30.19	-	4.55(at)/ N/A/ N/A	34.48/ 34.42/ 35.18	at/-/-	-	-	-	-	**NA**	**NA**	**NA**																	5	c
2023	**5606**	**Marinated fish**	+	P	28.31	28.97	+	29.44	29.74	+	30.01	34.97	+	+	+	+	+	**PA**	**PA**	**PA**	28.98	32.16	+	29.78	32.06	+	30.1	35.26	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2023	**5607**	**Chunks of desalted cod**	+	P	22.61	28.58	+	23.70	29.86	+	24.74	34.17	+	+	+	+	+	**PA**	**PA**	**PA**	20.63	31.80	+	22.72	32.78	+	21.87	/	+	+	+	+	+	**PA**	**PA**	**PA**	5	c
2023	**5608**	**Salted hake crumbs**	-	P	N/A	32.43	-	N/A	34.84	-	N/A/ 33.99*/ 35.28*/ N/A*	/ 34.08*/ 34.05*/ 34.35*	i/+*/+*/-*	-	-	-	-	**NA**	**NA**	**PD** FP(alt)																	5	c
2023	**5610**	**Marinated squid**	+	P	27.30	28.96	+	29.40	29.54	+	30.53	34.86	+	+	+	+	+	**PA**	**PA**	**PA**	25.56	31.76	+	28.48	32.22	+	26.14	35.9	+	+	+	+	+	**PA**	**PA**	**PA**	5	c

PRODUCTION ENVIRONMENTAL SAMPLES (EXCLUDING DUST SAMPLES)

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**	QS5			CFX96 standard			CFX Opus Deepwell				QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**		
					Salmonella (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**								*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**									
2024	**231**	**Swab before cleaning (dairy products industry)**	-	P	N/A	33.64	-	N/A	33.40	-	N/A	34.37	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	**232**	**Swab before cleaning (dairy products industry)**	+	P	17.03	/	+	19.36	36.93	+	19.27	38.44	+	+	+	+	+	**PA**	**PA**	**PA**	14.36	35.76	+	15.12	37.95	+	17.06	35.68	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**233**	**Swab before cleaning (seafood industry)**	+	P	16.02	/	+	17.43	38.27	+	17.37	37.10	+	+	+	+	+	**PA**	**PA**	**PA**	15.84	/	+	17.46	37.08	+	17.43	35.66	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**234**	**Swab after cleaning (seafood industry)**	+	P	17.28	34.17	+	19.09	36.20	+	18.43	35.07	+	+	+	+	+	**PA**	**PA**	**PA**	15.9	32.36	+	18.21	35.15	+	18.26	34.78	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**235**	**Wipe before cleaning (meat products production)**	-	P	N/A	28.41	-	N/A	33.14	-	N/A	34.00	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	**236**	**Wipe after cleaning (chocolate mousse production)**	+	P	16.76	/	+	16.76	36.06	+	16.44	37.41	+	+	+	+	+	**PA**	**PA**	**PA**	15.33	33.01	+	16.6	36.76	+	16.55	36.09	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**237**	**Wipe after cleaning (seafood products industry)**	-	P	N/A	33.30	-	N/A	33.72	-	N/A	34.97	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	**238**	**Wipe after cleaning (seafood products industry)**	+	P	16.54	/	+	16.82	38.49	+	17.23	38.08	+	+	+	+	+	**PA**	**PA**	**PA**	15.9	29.4	+	16.59	1.62	+	16.93	34.4	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**239**	**Wipe before cleaning (RTRH products industry)**	+	P	23.14	34.34	+	23.88	37.84	+	24.05	34.55	+	+	+	+	+	**PA**	**PA**	**PA**	19.2	/	+	20.78	38.32	+	19.08	34.88	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**240**	**Sponge after cleaning (RTRH products industry)**	+	P	18.64	34.60	+	19.10	35.38	+	18.83	35.72	+	+	+	+	+	**PA**	**PA**	**PA**	17.24	/	+	18.68	35.77	+	18.53	36.05	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**814**	**Swab before cleaning**	+	P	19.48	/	+	20.02	34.09	+	19.23	34.78	+	+	+	+	+	**PA**	**PA**	**PA**	16.44	/	+	17.96	38.69	+	17.5	36.83	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**815**	**Swab after cleaning**	+	P	12.62	/	+	17.06	33.98	+	16.53	36.49	+	+	+	+	+	**PA**	**PA**	**PA**	16.52	/	+	16.79	39.33	+	16.86	36.57	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**816**	**Wipe before cleaning (pork product industry)**	+	P	16.57	25.99	+	16.64	30.20	+	19.58	33.71	+	+	+	+	+	**PA**	**PA**	**PA**	17.3	21.45	+	19.18	36.22	+	18.86	34.09	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	**817**	**Bootsocks after sampling campaign**	+	P	16.42	31.18	+	18.19	34.73	+	17.74	34.60	+	+	+	+	+	**PA**	**PA**	**PA**	14.8	29.25	+	17.09	36.28	+	17.23	36.4	+	+	+	+	+	**PA**	**PA**	**PA**	6	a
2024	818	Wipe before cleaning (pastry product)	-	P	N/A	33.32	-	N/A	34.37	-	N/A	34.16	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	819	Wipe before cleaning (pastry product)	-	P	N/A	31.46	-	N/A	34.14	-	25.13(at)/ N/A /N/A	34.23/ 34.83/ 34.23	at/-/-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	820	Wipe before cleaning (pastry product)	-	P	N/A	33.02	-	N/A	34.97	-	N/A	34.47	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a

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♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

PRODUCTION ENVIRONMENTAL SAMPLES (EXCLUDING DUST SAMPLES)

Year of analysis	Sample N°	Product	Reference method: ISO 6579-1* Final result	Protocol: P = paired -U=unpaired	Alternative method: Salmofast® PCR Kit																																Category	Type
					16 h at 37 ± 1°C																16 h at 37 ± 1°C +72 h at 5 ± 3°C																	
					PCR result									All confirmatory tests	Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C				
					QS5			CFX96 standard			CFX Opus Deepwell										QS5			CFX96 standard			CFX Opus Deepwell											
					Salmonella (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	**QS5**	**CFX 96 standard**	**CFX OPUS DeepWell**		
2024	821	Swab before cleaning (fish waste)	-	P	N/A	33.30	-	N/A	34.56	-	N/A	34.15	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	822	Swab before cleaning (fish waste)	-	P	N/A	33.54	-	N/A	34.34	-	N/A	34.85	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	823	Swab before cleaning (pastry waste)	-	P	N/A	33.62	-	N/A	34.22	-	N/A	35.22	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	2197	Wipe after cleaning (pastry)	-	P	N/A	34.60	-	N/A	37.03	-	N/A	35.30	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	2198	Wipe before cleaning (pastry)	-	P	N/A	33.76	-	N/A	36.12	-	N/A	34.08	-	-	-	-	-	**NA**	**NA**	**NA**																	6	a
2024	2200	Swab after cleaning (pastry)	-	P	N/A	34.41	-	36.92/N/A/N/A	35.07/34.69/34.64	+/-/-	N/A	34.89	-	-	-	-	-	**NA**	**PD** FP(alt)	**NA**																	6	a
2024	**241**	**Spanish-style rice residue (RTRH products industry)**	+	P	25.87	/	+	26.40	36.84	+	26.22	33.37	+	+	+	+	+	**PA**	**PA**	**PA**	22.76	/	+	23.32	35.59	+	24.23	34.53	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**242**	**Pancakes residue (RTRH products industry)**	+	P	21.64	34.72	+	22.00	36.76	+	21.42	34.69	+	+	+	+	+	**PA**	**PA**	**PA**	18.69	34.37	+	21.9	34.8	+	21.1	34.32	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**243**	**Mushroom sauce residue (RTRH products industry)**	-	P	38,21/N/A/N/A	33,69/27,04/31,33	+/-/-	N/A	31.93	-	38.37/N/A/N/A	36.26/35.02/33.91	+/-/-	-	-	-	-	**PD** FP(alt)	**NA**	**PD** FP(alt)	N/A	33.69	-	N/A	32.86	-	38.15/N/A/N/A	31.58/33.98/35.30	+/-/-	-	-	-	-	**NA**	**NA**	**PD** FP(alt)	6	b
2024	**244**	**Sardines residue (Seafood products production)**	-	P	i/i/N/A*	i/i/34,50*	i/i/-*	N/A	36.67	-	N/A/N/A	N/A/31.72	i/-*	-	-	-	-	**NA**	**NA**	**NA**																	6	b
2024	**245**	**Pork meat residue (meat products industry)**	+	P	22.66	32.65	+	24.38	35.38	+	23.66	34.22	+	+	+	+	+	**PA**	**PA**	**PA**	22.28	33.48	+	23.97	36.89	+	24.16	33.7	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**1764**	**Residues of shredded beef**	+	P	16.24	30.55	+	18.28	/	+	18.59	38.72	+	+	+	+	+	**PA**	**PA**	**PA**	16.71	33.68	+	18.37	37.66	+	18.41	34.56	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**1765**	**Residues of shredded beef**	+	P	17.91	32.21	+	19.66	/	+	19.78	37.20	+	+	+	+	+	**PA**	**PA**	**PA**	16.88	/	+	18.85	39.57	+	19.02	35.82	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**1766**	**Residues of parmentier**	+	P	19.81	29.89	+	21.23	36.84	+	22.16	35.89	+	+	+	+	+	**PA**	**PA**	**PA**	19.78	31.76	+	21.71	35.39	+	21.5	32.79	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**1767**	**Residues of chipolata**	+	P	18.37	32.69	+	20.18	33.51	+	20.52	39.49	+	+	+	+	+	**PA**	**PA**	**PA**	18.9	33.92	+	20.86	N/A	+	20.01	32.48	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	**1768**	**Residues of chipolata**	+	P	20.53	33.38	+	21.89	/	+	22.29	36.70	+	+	+	+	+	**PA**	**PA**	**PA**	19.82	33.24	+	21.49	36.1	+	21.67	33.04	+	+	+	+	+	**PA**	**PA**	**PA**	6	b
2024	1769	Residues of chipolata	-	P	31.55/31.00/31.46	31.52/34.21/33.72	+/+/+	33.58/33.14/31.08	34.55/36.39/N/A	+/+/+	34.13/32.17/32.44	34.77/34.66/35.16	+/+/+	-	-	-	-	**PD** FP(alt)	**PD** FP(alt)	**PD** FP(alt)	N/A	33.13	-	N/A	34.56	-	N/A	32.74	-	-	-	-	-	**NA**	**NA**	**NA**	6	b
2024	1771	**Residues of pork**	-	P	35.6229.32/29.63	33.32/33.35/34.04	+/+/+	N/A	35.07	-	N/A	34.18	-	-	-	-	-	**PD** FP(alt)	**NA**	**NA**	N/A	33.91	-	N/A	34.76	-	N/A	33.75	-	-	-	-	-	**NA**	**NA**	**NA**	6	b
2024	2060	Residues of vegetables	-	P	N/A	37.76	-	N/A	34.16	-	N/A	35.09	-	-	-	-	-	**NA**	**NA**	**NA**																	6	b
2024	2061	Residues of pancakes	-	P	N/A	36.54	-	N/A	35.33	-	N/A	36.08	-	-	-	-	-	**NA**	**NA**	**NA**																	6	b

MICROVAL® NEN

PRODUCTION ENVIRONMENTAL SAMPLES (EXCLUDING DUST SAMPLES)																																										
					Alternative method: Salmofast® PCR Kit																																							
					16 h at 37 ± 1°C																							16 h at 37 ± 1°C +72 h at 5 ± 3°C																		
					PCR result										Final result			Agreement			PCR result									All confirmatory tests	Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C								
					QS5			CFX96 standard			CFX Opus Deepwell			All confirmatory tests							QS5			CFX96 standard			CFX Opus Deepwell															
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result		QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2024	2196	Spanish-style rice residue (RTRH products industry)	-	P	N/A	34.74	-	N/A	36.14	-	N/A	35.43	-	-	-	-	-	NA	NA	NA																	6	b
2024	2199	Residues of cake	-	P	N/A	35.11	-	N/A	35.91	-	N/A	34.43	-	-	-	-	-	NA	NA	NA																	6	b
2024	4340	Meat cutting residues	-	P	N/A	33.96	-	N/A	35.77	-	N/A	37.27	-	-	-	-	-	NA	NA	NA																	6	b
2024	4341	Residues of parmentier	-	P	N/A	32.94	-	37.3/ N/A/ N/A	36.93/ 34.46/ 33.53	+/-/-	N/A	36.60	-	-	-	-	-	NA	PD FP(alt)	NA																	6	b
2024	4342	Residues of shredded beef	-	P	39.53 (-)	34.17	-	37.15/N /A	32.8/ 35.5/ 35.8/ 34.86	+/-/-	38.56/ N/A/ N/A	23.18/ 33.84/ 34.38	+/-/-	-	-	-	-	NA	PD FP(alt)	PD FP(alt)																	6	b
2024	4343	Residues of salmon	-	P	N/A	27.90	-	37.22/ 4.63/ N/A	33/ 34.03/ 34.78	+/+/-	N/A	36.63	-	-	-	-	-	NA	PD FP(alt)	NA																	6	b
2024	**246**	**Process water before cleaning (meat products production)**	+	P	16.30	33.36	+	17.39	34.90	+	17.00	35.17	+	+	+	+	+	PA	PA	PA	15.97	22.48	+	16.51	38.4	+	17.24	36.32	+	+	+	+	+	PA	PA	PA	6	c
2024	**247**	**Process water before cleaning (turkey meat production)**	+	P	16.49	32.77	+	18.94	36.49	+	18.25	35.68	+	+	+	+	+	PA	PA	PA	17.18	/	+	18.62	36.56	+	18.06	35.74	+	+	+	+	+	PA	PA	PA	6	c
2024	**248**	**Rinse water before cleaning (meat products production)**	+	P	16.27	/	+	17.69	39.20	+	17.44	38.35	+	+	+	+	+	PA	PA	PA	15.86	34.74	+	17.47	36.59	+	17.3	36.52	+	+	+	+	+	PA	PA	PA	6	c
2024	**249**	**Process water before cleaning (chicken meat production)**	+	P	23.12	33.35	+	24.33	35.40	+	24.14	34.37	+	+	+	+	+	PA	PA	PA	20.46	32.9	+	23.01	35.54	+	22.7	34.56	+	+	+	+	+	PA	PA	PA	6	c
2024	**250**	**Rinse water before cleaning (brioche bakery production)**	+	P	16.15	33.75	+	17.23	34.73	+	17.02	36.87	+	+	+	+	+	PA	PA	PA	16.11	/	+	17.04	36.22	+	17.05	36.71	+	+	+	+	+	PA	PA	PA	6	c
2024	**251**	**Water before cleaning (RTRH products industry)**	-	P	N/A	33.62	-	37.03/ N/A/ N/A	34.76/ 34.48/ 34.08	+/-/-	N/A	34.50	-	-	-	-	-	NA	PD FP(alt)	NA	N/A	35.39	-	N/A	33.79	-	N/A	34.43	-	-	-	-	-	NA	NA	NA	6	c
2024	**252**	**Process water before cleaning (meat products industry)**	+	P	17.04	34.50	+	17.21	37.82	+	17.43	35.85	+	+	+	+	+	PA	PA	PA	16.72	35.9	+	17.4	35.13	+	17.27	36.31	+	+	+	+	+	PA	PA	PA	6	c
2024	**253**	**Process water before cleaning (seafood products industry)**	-	P	N/A/ N/A/ N/A	33,79/ 33,07/ 34,23	-/-/-	13.14 38.66 N/A	34.36/ 34.35/ 33.8	+/+/-	22.74	33.59	+	+	-	+	+	NA FN(alt)	PD	PD	N/A	34.79	-	N/A	35.07	-	N/A	30.25	-	-	-	-	-	NA	NA	NA	6	c
2024	**254**	**Process water before cleaning (seafood products industry)**	-	P	N/A	34.52	-	N/A	34.04	-	18.70/ 6.95/ N/A	34.80/ 35.11/ 34.70	+/-/-	-	-	-	-	NA	NA	PD FP(alt)	N/A	32.59	-	N/A	34.24	-	N/A	29.84	-	-	-	-	-	NA	NA	NA	6	c

PRODUCTION ENVIRONMENTAL SAMPLES (EXCLUDING DUST SAMPLES)																																									
					Alternative method: Salmofast® PCR Kit																																						
					16 h at 37 ± 1°C																					16 h at 37 ± 1°C +72 h at 5 ± 3°C																			
					PCR result										Final result			Agreement			PCR result										Final result - 72 h at 5°C ± 3°C			Agreement – 72 h at 5°C ± 3°C							
					QS5			CFX96 standard			CFX Opus Deepwell										QS5			CFX96 standard			CFX Opus Deepwell														
Year of analysis	Sample N°	Product	Reference method: ISO 6579-1♦ Final result	Protocol: P = paired -U=unpaired	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	All confirmatory tests	QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	All confirmatory tests	QS5	CFX 96 standard reanalysed	CFX OPUS DeepWell reanalysed	QS5	CFX 96 standard	CFX OPUS DeepWell	Category	Type
2024	**255**	**Process water after cleaning (seafood products industry)**	+	P	19.66	35.04	+	20.51	38.25	+	20.00	35.35	+	+	+	+	+	PA	PA	PA	15.49	/	+	17.05	N/A	+	16.86	30.85	+	+	+	+	+	PA	PA	PA	6	c
2024	**818**	**Process water after cleaning (meat products industry)**	-	P	N/A	31.19	-	N/A	32.19	-	N/A	33.09	-	-	-	-	-	NA	NA	NA																	6	c
2024	**819**	**Rinse water after cleaning**	+	P	15.70	31.73	+	17.07	37.46	+	16.40	34.84	+	+	+	+	+	PA	PA	PA	15.27	/	+	16.74	38.32	+	16.72	36.64	+	+	+	+	+	PA	PA	PA	6	c
2024	**820**	**Rinse water after cleaning (vegetable meat product)**	-	P	N/A	32.31	-	N/A	32.96	-	N/A	33.34	-	-	-	-	-	NA	NA	NA																	6	c
2024	**821**	**Rinse water after cleaning**	-	P	N/A	30.58	-	N/A	33.04	-	39.6/ N/A/ N/A	33.41/ 33.59/ 33.43	+/-/-	-	-	-	-	NA	NA	PD FP(alt)																	6	c
2024	**1763**	**Process water after cleaning (pork meat industry)**	-	P	N/A	32.97	-	N/A	35.68	-	N/A	35.14	-	-	-	-	-	NA	NA	NA																	6	c
2024	**1841**	**Rinse water (pastry product)**	+	P	14.97	/	+	17.67	38.40	+	18.08	35.93	+	+	+	+	+	PA	PA	PA	17.93	/	+	18.12	/	+	18.09	/	+	+	+	+	+	PA	PA	PA	6	c
2024	**1842**	**Rinse water (pastry product)**	+	P	14.77	/	+	16.96	/	+	17.35	36.78	+	+	+	+	+	PA	PA	PA	16.86	/	+	N/A/ 17.39*	/-	i/+*	17.71	/	+	+	+	+	+	PA	PA	PA	6	c
2024	**1843**	**Rinse water (pork industry)**	-	P	32.33/ N/A/ N/A	33.66/ 34.13/ 34.56	+/-/-	N/A	34.72	-	N/A	34.94	-	-	-	-	-	PD FP(alt)	NA	NA																	6	c
2023	4471	Process water (feed industry)	-	P	N/A	31.16	-	NA	33.18	-	N/A	34.63	-	-	-	-	-	NA	NA	NA																	6	c
2023	4472	Process water (feed industry)	-	P	37,92/ N/A/ N/A/ N/A*/ N/A*/ N/A*	31,07/ 29,87/ 28,57/ 30,74/ 29,96/ 30,53	+/i/i/-*/-*/-*	NA	33.01	-	N/A	34.10	-	-	-	-	-	PD FP(alt)	NA	NA	N/A	31.98	-	N/A	33.02	-	N/A	34.45	-	-	-	-	-	NA	NA	NA	6	c
2023	4473	Process water (feed industry)	+	P	28.27	30.42	+	29.45	34.77	+	27.42	33.29	+	+	+	+	+	PA	PA	PA	27.23	31.69	+	27.67	32.74	+	26.99	34.16	+	+	+	+	+	PA	PA	PA	6	c

Appendix 6 - RLOD: raw data

Matrix : Ground beef
Strain : *S.* Typhimurium A00C060
Seeding protocol : 48h at 3°C +/- 2°C
Protocol paired : BPW

Aerobic mesophilic flora : 4.1x10⁴ CFU/g

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit 16h at 37±1°C BPW																													
			RVS both		MKTTn broth				PCR result									Confirmatory tests																	Final result			Number positive samples/Total		
									CFX Opus			QS5			CFX 96 standard			Direct streaking						Streaking after subculture in RVS and MKTTn								All confirmatory tests						
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Result (Typical colonies)		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	RVS		MKTTn		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies		CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
																		XLD	*Brilliance Salmonella*					XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*											
945			-A	-A	-A	-A	-		N/A	34.19	-	N/A	32.66	-	N/A	33.73	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
946			-A	-A	-A	-A	-		N/A	33.86	-	N/A	32.94	-	N/A	33.33	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
947	0	/	-A	-A	-A	-A	-	0/5	N/A	33.48	-	N/A	32.85	-	N/A	33.7	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-	0/5	0/5	0/5
948			-A	-A	-A	-A	-		N/A	34.28	-	N/A	32.61	-	N/A	33.3	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
949			-A	-A	-A	-A	-		N/A	33.7	-	N/A	33.3	-	N/A	33.12	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
950			-A	-A	-A	-A	-		N/A	33.58	-	N/A	30.77	-	N/A	33.27	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
951			+M	+p	+M	+p	+		25.35	33.57	+	24.28	32.99	+	24.2	34.64	+	+1/2	+M	+	+	+	+	+M	+p	+M	+p	+	+	+	+	+	+	+	+			
952			+1/2	+p	+M	+M	+		24.07	34.14	+	22.53	33.41	+	23.14	33.05	+	+1/2	+M	+	+	+	+	+1/2	+p	+M	+M	+	+	+	+	+	+	+	+			
953			-A	-A	-A	-A	-		N/A	33.26	-	N/A	32.66	-	38.82 N/A N/A	33.08 33.68 33.97	+/-/-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
954			+1/2	+p	+M	+p	+		26.2	34.19	+	24.27	32.77	+	25.11	33	+	+m	+M	+	+	+	+	+1/2	+p	+M	+p	+	+	+	+	+	+	+	+			
955			+1/2	+M	+M	+p	+		25.46	35.16	+	23.35	32.58	+	25.41	33.34	+	+m	+M	+	+	+	+	+1/2	+M	+M	+p	+	+	+	+	+	+	+	+			
956			+1/2	+M	+M	+M	+		25.9	35.5	+	23.53	33.77	+	24.37	32.28	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
957			+M	+p	+M	+M	+		27.07	34.11	+	24.72	33.41	+	26.2	32.61	+	+1/2	+M	+	+	+	+	+M	+p	+M	+M	+	+	+	+	+	+	+	+			
958			-A	-A	-A	-A	-		N/A	33.82	-	N/A	32.28	-	39.34 N/A N/A	32.24 34.05 34.6	+/-/-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			
959	Low	1.1	+M	+M	+M	+M	+	15/20	24	32.79	+	23.44	33.28	+	21.64	35.91	+	+1/2	+M	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	+	+	+	15/20	15/20	15/20
960			+M	+M	+M	+M	+		25.68	34.78	+	22.98	32.93	+	24.94	35.01	+	+1/2	+M	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	+	+	+			
961			+M	+M	+M	+M	+		24.84	33.09	+	24.57	32.85	+	25.16	34.63	+	+1/2	+M	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	+	+	+			
962			+1/2	+M	+M	+M	+		23.43	33.36	+	22.95	33.53	+	23.83	35.71	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
963			+M	+M	+M	+p	+		23.51	32.65	+	23.11	33.05	+	23.44	35.97	+	+1/2	+M	+	+	+	+	+M	+M	+M	+p	+	+	+	+	+	+	+	+			
964			+1/2	+M	+M	+M	+		25.05	33.29	+	24.14	33.41	+	24.83	34.33	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
965			+1/2	+M	+M	+M	+		23.72	33.28	+	24.10	33	+	23.28	35.17	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
966			+1/2	+p	+M	+M	+		23.05	33.75	+	22.69	34	+	22.62	34.77	+	+1/2	+M	+	+	+	+	+1/2	+p	+M	+M	+	+	+	+	+	+	+	+			
967			-A	+(1)/+d	-A	+Md	-		N/A	33.98	-	N/A	32.81	-	N/A	34.25	-	-A	+md/d	(auto Aggluti nation)	- (C.koseri x5)	/	-	-A	+(1)/+d	-A	+Md	(auto Agglutina tion)	- (C.koseri x5)	/	-	-	-	-	-			
968			+1/2	+M	+M	+M	+		27.03	34.01	+	26.45	33.08	+	27.12	34.79	+	+m	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
969			-A	-A	-A	-A	-		N/A	33.63	-	N/A	33.01	-	N/A	34.25	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

MICROVAL® NEN

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmofast® PCR kit 16h at 37±1°C BPW																												
			RVS both		MKTTn broth				PCR result									Confirmatory tests																		Final result			Number positive samples/Total		
									CFX Opus			QS5			CFX 96 standard			Direct streaking					Streaking after subculture in RVS and MKTTn																				
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	*Salmonella* (Cq)	IAC (Cq)	Result	Result (Typical colonies)		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	RVS		MKTTn		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	All confirmatory tests	CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
																		XLD	*Brilliance Salmonella*					XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*														
970			+1/2	+M	+M	+M	+		23.12	32.71	+	21.22	32.68	+	23.28	35.57	+	+M	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+			
971			+1/2	+M	+M	+1/2	+		22.78	34.03	+	21.82	33.24	+	22.67	35.28	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+1/2	+	+	+	+	+	+	+	+			
972	High	5.2	+M	+M	+M	+M	+	5/5	22.34	33.58	+	21.84	32.94	+	22.99	35.04	+	+1/2	+p	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	+	+	5/5	5/5	5/5
973			+1/2	+M	+M	+M	+		26.24	34.46	+	25.12	32.11	+	25.91	35.38	+	+1/2	+M	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+			
974			+m	+M	+M	+M	+		25.2	34.21	+	23.12	33.44	+	24.99	35.03	+	+m	+M	+	+	+	+	+m	+M	+M	+M	+	+	+	+	+	+	+			

Matrix : Raw fish filet
Strain : S.Ohio Ad1482
Seeding protocol : 48h at 3°C +/- 2°C
Protocol unpaired : BPW+novo

Aerobic mesophilic flora : 8.09x10^5 CFU/g

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit																								Final result			Number positive samples/Total		
									16h at 37±1°C BPW + novobiocine 20mg/L																												
									PCR result								Confirmatory tests																				
			RVS both		MKTTn broth				CFX Opus			QS5			CFX 96 standard			Direct streaking					Streaking after subculture in RVS and MKTTn									All confirmatory tests					
																		Result (Typical colonies)					RVS		MKTTn											
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies		CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
1360	0	/	-A	-B	+d/-	+d/-	-	0/5	N/A	33.46	-	N/A	33.06	-	N/A	33.54	-	-A	-B	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-	0/5	0/5	0/5
1361			-A	-B	-A	-A	-		N/A	34.5	-	N/A	32.75	-	N/A	33.37	-	-A	-B	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1362			-A	-B	+d/-	-A	-		N/A	33.28	-	N/A	32.22	-	N/A	33.11	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1363			-A	-A	+d/-	+d/-	-		N/A	33.63	-	N/A	32.46	-	N/A	33.38	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1364			-A	-B	+d/-	-A	-		N/A	33.72	-	N/A	32.70	-	N/A	32.42	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1365	Low	0.9	-A	-B	-A	-A	-	7/20	N/A	33.59	-	N/A	31.74	-	N/A	32.5	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-	6/20	7/20	6/20
1366			-A	-A	+d/-	+d/-	-		36.14	33.25	+	27.04	32.74	+	N/A N/A N/A	33.41 33.6 35.18	-/-/-	-A	-A	/	/	/	/	+m	+1/2	+1/2	+1/2/+	+	+	+	+	+	+	+	-			
1367			-A	-A	+d/-	-A	-		N/A N/A N/A	33.87 33.83 33.95	-/-/-	32.52	32.46	+	N/A N/A N/A	33.17 34.74 33.87	-/-/-	-A	-A	/	/	/	/	-A	+1/2	+d/-	-A	+	+	+	+	+	-	+	-			
1368			-A	+M	+d/+	+m	+		32.07	33.36	+	29.09	32.55	+	32.04	33.42	+	-A	-A	/	/	/	/	+ (1)	+M	+d/-	+d/+	+	+	+	+	+	+	+	+			
1369			-A	+M	+d/-	+d/+	+		N/A	33.63	-	N/A 35.12* N/A* N/A*	N/A 30.63* 33.30* 33.06*	i/+*/- */-*	N/A	33.28	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1370			-A	-A	+d/-	+d/-	-		34.64	33.14	+	30.81	32.60	+	N/A 37.36 N/A	32.87/ 33.64/ 34.44	-/+/-	-A	-A	/	/	/	/	-A	+1/2/+	+d/-	+d/-	+	+	+	+	+	+	+	-			
1371			-A	-B	+d/-	+d/-	-		N/A	33.29	-	N/A	32.59	-	N/A	33.15	-	-A	-A	/	/	/	/	-A	-A	+d//-	+d/-	/	/	/	/	-	-	-	-			
1372			-A	-A	+d/-	-A	-		N/A	33.09	-	N/A	33.15	-	N/A	33.23	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1373			-A	+M	+d/-	+d/-	+		N/A	34.12	-	N/A	33.05	-	N/A	33.11	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-			
1374			-A	+1/2	-A	-A	+		24.72 (at) N/A N/A	35.02 34.49 34.87	-/-/-	N/A N/A N/A	32.53 33.02 32.41	-/-/-	N/A N/A N/A	32.41 34.53 34.17	-/-/-	-A	-A	/	/	/	/	-A	+M	+d/-	+d/-	+	+	+	+	+	-	-	-			
1375			-A	-A	+d/-	-A	-		N/A N/A N/A	34.69 34.43 34.68	-/-/-	N/A N/A N/A	33.08 32.22 33.21	-/-/-	N/A 19.59(at) N/A	32.28 35.24 34.58	-/-/-	-A	-A	/	/	/	/	-A	+1/2	-A	+d/+	+	+	+	+	+	-	-	-			

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit 16h at 37±1°C BPW + novobiocine 20mg/L																									Final result			Number positive samples/Total		
			RVS both		MKTTn broth				PCR result									Confirmatory tests																						
									CFX Opus			QS5			CFX 96 standard			Direct streaking					Streaking after subculture in RVS and MKTTn								All confirmatory tests					
																		Result (Typical colonies)						RVS		MKTTn											
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		Salmonella (Cq)	IAC (Cq)	**Result**	Salmonella (Cq)	IAC (Cq)	**Result**	Salmonella (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies		CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
1376	Low	0.9	-A	+M	+d/+	-A	+		31.6	34.21	+	28.58	32.85	+	31.04	32.34	+	-A	-A	/	/	/	/	-A	+1/2	+1/2	+1/2	+	+	+	+	+	+	+	+						
1377			-A	+1/2	+d/+	+m	+		33.47	34.51	+	N/A 30.45 30.70	33.30 32.76 32.88	-/+/+	31.63	31.15	+	-A	-A	/	/	/	/	+m	+M	+1/2// -	+m/+	+	+	+	+	+	+	-	+						
1378			-A	-A	+d/-	+d/-	-		N/A N/A N/A	34.34 33.9 33.99	-/-/-	N/A N/A N/A	32.76/3 3.15/32 .99	-/-/-	38.76	31.8	+	-A	-A	/	/	/	/	+(1)	+1/2	+d/-	+d/-	+	+	+	+	+	-	-	+						
1379			-A	-A	+d/-	-a	-		N/A	33.89	-	N/A	32.85	-	N/A	32.28	-	-A	-A	/	/	/	/	-A	-A	+d/-	-A	/	/	/	/	-	-	-	-						
1380			-A	+1/2	+d/-	+d//+	+		N/A	34.73	-	N/A	33.65	-	N/A	32.47	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-						
1381			-A	-A	+d/-	+d/-	-		N/A 32.86 32.8	34.25 33.98 33.77	- /+/+	31.11	33.05	+	31.98	31.76	+	-A	-A	/	/	/	/	+(1)	+M	+d/+	+d/+	+	+	+	+	+	-	+	+						
1382			-A	-B	+d/-	+d/-	-		32.94	33.34	+	30.58	32.40	+	32.08	32.54	+	-A	-A	/	/	/	/	+(2)	+1/2	+d/-	+d/+	+	+	+	+	+	+	+	+						
1383			-A	-B	+d/-	+d/-	-		N/A	33.55	-	N/A	32.11	-	N/A	33.58	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-						
1384			-A	-A	+d/-	+d/-	-		N/A	33.22	-	N/A	32.60	-	N/A	34.2	-	-A	-A	/	/	/	/	-A	-A	+d/-	+d/-	/	/	/	/	-	-	-	-						

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

Matrix : Fresh spinach
Strain : *S.*Virchow Ad2569
Seeding protocol : 48h at 3°C +/- 2°C
Protocol paired : BPW

Aerobic mesophilic flora : 7.6x10^5 CFU/g

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method: RVS both: XLD	ISO 6579-1♦ method: RVS both: Brilliance Salmonella	ISO 6579-1♦ method: MKTTn broth: XLD	ISO 6579-1♦ method: MKTTn broth: Brilliance Salmonella	ISO 6579-1♦ method: Final result	Number positive samples/Total	Salmofast® PCR kit 16h at 37±1°C BPW: PCR result: CFX Opus: *Salmonella* (Cq)	CFX Opus: IAC (Cq)	CFX Opus: Result	QS5: *Salmonella* (Cq)	QS5: IAC (Cq)	QS5: Result	CFX 96 standard: *Salmonella* (Cq)	CFX 96 standard: IAC (Cq)	CFX 96 standard: Result	Confirmatory tests: Direct streaking: Result (Typical colonies): XLD	Direct streaking: Result (Typical colonies): *Brilliance Salmonella*	Direct streaking: Oxoid™ Salmonella Latex test	Direct streaking: API 20E (without a purification step)	Direct streaking: Tests after purification (serological tests, API20E if necessary)	Direct streaking: Confirmation of typical colonies	Streaking after subculture in RVS and MKTTn: RVS: XLD	Streaking after subculture in RVS and MKTTn: RVS: *Brilliance Salmonella*	Streaking after subculture in RVS and MKTTn: MKTTn: XLD	Streaking after subculture in RVS and MKTTn: MKTTn: *Brilliance Salmonella*	Streaking after subculture in RVS and MKTTn: Oxoid™ Salmonella Latex test	Streaking after subculture in RVS and MKTTn: API 20E (without a purification step)	Streaking after subculture in RVS and MKTTn: Tests after purification (serological tests, API20E if necessary)	Streaking after subculture in RVS and MKTTn: Confirmation of typical colonies	All confirmatory tests	Final result: CFX OPUS	Final result: QS5	Final result: CFX 96 standard	Number positive samples/Total: CFX OPUS	Number positive samples/Total: QS5	Number positive samples/Total: CFX 96 standard
1095	0	/	-B	-A	-B	-A	-	0/5	7.04(at) N/A 5.13(at)	34.32 33.78 33.88	-/-/-	N/A	33.2	-	6.27 (AT)/ N/A/ N/A	34.18 34.18 34.09	-/-/-	-A	-A	/	/	/	/	-B	-A	-B	-A	/	/	/	/	-	-	-	-	0/5	0/5	0/5
1096			-B	-A	-B	-B	-		N/A	34.44	-	N/A	32.93	-	N/A	33.8	-	-B	-A	/	/	/	/	-B	-A	-B	-B	/	/	/	/	-	-	-	-			
1097			-B	-A	-A	-B	-		N/A	34.06	-	N/A	33.02	-	N/A	34.04	-	-A	-A	/	/	/	/	-B	-A	-A	-B	/	/	/	/	-	-	-	-			
1098			-B	-A	-A	-A	-		N/A	34.16	-	N/A	33.14	-	N/A	33.61	-	-A	-A	/	/	/	/	-B	-A	-A	-A	/	/	/	/	-	-	-	-			
1099			-B	-A	-A	-A	-		N/A	33.39	-	N/A	33.25	-	N/A	35.25	-	-A	-A	/	/	/	/	-B	-A	-A	-A	/	/	/	/	-	-	-	-			
1100	Low	0.3	+M	+M	+M	+M	+	9/20	N/A 23.15 23.15	33.15 34.07 33.12	- /+/+	22.78	33.23	+	24.62	34.55	+	+m/+	+m	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	-	+	+	8/20	8/20	9/20
1101			-B	-A	-B	-A	-		N/A	34.06	-	N/A	33.44	-	N/A	34.72	-	-A	-A	/	/	/	/	-B	-A	-B	-A	/	/	/	/	-	-	-	-			
1102			-B	-A	-B	-C	-		N/A	33.8	-	N/A	33.32	-	N/A	34.44	-	-A	-A	/	/	/	/	-B	-A	-B	-C	/	/	/	/	-	-	-	-			
1103			-A	-B	-B	-B	-		N/A	34.05	-	N/A	32.46	-	N/A	35.01	-	-A	-A	/	/	/	/	-A	-B	-B	-B	/	/	/	/	-	-	-	-			
1104			m	+1/2	+M	+M	+		29.17	33.78	+	26.55	32.31	+	29.7	33.8	+	+md/+	+md/-	+	+	+	+	m	+1/2	+M	+M	+	+	+	+	+	+	+	+			
1105			+1/2	+1/2	+1/2	+M	+		26.07	34.18	+	23.57	33.45	+	26.27	34.97	+	+m/+	+md/+	+	+	+	+	+1/2	+1/2	+1/2	+M	+	+	+	+	+	+	+	+			
1106			-A	-A	-B	-B	-		N/A	34.9	-	N/A	33.51	-	N/A	34.23	-	-A	-A	/	/	/	/	-A	-A	-B	-B	/	/	/	/	-	-	-	-			
1107			-B	-A	-A	-A	-		N/A	34.44	-	N/A	33.86	-	N/A	34.14	-	-B	-A	/	/	/	/	-B	-A	-A	-A	/	/	/	/	-	-	-	-			
1108			-B	-B	-A	-A	-		N/A	34.23	-	N/A	33.45	-	N/A	34.05	-	-A	-A	/	/	/	/	-B	-B	-A	-A	/	/	/	/	-	-	-	-			
1109			-A	-A	-A	-B	-		N/A	34.1	-	N/A	32.66	-	8.1 (at) N/A N/A	34.17 33.85 34.31	-/-/-	-A	-A	/	/	/	/	-A	-A	-A	-B	/	/	/	/	-	-	-	-			
1110			+m	+1/2	+1/2	+m	+		27.24	33.75	+	26.4	33.8	+	28.01	34.53	+	-A	-A	/	/	/	/	+m	+1/2	+1/2	+m	+	+	+	+	+	+	+	+			
1111			+m	+1/2	+M	+M	+		25.49	34.3	+	23.25	34.03	+	25.99	35.57	+	+md/+	+m	+	+	+	+	+m	+1/2	+M	+M	+	+	+	+	+	+	+	+			
1112			+m	+M	+1/2	+M	+		25.4	34.1	+	23.11	33.47	+	25.75	34.79	+	+md/+	+md/-	+	+	+	+	+m	+M	+1/2	+M	+	+	+	+	+	+	+	+			
1113			-B	-A	-A	-A	-		N/A	33.98	-	N/A	34.85	-	N/A	34.31	-	-A	-A	/	/	/	/	-B	-A	-A	-A	/	/	/	/	-	-	-	-			
1114			+m	+1/2	+1/2	+M	+		27.54	34.38	+	24.32	33.25	+	27.88	34.69	+	-A	+md/-	/	/	/	/	+m	+1/2	+1/2	+M	+	+	+	+	+	+	+	+			
1115			-B	-B	-A	-B	-		N/A	34.01	-	N/A	33.27	-	N/A	34.13	-	-A	-A	/	/	/	/	-B	-B	-A	-B	/	/	/	/	-	-	-	-			
1116			-A	-A	-A	-A	-		N/A	34.07	-	N/A	33.91	-	N/A	34.42	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-			

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit 16h at 37±1°C BPW																													
			RVS both		MKTTn broth				PCR result									Confirmatory tests																		Final result			Number positive samples/Total		
									CFX Opus			QS5			CFX 96 standard			Direct streaking						Streaking after subculture in RVS and MKTTn														
																		Result (Typical colonies)							RVS		MKTTn												
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	All confirmatory tests	CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
1117			-B	-A	-B	-A	-		38.76(at) N/A N/A	34.47 34.06 33.28	-/-/-	N/A	33.58	-	6.69 (at) N/A 39.99	34.68 33.57 34.02	-/-/+	-A	-A	/	/	/	/	-B	-A	-B	-A	/	/	/	/	-	-	-	-				
1118			+m	+1/2	+1/2	+M	+		24.03	35.15	+	22.45	33.46	+	24.08	35.61	+	-A	+m	+	+	+	+	+m	+1/2	+1/2	+M	+	+	+	+	+	+	+	+				
1119			-A	+md/+	-A	+m	+		35.51	34.41	+	N/A N/A N/A	32.55 32.30 32.41	-/-/-	34.97	34.03	+	-A	-A	/	/	/	/	-A	+md/+	-A	+m	+	+	+	+	+	+	-	+				
1120			+M	+M	+M	+M	+		25.09	35.13	+	22.75	33.87	+	24.45	34.63	+	+m/+	+m	+	+	+	+	+M	+M	+M	+M	+	+	+	+	+	+	+	+				
1121			+1/2	+1/2	+1/2	+1/2	+		31.1	34.23	+	28.47	33.11	+	30.55	34	+	-A	-A	/	/	/	/	+1/2	+1/2	+1/2	+1/2	+	+	+	+	+	+	+	+				
1122	High	2.8	+1/2	+1/2	+M	+M	+	5/5	26.29	34.29	+	25.42	32.91	+	26.52	34.81	+	+md/+	+m	+	+	+	+	+1/2	+1/2	+M	+M	+	+	+	+	+	+	+	+	5/5	5/5	5/5
1123			+m	+1/2	+M	+M	+		24.18	34.55	+	23.11	33.97	+	24.51	34.35	+	+md/+	+m	+	+	+	+	+m	+1/2	+M	+M	+	+	+	+	+	+	+	+				
1124			+1/2	+M	+M	+M	+		24.4	34.71	+	22.66	33.59	+	24.27	34.84	+	+md/+	+m	+	+	+	+	+1/2	+M	+M	+M	+	+	+	+	+	+	+	+				

Matrix : Spanish Tortilla (eggs, potatoes, onions)
Strain : S. Havana Ad1728
Spiking protocol: after heat-treatment (56°C 10min)
Protocol paired : BPW

Aerobic mesophilic flora : 3.5.x0³ CFU/g

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit																													
									16h at 37±1°C BPW																													
									PCR result									Confirmatory tests															Final result			Number positive samples/Total		
			RVS both		MKTTn broth		Final result		CFX Opus			QS5			CFX 96 standard			Direct streaking						Streaking after subculture in RVS and MKTTn								All confirmatory tests	CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella			*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	Result (Typical colonies)		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	RVS		MKTTn		Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies							
																		XLD	*Brilliance Salmonella*					XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*											
164	0	/	st	st	st	st	-	0/5	N/A	33	-	N/A	31.8	-	N/A	33.17	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-	0/5	0/5	0/5
165			st	st	st	st	-		N/A	33.12	-	N/A	31.16	-	N/A	33.07	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
166			st	st	st	st	-		N/A	32.98	-	N/A	31.66	-	N/A	32.93	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
167			st	st	st	st	-		N/A	33.1	-	N/A	31.85	-	N/A	32.92	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
168			st	st	st	st	-		N/A	33.04	-	N/A	31.55	-	N/A	33.12	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
169	Low	0.3	st	st	st	st	-	5/20	N/A	33.01	-	N/A	31.89	-	N/A	32.92	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-	5/20	4/20	4/20
170			+p	+p	+p	+p	+		22.27	33.26	+	22.07	33	+	22.45	33.95	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+	+			
171			st	st	st	st	-		N/A	32.6	-	N/A	32.43	-	N/A	33.12	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
172			+p	+p	+p	+p	+		21	33.16	+	19.17	31.75	+	21.4	34.02	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+	+			
173			st	st	st	st	-		N/A	33.11	-	N/A	31.54	-	N/A	33.08	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
174			st	st	st	st	-		N/A	32.93	-	N/A	32.23	-	N/A	32.87	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
175			st	st	st	st	-		N/A	32.96	-	N/A	32.42	-	N/A	33.22	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
176			+p	+p	+p	+p	+		28.59	32.84	+	27.72	31.58	+	29.09	32.71	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+	+			
177			st	st	st	st	-		N/A	33.09	-	N/A	32.06	-	N/A	33.04	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
178			st	st	st	st	-		N/A	32.97	-	N/A	32.24	-	N/A	33.62	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
179			st	st	st	st	-		N/A	33.21	-	N/A	32.41	-	N/A	33.14	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
180			st	st	st	st	-		N/A	32.73	-	N/A	31.93	-	N/A	33.11	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
181			st	st	st	st	-		N/A	33.29	-	N/A	31.67	-	N/A	33.08	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
182			st	st	st	st	-		N/A	33.07	-	N/A	31.38	-	N/A	33.1	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
183			st	st	st	st	-		N/A	33.08	-	N/A	31.61	-	N/A	33.24	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
184			st	st	st	st	-		N/A	32.8	-	N/A	31.52	-	N/A	32.94	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
185			+p	+p	+p	+p	+		36.88	32.9	+	N/A N/A N/A	31.94 32.7 32.44	-/-/-	N/A N/A N/A	33.69 33.39 33.36	-/-/-	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	-	-			
186			+p	+p	+p	+p	+		19.94	33.72	+	15.01	31.19	+	20.24	34.66	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+	+			
187			st	st	st	st	-		N/A	32.95	-	N/A	32.53	-	N/A	33.25	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
188			st	st	st	st	-		N/A	32.94	-	N/A	32.53	-	N/A	33.33	-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmofast® PCR kit																								
									16h at 37±1°C BPW																								
									PCR result								Confirmatory tests															Final result		
			RVS both		MKTTn broth				CFX Opus			QS5			CFX 96 standard			Direct streaking					Streaking after subculture in RVS and MKTTn								All confirmatory tests				Number positive samples/Total		
																	Result (Typical colonies)						RVS		MKTTn										
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies		CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
189	High	0.7	+p	+p	+p	+p	+	5/5	22.14	33.14	+	21.01	32.46	+	22.19	33.42	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+	+	5/5	5/5	5/5
190			+p	+p	+p	+p	+		24.19	32.52	+	23.46	32.58	+	24.29	33.23	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+			
191			+p	+p	+p	+p	+		20.31	33.87	+	19.36	32.44	+	20.04	34.47	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+			
192			+p	+p	+p	+p	+		34.77	33.51	+	32.33	31.6	+	35.01	33.23	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+			
193			+p	+p	+p	+p	+		22.37	33.44	+	21.26	32.92	+	22.02	34.05	+	+p	+p	+	+	+	+	+p	+p	+p	+p	+	+	+	+	+	+	+			

Matrix : Raw fish filet
Strain : S.Anatum Ad1451
Seeding protocol : 48h at 3°C +/- 2°C
Protocol unpaired : BPW+novo

Aerobic mesophilic flora : $6.9x10^6$ CFU/g

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit																								Final result			Number positive samples/Total		
									16h at 37±1°C BPW + novobiocine 20mg/L																														
									PCR result								Confirmatory tests																						
			RVS both		MKTTn broth				CFX Opus			QS5			CFX 96 standard			Direct streaking					Streaking after subculture in RVS and MKTTn									All confirmatory tests	CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
																	Result (Typical colonies)						RVS		MKTTn												
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies								
1190			-A	-C	-A	-B	-		N/A	34.2	-	N/A	33.46	-	N/A	33.76	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-				
1191			-C	st	-A	-A	-		N/A	33.63	-	N/A	32.94	-	N/A	33.65	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1192	0	/	-C	st	-A	-A	-	0/5	N/A	34.13	-	N/A	33.07	-	N/A	33.44	-	-A	-A	/	/	/	/	-A	-C	-A	-B	/	/	/	/	-	-	-	-	0/5	0/5	0/5
1193			-A	-A	-A	-A	-		N/A	34	-	N/A	32.88	-	N/A	33.88	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1194			st	st	-A	-B	-		N/A	33.53	-	N/A	32.96	-	N/A	34.11	-	-A	-A	/	/	/	/	-C	- (2)	-A	-A	/	/	/	/	-	-	-	-				
1195			-C	-C	-A	-B	-		N/A	33.76	-	N/A	33.4	-	N/A	33.78	-	-A	-A	/	/	/	/	-A	-C	-A	-A	/	/	/	/	-	-	-	-				
1196			-(1)	st	-A	-A	-		N/A	33.51	-	N/A	32.86	-	N/A	34.08	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1197			+p	+p	+M	+p	+		20.78	34.21	+	20.60	32.96	+	21.36	36.5	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1198			+p	+p	+M	+p	+		28.16	33.12	+	27.70	33.16	+	28.76	33.65	+	+m/+	+1/2/+	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1199			-B	st	-A	-B	-		N/A	34.13	-	N/A	32.72	-	N/A	33.56	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1200			-A	st	-A	-A	-		20.89	33.58	+	20.22	34.23	+	21.29	36.66	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1201			+p	+p	+M	+p	+		N/A	33.96	-	N/A	33.6	-	N/A	33.69	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1202			-C	st	-A	-B	-		N/A	33.47	-	N/A	32.56	-	N/A	34.31	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-				
1203			+p	+p	+M	+p	+		N/A	34.17	-	N/A	33.33	-	N/A	34.17	-	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-				
1204	Low	0.7	-A	-C	-A	-A	-	11/20	32.12 33.37 32.5	33.58 33.31 33.67	+/+/+	31.14 31.04 30.22	32.83 32.69 33.45	+/+/+	35.57 32.89 33.77	34.35 34.11 33.15	+/+/+	-A	-A	/	/	/	/	-A	-A	-A	-A	/	/	/	/	-	-	-	-	6/20	6/20	6/20
1205			+p	+p	+M	+p	+		N/A	33.3	-	N/A	32.63	-	N/A	33.95	-	+md/-	-A	/	/	/	/	-C	-C	-A	-B	/	/	/	/	-	-	-	-				
1206			-C	- (1)	-A	-A	-		20.63	34.79	+	19.81	34.18	+	20.66	35.16	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1207			+M	+p	+1/2	+M	+		N/A	33.42	-	N/A	32.24	-	N/A	33.94	-	-A	-A	/	/	/	/	-A	-C	-A	-A	/	/	/	/	-	-	-	-				
1208			+p	+p	+M	+M	+		N/A	32.85	-	N/A	32.84	-	N/A	33.42	-	-A	-A	/	/	/	/	-A	-C	-A	-B	/	/	/	/	-	-	-	-				
1209			+p	+p	+M	+p	+		N/A	33.81	-	N/A	32.93	-	N/A	33.52	-	-A	-A	/	/	/	/	-A	-C	-A	-B	/	/	/	/	-	-	-	-				
1210			+p	+p	+M	+p	+		20.7	35.1	+	20.23	33.25	+	20.39	34.73	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1211			-B	st	-A	-A	-		N/A	33.18	-	N/A	33.12	-	N/A	34.13	-	-A	-A	/	/	/	/	-A	-C	-A	-A	/	/	/	/	-	-	-	-				
1212			+p	+p	+M	+p	+		20.38	35.38	+	19.46	34.38	+	20.32	35.87	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+				
1213			+p	+p	+M	+M	+		N/A	33.57	-	N/A	33.1	-	N/A	33.71	-	-A	-A	/	/	/	/	-A	-C	-A	-A	/	/	/	/	-	-	-	-				
1214			-C	st	-A	-A	-		N/A	33.12	-	N/A	33.54	-	N/A	34.28	-	-A	-A	/	/	/	/	-A	-C	-A	-A	/	/	/	/	-	-	-	-				

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	Salmo*fast*® PCR kit 16h at 37±1°C BPW + novobiocine 20mg/L																													
			RVS both		MKTTn broth		Final result		PCR result									Confirmatory tests															Final result			Number positive samples/Total		
									CFX Opus			QS5			CFX 96 standard			Direct streaking						Streaking after subculture in RVS and MKTTn								All confirmatory tests						
																		Result (Typical colonies)						RVS		MKTTn												
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella			*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests. API20E if necessary)	Confirmation of typical colonies		CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
1215			+p	+p	+M	+M	+		19.91	34.29	+	19.73	34.45	+	19.95	35.71	+	+M	+M	+	+	+	+	+M	+p	+1/2	+p	+	+	+	+	+	+	+	+			
1216			+p	+p	+M	+p	+		21.57	33.94	+	21.19	33.54	+	21.68	35.57	+	+1/2	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+			
1217	High	3.0	+p	+p	+M	+p	+	5/5	26.68	33.59	+	26.65	33.62	+	26.71	33.65	+	+m/+	+1/2/+	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+	5/5	5/5	5/5
1218			+p	+p	+M	+M	+		19.62	34.98	+	18.25	33.15	+	19.55	36.12	+	+M	+M	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+			
1219			+p	+p	+M	+p	+		22.41	33.14	+	21.03	32.74	+	22.66	34.86	+	+M	+1/2	+	+	+	+	+p	+p	+M	+p	+	+	+	+	+	+	+	+			

Matrix : Stainless steel surface 4"x 4" (sponge used as sampling device)
Strains : S. Livingstone Ad2702+ co-inoculation with 10 x *Citrobacter freundii* 39
Seeding protocol: Liquid inoculum storage overnight at ambient temperature
Protocol paired : BPW

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method					Number positive samples/Total	**Salmo*fast*® PCR kit** **16h at 37±1°C BPW**																													
			RVS both		MKTTn broth				**PCR result**									**Confirmatory tests**															**Final result**			Number positive samples/Total		
									CFX Opus			QS5			CFX 96 standard			Direct streaking						Streaking after subculture in RVS and MKTTn														
																		Result (Typical colonies)						RVS		MKTTn												
			XLD	Brilliance Salmonella	XLD	Brilliance Salmonella	Final result		*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	*Salmonella* (Cq)	IAC (Cq)	**Result**	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	XLD	*Brilliance Salmonella*	XLD	*Brilliance Salmonella*	Oxoid™ Salmonella Latex test	API 20E (without a purification step)	Tests after purification (serological tests, API20E if necessary)	Confirmation of typical colonies	All confirmatory tests	CFX OPUS	QS5	CFX 96 standard	CFX OPUS	QS5	CFX 96 standard
1986	0	/	-C	-B	-A	-B	-	0/5	N/A	35.73	-	N/A	35.41	-	N/A	36.15	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-		-	0/5	0/5	0/5
1988			-C	-C	-A	-B	-		N/A	35.22	-	N/A	34.22	-	N/A	35.54	-	-A	-A	/	/	/	/	-C	-C	-A	-B	/	/	/	/	-	-		-			
2000			-C	-B	-A	-B	-		N/A	38.12	-	N/A	35.13	-	N/A	36.23	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-		-			
2003			-C	-B	-A	-A	-		N/A	34.92	-	N/A	34.43	-	N/A	35.57	-	-A	-A	/	/	/	/	-C	-B	-A	-A	/	/	/	/	-	-	-	-			
2006			-B	-B	-A	-B	-		N/A	34.89	-	N/A	34.73	-	N/A	37.12	-	-A	-A	/	/	/	/	-B	-B	-A	-B	/	/	/	/	-	-		-			
1984	Low	8.8	+M	+p	+1/2	+M	+	8/20	17.95	/	+	15.49	34.84	+	17.89	38.8	+	+M	+M	+	+	+	+	+M	+p	+1/2	+M	+	+	/	+	+	+	+	+	8/20	8/20	8/20
1985			-C	-B	-A	-B	-		N/A	35.62	-	N/A	33.64	-	N/A	35.25	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-	-	-			
1987			-C	-B	-A	-B	-		N/A	35.99	-	N/A	33.02	-	N/A	35.51	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-	-	-			
1989			-C	-B	-A	-B	-		N/A	35.15	-	23.95 N/A N/A	33.83 33.82 34.47	+/-/-	N/A	35.11	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-	-	-			
1991			+M	+p	+M	+M	+		17.97	36.28	+	14.52	35.52	+	17.43	/	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
1992			st	st	st	st	-		N/A	35.12	-	N/A	34.67	-	38.59 (at) N/A N/A	36.39 36.02 35.59	-/-/-	st	st	/	/	/	/	st	st	st	st	/	/	/	/	-	-	-	-			
1993			-C	-B	-A	-A	-		N/A	36.48	-	N/A	35.36	-	N/A	35.59	-	-A	-A	/	/	/	/	-C	-B	-A	-A	/	/	/	/	-	-	-	-			
1995			-C	-B	-A	-A	-		N/A	35.82	-	N/A	34.27	-	N/A	36.41	-	-A	-A	/	/	/	/	-C	-B	-A	-A	/	/	/	/	-	-	-	-			
1996			+p	+M	+M	+M	+		18.32	39.6	+	15.67	/	+	17.56	/	+	+M	+M	+	+	+	+	+p	+M	+M	+M	+	+	/	+	+	+	+	+			
1997			-C	-C	-A	-A	-		N/A	35.5	-	N/A	34.58	-	N/A	35.47	-	-A	-A	/	/	/	/	-C	-C	-A	-A	/	/	/	/	-	-	-	-			
1999			-C	-B	-A	-A	-		N/A	35.33	-	N/A	33.59	-	39.38 33.47 32.06	35.92 35.15 35.7	+/+/+	-A	-A	/	/	/	/	-C	-B	-A	-A	/	/	/	/	-	-	-	-			
2001			-C	-B	-A	-B	-		N/A	35.33	-	N/A	34.37	-	N/A	35.26	-	-A	-A	/	/	/	/	-C	-B	-A	-B	/	/	/	/	-	-	-	-			
2002			+M	+p	+M	+M	+		17.42	/	+	14.32	34.05	+	17.16	/	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2004			+M	+p	+M	+M	+		17.88	/	+	14.9	/	+	17.34	38.79	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2005			-B	-B	-A	-B	-		38.87 N/A N/A	35.33 35.5 35.15	+/-/-	N/A	34.31	-	N/A	36.31	-	-A	-A	/	/	/	/	-B	-B	-A	-B	/	/	/	/	-	-	-	-			
2008			+M	+p	+M	+M	+		19.49	/	+	14.75	33.03	+	18.77	/	+	+1/2	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2009			-B	-B	-A	-B	-		N/A	34.48	-	N/A	35.13	-	N/A	35.53	-	-A	-A	/	/	/	/	-B	-B	-A	-B	/	/	/	/	-	-	-	-			

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° sample	Level	Contamination level (CFU/sample)	ISO 6579-1♦ method – RVS both – XLD	ISO 6579-1♦ method – RVS both – Brilliance Salmonella	ISO 6579-1♦ method – MKTTn broth – XLD	ISO 6579-1♦ method – MKTTn broth – Brilliance Salmonella	ISO 6579-1♦ method – Final result	Number positive samples/Total	Salmo*fast*® PCR kit 16h at 37±1°C BPW – PCR result – CFX Opus – *Salmonella* (Cq)	PCR result – CFX Opus – IAC (Cq)	PCR result – CFX Opus – **Result**	PCR result – QS5 – *Salmonella* (Cq)	PCR result – QS5 – IAC (Cq)	PCR result – QS5 – **Result**	PCR result – CFX 96 standard – *Salmonella* (Cq)	PCR result – CFX 96 standard – IAC (Cq)	PCR result – CFX 96 standard – **Result**	Confirmatory tests – Direct streaking – Result (Typical colonies) – XLD	Direct streaking – Result (Typical colonies) – *Brilliance Salmonella*	Direct streaking – Oxoid™ Salmonella Latex test	Direct streaking – API 20E (without a purification step)	Direct streaking – Tests after purification (serological tests, API20E if necessary)	Direct streaking – Confirmation of typical colonies	Streaking after subculture in RVS and MKTTn – RVS – XLD	Streaking after subculture – RVS – *Brilliance Salmonella*	Streaking after subculture – MKTTn – XLD	Streaking after subculture – MKTTn – *Brilliance Salmonella*	Streaking after subculture – Oxoid™ Salmonella Latex test	Streaking after subculture – API 20E (without a purification step)	Streaking after subculture – Tests after purification (serological tests, API20E if necessary)	Streaking after subculture – Confirmation of typical colonies	All confirmatory tests	Final result – CFX OPUS	Final result – QS5	Final result – CFX 96 standard	Number positive samples/Total – CFX OPUS	Number positive samples/Total – QS5	Number positive samples/Total – CFX 96 standard
2010			-B	-B	-A	-B	-		N/A	35.14	-	N/A	33.67	-	N/A	34.81	-	-A	-A	/	/	/	/	-B	-B	-A	-B	/	/	/	/	-	-	-	-			
2011			+M	+p	+M	+M	+		18.83	36.09	+	16.31	/	+	18.54	39.39	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2013			+M	+p	+M	+p	+		19.18	35.41	+	16.5	/	+	18.61	/	+	+M	+M	+	+	+	+	+M	+p	+M	+p	+	+	/	+	+	+	+	+			
1990	High	53.6	+M	+p	+M	+M	+	5/5	17.66	36.2	+	14.69	33.89	+	17.27	/	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+	5/5	5/5	5/5
1994			+M	+p	+M	+M	+		18.12	36.55	+	15.1	/	+	17.4	37.9	+	+1/2	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
1998			+M	+p	+M	+M	+		17.42	35.61	+	15.19	34.46	+	17.17	/	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2007			+M	+p	+M	+M	+		18.17	38.76	+	14.88	/	+	17.82	37.39	+	+1/2	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			
2012			+M	+p	+M	+M	+		18.04	36.78	+	15.37	/	+	17.66	/	+	+M	+M	+	+	+	+	+M	+p	+M	+M	+	+	/	+	+	+	+	+			

Appendix 7 - Inclusivity and exclusivity: raw data

Milk inclusion

INCLUSIVITY														
No	Strain		Reference	Origin	Inoculation level (CFU/225ml)	BPW + 20mg/l novobiocin - 16-20h at 38°C ±1°C								
						QS5	CFX 96 standard	CFX Opus Deep Well	Confirmatory tests					
									Direct streaking					
						Result	Result	Result	XLD	Comment	Oxoid Brilliance *Salmonella*	Comment	Oxoid *Salmonella* Latex test	All confirmatory tests
1	Salmonella	Abaetetuba	Ad2318	/	28	+	+	+	+		+		+	+
2	*Salmonella*	Aberdeen	CIP 105618	/	47	+	+	+	+		+		+	+
3	Salmonella	Abortusequi	Ad2321	/	11	+	+	+	+	white colonies	+	little and light purple colonies	+ (on XLD)	+
4	Salmonella	Abortusovis	Ad2320	Ovine fetus	12	-	-	-	-		-		/	-
					19	+	+	+	+	white colonies	-		+ (on XLD)	+
5	Salmonella	Adelaïde	Ad2319	Turkey breeding environment	64	+	+	+	+		+		+	+
6	*Salmonella*	Agona	A00V038	Feed for pork	28	+	+	+	+		+		+	+
7	*Salmonella*	Anatum	A00E007	Dusts	34	+	+	+	+		+		+	+
8	*Salmonella*	*arizonae* 51:z4,z23:-	CIP 5523	Turkey meat	38	+	+	+	+		+		+	+
9	*Salmonella*	*arizonae* 48:z4,z23:-	Ad1850	Poultry environmental sample	34	+	+	+	+		+		+	+
10	*Salmonella*	Bardo	Adria 569	Meat for sausage	30	+	+	+	+		+		+	+
11	*Salmonella*	Bareilly	Ad1687	Chocolate industry	40	+	+	+	+		+		+	+
12	*Salmonella*	Blockley	Ad923	Poultry environment	38	+	+	+	+		+		+	+
13	*Salmonella*	*bongori 66 :z35*	Ad599	Environmental sample	56	+	+	+	+	white	+	light purple	+	+
14	*Salmonella*	Bovismorbificans	Adria 6629	Sausage	23	+	+	+	+		+		+	+
15	*Salmonella*	Braenderup	Adria 111	Pork meat	32	+	+	+	+		+		+	+
16	*Salmonella*	Brandenburg	Ad351	Seafood cocktail	33	+	+	+	+		+		+	+
17	*Salmonella*	Bredeney	Adria 396	Ground beef	25	+	+	+	+		+		+	+
18	Salmonella	Caracas	Ad2322	Spice	44	+	+	+	+		+		+	+
19	*Salmonella*	Cerro	Ad689	Dehydrated poultry protein	42	+	+	+	+		+		+	+
20	*Salmonella*	Chester	CIP 103543	/	28	+	+	+	+		+		+	+
21	Salmonella	Cubana	Ad2323	Dust feed environment	34	+	+	+	+		+		+	+
22	*Salmonella*	Derby	Ad1093	Fish fillet	326	+	+	+	+		+		+	+
					59	+	+	+	+		+		+	+
23	*Salmonella*	*diarizonae* 38:lv:z53	Ad451	Ewe milk cheese	54	+	+	+	+		+		+	+
24	*Salmonella*	*diarizonae* 61:k:1,5,7	Ad1300	Raw ewe milk	61	+	+	+	+		+		+	+
25	*Salmonella*	Dublin	Ad529	Beef meat	32	+	+	+	+		+	light purple	+	+
26	*Salmonella*	Emek	Ad333	/	18	+	+	+	+		+		+	+
27	*Salmonella*	Enteritidis	Ad477	Hen meat	22	+	+	+	+		+		+	+
28	*Salmonella*	Gallinarum biovar pullorum	Ad300	Poultry environment	9	-	-	-	-		-		/	-
					6	+	+	+	+	white	+	very little purple colonies	+ (on XLD)	+
29	Salmonella	Gaminara	Ad2324	Boar meat	30	+	+	+	+		+		+	+
30	*Salmonella*	Give	436	Ground beef	28	+	+	+	+		+		+	+

INCLUSIVITY														
No	Strain		Reference	Origin	Inoculation level (CFU/225ml)	BPW + 20mg/l novobiocin - 16-20h at 38°C ±1°C								
						QS5	CFX 96 standard	CFX Opus Deep Well	Confirmatory tests					
									Direct streaking					
						Result	Result	Result	XLD	Comment	Oxoid Brilliance *Salmonella*	Comment	Oxoid *Salmonella* Latex test	All confirmatory tests
31	*Salmonella*	Guinea	29	/	17	+	+	+	+	white colonies - yellow agar	+		+	+
32	*Salmonella*	Hadar	24871	Chicken meat	21	+	+	+	+		+		+	+
33	*Salmonella*	Havana	Ad930	Poultry environment	37	+	+	+	+		+		+	+
34	*Salmonella*	Heidelberg	A00E005	Dusts from dairy industry	28	+	+	+	+		+		+	+
35	*Salmonella*	*houtenae 50:g,z51*	Ad596	Dairy product	25	+	+	+	+		+	little	+	+
36	Salmonella	Hvittingfoss	Ad2325	Raw stuff	31	+	+	+	+		+		+	+
37	*Salmonella*	Indiana	Ad174	White cheese	11	+	+	+	+		+		+	+
38	*Salmonella*	*indica 1*,6,14,25:a:enx	Ad600	Environmental sample	26	+	+	+	+	white colonies - yellow agar	+	light purple	+	+
39	Salmonella	*indica*11:b:e,n,x	Ad2337	Chicken breeding environment	23	+	+	+	+		+	light purple	+	+
40	*Salmonella*	Infantis	F401B	Cheese	37	+	+	+	+		+		+	+
41	Salmonella	Javiana	Ad2326	Turkey meat	40	+	+	+	+		+		+	+
42	*Salmonella*	Kedougou	Ad929	Bovine environmental sample	24	+	+	+	+		+		+	+
43	*Salmonella*	Kentucky	Ad1756	Poultry environmental sample	38	+	+	+	+		+		+	+
44	*Salmonella*	Kottbus	Adria 1	Poultry environmental sample	15	+	+	+	+		+		+	+
45	*Salmonella*	Landau	Ad499	/	19	+	+	+	+		+		+	+
46	*Salmonella*	Lille	Adria 37	Food product	48	+	+	+	+		+		+	+
47	*Salmonella*	Livingstone	Ad1107	Dusts	43	+	+	+	+		+		+	+
48	*Salmonella*	London	Adria 326	Cooked meat sample	48	+	+	+	+		+		+	+
49	*Salmonella*	Luciana	CIP 105626	/	34	+	+	+	+	yellow agar	+		+	+
50	*Salmonella*	Manhattan	Adria 900	Dusts from dairy industry	45	+	+	+	+		+		+	+
51	*Salmonella*	Maracaibo	CIP 54143	/	22	+	+	+	+		+		+	+
52	*Salmonella*	Marseille	CIP105627	/	32	+	+	+	+		+		+	+
53	*Salmonella*	Mbandaka	Ad914	Mayonnaise	43	+	+	+	+		+		+	+
54	*Salmonella*	Meleagridis	505	Raw milk	19	+	+	+	+		+		+	+
55	Salmonella	Michigan	Ad2327	Low moisture sausage	42	+	+	+	+		+		+	+
56	*Salmonella*	Mikawasima	Ad1811	Raw ewe milk	35	+	+	+	+		+		+	+
57	Salmonella	Minnesota	Ad2328	Feed	54	+	+	+	+		+		+	+
58	Salmonella	Missisipi	Ad2329	Parakeet	21	+	+	+	+		+		+	+
59	*Salmonella*	Montevideo	Ad912	Raw milk	15	+	+	+	+		+		+	+
60	*Salmonella*	Muenchen	CIP 106178	/	16	+	+	+	+		+		+	+
61	*Salmonella*	Napoli	Ad928	Clinical	24	+	+	+	+		+		+	+
62	*Salmonella*	Newport	Adria 586	Sausage	16	+	+	+	+		+		+	+
63	*Salmonella*	Norwich	Ad1172	/	30	+	+	+	+		+		+	+
64	*Salmonella*	Ohio	Ad1482	Raw cow milk	16	+	+	+	+		+		+	+
65	*Salmonella*	Orion	27	/	17	+	+	+	+		-		+ (on XLD)	+
66	*Salmonella*	Oranienburg	Ad1724	Cereals	50	+	+	+	+		+		+	+
67	*Salmonella*	Ovakam	Ad1647	Compost	35	+	+	+	+		+		+	+
68	*Salmonella*	Panama	Adria 8	Ground beef	20	+	+	+	+		+		+	+
69	*Salmonella*	Paratyphi A	ATCC 9150	/	19	+	+	+	+	white	+	light purple	+	+
70	*Salmonella*	Paratyphi B	Ad301	Clinical	32	+	+	+	+		+		+	+

INCLUSIVITY														
No	Strain		Reference	Origin	Inoculation level (CFU/225ml)	BPW + 20mg/l novobiocin - 16-20h at 38°C ±1°C								
						QS5	CFX 96 standard	CFX Opus Deep Well	Confirmatory tests					
									Direct streaking					
						Result	Result	Result	XLD	Comment	Oxoid Brilliance *Salmonella*	Comment	Oxoid *Salmonella* Latex test	All confirmatory tests
71	*Salmonella*	Paratyphi C	ATCC 13428	/	35	+	+	+	+		+		+	+
72	*Salmonella*	Pomona	CIP105630	/	40	+	+	+	+		+		+	+
73	*Salmonella*	Poona	Ad2330	Poultry feed	37	+	+	+	+		+		+	+
74	Salmonella	Putten	Ad2331	Feed for chicken	49	+	+	+	+		+		+	+
75	*Salmonella*	Regent	Adria 328	Duck	25	+	+	+	+		+		+	+
76	*Salmonella*	Rissen	Adria 39	Food product	27	+	+	+	+		+		+	+
77	Salmonella	Rubislaw	Ad2332	Shark cartilage	39	+	+	+	+		+		+	+
78	*Salmonella*	Saintpaul	Adria F31	Pilchard fillets	26	+	+	+	+		+		+	+
79	*Salmonella*	*salamae* 42,b:e,n,x,z15	Ad593	Cereals	43	+	+	+	+		+		+	+
80	Salmonella	Schwarzengrund	Ad2333	Egg products environment	30	+	+	+	+		+		+	+
81	*Salmonella*	Senftenberg	Ad355	Seafood cocktail	25	+	+	+	+		+		+	+
82	*Salmonella*	Stanley	Ad1688	Chocolate industry	27	+	+	+	+		+		+	+
83	*Salmonella*	Stourbridge	Ad2297	Raw milk cheese	20	+	+	+	+		+		+	+
84	*Salmonella*	Strasbourg	CIP105632	/	11	+	+	+	+		+	blue	+	+
85	*Salmonella*	Tananarive	CIP54142	/	23	+	+	+	+		+		+	+
86	*Salmonella*	Tennessee	A00E006	Dusts from dairy industry	29	+	+	+	+		+		+	+
87	*Salmonella*	Thompson	AER301	Poultry	23	+	+	+	+		+		+	+
88	*Salmonella*	Typhi	Ad302	Clinical	16	-	-	-	-		-		/	/
					16	+	+	+	+		-		+ (on XLD)	+
89	*Salmonella*	Typhimurium	Ad1070	Pork meat	22	+	+	+	+		+		+	+
90	*Salmonella*	Typhimurium 1,4 [5], I2:-:-	Ad1333	Tiramisu	52	+	+	+	+		+		+	+
91	*Salmonella*	Typhimurium 1,4 [5], I2:-:1,2	Ad1335	Poultry environmental sample	40	+	+	+	+		+		+	+
92	*Salmonella*	Typhimurium 1,4 [5], II2:i:-	Ad1334	Ready to cook pork	31	+	+	+	+		+		+	+
93	*Salmonella*	Urbana	Ad2334	Shrimps	24	+	+	+	+		+		+	+
94	*Salmonella*	Veneziana	Adria 233	Food product	63	+	+	+	+		+		+	+
95	*Salmonella*	Virchow	Adria F276	Curry	39	+	+	+	+		+		+	+
96	Salmonella	Wandsworth	Ad2335	Fillet of mullet	22	+	+	+	+		+		+	+
97	*Salmonella*	Waycross	CIP105634	/	26	+	+	+	+		+		+	+
98	*Salmonella*	Wayne	Ad502	/	38	+	+	+	+		+		+	+
99	Salmonella	Weltevreden	Ad2336	Treated water	34	+	+	+	+		+		+	+
100	*Salmonella*	Worthington	Adria 3506	Pâté	31	+	+	+	+		+		+	+

EXCLUSIVITY																		
No	Strain		Reference	Origin	Inoculation level (CFU/225mL)	BPW 24h at 37°C												
						QS5			CFX96			CFX Opus DW			Confirmatory tests			
						Salmonella (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result	Salmonella (Cq)	IAC (Cq)	Result	Direct streaking		Oxoid *Salmonella* Latex test	All confirmatory tests
															XLD	Oxoid Brillance *Salmonella*		
1	*Citrobacter*	braakii	Ad833	Raw beef meat	6.00E+03	N/A	32.149	-	3.25(at) N/A	34.44 36.03	-/-	N/A	32.99	-	-	-	/	
2	*Citrobacter*	Diversus	adria 140	Raw milk	3.20E+04	N/A	32.855	-	N/A	34.17	-	N/A	33.05	-	-	+	-	-
3	*Citrobacter*	freundii	adria 23	Raw pork sausage	5.60E+04	N/A	32.517	-	3.72(at) N/A	34.19 35.74	-/-	N/A	33.37	-	-	-	/	
4	*Citrobacter*	freundii	adria 175	Raw duck meat	5.80E+04	N/A	33.106	-	N/A	33.75	-	N/A	33.26	-	-	-	/	-
5	*Citrobacter*	koseri	adria 71	Frozen vegetables	9.00E+04	N/A	33.983	-	N/A	34.67	-	N/A	34.56	-	-	-	/	-
6	*Enterobacter*	agglomerans	adria 11	Cheese	3.00E+04	N/A	32.462	-	N/A	34.38	-	N/A	33.55	-	-	-	/	-
7	*Enterobacter*	amnigenus	A00C068	Raw poultry meat	8.00E+04	N/A	33.363	-	N/A	34.43	-	N/A	33.45	-	-	-	/	-
8	*Enterobacter*	cloacae	adria 10	Raw milk	3.40E+04	32.74 N/A N/A	32.992 31.07 31.69	+/-/-	N/A	34.25	-	38.22 N/A N/A	33.43 32.77 32.95	+/-/-	-	-	/	
9	*Enterobacter*	intermedius	adria 60	Bean	2.20E+04	N/A	32.722	-	N/A	33.34	-	N/A	33.49	-	-	-	/	-
10	*Enterobacter*	kobei	Ad 342	Ham	6.40E+04	N/A	32.938	-	N/A	34.25	-	N/A	33.25	-	-	-	/	-
11	*Enterobacter*	sakazakii	adria 95	Fermented milk	4.20E+04	N/A	31.51	-	N/A	33.73	-	N/A	32.96	-	-	+	-	
12	*Erwinia*	carotovora	CIP 8283	Potatoes	6.00E+03	N/A	33.891	-	N/A	34.15	-	N/A	33.6	-	-	-	/	-
13	*Escherichia*	coli	adria 19	Grated carrots	5.40E+04	N/A	32.417	-	N/A	34.33	-	N/A	33.4	-	-	-	/	-
14	*Escherichia*	hermanii	Ad 461	Dessert	5.40E+04	N/A	33.48	-	N/A	34.07	-	N/A	34.16	-	-	-	/	-
15	*Escherichia*	vulneris	adria 132	Veal liver	1.60E+04	N/A	34.109	-	N/A	34.72	-	N/A	33.92	-	-	-	/	-
16	*Hafnia*	alvei	adria 167	Raw pork sausage	9.20E+04	N/A	33.012	-	N/A	34.01	-	N/A	33.52	-	-	-	/	-
17	*Klebsiella*	oxytoca	57	Food product	3.00E+04	N/A	33.111	-	N/A	34.48	-	N/A	34.17	-	-	-	/	-
18	*Klebsiella*	pneumoniae	47	Raw turkey meat	4.60E+04	N/A	32.733	-	N/A	34.31	-	N/A	33.25	-	-	-	/	-
19	*Kluyvera*	spp	adria 41	Raw milk	1.80E+04	N/A	32.625	-	N/A	33.86	-	N/A	33.37	-	-	-	/	-
20	*Morganella*	morganii	CIP A236	/	6.20E+04	N/A	30.696	-	N/A	34.1	-	N/A	34	-	-	-	/	-
21	*Pantoea*	agglomerans	adria 62	Frozen vegetables	2.40E+04	N/A	32.149	-	N/A	34.43	-	N/A	33.63	-	-	-	/	-
22	*Proteus*	mirabilis	Ad639	Mayonnaise	9.20E+04	N/A	32.057	-	N/A	34.25	-	N/A	33.24	-	-	-	/	-
23	*Proteus*	vulgaris	adria 43	Sliced ham	4.00E+03	N/A	34.407	-	N/A	34.25	-	N/A	34.6	-	-	-	/	-
24	*Providencia*	rettgeri	adria 112	White liquid egg	8.00E+03	N/A	33.28	-	4.5(at) N/A	34.58 31.92	-/-	N/A	34.46	-	-	-	/	
25	*Rhanella*	aquatilis	adria 69	Molluscs	2.00E+03	N/A	33.154	-	N/A	34.32	-	N/A	33.55	-	-	-	/	-
26	*Serratia*	liquefaciens	26	Egg product	1.40E+04	N/A	33.291	-	N/A	33.83	-	N/A	33.21	-	-	-	/	-
27	*Serratia*	proteomaculans	A00C056	Ham	1.40E+04	N/A	33.254	-	N/A	34.75	-	N/A	33.53	-	-	-	/	-
28	*Shigella*	flexneri	CIP 8248	/	6.20E+04	N/A	33.536	-	N/A	35.27	-	N/A	34.26	-	-	-	/	-
29	*Shigella*	sonnei	CIP 8249T (ATCC 29930)	/	4.80E+04	N/A	30.769	-	N/A	33.85	-	36.74(at) N/A	33.93 32.62	-/-	-	-	/	
30	*Yersinia*	enterocolitica	adria 32	Bacon	3.00E+04	N/A	33.271	-	N/A	34.54	-	N/A	34.61	-	-	-	/	-

Appendix 8 - Inter-laboratory study: raw data

Laboratory A
Aerobic mesophilic flora: 2.37E+06

Thermocycler: CFX96

N°Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)				
2	-	-	-	-	-	-	N/A	29.09	-	-	-	-	-	-	-	-	-	-	**NA**
5	-	-	-	-	-	-	N/A	29.17	-	-	-	-	-	-	-	-	-	-	**NA**
8	-	-	-	-	-	-	N/A	29.13	-	-	-	-	-	-	-	-	-	-	**NA**
9	-	-	-	-	-	-	N/A	29.97	-	-	-	-	-	-	-	-	-	-	**NA**
13	-	-	-	-	-	-	N/A	29.17	-	-	-	-	-	-	-	-	-	-	**NA**
19	-	-	-	-	-	-	N/A	29.14	-	-	-	-	-	-	-	-	-	-	**NA**
20	-	-	-	-	-	-	N/A	29.12	-	-	-	-	-	-	-	-	-	-	**NA**
22	-	-	-	-	-	-	N/A	29.35	-	-	-	-	-	-	-	-	-	-	**NA**
3	+	+	+	+	+	+	20.24	29.17	+	+	+	+	+	+	+	+	+	+	**PA**
4	+	+	+	+	+	+	22.89	29.17	+	+	+	+	+	+	+	+	+	+	**PA**
7	+	+	+	+	+	+	21.01	29.33	+	+	+	+	+	+	+	+	+	+	**PA**
11	+	+	+	+	+	+	22.04	28.99	+	+	+	+	+	+	+	+	+	+	**PA**
14	+	+	+	+	+	+	22.28	29.17	+	+	+	+	+	+	+	+	+	+	**PA**
16	+	+	+	+	+	+	22.32	28.98	+	+	+	+	+	+	+	+	+	+	**PA**
18	+	+	+	+	+	+	24.67	29.17	+	-	-	+	+	+	+	+	+	+	**PA**
24	+	+	+	+	+	+	22,33	29.46	+	+	+	+	+	+	+	+	+	+	**PA**
1	+	+	+	+	+	+	19.45	29.73	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	21.56	29.18	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	20.10	29.39	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	20.55	29.37	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	25,89	29.35	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	19.08	29.76	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	19.31	28.78	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	20.02	29.03	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory B1
Aerobic mesophilic flora: 2.91E+05

Thermocycler: QS5

N° Sample	ISO 6579-1						Salmo*fast* PCR method															Final result with ADRIA interpretation	Agreement Ref/Alt
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test (interpretation from B1)		PCR final result *Salmonella* spp.	PCR test (interpretation from ADRIA)		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)		
													Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid			
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	-	-	>40	27.73	-	N/A	29.59	-	-	-	-	-	-	-	-	-	-	**NA**
5	-	-	-	-	-	-	>40	27.88	-	N/A	29.65	-	-	-	-	-	-	-	-	-	-	**NA**
8	-	-	-	-	-	-	>40	27.55	-	39.88	29.55	+	-	-	-	-	-	-	-	-	-	**PD$_{FP(alt)}$**
9	-	-	-	-	-	-	>40	27.94	-	N/A	29.62	-	-	-	-	-	-	-	-	-	-	**NA**
13	-	-	-	-	-	-	>40	27.84	-	N/A	29.60	-	-	-	-	-	-	-	-	-	-	**NA**
19	-	-	-	-	-	-	>40	28.20	-	N/A	29.80	-	-	-	+ (retest -)	-	+ (retest -)	-	+ (retest -)	-	-	**NA**
20	-	-	-	-	-	-	>40	27.96	-	N/A	29.61	-	-	-	-	-	-	-	-	-	-	**NA**
22	-	-	-	-	-	-	>40	27.37	-	N/A	29.24	-	-	-	-	-	-	-	-	-	-	**NA**
3	+	+	+	+	+	+	19,9	27.36	+	20.21	29.52	+	+	+	+	+	+	+	+	+	+	**PA**
4	+	+	+	+	+	+	>40	27.83	-	N/A	29.57	-	-	-	-	-	-	-	-	-	-	**ND**
7	+	+	+	+	+	+	>40	27.99	-	N/A	29.85	-	-	-	-	-	-	-	-	-	-	**ND**
11	-	-	-	-	-	-	>40	27.82	-	N/A	29.50	-	-	-	-	-	-	-	-	-	-	**NA**
14	+	+	+	+	+	+	22,8	27.37	+	23.30	29.46	+	+	+	+	+	+	+	+	+	+	**PA**
16	-	-	-	-	-	-	20.00	27.15	+	20.42	29.23	+	+	+	+	+	+	+	+	+	+	**PD**
18	+	+	+	+	+	+	>40	27.65	-	N/A	29.39	-	-	-	-	-	-	-	-	-	-	**ND**
24	+	+	+	+	+	+	21,9	27.08	+	22.33	28.95	+	+	+	+	+	+	+	+	+	+	**PA**
1	+	+	+	+	+	+	18,0	27.61	+	N/A	30.34	-	+	+	+	+	+	+	+	+	-	**ND$_{FN(alt)}$**
6	+	+	+	+	+	+	21,1	27.43	+	21.55	29.53	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	20,2	27.57	+	20.55	29.58	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	18,9	27.51	+	19.37	29.67	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	19.60	27.12	+	20.17	29.41	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	20,4	27.25	+	20.81	29.21	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	19.20	27.42	+	19.80	29.58	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	21,0	27.06	+	21.41	29.00	+	+	+	+	+	+	+	+	+	+	**PA**

Laboratory B2
Aerobic mesophilic flora: 3.09E+05

Thermocycler: QS5

N° Sample	ISO 6579-1						Salmo*fast* PCR method																	
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test (interpretation from B2)		PCR final result *Salmonella* spp.	PCR test (interpretation from ADRIA)		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result with ADRIA interpretation	Agreement Ref/Alt
													Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella					
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
28	-	-	-	-	-	-	>40	27.47	-	N/A	29.43	-	-	-	-	-	-	-	-	-	-	-	**NA**
30	-	-	-	-	-	-	>40	27.81	-	N/A	29.52	-	-	-	-	-	-	-	-	-	-	-	**NA**
31	-	-	-	-	-	-	>40	28.24	-	N/A	29.82	-	-	-	-	-	-	-	-	-	-	-	**NA**
36	-	-	-	-	-	-	>40	27.32	-	N/A	29.38	-	-	-	-	-	-	-	-	-	-	-	**NA**
39	-	-	-	-	-	-	>40	27.53	-	N/A	29.82	-	-	-	-	-	+ (retest -)	+ (retest -)	+ (retest -)	-	-	-	**NA**
42	-	-	-	-	-	-	>40	31.66	-	N/A	32.52	-	-	-	-	-	-	-	-	-	-	-	**NA**
44	-	-	-	-	-	-	>40	27.81	-	N/A	29.65	-	-	-	+ (retest -)	+ (retest -)	-	-	+ (retest -)	-	-	-	**NA**
47	-	-	-	-	-	-	>40	26.00	-	N/A	29.02	-	-	-	-	-	-	-	-	-	-	-	**NA**
25	+	+	+	+	+	+	21.30	26.51	+	21.72	28.91	+	+	+	+	+	+	+	+	+	+	+	**PA**
26	-	-	-	-	-	-	19.90	25.89	+	20.67	28.59	+	+	+	+	+	+	+	+	+	+	+	**PD**
29	+	+	+	+	+	+	20.50	27.21	+	20.99	29.27	+	+	+	+	+	+	+	+	+	+	+	**PA**
33	+	+	+	+	+	+	21.90	26.25	+	22.69	28.71	+	+	+	+	+	+	+	+	+	+	+	**PA**
37	-	-	-	-	-	-	21.70	27.44	+	22.19	29.34	+	+	+	+	+	+	+	+	+	+	+	**PD**
38	-	-	-	-	-	-	17.70	27.68	+	18.61	29.96	+	+	+	+	+	+	+	+	+	+	+	**PD**
43	+	+	+	+	+	+	21.30	26.62	+	21.90	28.86	+	+	+	+	+	+	+	+	+	+	+	**PA**
46	+	+	+	+	+	+	17.00	25.00	+	18.59	28.50	+	+	+	+	+	+	+	+	+	+	+	**PA**
27	+	+	+	+	+	+	19.70	26.58	+	20.38	28.98	+	+	+	+	+	+	+	+	+	+	+	**PA**
32	+	+	+	+	+	+	21.20	26.97	+	21.69	29.29	+	+	+	+	+	+	+	+	+	+	+	**PA**
34	+	+	+	+	+	+	19.70	26.49	+	20.33	29.13	+	+	+	+	+	+	+	+	+	+	+	**PA**
35	+	+	+	+	+	+	20.80	27.58	+	21.23	29.58	+	+	+	+	+	+	+	+	+	+	+	**PA**
40	+	+	+	+	+	+	17.90	26.17	+	18.98	29.08	+	+	+	+	+	+	+	+	+	+	+	**PA**
41	+	+	+	+	+	+	19.20	26.24	+	20.16	29.11	+	+	+	+	+	+	+	+	+	+	+	**PA**
45	+	+	+	+	+	+	15.60	25.46	+	16.34	29.75	+	+	+	+	+	+	+	+	+	+	+	**PA**
48	+	+	+	+	+	+	18.40	25.32	+	19.31	28.69	+	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory C
Aerobic mesophilic flora: 1.90E+05

Thermocycler: CFX 96

N°Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	/	-	N/A	29.93	-	-	-	-	-	+	+	+	+	-	NA$_{FN(alt)}$
5	+	+	-	-	+	+	N/A	30.47	-	-	-	-	-	-	-	/	-	-	ND
8	+	+	-	-	+	+	N/A	30.28	-	-	-	-	-	-	-	/	-	-	ND
9	-	-	-	-	/	-	N/A	31.27	-	-	-	-	-	-	-	/	-	-	NA
13	-	-	-	-	/	-	N/A	29.71	-	-	-	+	+	+	+	+	+	-	NA$_{FN(alt)}$
19	-	-	-	-	/	-	N/A	29.56	-	-	-	+	+	+	+	+	+	-	NA$_{FN(alt)}$
20	-	-	-	-	/	-	N/A	29.82	-	-	-	-	-	-	-	/	-	-	NA
22	-	-	-	-	/	-	N/A	N/A	-	-	-	+	+	+	+	+	+	-	NA$_{FN(alt)}$
3	-	-	-	-	/	-	23.61	29.54	+	+	+	+	+	+	+	+	+	+	PD
4	-	-	-	-	/	-	24.22	29.59	+	+	+	+	+	+	+	+	+	+	PD
7	-	-	-	-	/	-	24.25	33.96	+	+	+	+	+	+	+	+	+	+	PD
11	+	+	+	+	+	+	N/A	30.37	-	-	-	-	-	-	-	/	-	-	ND
14	-	-	-	-	/	-	24.24	30.85	+	+	+	+	+	+	+	+	+	+	PD
16	+	+	+	+	+	+	23.94	29.42	+	+	+	+	+	+	+	+	+	+	PA
18	+	+	+	+	+	+	N/A	31.09	-	-	-	+	+	+	+	+	+	-	ND$_{FN(alt)}$
24	+	+	+	+	+	+	23.79	29.64	+	+	+	+	+	+	+	+	+	+	PA
1	+	+	+	+	+	+	23.26	30.10	+	+	+	+	+	+	+	+	+	+	PA
6	+	+	+	+	+	+	23.61	29.78	+	+	+	+	+	+	+	+	+	+	PA
10	+	+	+	+	+	+	24.07	30.37	+	+	+	+	+	+	+	+	+	+	PA
12	+	+	+	+	+	+	22.64	30.16	+	+	+	+	+	+	+	+	+	+	PA
15	+	+	+	+	+	+	23.27	28.28	+	+	+	+	+	+	+	+	+	+	PA
17	+	+	+	+	+	+	22.22	30.17	+	+	+	+	+	+	+	+	+	+	PA
21	+	+	+	+	+	+	23.14	29.27	+	+	+	+	+	+	+	+	+	+	PA
23	+	+	+	+	+	+	23.32	29.30	+	+	+	+	+	+	+	+	+	+	PA

MICROVAL® NEN

Laboratory D
Aerobic mesophilic flora: 1.37E+05

Thermocycler: QS5

N°Sample	ISO 6579-1						Salmo*fast* PCR method													Final result	Agreement Ref/Alt
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation									Confirmation final result *Salmonella* spp. (direct streaking and after subculture)		
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella					
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	-	-	N/A	30.60	-	-	-	-	-	-	-	-	-	-	-	**NA**
5	-	-	-	-	-	-	N/A	30.50	-	-	-	-	-	-	-	-	-	-	-	**NA**
8	-	-	-	-	-	-	N/A	30.44	-	-	-	-	-	-	-	-	-	-	-	**NA**
9	-	-	-	-	-	-	N/A	30.64	-	-	-	-	-	-	-	-	-	-	-	**NA**
13	-	-	-	-	-	-	31.63/38.31	30.16/32.13	+/+	-	-	-	-	-	-	-	-	-	-	**PD$_{FP(alt)}$**
19	-	-	+ (+ retest)	+ (+ retest)	+ (+ retest)	+	N/A	30.53	-	-	-	-	-	-	-	-	-	-	-	**ND**
20	-	-	+ (+ retest)	+ (+ retest)	+ (+ retest)	+	N/A	30.45	-	-	-	-	-	-	-	-	-	-	-	**ND**
22	-	-	-	-	-	-	36.61/N/A	30.38/31.51	+/+	-	-	-	+ (+ retest)	-	-	+ (+ retest)	+	+	+	**PD**
3	-	-	-	-	-	-	24.09	29.67	+	+	+	+	+	+	+	+	+	+	+	**PD**
4	+	+	+	+	+	+	N/A	30.08	-	-	-	-	+ (+ retest)	-	-	+ (+ retest)	+	-	+	**ND$_{FN(alt)}$**
7	+	+	+	+	+	+	N/A	30.12	-	- (+ retest)	- (+ retest)	+	+	+	+	+	+	-	+	**ND$_{FN(alt)}$**
11	-	-	-	-	-	-	32.37/39.19	30.21/32.29	+/+	-	-	-	-	-	-	-	-	-	-	**PD$_{FP(alt)}$**
14	+	+	+	+	+	+	35.39/N/A	30.32/31.66	+/+	-	-	-	-	-	-	-	-	-	-	**PA$_{FP(alt)}$**
16	-	-	-	-	-	-	24.67	29.43	+	+	+	+	+	+	+	+	+	+	+	**PD**
18	+	+	+	+	+	+	23.49	30.16	+	+	+	+	+	+	+	+	+	+	+	**PA**
24	+	+	+	+	+	+	N/A	30.29	-	-	-	-	-	-	-	-	-	-	-	**ND**
1	+	+	+	+	+	+	20.34	31.05	+	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	21.16	30.37	+	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	21.21	30.45	+	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	18.84	30.38	+	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	22.33	29.91	+	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	19.84	30.05	+	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	25.17	29.60	+	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	20.95	30.59	+	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory E
Aerobic mesophilic flora: 7.27E+04

Thermocycler: QS5

N° Sample	ISO 6579-1						Salmo*fast* PCR method													Final result	Agreement Ref/Alt
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation									Confirmation final result *Salmonella* spp. (direct streaking and after subculture)		
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella					
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)						
2	-	-	-	-	/	-	N/A	29.66	-	-	-	-	-	-	-	/	-	-	**NA**
5	-	-	-	-	/	-	N/A	28.63	-	-	-	-	-	-	-	/	-	-	**NA**
8	-	-	-	-	/	-	N/A	28.89	-	-	-	-	-	-	-	/	-	-	**NA**
9	-	-	-	-	/	-	29.94/N/A/N/A	29.86	+/-/-	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
13	-	-	-	-	/	-	N/A	29.22	-	-	-	-	-	-	-	/	-	-	**NA**
19	-	-	-	-	/	-	N/A	30.93	-	-	-	-	-	-	-	/	-	-	**NA**
20	-	-	-	-	/	-	N/A	29.23	-	-	-	-	-	-	-	/	-	-	**NA**
22	-	-	-	-	/	-	32.18/N/A/N/A	29.43	+/-/-	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
3	+	+	+	+	+	+	N/A	29.37	-	-	-	-	-	-	-	/	-	-	**ND**
4	-	-	-	-	/	-	17.70	29.01	+	+	+	+	+	+	+	+	+	+	**PD**
7	+	+	+	+	+	+	17.92	28.77	+	+	+	+	+	+	+	+	+	+	**PA**
11	+	+	+	+	+	+	33.16	29.48	+	-	-	-	-	-	-	/	-	-	**PA$_{FP(alt)}$**
14	+	+	+	+	+	+	N/A	28.97	-	-	-	-	-	-	-	/	-	-	**ND**
16	+	+	+	+	+	+	18.61	28.41	+	+	+	+	+	+	+	+	+	+	**PA**
18	+	+	+	+	+	+	N/A	29.86	-	-	-	-	-	-	-	/	-	-	**ND**
24	-	-	-	-	/	-	19.61	29.08	+	+	+	+	+	+	+	+	+	+	**PD**
1	+	+	+	+	+	+	17.45	34.17	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	16.43	29.11	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	16.50	29.90	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	16.52	29.47	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	17.83	29.05	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	16.12	30.22	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	18.71	28.78	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	16.29	29.26	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory F
Aerobic mesophilic flora: 4.09E+05

Thermocycler: CFX Opus Deepwell

N° Sample	ISO 6579-1						Salmofast PCR method														
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Latex test Oxoid	Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn							
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella					
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	-	-	NA	30.09	-	-	-	-	-	-	-	-	-	-	-	NA
5	-	-	-	-	-	-	NA	30.08	-	-	-	-	-	-	-	-	-	-	-	NA
8	-	-	-	-	-	-	NA	30.31	-	-	-	-	-	-	-	-	-	-	-	NA
9	-	-	-	-	-	-	NA	30.24	-	-	-	-	-	-	-	-	-	-	-	NA
13	-	-	-	-	-	-	NA	29.92	-	-	-	-	-	-	-	-	-	-	-	NA
19	-	-	-	-	-	-	NA	29.93	-	-	-	-	-	-	-	-	-	-	-	NA
20	-	-	-	-	-	-	NA	30.07	-	-	-	-	-	-	-	-	-	-	-	NA
22	-	-	-	-	-	-	NA	30.82	-	-	-	-	-	-	-	-	-	-	-	NA
3	+	+	+	+	+	+	20.05	29.91	+	+	+	+	+	+	+	+	+	+	+	PA
4	+	+	+	+	+	+	NA	30.11	-	-	-	-	-	-	-	-	-	-	-	ND
7	-	-	-	-	-	-	NA	30.04	-	-	-	-	-	-	-	-	-	-	-	NA
11	+	+	+	+	+	+	19.35	30.27	+	+	+	+	+	+	+	+	+	+	+	PA
14	+	+	+	+	+	+	20.25	29.71	+	+	+	+	+	+	+	+	+	+	+	PA
16	-	-	-	-	-	-	NA	30.02	-	-	-	-	-	-	-	-	-	-	-	NA
18	+	+	+	+	+	+	21.07	29.44	+	+	+	+	+	+	+	+	+	+	+	PA
24	+	+	+	+	+	+	20.24	30.11	+	+	+	+	+	+	+	+	+	+	+	PA
1	+	+	+	+	+	+	NA	30.11	-	-	-	-	-	-	-	-	-	-	-	ND
6	+	+	+	+	+	+	20.32	29.75	+	+	+	+	+	+	+	+	+	+	+	PA
10	+	+	+	+	+	+	19.50	29.65	+	+	+	+	+	+	+	+	+	+	+	PA
12	+	+	+	+	+	+	19.24	30.16	+	+	+	+	+	+	+	+	+	+	+	PA
15	+	+	+	+	+	+	NA	30.10	-	-	-	-	-	-	-	-	-	-	-	ND
17	+	+	+	+	+	+	21.32	28.95	+	+	+	+	+	+	+	+	+	+	+	PA
21	+	+	+	+	+	+	19.10	29.83	+	+	+	+	+	+	+	+	+	+	+	PA
23	+	+	+	+	+	+	19.30	30.19	+	+	+	+	+	+	+	+	+	+	+	PA

Laboratory G
Aerobic mesophilic flora: 1.68E+04

Thermocycler: QS5

N° Sample	ISO 6579-1						Salmo*fast* PCR method														
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation									Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn							
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	Latex test Oxoid				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)						
2	+	+	-	-	+	+	28.38	23.45	+	-	-	-	-	-	-	/	-		-	**PA$_{FP(alt)}$**
5	-	-	+	+	+	+	24.27	20.02	+	-	-	-	-	-	-	/	-		-	**PA$_{FP(alt)}$**
8	+	+	+	+	+	+	31.68	25.90	+	+	+	+	+	+	+	+	+		+	**PA**
9	+	+	+	+	+	+	18.84	14.33	+	-	-	-	-	-	-	/	-		-	**PA$_{FP(alt)}$**
13	-	-	+	+	+	+	28.30	20.52	+	-	-	+	+	+	+	+	+		+	**PA**
19	-	-	-	-	/	-	12.66	16.91	+	-	-	-	-	-	-	/	-		-	**PD$_{FP(alt)}$**
20	-	-	-	-	/	-	32.47	14.95	+	-	-	-	-	-	-	/	-		-	**PD$_{FP(alt)}$**
22	-	-	-	-	/	-	32.14	13.81	+	-	-	-	-	-	-	/	-		-	**PD$_{FP(alt)}$**
3	+	+	+	+	+	+	14.20	21.41	+	+	+	+	+	+	+	+	+		+	**PA**
4	+	+	+	+	+	+	14.47	20.16	+	+	+	+	+	+	+	+	+		+	**PA**
7	+	+	+	+	+	+	15.55	24.81	+	+	+	+	+	+	+	+	+		+	**PA**
11	+	+	+	+	+	+	14.55	20.80	+	+	+	+	+	+	+	+	+		+	**PA**
14	-	-	-	-	/	-	14.06	21.87	+	+	+	+	+	+	+	+	+		+	**PD**
16	+	+	+	+	+	+	14.94	23.15	+	+	+	+	+	+	+	+	+		+	**PA**
18	+	+	+	+	+	+	14.03	14.95	+	-	-	+	+	+	+	+	+		+	**PA**
24	+	+	+	+	+	+	15.28	22.299	+	+	+	+	+	+	+	+	+		+	**PA**
1	+	+	+	+	+	+	14.51	20.09	+	+	+	+	+	+	+	+	+		+	**PA**
6	+	+	+	+	+	+	16.39	22.08	+	+	+	+	+	+	+	+	+		+	**PA**
10	+	+	+	+	+	+	13.55	21.48	+	+	+	+	+	+	+	+	+		+	**PA**
12	+	+	+	+	+	+	14.09	20.57	+	+	+	+	+	+	+	+	+		+	**PA**
15	+	+	+	+	+	+	15.82	20.81	+	+	+	+	+	+	+	+	+		+	**PA**
17	+	+	+	+	+	+	17.28	14.95	+	+	+	+	+	+	+	+	+		+	**PA**
21	+	+	+	+	+	+	16.23	16.38	+	+	+	+	+	+	+	+	+		+	**PA**
23	+	+	+	+	+	+	16.87	16.70	+	+	+	+	+	+	+	+	+		+	**PA**

Laboratory H
Aerobic mesophilic flora: 1.10E+05

Thermocycler: CFX 96

N° Sample	ISO 6579-1						Salmofast PCR method												Final result	Agreement Ref/Alt
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)		
										Direct streaking (10µL)		RVS		MKTTn						
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	Latex test Oxoid			
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)				
2	-	-	-	-	/	-	N/A	29.69	-	-	-	-	-	-	-	/	-	-	NA
5	-	-	-	-	/	-	N/A	30.07	-	-	-	-	-	-	-	/	-	-	NA
8	-	-	-	-	/	-	37.91/N/A/N/A	30.12/29.96/29.83	+/-/-	-	-	-	-	-	-	/	-	-	$PD_{FP(alt)}$
9	-	-	-	-	/	-	N/A	30.02	-	-	-	-	-	-	-	/	-	-	NA
13	-	-	-	-	/	-	N/A	29.86	-	-	-	-	-	-	-	/	-	-	NA
19	-	-	-	-	/	-	N/A	29.76	-	-	-	-	-	-	-	/	-	-	NA
20	+	-	-	-	-	-	N/A	29.74	-	-	-	-	-	-	-	/	-	-	NA
22	-	-	+	-	-	-	N/A	30.04	-	-	-	-	-	-	-	/	-	-	NA
3	+	+	+	+	+	+	20.22	29.39	+	+	+	+	+	+	+	+	+	+	PA
4	+	+	+	+	+	+	22.11	29.22	+	+	+	+	+	+	+	+	+	+	PA
7	+	+	+	+	+	+	19.98	29.70	+	+	+	+	+	+	+	+	+	+	PA
11	+	+	+	+	+	+	N/A	29.71	-	-	-	-	-	-	-	/	-	-	ND
14	+	+	+	+	+	+	21.72	29.63	+	+	+	+	+	+	+	+	+	+	PA
16	+	+	+	+	+	+	26.39	29.36	+	+	+	+	+	+	+	+	+	+	PA
18	-	-	+	-	-	-	N/A	29.56	-	-	-	-	-	-	-	/	-	-	NA
24	+	+	+	+	+	+	21.84	28.98	+	+	+	+	+	+	+	+	+	+	PA
1	+	+	+	+	+	+	20.47	29.48	+	+	+	+	+	+	+	+	+	+	PA
6	+	+	+	+	+	+	19.01	30.34	+	+	+	+	+	+	+	+	+	+	PA
10	+	+	+	+	+	+	18.14	29.70	+	+	+	+	+	+	+	+	+	+	PA
12	+	+	+	+	+	+	19.76	29.40	+	+	+	+	+	+	+	+	+	+	PA
15	+	+	+	+	+	+	21.72	29.55	+	+	+	+	+	+	+	+	+	+	PA
17	+	+	+	+	+	+	20.50	35.42	+	+	+	+	+	+	+	+	+	+	PA
21	+	+	+	+	+	+	23.28	29.30	+	+	+	+	+	+	+	+	+	+	PA
23	+	+	+	+	+	+	19.11	29.05	+	+	+	+	+	+	+	+	+	+	PA

Laboratory I1
Aerobic mesophilic flora: 7.27E+05

Thermocycler: CFX96

N° Sample	ISO 6579-1						Salmo*fast* PCR method															
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Latex test Oxoid	Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
							Salmonella spp.	IAC		Direct streaking (10µL)		RVS		MKTTn							
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*						XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella						
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)						
2	-	-	-	-	/	-	N/A	29,9	-	-	-	-	-	-	-	/	-	-	NA
5	-	-	-	-	/	-	32,8/N/A/N/A	29,8/29.9/29.93	+/-/-	-	-	-	-	-	-	/	-	-	$PD_{FP(alt)}$
8	-	-	-	-	/	-	35.7/N/A/N/A	30/30.15/29.64	+/-/-	-	-	-	-	-	-	/	-	-	$PD_{FP(alt)}$
9	-	-	-	-	/	-	N/A	30,3	-	-	-	-	-	-	-	/	-	-	NA
13	-	-	-	-	/	-	N/A	29,5	-	-	-	-	-	-	-	/	-	-	NA
19	-	-	-	-	/	-	N/A	30	-	-	-	-	-	-	-	/	-	-	NA
20	-	-	-	-	/	-	N/A	30,6	-	-	-	-	-	-	-	/	-	-	NA
22	-	-	-	-	/	-	N/A	30,2	-	-	-	-	-	-	-	/	-	-	NA
3	+	+	+	+	+	+	N/A	29,8	-	-	-	-	-	-	-	/	-	-	ND
4	-	-	-	-	/	-	19,6	30,9	+	+	+	+	+	+	+	+	+	+	PD
7	-	-	-	-	/	-	20,4	30	+	+	+	+	+	+	+	+	+	+	PD
11	-	-	-	-	/	-	N/A	30	-	-	-	-	-	-	-	/	-	-	NA
14	-	-	-	-	/	-	18,8	30,8	+	+	+	+	+	+	+	+	+	+	PD
16	+	+	+	+	+	+	19,1	30,2	+	+	+	+	+	+	+	+	+	+	PA
18	-	-	-	-	/	-	19,3	30	+	+	+	+	+	+	+	+	+	+	PD
24	+	+	+	+	+	+	N/A	29,9	-	-	-	-	-	-	-	/	-	-	ND
1	+	+	+	+	+	+	18,3	30,8	+	+	+	+	+	+	+	+	+	+	PA
6	+	+	+	+	+	+	N/A	30,2	-	-	-	-	-	-	-	/	-	-	ND
10	+	+	+	+	+	+	18,1	30,9	+	+	+	+	+	+	+	+	+	+	PA
12	+	+	+	+	+	+	22,4	29,6	+	+	+	+	+	+	+	+	+	+	PA
15	+	+	+	+	+	+	19,7	30,2	+	+	+	+	+	+	+	+	+	+	PA
17	+	+	+	+	+	+	19,1	30,1	+	+	+	+	+	+	+	+	+	+	PA
21	+	+	+	+	+	+	18,4	31,4	+	+	+	+	+	+	+	+	+	+	PA
23	+	+	+	+	+	+	20,6	30,2	+	+	+	+	+	+	+	+	+	+	PA

Laboratory I2
Aerobic mesophilic flora: 3.16E+06

Thermocycler: QS5

N° Sample	ISO 6579-1						Salmo*fast* PCR method														Agreement Ref/Alt
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation									Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella					
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)						
28	-	-	-	-	/	-	N/A	29.8	-	-	-	-	-	-	-	/	-	-	**NA**
30	-	-	-	-	/	-	N/A	29.6	-	-	-	-	-	-	-	/	-	-	**NA**
31	-	-	-	-	/	-	N/A	29.4	-	-	-	-	-	-	-	/	-	-	**NA**
36	-	-	-	-	/	-	N/A	30.2	-	-	-	-	-	-	-	/	-	-	**NA**
39	-	-	-	-	/	-	N/A	28.7	-	-	-	-	-	-	-	/	-	-	**NA**
42	-	-	-	-	/	-	N/A	29.4	-	-	-	-	-	-	-	/	-	-	**NA**
44	-	-	-	-	/	-	N/A	29.3	-	-	-	-	-	-	-	/	-	-	**NA**
47	-	-	-	-	/	-	N/A	29.8	-	-	-	-	-	-	-	/	-	-	**NA**
25	+	+	+	+	+	+	20.0	29.2	+	+	+	+	+	+	+	+	+	+	**PA**
26	+	+	+	+	+	+	20.4	29.8	+	+	+	+	+	+	+	+	+	+	**PA**
29	+	+	+	+	+	+	19.4	30.9	+	+	+	+	+	+	+	+	+	+	**PA**
33	+	+	+	+	+	+	19.6	30.7	+	+	+	+	+	+	+	+	+	+	**PA**
37	+	+	+	+	+	+	19.4	31.2	+	+	+	+	+	+	+	+	+	+	**PA**
38	-	-	-	-	/	-	N/A	29.3	-	-	-	-	-	-	-	/	-	-	**NA**
43	+	+	+	+	+	+	N/A	29.2	-	-	-	-	-	-	-	/	-	-	**ND**
46	-	-	-	-	/	-	20.4	31.7	+	+	+	+	+	+	+	+	+	+	**PD**
27	+	+	+	+	+	+	20.2	29.8	+	+	+	+	+	+	+	+	+	+	**PA**
32	+	+	+	+	+	+	22.1	29.0	+	+	+	+	+	+	+	+	+	+	**PA**
34	+	+	+	+	+	+	19.6	31.3	+	+	+	+	+	+	+	+	+	+	**PA**
35	+	+	+	+	+	+	19.4	30.9	+	+	+	+	+	+	+	+	+	+	**PA**
40	+	+	+	+	+	+	19.2	31.9	+	+	+	+	+	+	+	+	+	+	**PA**
41	+	+	+	+	+	+	19.5	30.6	+	+	+	+	+	+	+	+	+	+	**PA**
45	+	+	+	+	+	+	21.3	30.7	+	+	+	+	+	+	+	+	+	+	**PA**
48	-	-	-	-	/	-	19.1	30.5	+	+	+	+	+	+	+	+	+	+	**PD**

Laboratory J
Aerobic mesophilic flora: 3.27E+05

Thermocycler: CFX 96

N° Sample	ISO 6579-1						Salmo*fast* PCR method															
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation									Latex test Oxoid	Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn								
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella						
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)							
2	-	-	-	-	/	-	N/A	29.62	-	-	-	-	-	-	-	/	-	-	**NA**
5	-	-	-	-	/	-	38.78	29.54	-	-	-	-	-	-	-	/	-	-	**NA**
8	-	-	-	-	/	-	N/A	30.01	-	-	-	-	-	-	-	/	-	-	**NA**
9	-	-	-	-	/	-	N/A	30.01	-	-	-	-	-	-	-	/	-	-	**NA**
13	-	-	-	-	/	-	N/A	30.23	-	-	-	-	-	-	-	/	-	-	**NA**
19	-	-	-	-	/	-	N/A	30.13	-	-	-	-	-	-	-	/	-	-	**NA**
20	-	-	-	-	/	-	N/A	30.1	-	-	-	-	-	-	-	/	-	-	**NA**
22	-	-	-	-	/	-	N/A	30.17	-	-	-	-	-	-	-	/	-	-	**NA**
3	+	+	+	+	+	+	N/A	29.41	-	-	-	-	-	-	-	/	-	-	**ND**
4	+	+	+	+	+	+	23.07	29.24	+	+	+	+	+	+	+	+	+	+	**PA**
7	+	+	+	+	+	+	N/A	29.42	-	-	-	-	-	-	-	/	-	-	**ND**
11	+	+	+	+	+	+	22.22	30.17	+	+	+	+	+	+	+	+	+	+	**PA**
14	+	+	+	+	+	+	N/A	29.84	-	-	-	-	-	-	-	/	-	-	**ND**
16	+	+	+	+	+	+	39.59	29.62	-	-	-	-	-	-	-	/	-	-	**ND**
18	-	-	-	-	/	-	19.77	30.14	+	+	+	+	+	+	+	+	+	+	**PD**
24	-	-	-	-	/	-	39.99	29.6	-	-	-	-	-	-	-	/	-	-	**NA**
1	+	+	+	+	+	+	22.97	29.42	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	18.31	30.06	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	22.1	30.22	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	21.22	30.05	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	19.25	30.27	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	18.86	30.35	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	22.89	30.24	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	21.84	30.39	+	+	+	+	+	+	+	+	+	+	**PA**

Laboratory K
Aerobic mesophilic flora: 5.73E+05

Thermocycler: QS5

Bag leakage

N° Sample	ISO 6579-1						Salm*ofast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	/	-	N/A	30.08	-	-	-	-	-	-	-	/	-	-	**NA**
5	-	-	-	-	/	-	N/A	30.68	-	-	-	-	-	-	-	/	-	-	**NA**
8	-	-	-	-	/	-	N/A	32.07	-	-	-	-	-	-	-	/	-	-	**NA**
9	-	-	-	-	/	-	N/A	31.61	-	-	-	-	-	-	-	/	-	-	**NA**
13	-	-	-	-	/	-	N/A	30.36	-	-	-	-	-	-	-	/	-	-	**NA**
19	-	-	-	-	/	-	N/A	30.52	-	-	-	-	-	-	-	/	-	-	**NA**
20	-	-	-	-	/	-	N/A	30.78	-	-	-	-	-	-	-	/	-	-	**NA**
22	-	-	-	-	/	-	N/A	30.67	-	-	-	-	-	-	-	/	-	-	**NA**
3	+	+	+	+	+	+	25.44	33.95	+	+	+	+	+	+	+	+	+	+	**PA**
4	-	-	-	-	/	-	N/A	29.55	-	-	-	-	-	-	-	/	-	-	**NA**
7	+ (- after retest)	+ (- after retest)	-	-	+ (- after retest)	-	22.74	31.01	+	+	+	+	+	+	+	+	+	+	**PD**
11	+	+	+	+	+	+	N/A	29.77	-	-	-	-	-	-	-	/	-	-	**ND**
14	-	-	-	-	/	-	N/A	32.49	-	-	-	-	-	-	-	/	-	-	**NA**
16	-	-	-	-	/	-	N/A	30.79	-	-	-	-	-	-	-	/	-	-	**NA**
18	+	+	+	+	+	+	N/A	30.36	-	-	-	-	-	-	-	/	-	-	**ND**
24	+	+	+	+	+	+	N/A	30.85	-	-	-	-	-	-	-	/	-	-	**ND**
1	+	+	+	+	+	+	20.53	30.23	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	22.12	30.08	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	21.98	31.50	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	22.24	29.68	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	22.65	30.29	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	23.75	31.67	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	21.95	29.85	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	21.21	29.87	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory L
Aerobic mesophilic flora: 3.05E+05

Thermocycler: CFX Opus 96 Deepwell

N° Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	/	-	NA	29.74	-	-	-	-	-	-	-	/	-	-	**NA**
5	-	-	-	-	/	-	36.04/N/A/N/A/N/A*	29.15/28.99/29.42/28.38*	+/-/-/-*	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
8	-	-	-	-	/	-	NA	29.27	-	-	-	-	-	-	-	/	-	-	**NA**
9	-	-	+	-	-	-	38.37/29.59/29.72/N/A*	30.10/28.94/29.12/28.39*	+/+/+/-*	+ (- after retest)	-	-	-	-	-	+ (- after retest)	-	-	**PD$_{FP(alt)}$**
13	-	-	-	-	/	-	NA	29.32	-	-	-	-	-	-	-	/	-	-	**NA**
19	-	-	-	-	/	-	NA	29.43	-	-	-	-	-	-	-	/	-	-	**NA**
20	-	-	-	-	/	-	NA	29.18	-	-	-	-	-	-	-	/	-	-	**NA**
22	-	-	+	-	-	-	NA	29.14	-	-	-	-	-	-	-	/	-	-	**NA**
3	-	-	-	-	/	-	21.18	29.51	+	+	+	+	+	+	+	+	+	+	**PD**
4	-	-	+	-	-	-	23.76	28.93	+	+	+	+	+	+	+	+	+	+	**PD**
7	-	-	-	-	/	-	NA	29.05	-	-	-	-	-	-	-	/	-	-	**NA**
11	+	+	+	+	+	+	20.93	29.06	+	+	+	+	+	+	+	+	+	+	**PA**
14	+	+	+	+	+	+	NA	29.10	-	-	-	-	-	-	-	/	-	-	**ND**
16	+	+	+	+	+	+	23.51	28.70	+	+	+	+	+	+	+	+	+	+	**PA**
18	+	+	+	+	+	+	23.22	29.09	+	+	+	+	+	+	+	+	+	+	**PA**
24	-	-	-	-	/	-	NA	28.94	-	-	-	-	-	-	-	/	-	-	**NA**
1	+	+	+	+	+	+	21.03	30.18	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	24.37	28.66	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	19.66	29.15	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	23.72	28.84	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	23.02	29.00	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	25.54	29.08	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	20.27	28.55	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	23.03	28.44	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory M
Aerobic mesophilic flora: 4.09E+05

Thermocycler: CFX 96

* = New extraction

N° Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn						
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	Latex test Oxoid			
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)				
2	-	-	-	-	/	-	N/A	30.08	-	-	-	-	-	-	-	/	-	-	-	**NA**
5	-	-	-	-	/	-	N/A	30.11	-	-	-	-	-	-	-	/	-	-	-	**NA**
8	-	-	-	-	/	-	N/A	29.87	-	-	-	-	-	-	-	/	-	-	-	**NA**
9	-	-	-	-	/	-	N/A	30.08	-	-	-	-	-	-	-	/	-	-	-	**NA**
13	-	-	-	-	/	-	N/A	30.42	-	-	-	-	-	-	-	/	-	-	-	**NA**
19	-	-	-	-	/	-	N/A	29.99	-	-	-	-	-	-	-	/	-	-	-	**NA**
20	-	-	-	-	/	-	N/A	30.03	-	-	-	-	-	-	-	/	-	-	-	**NA**
22	-	-	-	-	/	-	N/A	30.02	-	-	-	-	-	-	-	/	-	-	-	**NA**
3	+	+	+	+	+	+	22.06	29.99	+	+	+	+	+	+	+	+	+	+	+	**PA**
4	+	+	+	+	+	+	23.67	29.30	+	+	+	+	+	+	+	+	+	+	+	**PA**
7	-	-	-	-	/	-	N/A	30.12	-	-	-	-	-	-	-	/	-	-	-	**NA**
11	-	-	-	-	/	-	24.43	29.75	+	+	+	+	+	+	+	+	+	+	+	**PD**
14	+	+	+	+	+	+	21.39	29.77	+	+	+	+	+	+	+	+	+	+	+	**PA**
16	+	+	+	+	+	+	N/A	30.09	-	-	-	-	-	-	-	/	-	-	-	**ND**
18	+	+	+	+	+	+	25.27	29.71	+	+	+	+	+	+	+	+	+	+	+	**PA**
24	+	+	+	+	+	+	N/A	29.95	-	-	-	-	-	-	-	/	-	-	-	**ND**
1	+	+	+	+	+	+	23.02	29.50	+	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	20.27	30.19	+	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	21.84	29.97	+	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	20.21	30.19	+	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	19.99	30.07	+	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	21.05	29.96	+	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	22.87	29.95	+	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	21.91	29.86	+	+	+	+	+	+	+	+	+	+	+	**PA**

MICROVAL® NEN

Laboratory N
Aerobic mesophilic flora: 2.60E+08

Thermocycler: CFX Opus Deepwell

N° Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	/	-	35.51	28.53	+	-	-	+	+	+	+	+	+	+	**PD**
5	-	-	-	+	-	-	39.34	28.43	+	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
8	-	-	-	-	/	-	N/A	28.50	-	-	-	-	-	-	-	/	-	-	**NA**
9	-	-	-	+	-	-	N/A	28.84	-	-	-	-	-	-	-	/	-	-	**NA**
13	-	-	-	-	/	-	36.49	28.49	+	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
19	-	-	-	+	-	-	36.16	28.52	+	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
20	-	-	-	-	/	-	N/A	28.28	-	-	-	-	-	-	-	/	-	-	**NA**
22	-	-	-	-	/	-	35.16	28.38	+	-	-	-	-	-	-	/	-	-	**PD$_{FP(alt)}$**
3	-	-	-	-	/	-	N/A	28.68	-	-	-	-	-	-	-	/	-	-	**NA**
4	+	+	+	+	+	+	24.73	28.24	+	+	+	+	+	+	+	+	+	+	**PA**
7	-	-	-	-	/	-	N/A	28.71	-	-	-	-	-	-	-	/	-	-	**NA**
11	+	+	+	+	+	+	36.76	28.46	+	-	-	-	-	-	-	/	-	-	**PA$_{FP(alt)}$**
14	+	+	+	+	+	+	25.65	28.21	+	+	+	+	+	+	+	+	+	+	**PA**
16	+	+	+	+	+	+	22.95	28.70	+	+	+	+	+	+	+	+	+	+	**PA**
18	+	+	+	+	+	+	N/A	28.70	-	-	-	-	-	-	-	/	-	-	**ND**
24	+	+	-	+	+	+	N/A	28.77	-	-	-	-	-	-	-	/	-	-	**ND**
1	+	+	+	+	+	+	21.22	28.83	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	25.02	28.40	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	25.32	28.65	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	26.17	28.08	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	23.80	28.64	+	+	+	+	+	+	+	+	+	+	**PA**
17	+	+	+	+	+	+	23.34	28.86	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	23.44	28.23	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	39.10	28.49	+	-	-	-	-	-	-	/	-	-	**PA$_{FP(alt)}$**

MICROVAL® NEN

Laboratory O
Aerobic mesophilic flora: 3.64E+06

Thermocycler: CFX Opus

Bag leakage

N° Sample	ISO 6579-1						Salmo*fast* PCR method													
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test		PCR final result *Salmonella* spp.	Confirmation								Confirmation final result *Salmonella* spp. (direct streaking and after subculture)	Final result	Agreement Ref/Alt
										Direct streaking (10µL)		RVS		MKTTn		Latex test Oxoid				
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella				
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)					
2	-	-	-	-	-	-	N/A	30.09	-	-	-	-	-	-	-	-	-	-	-	**NA**
5	-	-	-	-	-	-	N/A	30.02	-	-	-	-	-	-	-	-	-	-	-	**NA**
8	-	-	-	-	-	-	N/A	29.78	-	-	-	-	-	-	-	-	-	-	-	**NA**
9	-	-	-	-	-	-	N/A	31.22	-	-	-	-	-	-	-	-	-	-	-	**NA**
13	-	-	-	-	-	-	N/A	29.88	-	-	-	-	-	-	-	-	-	-	-	**NA**
19	-	-	-	-	-	-	N/A	29.95	-	-	-	-	-	-	-	-	-	-	-	**NA**
20	-	-	-	-	-	-	N/A	29.87	-	-	-	-	-	-	-	-	-	-	-	**NA**
22	-	-	-	-	-	-	N/A	29.98	-	-	-	-	-	-	-	-	-	-	-	**NA**
3	+	+	+	+	+	+	22.94	29.22	+	+	+	+	+	+	+	+	+	+	+	**PA**
4	-	-	-	-	-	-	N/A	30.06	-	-	-	-	-	-	-	-	-	-	-	**NA**
7	+	+	+	+	+	+	21.07	29.48	+	+	+	+	+	+	+	+	+	+	+	**PA**
11	+	+	+	+	+	+	18.87	30.45	+	+	+	+	+	+	+	+	+	+	+	**PA**
14	+	+	+	+	+	+	19.64	30.26	+	+	+	+	+	+	+	+	+	+	+	**PA**
16	+	+	+	+	+	+	21.54	29.8	+	+	+	+	+	+	+	+	+	+	+	**PA**
18	+	+	+	+	+	+	20.45	29.82	+	+	+	+	+	+	+	+	+	+	+	**PA**
24	-	-	-	-	-	-	22.49	29.51	+	+	+	+	+	+	+	+	+	+	+	**PD**
1	+	+	+	+	+	+	18.67	29.89	+	+	+	+	+	+	+	+	+	+	+	**PA**
6	+	+	+	+	+	+	18.01	30.4	+	+	+	+	+	+	+	+	+	+	+	**PA**
10	+	+	+	+	+	+	18.92	31.84	+	+	+	+	+	+	+	+	+	+	+	**PA**
12	+	+	+	+	+	+	19.11	30.32	+	+	+	+	+	+	+	+	+	+	+	**PA**
15	+	+	+	+	+	+	N/A	29.69	-	-	-	-	-	-	-	-	-	-	-	**ND**
17	+	+	+	+	+	+	18	30.42	+	+	+	+	+	+	+	+	+	+	+	**PA**
21	+	+	+	+	+	+	18.22	30.05	+	+	+	+	+	+	+	+	+	+	+	**PA**
23	+	+	+	+	+	+	19.52	30.43	+	+	+	+	+	+	+	+	+	+	+	**PA**

Laboratory **P** **ADRIA**
Aerobic mesophilic flora: 1.40E+04

Thermocycler: CFX96/OPUS/QS5

N° Sample	ISO 6579-1♦						Salmo*fast* PCR method																				Final result	Agreement Ref/Alt		
	RVS		MKTTn		Latex test Oxoid	Final result	PCR test CFX96		PCR final result *Salmonella* spp.	PCR test OPUS		PCR final result *Salmonella* spp.	PCR test QS5		PCR final result *Salmonella* spp.	Confirmation							Latex test Oxoid	Confirmation final result *Salmonella* spp.(direct streaking and after subculture)					
																Direct streaking (10µL)		RVS		MKTTn									
	XLD	RAPID' *Salmonella*	XLD	RAPID' *Salmonella*			*Salmonella* spp.	IAC		*Salmonella* spp.	IAC		*Salmonella* spp.	IAC		XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella	XLD	*Brilliance* Salmonella							
	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)			Cq value	Cq value		Cq value	Cq value		Cq value	Cq value		Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)	Typical colonies (+/-)						CFX 96	CFX Opus	QS5
2	-	-	-	-	/	-	N/A	31.37	-	28.54/ N/A/ 23.94/ N/A*	33.3/ 33.28/ 31.69/ 32.62*	+/ -/ +/ -*	N/A	29.30	-	-	-	-	-	-	-	/	-	-	NA	PD$_{FP(alt)}$	NA
5	-	-	-	-	/	-	N/A	30.16	-	37.86/ 33.62/ N/A/ 1.41*	33.99/ 34.64/ N/A/ 34.15*	+/ +/ i/ -(AT)	N/A	28.95	-	-	-	-	-	-	-	/	-	-	NA	PD$_{FP(alt)}$	NA
8	-	-	-	-	/	-	N/A	30.05	-	N/A	34.30	-	35.81/ N/A/ N/A/ N/A/ N/A/ N/A/ N/A/ N/A/ 20.00/ N/A/ N/A*	29.34/ 30.77/ 27.35/ 30.18/ 30.49/ 32.94/ 31.55/ 30.30/ N/A/ 31.27/ 33.20*	+/ -/ -/ -/ -/ -/ -/ -/ +/ -/ -*	-	-	-	-	-	-	/	-	-	NA	NA	PD$_{FP(alt)}$
9	-	-	-	-	/	-	N/A	30.02	-	28.19/ 28.1/ 29.02/ N/A*	33.99/ 33.55/ 34.52/ 34.07*	+/ +/ +/ -*	N/A	29.31	-	-	-	-	-	-	-	/	-	-	NA	PD$_{FP(alt)}$	NA
13	-	-	-	-	/	-	N/A	30.44	-	N/A	33.36	-	N/A	28.10	-	-	-	-	-	-	-	/	-	-	NA	NA	NA
19	-	-	-	-	/	-	N/A	30.26	-	N/A	34.36	-	N/A	28.80	-	-	-	-	-	-	-	/	-	-	NA	NA	NA
20	-	-	-	-	/	-	N/A	30.02	-	N/A	34.10	-	N/A	28.41	-	-	-	-	-	-	-	/	-	-	NA	NA	NA
22	-	-	-	-	/	-	N/A	29.86	-	N/A	35.03	-	N/A	29.71	-	-	-	-	-	-	-	/	-	-	NA	NA	NA

♦ Analyses performed according to the COFRAC accreditation (Accreditation Testing n°1-0144, scope available on www.cofrac.fr)

N° Sample	ISO 6579-1♦ RVS XLD Typical colonies (+/-)	ISO 6579-1♦ RVS RAPID' *Salmonella* Typical colonies (+/-)	ISO 6579-1♦ MKTTn XLD Typical colonies (+/-)	ISO 6579-1♦ MKTTn RAPID' *Salmonella* Typical colonies (+/-)	Latex test Oxoid	Final result	*Salmofast* PCR method: PCR test CFX96 *Salmonella* spp. Cq value	PCR test CFX96 IAC Cq value	PCR final result *Salmonella* spp.	PCR test OPUS *Salmonella* spp. Cq value	PCR test OPUS IAC Cq value	PCR final result *Salmonella* spp.	PCR test QS5 *Salmonella* spp. Cq value	PCR test QS5 IAC Cq value	PCR final result *Salmonella* spp.	Confirmation: Direct streaking (10µL) XLD Typical colonies (+/-)	Direct streaking (10µL) *Brilliance* Salmonella Typical colonies (+/-)	RVS XLD Typical colonies (+/-)	RVS *Brilliance* Salmonella Typical colonies (+/-)	MKTTn XLD Typical colonies (+/-)	MKTTn *Brilliance* Salmonella Typical colonies (+/-)	Latex test Oxoid	Confirmation final result *Salmonella* spp.(direct streaking and after subculture)	Final result	Agreement Ref/Alt CFX 96	Agreement Ref/Alt CFX Opus	Agreement Ref/Alt QS5
3	+	+	+	+	+	+	23.33	30.15	+	23.05	35.22	+	21.63	28.08	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
4	-	-	-	-	/	-	22.88	29.69	+	23.01	34.22	+	21.81	27.98	+	+	+	+	+	+	+	+	+	+	PD	PD	PD
7	+	+	+	+	+	+	23.54	30.21	+	23.11	35.05	+	21.60	28.40	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
11	+	+	+	+	+	+	19.49	31.62	+	19.21	36.46	+	17.59	29.15	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
14	+	+	+	+	+	+	N/A	30.27	-	N/A	32.87	-	N/A	28.89	-	-	-	-	-	-	-	/	-	-	ND	ND	ND
16	-	-	-	-	/	-	N/A/ N/A/ N/A/ N/A*	30.16/ 34.11/ 34.52/ 34.31*	-/-/-/-*	N/A/ N/A/ N/A/ N/A*	34.15/ 35.74/ 36.17/ 35.93*	-/-/-/-*	N/A/ N/A/ N/A/ N/A*	29.17/ 27.66/ 27.23/ 27.00*	-/-/-/-*	- (x5)	- (x5)	+ (x5)	+ (x5)	+ (x5)	+ (x5)	+	+	-	NA$_{FN(alt)}$	NA$_{FN(alt)}$	NA$_{FN(alt)}$
18	-	-	-	-	/	-	21.56	30.15	+	22.39	34.58	+	19.60	28.92	+	+	+	+	+	+	+	+	+	+	PD	PD	PD
24	+	+	+	+	+	+	21.66	29.43	+	22.51	38.93	+	20.59	29.89	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
1	+	+	+	+	+	+	21.56	31.69	+	20.63	35.57	+	19.92	30.30	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
6	+	+	+	+	+	+	23.79	30.77	+	25.27	34.54	+	20.93	28.86	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
10	+	+	+	+	+	+	23.01	30.64	+	23.45	33.52	+	21.28	29.44	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
12	+	+	+	+	+	+	18.92	32.74	+	18.42	35.91	+	17.14	28.83	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
15	+	+	+	+	+	+	20.99	30.23	+	21.08	37.31	+	19.61	29.74	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
17	+	+	+	+	+	+	21.05	31.24	+	21.22	34.77	+	18.99	28.98	+	+	+	+	+	+	+	+	+	+	PA	PA	PA
21	-	-	-	-	/	-	21.49	30.46	+	21.76	35.16	+	19.09	28.57	+	+	+	+	+	+	+	+	+	+	PD	PD	PD
23	+	+	+	+	+	+	25.03	29.28	+	25.99	34.31	+	23.33	29.28	+	+	+	+	+	+	+	+	+	+	PA	PA	PA