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NF VALIDATION
Validation of alternative analytical methods
Application in food microbiology

Summary Report

Validation study according to the ISO 16140-2

GENE-UP® *Cronobacter* spp. (Certificate number: BIO 12/42 - 03/18)

for detection of *Cronobacter* spp. in

- ☑ **Milk powders, infant formula and infant cereals without probiotics including ingredients** *(up to 25 g)*
- ☑ **Infant formula and infant cereals with probiotics** *(up to 25 g)*
- ☑ **Milk powders, infant formula and infant cereals with or without probiotics including ingredients** *(excluding whey protein concentrates)* *(up to 375 g)*
- ☑ **Milk powders, infant formula and infant cereals with and without probiotics, early life nutrition (ELN)** *(up to 300 g)*
- ☑ **Production environmental samples** *(up to 25 g or ml or sampling device)*

Qualitative method

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This report consists of 206 pages, including 7 appendices.
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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◆.

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February 23, 2026

LIST OF ABBREVIATIONS

Method & protocol

CFU	Colony Forming Units
ILS	Interlaboratory Study
MCS	Method Comparison Study
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
IC	Internal Control

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

-	No typical colonies but presence of background microflora
(ia):	inoculation area
(x)	Number of colonies in the plate
*	Dilution of the extract in case of inhibition according to the alternative protocol (1/3)
**	Dilution of the extract in case of inhibition according to the alternative protocol (1/5)
1/2	50% level of target analyte
Cp	Crossing Point (or Cycle Threshold)
d	Doubtful result
i	Inhibition
ne	New DNA extraction
m	Minority level of target analyte
M	Majority level of target analyte
p	Pure culture level of target analyte
st	Plate without any colony
Tm	Melting temperature

Bold typing	**Artificially inoculated samples**

Quality Assurance documents related to this study can be consulted upon request from **bioMérieux**.

The technical protocol and the result interpretation were carried out according to the ISO 16140-2:2016, ISO 16140-2/A1:2024 and the AFNOR technical rules (Revision 12).

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* ▪ AFNOR technical rules (Revision 12)
Reference method♦	ISO 22964:2017 - Microbiology of the food chain - Horizontal method for the detection of *Cronobacter* spp.
Alternative method	**GENE-UP® *Cronobacter* spp.**
Scope	> **Milk powders, infant formula and infant cereals without probiotics including ingredients *(up to 25 g)*** > **Infant formula and infant cereals with probiotics *(up to 25 g)*** > **Milk powders, infant formula and infant cereals with or without probiotics including ingredients *(excluding whey protein concentrates) (up to 375 g*)** > **Milk powders, infant formula and infant cereals with and without probiotics, early life nutrition (ELN) (*up to 300 g*)** > **Production environmental samples *(up to 25 g or ml or sampling devices)***
Certification organism	AFNOR Certification (http://nf-validation.afnor.org/)

1 INTRODUCTION

The **GENE-UP® *Cronobacter* spp. method** was validated in March 2018 (Certificate number: BIO 12/42 - 03/18) according to the EN ISO 16140-2:2016 (See **Table 1**).

Table 1 - Summary of the initial and extension studies

Date	Study	Reference method	Validation standard
March 2018	**Initial validation**: - Infant formula and infant cereals with probiotics (up to 25 g) - Infant formula and infant cereals without probiotics including ingredients (up to 25 g)	ISO 22964:2017	ISO 16140-2:2016
July 2018	**Extension N°1**: - Milk powders (up to 25 g) - Milk powders, infant formula and infant cereals with or without probiotics including ingredients (excluding whey protein concentrates) (up to 375 g) - Production environmental samples (up to 25 g or ml or sampling device)	ISO 22964:2017	ISO 16140-2:2016
November 2019	**Extension N°2**: - Milk powders (up to 375 g) using the protocol dedicated to ingredients	ISO 22964:2017	ISO 16140-2:2016
December 2020	**Extension N° 3** for the application of a pre-treatment of the enrichment broth prior lysis step in order to remove the free DNA and DNA from dead cells present in the enrichment broth. - Milk powders, ingredients (excluding whey protein concentrates), infant formula and infant cereals with or without probiotics (up to 375 g) - Production environmental samples (up to 25 g or ml or sampling device)	ISO 22964:2017	ISO 16140-2:2016
May 2021	Minor change: Routine software V3.2	/	/
February 2022	**Renewal study**	ISO 22964:2017	ISO 16140-2:2016
October 2023	**Extension N° 4** for the use of a new protocol for: - Milk powders, infant formula and infant cereals with and without probiotics, early life nutrition (ELN) (up to 300 g).	ISO 22964:2017	ISO 16140-2:2016
January 2026	**Renewal study** with an update of the interpretation according to ISO 16140-2/A1:2024	ISO 22964:2017	ISO 16140-2:2016 & ISO 16140-2/A1:2024

2 METHOD PROTOCOLS

2.1 Alternative method

2.1.1 Principle

The GENE-UP *Cronobacter* spp. detection kit reference 421920 is based on the real time Polymerase Chain Reaction (PCR) principle.

The GENE-UP thermocycler (Ref: 414056) detects fluorescence at several wavelengths to allow multi-target detections in the same reaction vessel. The fluorescent signal from a sample is recorded in channel 640, while the signal for the internal amplification control is recorded in channel 705. The software GENE-UP routine automatically interprets the results.

Both the assay for the sample and the internal control use dual Fluorescence Resonance Energy Transfer (FRET) hybridization probes.
The resulting fluorescent signal from the FRET interaction provides a real-time amplification curve.
After amplification fluorescence detection is complete, the GENE-UP instrument can perform a melt by increasing the temperature such that the sample DNA strands begin to melt. As the DNA strands melt, the observed fluorescence of the target DNA decreases at a rate that is characteristic for a particular DNA sequence, such that genotyping can occur. Melt peaks are generated by taking the negative derivative of fluorescence against temperature.
At the end of the PCR program, the PCR products are melted to determine the presence of the DNA target.
The software uses the melt peak to conclude to a positive or to a negative result.
The routine software version 3.0. was used to provide the data for the extension studies (2019, 2020). The version 3.2 was used for the extension study performed in 2023.

BACTVIAB™ PMAxx™ dye is a high-affinity photoreactive DNA binding dye for viability PCR (v-PCR) of bacteria and other organisms. BACTVIAB PMAxx is cell membrane impermeant and can be used to selectively modify only the DNA in dead cells while leaving the DNA in viable cells intact. It allows the selective detection of viable cells by real-time PCR.

2.1.2 PCR results interpretation

The PCR call is based on the presence of a melting peak (giving a melting temperature, TM)).
The target is determined positive when the TM is within the expected range regardless of the CP (value, and presence/absence). On the other hand, when no TM is detected or TM is below the threshold of fluorescence or TM is outside of the expected range, the target is called negative.

2.1.3 Protocols

Different enrichment protocols are available depending on the tested categories; they are described in **Table 2**. The detailed protocols are given in **Appendix 1**.

The different steps are the following:

- Enrichment according to the protocols described in Table 2
- BACTVIAB™ PMAxx™ treatment on 20 µL enriched sample (optional) for categories 3, 4 and 5
- Lysis using GENE-UP Lysis kit and the Bead-Beater performed on 20 µL BACTVIAB™ PMAxx™ pretreated or untreated enriched sample.
- PCR using the GENE-UP thermocycler on 10 µL lysate.
- Confirmation by:
    - Direct streaking onto ESIA or CCI Agar
    - Or subculture in CSB (0.1 ml + 10 ml) (41.5°C for 24 h ± 2 h) and streaking onto ESIA (44°C ± 1°C for 24 h ± 3 h) or CCI Agar (41.5°C for 24 h ± 2 h)
    - The typical colonies are confirmed using the API ID 32 galleries or the Fast Crono from ESIA, CCI and TSA.

It is possible to store the enrichment broths and the lysates for 72 h at 5°C ± 3°C before testing.

Table 2 - Categories and associated protocols

Categories		Sub-category	Test portion size	Enrichment Protocol	Dilution	Enrichment broth	Incubation time	Incubation temperature	BACTVIAB™ PMAxx™ pretreatment
1	**Milk powders, infant formula and infant cereals without probiotics including ingredients**	/	Up to 25 g	Specific ①	1/10	BPW*	18 - 26 h	34-38°C	Without
2	**Infant formula and infant cereals with probiotics**	/	Up to 25 g	Specific ②	1/10	BPW* + Novobiocin (10 mg/l)	18 - 26 h	34-38°C	Without
3	**Milk powders, infant formula and infant cereals with or without probiotics including ingredients (excluding whey protein concentrates)**	Sub-category 3-1 Milk powders, infant formula and infant cereals with or without probiotics	Up to 375 g	Specific ③	1/6	Pre-warmed BPW* + Novobiocin (10 mg/L)	20 – 28 h	34-38°C	With or without
		Sub-category 3-2 Milk powders, ingredients and milk derivates *(excluding whey protein concentrates)*	Up to 375 g	Specific ④	1/10	Pre-warmed BPW	20 - 28 h	34-38°C	With or without
4	**Production environmental samples**	/	Up to 25 g or ml or sample device	Specific ①	1/10 or 10 ml for swab 100 mL for sponge 225 mL for wipe	BPW	18 - 26 h	34-38°C	With or without
5	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition (ELN)**	/	Up to 300 g	Specific ⑤	1/10	Pre-warmed BPW + Novobiocin (10 mg/L)	22 - 28 h	34-38°C	With or without

* Addition of α-amylase for infant cereals (0.1 g/l)

2.1.4 Restriction

There is no restriction for use.

2.2 Reference method♦

The reference method is the ISO 22964:2017 - Microbiology of food chain - Horizontal method for the detection of *Cronobacter* spp. (See **Appendix 2**).

Note that, based on previous data, big sample sizes cannot be used in the reference method procedure due to the impact on the detection levels and the sensitivity performances. 10 g sample size was thus used for the reference method while 25 g, 300 g or 375 g sample sizes were tested for the alternative method.

The following protocols were applied (according to ISO 6887-4 & 5):

- Milk powder, Infant formula without probiotics and early life nutrition (ELN): BPW, 16-20 h at 34-38°C
- Infant formula with probiotics: BPW 2X, 16-20 h at 34-38°C
- Infant cereals: BPW + α-amylase (0.1 g/l), 16-2 0h at 34-38°C
- Infant cereals with probiotics: prewarmed BPW 2 X + α-amylase (0.1 g/l), 16-20 h at 34-38°C
- Environmental samples: BPW 16-20 h at 34-38°C.

2.3 Study design

As different sample sizes and/or enrichments were tested for the reference and the alternative methods, it was an **unpaired study design** for all the tested categories and types except for surfaces in the environmental samples category as in this case the same sampling device was used for the reference and the alternative methods.

3 INITIAL VALIDATION, EXTENSION STUDIES (2018, 2019, 2020 AND 2023) AND RENEWALS: RESULTS

3.1 Method comparison study

The method comparison study is a study performed by the expert laboratory to compare the alternative method with the reference method.

The study was carried out on a diversity of samples and strains representative of agri-food products. This does not constitute an exhaustive list of the different matrices included in the scope.
For any comment on the alternative method, please contact AFNOR Certification at http://nf-validation.afnor.org/contact-2/.

3.1.1 Sensitivity study

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

3.1.1.1 Number and nature of samples

For the initial validation study, 128 samples were analysed providing 63 positive and 65 negative results.
For the extension study performed in 2018, 212 samples were tested providing 111 positive and 101 negative results.
For the extension study performed in 2019, 22 samples were analysed providing 10 positive and 12 negative results.
For the extension performed in 2020, 198 samples providing 94 positive results and 104 negative results have been tested.
For the extension performed in 2023, 60 samples providing 32 positive results and 28 negative results. Note that the same samples were tested with and without applying the BACTVIAB PMAxx protocol.

Combining all the studies, 620 samples (corresponding to 680 results) have been analysed providing 342 positive and 338 negative results.

The interpretation for all combined categories has been done by taking into account either the categories 3, 4 and 5 with or without the BACTVIAB^{M} PMAxx^{TM} protocol.
216 positive and 206 negative results have been obtained without applying the BACTVIAB^{TM} PMAxx^{TM} protocol and 195 positive and 202 negative samples when using the BACTVIAB^{TM} PMAxx^{TM} protocol for categories 3, 4 and 5.

The distribution per tested category and type is given in **Table 3**.

Table 3 – Distribution per tested category and type

Category		Type		Enrichment Protocol	Positive	Negative	Total
1	Milk powders and ingredients, infant formula and infant cereals without probiotics (up to 25 g)	a	*Infant formula*	①	11	11	22
		b	*Infant cereals*	①	11	11	22
		c	*Ingredients: lactoserum, maltodextrin, milk powders.*	①	16	15	31
				Total	38	37	75
2	Infant formula and infant cereals with probiotics (up to 25 g)	a	*Infant formula*	②	16	16	32
		b	*Infant cereals*	②	15	17	32
				Total	31	33	64
3	Milk powders, ingredients, infant formula and infant cereals with or without probiotics (up to 375 g)	a	*Milk powders, Infant formula and infant cereals without probiotics*	③	20	15	35
		b	*Infant formula and infant cereals with probiotics*	③	18	15	33
		c1	*Ingredients (maltodextrin, whey, lactose, starch, caseinate…)*	④	32	31	63
		c2	*Milk powders*	④	10	12	22
				Total	80	73	153
3 BACTVIAB™ PMAxx™		a	Milk powders, Infant formula and infant cereals without probiotics	③	16	15	31
		b	Infant formula and infant cereals with probiotics	③	15	17	32
		c	Milk powders and Ingredients: maltodextrin, whey, lactose, starch, caseinate…	④	31	29	60
				Total	62	61	123
4	Production environmental samples (up to 25 g or ml or sampling device)	a	*Process water*	①	11	11	22
		b	*Residues and dusts*	①	12	10	22
		c	*Surfaces*	①	12	14	26
				Total	35	35	70
4 BACTVIAB™ PMAxx™		a	Process water	①	7	15	22
		b	Residues and dusts	①	16	13	29
		c	Surfaces	①	9	15	24
				Total	32	43	75

Category		Type		Enrichment Protocol	Positive	Negative	Total
5	Milk powders, infant formula and infant cereals with or without probiotics, ELN (up to 300 g)	a	Milk powders, infant formula and infant cereals without probiotics	⑤	11	9	20
		b	Infant formula and infant cereals with probiotics	⑤	11	9	20
		c	Early life nutrition	⑤	10	10	20
				Total	32	28	60
5 BACTVIAB™ PMAxx™		a	Milk powders, infant formula and infant cereals without probiotics	⑤	11	9	20
		b	Infant formula and infant cereals with probiotics	⑤	11	9	20
		c	Early life nutrition	⑤	10	10	20
				Total	32	28	60
All samples					**342**	**338**	**680**
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™ PMAxx™					**216**	**206**	**422**
All categories 1 + 2 + (3 + 4 + 5 with BACTVIAB™ PMAxx™)					**195**	**202**	**397**

3.1.1.2 *Artificial contamination of samples*

Artificial contaminations were done by seeding and spiking protocols. The artificial contaminations are presented in **Appendix 3**.

Taking into account the initial validation study and the extension studies, 309 samples were artificially contaminated; 278 gave a positive result.

The repartition of the positive samples per inoculation protocol and inoculation level is given in **Table 4**.

Table 4 - Repartition of the positive samples per inoculation protocol and inoculation level

Category	Artificially contaminated				Naturally contaminated	Total
	Seeding		Spiking			
	≤ 3 CFU	3<x≤10	≤ 5 CFU	5<x≤10		
1	34	4	0	0	0	38
2	27	4	0	0	0	31
3	61	6	7	0	6	80
3 BACTVIAB™ PMAxx™	54	3	4	0	1	62
4	13	18	0	0	4	35
4 BACTVIAB™ PMAxx™	16	1	12	0	3	32
5	30	2	0	0	0	32(1)
5 BACTVIAB™ PMAxx™	30	2	0	0	0	32(1)
All samples	**235**	**38**	**23**	**0**	**14**	**310**
%	73.7%	12.3%	7.4%	0%	4.5%	100%
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™ PMAxx™	**165**	**34**	**7**	**0**	**10**	**216**
%	76%	16%	3%	0%	5%	100%
All categories 1 + 2 + (3 + 4 + 5 with BACTVIAB™ PMAxx™)	**161**	**14**	**16**	**0**	**4**	**195**
%	83%	7%	8%	0%	2%	100%

(1): same samples

Combining all the studies, 12.3% of the samples were contaminated between 3 (seeding) or 5 CFU (spiking) and 10 CFU.

4,5 % of the samples were naturally contaminated if all the tested samples are taken into account (initial and extension studies).

3.1.1.3 Protocols applied during the validation study

Incubation times

The following incubation times were applied (See **Table 5**):

Table 5 - Incubation time

Protocol	Category	Enrichment	CSB broth
Protocol ①	**Milk powders, infant formula and infant cereals without probiotics including ingredients Production environmental samples**	18 h	22 h
Protocol ②	**Infant formula and infant cereals with probiotics**	18 h	22 h
Protocols ③ and ④	**Milk powders, infant formula and infant cereals with or without probiotics including ingredients**	20 h	22 h
Protocol ⑤	**Milk powders, infant formula and infant cereals with or without probiotics, ELN (up to 300 g)**	22 h	22 h

Confirmation protocols

The different confirmation protocols which were applied during the validation study are listed in **Table 6**.

Table 6 - Confirmation protocols

Protocol	After enrichment incubation broth		After enrichment broth storage	
	Fast Crono	API ID32E	Fast Crono	API ID32E
Subculture in CSB, streaking onto CCI and purification onto TSA	/	X	/	/
Direct streaking onto CCI	X	X	X	/
Direct streaking onto ESIA	X	X	X	/

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

All enrichment broths and lysates from the positive samples were tested again after 72 h storage at 5 ± 3°C. The PCR tests and confirmatory tests were carried out again.

Lactic bacteria enumeration

For products with probiotics, lactic bacteria enumeration was carried out using MRS pH 5.7 incubated in anaerobic conditions for 72 h at 30°C ± 1°C, according to ISO 15214.

3.1.1.4 Test results

Raw data per category are given in **Appendix 4** (*Initial validation, extension studies)*.
The results are given in Table 7.

Table 7 – Summary of results obtained with the reference and alternative methods (after confirmation) of all samples for each category

Category		PA	PD	TND	TNA	Total
1	Milk powders and ingredients, infant formula and infant cereals without probiotics (up to 25 g)	21	9	8	37	75
2	Infant formula and infant cereals with probiotics (up to 25 g)	16	9	6	33	64
3	Milk powders, ingredients, infant formula and infant cereals with or without probiotics (up to 375 g)	58	11	11	73	153
3 BACTVIAB™ PMAxx™	Milk powders, ingredients, infant formula and infant cereals with or without probiotics (up to 375 g)	45	8	9	61	123
4	Production environmental samples (up to 25 g or ml or sampling device)	33	2	0	35	70
4 BACTVIAB™ PMAxx™	Production environmental samples (up to 25 g or ml or sampling device)	21	4	7	43	75
5	Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition (up to 300 g)	28	2	2	28	60
5 BACTVIAB™ PMAxx™	Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition (up to 300 g)	28	2	2	28	60
All samples		**250**	**47**	**45**	**338**	**680**
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™PMAxx™		**156**	**33**	**27**	**206**	**422**
All categories 1 + 2 +(3 + 4 + 5 with BACTVIAB™PMAxx™)		**131**	**32**	**32**	**202**	**397**

Paired evaluation: $TND = ND_{FN(alt)}$ $TNA = NA + PD_{FP(alt)}$
Unpaired evaluation: $TND = ND + ND_{FN(alt)} + PA_{FP(alt)}$ $TNA = NA + NA_{FN(alt)} + PD_{FP(alt)}$

3.1.1.5 Calculation of relative trueness (RT), sensitivity (SE), false positive ratio (FPR) and false negative ratio (FNR) for the alternative method

The calculations are presented in **Table 8**.

Table 8 – Calculation of relative trueness (RT), sensitivity (SE), false positive ratio (FPR) and false negative ratio (FNR) for the alternative method

Category		Type		Protocol	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	**Milk powders and ingredients, infant formula and infant cereals without probiotics** (up to 25 g)	a	Infant formula	①	6	0	11	0	2	3	0	0	3	11	72.7	81.8	77.3	0.0	0.0
		b	Infant cereals	①	6	0	11	0	3	2	0	0	2	11	81.8	72.7	77.3	0.0	0.0
		c	Ingredients: lactoserum, maltodextrin, milk powders.	①	9	0	14	0	4	3	0	1	3	15	81.3	75.0	77.4	6.7	0.0
				Total	21	0	36	0	9	8	0	1	8	37	78.9	76.3	77.3	2.7	0.0
2	**Infant formula and infant cereals with probiotics** (up to 25 g)	a	Infant formula	②	7	0	15	0	6	3	0	1	3	16	81.3	62.5	71.9	6.3	0.0
		b	Infant cereals	②	9	0	17	0	3	3	0	0	3	17	80.0	80.0	81.3	0.0	0.0
			Total		16	0	32	0	9	6	0	1	6	33	80.6	71.0	76.6	3.0	0.0
3	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	12	0	14	0	3	4	1	1	5	15	75.0	85.0	77.1	6.7	5.0
		b	Infant formula and infant cereals with probiotics	③	15	0	14	0	2	0	1	1	1	15	94.4	88.9	90.9	6.7	5.6
		c 1	Ingredients (maltodextrin, whey, lactose, starch, caseinate…)	④	24	0	29	0	5	2	1	2	3	31	90.6	84.4	87.3	6.5	3.1
		c 2	Milk powders	④	7	0	12	0	1	1	1	0	2	12	80.0	90.0	86.4	0.0	10.0
				Total	58	0	69	0	11	7	4	4	11	73	86.3	86.3	85.6	5.5	5.0
3 BACTVIAB™ PMAxx™	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	14	0	15	0	2	0	0	0	0	15	100.0	87.5	93.5	0.0	0.0
		b	Infant formula and infant cereals with probiotics	③	12	0	16	1	0	2	1	0	3	17	80.0	100.0	90.6	0.0	13.3
		c	Milk powders and Ingredients: maltodextrin, whey, lactose, starch, caseinate…	④	19	0	29	0	6	6	0	0	6	29	80.6	80.6	80.0	0.0	0.0
				Total	45	0	60	1	8	8	1	0	9	61	85.5	87.1	86.2	0.0	3.2
4	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	10	0	11	0	1	0	0	0	0	11	100.0	90.9	95.5	0.0	0.0
		b	Residues and dusts	①	11	0	10	0	1	0	0	0	0	10	100.0	91.7	95.5	0.0	0.0
		c	Surfaces	①	12	0	14	0	0	0	0	0	0	14	100.0	100.0	100.0	0.0	0.0
				Total	33	0	35	0	2	0	0	0	0	35	100.0	94.3	97.1	0.0	0.0
4 BACTVIAB™ PMAxx™	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	3	0	15	0	2	2	0	0	2	15	71.4	71.4	81.8	0.0	0.0
		b	Residues and dusts	①	10	0	12	1	1	2	3	0	5	13	68.8	93.8	79.3	0.0	25.0
		c	Surfaces	①	8	0	15	0	1	0	0	0	0	15	100.0	88.9	95.8	0.0	0.0
				Total	21	0	42	1	4	4	3	0	7	43	78.1	87.5	85.3	0.0	12.5

Category		Type		Protocol	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 %
5	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	⑤	10	0	9	0	1	0	0	0	0	9	100.0	90.9	95.0	0.0	0.0
		b	Infant formula and infant cereals with probiotics	⑤	10	0	8	0	0	1	0	1	1	9	90.9	100.0	95.0	11.1	0.0
		c	Early life nutrition	⑤	8	0	10	0	1	1	0	0	1	10	90.0	90.0	90.0	0.0	0.0
			Total		28	0	27	0	2	2	0	1	2	28	93.8	93.8	93.3	3.6	0.0
5 BACTVIAB™ PMAxx™	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	⑤	10	0	9	0	1	0	0	0	0	9	100.0	90.9	95.0	0.0	0.0
		b	Infant formula and infant cereals with probiotics	⑤	10	0	9	0	0	1	0	0	1	9	90.9	100.0	95.0	0.0	0.0
		c	Early life nutrition	⑤	8	0	10	0	1	1	0	0	1	10	90.0	90.0	90.0	0.0	0.0
			Total		28	0	28	0	2	2	0	0	2	28	93.8	93.8	93.3	0.0	0.0
All samples					**250**	**0**	**329**	**2**	**47**	**37**	**8**	**7**	**45**	**338**	**86.8**	**86.3**	**86.5**	**2.1**	**2.9**
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™ PMAxx™					**156**	**0**	**199**	**0**	**33**	**23**	**4**	**7**	**27**	**206**	**87.5**	**84.7**	**85.8**	**3.4**	**1.9**
All categories (1 + 2 + 3 + 4 + 5) with BACTVIAB™ PMAxx™)					**131**	**0**	**198**	**2**	**32**	**28**	**4**	**2**	**32**	**202**	**83.6**	**83.6**	**83.9**	**1.0**	**3.1**

A summary of the results is given in Table 9.

Table 9 - Summary of results

		All categories	
		All categories (1+2+3+4+5) without BACTVIAB™ PMAxx™	All categories 1+2+(3+4+5 with BACTVIAB™ PMAxx™)
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA+PD)}{(PA+ND+PD)} \times 100\%$	92.2 %	83.6 %
Sensitivity for the reference method	$SE_{ref} = \frac{(PA+ND)}{(PA+ND+PD)} \times 100\%$	83.9 %	83.6 %
Relative trueness	$RT = \frac{(PA+NA)}{N} \times 100\%$	69.4 %	83.9 %
False positive ratio for the alternative method (unpaired and paired evaluation)	$FPR = \frac{PA_{FP(alt)} + PD_{FP\,(alt)}}{TNA} x\ 100\ \%$	5.1 %	1.0 %
False negative ratio for the alternative method (unpaired and paired evaluation)	$FNR = \frac{NA_{FN(alt)} + ND_{FN(alt)}}{PA + TND + PD} x\ 100\ \%$	2.0 %	3.1 %

A sensitivity and a relative trueness below 90 % are explained by the unpaired study design with samples contaminated at a low level.

3.1.1.6 *Analysis of discordant results*

- **Negative deviations** (see Table 10)

When combining all the categories, 27 negative deviations were observed for the protocols without BACTVIAB™ PMAxx™ treatment and 32 with BACTVIAB™ PMAxx™ treatment.

The presence of *Cronobacter* spp. was confirmed in the enrichment broth ($ND_{FN(alt)}$ samples) for 8 samples tested (4 with and 4 without BACTVIAB™ PMAxx™ treatment):

- With BACTVIAB™ PMAxx™ treatment: samples n°2564 (IF with probiotics), 4620, 4676, 4679 (dusts) with direct streaking and after CSB subculture. Among these samples, the sample n°4260 was naturally contaminated.
- Without BACTVIAB™ PMAxx™ treatment: samples n°2590, 2620, 3126 and 5402) with direct streaking onto ESIA and CCI for samples 2590 et 5402 and only after CSB subculture for samples 2620 and 3126. All these samples were artificially contaminated by lyophilized strains.

The subculture of the enriched BPW in CSB broth prior streaking onto CCI agar plates allowed confirming 2 samples in negative agreement ($NA_{FN(alt)}$ samples: 3117 (Infant formula with probiotics) and 4287 (Dusts from dairy industry).
The false negative samples (2 $NA_{FN(alt)}$ and 8 $ND_{FN(alt)}$) are listed in **Table 11**.

upon request of the AFNOR Technical board 10 samples inoculated with lyophilized strains using the GENE-UP *Cronobacter* method only with and without applying the BACTVIAB™ PMAxx™ protocol were tested in parallel. The raw data are provided in **Appendix 4**. Nine samples out of the ten inoculated samples gave positive results by both protocols (with and without BACTVIAB™ PMAxx™).
These results confirm that the negative deviations obtained were not due to the BACTVIAB™ PMAxx™ protocol but rather to the design of the study. The high level of stress obtained for one strain using the spiking protocol and tested with the BACTVIAB™ PMAxx™ only (2.2 log) could explained some of the additional deviations with this treatment.

Positive deviations (see Table 12)

When combining all the categories, 33 positive deviations were observed for the protocols without BACTVIAB™ PMAxx™ treatment and 32 with BACTVIAB™ PMAxx™ treatment.
They concern 6 naturally contaminated samples (375 g sample size without BACTVIAB™ PMAxx™) and 2 naturally contaminated samples tested with BACTVIAB™ PMAxx™ (375 g sample size and surface).
16 positive deviations were observed for the four categories tested with the BACTVIAB™ PMAxx™ pre-treatment, 8 concern the categories 3, 2 the category 5, and 4 environmental samples, 2 naturally contaminated samples were concerned (2888: Infant cereals, 4378: dairy industry surface sample).

Table 10 - Negative deviations

Year of analysis	Sample N°	Product	Artificial contaminations (spiking protocol)		Enrichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*						Category	Type
							BPW for 18 h at 34-38°C							
							PCR			Confir-mation	Final result	Agree-ment		
			Strain	Inoculation level (CFU/sample)			Cp	Tm	Result					
2017	**7621**	**Infant formula without probiotics**	*C. sakazakii* Ad1446	<0.2	①	+	0	0	-	-	-	**ND**	1	a
2017	**7801**	**Infant formula without probiotics**	*C. sakazakii* Ad2396	0.3	①	+	0	0	-	-	-	**ND**	1	a
2017	**7802**	**Infant formula without probiotics**	*C. sakazakii* Ad1420	0.1	①	+	0	0	-	-	-	**ND**	1	a
2017	**7628**	**Infant cereals without probiotics**	*C. sakazakii* Ad2394	1.0	①	+	0	0	-	-	-	**ND**	1	b
2017	**7630**	**Infant cereals without probiotics**	*C. sakazakii* Ad2400	2.0	①	+	0	0	-	-	-	**ND**	1	b
2017	**7633**	**Milk proteins**	*C. sakazakii* Ad1420	0.7	①	+	0	0	-	-	-	**ND**	1	c
2017	**2610**	**Milk powder**	*C. muytjensis* E769	1.0	①	+	0	0	-	-	-	**ND**	1	c
2017	**2613**	**Skim milk powder**	*C. muytjensis* E888	<0.25	①	+	0	0	-	-	-	**ND**	1	c
2017	**8027**	**Infant formula with probiotics ($3.6x10^2$ CFU/g)**	*C. sakazakii* Ad2370	0.6	②	+	0	0	-	-	-	**ND**	2	a
2017	**8031**	**Infant formula with probiotics ($1.8x10^5$ CFU/g)**	*C. sakazakii* Ad2350	0.3	②	+	0	0	-	-	-	**ND**	2	a
2017	**8033**	**Infant formula with probiotics ($4.8x10^5$ CFU/g)**	*C. sakazakii* Ad2348	2.1	②	+	0	0	-	-	-	**ND**	2	a
2017	**8035**	**Infant cereals with probiotics ($7.1x10^4$ CFU/g)**	*C. sakazakii* Ad2370	0.6	②	+	0	0	-	-	-	**ND**	2	b
2017	**8037**	**Infant cereals with probiotics ($2.5x10^5$ CFU/g)**	*C. sakazakii* Ad2350	0.3	②	+	0	0	-	-	-	**ND**	2	b
2017	**8038**	**Infant cereals with probiotics ($5.1x10^5$ CFU/g)**	*C. sakazakii* Ad2350	0.3	②	+	0	0	-	-	-	**ND**	2	b
2018	**2590**	**Milk powder**	*C. muytjensis* E769	1.0	③	+	0/0/0/0*	0/0/0/0*	-/i/i/-*	+	-	**$ND_{FN(alt)}$**	3	a
2018	**2593**	**Skim milk powder**	*C. muytjensis* E888	<0.25	③	+	0/0	0/0	i/-*	-	-	**ND**	3	a

Year of analysis	Sample N°	Product	Artificial contaminations (spiking protocol)		Enrichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*						Category	Type
							BPW for 18 h at 34-38°C							
							PCR			Confir-mation	Final result	Agree-ment		
			Strain	Inoculation level (CFU/sample)			Cp	Tm	Result					
2018	**2596**	**Infant cereals without probiotics**	*C. turincensis* Ad1445	1.0	③	+	0	0	-	-	-	**ND**	3	a
2018	**2602**	**Infant formula without probiotics**	*C. sakazakii* Ad2367	10.0	③	+	0	0	-	-	-	**ND**	3	a
2018	**2606**	**Infant formula without probiotics**	*C. sakazakii* Ad2380	1.0	③	+	0	0	-	-	-	**ND**	3	a
2018	**2620**	**Infant formula with probiotics (7.2x10⁴ CFU/g)**	*C. sakazakii* Ad2353	4.0	③	+	0/35.37/ 34.92	0/66.65/ 66.73	-/+/+	+ (after CSB subculture)	-	**$ND_{FN(alt)}$**	3	b
2018	**3109**	**Starch**	*C. sakazakii* Ad946	2.4	④	+	0	0	-	-	-	**ND**	3	c1
2018	**3111**	**Corn starch**	*C. sakazakii* Ad2286	0.8	④	+	0	0	-	-	-	**ND**	3	c1
2018	**3126**	**Wheat starch**	*C. sakazakii* Ad2288	2.3	④	+	0/0/0	0/0/0	-/-/-	+ (after CSB subculture)	-	**$ND_{FN(alt)}$**	3	c1
2019	**5400**	**Milk powder (0% Fat)**	*C. malonaticus* DSM18702	3	④	+	0	0	-	-	-	**ND**	3	c2
2019	**5402**	**Milk powder (0% Fat)**	*C. sakazakii* Ad2412	3	④	+	0/0/0	0/0/0	-/-/-	+	-	**$ND_{FN(alt)}$**	3	c2
2023	**1778**	**Infant formula with probiotics**	*C. sakazakii* Ad2381	1.8	⑤	+	0	0	-	-	-	**ND**	5	b
2023	**1772**	**Infant rice protein**	*C. sakazakii* Ad2359	0.2	⑤	+	0	0	-	-	-	**ND**	5	c

* = 1/3 dilution of the extract ** = 1/5 dilution of the extract

Year of analysis	Sample N°	Product	Artificial contaminations		Enichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* Protocol ① or ③ or ④ or ⑤ with BACTVIAB™ PMAxx™ treatment						Category	Type
			Strain	Inoculation level/sample			PCR			Confirmation final result	Final result	Agreement		
							Cp	Tm	Result					
2020	**2564**	**Infant formula with probiotics (Bifidobacterium breve 9.7x10⁶CFU/g)**	*C. sakazakii* Ad1430	2.7	③	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	3	b
2020	**2749**	**Maltodextrin**	*C. sakazakii* Ad2341	2.5	④	+	0	0	-	-	-	**ND**	3	c
2020	**2753**	**Whey**	*C. sakazakii* Ad2848	2.1	④	+	0	0	-	-	-	**ND**	3	c
2020	**2755**	**Whey**	*C. muytjensii* E769	1.5	④	+	0	0	-	-	-	**ND**	3	c
2020	**2758**	**Starch**	*C. sakazakii* Ad2848	2.1	④	+	0	0	-	-	-	**ND**	3	c
2020	**3100**	**Natrium caseinate**	*C. sakazakii* Ad953	1.8	④	+	0	0	-	-	-	**ND**	3	c
2020	**3103**	**Lactose**	*C. sakazakii* Ad2396	5.0	④	+	0	0	-	-	-	**ND**	3	c
2020	**3834**	**Infant formula with probiotics (*Bifidobacterium infantis* 4.4x10⁵CFU/g)**	*C. sakazakii* Ad2373	1.0	③	+	0	0	-	-	-	**ND**	3	b
2020	**3835**	**Infant formula with probiotics (*Lactobacillus reuterii* 1.2x10⁶CFU/g)**	*C. sakazakii* Ad2373	1.0	③	+	0	0	-	-	-	**ND**	3	b
2020	4260	Dusts (dairy environment)	/		①	+	0/35.89/0	0/68.03/0	-/+/-	+	-	$ND_{FN(alt)}$	4	b
2020	**4411**	**Process water (dairy environment)**	*C. sakazakii* Ad2397	1.2	①	+	0	0	-	-	-	**ND**	4	a
2020	**4624**	**Process water (dairy environment)**	*C. sakazakii* Ad2397	3.4	①	+	0	0	-	-	-	**ND**	4	a
2020	**4676**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	1.2	①	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	4	b
2020	**4679**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	1.2	①	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	4	b
2020	**4682**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	0.4	①	+	0	0	-	-	-	**ND**	4	b
2020	**4684**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	0.4	①	+	0	0	-	-	-	**ND**	4	b
2023	**1778**	**Infant formula with probiotics**	*C. sakazakii* Ad2381	1.8	⑤	+	0	0	-	-	-	**ND**	5	b
2023	**1772**	**Infant rice protein**	*C. sakazakii* Ad2359	0.2	⑤	+	0	0	-	-	-	**ND**	5	c

Table 11 - Samples in negative deviations and samples in negative agreement with positive confirmation

	Year of Year of analysis	Sample N°	Product	Artificial contaminations				Enichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*						Category	Type
										PCR			Confirmation final result	Final result	Agree-ment		
				Strain	Injury protocol	Injury measurement	Mean			Cp Cro	Tm Cro	Result					
Without BACTVIAB™ PMAxx™	2018	**2590**	**Whole milk powder**	*C. muytjensis* E769	Seeding lyophilized strain 1 weeks at room temperature	/	1.0	③	+	0/0/0/0*	0/0/0/0*	-/i/i/-*	+	-	$ND_{FN(alt)}$	3	a
	2018	**2620**	**Infant formula with probiotics (7,2.10⁴ CFU/g)**	*C. sakazakii* Ad2353	Seeding lyophilized strain 2 weeks at room temperature	/	4.0	③	+	0/35,37/34,92	0/66,65/66,73	-/+/+	+	-	$ND_{FN(alt)}$	3	b
	2018	**3126**	**Wheat starch**	*C. sakazakii* Ad2288	Seeding lyophilized strain 2 weeks at room temperature	/	2.3	④	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	3	c1
	2019	**5402**	**Milk powder 0% fat**	C. *sakazakii* Ad2412	Seeding lyophilized strain 2 weeks at room temperature	/	3	④	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	3	c2
With BACTVIAB™ PMAxx™	2020	**2564**	**Infant formula with probiotics (*Bifidobacterium breve* 9.7x10⁶CFU/g)**	*C. sakazakii* Ad1430	Seeding lyophilised strain 2 weeks at ambient temperature	/	2,7	③	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	3	b
	2020	**3117**	**Infant formula with probiotics (*Lactobacillus reuteri* 2.3x10⁶CFU/g)**	*C. sakazakii* Ad2291	Seeding lyophilised strain 2 weeks at ambient temperature	/	4,0	③	-	0/0/0	0/0/0	-/-/-	+	-	$NA_{FN(alt)}$	3	b
	2020	4260	Dusts (dairy environment)	/	/			①	+	0/35.89/0	0/68.03/0	-/+/-	+	-	$ND_{FN(alt)}$	4	b
	2020	**4287**	**Dusts (dairy environment)**	*C. sakazakii* Ad898	HT 8 min 56°C	1.6	2,0	①	-	0/35.6/ 34.93/0/0	0/67.8/ 68.27/0/0	-/+/+/-/-	+	-	$NA_{FN(alt)}$	4	b
	2020	**4676**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	HT 8 min 56°C	2.2	1,2	①	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	4	b
	2020	**4679**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	HT 8 min 56°C	2.2	1,2	①	+	0/0/0	0/0/0	-/-/-	+	-	$ND_{FN(alt)}$	4	b

*1:3 dilution of the DNA extract

Table 12 - Positive deviations

Year of analysis	Sample N°	Product	Artificial contaminations (spiking protocol)		Enrichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*						Category	Type
							BPW for 18 h at 34-38°C							
							PCR			Confir-mation	Final result	Agreement		
			Strain	Inoculation level (CFU/ sample)			Cp	Tm	Result					
2017	**7622**	**Infant formula without probiotics**	*C. sakazakii* Ad1420	0.7	①	-	25.19	65.59	+	+	+	**PD**	1	a
2017	**7623**	**Infant formula without probiotics**	*C. sakazakii* Ad2394	1.0	①	-	23.65	65.7	+	+	+	**PD**	1	a
2017	**7631**	**Infant cereals without probiotics**	*C. sakazakii* Ad1446	<0.2	①	-	28.07	65.94	+	+	+	**PD**	1	b
2017	**7798**	**Infant cereals without probiotics**	*C. sakazakii* Ad893	4.7	①	-	21.57	66.21	+	+	+	**PD**	1	b
2017	**9130**	**Infant cereals without probiotics**	*C. sakazakii* Ad2413	0.7	①	-	22.57	66.15	+	+	+	**PD**	1	b
2017	**7635**	**Caseinate**	*C. sakazakii* Ad2395	1.7	①	-	32.05	65.14	+	+	+	**PD**	1	c
2017	**7805**	**Corn flour**	*C. sakazakii* Ad2383	0.6	①	-	21.09	66.03	+	+	+	**PD**	1	c
2017	**8459**	**Whey protein concentrate**	*C. sakazakii* Ad2349	3.0	①	-	30.02	65.59	+	+	+	**PD**	1	c
2017	**2612**	**Skim milk powder**	*C. muytjensis* E888	<0.25	①	-	35.82	65.76	+	+	+	**PD**	1	c
2017	**8028**	**Infant formula with probiotics (<10 CFU/g)**	*C. sakazakii* Ad2370	0.6	②	-	24.75	65.62	+	+	+	**PD**	2	a
2017	**8029**	**Infant formula with probiotics ($1.3x10^5$ CFU/g)**	*C. sakazakii* Ad2370	0.6	②	-	26.43	65.92	+	+	+	**PD**	2	a
2017	**8032**	**Infant formula with probiotics ($3.0x10^4$ CFU/g)**	*C. sakazakii* Ad2348	2.1	②	-	29.82	65.96	+	+	+	**PD**	2	a
2017	**8135**	**Infant formula with probiotics ($4.2x10^5$ CFU/g)**	*C. sakazakii* Ad2352	0.7	②	-	35.45	66.67	+	+	+	**PD**	2	a
2017	**8448**	**Infant formula with probiotics ($4.2x10^5$ CFU/g)**	*C. turincensis* Ad1445	6.0	②	-	27.83	65.78	+	+	+	**PD**	2	a
2017	**9610**	**Infant formula with probiotics ($4.2x10^5$ CFU/g)**	*C. sakazakii* Ad940	1.6	②	-	24.93	65.65	+	+	+	**PD**	2	a

Year of analysis	Sample N°	Product	Artificial contaminations (spiking protocol)		Enrichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW for 18 h at 34-38°C						Category	Type
			Strain	Inoculation level (CFU/ sample)			PCR			Confir-mation	Final result	Agreement		
							Cp	Tm	Result					
2018	**8140**	**Infant cereals with probiotics (7.1x10⁴ CFU/g)**	*C. sakazakii* Ad2361	0.7	②	-	24.59	66.16	+	+	+	**PD**	2	b
2018	**9126**	**Infant cereals with probiotics (7.1x10⁴ CFU/g)**	*C. sakazakii* Ad2413	0.7	②	-	24.75	65.72	+	+	+	**PD**	2	b
2018	**9127**	**Infant cereals with probiotics (5.6x10⁵ CFU/g)**	*C. sakazakii* Ad2413	0.7	②	-	32.52	65.85	+	+	+	**PD**	2	b
2018	2640	Skim milk powder	/	/	③	-	0/34.51*	0/65.73*	i/+*	+	+	**PD**	3	a
2018	2649	Infant cereals without probiotics	/	/	③	-	29.13	65.96	+	+	+	**PD**	3	a
2018	**3472**	**Infant formula without probiotics**	*C. sakazakii* Ad2411	3.4	③	-	24.25	66.47	+	+	+	**PD**	3	a
2018	**2636**	**Infant cereals with probiotics (3.2x10⁶ CFU/g)**	*C. sakazakii* SU12-74	0.9	③	-	0	66.35	+	+	+	**PD**	3	b
2018	2869	Infant formula with probiotics (9.6x10⁶ CFU/g)	/	/	③	-	18.01	65.89	+	+	+	**PD**	3	b
2018	**3104**	**Wheat starch**	*C. sakazakii* Ad916	1.5	④	-	25.97	66.68	+	+	+	**PD**	3	c1
2018	**3112**	**Wheat starch**	*C. sakazakii* Ad2286	0.8	④	-	24.26	66.39	+	+	+	**PD**	3	c1
2018	3631	Starch	/	/	④	-	34.7	65.9	+	+	+	**PD**	3	c1
2018	3642	Starch	/	/	④	-	33.14	65.74	+	+	+	**PD**	3	c1
2018	3643	Starch	/	/	④	-	33.84	66.1	+	+	+	**PD**	3	c1
2019	**5403**	**Milk powder (0 % Fat)**	*C. sakazakii* Ad2412	3	④	-	31.40	66.20	+	+	+	**PD**	3	c2
2018	**2467**	**Process water (rinse)**	*C. sakazakii* Ad12-26	7.6	①	-	24.65	66.24	+	+	+	**PD**	4	a
2018	**3146**	**Dust from vacuum**	*C. sakazakii* SU 12-7	1.5	①	-	28.84	67.74	+	+	+	**PD**	4	b

* = 1/3 dilution of the extract ** = 1/5 dilution of the extract

Year of analysis	Sample N°	Product	Artificial contaminations		Enrichment Protocol	ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* Protocol ① or ③ or ④ or ⑤ with BACTVIAB™ PMAxx™						Category	Type
			Strain	Inoculation level/sample			PCR			Confirmation final result	Final result	Agree-ment		
							Cp	Tm	Result					
2020	**2569**	**Infant formula**	*C. sakazakii* Ad2382	1.0	③	-	34.85	68.66	+	+	+	**PD**	3	a
2020	**2743**	**Whey**	*C. sakazakii* Ad2848	2.1	④	-	32.6	67.5	+	+	+	**PD**	3	c
2020	**2746**	**Non-fat dry milk**	*C. sakazakii* Ad2341	2.5	④	-	32.56	67.5	+	+	+	**PD**	3	c
2020	**2754**	**Whey**	*C. sakazakii* Ad935	2.6	④	-	33.65	67.06	+	+	+	**PD**	3	c
2020	**2756**	**Starch**	*C. sakazakii* Ad2341	2.5	④	-	29.43	67.3	+	+	+	**PD**	3	c
2020	**2757**	**Starch**	*C. sakazakii* Ad935	2.6	④	-	30.01	67.59	+	+	+	**PD**	3	c
2020	2888	Infant cereals	/	/	③	-	29.36	67.99	+	+	+	**PD**	3	a
2020	**3102**	**Non-fat dry milk**	*C. sakazakii* Ad2396	5.0	④	-	34.06	68.31	+	+	+	**PD**	3	c
2020	**4041**	**Process water (dairy environment)**	*C. sakazakii* Ad1707	1.6	①	-	28.53	68.5	+	+	+	**PD**	4	a
2020	4378	Sponge (dairy environment)	/	/	①	-	33.08	68.38	+	+ (after storage 72h)	+	**PD**	4	c
2020	**4410**	**Process water (dairy environment)**	*C. sakazakii* Ad2389	0.6	①	-	27.1	68.26	+	+	+	**PD**	4	a
2020	**4678**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	1.2	①	-	34.3	68.6	+	+	+	**PD**	4	b
2023	**1583**	**Infant cereals**	*C. sakazakii* Ad2341	3.5	⑤	-	22.09	67.08	+	+	+	**PD**	5	a
2023	**1775**	**Infant rice protein**	*C. sakazakii* Ad3273	0.8	⑤	-	26.43	66.67	+	+	+	**PD**	5	c

The analyses of discordant results according to the ISO 16140-2 is the following (See Table 13):

Table 13 - Analyses of discordant results

Category		Type		Protocol	Study design	N+	TND	PD	Unpaired study TND-PD	Unpaired study AL	Combined TND-PD	Combined AL
1	**Milk powders and ingredients, infant formula and infant cereals without probiotics** (up to 25 g)	a	Infant formula	①	Unpaired	11	3	2	1		1	
		b	Infant cereals	①	Unpaired	11	2	3	-1		-1	
		c	Ingredients: lactoserum, maltodextrin, milk powders.	①	Unpaired	16	3	4	-1		-1	
					Total	**38**	**8**	**9**	**-1**	**3**	**-1**	**3**
2	**Infant formula and infant cereals with probiotics** (up to 25 g)	a	Infant formula	②	Unpaired	16	3	6	-3		-3	
		b	Infant cereals	②	Unpaired	15	3	3	0		0	
					Total	**31**	**6**	**9**	**-3**	**3**	**-3**	**3**
3	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	20	5	3	2		2	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	18	1	2	-1		-1	
		c1	Ingredients (maltodextrin, whey, lactose, starch, caseinate…)	④	Unpaired	32	3	5	-2		-2	
		c2	Milk powders	④	Unpaired	10	2	1	1		1	
					Total	**80**	**11**	**11**	**0**	**4**	**0**	**4**
3 **BACTVIAB™ PMAxx™**	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	16	0	2	-2		-2	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	15	3	0	3		3	
		c	Milk powders and Ingredients: maltodextrin, whey, lactose, starch, caseinate…	④	Unpaired	31	6	6	0		0	
					Total	**62**	**9**	**8**	**1**	**4**	**1**	**4**
4	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	11	0	1			-1	
		b	Residues and dusts	①	Unpaired	12	0	1			-1	
		c	Surfaces	①	Paired	12	0	0			0	
					Total	**35**	**0**	**2**			**-2**	**3**
4 **BACTVIAB™ PMAxx™**	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	7	2	2			0	
		b	Residues and dusts	①	Unpaired	16	5	1			4	
		c	Surfaces	①	Paired	9	0	1			-1	
					Total	**32**	**7**	**4**			**3**	**3**
5	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	11	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**32**	**2**	**2**	**0**	**3**	**0**	**3**
5 **BACTVIAB™ PMAxx™**	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	11	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**32**	**2**	**2**	**0**	**3**	**0**	**3**
All samples					Mix paired and unpaired	**342**	**45**	**47**	/	/	**-2**	**7**
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™ PMAxx™					Mix paired and unpaired	**216**	**27**	**33**	/	/	**-6**	**5**
All categories 1 + 2 +(3+ 4 + 5 with BACTVIAB™ PMAxx™)					Mix paired and unpaired	**195**	**32**	**32**	/	/	**0**	**6**

The observed values for TND- PD for the 5 individual categories tested without BACTVIAB™ PMAxx™ pre-treatment, for the 3 individual categories tested without BACTVIAB™ PMAxx™ pre-treatment and for all the combined categories meet the Acceptability Limits (observed values ≤ AL).

3.1.1.7 Enrichment broth and lysate storage at 5 ± 3 °C for 72 h

The enrichment broths and lysates from 366 samples were tested again after storage for 72 h at 5°C ± 3°C. The following changes were observed (See **Table 14**).

Table 14 - Enrichment broth storage

Extraction Protocol	Sample N°	Product	Agreement before storage	Agreement after storage		Category	Type
				BPW	Lysate		
Without BACTVIAB™ PMAxx™	7796	Infant formula without probiotics	PA	PA	$ND_{FN(alt)}$	1	a
	2611	Skim milk powder	PA	$PA_{FP(alt)}$	$PA_{FP(alt)}$	1	c
	2590	Whole milk powder	$ND_{FN(alt)}$	PA	$ND_{FN(alt)}$	3	a
	2620	Infant formula with probiotics ($7.2x10^4$ CFU/g)	$ND_{FN(alt)}$	$PA_{FP(alt)}$	$PA_{FP(alt)}$	3	b
	3125	Maltodextrin	PA	$PA_{FP(alt)}$	$PA_{FP(alt)}$	3	c
	3132	Maltodextrin	PA	PA	$ND_{FN(alt)}$	3	c
With BACTVIAB™ PMAxx™	2564	Infant formula with probiotics (*Bifidobacterium breve* $9.7x10^6$CFU/g)	$ND_{FN(alt)}$	PA	$ND_{FN(alt)}$	3	b
	2581	Skim milk powder	PA	$ND_{FN(alt)}$	PA	3	a
	2743	Whey	PD	$PD_{FP(alt)}$	$PD_{FP(alt)}$	3	c
	2744	Whey	PA	$PA_{FP(alt)}$	$PA_{FP(alt)}$	3	c
	2750	Non-fat dry milk	PA	$PA_{FP(alt)}$	$PA_{FP(alt)}$	3	c
	4260	Dusts (dairy environment)	$ND_{FN(alt)}$	PA	$ND_{FN(alt)}$	4	b
	4289	Vacuum cleaner filter (dairy environment)	PA	$ND_{FN(alt)}$	PA	4	b

The analyses of discordant become (See **Table 15** for BPW storage and **Table 16** for lysates storage).

Table 15 - Analysis of discordant results after BPW storage for 72 h at 5 ± 3°C

Category		Type		Protocol	Study design	N+	TND	PD	Unpaired study TND-PD	Unpaired study AL	Combined TND-PD	Combined AL
1	**Milk powders and ingredients, infant formula and infant cereals without probiotics** (up to 25 g)	a	Infant formula	①	Unpaired	11	3	2	1		1	
		b	Infant cereals	①	Unpaired	11	2	3	-1		-1	
		c	Ingredients: lactoserum, maltodextrin, milk powders.	①	Unpaired	16	4	4	0		0	
					Total	**38**	**9**	**9**	**0**	**3**	**0**	**3**
2	**Infant formula and infant cereals with probiotics** (up to 25 g)	a	Infant formula	②	Unpaired	16	3	6	-3		-3	
		b	Infant cereals	②	Unpaired	15	3	3	0		0	
					Total	**31**	**6**	**9**	**-3**	**3**	**-3**	**3**
3	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	20	4	3	1		1	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	18	1	2	-1		-1	
		c1	Ingredients (maltodextrin, whey, lactose, starch, caseinate…)	④	Unpaired	32	4	5	-1		-1	
		c2	Milk powders	④	Unpaired	10	2	1	1		1	
					Total	**80**	**11**	**11**	**0**	**4**	**0**	**4**
3 BACTVIAB™ PMAxx™	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	16	1	2	-1		-1	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	15	2	0	2		2	
		c	Milk powders and Ingredients: maltodextrin, whey, lactose, starch, caseinate…	④	Unpaired	30	8	5	3		3	
					Total	**61**	**11**	**7**	**4**	**4**	**4**	**4**
4	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	11	0	1			-1	
		b	Residues and dusts	①	Unpaired	12	0	1			-1	
		c	Surfaces	①	Paired	12	0	0			0	
					Total	**35**	**0**	**2**			**-2**	**3**
4 BACTVIAB™ PMAxx™	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	7	2	2			0	
		b	Residues and dusts	①	Unpaired	16	5	1			4	
		c	Surfaces	①	Paired	9	0	1			-1	
					Total	**32**	**7**	**4**			**3**	**3**
5	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	11	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**32**	**2**	**2**	**0**	**3**	**0**	**3**
5 BACTVIAB™ PMAxx™	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	12	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**33**	**2**	**2**	**0**	**3**	**0**	**3**
All samples					Mix paired and unpaired	**342**	**48**	**46**	/	/	**2**	**7**
All categories (1 + 2 + 3 + 4) without BACTVIAB™ PMAxx™					Mix paired and unpaired	**216**	**28**	**33**	/	/	**-5**	**5**
All categories 1 + 2 + (3 + 4) with BACTVIAB™PMAxx™					Mix paired and unpaired	**195**	**35**	**31**	/	/	**4**	**6**

Table 16 - Analysis of discordant results after lysate storage for 72 h at 5 ± 3°C

Category		Type		Protocol	Study design	N+	ND	PD	Unpaired study TND-PD	Unpaired study AL	Combined TND-PD	Combined TND-PD
1	**Milk powders and ingredients, infant formula and infant cereals without probiotics** (up to 25 g)	a	Infant formula	①	Unpaired	11	4	2	2		2	
		b	Infant cereals	①	Unpaired	11	2	3	-1		-1	
		c	Ingredients: lactoserum, maltodextrin, milk powders.	①	Unpaired	16	4	4	0		0	
					Total	**38**	**10**	**9**	**1**	**3**	**1**	**3**
2	**Infant formula and infant cereals with probiotics** (up to 25 g)	a	Infant formula	②	Unpaired	16	3	6	-3		-3	
		b	Infant cereals	②	Unpaired	15	3	3	0		0	
					Total	**31**	**6**	**9**	**-3**	**3**	**-3**	**3**
3	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	20	5	3	2		2	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	18	1	2	-1		-1	
		c1	Ingredients (maltodextrin, whey, lactose, starch, caseinate…)	④	Unpaired	32	5	5	0		0	
		c2	Milk powders	④	Unpaired	10	2	1	1		1	
					Total	**80**	**13**	**11**	**2**	**4**	**2**	**4**
3 BACTVIAB™ PMAxx™	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	a	Milk powders, Infant formula and infant cereals without probiotics	③	Unpaired	16	0	2	-2		-2	
		b	Infant formula and infant cereals with probiotics	③	Unpaired	15	3	0	3		3	
		c	Milk powders and Ingredients: maltodextrin, whey, lactose, starch, caseinate…	④	Unpaired	30	8	5	3		3	
					Total	**61**	**11**	**7**	**4**	**4**	**4**	**4**
4	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	11	0	1			-1	
		b	Residues and dusts	①	Unpaired	12	0	1			-1	
		c	Surfaces	①	Paired	12	0	0			0	
					Total	**35**	**0**	**2**			**-2**	**3**
4 BACTVIAB™ PMAxx™	**Production environmental samples** (up to 25 g or ml or sampling device)	a	Process water	①	Unpaired	7	2	2			0	
		b	Residues and dusts	①	Unpaired	16	5	1			4	
		c	Surfaces	①	Paired	9	0	1			-1	
					Total	**32**	**7**	**4**			**3**	**3**
5	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	11	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**32**	**2**	**2**	**0**	**3**	**0**	**3**
5 BACTVIAB™ PMAxx™	**Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition** (up to 300 g)	a	Milk powder, infant formula and infant cereals without probiotics	①	Unpaired	11	0	1	-1		-1	
		b	Infant formula and infant cereals with probiotics	①	Unpaired	11	1	0	1		1	
		c	Early life nutrition	①	Unpaired	10	1	1	0		0	
					Total	**32**	**2**	**2**	**0**	**3**	**0**	**3**
All samples					Mix paired and unpaired	**341**	**51**	**46**	/	/	**5**	**7**
All categories (1 + 2 + 3 + 4) without BACTVIAB™PMAxx™					Mix paired and unpaired	**216**	**31**	**33**	/	/	**-2**	**5**
All categories 1 + 2 + (3 + 4) with BACTVIAB™PMAxx™					Mix paired and unpaired	**194**	**36**	**31**	/	/	**5**	**6**

The observed values for TND – PD for the 5 individual categories tested without BACTVIAB™ PMAxx™ pre-treatment, for the 3 individual categories tested without BACTVIAB™ PMAxx™ pre-treatment and for all the combined categories meet the Acceptability Limits (observed values ≤ AL).

3.1.1.8 Confirmation

All the samples were confirmed by:

- Direct streaking onto ESIA and CCI Agar,
- Subculture in CSB before streaking onto CCI agar.

The typical colonies were confirmed by the Fast Crono and the API ID32E without purification step for colonies obtained on selective agar plates after direct streaking and after purification step for colonies obtained after subculture in CSB prior streaking.

Combining all the studies, 15 samples were not confirmed (before and/or after storage), see **Table 17**:

- 10 $PD_{FP(alt)}$ samples,
- 5 $PA_{FP(alt)}$ samples.

For these samples with positive PCR results, it was impossible to recover the *Cronobacter* strain from the enriched BPW or after subculture in CSB broth even when several plates or broths were inoculated. Note that for 2 samples (8411 and 8442), PCR run on non-enriched BPW gave also positive PCR tests (Tm = 66.76 and 67.2).

For all other positive samples positive confirmation was obtained with direct streaking and/or the CSB subculture. The comparison between the different confirmation protocols (direct streaking onto ESIA or onto CCI Agar plate or subculture in CSB) is given in **Table 18**. All samples were confirmed by all the confirmation protocols except for only three samples.
For two samples (n°2744 Whey and n°2750 Dry water milk powder), no typical colony was obtained onto ESIA plate (2744 and 2750) while typical colonies were obtained onto CCI plate (1 colony for sample 2750) or onto CCI plate after CSB subculture (2744 and 2750).
For one sample (n°4620 Dusts), typical colonies were obtained onto ESIA plate and CCI plate after subculture only (and no with direct streaking onto CCI plate).

For one sample (n°3634 Starch) with negative PCR results, typical colonies were obtained onto ESIA and CCI plate (before and after subculture). Typical colonies were not confirmed by API ID32E (*Leclercia adecarboxylata*) while Fast Crono test gave positive result. These colonies were considered as negative.

Table 17 - False positive samples

BACTVIAB PMAxx treatment	Year of analysis	Sample N°	Product	Artificial contaminations		Enrichment Protocol	Storage	ISO 22964 Result	Alternative method: GENE-UP *Cronobacter* BPW for 18 h at 34-38°C					Category	Type
				Strain	Inoculation level (CFU/sample)				PCR			Confirmation	Final result	Agree-ment	
									Cp	Tm	Res ult				
Without	2017	8442	Caseinate	/	/	1	Before	-	36.12	66.08	+	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	$PD_{FP(alt)}$	1	c
							After (BPW)	-	36.83	65.42	+	-	-	$PD_{FP(alt)}$		
							After (lysate)	-	36.21	65.44	+	-	-	$PD_{FP(alt)}$		
	2017	8411	Infant formula with probiotics (<10 CFU/g)	/	/	2	Before	-	37.31	66.15	+	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	$PD_{FP(alt)}$	2	a
	2018	**2611**	**Skim milk powder**	*C. muytjensis* E769	1.0	1	After (BPW)	+	33.76	66.08	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PA_{FP(alt)}$	1	c
							After (lysate)	+	33.43	65.98	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PA_{FP(alt)}$		
	2018	2648	Infant cereals without probiotics	/	/	3	Before	-	33.93/ 0/0	66.48/ 66.31/ 0	+/+/-	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PD_{FP(alt)}$	3	a
	2018	2866	Infant cereals with probiotics ($1.2x10^7$ CFU/g)	/	/	3	Before	-	0/0/0	66.57/ 0/0	+/-/-	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PD_{FP(alt)}$	3	b
	2018	**2620**	**Infant formula with probiotics ($7.2x10^4$ CFU/g)**	*C. sakazakii* Ad2353	4.0	3	After (BPW)	+	36.84	67.25	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PA_{FP(alt)}$	3	b
							After (lysate)	+	35.8	67	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PA_{FP(alt)}$		

BACTVIAB PMAxx treatment	Year of analysis	Sample N°	Product	Artificial contaminations		Enrichment Protocol	Storage	ISO 22964 Result	Alternative method: GENE-UP *Cronobacter*					Category	Type
									BPW for 18 h at 34-38°C						
									PCR						
				Strain	Inoculation level (CFU/sample)				Cp	Tm	Result	Confirmation	Final result	Agree-ment	
Without	2018	2872	Caseinate	/	/	4	Before	-	37.46/ 0/0	66.29/ 0/0	+/-/-	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PD_{FP(alt)}$	3	c1
							After (BPW)	-	0	67.03	+	-	-	$PD_{FP(alt)}$		
	2018	**3125**	**Maltodextrin**	*C. sakazakii* Ad916	1.5	4	After (BPW)	+	33.68	66.83	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PA_{FP(alt)}$	3	c1
							After (lysate)	+	33.29	66.45	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PAF_{P(alt)}$		
	2018	3645	Caseinate	/	/	4	Before	-	0	66.12	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PD_{FP(alt)}$	3	c1
							After (lysate)	-	35.14	66.18	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	$PD_{FP(alt)}$		
	2023	2010	Infant formula with probiotics (*B.lactis*:8.91x10^5 CFU/g) (26%fat)	/	/	⑤	Before	-	34.37/ 35.33/ 34.44	66.46/ 66.15/ 66.58	+/+/ +	-	-	$PD_{FP(alt)}$	5	b
							After (BPW)	-	33.99/ 0/ 34.93	66.62/ 66.27/ 65.98	+/-/+	-	-	$PD_{FP(alt)}$		
							After (lysate)	-	33.18/ 34.04/ 34.90	67.05/ 66.28/ 65.49	+/+/ +	-	-	$PD_{FP(alt)}$		

BACTVIAB PMAxx treatment	Year of analysis	Sample N°	Product	Artificial contaminations		Enrichment Protocol	Storage	ISO 22964 Result	Alternative method: GENE-UP *Cronobacter* BPW for 18 h at 34-38°C					Category	Type
				Strain	Inoculation level (CFU/sample)				PCR			Confirmation	Final result	Agree-ment	
									Cp	Tm	Result				
With	2020	**2743**	**Whey**	*C. sakazakii* Ad2848	2.1	④	After (BPW)	-	32.08	68.47	+	- 5x- (ESIA/CCI/CSB)	-	$PD_{FP(alt)}$	3	c
							After (lysate)	-	32.45	67.26	+	- 5x- (ESIA/CCI/CSB)	-	$PD_{FP(alt)}$		
	2020	**2744**	**Whey**	*C. muytjensii* E769	1.5	④	After (BPW)	+	32.56	68.59	+	- 5x- (ESIA/CCI/CSB)	-	$PA_{FP(alt)}$	3	c
							After (lysate)	+	32.7	67.26	+	- 5x- (ESIA/CCI/CSB)	-	$PA_{FP(alt)}$		
	2020	**2750**	**Dry water milk powder**	*C. muytjensii* E769	1.5	④	After (BPW)	+	34.73	68.11	+	- 5x- (ESIA/CCI/CSB)	-	$PA_{FP(alt)}$	3	c
							After (lysate)	+	32.84	66.92	+	- 5x- (ESIA/CCI/CSB)	-	$PA_{FP(alt)}$		
	2020	**4287**	**Dusts (dairy environment)**	*C. sakazakii* Ad898	2.0	①	After (BPW)	-	34.96	68.11	+	-	-	$PD_{FP(alt)}$	4	b
							After (lysate)	-	35.36	66.7	+	-	-	$PD_{FP(alt)}$		
	2023	2010	Infant formula with probiotics (*B. lactis*:8.91X10^5 CFU/g) (26% fat)	/	/	⑤	After (lysate)	-	29.09/ 0/0	67.11/ 0/0	+/-/-	-	-	$PD_{FP(alt)}$	5	b

Table 18 - Confirmation

Category		Confirmation protocol	PA	$PA_{FP(alt)}$	NA	$NA_{FN(alt)}$	PD	ND	$ND_{FN(alt)}$	$PD_{FP(alt)}$	TND	TNA	Total number of positive samples
1	**Infant formula and infant cereals with probiotics** (up to 25 g)	DS ESIA	21	0	36	0	9	8	0	1	8	37	38
		DS CCI	21	0	36	0	9	8	0	1	8	37	38
		CSB/CCI	21	0	36	0	9	8	0	1	8	37	38
		All confirmatory tests	21	0	36	0	9	8	0	1	8	37	38
2	**Infant formula and infant cereals with probiotics** (up to 25 g)	DS ESIA	16	0	32	0	9	6	0	1	6	33	31
		DS CCI	16	0	32	0	9	6	0	1	6	33	31
		CSB/CCI	16	0	32	0	9	6	0	1	6	33	31
		All confirmatory tests	16	0	32	0	9	6	0	1	6	33	31
3	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	DS ESIA	58	0	69	0	11	9	2	4	11	73	80
		DS CCI	58	0	69	0	11	9	2	4	11	73	80
		CSB/CCI	58	0	69	0	11	7	4	4	11	73	80
		All confirmatory tests	58	0	69	0	11	7	4	4	11	73	80
3 BACTVIAB™ PMAxx™	**Milk powders, ingredients, infant formula and infant cereals with or without probiotics** (up to 375 g)	DS ESIA	43	2	61	0	8	8	1	0	11	61	62
		DS CCI	44	1	60	1	8	8	1	0	10	61	62
		CSB/CCI	45	0	60	1	8	8	1	0	9	61	62
		All confirmatory tests	45	0	60	1	8	8	1	0	9	61	62
4	**Production environmental samples** (up to 25 g or ml or sampling device)	DS ESIA	33	0	35	0	2	0	0	0	0	35	35
		DS CCI	33	0	35	0	2	0	0	0	0	35	35
		CSB/CCI	33	0	35	0	2	0	0	0	0	35	35
		All confirmatory tests	33	0	35	0	2	0	0	0	0	35	35
4 BACTVIAB™ PMAxx™	**Production environmental samples** (up to 25 g or ml or sampling device)	DS ESIA	21	0	43	0	3	4	3	1	7	44	31
		DS CCI	21	0	43	0	3	5	2	1	7	44	31
		CSB/CCI	21	0	42	1	3	4	3	1	7	44	31
		All confirmatory tests	21	0	42	1	4	4	3	0	7	43	32

Category		Confirmation protocol	PA	$PA_{FP(alt)}$	NA	$NA_{FN(alt)}$	PD	ND	$ND_{FN(alt)}$	$PD_{FP(alt)}$	TND	TNA	Total number of positive samples
5	Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition (up to 300 g)	DS ESIA	28	0	27	0	2	2	0	1	2	28	32
		DS CCI	28	0	27	0	2	2	0	1	2	28	32
		CSB/CCI	28	0	27	0	2	2	0	1	2	28	32
		All confirmatory tests	28	0	27	0	2	2	0	1	2	28	32
5 BACTVIAB™ PMAxx™	Milk powders, infant formula and infant cereals with or without probiotics, including early life nutrition (up to 300 g)	DS ESIA	28	0	28	0	2	2	0	1	2	29	32
		DS CCI	28	0	28	0	2	2	0	1	2	29	32
		CSB/CCI	28	0	28	0	2	2	0	0	2	28	32
		All confirmatory tests	28	0	28	0	2	2	0	1	2	29	32
All categories (1 + 2 + 3 + 4 + 5) without BACTVIAB™ PMAxx™		DS ESIA	156	0	199	0	33	25	2	7	27	206	216
		DS CCI	156	0	199	0	33	25	2	7	27	206	216
		CSB/CCI	156	0	199	0	33	23	4	7	27	206	216
		All confirmatory tests	**156**	**0**	**199**	**0**	**33**	**23**	**4**	**7**	**27**	**206**	**216**
All categories (1 + 2 + 3 + 4 + 5) with BACTVIAB™ PMAxx™		DS ESIA	129	2	200	0	31	28	4	4	34	204	194
		DS CCI	130	1	199	1	31	29	3	4	33	204	194
		CSB/CCI	131	0	198	2	31	28	4	3	32	203	194
		All confirmatory tests	**131**	**0**	**198**	**2**	**32**	**28**	**4**	**3**	**32**	**203**	**195**

DS: Direct streaking

For category 5, all the positive PCR tests were confirmed whatever the protocol applied.
One more sample was confirmed using the CCI plates for the category 3 (BACTVIAB™ PMAxx™). For one sample (4378: Surface sample with BACTVIAB™ PMAxx™), the presence of *Cronobacter* spp strain was confirmed after 72 h storage of the enrichment broth.

3.1.1.9 PCR inhibition

Taking into account all the studies, 1412 PCR tests were carried out; inhibitions were observed for 10 samples representing 0.87% of the PCR tests carried out for this study (See **Table 19**). Note that no inhibition was observed for the PCR test carried out for the category 5.

Table 19 - PCR inhibitions

Sample N°	Product	PCR		
		Cp	Tm	Result
8450	**Infant formula with probiotics ($7.0x10^5$ CFU/g)**	0/0	0/0	i/-*
2592	**Skim milk powder**	0/0/0*	0/0/0*	i/-/-*
2593	**Skim milk powder**	0/0	0/0	i/-*
2595	**Infant cereals without probiotics**	0/31.18	0/65.72	i/+
2640	Skim milk powder	0/34.51*	0/65.73*	i/+*
2641	Skim milk powder	0/0*	0/0*	i/-*
2642	Skim milk powder	0/0*	0/0*	i/-*
2643	Half-skim milk powder	0/0*	0/0*	i/-*
2646	Infant formula without probiotics	0/0*/0**	0/0*/0**	i/i*/-**
2864	Infant cereals with probiotics ($2.9x10^5$ CFU/g)	0/0*	0/0*	i/-*

*: 1/3 dilution of the lysate **: 1/5 dilution of the lysate i: PCR inhibition

These inhibitions concern milk powders (skim milk and half-skim milk), infant cereals and infant formula with and without probiotics. For 7 samples (8450, 2593, 2640, 2641, 2642, 2643 and 2864), a 1/3 dilution of the lysate was required to obtain a result and for one sample (2646), it was necessary to perform a 1/5 dilution. For 2 samples (2592 and 2595), the inhibitions were not observed when the non-diluted lysates were tested again after inhibition, as recommended in the kit insert.

3.1.2 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:

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

3.1.2.1 Experimental design

One matrix should be tested per category and per protocol. At least, three inoculation levels were used:

- A negative control: 5 samples,
- A low contamination level providing fractional recovery data, with 20 replicates,
- A high contamination level, with 5 replicates.

A total plate count determination or lactic microflora on each matrix was performed to estimate the total microbial load on the day of analysis.

The matrix/strain pairs were analysed by the reference method and by the alternative method (See **Table 20**).

Table 20 - Defined (matrix/strain) pairs for the RLOD determination

		Category	Matrix	Strain	Origin	Storage conditions after inoculation and before analysis	Sample size	Protocol	Study design
Initial validation study	1	**Milk powders, infant formula and infant cereals without probiotics including ingredients** (up to 25 g)	Infant cereals	*Cronobacter dublinensis* E798	Unknown	Seeding protocol Lyophilized strain 2 weeks at room temperature	25 g	①	*Unpaired*
	2	**Infant formula and infant cereals with probiotics** (up to 25 g)	Infant formula with probiotics	*Cronobacter sakazakii* Ad2413	Dairy product	Seeding protocol Lyophilized strain 2 weeks at room temperature	25 g	②	*Unpaired*
Extension study (2018)	3	**Milk powders, infant formula and infant cereals with or without probiotics including ingredients** (up to 375 g)	Maltodextrin	*Cronobacter turicensis* Ad1445	Milk powder	Seeding protocol Lyophilized strain 2 weeks at room temperature	375 g	④	*Unpaired*
			Infant formula with probiotics	*Cronobacter sakazakii* Ad2412	Infant formula	Seeding protocol Lyophilized strain 2 weeks at room temperature	375 g	③	*Unpaired*
	4	**Production environmental samples** (up to 25 g or ml or sampling device)	Process water	*Cronobacter muytjensii* E888	Milk powder	Seeding protocol 48 h at 5°C ± 3°C	25 ml	①	*Unpaired*
Extension study (2020)	3	**Milk powders, infant formula and infant cereals with or without probiotics including ingredients** (up to 375 g)	Maltodextrin	*Cronobacter turicensis* Ad1445	Milk powder	Seeding protocol Lyophilized strain 2 weeks at room temperature	375 g	④ with PMAxx	*Unpaired*
			Infant formula with probiotics	*Cronobacter sakazakii* Ad2412	Infant formula	Seeding protocol Lyophilized strain 2 weeks at room temperature	375 g	③ with PMAxx	*Unpaired*
	4	**Production environmental samples**	Process water	*Cronobacter muytjensii* E888	Milk powder	Seeding protocol 48 h at 5°C ± 3°C	25 ml	① with PMAxx	*Unpaired*
Extension study (2023)	5	**Milk powders, infant formula and infant cereals with and without probiotics, ELN** (up to 300 g)	Infant cereals with probiotics	*Cronobacter sakazakii* Ad3273	Infant cereals	Seeding protocol Lyophilized strain 2 weeks at room temperature	300 g	⑤ without and with PMAxx	*Unpaired*

3.1.2.2 Calculation and interpretation of the RLOD

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

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 are given in **Table 21**.

Table 21 – Presentation of RLOD before and after confirmation of the alternative method results

Category	Matrix/strain pair	Enrichment and extraction protocol	AL	RLOD
1	Infant cereals (25 g)/ *Cronobacter dublinensis* E798	①	2.5	1.9 [0.7 ; 4.9]
2	Infant formula with probiotics (25 g)/ *Cronobacter sakazakii* Ad2413	②		1.2 [0.6 ; 2.4]
3	Maltodextrin (375g) / *Cronobacter turicensis* Ad1445	④		2.5 [1.2 ; 5.3]
	Infant formula with probiotis (375g) / *Cronobacter sakazakii* Ad2412	③		0.7 [0.3 ; 1.6]
	Maltodextrin (375g) / *Cronobacter turicensis* Ad1445	④+ BACTVIAB™ PMAxx™		1.2 [0.5 ; 2.6]
	Infant formula with probiotics / *Cronobacter sakazakii* Ad2412	③+ BACTVIAB™ PMAxx™		1.2 [0.5 ; 2.6]
4	Process water (rinse) (up to 25 g or ml or sampling device)/ *Cronobacter muytjensii* E888	①		1.4 [0.5 ; 3.7]
	Process water (rinse) (25 mL) / *Cronobacter muytjensii* E888	①+ BACTVIAB™ PMAxx™		0.6 [0.2 ; 1.4]
5	Infant cereals with probiotics (300 g)/ *Cronobacter sakazakii* Ad3273	⑤		1.0 [0.5 ; 2.0]
	Infant cereals with probiotics (300 g)/ *Cronobacter sakazakii* Ad3273	⑤+ BACTVIAB™ PMAxx™		0.9 [0.4 ; 1.9]
All combined RLOD				1.1 [0.9 ; 1.5]
Combined categories (1 + 2 + 3 + 4 + 5) w/o BACTVIAB™ PMAxx™				1.3 [0.9 ; 1.8]
Combined categories (1 + 2 + 3 + 4 + 5) w BACTVIAB™ PMAxx™				1.1 [0.8 ; 1.5]

For maltodextrin, the RLOD value is equal to the Acceptability Limit (AL) (RLOD = 2.5). Note that for this food type (ingredients), satisfying results were observed with 5 positive deviations and 3 negative deviations. The RLOD was thus considered as acceptable by the AFNOR Technical Board.

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 22**.

Table 22 - LOD_{50} and LOD_{95} results

Category	Matrix/strain pair	Enrichment and extraction Protocol	Level of detection at 50% (CFU / sample size) according to Wilrich & Wilrich		Level of detection at 95% (CFU / sample size) according to Wilrich & Wilrich	
			Reference method	Alternative method	Reference method	Alternative method
1	Infant cereals (25 g) / *Cronobacter dublinensis* E798	①	0.8 [0.5 ; 1.4]	1.3 [0.7 ; 2.3]	3.4 [2.0 ; 5.9]	5.5 [3.0 ; 9.8]
2	Infant formula with probiotics (25 g) / *Cronobacter sakazakii* Ad2413	②	0.4 [0.2 ; 0.7]	0.7 [0.4 ; 1.2]	1.9 [1.1 ; 3.2]	3.0 [1.7 ; 5.3]
3	Maltodextrin (375 g) / *Cronobacter turicensis* Ad1445	④	0.3 [0.2 ; 0.6]	0.9 [0.5 ; 1.5]	1.4 [0.8 ; 2.5]	3.8 [2.2 ; 6.5]
	Infant formula with probiotics (375 g) / *Cronobacter sakazakii* Ad2412	③	0.6 [0.4 ; 1.0]	0.4 [0.3 ; 0.8]	2.7 [1.6 ; 4.5]	1.9 [1.1 ; 3.4]
	Maltodextrin (375 g) / *Cronobacter turicensis* Ad1445	④ + BACTVIAB™ PMAxx™	0.6 [0.3 ; 1.0]	0.7 [0.4 ; 1.2]	2.6 [1.5 ; 4.5]	3.0 [1.7 ; 5.2]
	Infant formula with probiotics (375 g) / *Cronobacter sakazakii* Ad2412	③ + BACTVIAB™ PMAxx™	0.4 [0.2 ; 0.7]	0.5 [0.3 ; 0.8]	1.7 [1.0 ; 3.0]	2.0 [1.1 ; 3.5]
4	Process water (rinse) (25 ml) / *Cronobacter muytjensii* E888	①	0.5 [0.3 ; 1.0]	0.7 [0.4 ; 1.5]	2.3 [1.2 ; 4.4]	3.2 [1.5 ; 6.5]
	Process water (rinse) (25 ml) / *Cronobacter muytjensii* E888	① + BACTVIAB™ PMAxx™	1.4 [0.8 ; 2.5]	0.9 [0.5 ; 1.5]	6.1 [3.5 ; 10.8]	3.8 [2.2 ; 6.6]
5	Infant cereals with probiotics (300 g) / *Cronobacter sakazakii* Ad3273	⑤	0.3 [0.2 ; 0.5]	0.3 [0.2 ; 0.5]	1.3 [0.7 ; 2.3]	1.3 [0.7 ; 2.3]
	Infant cereals with probiotics (300 g) / *Cronobacter sakazakii* Ad3273	⑤ + BACTVIAB™ PMAxx™	0.3 [0.2 ; 0.5]	0.3 [0.1 ; 0.5]	1.3 [0.7 ; 2.3]	1.1 [0.6 ; 1.9]
All combined			0.5 [0.5 ; 0.6]	0.6 [0.5 ; 0.8]	2.3 [2.0 ; 2.8]	2.7 [2.3 ; 3.3]
Combined categories (1+2+3+4+5) w/o BACTVIAB™ PMAxx™			0.5 [0.4 ; 0.8]	0.7 [0.5 ; 0.8]	2.1 [1.7 ; 2.6]	2.9 [2.3 ; 3.7]
Combined categories (3+4+5) w BACTVIAB™ PMAxx™			0.6 [0.5 ; 0.8]	0.7 [0.5 ; 0.9]	2.7 [2.1 ; 3.4]	2.9 [2.3 ; 3.7]

The RLOD meet the Acceptability Limits (RLOD ≤ AL) for each matrix/strain pair, except for maltodextrin for which the RLOD is equal to the AL (RLOD = 2.5). The RLOD was considered equivalent to the AL and was approved by the AFNOR Technical Board.

The LOD_{50} varies from 0.3 to 1.4 CFU/sample size for the reference method and from 0.3 to 1.3 CFU/ sample size for the alternative method.

3.1.3 Inclusivity / exclusivity

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

3.1.3.1 Test protocols

- **Inclusivity**

Cronobacter spp. strains cultures were enriched in BHI medium at 37°C. Dilutions were done in order to inoculate 10 - 100 cells/225 ml of enrichment broth (BPW + Novobiocin). The alternative protocol was then performed after an enrichment time of 18 h at 34-38°C.
Confirmation was performed by direct plating on CCI agar and then identification of presumptive positive colonies by ID32E and Fast Crono.

- **Exclusivity**

Negative strains cultures were performed in BHI at 37°C. Dilutions were realized in order to inoculate 10^5 cells/ml of BPW. The BPW was then enriched for 24 hours at 34-38°C.

3.1.3.2 Results

Raw data are given in **Appendix 6**.

- **Inclusivity**

The 50 target strains tested gave a positive PCR result and positive confirmatory tests. For 13 strains, addition of milk in the enrichment broth was necessary to obtain positive growth. For 2 strains, higher inoculation was necessary to get a positive result (*Cronobacter malonaticus* E684 and *Cronobacter condimenti* LMG 262 50T).

Exclusivity

No cross reaction was observed with the 31 strains tested.

3.2 Practicability

The alternative method practicability was evaluated according to the AFNOR criteria relative to method comparison study.

Storage conditions, shelf-life and modalities of utilization after first use	Enrichment broth: after incubation before the lysis step or confirmation, 2 - 8°C for 3 days. Lysis reagent: - before use at 15 - 25 °C in the kit until expiration date of the kit - lysate (after addition of the sample and vortex step): 1 h at 15 - 25°C 3 days at 2 - 8°C (or - 20°C for longer storage)		
Time to result	Steps	**Reference method**	**Alternative method**
	Negative samples		
	Sampling / enrichment	Day 0	Day 0
	Direct streaking	/	/
	Lysis and PCR	/	Day 1
	CSB	Day 1	/
	Streaking CSB	Day 2	/
	Reading plates	Day 3	/
	Presumptive positive or positive results		
	Direct streaking	/	Day 1
	CSB	Day 1	Day 1
	Streaking CSB	Day 2	Day 2
	Reading plates	Day 3	Day 2 or 3
	Confirmatory tests	Day 4	Day 2 to 4
Common step with the reference method	No common step		

The negative results are available in 1 day and the positive results in 2 or 4 days depending on the confirmation protocol used.

3.3 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.

3.3.1 Study organisation

- *Collaborators number*

15 laboratories (16 collaborators) participated to the study and originated from 4 different countries. 2 collaborators for Lab G were involved.

- *Matrix and strain used*

Infant formula with probiotics (*Lactobacillus reuteri* DSM 17938) was inoculated with *Cronobacter sakazakii* Ad 940 strain.
In order to facilitate the study, infant formula was first homogenized in sterile water.

- *Samples*

Samples were prepared and inoculated on Monday 29th of January 2018, as described below:

- 24 blind coded samples (25 ml) for *Cronobacter* spp. detection by the GENE-UP ® *Cronobacter* spp. method (RED LABEL)
- 24 blind coded samples (10 ml) for *Cronobacter* spp. detection by the ISO 22964 (April 2017) reference method (BLUE LABEL)
- 1 sample (labelled “Sample for anaerobic lactic flora”) for anaerobic lactic flora enumeration in MRS agar
- 1 water flask labelled “Temperature Control” with a temperature probe.

- *Inoculation*

The targeted inoculation levels were the following:

- Level 0: 0 CFU/g,
- Level 1: level providing as much as possible fractional positive result (2 CFU/sample),
- Level 2:10 CFU/sample.

- *Labelling and shipping*

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

A temperature control flask containing a sensor was added to the package in order to register temperature profile during transport, package delivery and storage until analyses.

Samples were shipped on Monday 29th January 2018 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 at arrival.

- *Analyses*

Collaborative study laboratories and the expert laboratory carried out the analyses on Tuesday 30th or Wednesday 31st January 2018 with the alternative and reference methods.

3.3.2 Experimental parameters controls

3.3.2.1 Strain stability and background microflora stability

Strain stability was checked by inoculating the matrix at 2 CFU/sample and 100 CFU/g. Enumerations were performed for the high contamination level and detection analyses were performed for the low contamination level after 24 h and 48 h storage at 5 ± 3°C. *Triplicates* were analysed. The aerobic mesophilic flora was also enumerated; the results are given in **Table 23**.

Table 23 - Sample stability

Day	Reference method (detection) - 10 g			Alternative method (detection) - 25 g			CFU/g			Lactic acid flora (CFU/g)
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	
Day 0	-	+	+	+	+	+	281	273	455	$3.8\ 10^5$
Day 1	+	+	+	-	+	+	110	60	90	$6.2\ 10^5$
Day 2	+	+	+	+	+	+	50	20	0	$5.5\ 10^5$

A decrease in the count level was observed during storage at 5°C ± 3°C.

3.3.2.2 Contamination levels

The contamination levels and the sample codification were the following (see **Table 24**).

Table 24 - Contamination levels

Level	Samples	Theoretical target level (b/sample)	True level (b/ sample)*	Low limit / sample	High limit / sample
Level 0	1 - 4 - 6 - 11 - 14 - 18 - 20 - 24 26 - 28 - 31 - 34 - 37 - 40 - 43 - 44	/	/	/	/
Level 1	3 - 5 - 10 - 15 - 16 - 19 - 22 - 23 27 - 30 - 35 - 38 - 41 - 42 - 46 - 48	2	2.6	2.2	3.1
Level 2	2 - 7 - 8 - 9 - 12 - 13 - 17 - 21 25 - 29 - 32 - 33 - 36 - 39 - 45 - 47	10	9.8	8.0	12.0

*** Due to the decrease in the count level observed in the stability study, the true levels at the time of the study were probably lower.**

3.3.2.3 Logistic conditions

Temperature conditions are given in **Table 25**.

Table 25 - Sample temperatures at receipt

Collaborators	Temperature measured by the probe (°C)	Temperature measured at receipt (°C)	Receipt date and time	Analysis date
A	3.6	2.0	31/01/2018 15h00	31/01/2018
B	1.8	5.1	30/01/2018 09h00	30/01/2018
C	6.1	3.5	30/01/2018 10h300	30/01/2018
D	1.8	4.2	30/01/2018 09h35	30/01/2018
E	-16.5	5.0	30/01/2018 18h00	30/01/2018
F	6.7	9.7	30/01/2018 12h00	30/01/2018
G1	1.2	1.4	31/01/2018 10h00	31/01/2018
G2	1.4	1.5	31/01/2018 10h00	31/01/2018
H	1.7	1.8	30/01/2018 11h40	30/01/2018
I	5.9	4.1	30/01/2018 10h00	30/01/2018
J	1.5	2.6	30/01/2018 09h45	30/01/2018
K	2.1	4.9	31/01/2018 09h00	31/01/2018
L	1.4	1.4	30/01/2018 11h00	30/01/2018
M	1.3	3.9	30/01/2018 09h30	30/01/2018
N	1.5	6.0	30/01/2018 10h20	30/01/2018
O	2.9	6.0	30/01/2018 11h00	30/01/2018

No problem was encountered during the transport or at receipt except for 2 collaborators:

- For Lab E, the probe measured a temperature of -16.5°C; the probe probably failed as the Lab measured a temperature at receipt of 5.0°C.
- For Lab F, the temperature measured at receipt by the Lab was 9.7°C but the probe measured a temperature of 6.7°C.

For the other collaborators, all the samples were delivered on time and in appropriate conditions. Temperatures during shipment and at receipt were all correct.

3.3.3 Results analysis

The raw data are given in **Appendix 7**.

3.3.3.1 Expert laboratory results

The results obtained by the expert laboratory are given in **Table 26**.

Table 26 – Results obtained by the expert Lab.

Level	Reference method	Alternative method
L0	0/8	0/8
L1	8/8	7/8
L2	8/8	8/8

3.3.3.2 Results observed by the collaborative laboratories

> **Aerobic mesophilic flora enumeration**

Depending on the Lab results, the enumeration levels varied from 4.0 x 10^4 to 8.1 x 10^5 CFU/g.

> ***Cronobacter* spp. detection**

16 collaborators participated to the study. The results obtained are provided in **Table 27** (reference method) and **Table 28** (alternative method).

Table 27 - Positive results by the reference method (ALL the collaborators)

Collaborators	Contamination level		
	L0	L1	L2
A	0	7	8
B	0	7	8
C	0	6	8
D	0	7	8
E	0	7	8
F	0	7	8
G1	0	7	8
G2	0	5	8
H	0	6	8
I	0	7	8
J	0	8	8
K	0	7	8
L	0	6	8
M	0	6	8
N	0	7	8
O	0	8	8
Total	$P_0 = 0$	$P_1 = 108$	$P_2 = 128$

Table 28 - Positive results (before and after confirmation) by the alternative method (ALL the collaborators)

Collaborators	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	5	5	5	8	8	8
B	0	0	0	3	3	3	8	8	8
C	1	0	0	5	5	5	8	8	8
D	0	0	0	6	6	6	8	8	8
E	0	0	0	5	5	5	8	8	8
F	0	0	0	6	6	6	8	8	8
G1	0	0	0	6	6	6	8	8	8
G2	0	0	0	6	6	6	8	8	8
H	0	0	0	7	7	7	8	8	8
I	0	0	0	7	7	7	8	8	8
J	0	0	0	8	8	8	8	8	8
K	0	0	0	7	7	7	8	8	8
L	0	0	0	6	6	6	8	8	8
M	0	0	0	7	7	7	8	8	8
N	4	3	3	8	8	8	8	8	8
O	0	0	0	7	7	7	8	8	8
Total	$P_0 = 5$	$C_0 = 3$	$CP_0 = 3$	$P_1 = 99$	$C_1 = 99$	$CP_1 = 99$	$P_2 = 128$	$C_2 = 128$	$CP_2 = 128$

Lab C obtained a positive PCR result for an unspiked sample (C24); the presence of *Cronobacter* spp. was not confirmed in the enrichment broth. This result was confirmed by testing the DNA extract a second time. This result was probably due to a contamination during the extraction step.

Lab N obtained 4 positive PCR results for unspiked samples (N4, N6, N20 and N24). For three of them, the confirmatory tests concluded to the presence of *Cronobacter* spp. in the enrichment broth. This Lab mentioned that some flasks leaked. This could explain these contaminations.

According to the AFNOR technical rules, it is possible to include the results from a collaborator with maximum one cross contamination at Level 0. For this study, this rule was applied and the results from Lab N were excluded for interpretation.

3.3.3.3 *Results of the collaborators retained for interpretation*

The results obtained with the 15 collaborators kept for interpretation are presented in **Table 29** (reference method) and **Table 30** (alternative method).

Table 29 - Positive results by the reference method (Without Lab N)

Collaborators	Contamination level		
	L0	L1	L2
A	0	7	8
B	0	7	8
C	0	6	8
D	0	7	8
E	0	7	8
F	0	7	8
G1	0	7	8
G2	0	5	8
H	0	6	8
I	0	7	8
J	0	8	8
K	0	7	8
L	0	6	8
M	0	6	8
O	0	8	8
Total	$P_0 = 0$	$P_1 = 101$	$P_2 = 120$

Table 30 - Positive results (before and after confirmation) by the alternative method (Without Lab N)

Collaborators	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	5	5	5	8	8	8
B	0	0	0	3	3	3	8	8	8
C	1	0	0	5	5	5	8	8	8
D	0	0	0	6	6	6	8	8	8
E	0	0	0	5	5	5	8	8	8
F	0	0	0	6	6	6	8	8	8
G1	0	0	0	6	6	6	8	8	8
G2	0	0	0	6	6	6	8	8	8
H	0	0	0	7	7	7	8	8	8
I	0	0	0	7	7	7	8	8	8
J	0	0	0	8	8	8	8	8	8
K	0	0	0	7	7	7	8	8	8
L	0	0	0	6	6	6	8	8	8
M	0	0	0	7	7	7	8	8	8
O	0	0	0	7	7	7	8	8	8
Total	**P_0 = 1**	**C_0 =0**	**CP_0 = 0**	**P_1 = 91**	**C_1 = 91**	**CP_1 = 91**	**P_2 = 120**	**C_2 = 120**	**CP_2 = 120**

3.3.4 Calculation and interpretation

3.3.4.1 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 31**).

Table 31 - Percentage specificity

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

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

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

Partial positive results were obtained for the low inoculation level (L1). This inoculation level was retained for calculation.

Partial positive results were obtained for the low inoculation level (L1 = 84,2% for the reference method and 75,8% for the alternative method). Only the inoculation level L1 was retained for calculation. The fractional recovery is higher than expected (accepted rang 25-75%) but very closed for the alternative method.
Despite this high percentage of positives, the distribution of results across collaborators indicates that the alternative method was still appropriately challenged. Specifically, 13 out of 15 collaborators obtained fractional results: 8 collaborators have obtained 7 positives, 4 have obtained 6 positives, 1 have obtained 5 positives out of 8 contaminated samples. This variability is typical in low-level contamination studies and confirms that the method was tested under limiting conditions.

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 32**.

Table 32 - Summary of the obtained results with the reference method and the alternative method for Level 1

Response	Reference method positive (R+)	Reference method negative (R-)
Alternative method positive (A+)	Positive agreement (A+/R+) **PA = 81**	Positive deviation (R-/A+) **PD = 10**
Alternative method negative (A-)	Total Negative deviation (A-/R+) **TND = 20**	Total Negative agreement (A-/R-) **TNA = 9**

Based on the data summarized in Table 32, 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 33).

Table 33 - Sensitivity, relative trueness and false positive ratio percentages

		Level 1
Sensitivity for the alternative method	$SE_{alt} = \frac{(PA + PD)}{(PA + TND + PD)} \; x \; 100 \; \%$	82.0 %
Sensitivity for the reference method	$SE_{ref} = \frac{(PA + TND)}{(PA + TND + PD)} \; x \; 100 \; \%$	91.0 %
Relative trueness	$RT = \frac{(PA + TNA)}{N} x100 \; \%$	75.0 %
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)	$FNR = \frac{NA_{FN(alt)} + ND_{FN(alt)}}{PA + TND + PD} \; x \; 100 \; \%$	0.0 %

3.3.4.3 Interpretation of data

The negative deviations are listed in **Table 34** for Level 1.
The positive deviations are listed in **Table 35** for Level 1.

20 negative deviations were observed. These results could be related to:

- The different sample size tested in the reference method (10 g) and the alternative method (25 g),
- The use of a selective enrichment broth for the alternative method,
- The unpaired study design.

Note that the confirmatory tests were negative for all these samples.

Table 34 - Negative deviations for Level 1

Collaborator	Sample N°	Confirmation result
A	**A3**	**-**
	A16	**-**
B	**B15**	**-**
	B16	**-**
	B22	**-**
	B23	**-**
C	**C19**	**-**
D	**D10**	**-**
E	**E5**	**-**
	E19	**-**
F	**F10**	**-**
	F15	**-**
G1	**G16**	**-**
	G23	**-**
G2	**G46**	**-**
H	**H10**	**-**
K	**K15**	**-**
L	**L19**	**-**
M	**M15**	**-**
O	**O16**	**-**

Table 35 - Positive deviations for Level 1

Collaborator	Sample N°
F	**F19**
G1	**G15**
G2	**G30**
	G35
H	**H3**
	H5
K	**K22**
L	**L16**
M	**M3**
	M16
N	**N22**

For an **unpaired study design**, the difference between (TND – PD) is calculated for the level(s) where fractional recovery is obtained (so L_1 in this study). 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 calculations are the following, according to the ISO 16140-2 (See **Table 36**).

Table 36 - Calculations

N_X	120
$(p+)_{ref}$	0.842
$(p+)_{alt}$	0.758
AL = (TND - PD) max	10.79
TND - PD	10
Conclusion	TND - PD ≤ AL

The ISO 16140-2:2016 and ISO 16140-2/A1:2024 requirements are fulfilled as (TND - PD) is lower than the AL.

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

The LOD $_{50\%}$ was calculated using the 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 37**.

Table 37 - LOD $_{50\%}$ and RLOD

Method	LOD 50%	RLOD
Reference	1.0 [0.8 - 1.2]	1.2
Alternative	1.2 [1.0 - 1.5]	

4 CONCLUSION

The **method comparison study conclusions** are:

☒ Combining all the studies 5 categories were tested. The BACTVIAB pre-treatment protocol was applied for three categories. Combining all the samples, the protocol of the alternative method showed 32 positive deviations (PD) and 32 total negative deviations (TND) when BACTVIAB™ PMAxx™ pretreatment was applied for categories 3 and 4 and 5, 33 positive deviations (PD) and 27 total negative deviations (TND) when BACTVIAB™ PMAxx™ pretreatment was not applied for categories 3, 4 and 5.
The observed values for TND- PD for the 5 individual categories and for all the categories met the Acceptability Limits (observed values ≤ AL) whatever the enrichment protocol and extraction protocol applied.

☒ The RLOD is below the Acceptability Limits for each matrix/strain pair, except for maltodextrin (RLOD = 2.5; AL = 2.5 for protocol 4 without BACTVIAB™ PMAxx™). Nevertheless, this RLOD was approved by the AFNOR Certification body considering the sensitivity results.

☒ It is possible to store the primary enrichment broth and the lysates for 72 h at 5 ± 3°C.

☒ The GENE-UP *Cronobacter* spp. method is specific and selective.

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

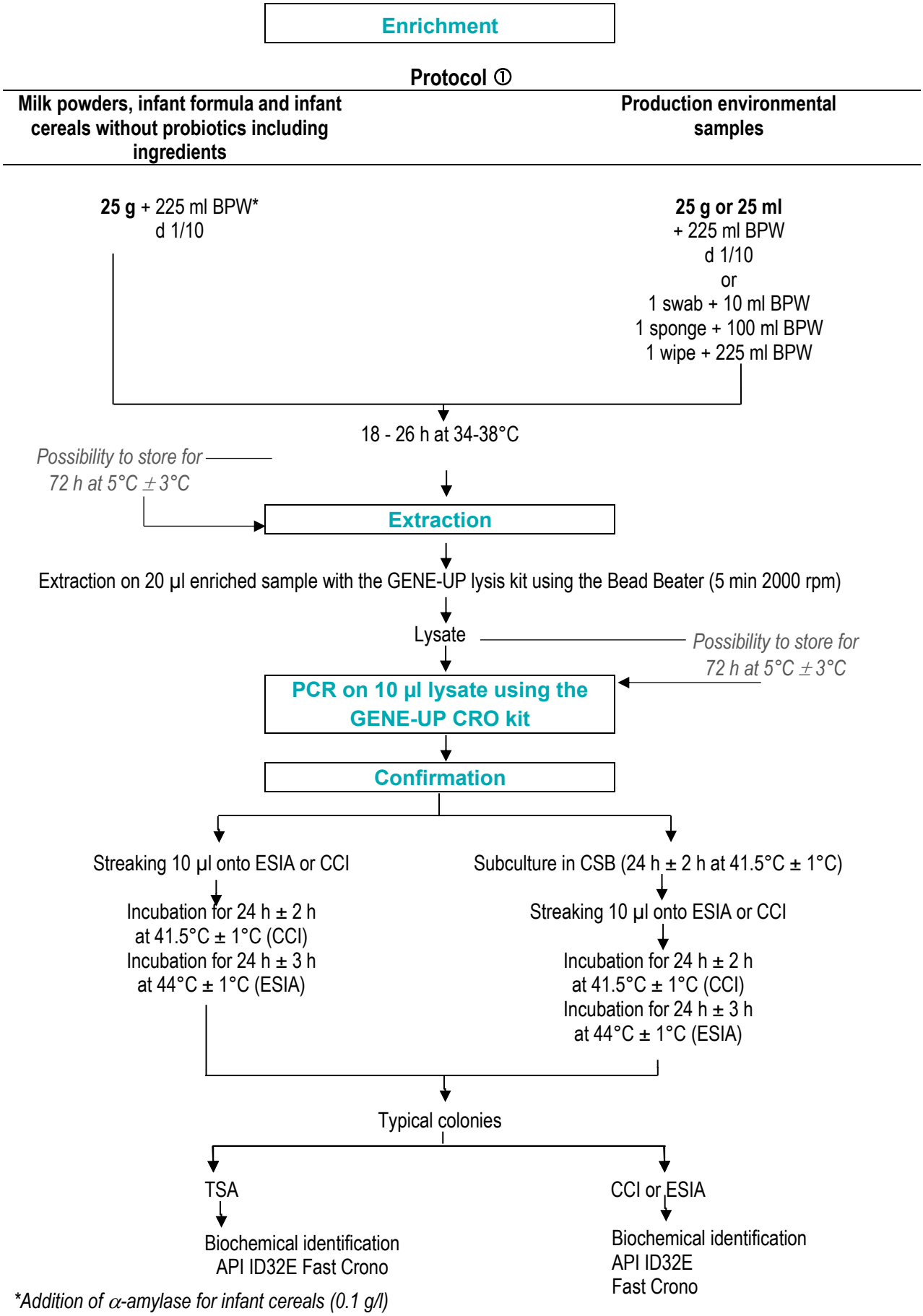
The data and interpretations comply with the ISO 16140-2 requirements. **The GENE-UP® *Cronobacter* spp. method is considered equivalent to the ISO 22964:2017 standard.**

Quimper, 23 February 2026

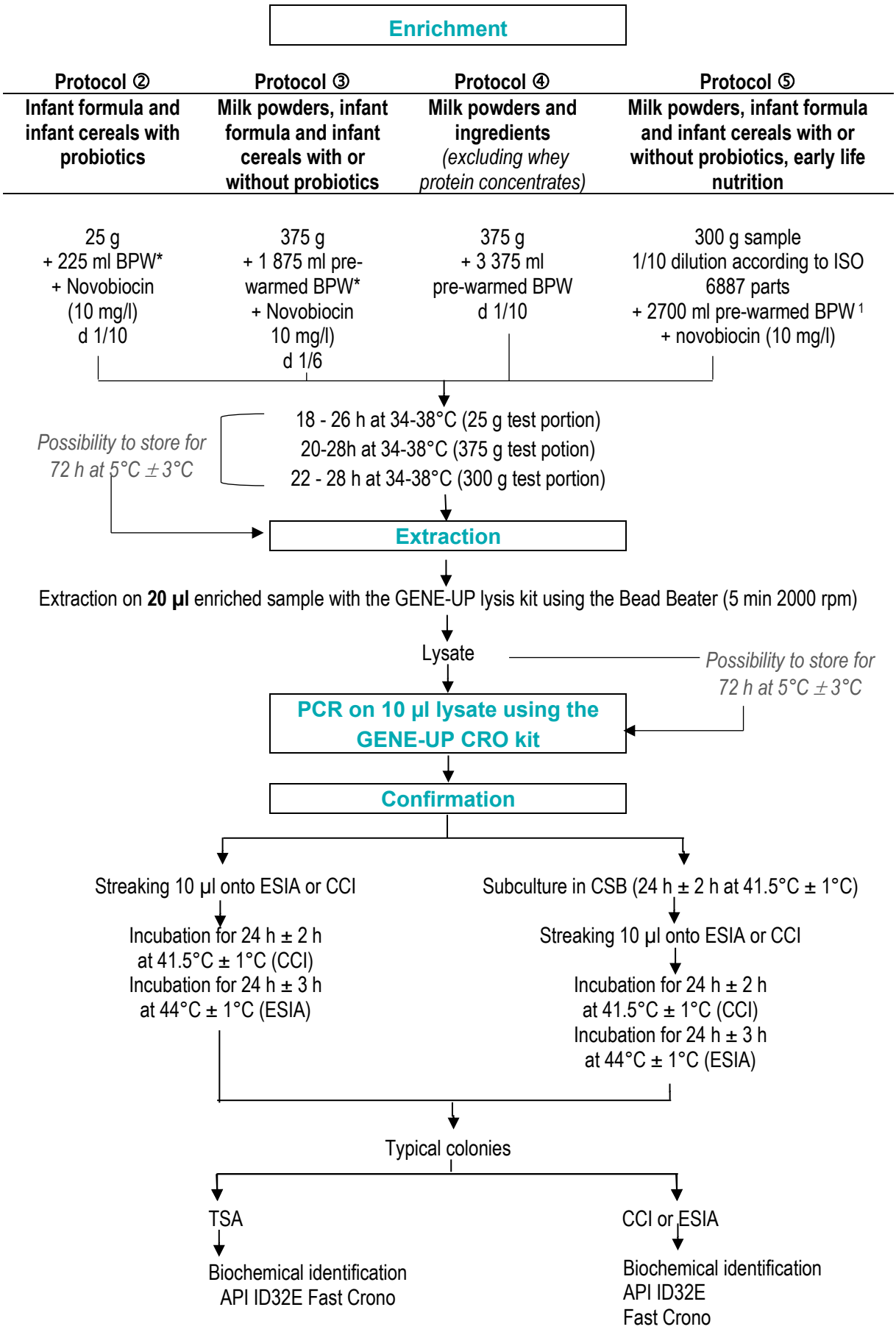
Astrid CARIOU
Manager
Method performance in food microbiology

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

Appendix 1 – Flow diagram of the alternative method: GENE-UP® *Cronobacter*

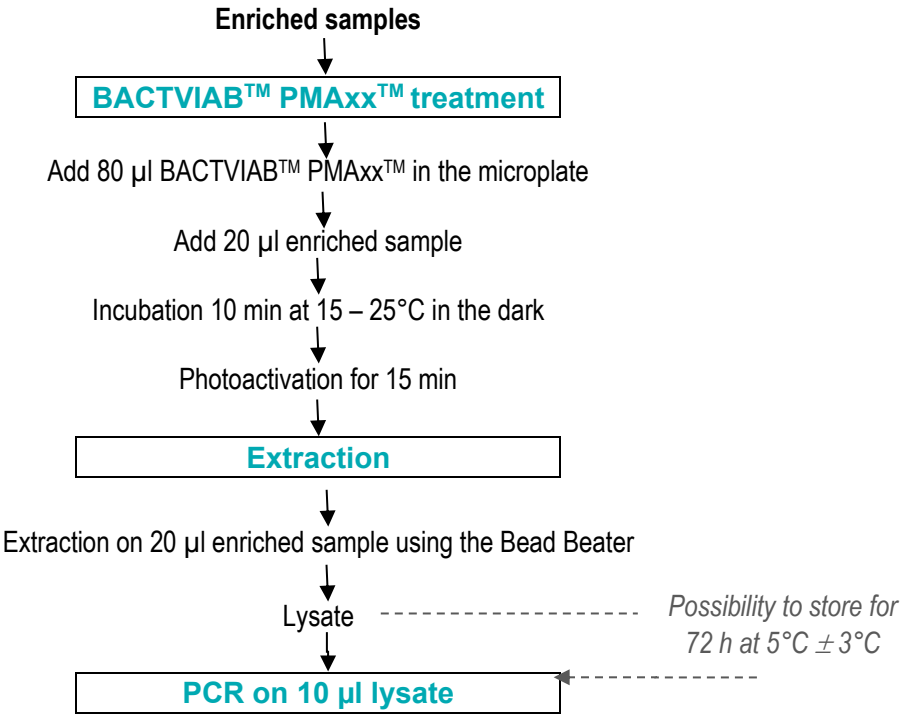


Addition of α-amylase for infant cereals (0.1 g/l)



[1] Addition of α-amylase for infant cereals (0.1 g/l)

BACTVIAB™ PMAxx™ treatment: Optional for categories 3, 4 and 5



Appendix 2 - Flow diagram of the reference method: ISO 22964:2017 - Microbiology of the food chain - Horizontal method for the detection of *Cronobacter* spp.

10 g + 90 ml BPW*

↓

Incubation 18 h ± 2 h
at 34 – 38°C

↓

0.1 ml + 10 ml CSB

↓

Incubation 24 h ± 2 h
at 41.5°C ± 1°C

↓

Streaking onto CCI Agar plate

↓

Incubation 24 h ± 2 h
at 41.5°C ± 1°C

↓

Confirmatory test on one typical colony, and four other colonies
(if the first one is negative (typical colony: blue to blue-green))

↓

Streaking onto TSA

↓

Incubation 18 h – 24 h
at 37°C ± 1°C

↓

Biochemical confirmation (oxidase, mini-galleries)

*Addition of α-amylase for infant cereals (0.1 g/l)

Appendix 3 – Artificial contamination of samples (Initial validation (2018) and extension studies (2018, 2019, 2020 and 2023))

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**7618**	**Infant formula without probiotics**	*C. sakazakii* Ad2394	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	①	+	1	a
2017	**7619**	**Infant formula without probiotics**	*C. sakazakii* Ad2395	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	①	+	1	a
2017	**7620**	**Infant formula without probiotics**	*C. sakazakii* Ad2400	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.0	①	+	1	a
2017	**7621**	**Infant formula without probiotics**	*C. sakazakii* Ad1446	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.2	①	+	1	a
2017	**7622**	**Infant formula without probiotics**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	+	1	a
2017	**7623**	**Infant formula without probiotics**	*C. sakazakii* Ad2394	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	①	+	1	a
2017	**7795**	**Infant formula without probiotics**	*C. sakazakii* Ad893	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	4.7	①	+	1	a
2017	**7796**	**Infant formula without probiotics**	*C. sakazakii* Ad2378	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.2	①	+	1	a
2017	**7799**	**Infant formula without probiotics**	*C. sakazakii* Ad893	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	4.7	①	-	1	a
2017	**7801**	**Infant formula without probiotics**	*C. sakazakii* Ad2396	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	①	+	1	a
2017	**7802**	**Infant formula without probiotics**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.1	①	+	1	a
2017	**9128**	**Infant formula without probiotics**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	①	+	1	a
2017	**9129**	**Infant formula without probiotics**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	①	-	1	a
2017	**7624**	**Infant cereals without probiotics**	*C. sakazakii* Ad2395	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	①	+	1	b

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**7625**	**Infant cereals without probiotics**	*C. sakazakii* Ad2400	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.0	①	+	1	b
2017	**7626**	**Infant cereals without probiotics**	*C. sakazakii* Ad1446	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.2	①	-	1	b
2017	**7627**	**Infant cereals without probiotics**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	-	1	b
2017	**7628**	**Infant cereals without probiotics**	*C. sakazakii* Ad2394	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	①	+	1	b
2017	**7629**	**Infant cereals without probiotics**	*C. sakazakii* Ad2395	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	①	+	1	b
2017	**7630**	**Infant cereals without probiotics**	*C. sakazakii* Ad2400	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.0	①	+	1	b
2017	**7631**	**Infant cereals without probiotics**	*C. sakazakii* Ad1446	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.2	①	+	1	b
2017	**7797**	**Infant cereals without probiotics**	*C. muytjensis* E888	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	+	1	b
2017	**7798**	**Infant cereals without probiotics**	*C. sakazakii* Ad893	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	4.7	①	+	1	b
2017	**7800**	**Infant cereals without probiotics**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.1	①	+	1	b
2017	**8455**	**Infant cereals without probiotics**	*C. muytjensis* E769	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.0	①	-	1	b
2017	**8456**	**Infant cereals without probiotics**	*C. sakazakii* Ad2341	Wheat starch	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	①	-	1	b
2017	**9130**	**Infant cereals without probiotics**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	①	+	1	b
2017	**9131**	**Infant cereals without probiotics**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	①	+	1	b
2017	**7632**	**Lactoserum**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	+	1	c
2017	**7633**	**Milk proteins**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	+	1	c

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**7634**	**Lactose**	*C. sakazakii* Ad2394	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	①	+	1	c
2017	**7635**	**Caseinate**	*C. sakazakii* Ad2395	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	①	+	1	c
2017	**7636**	**Lactoserum proteins concentrate**	*C. sakazakii* Ad2400	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.0	①	+	1	c
2017	**7637**	**Maltodextrin**	*C. sakazakii* Ad1446	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.2	①	+	1	c
2017	**7638**	**Lactoserum proteins concentrate**	*C. sakazakii* Ad1420	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	①	-	1	c
2017	**7803**	**Lactoserum**	*C. malonaticus* E752	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.1	①	-	1	c
2017	**7804**	**Lactoserum**	*C. sakazakii* Ad2381	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.7	①	-	1	c
2017	**7805**	**Corn flour**	*C. sakazakii* Ad2383	Environmental sample	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	①	+	1	c
2017	**7806**	**Milk powder (ingredient)**	*C. sakazakii* Ad2359	Environmental sample	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.7	①	+	1	c
2017	**8458**	**Lactose**	*C. turincensis* Ad1445	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	①	+	1	c
2017	**8459**	**Whey protein concentrate**	*C. sakazakii* Ad2349	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.0	①	+	1	c
2018	**2609**	**Skim milk powder**	*C. muytjensis* E769	Milk powder	Seeding lyophilized strain 1 wees at room temperature	/	/	1.0	①	+	1	c
2018	**2610**	**Whole milk powder**	*C. muytjensis* E769	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	①	+	1	c
2018	**2611**	**Skim milk powder**	*C. muytjensis* E769	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	①	+	1	c
2018	**2612**	**Skim milk powder**	*C. muytjensis* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	①	+	1	c
2018	**2613**	**Skim milk powder**	*C. muytjensis* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	①	+	1	c

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							Enume-ration	Mean				
2018	**2614**	**Skim milk powder**	*C. muytjensis* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	①	+	1	c
2017	**8027**	**Infant formula with probiotics (3.6x10^2 CFU/g)**	*C. sakazakii* Ad2370	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	②	+	2	a
2017	**8028**	**Infant formula with probiotics (<10 CFU/g)**	*C. sakazakii* Ad2370	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	②	+	2	a
2017	**8029**	**Infant formula with probiotics (1.3x10^5 CFU/g)**	*C. sakazakii* Ad2370	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	②	+	2	a
2017	**8030**	**Infant formula with probiotics (<10 CFU/g)**	*C. sakazakii* Ad2350	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	②	+	2	a
2017	**8031**	**Infant formula with probiotics (1.8x10^5 CFU/g)**	*C. sakazakii* Ad2350	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	②	+	2	a
2017	**8032**	**Infant formula with probiotics (3.0x10^4 CFU/g)**	*C. sakazakii* Ad2348	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.1	②	+	2	a
2017	**8033**	**Infant formula with probiotics (4.8x10^5 CFU/g)**	*C. sakazakii* Ad2348	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.1	②	+	2	a
2017	**8131**	**Infant formula with probiotics (5.6x10^5 CFU/g)**	*C. dublinensis* DSM18705	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.4	②	-	2	a
2017	**8132**	**Infant formula with probiotics (1.2x10^7 CFU/g)**	*C. dublinensis* DSM18705	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.4	②	-	2	a
2017	**8133**	**Infant formula with probiotics (4.3x10^5 CFU/g)**	*C. sakazakii* Ad2351	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.4	②	+	2	a

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			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**8134**	**Infant formula with probiotics (6.8x10^5 CFU/g)**	*C. sakazakii* Ad2351	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.4	②	+	2	a
2017	**8135**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	*C. sakazakii* Ad2352	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	a
2017	**8136**	**Infant formula with probiotics (6.8x10^5 CFU/g)**	*C. sakazakii* Ad2352	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	a
2017	**8137**	**Infant formula with probiotics (7.5x10^5 CFU/g)**	*C. sakazakii* Ad2356	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	②	+	2	a
2017	**8138**	**Infant formula with probiotics (8.6x10^5 CFU/g)**	*C. sakazakii* Ad2361	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	a
2017	**8448**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	②	+	2	a
2017	**8449**	**Infant formula with probiotics (<10 CFU/g)**	*C. sakazakii* Ad2349	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.0	②	-	2	a
2017	**8450**	**Infant formula with probiotics (7.0x10^5 CFU/g)**	*C. muytjensis* E769	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.0	②	-	2	a
2017	**9610**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	*C. sakazakii* Ad940	Dairy product	Seeding lyophilized strain 1 weeks at room temperature	/	/	1.6	②	+	2	a
2017	**9611**	**Infant formula with probiotics (5.9x10^5 CFU/g)**	*C. sakazakii* Ad940	Dairy product	Seeding lyophilized strain 1 weeks at room temperature	/	/	1.6	②	+	2	a

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			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**8034**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	*C. sakazakii* Ad2370	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	②	-	2	b
2017	**8035**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	*C. sakazakii* Ad2370	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.6	②	+	2	b
2017	**8036**	**Infant cereals with probiotics (1.7x10^4 CFU/g)**	*C. sakazakii* Ad2350	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	②	-	2	b
2017	**8037**	**Infant cereals with probiotics (2.5x10^5 CFU/g)**	*C. sakazakii* Ad2350	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	②	+	2	b
2017	**8038**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	*C. sakazakii* Ad2350	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.3	②	+	2	b
2017	**8039**	**Infant cereals with probiotics (6.7x10^5 CFU/g)**	*C. sakazakii* Ad2348	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.1	②	+	2	b
2017	**8040**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	*C. sakazakii* Ad2348	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.1	②	+	2	b
2017	**8041**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	*C. sakazakii* Ad2348	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.1	②	+	2	b
2017	**8139**	**Infant cereals with probiotics (6.7x10^6 CFU/g)**	*C. sakazakii* Ad2361	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	b
2017	**8140**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	*C. sakazakii* Ad2361	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	b

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			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**8141**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	*C. sakazakii* Ad2356	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	②	+	2	b
2017	**8142**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	*C. sakazakii* Ad2356	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.7	②	+	2	b
2017	**8143**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	*C. sakazakii* Ad2352	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	+	2	b
2017	**8144**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	*C. sakazakii* Ad2351	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.4	②	+	2	b
2017	**8145**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	*C. dublinensis* DSM18705	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	<0.4	②	-	2	b
2017	**8451**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	*C. sakazakii* Ad2341	Wheat starch	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.0	②	-	2	b
2017	**8452**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	*C. sakazakii* Ad704	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.7	②	-	2	b
2017	**8453**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	②	-	2	b
2017	**8454**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	*C. sakazakii* Ad2349	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	3.0	②	+	2	b
2017	**9126**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	②	+	2	b

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			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2017	**9127**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	0.7	②	+	2	b
2018	**2589**	**Skim milk powder**	*C. muytjensii* E769	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2590**	**Whole milk powder**	*C. muytjensii* E769	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2592**	**Skim milk powder**	*C. muytjensii* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	③	-	3	a
2018	**2593**	**Skim milk powder**	*C. muytjensii* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	③	+	3	a
2018	**2594**	**Skim milk powder**	*C. muytjensii* E888	Milk powder	Seeding lyophilized strain 1 week at room temperature	/	/	<0.25	③	-	3	a
2018	**2595**	**Infant cereals without probiotics**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2596**	**Infant cereals without probiotics**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2597**	**Infant cereals without probiotics**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2598**	**Infant cereals without probiotics**	*C. turicensis* Ad1445	Infant formula	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2599**	**Infant cereals without probiotics**	*C. sakazakii* Ad1418	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	1.25	③	+	3	a
2018	**2600**	**Infant cereals without probiotics**	*C. sakazakii* Ad1418	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	1.25	③	+	3	a
2018	**2601**	**Infant cereals without probiotics**	*C. sakazakii* Ad1418	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	1.25	③	+	3	a
2018	**2602**	**Infant formula without probiotics**	*C. sakazakii* Ad2367	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	10.0	③	+	3	a
2018	**2604**	**Infant formula without probiotics**	*C. sakazakii* Ad2367	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	10.0	③	+	3	a

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2018	**2606**	**Infant formula without probiotics**	*C. sakazakii* Ad2380	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	+	3	a
2018	**2607**	**Infant formula without probiotics**	*C. sakazakii* Ad2380	Environmental sample from dairy industry	Seeding lyophilized strain 1 week at room temperature	/	/	1.0	③	-	3	a
2018	**3469**	**Skim milk powder**	*C. sakazakii* Ad831	Milk powder	Spiking HT 8min 56°C	1,68	6-4-3-4-6	4.6	③	+	3	a
2018	**3470**	**Skim milk powder**	*C. sakazakii* Ad935	Dairy product	Spiking HT 8min 56°C	1,00	5-1-3-1-4	2.8	③	+	3	a
2018	**3471**	**Infant formula without probiotics**	*C. sakazakii* Ad2411	Infant formula	Spiking HT 8min 56°C	1,48	3-4-4-2-4	3.4	③	+	3	a
2018	**3472**	**Infant formula without probiotics**	*C. sakazakii* Ad2411	Infant formula	Spiking HT 8min 56°C	1,48	3-4-4-2-4	3.4	③	+	3	a
2018	**3473**	**Infant formula without probiotics**	*C. sakazakii* Ad941	Dairy product	Spiking HT 8min 56°C	1,70	3-5-5-3-9	5.0	③	+	3	a
2018	**2620**	**Infant formula with probiotics ($7.2x10^4$ CFU/g)**	*C. sakazakii* Ad2353	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	4.0	③	+	3	b
2018	**2623**	**Infant formula with probiotics ($6.1x10^6$ CFU/g)**	*C. sakazakii* Ad2353	Infant formula	Seeding lyophilized strain 2 weeks at room temperature	/	/	4.0	③	+	3	b
2018	**2625**	**Infant formula with probiotics ($5.1x10^5$ CFU/g)**	*C. sakazakii* SU12-116	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	③	+	3	b
2018	**2626**	**Infant formula with probiotics ($4.7x10^5$ CFU/g)**	*C. sakazakii* SU12-116	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	③	+	3	b
2018	**2627**	**Infant formula with probiotics ($1.1x10^6$ CFU/g)**	*C. sakazakii* SU12-116	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	③	+	3	b
2018	**2628**	**Infant formula with probiotics ($1.4x10^4$ CFU/g)**	*C. sakazakii* SU12-116	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	③	+	3	b

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2018	**2629**	**Infant formula with probiotics ($3.0x10^4$ CFU/g)**	*C. sakazakii* SU12-116	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	③	+	3	b
2018	**2630**	**Infant cereals with probiotics ($1.4x10^5$ CFU/g)**	*C. sakazakii* Ad2393	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.9	③	+	3	b
2018	**2631**	**Infant cereals with probiotics ($2.1x10^5$ CFU/g)**	*C. sakazakii* Ad2393	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.9	③	+	3	b
2018	**2632**	**Infant cereals with probiotics ($7.8x10^5$ CFU/g)**	*C. sakazakii* Ad2393	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.9	③	+	3	b
2018	**2633**	**Infant cereals with probiotics ($2.5x10^5$ CFU/g)**	*C. sakazakii* Ad2393	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.9	③	+	3	b
2018	**2634**	**Infant cereals with probiotics ($4.5x10^4$ CFU/g)**	*C. sakazakii* Ad2393	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.9	③	+	3	b
2018	**2635**	**Infant cereals with probiotics ($9.1x10^3$ CFU/g)**	*C. sakazakii* SU12-74	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.9	③	+	3	b
2018	**2636**	**Infant cereals with probiotics ($3.2x10^6$ CFU/g)**	*C. sakazakii* SU12-74	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.9	③	+	3	b
2018	**2637**	**Infant cereals with probiotics ($1.3x10^5$ CFU/g)**	*C. sakazakii* SU12-74	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.9	③	+	3	b
2018	**2638**	**Infant cereals with probiotics ($1.4x10^6$ CFU/g)**	*C. sakazakii* SU12-74	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.9	③	+	3	b

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							Enume-ration	Mean				
2018	**2639**	**Infant cereals with probiotics (2.2x10^5 CFU/g)**	*C. sakazakii* SU12-74	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.9	③	+	3	b
2018	**3101**	**Starch**	*C. sakazakii* Ad916	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3102**	**Caseinate**	*C. sakazakii* Ad916	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3103**	**Corn starch**	*C. sakazakii* Ad916	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3104**	**Wheat starch**	*C. sakazakii* Ad916	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3106**	**Lactose**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3107**	**Maltodextrin**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3108**	**Whey**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3109**	**Starch**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3110**	**Caseinate**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3111**	**Corn starch**	*C. sakazakii* Ad2286	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.8	④	+	3	c1
2018	**3112**	**Wheat starch**	*C. sakazakii* Ad2286	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.8	④	+	3	c1
2018	**3113**	**Corn starch**	*C. sakazakii* Ad2286	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.8	④	+	3	c1
2018	**3114**	**Lactose**	*C. sakazakii* Ad2286	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	0.8	④	+	3	c1
2018	**3123**	**Whey**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1
2018	**3124**	**Maltodextrin**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2018	**3125**	**Maltodextrin**	*C. sakazakii* Ad916	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3126**	**Wheat starch**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1
2018	**3127**	**Caseinate**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1
2018	**3128**	**Corn starch**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1
2018	**3129**	**Lactose**	*C. sakazakii* Ad2288	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.3	④	+	3	c1
2018	**3130**	**Corn starch**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3131**	**Starch**	*C. sakazakii* Ad946	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.4	④	+	3	c1
2018	**3132**	**Maltodextrin**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	④	+	3	c1
2018	**3133**	**Whey**	*C. sakazakii* Ad2357	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	④	+	3	c1
2018	**3134**	**Starch**	*C. sakazakii* Ad2357	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	④	+	3	c1
2018	**3135**	**Lactose**	*C. sakazakii* Ad2344	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	④	+	3	c1
2018	**3136**	**Caseinate**	*C. sakazakii* Ad2344	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	④	+	3	c1
2018	**3474**	**Maltodextrin**	*C. sakazakii* Ad831	Milk powder	Spiking HT 8min 56°C	1,68	6-4-3-4-6	4.6	④	+	3	c1
2018	**3475**	**Whey**	*C. sakazakii* Ad935	Dairy product	Spiking HT 8min 56°C	1,00	5-1-3-1-4	2.8	④	+	3	c1
2019	**5400**	**Milk powder 0% fat**	*C. malonaticus* DSM18702	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5402**	**Milk powder 0% fat**	*C. sakazakii* Ad2412	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5403**	**Milk powder 0% fat**	*C. sakazakii* Ad2412	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2019	**5405**	**Milk powder 26% fat**	C. *malonaticus* DSM18702	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5406**	**Milk powder 26% fat**	C. *sakazakii* Ad2412	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5407**	**Milk powder 14% fat**	C. *sakazakii* Ad2412	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5408**	**Milk powder 14% fat**	C. *sakazakii* Ad936	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5410**	**Milk powder 26% fat**	C. *sakazakii* Ad2412	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5411**	**Milk powder 26% fat**	C. *sakazakii* Ad936	Dairy product	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2019	**5412**	**Milk powder 0,8% fat**	C. *malonaticus* DSM18702	Milk powder	Seeding lyophilized strain 2 weeks at room temperature	/	/	3	④	+	3	c2
2018	**386**	**Water after cleaning**	*C. sakazakii* Ad2289	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-7-5-2	4.4	①	+	4	a
2018	**387**	**Water after cleaning**	*C. sakazakii* Ad2342	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-1-5-4-1	2.6	①	+	4	a
2018	**388**	**Water after cleaning**	*C. sakazakii* Ad2360	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	3-6-5-4-5	4.6	①	+	4	a
2018	**389**	**Water before cleaning**	*C. sakazakii* Ad2379	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-4-1-1	2.8	①	-	4	a
2018	**390**	**Water before cleaning**	*C. sakazakii* Ad2289	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-7-5-2	4.4	①	-	4	a
2018	**391**	**Water before cleaning**	*C. sakazakii* Ad2342	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-1-5-4-1	2.6	①	-	4	a
2018	**392**	**Water before cleaning**	*C. sakazakii* Ad2360	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	3-6-5-4-5	4.6	①	+	4	a
2018	**2465**	**Process water (rinse)**	*C. sakazakii* Ad1226	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	8-6-8-10-6	7.6	①	+	4	a
2018	**2466**	**Process water (rinse)**	*C. sakazakii* Ad1226	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	8-6-8-10-6	7.6	①	+	4	a

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2018	**2467**	**Process water (rinse)**	*C. sakazakii* Ad1226	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	8-6-8-10-6	7.6	①	+	4	a
2018	**2468**	**Process water (rinse)**	*C. sakazakii* Ad2355	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	11-7-5-9-8	8.0	①	+	4	a
2018	**2469**	**Process water (rinse)**	*C. sakazakii* Ad2355	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	11-7-5-9-8	8.0	①	+	4	a
2018	**2470**	**Process water (rinse)**	*C. sakazakii* Ad2355	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	11-7-5-9-8	8.0	①	+	4	a
2018	**3137**	**Dust from vacuum**	*C. sakazakii* Ad2357	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	①	+	4	b
2018	**3138**	**Dust from vacuum**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	①	+	4	b
2018	**3139**	**Dust from vacuum**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	①	+	4	b
2018	**3140**	**Dust from vacuum**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	①	+	4	b
2018	**3141**	**Dust from vacuum**	*C. sakazakii* Ad2357	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	①	+	4	b
2018	**3142**	**Dust from vacuum**	*C. sakazakii* Ad2344	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	①	+	4	b
2018	**3143**	**Dust from vacuum**	*C. sakazakii* Ad2344	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	①	+	4	b
2018	**3144**	**Dust from vacuum**	*C. sakazakii* Ad2344	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	2.5	①	+	4	b
2018	**3145**	**Dust from vacuum**	*C. sakazakii* Ad2357	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	6.0	①	+	4	b
2018	**3146**	**Dust from vacuum**	*C. sakazakii* SU 12-7	Environmental sample from dairy industry	Seeding lyophilized strain 2 weeks at room temperature	/	/	1.5	①	+	4	b
2018	**393**	**Wipe after cleaning**	*C. sakazakii* Ad2289	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-7-5-2	4.4	①	-	4	c
2018	**394**	**Wipe after cleaning**	*C. sakazakii* Ad2342	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-1-5-4-1	2.6	①	-	4	c

Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measure-ment	Inoculation Level CFU/sample					
							Enume-ration	Mean				
2018	**395**	**Wipe before cleaning**	*C. sakazakii* Ad2360	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	3-6-5-4-5	4.6	①	+	4	c
2018	**396**	**Wipe before cleaning**	*C. sakazakii* Ad2360	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	3-6-5-4-5	4.6	①	+	4	c
2018	**397**	**Wipe before cleaning**	*C. sakazakii* Ad2379	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-4-1-1	2.8	①	-	4	c
2018	**398**	**Wipe before cleaning**	*C. sakazakii* Ad2379	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-4-1-1	2.8	①	-	4	c
2018	**399**	**Wipe before cleaning**	*C. sakazakii* Ad2289	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-7-5-2	4.4	①	+	4	c
2018	**400**	**Wipe before cleaning**	*C. sakazakii* Ad2342	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-1-5-4-1	2.6	①	+	4	c
2018	**2159**	**Wipe after cleaning**	*C. sakazakii* Ad2406	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-6-6-5	5.0	①	+	4	c
2018	**2160**	**Wipe after cleaning**	*C. sakazakii* Ad2406	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-6-6-5	5.0	①	+	4	c
2018	**2161**	**Wipe after cleaning**	*C. sakazakii* Ad2406	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	5-3-6-6-5	5.0	①	+	4	c
2018	**2162**	**Wipe after cleaning**	*C. sakazakii* Ad2408	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	6-1-2-4-2	3.0	①	+	4	c
2018	**2163**	**Wipe after cleaning**	*C. sakazakii* Ad2408	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	6-1-2-4-2	3.0	①	+	4	c
2018	**2164**	**Wipe before cleaning**	*C. sakazakii* Ad2409	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-2-1-4-2	2.2	①	+	4	c
2018	**2165**	**Wipe before cleaning**	*C. sakazakii* Ad2409	Environmental sample from dairy industry	Seeding 48h 2-8°C	/	2-2-1-4-2	2.2	①	+	4	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**2562**	**Infant formula with probiotics (*Bifidobacterium lactis* 3.6x10^{6}CFU/g)**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	b
2020	**2563**	**Infant formula with probiotics (*Bifidobacterium lactis* 5.2x10^{5}CFU/g)**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	b
2020	**2564**	**Infant formula with probiotics (*Bifidobacterium breve* 9.7x10^{6}CFU/g)**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	b
2020	**2565**	**Infant formula with probiotics (*Bifidobacterium lactis* 1.4x10^{4}CFU/g)**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	b
2020	**2566**	**Infant formula with probiotics (*Lactobacillus reuteri* 6.6x10^{4}CFU/g)**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	b
2020	**2567**	**Infant formula**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	a
2020	**2568**	**Infant formula**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	a
2020	**2569**	**Infant formula**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	a
2020	**2570**	**Infant formula**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	a
2020	**2571**	**Infant formula**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	a

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**2572**	**Infant cereals**	*C. sakazakii* Ad1430	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.7	③	+	3	a
2020	**2573**	**Infant cereals**	*C. sakazakii* Ad2382	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.0	③	+	3	a
2020	**2574**	**Infant cereals**	*C. dublinensis* DSM18705	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2575**	**Infant cereals**	*C. malonaticus* DSM18702	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2576**	**Infant cereals**	*C. dublinensis* DSM18705	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2577**	**Whole milk powder**	*C. malonaticus* DSM18702	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2578**	**Skim milk powder**	*C. dublinensis* DSM18705	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2579**	**Half-skim milk powder**	*C. malonaticus* DSM18702	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2580**	**Skim milk powder**	*C. dublinensis* DSM18705	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a
2020	**2581**	**Skim milk powder**	*C. malonaticus* DSM18702	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	③	+	3	a

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**2741**	**Milk powder**	*C. sakazakii* Ad2341	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.5	④	+	3	c
2020	**2742**	**Milk powder**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2743**	**Whey**	*C. sakazakii* Ad2848	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	④	+	3	c
2020	**2744**	**Whey**	*C. muytjensii* E769	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.5	④	+	3	c
2020	**2745**	**Whey**	*C. muytjensii* E769	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.5	④	+	3	c
2020	**2746**	**Non-fat dry milk**	*C. sakazakii* Ad2341	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.5	④	+	3	c
2020	**2747**	**Non-fat dry milk**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2748**	**Caseinate**	*C. sakazakii* Ad2848	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	④	+	3	c
2020	**2749**	**Maltodextrin**	*C. sakazakii* Ad2341	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.5	④	+	3	c
2020	**2750**	**Non-fat dry milk**	*C. muytjensii* E769	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.5	④	+	3	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**2751**	**Whey**	*C. sakazakii* Ad2341	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.5	④	+	3	c
2020	**2752**	**Whey**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2753**	**Whey**	*C. sakazakii* Ad2848	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	④	+	3	c
2020	**2754**	**Whey**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2755**	**Whey**	*C. muytjensii* E769	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.5	④	+	3	c
2020	**2756**	**Starch**	*C. sakazakii* Ad2341	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.5	④	+	3	c
2020	**2757**	**Starch**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2758**	**Starch**	*C. sakazakii* Ad2848	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	④	+	3	c
2020	**2759**	**Maltodextrin**	*C. sakazakii* Ad935	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.6	④	+	3	c
2020	**2760**	**Maltodextrin**	*C. muytjensii* E769	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.5	④	+	3	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**3098**	**Corn starch**	*C. sakazakii* Ad953	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.8	④	+	3	c
2020	**3099**	**Maltodextrin**	*C. sakazakii* Ad953	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.8	④	+	3	c
2020	**3100**	**Natrium caseinate**	*C. sakazakii* Ad953	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.8	④	+	3	c
2020	**3101**	**Whey**	*C. sakazakii* Ad953	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.8	④	+	3	c
2020	**3102**	**Non-fat dry milk**	*C. sakazakii* Ad2396	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	5.0	④	+	3	c
2020	**3103**	**Lactose**	*C. sakazakii* Ad2396	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	5.0	④	+	3	c
2020	**3104**	**Whey**	*C. sakazakii* Ad953	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.8	④	+	3	c
2020	**3105**	**Whey**	*C. sakazakii* Ad2396	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	5.0	④	-	3	c
2020	**3106**	**Whey**	*C. sakazakii* Ad2291	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	4.0	④	+	3	c
2020	**3107**	**Maltodextrin**	*C. sakazakii* Ad2291	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	4.0	④	+	3	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**3108**	**Infant cereals cocoa (*Bifidobacterium lactis* 3.0x10⁶CFU/g)**	*C. sakazakii* Ad2849	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	③	+	3	b
2020	**3109**	**Infant cereals oats and wheat (*Bifidobacterium lactis* 5.6x10⁶CFU/g)**	*C. sakazakii* Ad2849	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	③	+	3	b
2020	**3110**	**Infant cereals honey (*Bifidobacterium lactis* 1.0x10⁷CFU/g)**	*C. sakazakii* Ad2849	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	③	+	3	b
2020	**3111**	**Infant cereals chestnut biscuit (*Bifidobacterium lactis* 4.0x10⁵CFU/g)**	*C. sakazakii* Ad2849	Vegetables	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	2.1	③	+	3	b
2020	**3112**	**Infant cereals 5 cereals (*Bifidobacterium lactis* 3.5x10⁵CFU/g)**	*C. sakazakii* Ad2372	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.6	③	+	3	b
2020	**3113**	**Infant cereals biscuit (*Bifidobacterium lactis* 4.5x10⁵CFU/g)**	*C. sakazakii* Ad2372	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.6	③	+	3	b
2020	**3114**	**Infant cereals vanilla (*Bifidobacterium lactis* 4.5x10⁵CFU/g)**	*C. sakazakii* Ad2372	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	1.6	③	+	3	b
2020	**3115**	**Infant formula with probiotics (*Lactobacillus reuteri* 4.4x10⁵CFU/g)**	*C. sakazakii* Ad2396	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	5.0	③	-	3	b
2020	**3116**	**Infant formula with probiotics (*Bifidobacterium infantis* 1.2x10⁶CFU/g)**	*C. sakazakii* Ad2291	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	4.0	③	+	3	b
2020	**3117**	**Infant formula with probiotics (*Lactobacillus reuteri* 2.3x10⁶CFU/g)**	*C. sakazakii* Ad2291	Dairy product	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	4.0	③	-	3	b

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)											
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**3832**	**Dusts**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	3.0	①	+	4	b
2020	**3833**	**Dusts**	*C. sakazakii* Ad2383	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	/	/	0.9	①	+	4	b
2020	**3834**	**Infant formula with probiotics (*Bifidobacterium infantis* 4.4x10^{5}CFU/g)**	*C. sakazakii* Ad2373	Infant formula	HT 8 min 56°C	2,2	1-0-1-1-2	1.0	③	+	3	b
2020	**3835**	**Infant formula with probiotics (*Lactobacillus reuterii* 1.2x10^{6}CFU/g)**	*C. sakazakii* Ad2373	Infant formula	HT 8 min 56°C	2,2	1-0-1-1-2	1.0	③	+	3	b
2020	**3836**	**Starch**	*C. sakazakii* Ad2285	Dairy product	HT 8 min 56°C	2,0	2-1-0-1-3	1.4	④	+	3	c
2020	**3837**	**Starch**	*C. sakazakii* Ad2285	Dairy product	HT 8 min 56°C	2,0	2-1-0-1-3	1.4	④	+	3	c
2020	**4040**	**Process water (dairy environment)**	*C. sakazakii* Ad2365	Dairy environment	Seeding 48h at 3±2°C	/	1-2-3-2-0	1.6	①	+	4	a
2020	**4041**	**Process water (dairy environment)**	*C. sakazakii* Ad1707	Dairy environment	Seeding 48h at 3±2°C	/	0-1-1-3-3	1.6	①	+	4	a
2020	**4042**	**Process water (dairy environment)**	*C. sakazakii* Ad2365	Dairy environment	Seeding 48h at 3±2°C	/	1-2-3-2-0	1.6	①	+	4	a
2020	**4043**	**Process water (dairy environment)**	*C. sakazakii* Ad1707	Dairy environment	Seeding 48h at 3±2°C	/	0-1-1-3-3	1.6	①	+	4	a
2020	**4114**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2343	Dairy environment	Seeding 48h at 3±2°C	/	0-5-0-8-2	3.0	①	+	4	c
2020	**4115**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2343	Dairy environment	Seeding 48h at 3±2°C	/	0-5-0-8-2	3.0	①	+	4	c
2020	**4116**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2392	Dairy environment	Seeding 48h at 3±2°C	/	2-4-4-1-3	2.8	①	+	4	c
2020	**4117**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2392	Dairy environment	Seeding 48h at 3±2°C	/	2-4-4-1-3	2.8	①	+	4	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**4118**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2362	Dairy environment	Seeding 48h at 3±2°C	/	1-4-2-3-3	2.6	①	-	4	c
2020	**4119**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2362	Dairy environment	Seeding 48h at 3±2°C	/	1-4-2-3-3	2.6	①	+	4	c
2020	**4282**	**Process water (dairy environment)**	*C. sakazakii* Ad963	Dairy product	Seeding 48h at 3±2°C	/	3-0-1-0-1	1.0	①	-	4	a
2020	**4283**	**Process water (dairy environment)**	*C. sakazakii* Ad963	Dairy product	Seeding 48h at 3±2°C	/	3-0-1-0-1	1.0	①	-	4	a
2020	**4284**	**Process water (dairy environment)**	*C. sakazakii* Ad944	Dairy product	Seeding 48h at 3±2°C	/	1-2-2-2-0	1.4	①	-	4	a
2020	**4285**	**Process water (dairy environment)**	*C. sakazakii* Ad944	Dairy product	Seeding 48h at 3±2°C	/	1-2-2-2-0	1.4	①	-	4	a
2020	**4286**	**Process water (dairy environment)**	*C. sakazakii* Ad944	Dairy product	Seeding 48h at 3±2°C	/	1-2-2-2-0	1.4	①	-	4	a
2020	**4287**	**Dusts (dairy environment)**	*C. sakazakii* Ad898	Dairy product	HT 8 min 56°C	1,6	3-3-1-2-1	2.0	①	-	4	b
2020	**4288**	**Vacuum cleaner filter (dairy environment)**	*C. sakazakii* Ad898	Dairy product	HT 8 min 56°C	1,6	3-3-1-2-1	2.0	①	+	4	b
2020	**4289**	**Vacuum cleaner filter (dairy environment)**	*C. sakazakii* Ad898	Dairy product	HT 8 min 56°C	1,6	3-3-1-2-1	2.0	①	+	4	b
2020	**4290**	**Vacuum cleaner filter (dairy environment)**	*C. sakazakii* Ad2290	Dairy product	HT 8 min 56°C	2,2	6-5-5-3-4	4.6	①	+	4	b
2020	**4291**	**Vacuum cleaner filter (dairy environment)**	*C. sakazakii* Ad2290	Dairy product	HT 8 min 56°C	2,2	6-5-5-3-4	4.6	①	+	4	b
2020	**4292**	**Process water (dairy environment)**	*C. sakazakii* Ad963	Dairy product	Seeding 48h at 3±2°C	/	3-0-1-0-1	1.0	①	-	4	a
2020	**4293**	**Process water (dairy environment)**	*C. sakazakii* Ad944	Dairy product	Seeding 48h at 3±2°C	/	1-2-2-2-0	1.4	①	-	4	a
2020	**4406**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2389	Environment	Seeding 48h at 3±2°C	/	0-0-0-1-2	0.6	①	+	4	c

EXTENSION STUDY (2020) (BACTVIAB™ PMAxx™ treatment for categories 3 and 4)												
Year of analysis	Sample N°	Product	Artificial contaminations						Protocol	Global result	Category	Type
			Strain	Origin	Injury protocol	Injury measurement	Inoculation level CFU/sample					
							Enumeration	Mean				
2020	**4407**	**Sponge (dairy environment)**	*C. sakazakii* Ad2389	Environment	Seeding 48h at 3±2°C	/	0-0-0-1-2	0.6	①	+	4	c
2020	**4408**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2397	Environment	Seeding 48h at 3±2°C	/	1-2-0-0-3	1.2	①	+	4	c
2020	**4409**	**Wipe after cleaning process (dairy environment)**	*C. sakazakii* Ad2397	Environment	Seeding 48h at 3±2°C	/	1-2-0-0-3	1.2	①	-	4	c
2020	**4410**	**Process water (dairy environment)**	*C. sakazakii* Ad2389	Environment	Seeding 48h at 3±2°C	/	0-0-0-1-2	0.6	①	+	4	a
2020	**4411**	**Process water (dairy environment)**	*C. sakazakii* Ad2397	Environment	Seeding 48h at 3±2°C	/	1-2-0-0-3	1.2	①	+	4	a
2020	**4623**	**Process water (dairy environment)**	*C. sakazakii* Ad2389	Environment	Seeding 48h at 3±2°C	/	5-3-3-3-2	3.2	①	-	4	a
2020	**4624**	**Process water (dairy environment)**	*C. sakazakii* Ad2397	Environment	Seeding 48h at 3±2°C	/	5-2-2-5-3	3.4	①	+	4	a
2020	**4675**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	Environment	HT 8 min 56°C	2,2	1-1-1-1-2	1.2	①	+	4	b
2020	**4676**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	Environment	HT 8 min 56°C	2,2	1-1-1-1-2	1.2	①	+	4	b
2020	**4677**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	Environment	HT 8 min 56°C	2,2	1-1-1-1-2	1.2	①	+	4	b
2020	**4678**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	Environment	HT 8 min 56°C	2,2	1-1-1-1-2	1.2	①	+	4	b
2020	**4679**	**Dusts (dairy environment)**	*C. sakazakii* Ad2399	Environment	HT 8 min 56°C	2,2	1-1-1-1-2	1.2	①	+	4	b
2020	**4680**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	Dairy product	HT 8 min 56°C	1,7	0-1-1-0-0	0.4	①	+	4	b
2020	**4681**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	Dairy product	HT 8 min 56°C	1,7	0-1-1-0-0	0.4	①	-	4	b
2020	**4682**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	Dairy product	HT 8 min 56°C	1,7	0-1-1-0-0	0.4	①	+	4	b
2020	**4683**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	Dairy product	HT 8 min 56°C	1,7	0-1-1-0-0	0.4	①	-	4	b
2020	**4684**	**Dusts (dairy environment)**	*C. sakazakii* Ad947	Dairy product	HT 8 min 56°C	1,7	0-1-1-0-0	0.4	①	+	4	b

EXTENSION STUDY (2023) Milk powders, infant formula and infant cereals with or without probiotics, Early life nutrition (300 g test portion)											
Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/sample Mean				
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	*C. muytjensii E888*	Milk powder	Seeding lyophilised strain 2 weeks at ambient temperature	2.8	⑤	+	5	a
2023	**1577**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	*C. sakazakii* Ad2407	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	0.1	⑤	-	5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0,8% fat)**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	2.3	⑤	+	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24,6% fat)**	*C. sakazakii* Ad2413	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.5	⑤	+	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	*C. sakazakii* Ad2412	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	0.5	⑤	+	5	a
2023	**1581**	**Poudre de lait infantile bio dès 6 mois (23,7% MG)**	**Infant formula (23,7% fat)**	*C. sakazakii* Ad2407	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	0.1	⑤	-	5	a
2023	**1582**	**Poudre de lait infantile 0 à 6 mois (23,5% MG)**	**Infant formula (23,5% fat)**	*C. sakazakii* Ad2407	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	0.1	⑤	-	5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	*C. sakazakii* Ad2341	Starch	Seeding lyophilised strain 2 weeks at ambient temperature	3.5	⑤	+	5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B. lactis*: 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 1,18.10³ CFU/g)**	*C. sakazakii* Ad2341	Starch	Seeding lyophilised strain 2 weeks at ambient temperature	3.5	⑤	+	5	b
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	*C. sakazakii* Ad2848	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	0.3	⑤	+	5	a

EXTENSION STUDY (2023) Milk powders, infant formula and infant cereals with or without probiotics, Early life nutrition (300 g test portion)											
Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/sample Mean				
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thickened powder**	*C. dublinensis* DSM18705	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.5	⑤	+	5	c
2023	**1768**	**Poudre infantile protéine de riz avec probiotiques (*B. lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B. lactis*: 2.73x10² CFU/g) (21.5% fat)**	*C. dublinensis* DSM18705	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.5	⑤	+	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	*C. malonaticus* E752	Baby food	Seeding lyophilised strain 2 weeks at ambient temperature	0.9	⑤	+	5	c
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	*C. malonaticus* E752	Baby food	Seeding lyophilised strain 2 weeks at ambient temperature	0.9	⑤	+	5	c
2023	**1771**	**Poudre de riz infantile 6-12 mois (23,3% MG)**	**Infant rice protein (23.3% fat)**	*C. sakazakii* Ad2359	Surface	Seeding lyophilised strain 2 weeks at ambient temperature	0.2	⑤	-	5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	*C. sakazakii* Ad2359	Surface	Seeding lyophilised strain 2 weeks at ambient temperature	0.2	⑤	+	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8% fat)**	*C. sakazakii* Ad2381	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.8	⑤	+	5	c
2023	**1774**	**Poudre infantile de protéine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	*C. sakazakii* Ad2381	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.8	⑤	+	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	*C. sakazakii* Ad3273	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	0.8	⑤	+	5	c

EXTENSION STUDY (2023) Milk powders, infant formula and infant cereals with or without probiotics, Early life nutrition (300 g test portion)											
Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/sample Mean				
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	*C. sakazakii* Ad3273	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	0.8	⑤	+	5	c
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10^5 UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B. lactis*: 8.91x10^5 CFU/g) (24.5% fat)**	*C. sakazakii* Ad2381	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.8	⑤	+	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10^5 UFC/g) (25% MG)**	**Infant formula with probiotics (*B. lactis*: 4.09x10^5 CFU/g) (25% fat)**	*C. sakazakii* Ad2381	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1.8	⑤	+	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10^6 UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B. lactis*: 1.36x10^6 CFU/g) (27.6% fat)**	*C. sakazakii* Ad2396	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1	⑤	+	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10^4 UFC/g) (26% MG)**	**Infant formula with probiotics (*B. lactis*: 3.36x10^4 CFU/g) (26% fat)**	*C. sakazakii* Ad2396	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1	⑤	+	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10^3 UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B. lactis*: 2.45x10^3 CFU/g) (28.2% fat)**	*C. sakazakii* Ad2396	Infant formula	Seeding lyophilised strain 2 weeks at ambient temperature	1	⑤	+	5	b
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10^6 UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 1.45x10^6 CFU/g)**	*C. sakazakii* Ad2849	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	1.2	⑤	+	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10^5 UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 4.41x10^5 CFU/g)**	*C. sakazakii* Ad2849	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	1.2	⑤	+	5	b

EXTENSION STUDY (2023) Milk powders, infant formula and infant cereals with or without probiotics, Early life nutrition (300 g test portion)											
Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/sample Mean				
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 1.09x10⁶ CFU/g)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.7	⑤	+	5	b
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	*C. sakazakii* Ad2848	Infant cereals	Seeding lyophilised strain 2 weeks at ambient temperature	0.6	⑤	+	5	a
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri*: 3.09x10⁶ CFU/g) (24.2% fat)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.7	⑤	+	5	b
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.4	⑤	+	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.4	⑤	+	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	*C. sakazakii* Ad944	Milk product	Seeding lyophilised strain 2 weeks at ambient temperature	1	⑤	+	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	*C. sakazakii* Ad944	Milk product	Seeding lyophilised strain 2 weeks at ambient temperature	1	⑤	+	5	a
2023	**2006**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice powder (25% fat)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.4	⑤	-	5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thickened powder**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.4	⑤	+	5	c

EXTENSION STUDY (2023) Milk powders, infant formula and infant cereals with or without probiotics, Early life nutrition (300 g test portion)											
Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Global result	Category	Type
				Strain	Origin	Injury protocol	Inoculation level/sample Mean				
2023	**2008**	**Céréales infantiles +6 mois quinoa / banane / prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 1.18x10³ CFU/g)**	*C. sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	2.7	⑤	+	5	b

Appendix 4 – Sensitivity study: raw data
(Initial validation (2018) and extension studies (2018, 2019, 2020 and 2023))

Results taking account all the confirmatory tests combined

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS *(up to 25 g) (Initial validation study, 2018)*																									
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
							BPW for 18 h at 34-38°C						BPW for 18 h at 37°C + 72 h at 5°C ± 3°C												
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result	Agree-ment	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agree-ment 72 h BPW	Agree-ment 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2017	**7618**	**Infant formula without probiotics**	①	+p	+	+	29.17	65.93	+	+	+	**PA**	28.72	65.95	+	29.07	66.37	+	+	+	+	**PA**	**PA**	1	a
2017	**7619**	**Infant formula without probiotics**	①	+p	+	+	28.87	65.94	+	+	+	**PA**	26.84	65.87	+	28.8	65.89	+	+	+	+	**PA**	**PA**	1	a
2017	**7620**	**Infant formula without probiotics**	①	+p	+	+	28.65	66.06	+	+	+	**PA**	28.4	66.08	+	28.29	65.87	+	+	+	+	**PA**	**PA**	1	a
2017	**7621**	**Infant formula without probiotics**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	a
2017	**7622**	**Infant formula without probiotics**	①	st	/	-	25.19	65.59	+	+	+	**PD**	23.81	66.18	+	25.37	65.53	+	+	+	+	**PD**	**PD**	1	a
2017	**7623**	**Infant formula without probiotics**	①	st	/	-	23.65	65.7	+	+	+	**PD**	24.23	65.9	+	24.3	65.83	+	+	+	+	**PD**	**PD**	1	a
2017	**7624**	**Infant cereals without probiotics**	①	+p	+	+	26.24	65.65	+	+	+	**PA**	26.12	65.53	+	26.1	65.53	+	+	+	+	**PA**	**PA**	1	b
2017	**7625**	**Infant cereals without probiotics**	①	+p	+	+	20.69	65.6	+	+	+	**PA**	21.11	65.87	+	21.09	65.58	+	+	+	+	**PA**	**PA**	1	b
2017	**7626**	**Infant cereals without probiotics**	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	**7627**	**Infant cereals without probiotics**	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	**7628**	**Infant cereals without probiotics**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	b
2017	**7629**	**Infant cereals without probiotics**	①	+p	+	+	33.28	65.87	+	+	+	**PA**	32.77	65.82	+	34.06	65.96	+	+	+	+	**PA**	**PA**	1	b
2017	**7630**	**Infant cereals without probiotics**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	b
2017	**7631**	**Infant cereals without probiotics**	①	st	/	-	28.07	65.94	+	+	+	**PD**	27.79	66.05	+	28.13	65.87	+	+	+	+	**PD**	**PD**	1	b
2017	**7632**	**Lactoserum**	①	+p	+	+	20.99	65.38	+	+	+	**PA**	20.23	65.86	+	20.8	65.1	+	+	+	+	**PA**	**PA**	1	c
2017	**7633**	**Milk proteins**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	c
2017	**7634**	**Lactose**	①	+p	+	+	32.3	65.87	+	+	+	**PA**	30.7	66.03	+	31.4	65.86	+	+	+	+	**PA**	**PA**	1	c
2017	**7635**	**Caseinate**	①	st	/	-	32.05	65.14	+	+	+	**PD**	29.16	65.46	+	32.77	65.55	+	+	+	+	**PD**	**PD**	1	c
2017	**7636**	**Lactoserum proteins concentrate**	①	+p	+	+	26.12	65.68	+	+	+	**PA**	25.72	66.21	+	26.29	66.03	+	+	+	+	**PA**	**PA**	1	c
2017	**7637**	**Maltodextrin**	①	+p	+	+	28.62	66.08	+	+	+	**PA**	28.84	66.3	+	28.25	65.8	+	+	+	+	**PA**	**PA**	1	c
2017	**7638**	**Lactoserum proteins concentrate**	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	**7795**	**Infant formula without probiotics**	①	+p	+	+	28.79	65.64	+	+	+	**PA**	23.17	66.38	+	26.92	65.89	+	+	+	+	**PA**	**PA**	1	a
2017	**7796**	**Infant formula without probiotics**	①	+p	+	+	37.48	65.98	+	+	+	**PA**	34.65	66.12	+	0/35.16/ 35.57	0/66.12/ 65.93	-/+/+	+	+	-	**PA**	**$ND_{FN(alt)}$**	1	a
2017	**7797**	**Infant cereals without probiotics**	①	+p	+	+	36.32	66.09	+	+	+	**PA**	35.51	66.18	+	35.77	66.2	+	+	+	+	**PA**	**PA**	1	b

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS *(up to 25 g) (Initial validation study, 2018)*																									
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
							BPW for 18 h at 34-38°C						BPW for 18 h at 37°C + 72 h at 5°C ± 3°C												
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result	Agree-ment	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agree-ment 72 h BPW	Agree-ment 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2017	**7798**	**Infant cereals without probiotics**	①	st	/	-	21.57	66.21	+	+	+	**PD**	19.76	66.31	+	21.18	66.11	+	+	+	+	**PD**	**PD**	1	b
2017	**7799**	**Infant formula without probiotics**	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	**7800**	**Infant cereals without probiotics**	①	+p	+	+	25.68	66.06	+	+	+	**PA**	22.89	66.24	+	24.68	66.15	+	+	+	+	**PA**	**PA**	1	b
2017	**7801**	**Infant formula without probiotics**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	a
2017	**7802**	**Infant formula without probiotics**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	a
2017	**7803**	**Lactoserum**	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	**7804**	**Lactoserum**	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	**7805**	**Corn flour**	①	st	/	-	21.09	66.03	+	+	+	**PD**	20.22	66.91	+	23.35	66.53	+	+	+	+	**PD**	**PD**	1	c
2017	**7806**	**Milk powder (ingredient)**	①	+p	+	+	35.2	65.45	+	+	+	**PA**	35.49	66.02	+	39.71	65.33	+	+	+	+	**PA**	**PA**	1	c
2017	8426	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8427	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8428	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8429	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8430	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8431	Infant cereals without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	8432	Infant cereals without probiotics	①	-	/	-	0	0	-	-	-	**NA**												1	b
2017	8433	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8434	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8435	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8436	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8437	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8438	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8439	Infant formula without probiotics	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	8440	Infant formula without probiotics	①	-	/	-	0	0	-	-	-	**NA**												1	a
2017	8441	Infant formula without probiotics	①	-	/	-	0	0	-	-	-	**NA**												1	a

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS *(up to 25 g) (Initial validation study, 2018)*																										
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																		Category	Type
							BPW for 18 h at 34-38°C						BPW for 18 h at 37°C + 72 h at 5°C ± 3°C													
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result	Agree-ment	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agree-ment 72 h BPW	Agree-ment 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result								
2017	8442	Caseinate	①	st	/	-	36.12	66.08	+	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	**$PD_{FP(ALT)}$**	36.83	65.42	+	36.21	65.44	+	-	-	-	**$PD_{FP(ALT)}$**	**$PD_{FP(ALT)}$**	1	c
2017	8443	Lactose	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	8444	Whey protein concentrate	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	8445	Milk proteins	①	-	/	-	0	0	-	-	-	**NA**												1	c
2017	8446	Maltodextrin	①	-	/	-	0	0	-	-	-	**NA**												1	c
2017	8447	Whey permeate	①	st	/	-	0	0	-	-	-	**NA**												1	c
2017	**8455**	**Infant cereals without probiotics**	①	st	/	-	0	0	-	-	-	**NA**												1	b
2017	**8456**	**Infant cereals without probiotics**	①	-	/	-	0	0	-	-	-	**NA**												1	b
2017	**8458**	**Lactose**	①	+p	+	+	22.88	65.93	+	+	+	**PA**	23.64	66.15	+	23.11	65.83	+	+	+	+	**PA**	**PA**	1	c
2017	**8459**	**Whey protein concentrate**	①	st	/	-	30.02	65.59	+	+	+	**PD**	30.62	65.42	+	30.36	65.32	+	+	+	+	**PD**	**PD**	1	c
2017	**9128**	**Infant formula without probiotics**	①	+p	+	+	20.09	66.12	+	+	+	**PA**	19.58	66.38	+	20.2	65.65	+	+	+	+	**PA**	**PA**	1	a
2017	**9129**	**Infant formula without probiotics**	①	st	/	-	0	0	-	-	-	**NA**												1	a
2017	**9130**	**Infant cereals without probiotics**	①	st	/	-	22.57	66.15	+	+	+	**PD**	19.76	66	+	22.25	65.69	+	+	+	+	**PD**	**PD**	1	b
2017	**9131**	**Infant cereals without probiotics**	①	+p	+	+	29.59	66.63	+	+	+	**PA**	28.67	66.33	+	29.11	66.22	+	+	+	+	**PA**	**PA**	1	b
2017	9132	Milk proteins	①	st	/	-	0	0	-	-	-	**NA**												1	c
2018	**2609**	**Skim milk powder**	①	+p	+	+	31.58	65.63	+	+	+	**PA**	29.45	65.6	+	31.54	65.48	+	+	+	+	**PA**	**PA**	1	c
2018	**2610**	**Whole milk powder**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	c
2018	**2611**	**Skim milk powder**	①	+p	+	+	35.06	65.52	+	+	+	**PA**	33.76	66.08	+	33.43	65.98	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	-	**$PA_{FP(alt)}$**	**$PA_{FP(alt)}$**	1	c
2018	**2612**	**Skim milk powder**	①	st	/	-	35.82	65.76	+	+	+	**PD**	31.85	65.74	+	33.14	65.3	+	+	+	+	**PD**	**PD**	1	c
2018	**2613**	**Skim milk powder**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	1	c
2018	**2614**	**Skim milk powder**	①	+p	+	+	27.76	65.26	+	+	+	**PA**	26.77	65.43	+	28.64	65.1	+	+	+	+	**PA**	**PA**	1	c
2018	2615	Skim milk powder	①	st	/	-	0	0	-	-	-	**NA**												1	c
2018	2616	Whole milk powder	①	st	/	-	0	0	-	-	-	**NA**												1	c
2018	2617	Skim milk powder	①	st	/	-	0	0	-	-	-	**NA**												1	c
2018	2618	Skim milk powder	①	st	/	-	0	0	-	-	-	**NA**												1	c
2018	2619	Skim milk powder	①	st	/	-	0	0	-	-	-	**NA**												1	c

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) - *(Initial validation study, 2018)*																									
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							BPW + Novobiocin for 18 h at 34-38°C						BPW + Novobiocin for 18 h at 37°C +72 h at 5°C ± 3°C												
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result 18 h	Agreement 18 h	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2017	**8027**	**Infant formula with probiotics (3.6x10^2 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	a
2017	**8028**	**Infant formula with probiotics (<10 CFU/g)**	②	st	/	-	24.75	65.62	+	+	+	**PD**	19.09	65.86	+	23.95	65.7	+	+	+	+	**PD**	**PD**	2	a
2017	**8029**	**Infant formula with probiotics (1.3x10^5 CFU/g)**	②	st	/	-	26.43	65.92	+	+	+	**PD**	20.21	66.35	+	25.78	65.53	+	+	+	+	**PD**	**PD**	2	a
2017	**8030**	**Infant formula with probiotics (<10 CFU/g)**	②	+p	+	+	29.31	66.29	+	+	+	**PA**	19.21	66.55	+	27.85	66.05	+	+	+	+	**PA**	**PA**	2	a
2017	**8031**	**Infant formula with probiotics (1.8x10^5 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	a
2017	**8032**	**Infant formula with probiotics (3.0x10^4 CFU/g)**	②	st	/	-	29.82	65.96	+	+	+	**PD**	20.17	66.07	+	28.47	65.97	+	+	+	+	**PD**	**PD**	2	a
2017	**8033**	**Infant formula with probiotics (4.8x10^5 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	a
2017	**8131**	**Infant formula with probiotics (5.6x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	**8132**	**Infant formula with probiotics (1.2x10^7 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	**8133**	**Infant formula with probiotics (4.3x10^5 CFU/g)**	②	+p	+	+	20.89	65.89	+	+	+	**PA**	21.72	65.64	+	20.94	66.15	+	+	+	+	**PA**	**PA**	2	a
2017	**8134**	**Infant formula with probiotics (6.8x10^5 CFU/g)**	②	+p	+	+	20.86	65.99	+	+	+	**PA**	20.09	65.9	+	19.86	65.39	+	+	+	+	**PA**	**PA**	2	a
2017	**8135**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	②	st	/	-	35.45	66.67	+	+	+	**PD**	35.25	65.94	+	35.66	66.11	+	+	+	+	**PD**	**PD**	2	a
2017	**8136**	**Infant formula with probiotics (6.8x10^5 CFU/g)**	②	+p	+	+	20.28	66.34	+	+	+	**PA**	18.63	66.48	+	19.03	65.83	+	+	+	+	**PA**	**PA**	2	a
2017	**8137**	**Infant formula with probiotics (7.5x10^5 CFU/g)**	②	+p	+	+	19.42	66.26	+	+	+	**PA**	18.73	66.35	+	18.91	65.93	+	+	+	+	**PA**	**PA**	2	a
2017	**8138**	**Infant formula with probiotics (8.6x10^5 CFU/g)**	②	+p	+	+	21.72	66.48	+	+	+	**PA**	19.52	66.36	+	20.24	65.77	+	+	+	+	**PA**	**PA**	2	a
2017	8403	Infant formula with probiotics (4.2x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8404	Infant formula with probiotics (5.9x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) - *(Initial validation study, 2018)*																											
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																		Category	Type
							BPW + Novobiocin for 18 h at 34-38°C						BPW + Novobiocin for 18 h at 37°C +72 h at 5°C ± 3°C													
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result 18 h	Agreement 18 h	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result								
2017	8405	Infant formula with probiotics (4.3x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8406	Infant formula with probiotics (6.8x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8407	Infant formula with probiotics (8.6x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8408	Infant formula with probiotics (8.0x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8409	Infant formula with probiotics (<10 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8410	Infant formula with probiotics (<10 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8411	Infant formula with probiotics (<10 CFU/g)	②	st	/	-	37.31	66.15	+	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	**PD$_{FP(ALT)}$**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	2	a
2017	8412	Infant formula with probiotics (1.2x10^7 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8413	Infant formula with probiotics (4.2x10^6 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	8414	Infant formula with probiotics (7.0x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	**8448**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	②	st	/	-	27.83	65.78	+	+	+	**PD**	23.84	65.85	+	26.09	66.26	+	+	+	+	**PD**	**PD**	2	a
2017	**8449**	**Infant formula with probiotics (<10 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	a
2017	**8450**	**Infant formula with probiotics (7.0x10^5 CFU/g)**	②	st	/	-	0/0	0/0	i/-*	-	-	**NA**												2	a
2017	**9610**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	②	st	/	-	24.93	65.65	+	+	+	**PD**	24.65	65.85	+	24.76	65.48	+	+	+	+	**PD**	**PD**	2	a
2017	**9611**	**Infant formula with probiotics (5.9x10^5 CFU/g)**	②	+p	+	+	18.34	65.68	+	+	+	**PA**	19.13	65.44	+	19.01	65.29	+	+	+	+	**PA**	**PA**	2	a
2017	**8034**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	b
2017	**8035**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	b
2017	**8036**	**Infant cereals with probiotics (1.7x10^4 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	b

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) - *(Initial validation study, 2018)*																										
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
							BPW + Novobiocin for 18 h at 34-38°C						BPW + Novobiocin for 18 h at 37°C +72 h at 5°C ± 3°C													
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result 18 h	Agreement 18 h	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2017	**8037**	**Infant cereals with probiotics (2.5x10^5 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	b
2017	**8038**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	②	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	2	b
2017	**8039**	**Infant cereals with probiotics (6.7x10^5 CFU/g)**	②	+p	+	+	31.92	65.78	+	+	+	**PA**	21.76	65.87	+	31.87	66.19	+	+	+	+	**PA**	**PA**	2	b
2017	**8040**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	②	+p	+	+	28.44	65.84	+	+	+	**PA**	18.49	65.93	+	28.13	66.03	+	+	+	+	**PA**	**PA**	2	b
2017	**8041**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	+p	+	+	28.12	65.63	+	+	+	**PA**	26.39	65.62	+	27.42	65.98	+	+	+	+	**PA**	**PA**	2	b
2017	**8139**	**Infant cereals with probiotics (6.7x10^6 CFU/g)**	②	+p	+	+	31.65	65.97	+	+	+	**PA**	28.71	65.97	+	30.38	65.74	+	+	+	+	**PA**	**PA**	2	b
2017	**8140**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	st	/	-	24.59	66.16	+	+	+	**PD**	21.3	66.5	+	25.1	65.97	+	+	+	+	**PD**	**PD**	2	b
2017	**8141**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	②	+M	+	+	28.85	65.58	+	+	+	**PA**	25.34	65.97	+	29.98	66.19	+	+	+	+	**PA**	**PA**	2	b
2017	**8142**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	②	+p	+	+	20.52	65.78	+	+	+	**PA**	18.33	65.98	+	20.62	65.43	+	+	+	+	**PA**	**PA**	2	b
2017	**8143**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	+p	+	+	31.2	65.81	+	+	+	**PA**	28.05	65.87	+	31.05	65.94	+	+	+	+	**PA**	**PA**	2	b
2017	**8144**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	+p	+	+	21.58	65.75	+	+	+	**PA**	17.55	65.15	+	20.96	65.59	+	+	+	+	**PA**	**PA**	2	b
2017	**8145**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**												2	b
2017	8415	Infant cereals with probiotics (7.4x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	b
2017	8416	Infant cereals with probiotics (2.3x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	b
2017	8417	Infant cereals with probiotics (8.7x10^6 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2
2017	8418	Infant cereals with probiotics (5.6x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	b
2017	8419	Infant cereals with probiotics (1.0x10^6 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**												2	b

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) - *(Initial validation study, 2018)*																										
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦			Alternative method: GENE-UP *Cronobacter*																		Category	Type
							BPW + Novobiocin for 18 h at 34-38°C						BPW + Novobiocin for 18 h at 37°C +72 h at 5°C ± 3°C													
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result 18 h	Agreement 18 h	PCR-BPW 72 h			PCR-Lysate 72 h			Confirmation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result								
2017	8420	Infant cereals with probiotics (1.7x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	8421	Infant cereals with probiotics (4.0x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	8422	Infant cereals with probiotics (7.1x10^4 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	8423	Infant cereals with probiotics (4.4x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	8424	Infant cereals with probiotics (5.1x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	8425	Infant cereals with probiotics (6.7x10^5 CFU/g)	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	**8451**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	**8452**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	**8453**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	st	/	-	0	0	-	-	-	**NA**													2	b
2017	**8454**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	+p	+	+	0	66.28	+	+	+	**PA**	35.12	65.92	+	35.2	65.92	+	+	+	+	**PA**	**PA**	2	b
2017	**9126**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	st	/	-	24.75	65.72	+	+	+	**PD**	22.7	66.03	+	24.91	65.9	+	+	+	+	**PD**	**PD**	2	b
2017	**9127**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	st	/	-	32.52	65.85	+	+	+	**PD**	30.56	65.65	+	32.49	65.79	+	+	+	+	**PD**	**PD**	2	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates (up to 375 g) *(Extension studies, 2018 and 2019)*																								
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							After incubation time						After storage for 72h at 5 ± 3°C											
				CSB	Confirmation	ISO 22964 Result	PCR			Confirmation final result	Final result	Agree-ment	PCR-BPW 72h			PCR-Lysate 72h			Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2018	**2589**	**Skim milk powder**	③	+p	+	+	40	65.71	+	+	+	**PA**	36.41	65.47	+	38.41	65.45	+	+	+	+	**PA**	**PA**	3	a
2018	**2590**	**Whole milk powder**	③	+p	+	+	0/0/0/0*	0/0/0/0*	-/i/i/-*	+	-	**$ND_{FN(alt)}$**	0/37.02/ 36.91	65.92/ 65.98/ 65.81	+/+/+	0/0/36.87	0/0/65.84	-/i/+	+	+	-	**PA**	**$ND_{FN(alt)}$**	3	a
2018	**2592**	**Skim milk powder**	③	st	/	-	0/0/0*	0/0/0*	i/-/-*	-	-	**NA**												3	a
2018	**2593**	**Skim milk powder**	③	+p	+	+	0/0	0/0	i/-*	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	a
2018	**2594**	**Skim milk powder**	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	**2595**	**Infant cereals without probiotics**	③	+p	+	+	0/31.18	0/65.72	i/+	+	+	**PA**	0/29.53*	0/66.36*	i/+*	38.03	65.89	+	+	+	+	**PA**	**PA**	3	a
2018	**2596**	**Infant cereals without probiotics**	③	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	a
2018	**2597**	**Infant cereals without probiotics**	③	+p	+	+	32.01	65.89	+	+	+	**PA**	30.57	65.77	+	31.02	66.08	+	+	+	+	**PA**	**PA**	3	a
2018	**2598**	**Infant cereals without probiotics**	③	+p	+	+	23.8	66.29	+	+	+	**PA**	26.42	66.68	+	26.45	66.66	+	+	+	+	**PA**	**PA**	3	a
2018	**2599**	**Infant cereals without probiotics**	③	+p	+	+	19.22	66.09	+	+	+	**PA**	20.59	66.52	+	21.25	66.07	+	+	+	+	**PA**	**PA**	3	a
2018	**2600**	**Infant cereals without probiotics**	③	+p	+	+	31.85	65.77	+	+	+	**PA**	29.96	65.92	+	25.37	65.83	+	+	+	+	**PA**	**PA**	3	a
2018	**2601**	**Infant cereals without probiotics**	③	+p	+	+	26.74	65.48	+	+	+	**PA**	26.07	65.05	+	27.75	65.51	+	+	+	+	**PA**	**PA**	3	a
2018	**2602**	**Infant formula without probiotics**	③	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	a
2018	**2604**	**Infant formula without probiotics**	③	+p	+	+	32.72	65.52	+	+	+	**PA**	30.57	65.76	+	30.67	65.7	+	+	+	+	**PA**	**PA**	3	a
2018	**2606**	**Infant formula without probiotics**	③	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	a
2018	**2607**	**Infant formula without probiotics**	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	2640	Skim milk powder	③	st	/	-	0/34.51*	0/65.73*	i/+*	+	+	**PD**	40	65.46	+	0/34.18*	0/65.94*	i/+*	+	+	+	**PD**	**PD**	3	a
2018	2641	Skim milk powder	③	st	/	-	0/0*	0/0*	i/-*	-	-	**NA**												3	a
2018	2642	Skim milk powder	③	st	/	-	0/0*	0/0*	i/-*	-	-	**NA**												3	a
2018	2643	Half-skim milk powder	③	st	/	-	0/0*	0/0*	i/-*	-	-	**NA**												3	a
2018	2644	Infant formula without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	2645	Infant formula without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	2646	Infant formula without probiotics	③	st	/	-	0/0*/0**	0/0*/0**	i/i*/-**	-	-	**NA**												3	a
2018	2647	Infant cereals without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	2648	Infant cereals without probiotics	③	st	/	-	33.93 /0/0	66.48/ 66.31/0	+/+/-	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	**$PD_{FP(ALT)}$**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	a
2018	2649	Infant cereals without probiotics	③	st	/	-	29.13	65.96	+	+	+	**PD**	29.25	66.05	+	30.39	66.09	+	+	+	+	**PD**	**PD**	3	a
2018	**3469**	**Skim milk powder**	③	+p	+	+	0	65.11	+	+	+	**PA**	0/25.8*	0/65.79*	i/+*	28.38	64.95	+	+	+	+	**PA**	**PA**	3	a

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates (up to 375 g) *(Extension studies, 2018 and 2019)*																								
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
				CSB	Confirmation	ISO 22964 Result	After incubation time						After storage for 72h at 5 ± 3°C											
							PCR			Confirmation final result	Final result	Agree-ment	PCR-BPW 72h			PCR-Lysate 72h			Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2018	**3470**	**Skim milk powder**	③	+p	+	+	24.57	65.37	+	+	+	**PA**	28.08	65.05	+	22.13	64.92	+	+	+	+	**PA**	**PA**	3	a
2018	**3471**	**Infant formula without probiotics**	③	+p	+	+	18.75	66.28	+	+	+	**PA**	20.77	65.76	+	18.45	66.3	+	+	+	+	**PA**	**PA**	3	a
2018	**3472**	**Infant formula without probiotics**	③	st	/	-	24.25	66.47	+	+	+	**PD**	25.34	66.11	+	24.1	66.13	+	+	+	+	**PD**	**PD**	3	a
2018	**3473**	**Infant formula without probiotics**	③	+p	+	+	29.84	65.71	+	+	+	**PA**	37.55	65.31	+	30.06	65.25	+	+	+	+	**PA**	**PA**	3	a
2018	3751	Infant cereals without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	3752	Infant cereals without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	3753	Infant cereals without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	3797	Infant formula without probiotics	③	st	/	-	0	0	-	-	-	**NA**												3	a
2018	**2620**	**Infant formula with probiotics ($7.2x10^4$ CFU/g)**	③	+p	+	+	0/35.37/ 34.92	0/66.65/ 66.73	-/+/+	+	-	**$ND_{FN(alt)}$**	36.84	67.25	+	35.8	67	+	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	-	**$PA_{FP(alt)}$**	**$PA_{FP(alt)}$**	3	b
2018	**2623**	**Infant formula with probiotics ($6.1x10^6$ CFU/g)**	③	+p	+	+	26.91	65.72	+	+	+	**PA**	25.02	65.84	+	25.78	65.61	+	+	+	+	**PA**	**PA**	3	b
2018	**2625**	**Infant formula with probiotics ($5.1x10^5$ CFU/g)**	③	+p	+	+	21.85	66.2	+	+	+	**PA**	20.63	65.69	+	20.84	66.04	+	+	+	+	**PA**	**PA**	3	b
2018	**2626**	**Infant formula with probiotics ($4.7x10^5$ CFU/g)**	③	+p	+	+	30.85	65.96	+	+	+	**PA**	30.16	66.15	+	30.39	66.02	+	+	+	+	**PA**	**PA**	3	b
2018	**2627**	**Infant formula with probiotics ($1.1x10^6$ CFU/g)**	③	+p	+	+	24.7	66.39	+	+	+	**PA**	23.74	65.97	+	25.02	66	+	+	+	+	**PA**	**PA**	3	b
2018	**2628**	**Infant formula with probiotics ($1.4x10^4$ CFU/g)**	③	+p	+	+	20.33	65.21	+	+	+	**PA**	20.53	65.94	+	20.71	65.58	+	+	+	+	**PA**	**PA**	3	b
2018	**2629**	**Infant formula with probiotics ($3.0x10^4$ CFU/g)**	③	+p	+	+	20.43	65.04	+	+	+	**PA**	19.92	65.6	+	20.85	65.34	+	+	+	+	**PA**	**PA**	3	b
2018	**2630**	**Infant cereals with probiotics ($1.4x10^5$ CFU/g)**	③	+p	+	+	31.63	65.53	+	+	+	**PA**	30.64	65.67	+	31.84	66	+	+	+	+	**PA**	**PA**	3	b
2018	**2631**	**Infant cereals with probiotics ($2.1x10^5$ CFU/g)**	③	+p	+	+	32.85	65.62	+	+	+	**PA**	32.57	65.98	+	32.85	66.07	+	+	+	+	**PA**	**PA**	3	b
2018	**2632**	**Infant cereals with probiotics ($7.8x10^5$ CFU/g)**	③	+p	+	+	23.41	65.89	+	+	+	**PA**	22.76	65.94	+	23.62	65.16	+	+	+	+	**PA**	**PA**	3	b
2018	**2633**	**Infant cereals with probiotics ($2.5x10^5$ CFU/g)**	③	+p	+	+	29.11	65.73	+	+	+	**PA**	28.27	65.86	+	29.13	65.95	+	+	+	+	**PA**	**PA**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates (up to 375 g) *(Extension studies, 2018 and 2019)*																									
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
							After incubation time						After storage for 72h at 5 ± 3°C												
							PCR						PCR-BPW 72h			PCR-Lysate 72h									
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**	Final result	Agree-ment	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
				CCI																					
2018	**2634**	**Infant cereals with probiotics ($4.5x10^4$ CFU/g)**	③	+p	+	+	31.54	65.94	+	+	+	**PA**	30.79	65.8	+	31.75	66.06	+	+	+	+	**PA**	**PA**	3	b
2018	**2635**	**Infant cereals with probiotics ($9.1x10^3$ CFU/g)**	③	+p	+	+	33.58	66.11	+	+	+	**PA**	33.43	66.19	+	33.87	66.25	+	+	+	+	**PA**	**PA**	3	b
2018	**2636**	**Infant cereals with probiotics ($3.2x10^6$ CFU/g)**	③	st	/	-	0	66.35	+	+	+	**PD**	0/31.79	0/66.53	i/+*	40	61.56. 66.09	+	+	+	+	**PD**	**PD**	3	b
2018	**2637**	**Infant cereals with probiotics ($1.3x10^5$ CFU/g)**	③	+p	+	+	28.61	65.81	+	+	+	**PA**	27.16	65.95	+	28.08	65.83	+	+	+	+	**PA**	**PA**	3	b
2018	**2638**	**Infant cereals with probiotics ($1.4x10^6$ CFU/g)**	③	+p	+	+	32.83	66.03	+	+	+	**PA**	32.75	66.37	+	32.87	66.37	+	+	+	+	**PA**	**PA**	3	b
2018	**2639**	**Infant cereals with probiotics ($2.2x10^5$ CFU/g)**	③	+p	+	+	26.23	65.99	+	+	+	**PA**	25.12	66.07	+	26.26	65.79	+	+	+	+	**PA**	**PA**	3	b
2018	2864	Infant cereals with probiotics ($2.9x10^5$ CFU/g)	③	st	/	-	0/0*	0/0*	i/-*	-	-	**NA**												3	b
2018	2865	Infant cereals with probiotics ($4.8x10^4$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	2866	Infant cereals with probiotics ($1.2x10^7$ CFU/g)	③	st	/	-	0/0/0	66.57/0/0	+/-/-	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	**$PD_{FP(ALT)}$**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	b
2018	2867	Infant formula with probiotics ($1.6x10^6$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	2868	Infant formula with probiotics ($1.5x10^6$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	2869	Infant formula with probiotics ($9.6x10^6$ CFU/g)	③	st	/	-	18.01	65.89	+	+	+	**PD**	16.13	65.89	+	18.6	65.58	+	+	+	+	**PD**	**PD**	3	b
2018	3754	Infant cereals with probiotics ($2.5x10^5$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3755	Infant cereals with probiotics ($1.4x10^6$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3756	Infant cereals with probiotics ($2.2x10^5$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3757	Infant cereals with probiotics ($4.8x10^4$ CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b

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				CSB	Confirmation	ISO 22964 Result	After incubation time						After storage for 72h at 5 ± 3°C												
							PCR						PCR-BPW 72h			PCR-Lysate 72h									
				CCI			Cp	Tm	Result	**Confirmation final result**	Final result	Agree-ment	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
2018	3758	Infant cereals with probiotics (2.9x10^5 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3798	Infant formula with probiotics (1.6x10^6 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3799	Infant formula with probiotics (7.2x10^4 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3800	Infant formula with probiotics (6.0x10^4 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3801	Infant formula with probiotics (1.5x10^6 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	3802	Infant formula with probiotics (4.7x10^5 CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2018	2870	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	2871	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	2872	Caseinate	④	st	/	-	37.46/0/0	66.29/ 0/0	+/-/-	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	**PD$_{FP(ALT)}$**	0	67.03	+	0	0	-	-	-	-	**PD$_{FP(ALT)}$**	**NA**	3	c
2018	2873	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	**3101**	**Starch**	④	+p	+	+	32.47	66.69	+	+	+	**PA**	31.31	66.17	+	32.14	66.81	+	+	+	+	**PA**	**PA**	3	c
2018	**3102**	**Caseinate**	④	+p	+	+	24.98	65.98	+	+	+	**PA**	22.59	65.79	+	24.85	66.05	+	+	+	+	**PA**	**PA**	3	c
2018	**3103**	**Corn starch**	④	+p	+	+	33.85	66.23	+	+	+	**PA**	31.38	66.06	+	36.63	66.35	+	+	+	+	**PA**	**PA**	3	c
2018	**3104**	**Wheat starch**	④	-	/	-	25.97	66.68	+	+	+	**PD**	23.78	66.4	+	25.39	66.34	+	+	+	+	**PD**	**PD**	3	c
2018	**3106**	**Lactose**	④	+p	+	+	24.67	66.81	+	+	+	**PA**	22.52	66.3	+	23.18	66.19	+	+	+	+	**PA**	**PA**	3	c
2018	**3107**	**Maltodextrin**	④	+p	+	+	21	66.43	+	+	+	**PA**	20.18	66.25	+	21.29	66.53	+	+	+	+	**PA**	**PA**	3	c
2018	**3108**	**Whey**	④	+p	+	+	23.88	66.06	+	+	+	**PA**	21.84	65.39	+	23.25	65.94	+	+	+	+	**PA**	**PA**	3	c
2018	**3109**	**Starch**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2018	**3110**	**Caseinate**	④	+p	+	+	21.48	66.07	+	+	+	**PA**	21.6	66	+	22.66	66.19	+	+	+	+	**PA**	**PA**	3	c
2018	**3111**	**Corn starch**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2018	**3112**	**Wheat starch**	④	-	/	-	24.26	66.39	+	+	+	**PD**	23.13	66.36	+	25.93	66.49	+	+	+	+	**PD**	**PD**	3	c
2018	**3113**	**Corn starch**	④	+p	+	+	23.36	64.93	+	+	+	**PA**	24.01	66.08	+	25.59	66.25	+	+	+	+	**PA**	**PA**	3	c
2018	**3114**	**Lactose**	④	+p	+	+	22.75	65.73	+	+	+	**PA**	22.89	66.28	+	24.54	66.25	+	+	+	+	**PA**	**PA**	3	c
2018	**3123**	**Whey**	④	+p	+	+	23.69	66.13	+	+	+	**PA**	23.28	66.28	+	23.31	65.62	+	+	+	+	**PA**	**PA**	3	c
2018	**3124**	**Maltodextrin**	④	+p	+	+	21.77	67.15	+	+	+	**PA**	20.81	67.03	+	19.54	66.61	+	+	+	+	**PA**	**PA**	3	c
2018	**3125**	**Maltodextrin**	④	+p	+	+	33.46	67.16	+	+	+	**PA**	33.68	66.83	+	33.29	66.45	+	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	3	c
2018	**3126**	**Wheat starch**	④	+p	+	+	0/0/0	0/0/0	-/-/-	+	-	**ND$_{FN(alt)}$**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c

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				CCI			Cp	Tm	Result	**Confirmation final result**	Final result	Agree-ment	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
2018	**3127**	**Caseinate**	④	+p	+	+	26.86	66.32	+	+	+	**PA**	28.67	66.23	+	24.32	65.63	+	+	+	+	**PA**	**PA**	3	c
2018	**3128**	**Corn starch**	④	+p	+	+	33.53	66.59	+	+	+	**PA**	32.54	66.44	+	33.68	66.14	+	+	+	+	**PA**	**PA**	3	c
2018	**3129**	**Lactose**	④	+p	+	+	24.01	66.65	+	+	+	**PA**	24.27	66.84	+	22.6	66.28	+	+	+	+	**PA**	**PA**	3	c
2018	**3130**	**Corn starch**	④	+p	+	+	25.77	66.99	+	+	+	**PA**	25.17	66.74	+	25.54	66.9	+	+	+	+	**PA**	**PA**	3	c
2018	**3131**	**Starch**	④	+p	+	+	32.15	66.12	+	+	+	**PA**	31.76	66.3	+	32	66.06	+	+	+	+	**PA**	**PA**	3	c
2018	**3132**	**Maltodextrin**	④	+p	+	+	0	66.96	+	+	+	**PA**	0	66.82	+	0/0/0	0/0/ 68.03	-/-/+	+	+	-	**PA**	**ND$_{FN(alt)}$**	3	c
2018	**3133**	**Whey**	④	+p	+	+	21.8	65.93	+	+	+	**PA**	21.04	65.68	+	22.13	65.63	+	+	+	+	**PA**	**PA**	3	c
2018	**3134**	**Starch**	④	+p	+	+	27.88	66.23	+	+	+	**PA**	20.65	65.92	+	28.2	66.35	+	+	+	+	**PA**	**PA**	3	c
2018	**3135**	**Lactose**	④	+p	+	+	23.28	66.58	+	+	+	**PA**	22.58	65.72	+	24.34	66.28	+	+	+	+	**PA**	**PA**	3	c
2018	**3136**	**Caseinate**	④	+p	+	+	33.48	65.88	+	+	+	**PA**	33.8	65.92	+	34.59	65.92	+	+	+	+	**PA**	**PA**	3	c
2018	**3474**	**Maltodextrin**	④	+p	+	+	20.34	66.24	+	+	+	**PA**	23.06	66.12	+	21.5	66.42	+	+	+	+	**PA**	**PA**	3	c
2018	**3475**	**Whey**	④	+p	+	+	26.1	65.78	+	+	+	**PA**	27.26	65.07	+	26.87	65	+	+	+	+	**PA**	**PA**	3	c
2018	3739	Caseinate	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3631	Starch	④	st	/	-	34.7	65.9	+	+	+	**PD**	35.43	66.23	+	35.59	66.37	+	+	+	+	**PD**	**PD**	3	c
2018	3632	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3633	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3634	Starch	④	+p	- (*Buttiauxella agrestis/ Leclercia adecraboxylata*)	-	0/0/0	0/0/0	-/-/-	-	-	**NA**												3	c
2018	3635	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3636	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3637	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3638	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3639	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3640	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3641	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3642	Starch	④	st	/	-	33.14	65.74	+	+	+	**PD**	33.36	65.52	+	34.05	65.14	+	+	+	+	**PD**	**PD**	3	c
2018	3643	Starch	④	-	/	-	33.84	66.1	+	+	+	**PD**	35.06	66.13	+	34.54	65.48	+	+	+	+	**PD**	**PD**	3	c
2018	3644	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3645	Caseinate	④	st	/	-	0	66.12	+	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	**PD$_{FP(ALT)}$**	0	0	-	35.14	66.18	+	- (ESIA 5x-CCI 5x-CSB/CCI 5x-)	-	-	**NA**	**PD$_{FP(ALT)}$**	3	c
2018	3803	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3804	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3805	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3806	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3807	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c

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2018	3808	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3809	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3810	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3811	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3812	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3813	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3814	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3815	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2018	3816	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2019	5381	Milk powder 0% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2
2019	5382	Milk powder 0% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	5387	Milk powder 0% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2
2019	5388	Milk powder 0% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	5389	Milk powder 26% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2
2019	5390	Milk powder 26% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	5391	Milk powder 0,8% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2
2019	5392	Milk powder 14% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	5393	Milk powder 26% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	5394	Milk powder 0,8% fat	④	st	/	-	0	0	-	-	-	**NA**												3	c2
2019	**5400**	**Milk powder 0% fat**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c2
2019	**5402**	**Milk powder 0% fat**	④	+p	+	+	0/0/0	0/0/0	-/-/-	+	-	**ND$_{FN(alt)}$**	0/0/0	0/0/0	-/-/-	0	0	-	+	-	-	**ND$_{FN(alt)}$**	**ND$_{FN(alt)}$**	3	c2
2019	**5403**	**Milk powder 0% fat**	④	-	/	-	31.4	66.2	+	+	+	**PD**	28.8	66.03	+	30.17	65.92	+	+	+	+	**PD**	**PD**	3	c2
2019	**5405**	**Milk powder 26% fat**	④	+p	+	+	32.37	65.88	+	+	+	**PA**	30.28	65.74	+	36.13	64.93	+	+	+	+	**PA**	**PA**	3	c2
2019	**5406**	**Milk powder 26% fat**	④	+p	+	+	25.69	66.15	+	+	+	**PA**	23.78	66.06	+	25.28	66.07	+	+	+	+	**PA**	**PA**	3	c2
2019	**5407**	**Milk powder 14% fat**	④	+p	+	+	21.11	65.39	+	+	+	**PA**	19.13	65.34	+	23.42	65.39	+	+	+	+	**PA**	**PA**	3	c2
2019	**5408**	**Milk powder 14% fat**	④	+p	+	+	21.74	65.56	+	+	+	**PA**	20.96	65.56	+	23.82	65.59	+	+	+	+	**PA**	**PA**	3	c2
2019	**5410**	**Milk powder 26% fat**	④	+p	+	+	26.71	65.84	+	+	+	**PA**	24.39	66.05	+	24.9	65.75	+	+	+	+	**PA**	**PA**	3	c2
2019	**5411**	**Milk powder 26% fat**	④	+p	+	+	24.4	65.91	+	+	+	**PA**	22.42	66.09	+	23.35	65.99	+	+	+	+	**PA**	**PA**	3	c2
2019	**5412**	**Milk powder 0.8% fat**	④	+p	+	+	33.9	65.5	+	+	+	**PA**	32.29	65.97	+	34.62	65.39	+	+	+	+	**PA**	**PA**	3	c2
2019	5680	High density milk powder 0.6-0.7% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2
2019	5681	Low density milk powder 0.6-0.7% fat	④	-	/	-	0	0	-	-	-	**NA**												3	c2

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) *(Extension study, 2018)*																											
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																				
							BPW 18h 34-38°C						BPW 18 h 34-38 °C + 72 h at 5°C ± 3°C														
							PCR			Confir-mation final result	Final result	Agreement	PCR-BPW 72 h			PCR-Lysate 72 h			Confir mation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate	Category	Type
				CSB	Confirmation	ISO 22964 Result																				
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result								
2018	347	Water before cleaning	①	st	/	-	0	0	-	-	-	**NA**												4	a
2018	348	Water before cleaning	①	+M	+	+	26	65.52	+	+	+	**PA**	27.36	66.09	+	26.29	65.93	+	+	+	+	**PA**	**PA**	4	a
2018	349	Water before cleaning	①	+md/-	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	4	a
2018	**386**	**Water after cleaning**	①	+p	+	+	22.33	66.67	+	+	+	**PA**	23.01	66.61	+	21.4	65.98	+	+	+	+	**PA**	**PA**	4	a
2018	**387**	**Water after cleaning**	①	+p	+	+	22.82	66.43	+	+	+	**PA**	22.59	66.31	+	21.61	65.89	+	+	+	+	**PA**	**PA**	4	a
2018	**388**	**Water after cleaning**	①	+p	+	+	22.83	66.56	+	+	+	**PA**	23.5	66.47	+	21.58	66.14	+	+	+	+	**PA**	**PA**	4	a
2018	**389**	**Water before cleaning**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2018	**390**	**Water before cleaning**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2018	**391**	**Water before cleaning**	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	**392**	**Water before cleaning**	①	+p	+	+	24.9	66.1	+	+	+	**PA**	24.69	66.3	+	22.9	65.93	+	+	+	+	**PA**	**PA**	4	a
2018	1789	Rinse water	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	1790	Process water	①	st	/	-	0	0	-	-	-	**NA**												4	a
2018	1791	Rinse water	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	2166	Process water	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	2167	Process water	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	2168	Process water	①	-	/	-	0	0	-	-	-	**NA**												4	a
2018	**2465**	**Process water (rinse)**	①	+p	+	+	23.83	66.55	+	+	+	**PA**	22.8	66.56	+	22.53	65.98	+	+	+	+	**PA**	**PA**	4	a
2018	**2466**	**Process water (rinse)**	①	+p	+	+	23.19	66.13	+	+	+	**PA**	22.73	66.25	+	22.26	65.83	+	+	+	+	**PA**	**PA**	4	a
2018	**2467**	**Process water (rinse)**	①	st	/	-	24.65	66.24	+	+	+	**PD**	23.84	66.27	+	23.17	65.93	+	+	+	+	**PD**	**PD**	4	a
2018	**2468**	**Process water (rinse)**	①	+p	+	+	22.13	66.1	+	+	+	**PA**	22.02	66.27	+	21.31	65.67	+	+	+	+	**PA**	**PA**	4	a
2018	**2469**	**Process water (rinse)**	①	+p	+	+	22.61	66.14	+	+	+	**PA**	22.15	66.2	+	21.57	65.8	+	+	+	+	**PA**	**PA**	4	a
2018	**2470**	**Process water (rinse)**	①	+p	+	+	23.09	66.18	+	+	+	**PA**	22.47	66.14	+	21.66	66.34	+	+	+	+	**PA**	**PA**	4	a
2018	345	Waste	①	st	/	-	0	0	-	-	-	**NA**												4	b
2018	346	Waste	①	st	/	-	0	0	-	-	-	**NA**												4	b
2018	350	Dusts	①	-	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	4	b
2018	351	Dusts	①	st	/	-	0	0	-	-	-	**NA**												4	b
2018	352	Dust from vacuum	①	+M	+	+	22.97	65.89	+	+	+	**PA**	25.16	66.23	+	23.09	65.93	+	+	+	+	**PA**	**PA**	4	b
2018	1792	Waste	①	-	/	-	0/0/0	0/0/0	-/-/-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	4	b
2018	1793	Dust	①	-	/	-	0	0	-	-	-	**NA**												4	b
2018	1794	Dust from vacuum	①	+1/2	+	+	23.84	66.24	+	+	+	**PA**	23.7	65.74	+	24.29	66.19	+	+	+	+	**PA**	**PA**	4	b
2018	2169	Waste	①	st	/	-	0	0	-	-	-	**NA**												4	b
2018	2170	Waste	①	st	/	-	0	0	-	-	-	**NA**												4	b
2018	2171	Dust from vacuum	①	-	/	-	0	0	-	-	-	**NA**												4	b
2018	2172	Dust from vacuum	①	-	/	-	0	0	-	-	-	**NA**												4	b
2018	**3137**	**Dust from vacuum**	①	+p	+	+	25.38	65.07	+	+	+	**PA**	23.07	65.93	+	25.13	65.53	+	+	+	+	**PA**	**PA**	4	b

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) *(Extension study, 2018)*																										
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																			
							BPW 18h 34-38°C						BPW 18 h 34-38 °C + 72 h at 5°C ± 3°C													
				CSB	Confirmation	ISO 22964 Result	PCR			Confir-mation final result	Final result	Agreement	PCR-BPW 72 h			PCR-Lysate 72 h			Confir mation final result	Final result 72 h BPW	Final result 72 h Lysate	Agreement 72 h BPW	Agreement 72 h Lysate	Category	Type
				CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result								
2018	**3138**	**Dust from vacuum**	①	+p	+	+	31.48	65.66	+	+	+	**PA**	30.67	66.12	+	30.96	65.58	+	+	+	+	**PA**	**PA**	4	b
2018	**3139**	**Dust from vacuum**	①	+p	+	+	27.79	65.66	+	+	+	**PA**	24.98	65.64	+	27.88	65.66	+	+	+	+	**PA**	**PA**	4	b
2018	**3140**	**Dust from vacuum**	①	+p	+	+	20.73	66.62	+	+	+	**PA**	19.98	66.42	+	22	66.56	+	+	+	+	**PA**	**PA**	4	b
2018	**3141**	**Dust from vacuum**	①	+p	+	+	27.22	66.37	+	+	+	**PA**	27.22	66.18	+	26.98	66.24	+	+	+	+	**PA**	**PA**	4	b
2018	**3142**	**Dust from vacuum**	①	+p	+	+	23.04	66.49	+	+	+	**PA**	22.97	66.75	+	23.89	66.35	+	+	+	+	**PA**	**PA**	4	b
2018	**3143**	**Dust from vacuum**	①	+p	+	+	26.18	66.31	+	+	+	**PA**	25.16	66.25	+	26.13	66.18	+	+	+	+	**PA**	**PA**	4	b
2018	**3144**	**Dust from vacuum**	①	+p	+	+	29.93	66.28	+	+	+	**PA**	28.09	66.01	+	29.63	66.13	+	+	+	+	**PA**	**PA**	4	b
2018	**3145**	**Dust from vacuum**	①	+p	+	+	28.81	66.22	+	+	+	**PA**	28.02	66.2	+	29.31	66.02	+	+	+	+	**PA**	**PA**	4	b
2018	**3146**	**Dust from vacuum**	①	st	/	-	28.84	67.74	+	+	+	**PD**	26.28	66.24	+	28.31	66.75	+	+	+	+	**PD**	**PD**	4	b
2018	338	Sponge before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	339	Sponge before cleaning	①	-	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	4	c
2018	340	Sponge before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	341	Sponge before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	342	Sponge before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	343	Wipe before cleaning	①	st	/	-	0	0	-	-	-	**NA**												4	c
2018	344	Wipe before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	**393**	**Wipe after cleaning**	①	st	/	-	0	0	-	-	-	**NA**												4	c
2018	**394**	**Wipe after cleaning**	①	st	/	-	0	0	-	-	-	**NA**												4	c
2018	**395**	**Wipe before cleaning**	①	+M	+	+	28.17	66.37	+	+	+	**PA**	30.24	66.75	+	28.19	66.41	+	+	+	+	**PA**	**PA**	4	c
2018	**396**	**Wipe before cleaning**	①	+M	+	+	22.26	65.98	+	+	+	**PA**	24.32	66.26	+	22.87	65.88	+	+	+	+	**PA**	**PA**	4	c
2018	**397**	**Wipe before cleaning**	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	**398**	**Wipe before cleaning**	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	**399**	**Wipe before cleaning**	①	+p	+	+	23.16	66.48	+	+	+	**PA**	24.37	66.49	+	23.61	66.06	+	+	+	+	**PA**	**PA**	4	c
2018	**400**	**Wipe before cleaning**	①	+p	+	+	22.84	66.05	+	+	+	**PA**	25.18	66.36	+	24.94	66.44	+	+	+	+	**PA**	**PA**	4	c
2018	1795	Wipe before cleaning	①	st	/	-	0	0	-	-	-	**NA**												4	c
2018	1796	Wipe before cleaning	①	+md/-	/	-	0/0/0	0/0/0	-/-/-	-	-	**NA**	0	0	-	0	0	-	-	-	-			4	c
2018	1797	Wipe before cleaning	①	+M	+	+	27.62	66.42	+	+	+	**PA**	27.83	66.36	+	29.88	66.68	+	+	+	+	**PA**	**PA**	4	c
2018	1798	Wipe before cleaning	①	-	/	-	0	0	-	-	-	**NA**												4	c
2018	**2159**	**Wipe after cleaning**	①	+p	+	+	22.75	66.93	+	+	+	**PA**	22.9	66.72	+	22.08	66.16	+	+	+	+	**PA**	**PA**	4	c
2018	**2160**	**Wipe after cleaning**	①	+p	+	+	24.06	66.04	+	+	+	**PA**	22.22	66.08	+	22.34	65.56	+	+	+	+	**PA**	**PA**	4	c
2018	**2161**	**Wipe after cleaning**	①	+p	+	+	24.27	66.29	+	+	+	**PA**	22.86	66.26	+	23.17	65.66	+	+	+	+	**PA**	**PA**	4	c
2018	**2162**	**Wipe after cleaning**	①	+p	+	+	27	66.21	+	+	+	**PA**	23.83	66.12	+	25.74	65.83	+	+	+	+	**PA**	**PA**	4	c
2018	**2163**	**Wipe after cleaning**	①	+p	+	+	22.22	66.27	+	+	+	**PA**	21.23	66.37	+	21.41	65.72	+	+	+	+	**PA**	**PA**	4	c
2018	**2164**	**Wipe before cleaning**	①	+p	+	+	23.13	66.46	+	+	+	**PA**	24.1	66.48	+	21.59	65.89	+	+	+	+	**PA**	**PA**	4	c
2018	**2165**	**Wipe before cleaning**	①	+M	+	+	29.98	66.1	+	+	+	**PA**	29.39	65.96	+	28.18	65.65	+	+	+	+	**PA**	**PA**	4	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS - (up to 375 g)
BACTVIAB™ PMAxx™ treatment *(Extension study, 2020)*

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																		Category	Type
							Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C													
							PCR			Confirmation			PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate					
													BPW 72h			Lysate 72h										
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	Confirmation final result	Final result	Agreement	Cp	Tm	Result	Cp	Tm	Result	Confirmation final result			Agreement 72h BPW	Agreement 72h Lysate		
				CCI																						
2020	**2567**	**Infant formula**	③	+p	+	+	24.59	68.18	+	+	+	**PA**	25.12	66.57	+	26.82	68.4	+	+	+	+	**PA**	**PA**	3	a
2020	**2568**	**Infant formula**	③	+p	+	+	27.44	68.02	+	+	+	**PA**	28.29	68.42	+	28.57	68.35	+	+	+	+	**PA**	**PA**	3	a
2020	**2569**	**Infant formula**	③	st	/	-	34.85	68.66	+	+	+	**PD**	34.53	68.62	+	35.78	68.93	+	+	+	+	**PD**	**PD**	3	a
2020	**2570**	**Infant formula**	③	+p	+	+	32.12	68.3	+	+	+	**PA**	31.68	68.58	+	33.2	68.59	+	+	+	+	**PA**	**PA**	3	a
2020	**2571**	**Infant formula**	③	+p	+	+	24.51	67.78	+	+	+	**PA**	26.14	68.16	+	26.93	68.11	+	+	+	+	**PA**	**PA**	3	a
2020	**2572**	**Infant cereals**	③	+p	+	+	24.62	68.22	+	+	+	**PA**	26.49	68.57	+	27.04	68.26	+	+	+	+	**PA**	**PA**	3	a
2020	**2573**	**Infant cereals**	③	+p	+	+	24.5	68.02	+	+	+	**PA**	25.65	67.16	+	25.27	67.83	+	+	+	+	**PA**	**PA**	3	a
2020	**2574**	**Infant cereals**	③	+p	+	+	26.3	68.08	+	+	+	**PA**	0	55.3	+	27.12	67.88	+	+	+	+	**PA**	**PA**	3	a
2020	**2575**	**Infant cereals**	③	+p	+	+	25.6	68.28	+	+	+	**PA**	26.88	67.31	+	27.34	67.91	+	+	+	+	**PA**	**PA**	3	a
2020	**2576**	**Infant cereals**	③	+p	+	+	24.08	67.93	+	+	+	**PA**	25.66	68.23	+	24.87	67.64	+	+	+	+	**PA**	**PA**	3	a
2020	**2577**	**Whole milk powder**	③	+p	+	+	33.5	68.2	+	+	+	**PA**	33.06	68.23	+	33.84	67.83	+	+	+	+	**PA**	**PA**	3	a
2020	**2578**	**Skim milk powder**	③	+p	+	+	31.7	67.6	+	+	+	**PA**	28.67	67.81	+	31.45	67.73	+	+	+	+	**PA**	**PA**	3	a
2020	**2579**	**Half-skim milk powder**	③	+p	+	+	30.79	67.98	+	+	+	**PA**	30.78	68.13	+	31.74	68	+	+	+	+	**PA**	**PA**	3	a
2020	**2580**	**Skim milk powder**	③	+p	+	+	31.57	66.86	+	+	+	**PA**	28.57	67.9	+	31.72	67.39	+	+	+	+	**PA**	**PA**	3	a
2020	**2581**	**Skim milk powder**	③	+p	+	+	35.57	68.13	+	+	+	**PA**	0/0/0	0/0/0	-/-/-	35.42	67.83	+	+	-	+	**$ND_{FN(alt)}$**	**PA**	3	a
2020	2876	Whole milk powder	③	-	/	-	0	0	-	-	-	**NA**												3	a
2020	2877	Skim milk powder	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2878	Whole milk powder	③	-	/	-	0	0	-	-	-	**NA**												3	a
2020	2879	Half-skim milk powder	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2880	Whole milk powder	③	-	/	-	0	0	-	-	-	**NA**												3	a
2020	2881	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2882	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2883	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2884	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2885	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2886	Infant cereals	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2887	Infant cereals	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2888	Infant cereals	③	-	/	-	29.36	67.99	+	+	+	**PD**	29.87	67.3	+	30.73	67.68	+	+	+	+	**PD**	**PD**	3	a
2020	2889	Infant cereals	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	2890	Infant cereals	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	3971	Infant formula	③	st	/	-	0	0	-	-	-	**NA**												3	a
2020	**2562**	**Infant formula with probiotics (Bifidobacterium lactis 3.6x10⁶CFU/g)**	③	+p	+	+	26.79	68.33	+	+	+	**PA**	28.18	69.2	+	27.66	68.74	+	+	+	+	**PA**	**PA**	3	b
2020	**2563**	**Infant formula with probiotics (Bifidobacterium lactis 5.2x10⁵CFU/g)**	③	+p	+	+	32.46	68.07	+	+	+	**PA**	32.34	68.21	+	32.87	68.47	+	+	+	+	**PA**	**PA**	3	b
2020	**2564**	**Infant formula with probiotics (Bifidobacterium breve 9.7x10⁶CFU/g)**	③	+p	+	+	0/0/0	0/0/0	-/-/-	+	-	**$ND_{FN(alt)}$**	29.58	68.92	+	0/0/0	0/0/0	-/-/-	+	+	-	**PA**	**$ND_{FN(alt)}$**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS - (up to 375 g)
BACTVIAB™ PMAxx™ treatment *(Extension study, 2020)*

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C											
							PCR			Confirmation			PCR						Confirmation					
													BPW 72h			Lysate 72h								
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**	Final result	Agreement	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
				CCI																				
2020	**2565**	**Infant formula with probiotics (Bifidobacterium lactis 1.4x10⁴CFU/g)**	③	+p	+	+	29.82	68.1	+	+	+	**PA**	30.83	68.78	+	30.99	68.25	+	+	+	+	**PA**	**PA**	3	b
2020	**2566**	**Infant formula with probiotics (Lactobacillus reuteri 6.6x10⁴CFU/g)**	③	+p	+	+	26.02	68.12	+	+	+	**PA**	27.82	68.6	+	28.51	68.43	+	+	+	+	**PA**	**PA**	3	b
2020	**3108**	**Infant cereals cocoa (Bifidobacterium lactis 3.0x10⁶CFU/g)**	③	+p	+	+	25.72	67.95	+	+	+	**PA**	26.62	68.15	+	27.12	67.82	+	+	+	+	**PA**	**PA**	3	b
2020	**3109**	**Infant cereals avoine et blé (Bifidobacterium lactis 5.6x10⁶CFU/g)**	③	+p	+	+	25.91	67.96	+	+	+	**PA**	27.1	68.12	+	25.7	67.46	+	+	+	+	**PA**	**PA**	3	b
2020	**3110**	**Infant cereals honey (Bifidobacterium lactis 1.0x10⁷CFU/g)**	③	+p	+	+	25.47	67.99	+	+	+	**PA**	25.82	68.11	+	25.26	67.39	+	+	+	+	**PA**	**PA**	3	b
2020	**3111**	**Infant cereals chestnut biscuit (Bifidobacterium lactis 4.0x10⁵CFU/g)**	③	+p	+	+	25.51	68.1	+	+	+	**PA**	26.41	68.22	+	27.18	68.02	+	+	+	+	**PA**	**PA**	3	b
2020	**3112**	**Infant cereals 5 cereals (Bifidobacterium lactis 3.5x10⁵CFU/g)**	③	+p	+	+	33.86	68.32	+	+	+	**PA**	33.9	68.43	+	34.01	67.52	+	+	+	+	**PA**	**PA**	3	b
2020	**3113**	**Infant cereals biscuit (Bifidobacterium lactis 4.5x10⁵CFU/g)**	③	+p	+	+	27.6	68.34	+	+	+	**PA**	27.88	68.57	+	27.5	68.26	+	+	+	+	**PA**	**PA**	3	b
2020	**3114**	**Infant cereals vanilla (Bifidobacterium lactis 4.5x10⁵CFU/g)**	③	+p	+	+	34.67	68.17	+	+	+	**PA**	30.25	68.77	+	35.61	68.02	+	+	+	+	**PA**	**PA**	3	b
2020	**3115**	**Infant formula with probiotics (Lactobacillus reuteri 4.4x10⁵CFU/g)**	③	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	b
2020	**3116**	**Infant formula with probiotics (Bifidobacterium infantis 1.2x10⁶CFU/g)**	③	+p	+	+	30.08	67.94	+	+	+	**PA**	29.41	68.49	+	31.05	68.57	+	+	+	+	**PA**	**PA**	3	b
2020	**3117**	**Infant formula with probiotics (Lactobacillus reuteri 2.3x10⁶CFU/g)**	③	st	/	-	0/0/0	0/0/0	-/-/-	+	-	**$NA_{FN(alt)}$**	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	+	-	-	**$NA_{FN(alt)}$**	**$NA_{FN(alt)}$**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS - (up to 375 g)
BACTVIAB™ PMAxx™ treatment *(Extension study, 2020)*

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
				CSB	Confirmation	ISO 22964 Result	Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C												
							PCR			Confirmation	Final result	Agreement	PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h									
				CCI			Cp	Tm	Result	**Confirmation final result**			Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**						
2020	**3834**	**Infant formula with probiotics (Bifidobacterium infantis 4.4x10^{5}CFU/g)**	③	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	b
2020	**3835**	**Infant formula with probiotics (Lactobacillus reuterii 1.2x10^{6}CFU/g)**	③	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	b
2020	3894	Infant formula with probiotics (Bifidobacterium 1.2x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3895	Infant formula with probiotics (Bifidobacterium infantis 5.2x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3896	Infant formula with probiotics (Bifidobacterium infantis 4.1x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	b
2020	3897	Infant cereals with probiotics (Bifidobacterium lactis 1.2x10^{4}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3898	Infant cereals with probiotics (Bifidobacterium lactis 9.1x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3972	Infant cereals with probiotics (Bifidobacterium lactis 7.3x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3973	Infant cereals with probiotics (Bifidobacterium lactis 5.8x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3974	Infant cereals with probiotics (Bifidobacterium lactis 6.2x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3975	Infant cereals with probiotics (Bifidobacterium lactis 4.5x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS - (up to 375 g)
BACTVIAB™ PMAxx™ treatment *(Extension study, 2020)*

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																	Category	Type
				CSB	Confirmation	ISO 22964 Result	Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C												
							PCR			Confirmation	Final result	Agreement	PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h									
				CCI			Cp	Tm	Result	**Confirmation final result**			Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**						
2020	3976	Infant cereals with probiotics (Bifidobacterium lactis 5.5x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3977	Infant formula with probiotics (Bifidobacterium lactis 4.6x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3978	Infant formula with probiotics (Lactobacillus fermentum 2.4x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3979	Infant formula with probiotics (Bifidobacterium infantis 9.1x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3980	Infant formula with probiotics (Lactobacillus reuterii 9.0x10^{5}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	3981	Infant formula with probiotics (Lactobacillus reuterii 3.4x10^{6}CFU/g)	③	st	/	-	0	0	-	-	-	**NA**												3	b
2020	**2741**	**Milk powder**	④	+p	+	+	27.14	67.25	+	+	+	**PA**	33.3	68.8	+	29.68	67.62	+	+	+	+	**PA**	**PA**	3	c
2020	**2742**	**Milk powder**	④	+p	+	+	27.82	67.27	+	+	+	**PA**	30.07	68.36	+	28.23	67.13	+	+	+	+	**PA**	**PA**	3	c
2020	**2743**	**Whey**	④	st	/	-	32.6	67.5	+	+	+	**PD**	32.08	68.47	+	32.45	67.26	+	5x-(ESIA/CCI/CSB)	-	-	**PD$_{FP(ALT)}$**	**PD$_{FP(ALT)}$**	3	c
2020	**2744**	**Whey**	④	+p	+	+	32.7	67.3	+	+	+	**PA**	32.56	68.59	+	32.7	67.26	+	5x-(ESIA/CCI/CSB)	-	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	3	c
2020	**2745**	**Whey**	④	+p	+	+	32.76	67.58	+	+	+	**PA**	32.22	68.23	+	32.77	67.27	+	+(CSB)	+	+	**PA**	**PA**	3	c
2020	**2746**	**Non-fat dry milk**	④	st	/	-	32.56	67.5	+	+	+	**PD**	33.45	68.22	+	32.46	67.3	+	+	+	+	**PD**	**PD**	3	c
2020	**2747**	**Non-fat dry milk**	④	+p	+	+	30.57	67.33	+	+	+	**PA**	31.22	68.43	+	30.08	66.98	+	+	+	+	**PA**	**PA**	3	c
2020	**2748**	**Caseinate**	④	+p	+	+	26.55	67.52	+	+	+	**PA**	30.31	68.84	+	28.85	67.12	+	+	+	+	**PA**	**PA**	3	c
2020	**2749**	**Maltodextrin**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**2750**	**Non-fat dry milk**	④	+p	+	+	32.96	67.16	+	+	+	**PA**	34.73	68.11	+	32.84	66.92	+	5x-(ESIA/CCI/CSB)	-	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	3	c
2020	**2751**	**Whey**	④	+p	+	+	31.12	66.88	+	+	+	**PA**	32.65	67.9	+	31.69	66.83	+	+	+	+	**PA**	**PA**	3	c
2020	**2752**	**Whey**	④	+p	+	+	27.44	66.91	+	+	+	**PA**	30.1	67.71	+	27.53	66.37	+	+	+	+	**PA**	**PA**	3	c
2020	**2753**	**Whey**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**2754**	**Whey**	④	st	/	-	33.65	67.06	+	+	+	**PD**	33.72	67.97	+	34.02	66.65	+	+	+	+	**PD**	**PD**	3	c
2020	**2755**	**Whey**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**2756**	**Starch**	④	st	/	-	29.43	67.3	+	+	+	**PD**	32.09	68.59	+	28.74	66.73	+	+	+	+	**PD**	**PD**	3	c
2020	**2757**	**Starch**	④	st	/	-	30.01	67.59	+	+	+	**PD**	31.51	68.55	+	30.5	67.5	+	+	+	+	**PD**	**PD**	3	c
2020	**2758**	**Starch**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**2759**	**Maltodextrin**	④	+p	+	+	26.63	67.38	+	+	+	**PA**	29.53	68.66	+	26.63	66.7	+	+	+	+	**PA**	**PA**	3	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS - (up to 375 g) BACTVIAB™ PMAxx™ treatment *(Extension study, 2020)*																											
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																		Category	Type
				CSB	Confirmation	ISO 22964 Result	Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C													
							PCR			Confirmation	Final result	Agreement	PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h									
				CCI			Cp	Tm	Result	**Confirmation final result**			Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**						
2020	**2760**	**Maltodextrin**	④	+p	+	+	30.87	67.24	+	+	+	**PA**	31.61	68.54	+	30.93	66.69	+	+(CSB)	+	+	**PA**	**PA**	3	c
2020	**3098**	**Corn starch**	④	+p	+	+	29.4	68.78	+	+	+	**PA**	28.27	68.78	+	29.97	68.25	+	+	+	+	**PA**	**PA**	3	c
2020	**3099**	**Maltodextrin**	④	+p	+	+	28.41	68.36	+	+	+	**PA**	27.79	68.41	+	29	67.76	+	+	+	+	**PA**	**PA**	3	c
2020	**3100**	**Natrium caseinate**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**3101**	**Whey**	④	+p	+	+	33.35	68.08	+	+	+	**PA**	33.23	68.42	+	33.61	67.63	+	+	+	+	**PA**	**PA**	3	c
2020	**3102**	**Non-fat dry milk**	④	st	/	-	34.06	68.31	+	+	+	**PD**	33.58	68.31	+	33.74	67.62	+	+	+	+	**PD**	**PD**	3	c
2020	**3103**	**Lactose**	④	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	3	c
2020	**3104**	**Whey**	④	+p	+	+	31.58	68.34	+	+	+	**PA**	30.88	68.44	+	31.51	68.07	+	+	+	+	**PA**	**PA**	3	c
2020	**3105**	**Whey**	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	**3106**	**Whey**	④	+p	+	+	33.65	67.98	+	+	+	**PA**	33.79	68.45	+	34.25	67.85	+	+	+	+	**PA**	**PA**	3	c
2020	**3107**	**Maltodextrin**	④	+p	+	+	27.5	68.05	+	+	+	**PA**	27.01	68.21	+	27.86	67.73	+	+	+	+	**PA**	**PA**	3	c
2020	**3836**	**Starch**	④	+p	+	+	29.44	68.43	+	+	+	**PA**	30.55	68.28	+	29.59	67.68	+	+	+	+	**PA**	**PA**	3	c
2020	**3837**	**Starch**	④	+p	+	+	32.44	68.63	+	+	+	**PA**	32.6	68.5	+	30.57	67.51	+	+	+	+	**PA**	**PA**	3	c
2020	3838	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3839	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3840	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3841	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3842	Starch	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3843	Lactose	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3844	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3845	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	3846	Whey	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	3847	Caseinate	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3848	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	3849	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3850	Caseinate	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	3851	Whey	④	st	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	3	c
2020	3852	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3899	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3900	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3901	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3902	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3903	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3904	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3905	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3906	Whey	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3907	Milk powder	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3908	Maltodextrin	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3968	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3969	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c
2020	3970	Non-fat dry milk	④	st	/	-	0	0	-	-	-	**NA**												3	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device)
BACTVIAB™ PMAxx™ treatment (Extension study, 2020)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C											
							PCR			Confirmation			PCR						Confirmation					
													BPW 72h			Lysate 72h								
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**	Final result	Agreement	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
				CCI																				
2020	**4040**	**Process water (dairy environment)**	①	+p	+	+	30.05	68.67	+	+	+	**PA**	30.59	68.63	+	28.8	67.62	+	+	+	+	**PA**	**PA**	4	a
2020	**4041**	**Process water (dairy environment)**	①	st	/	-	28.53	68.5	+	+	+	**PD**	28.84	68.39	+	28.54	67.76	+	+	+	+	**PD**	**PD**	4	a
2020	**4042**	**Process water (dairy environment)**	①	+p	+	+	27.8	68.59	+	+	+	**PA**	27.54	68.39	+	26.72	67.59	+	+	+	+	**PA**	**PA**	4	a
2020	**4043**	**Process water (dairy environment)**	①	+p	+	+	27.61	68.6	+	+	+	**PA**	28.01	68.49	+	27.43	67.85	+	+	+	+	**PA**	**PA**	4	a
2020	4255	Process water (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	4256	Process water (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	a
2020	4257	Process water (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	a
2020	4258	Process water (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	4259	Process water (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4282**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4283**	**Process water (dairy environment)**	①	-	/	-	0	0	-	-	-	**NA**												4	a
2020	**4284**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4285**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4286**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4292**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4293**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	4381	Process water (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	4382	Process water (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4410**	**Process water (dairy environment)**	①	st	/	-	27.1	68.26	+	+	+	**PD**	27.58	68.52	+	27.57	67.77	+	+	+	+	**PD**	**PD**	4	a
2020	**4411**	**Process water (dairy environment)**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	4	a
2020	**4623**	**Process water (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	a
2020	**4624**	**Process water (dairy environment)**	①	+d/+	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	4	a
2020	**3832**	**Dusts**	①	+p	+	+	32.49	68.67	+	+	+	**PA**	32.7	68.56	+	31.73	67.58	+	+	+	+	**PA**	**PA**	4	b
2020	**3833**	**Dusts**	①	+p	+	+	33.3	67.95	+	+	+	**PA**	33.52	67.95	+	33.54	67.64	+	+	+	+	**PA**	**PA**	4	b
2020	4260	Dusts (dairy environment)	①	+d/+	+	+	0/35,89/0	0/68,03/0	-/+/-	+	-	**$ND_{FN(alt)}$**	0	67.93	+	0/36,47/0	0/68,07/68,26	-/+/+	+	+	-	**PA**	**$ND_{FN(alt)}$**	4	b

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device)
BACTVIAB™ PMAxx™ treatment (Extension study, 2020)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C											
							PCR			Confirmation			PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h								
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**	Final result	Agreement	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**						
				CCI																				
2020	4261	Vacuum cleaner filter (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4262	Vacuum cleaner filter (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4263	Vacuum cleaner filter (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4264	Vacuum cleaner filter (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	**4287**	**Dusts (dairy environment)**	①	-	/	-	0/35,6/34,93/0/0	0/67,8/68,27/0/0	-/+/+/-/-	+	-	**$NA_{FN(alt)}$**	34.96	68.11	+	35.36	66.7	+	-	-	-	**$PD_{FP(ALT)}$**	**$PD_{FP(ALT)}$**	4	b
2020	**4288**	**Vacuum cleaner filter (dairy environment)**	①	+p	+	+	33.56	68.3	+	+	+	**PA**	34.16	68.11	+	35.1	66.91	+	+	+	+	**PA**	**PA**	4	b
2020	**4289**	**Vacuum cleaner filter (dairy environment)**	①	+p	+	+	35,26	67,49	+	+	+	**PA**	0/0/0	0/0/0	-/-/-	0	67.26	+	+	-	+	**$ND_{FN(alt)}$**	**PA**	4	b
2020	**4290**	**Vacuum cleaner filter (dairy environment)**	①	+p	+	+	35.75	66.88	+	+	+	**PA**	34.59	68.62	+	37.28	65.32	+	+	+	+	**PA**	**PA**	4	b
2020	**4291**	**Vacuum cleaner filter (dairy environment)**	①	+p	+	+	35.52	67.66	+	+	+	**PA**	33.92	68.11	+	35.07	66.13	+	+	+	+	**PA**	**PA**	4	b
2020	4383	Dusts	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4617	Dusts (dairy environment)	①	+p	+	+	29.35	68.64	+	+	+	**PA**	26.03	68.06	+	26.48	67.9	+	+	+	+	**PA**	**PA**	4	b
2020	4618	Dusts (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4619	Dusts (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**											4	b
2020	4620	Dusts (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**											4	b
2020	4621	Dusts (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	4622	Dusts (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**											4	b
2020	**4675**	**Dusts (dairy environment)**	①	+M	+	+	31.98	68.57	+	+	+	**PA**	31.2	68.34	+	31.32	68.22	+	+	+	+	**PA**	**PA**	4	b
2020	**4676**	**Dusts (dairy environment)**	①	+M	+	+	0/0/0	0/0/0	-/-/-	+	-	**$ND_{FN(alt)}$**	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	+	-	-	**$ND_{FN(alt)}$**	**$ND_{FN(alt)}$**	4	b
2020	**4677**	**Dusts (dairy environment)**	①	+M	+	+	30.48	68.16	+	+	+	**PA**	30.05	68.15	+	30.1	67.86	+	+	+	+	**PA**	**PA**	4	b
2020	**4678**	**Dusts (dairy environment)**	①	-	/	-	34.3	68.6	+	+	+	**PD**	34.64	68.33	+	33.83	67.94	+	+	+	+	**PD**	**PD**	4	b
2020	**4679**	**Dusts (dairy environment)**	①	+M	+	+	0/0/0	0/0/0	-/-/-	+	-	**$ND_{FN(alt)}$**	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	+(CSB)	-	-	**$ND_{FN(alt)}$**	**$ND_{FN(alt)}$**	4	b
2020	**4680**	**Dusts (dairy environment)**	①	+1/2	+	+	31.45	68.58	+	+	+	**PA**	30.42	67.97	+	30.31	67.85	+	+	+	+	**PA**	**PA**	4	b
2020	**4681**	**Dusts (dairy environment)**	①	-	/	-	0	0	-	-	-	**NA**											4	b
2020	**4682**	**Dusts (dairy environment)**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	4	b

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device)
BACTVIAB™ PMAxx™ treatment (Extension study, 2020)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
							Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C											
							PCR			Confirmation	Final result	Agreement	PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h									
				CSB	Confirmation	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**			Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**						
				CCI																				
2020	**4683**	**Dusts (dairy environment)**	①	+d/-	/	-	0	0	-	-	-	**NA**	0	0	-	0	0	-	-	-	-	**NA**	**NA**	4	b
2020	**4684**	**Dusts (dairy environment)**	①	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	4	b
2020	4094	Wipe before cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4095	Wipe before cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4096	Wipe before cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4097	Wipe before cleaning process (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	c
2020	4098	Wipe after cleaning process (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	c
2020	4099	Wipe after cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4100	Wipe after cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4101	Wipe after cleaning process (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	**4114**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	30.5	68.51	+	+	+	**PA**	29.44	68.42	+	30.38	66.89	+	+	+	+	**PA**	**PA**	4	c
2020	**4115**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	27.92	68.22	+	+	+	**PA**	26.74	68.31	+	27.02	66.42	+	+	+	+	**PA**	**PA**	4	c
2020	**4116**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	27.66	68.6	+	+	+	**PA**	26.84	68.42	+	23.86	66.13	+	+	+	+	**PA**	**PA**	4	c
2020	**4117**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	31.54	68.34	+	+	+	**PA**	31.25	68.76	+	29.39	66.56	+	+	+	+	**PA**	**PA**	4	c
2020	**4118**	**Wipe after cleaning process (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	**4119**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	27.95	68.3	+	+	+	**PA**	27.55	68.46	+	26.22	66.27	+	+	+	+	**PA**	**PA**	4	c
2020	4375	Sponge (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) BACTVIAB™ PMAxx™ treatment (Extension study, 2020)																											
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																			Category	Type
				CSB	Confirmation	ISO 22964 Result	Protocol ① or ③ or ④ after incubation time						After storage for 72h at 5°C ± 3°C														
							PCR			Confirmation	Final result	Agreement	PCR						Confirmation	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													BPW 72h			Lysate 72h										
				CCI			Cp	Tm	Result	**Confirmation final result**			Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**							
2020	4376	Sponge (dairy environment)	①	-	/	-	0	0	-	-	-	**NA**												4	c
2020	4377	Wipe (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4378	Sponge (dairy environment)	①	-	/	-	33.08	68.38	+	+ (after storage 72h)	+	**PD**	34.29	68.31	+	33.08	67.73	+	+	+	+	**PD**	**PD**	4	c
2020	4379	Swab (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	4380	Swab (dairy environment)	①	st	/	-	0	0	-	-	-	**NA**												4	c
2020	**4406**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	27.08	68.54	+	+	+	**PA**	28.69	68.94	+	28.29	68.3	+	+	+	+	**PA**	**PA**	4	c
2020	**4407**	**Sponge (dairy environment)**	①	+p	+	+	29.13	68.2	+	+	+	**PA**	29.76	68.48	+	29.63	67.93	+	+	+	+	**PA**	**PA**	4	c
2020	**4408**	**Wipe after cleaning process (dairy environment)**	①	+p	+	+	28.52	68.48	+	+	+	**PA**	29.44	68.69	+	27.4	68.06	+	+	+	+	**PA**	**PA**	4	c
2020	**4409**	**Wipe after cleaning process (dairy environment)**	①	st	/	-	0	0	-	-	-	**NA**												4	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) *(Extension study, 2023)*

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h at 34-38°C						After storage for 72 h at 5°C ± 3°C										
									PCR without PMaxx			Confirmation final result	Final result	Agree-ment	PCR without PMaxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result							BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+p	+	+	21.59	66.61	+	+	+	**PA**	21.47	66.55	+	22.15	66.41	+	+	+	+	**PA**	**PA**	5	a
2023	**1577**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0,8% fat)**	BPW	⑤	+p	+	+	19.35	65.91	+	+	+	**PA**	18.98	65.62	+	19.67	65.99	+	+	+	+	**PA**	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24.6% fat)**	BPW + Tween 80	⑤	+p	+	+	19.53	66.53	+	+	+	**PA**	25.13	66.30	+	19.02	65.76	+	+	+	+	**PA**	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	20.16	66.90	+	+	+	**PA**	19.95	66.52	+	19.10	66.29	+	+	+	+	**PA**	**PA**	5	a
2023	**1581**	**Poudre de lait infantile bio dès 6 mois (23,7% MG)**	**Infant formula (23.7% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	**1582**	**Poudre de lait infantile 0 à 6 mois (23,5% MG)**	**Infant formula (23.5% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	st	/	-	22.09	67.08	+	+	+	**PD**	20.59	66.58	+	19.99	66.82	+	+	+	+	**PD**	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+p	+	+	21.16	67.00	+	+	+	**PA**	19.72	66.46	+	18.97	66.73	+	+	+	+	**PA**	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+p	+	+	20.21	66.99	+	+	+	**PA**	19.88	66.97	+	19.01	66.74	+	+	+	+	**PA**	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+p	+	+	29.75	66.22	+	+	+	**PA**	21.75	66.14	+	29.35	66.35	+	+	+	+	**PA**	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	19.12	66.22	+	+	+	**PA**	19.19	66.44	+	18.94	66.15	+	+	+	+	**PA**	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	20.88	66.40	+	+	+	**PA**	19.80	66.74	+	20.10	66.42	+	+	+	+	**PA**	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+p	+	+	21.29	66.17	+	+	+	**PA**	19.64	66.06	+	21.50	66.19	+	+	+	+	**PA**	**PA**	5	a
2023	2500	Céréales infantiles saveur biscuits	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	2501	Céréales infantiles +10 mois vanille	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	2502	Céréales infantiles après 4 mois bioépautre	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	a
2023	2503	Poudre de lait infantile dès 6 mois bio (23,6% MG)	Infant formula (23.6% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**												5	a

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) *(Extension study, 2023)*

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h at 34-38°C						After storage for 72 h at 5°C ± 3°C										
									PCR without PMaxx			Confirmation final result	Final result	Agree-ment	PCR without PMaxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
						CCI																					
2023	2504	Poudre de lait infantile dès 6 mois (23,5% MG)	Infant formula (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	2505	Poudre de lait 0-6 mois (24,6% MG)	Infant formula (24.6% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B. lactis*: 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	21.92	66.81	+	+	+	**PA**	21.42	66.55	+	20.72	66.66	+	+	+	+	**PA**	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B. lactis*: 8.91x10⁵ CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+p	+	+	19.43	66.45	+	+	+	**PA**	19.54	66.26	+	20.29	66.21	+	+	+	+	**PA**	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10⁵ UFC/g) (25% MG)**	**Infant formula with probiotics (*B. lactis*: 4.09x10⁵ CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10⁶ UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B. lactis*: 1.36x10⁶ CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+p	+	+	22.63	66.47	+	+	+	**PA**	23.45	66.30	+	24.00	66.44	+	+	+	+	**PA**	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10⁴ UFC/g) (26% MG)**	**Infant formula with probiotics (*B. lactis*: 3.36x10⁴ CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+p	+	+	20.45	66.57	+	+	+	**PA**	21.01	66.49	+	21.66	66.48	+	+	+	+	**PA**	**PA**	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10³ UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B. lactis*: 2.45x10³ CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+p	+	+	31.36	66.16	+	+	+	**PA**	30.58	66.44	+	32.76	66.16	+	+	+	+	**PA**	**PA**	5	b
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B. lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	21.03	66.58	+	+	+	**PA**	21.57	66.29	+	21.66	66.28	+	+	+	+	**PA**	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B. lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	21.52	66.53	+	+	+	**PA**	20.79	66.45	+	21.14	66.37	+	+	+	+	**PA**	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B. lactis* : 1.09x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	21.35	66.59	+	+	+	**PA**	20.16	66.77	+	20.57	66.25	+	+	+	+	**PA**	**PA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) *(Extension study, 2023)*

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h at 34-38°C						After storage for 72 h at 5°C ± 3°C										
									PCR without PMaxx			Confirmation final result	Final result	Agree-ment	PCR without PMaxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
						CCI																					
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*Lxreuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+p	+	+	25.71	66.56	+	+	+	**PA**	24.16	66.79	+	26.14	66.67	+	+	+	+	**PA**	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa/banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B. lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	20.15	66.57	+	+	+	**PA**	20.10	66.83	+	19.29	66.53	+	+	+	+	**PA**	**PA**	5	b
2023	2009	Poudre de lait infantile 0-6 mois avec probiotiques (*S.thermophilus* : 1,32.10⁶ UFC/g) (28,6% MG)	Infant formula with probiotics (*Sxthermophilus* : 1.32x10⁶ CFU/g) (28.6% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B. lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	st	/	-	34.37/ 35.33/3 4.44	66.46/ 66.15/ 66.58	+/+/+	-	-	**PD$_{FP(ALT)}$**	33.99/ 0/34.93	66.62/ 66.27/ 65.98	+/-/+	33.18/ 34.04/ 34.90	67.05/ 66.28/ 65.49	+/+/+	/	-	-	**PD$_{FP(ALT)}$**	**PD$_{FP(ALT)}$**	5	b
2023	2011	Poudre de lait infantile 6-12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,8% MG)	Infant formula with probiotics (*B. lactis*: 8.91x10⁵ CFU/g) (24.8% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2494	Poudre de lait infantile dès la naissance avec probiotiques (*L.reuteri*: 3,09.10⁶ UFC/g) (27,8% MG)	Infant formula with probiotics (*Lxreuteri*: 3.09x10⁶ CFU/g) (27.8%fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
	2495	Poudre de lait infantile 0-6 mois avec probiotiques (*B.breve*: 3,50.10⁶ UFC/g) (24,3% MG)	Infant formula with probiotics (*Bxbreve*: 3.50x10⁶ CFU/g) (24.3% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2496	Poudre de lait infantile système immunitaire dès 6 mois avec probiotiques (*L.reuteri*: 3,36.10⁶ UFC/g) (24,2% MG)	Infant formula with probiotics (*Lxreuteri*: 3.36x10⁶ CFU/g) (24.2% fat)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2497	Céréales infantiles avec probiotiques (B.*lactis*: 1,18.10³ UFC/g)	Infant cereals with probiotics (*B. lactis*: 1.18x10³ CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2498	Céréales infantiles quinoa + 6 mois avec probiotiques (B.*lactis*: 4,41.10⁵ UFC/g)	Infant cereals with probiotics (*B. lactis*: 4.41x10⁵ CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**												5	b

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Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h at 34-38°C						After storage for 72 h at 5°C ± 3°C										
									PCR without PMaxx			Confirmation final result	Final result	Agree-ment	PCR without PMaxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result							BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	2499	Céréales infantiles avec probiotiques (B.*lactis*: 1,36.10⁴ UFC/g)	Infant cereals with probiotics (*B. lactis*: 1.36x10⁴ CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	NA											5	b
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thinckened powder**	BPW + α-amylase	⑤	+p	+	+	23.27	67.17	+	+	+	PA	22.93	66.82	+	23.71	66.77	+	+	+	+	PA	PA	5	c
2023	**1768**	**Poudre infantile proteine de riz avec probiotiques (*B.lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B. lactis*: 2.73x10² CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+p	+	+	27.16	66.30	+	+	+	PA	27.21	66.29	+	27.73	66.19	+	+	+	+	PA	PA	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*Lxreuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+md	+	+	20.20	66.65	+	+	+	PA	19.54	66.55	+	20.09	66.15	+	+	+	+	PA	PA	5	c
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+md	+	+	22.77	66.69	+	+	+	PA	21.45	66.11	+	23.38	66.26	+	+	+	+	PA	PA	5	c
2023	**1771**	**Poudre de riz infantile 6-12 mois (23,3% MG)**	**Infant rice protein (23.3% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	NA											5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+p	+	+	0	0	-	-	-	ND	0	0	-	0	0	-	-	-	-	ND	ND	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+p	+	+	31.58	66.44	+	+	+	PA	27.51	66.62	+	32.26	66.09	+	+	+	+	PA	PA	5	c
2023	**1774**	**Poudre infantile de proteine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+p	+	+	26.22	66.63	+	+	+	PA	23.02	66.47	+	27.19	66.66	+	+	+	+	PA	PA	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	st	/	-	26.43	66.67	+	+	+	PD	24.66	66.52	+	27.96	66.44	+	+	+	+	PD	PD	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+p	+	+	20.74	66.79	+	+	+	PA	21.34	67.11	+	20.81	66.42	+	+	+	+	PA	PA	5	c
2023	**2006**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice powder (25% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	NA											5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thinckened powder**	BPW	⑤	+p	+	+	23.47	66.99	+	+	+	PA	22.09	66.99	+	24.61	67.27	+	+	+	+	PA	PA	5	c
2023	2651	Poudre épaississante infantile	Thickened powder	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	NA											5	c

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Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h at 34-38°C						After storage for 72 h at 5°C ± 3°C										
									PCR without PMaxx						PCR without PMaxx										
															BPW 72h			Lysate 72h							
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	Cp	Tm	Result	**Confirmation final result**	Final result	Agree-ment	Cp	Tm	Result	Cp	Tm	Result	**Confirmation final result**	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
						CCI																					
2023	2652	Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (26,5% MG)	Infant powder without lactose with probiotics (*Lxreuteri*: 1.0x10⁶ CFU/g) (26.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2653	Poudre de riz infantile bio dès 6 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2654	Poudre de riz infantile 6-12 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2655	Poudre de riz infantile AR 6-12 mois (22,8% MG)	Infant rice powder (22.8% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2656	Poudre de riz infantile 0-36 mois (25% MG)	Infant rice powder (25% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2657	Poudre dessert infantile sans lait nature 6-12 mois	Infant dessert powder without milk	BPW	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2658	Poudre dessert infantile sans lait vanille dès 12 mois	Infant dessert powder without milk	BPW	⑤	st	/	-	0	0	-	-	-	**NA**											5	c

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									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C											
									PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
						CCI																				
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+p	+	+	28.63	67.98	+	+	+	**PA**	29.10	67.56	+	28.32	67.39	+	+	+	+	**PA**	**PA**	5	a
2023	**1577**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0.8% fat)**	BPW	⑤	+p	+	+	26.05	67.20	+	+	+	**PA**	25.69	66.34	+	26.47	66.67	+	+	+	+	**PA**	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24,6% fat)**	BPW + Tween 80	⑤	+p	+	+	27.17	67.61	+	+	+	**PA**	27.85	67.13	+	30.26	67.19	+	+	+	+	**PA**	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	28.68	67.44	+	+	+	**PA**	29.15	67.15	+	31.03	67.55	+	+	+	+	**PA**	**PA**	5	a
2023	**1581**	**Poudre de lait infantile bio dès 6 mois (23,7% MG)**	**Infant formula (23.7% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	**1582**	**Poudre de lait infantile 0 à 6 mois (23,5% MG)**	**Infant formula (23.5% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	st	/	-	28.49	67.63	+	+	+	**PD**	28.60	67.54	+	29.51	67.54	+	+	+	+	**PD**	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+p	+	+	26.48	67.28	+	+	+	**PA**	29.81	66.89	+	27.95	67.37	+	+	+	+	**PA**	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+p	+	+	26.55	67.61	+	+	+	**PA**	25.70	67.73	+	28.13	67.09	+	+	+	+	**PA**	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+p	+	+	32.84	67.54	+	+	+	**PA**	27.94	66.94	+	32.88	67.10	+	+	+	+	**PA**	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	25.78	67.18	+	+	+	**PA**	27.00	67.47	+	26.08	66.79	+	+	+	+	**PA**	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+p	+	+	26.55	67.45	+	+	+	**PA**	28.26	67.59	+	27.27	67.19	+	+	+	+	**PA**	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+p	+	+	26.18	67.09	+	+	+	**PA**	26.00	67.24	+	27.48	66.88	+	+	+	+	**PA**	**PA**	5	a
2023	2500	Céréales infantiles saveur biscuits	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	2501	Céréales infantiles +10 mois vanille	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	2502	Céréales infantiles après 4 mois bioépautre	Infant cereals	BPW + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	a

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									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C											
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	2503	Poudre de lait infantile dès 6 mois bio (23,6% MG)	Infant formula (23.6% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	2504	Poudre de lait infantile dès 6 mois (23,5% MG)	Infant formula (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	2505	Poudre de lait 0-6 mois (24,6% MG)	Infant formula (24.6% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10^3 UFC/g)**	**Infant cereals with probiotics (*B.lactis*: 1.18x10^3 CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	29.42	67.52	+	+	+	**PA**	30.69	66.66	+	30.67	67.61	+	+	+	+	**PA**	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10^5 UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B.lactis*: 8.91x10^5 CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+p	+	+	26.15	67.09	+	+	+	**PA**	25.53	66.75	+	28.03	67.03	+	+	+	+	**PA**	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10^5 UFC/g) (25% MG)**	**Infant formula with probiotics (*B.lactis*: 4.09x10^5 CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10^6 UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B.lactis*: 1.36x10^6 CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+p	+	+	28.97	67.03	+	+	+	**PA**	29.96	67.19	+	30.65	66.79	+	+	+	+	**PA**	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10^4 UFC/g) (26% MG)**	**Infant formula with probiotics (*B.lactis*: 3.36x10^4 CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+p	+	+	26.03	67.11	+	+	+	**PA**	27.18	67.14	+	27.70	66.99	+	+	+	+	**PA**	**PA**	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10^3 UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B.lactis*: 2.45x10^3 CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+p	+	+	33.90	67.22	+	+	+	**PA**	34.13	67.51	+	33.79	67.09	+	+	+	+	**PA**	**PA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) *(Extension study, 2023)*

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C											
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	26.26	67.65	+	+	+	**PA**	25.72	67.58	+	28.06	67.14	+	+	+	+	**PA**	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	27.56	67.36	+	+	+	**PA**	25.78	67.43	+	28.78	66.71	+	+	+	+	**PA**	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.09x106 CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	28.86	67.61	+	+	+	**PA**	26.35	67.63	+	30.31	67.09	+	+	+	+	**PA**	**PA**	5	b
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+p	+	+	31.05	67.51	+	+	+	**PA**	29.53	67.64	+	31.57	67.44	+	+	+	+	**PA**	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa/banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+p	+	+	26.20	67.21	+	+	+	**PA**	25.76	67.19	+	28.62	67.15	+	+	+	+	**PA**	**PA**	5	b
2023	2009	Poudre de lait infantile 0-6 mois avec probiotiques (*S.thermophilus* : 1,32.10⁶ UFC/g) (28,6% MG)	Infant formula with probiotics (*S.thermophilus* : 1.32x10⁶ CFU/g) (28.6% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B.lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**	0	0	-	29.09/0/0	67.11/0/0	+/-/-	/	-	-	**NA**	**PD$_{FP(ALT)}$**	5	b
2023	2011	Poudre de lait infantile 6-12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,8% MG)	Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.8% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**												5	b

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Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C											
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	2494	Poudre de lait infantile dès la naissance avec probiotiques (*L.reuteri*: 3,09.10^6 UFC/g) (27,8% MG)	Infant formula with probiotics (*L.reuteri*: 3.09x10^6 CFU/g) (27.8%fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	2495	Poudre de lait infantile 0-6 mois avec probiotiques (*B.breve*: 3,50.10^6 UFC/g) (24,3% MG)	Infant formula with probiotics (*B.breve*: 3.50x10^6 CFU/g) (24.3% fat)	BPW 2X + Tween	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	2496	Poudre de lait infantile système immunitaire dès 6 mois avec probiotiques (*L.reuteri*: 3,36.10^6 UFC/g) (24,2% MG)	Infant formula with probiotics (*L.reuteri*: 3.36x10^6 CFU/g) (24.2% fat)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	2497	Céréales infantiles avec probiotiques (B.*lactis*: 1,18.10^3 UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.18x10^3 CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	2498	Céréales infantiles quinoa + 6 mois avec probiotiques (B.*lactis*: 4,41.10^5 UFC/g)	Infant cereals with probiotics (*B.lactis*: 4.41x10^5 CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	2499	Céréales infantiles avec probiotiques (B.*lactis*: 1,36.10^4 UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.36x10^4 CFU/g)	BPW 2X + α-amylase	⑤	st	/	-	0	0	-	-	-	**NA**											5	b
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thickened powder**	BPW + α-amylase	⑤	+p	+	+	28.69	67.84	+	+	+	**PA**	28.62	67.58	+	27.64	67.49	+	+	+	+	**PA**	**PA**	5	c
2023	**1768**	**Poudre infantile protéine de riz avec probiotiques (*B.lactis*: 2,73.10^2 UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B.lactis*: 2.73x10^2 CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+p	+	+	32.31	67.40	+	+	+	**PA**	31.49	67.00	+	32.57	67.50	+	+	+	+	**PA**	**PA**	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10^6 UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10^6 CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+md	+	+	26.99	67.49	+	+	+	**PA**	25.70	67.23	+	28.34	67.45	+	+	+	+	**PA**	**PA**	5	c

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Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*																Category	Type
									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C											
									PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
						CCI																				
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+md	+	+	27.46	67.42	+	+	+	**PA**	26.45	67.06	+	29.15	67.67	+	+	+	+	**PA**	**PA**	5	c
2023	**1771**	**Poudre de riz infantile 6-12 mois (23,3% MG)**	**Infant rice protein (23.3% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+p	+	+	0	0	-	-	-	**ND**	0	0	-	0	0	-	-	-	-	**ND**	**ND**	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+p	+	+	33.06	67.48	+	+	+	**PA**	30.89	67.50	+	33.89	67.11	+	+	+	+	**PA**	**PA**	5	c
2023	**1774**	**Poudre infantile de proteine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+p	+	+	30.66	67.58	+	+	+	**PA**	27.99	67.29	+	31.16	67.16	+	+	+	+	**PA**	**PA**	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	st	/	-	31.71	67.47	+	+	+	**PD**	29.77	67.54	+	32.82	67.14	+	+	+	+	**PD**	**PD**	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+p	+	+	25.94	67.15	+	+	+	**PA**	26.76	67.46	+	26.78	66.57	+	+	+	+	**PA**	**PA**	5	c
2023	**2006**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice powder (25% fat)**	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thinckened powder**	BPW	⑤	+p	+	+	28.70	67.51	+	+	+	**PA**	27.96	67.40	+	31.25	67.36	+	+	+	+	**PA**	**PA**	5	c
2023	2651	Poudre épaississante infantile	Thinckened powder	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2652	Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10^6 UFC/g) (26,5% MG)	Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10^6 CFU/g) (26.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2653	Poudre de riz infantile bio dès 6 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2654	Poudre de riz infantile 6-12 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2655	Poudre de riz infantile AR 6-12 mois (22,8% MG)	Infant rice powder (22.8% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c

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Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964 ♦			Alternative method: GENE-UP *Cronobacter*															Category	Type
									Protocol ⑤: Pre-warmed BPW 22h 34-38°C						After 72 h storage at 5°C ± 3°C										
						CSB	Confirmation Oxidase/API ID32E	ISO 22964 Result	PCR With PMAxx			Confirmation final result	Final result	Agreement	PCR with PMAxx						Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agree-ment 72h BPW	Agree-ment 72h Lysate		
															BPW 72h			Lysate 72h								
						CCI			Cp	Tm	Result				Cp	Tm	Result	Cp	Tm	Result							
2023	2656	Poudre de riz infantile 0-36 mois (25% MG)	Infant rice powder (25% fat)	BPW + Tween 80	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2657	Poudre dessert infantile sans lait nature 6-12 mois	Infant dessert powder without milk	BPW	⑤	st	/	-	0	0	-	-	-	**NA**											5	c
2023	2658	Poudre dessert infantile sans lait vanille dès 12 mois	Infant dessert powder without milk	BPW	⑤	st	/	-	0	0	-	-	-	**NA**											5	c

Confirmatory tests: detailed results - After incubation time

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS (up to 25 g) *(Initial validation study, 2018)*																												
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*																					Category	Type
					BPW 18 h 34-38°C																							
					PCR	Confirmation																		Final result	Agree-ment		
						Direct streaking											Subculture CSB					Confir-mation final result					
						ESIA					CCI					CCI											
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment							
2017	**7618**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a
2017	**7619**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a
2017	**7620**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a
2017	**7621**	**Infant formula without probiotics**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	a
2017	**7622**	**Infant formula without probiotics**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	a
2017	**7623**	**Infant formula without probiotics**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	a
2017	**7624**	**Infant cereals without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	b
2017	**7625**	**Infant cereals without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	b
2017	**7626**	**Infant cereals without probiotics**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	**7627**	**Infant cereals without probiotics**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	**7628**	**Infant cereals without probiotics**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	b
2017	**7629**	**Infant cereals without probiotics**	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	b
2017	**7630**	**Infant cereals without probiotics**	①	+	-	-			-	**ND**	+md/-			-	**ND**	-			-	**ND**	-	-	**ND**	1	b
2017	**7631**	**Infant cereals without probiotics**	①	-	+	+p	+	+	+	**PD**	+M	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	b
2017	**7632**	**Lactoserum**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	**7633**	**Milk proteins**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	c
2017	**7634**	**Lactose**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	**7635**	**Caseinate**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	c
2017	**7636**	**Lactoserum proteins concentrate**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	**7637**	**Maltodextrin**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	**7638**	**Lactoserum proteins concentrate**	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	**7795**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a
2017	**7796**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS (up to 25 g) *(Initial validation study, 2018)*																											
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*																				Category	Type
					BPW 18 h 34-38°C																						
					PCR	Confirmation																					
						Direct streaking											Subculture CSB					Confir-mation final result	Final result	Agree-ment		
						ESIA					CCI						CCI									
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment					
2017	**7797**	**Infant cereals without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	b
2017	**7798**	**Infant cereals without probiotics**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	b
2017	**7799**	**Infant formula without probiotics**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	**7800**	**Infant cereals without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	b
2017	**7801**	**Infant formula without probiotics**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	a
2017	**7802**	**Infant formula without probiotics**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	a
2017	**7803**	**Lactoserum**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	**7804**	**Lactoserum**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	**7805**	**Corn flour**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	c
2017	**7806**	**Milk powder (ingredient)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	8426	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8427	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8428	Infant cereals without probiotics	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	1	b
2017	8429	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8430	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8431	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8432	Infant cereals without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	8433	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8434	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8435	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8436	Infant formula without probiotics	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	1	a
2017	8437	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8438	Infant formula without probiotics	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8439	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a

INFANT FORMULA AND INFANT CEREALS WITHOUT PROBIOTICS INCLUDING INGREDIENTS (up to 25 g) *(Initial validation study, 2018)*																												
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW 18 h 34-38°C																					Final result	Agree-ment	Category	Type
					PCR	Confirmation																							
						Direct streaking											Subculture CSB					Confir-mation final result						
						ESIA					CCI						CCI											
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment							
2017	8440	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8441	Infant formula without probiotics	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	8442	Caseinate	①	-	+	st			-	**PD$_{FP(ALT)}$**	st			-	**PD$_{FP(ALT)}$**	st			-	**PD$_{FP(ALT)}$**	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	**PD$_{FP(ALT)}$**	1	c
2017	8443	Lactose	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	8444	Whey protein concentrate	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	8445	Milk proteins	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	8446	Maltodextrin	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	1	c
2017	8447	Whey permeate	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2017	**8455**	**Infant cereals without probiotics**	①	-	-	-			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	b
2017	**8456**	**Infant cereals without probiotics**	①	-	-	st			-	**NA**	st			-	**NA**	-			-	**NA**	-	-	**NA**	1	b
2017	**8458**	**Lactose**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2017	**8459**	**Whey protein concentrate**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	c
2017	**9128**	**Infant formula without probiotics**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	a
2017	**9129**	**Infant formula without probiotics**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	a
2017	**9130**	**Infant cereals without probiotics**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	b
2017	**9131**	**Infant cereals without probiotics**	①	+	+	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	1	b
2017	9132	Milk proteins	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2018	**2609**	**Skim milk powder**	①	+	+	+Md	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2018	**2610**	**Whole milk powder**	①	+	-	-			-	**ND**	-			-	**ND**	st			-	**ND**	-	-	**ND**	1	c
2018	**2611**	**Skim milk powder**	①	+	+	+p	+	+	+	**PA**	+md	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2018	**2612**	**Skim milk powder**	①	-	+	+pd	+	+	+	**PD**	+M	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	1	c
2018	**2613**	**Skim milk powder**	①	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	1	c
2018	**2614**	**Skim milk powder**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	1	c
2018	2615	Skim milk powder	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2018	2616	Whole milk powder	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2018	2617	Skim milk powder	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2018	2618	Skim milk powder	①	-	-	-			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c
2018	2619	Skim milk powder	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	1	c

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) *(Initial validation study, 2018)*																														
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW + Novobiocin for 18 h at 34-38°C																								Category	Type
					PCR	Confirmation																					Final result 18 h	Agree-ment 18 h		
						Direct streaking											subculture CSB													
						ESIA					CCI						CCI													
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agreement		Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement	Confirmation final result							
2018	**8027**	**Infant formula with probiotics (3.6x10^{2} CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**		st			-	**ND**	-	-	**ND**	2	a
2018	**8028**	**Infant formula with probiotics (<10 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**		+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**8029**	**Infant formula with probiotics (1.3x10^{5} CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**		+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**8030**	**Infant formula with probiotics (<10 CFU/g)**	②	+	+	+M	+	+	+	**PA**	+M	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	**8031**	**Infant formula with probiotics (1.8x10^{5} CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**		st			-	**ND**	-	-	**ND**	2	a
2018	**8032**	**Infant formula with probiotics (3.0x10^{4} CFU/g)**	②	-	+	+M	+	+	+	**PD**	+M	+	+	+	**PD**		+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**8033**	**Infant formula with probiotics (4.8x10^{5} CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**		st			-	**ND**	-	-	**ND**	2	a
2018	**8131**	**Infant formula with probiotics (5.6x10^{5} CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**		st			-	**NA**	-	-	**NA**	2	a
2018	**8132**	**Infant formula with probiotics (1.2x10^{7} CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**		st			-	**NA**	-	-	**NA**	2	a
2018	**8133**	**Infant formula with probiotics (4.3x10^{5} CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	**8134**	**Infant formula with probiotics (6.8x10^{5} CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	**8135**	**Infant formula with probiotics (4.2x10^{5} CFU/g)**	②	-	+	+p (3)	+	+	+	**PD**	+p (1)	+	+	+	**PD**		+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**8136**	**Infant formula with probiotics (6.8x10^{5} CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	**8137**	**Infant formula with probiotics (7.5x10^{5} CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	**8138**	**Infant formula with probiotics (8.6x10^{5} CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**		+p	+	+	+	**PA**	+	+	**PA**	2	a
2018	8403	Infant formula with probiotics (4.2x10^{5} CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**		st			-	**NA**	-	-	**NA**	2	a

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) *(Initial validation study, 2018)*																													
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW + Novobiocin for 18 h at 34-38°C																						Category	Type
					PCR	Confirmation																		Final result 18 h	Agree-ment 18 h		
						Direct streaking										subculture CSB					Confirmation final result						
						ESIA					CCI					CCI											
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement							
2018	8404	Infant formula with probiotics (5.9x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8405	Infant formula with probiotics (4.3x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8406	Infant formula with probiotics (6.8x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8407	Infant formula with probiotics (8.6x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8408	Infant formula with probiotics (8.0x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8409	Infant formula with probiotics (<10 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8410	Infant formula with probiotics (<10 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8411	Infant formula with probiotics (<10 CFU/g)	②	-	+	st			-	**PD$_{FP(ALT)}$**	st			-	**PD$_{FP(ALT)}$**	st			-	**PD$_{FP(ALT)}$**	- (5 ESIA + 5 CCI + 5 CSB/CCI =st)	-	**PD$_{FP(ALT)}$**	2	a
2018	8412	Infant formula with probiotics (1.2x10^7 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8413	Infant formula with probiotics (4.2x10^6 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	8414	Infant formula with probiotics (7.0x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	**8448**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**8449**	**Infant formula with probiotics (<10 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	**8450**	**Infant formula with probiotics (7.0x10^5 CFU/g)**	②	-	i/-*	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	a
2018	**9610**	**Infant formula with probiotics (4.2x10^5 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	2	a
2018	**9611**	**Infant formula with probiotics (5.9x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	a

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) *(Initial validation study, 2018)*																											
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW + Novobiocin for 18 h at 34-38°C																				Category	Type
					PCR	Confirmation																					
						Direct streaking											subculture CSB										
						ESIA					CCI						CCI										
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement	Confirmation final result	Final result 18 h	Agree-ment 18 h		
2018	**8034**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8035**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	2	b
2018	**8036**	**Infant cereals with probiotics (1.7x10^4 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8037**	**Infant cereals with probiotics (2.5x10^5 CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	2	b
2018	**8038**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	②	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	2	b
2018	**8039**	**Infant cereals with probiotics (6.7x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8040**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8041**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8139**	**Infant cereals with probiotics (6.7x10^6 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8140**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	2	b
2018	**8141**	**Infant cereals with probiotics (2.7x10^3 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8142**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8143**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8144**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b
2018	**8145**	**Infant cereals with probiotics (5.1x10^5 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) *(Initial validation study, 2018)*																												
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW + Novobiocin for 18 h at 34-38°C																				Final result 18 h	Agree-ment 18 h	Category	Type
					PCR	Confirmation																							
						Direct streaking											subculture CSB												
						ESIA					CCI						CCI												
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement	Confirmation final result							
2018	8415	Infant cereals with probiotics (7.4x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8416	Infant cereals with probiotics (2.3x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8417	Infant cereals with probiotics (8.7x10^6 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8418	Infant cereals with probiotics (5.6x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8419	Infant cereals with probiotics (1.0x10^6 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8420	Infant cereals with probiotics (1.7x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8421	Infant cereals with probiotics (4.0x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8422	Infant cereals with probiotics (7.1x10^4 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8423	Infant cereals with probiotics (4.4x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8424	Infant cereals with probiotics (5.1x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	8425	Infant cereals with probiotics (6.7x10^5 CFU/g)	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8451**	**Infant cereals with probiotics (2.3x10^5 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8452**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8453**	**Infant cereals with probiotics (1.7x10^5 CFU/g)**	②	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	2	b
2018	**8454**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	+	+	+p (3)	+	+	+	**PA**	+p (5)	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	2	b

INFANT FORMULA AND INFANT CEREALS WITH PROBIOTICS (up to 25 g) *(Initial validation study, 2018)*																																
Year of analysis	Sample N°	Product (lactic bacteria enumeration done by the expert laboratory)	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* BPW + Novobiocin for 18 h at 34-38°C																										Category	Type
					PCR	Confirmation																						Final result 18 h	Agree-ment 18 h		
						Direct streaking											subculture CSB															
						ESIA						CCI					CCI															
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement	Confirmation final result									
2018	**9126**	**Infant cereals with probiotics (7.1x10^4 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	2	b							
2018	**9127**	**Infant cereals with probiotics (5.6x10^5 CFU/g)**	②	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	2	b							

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates) (up to 375 g) *(Extension studies, 2018 and 2019)*																												
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP Cronobacter																					Category	Type
					Enrichment																						
					PCR	Confirmation																						
						Direct streaking											subculture CSB											
						ESIA						CCI					CCI					Confirmation final result	Final result	Agreement				
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement							
2018	**2589**	**Skim milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2590**	**Whole milk powder**	③	+	-/i/i/-*	+p	+	+	-	**$ND_{FN(alt)}$**	+p	+	+	-	**$ND_{FN(alt)}$**	+p	+	+	-	**$ND_{FN(alt)}$**	+	-	**$ND_{FN(alt)}$**	3	a
2018	**2592**	**Skim milk powder**	③	-	i/-/-*	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	a
2018	**2593**	**Skim milk powder**	③	+	i/-*	-			-	**ND**	-			-	**ND**	-			-	**ND**	-	-	**ND**	3	a
2018	**2594**	**Skim milk powder**	③	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	**2595**	**Infant cereals without probiotics**	③	+	i/+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2596**	**Infant cereals without probiotics**	③	+	-	st			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	3	a
2018	**2597**	**Infant cereals without probiotics**	③	+	+	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2598**	**Infant cereals without probiotics**	③	+	+	+M	+	+	+	**PA**	+1/2	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2599**	**Infant cereals without probiotics**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2600**	**Infant cereals without probiotics**	③	+	+	+M	+	+	+	**PA**	+1/2	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2601**	**Infant cereals without probiotics**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2602**	**Infant formula without probiotics**	③	+	-	-			-	**ND**	st			-	**ND**	st			-	**ND**	-	-	**ND**	3	a
2018	**2604**	**Infant formula without probiotics**	③	+	+	+Md	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**2606**	**Infant formula without probiotics**	③	+	-	st			-	**ND**	-			-	**ND**	st			-	**ND**	-	-	**ND**	3	a
2018	**2607**	**Infant formula without probiotics**	③	-	-	-			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2640	Skim milk powder	③	-	i/+*	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	a
2018	2641	Skim milk powder	③	-	i/-*	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2642	Skim milk powder	③	-	i/-*	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2643	Half-skim milk powder	③	-	i/-*	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2644	Infant formula without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2645	Infant formula without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2646	Infant formula without probiotics	③	-	i/i*/-**	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	2647	Infant cereals without probiotics	③	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	a
2018	2648	Infant cereals without probiotics	③	-	+/+/-	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	**$PD_{FP(ALT)}$**	3	a
2018	2649	Infant cereals without probiotics	③	-	+	+m/+	+	+	+	**PD**	+m/+	+	+	+	**PD**	+m/+	+	+	+	**PD**	+	+	**PD**	3	a
2018	**3469**	**Skim milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**3470**	**Skim milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	**3471**	**Infant formula without probiotics**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates) (up to 375 g) *(Extension studies, 2018 and 2019)*																												
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP Cronobacter																					Category	Type
					Enrichment																						
					PCR	Confirmation																						
						Direct streaking											subculture CSB											
						ESIA						CCI					CCI											
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement	Confirmation final result	Final result	Agreement				
2018	**3472**	**Infant formula without probiotics**	③	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	a
2018	**3473**	**Infant formula without probiotics**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	a
2018	3751	Infant cereals without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	3752	Infant cereals without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	3753	Infant cereals without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	3797	Infant formula without probiotics	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	a
2018	**2620**	**Infant formula with probiotics ($7.2x10^4$ CFU/g)**	③	+	-/+/+	st			-	**ND**	st			-	**ND**	+p	+	+	-	**$ND_{FN(alt)}$**	+	-	**$ND_{FN(alt)}$**	3	b
2018	**2623**	**Infant formula with probiotics ($6.1x10^6$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2625**	**Infant formula with probiotics ($5.1x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2626**	**Infant formula with probiotics ($4.7x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2627**	**Infant formula with probiotics ($1.1x10^6$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2628**	**Infant formula with probiotics ($1.4x10^4$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2629**	**Infant formula with probiotics ($3.0x10^4$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2630**	**Infant cereals with probiotics ($1.4x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2631**	**Infant cereals with probiotics ($2.1x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2632**	**Infant cereals with probiotics ($7.8x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2633**	**Infant cereals with probiotics ($2.5x10^5$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2634**	**Infant cereals with probiotics ($4.5x10^4$ CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b

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					Enrichment																						
					PCR	Confirmation																		Final result	Agreement		
						Direct streaking											subculture CSB					Confirmation final result					
						ESIA					CCI					CCI											
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement						
2018	**2635**	**Infant cereals with probiotics (9.1x10^3 CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2636**	**Infant cereals with probiotics (3.2x10^6 CFU/g)**	③	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	b
2018	**2637**	**Infant cereals with probiotics (1.3x10^5 CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2638**	**Infant cereals with probiotics (1.4x10^6 CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	**2639**	**Infant cereals with probiotics (2.2x10^5 CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	b
2018	2864	Infant cereals with probiotics (2.9x10^5 CFU/g)	③	-	i/-*	-			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	2865	Infant cereals with probiotics (4.8x10^4 CFU/g)	③	-	-	-			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	2866	Infant cereals with probiotics (1.2x10^7 CFU/g)	③	-	+/-/-	-			-	**PD$_{FP(ALT)}$**	st			-	**PD$_{FP(ALT)}$**	-			-	**PD$_{FP(ALT)}$**	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	**PD$_{FP(ALT)}$**	3	b
2018	2867	Infant formula with probiotics (1.6x10^6 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	2868	Infant formula with probiotics (1.5x10^6 CFU/g)	③	-	-	-			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	2869	Infant formula with probiotics (9.6x10^6 CFU/g)	③	-	+	+M	+	+	+	**PD**	+M	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	b
2018	3754	Infant cereals with probiotics (2.5x10^5 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3755	Infant cereals with probiotics (1.4x10^6 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3756	Infant cereals with probiotics (2.2x10^5 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3757	Infant cereals with probiotics (4.8x10^4 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3758	Infant cereals with probiotics (2.9x10^5 CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b

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						Direct streaking																**subculture CSB**						
						ESIA						**CCI**						**CCI**					**Confirmation final result**				
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement					
2018	3798	Infant formula with probiotics ($1.6x10^6$ CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3799	Infant formula with probiotics ($7.2x10^4$ CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3800	Infant formula with probiotics ($6.0x10^4$ CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3801	Infant formula with probiotics ($1.5x10^6$ CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	3802	Infant formula with probiotics ($4.7x10^5$ CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	b
2018	2870	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	2871	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	2872	Caseinate	④	-	+/-/-	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	**$PD_{FP(ALT)}$**	3	c1
2018	2873	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	**3101**	**Starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3102**	**Caseinate**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3103**	**Corn starch**	④	+	+	+md/+	+	+	+	**PA**	+md/+	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3104**	**Wheat starch**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c1
2018	**3106**	**Lactose**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3107**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3108**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3109**	**Starch**	④	+	-	-			-	**ND**	-			-	**ND**	st			-	**ND**	-	-	**ND**	3	c1
2018	**3110**	**Caseinate**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3111**	**Corn starch**	④	+	-	-			-	**ND**	-			-	**ND**	st			-	**ND**	-	-	**ND**	3	c1
2018	**3112**	**Wheat starch**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c1
2018	**3113**	**Corn starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3114**	**Lactose**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3123**	**Whey**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3124**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3125**	**Maltodextrin**	④	+	+	+p (1)	+	+	+	**PA**	+p (4)	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3126**	**Wheat starch**	④	+	-/-/-	st			-	**ND**	st			-	**ND**	+p	+	+	-	**$ND_{FN(alt)}$**	+	-	**$ND_{FN(alt)}$**	3	c1
2018	**3127**	**Caseinate**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3128**	**Corn starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3129**	**Lactose**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3130**	**Corn starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3131**	**Starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3132**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+1/2	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3133**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3134**	**Starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3135**	**Lactose**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3136**	**Caseinate**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates) (up to 375 g) *(Extension studies, 2018 and 2019)*																												
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP Cronobacter**																					Category	Type
					Enrichment																						
					PCR	Confirmation																					
						Direct streaking											**subculture CSB**					**Confirmation final result**	Final result	Agreement		
						ESIA					**CCI**						**CCI**									
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement					
2018	**3474**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	**3475**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c1
2018	3739	Caseinate	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3631	Starch	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c1
2018	3632	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3633	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3634	Starch	④	-	-/-/-	+p	- (Leclercia adecarboxylata)	+	-	**NA**	+p	- (Leclercia adecarboxylata)	+	-	**NA**	+p	- (Leclercia adecarboxylata)	+	-	**NA**	-	-	**NA**	3	c1
2018	3635	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3636	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3637	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3638	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3639	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3640	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3641	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3642	Starch	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c1
2018	3643	Starch	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c1
2018	3644	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3645	Caseinate	④	-	+	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	st			-	**$PD_{FP(ALT)}$**	- (ESIA 5x- CCI 5x- CSB/CCI 5x-)	-	**$PD_{FP(ALT)}$**	3	c1
2018	3803	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3804	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3805	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3806	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3807	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3808	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3809	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3810	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3811	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3812	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3813	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3814	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3815	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2018	3816	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c1
2019	5381	Milk powder 0% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5382	Milk powder 0% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5387	Milk powder 0% fat	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c2
2019	5388	Milk powder 0% fat	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c2
2019	5389	Milk powder 26% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5390	Milk powder 26% fat	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c2
2019	5391	Milk powder 0.8% fat	④	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	3	c2
2019	5392	Milk powder 14% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5393	Milk powder 26% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5394	Milk powder 0.8% fat	④	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	3	c2
2019	**5400**	**Milk powder 0% fat**	④	+	-	st			-	**ND**	st			-	**ND**	-			-	**ND**	-	-	**ND**	3	c2
2019	**5402**	**Milk powder 0% fat**	④	+	-/-/-	+m(5)	+	+	-	**$ND_{FN(alt)}$**	+m(2)	+	+	-	**$ND_{FN(alt)}$**	+M	+	+	-	**$ND_{FN(alt)}$**	+	-	**$ND_{FN(alt)}$**	3	c2
2019	**5403**	**Milk powder 0% fat**	④	-	+	+p	+	+	+	**PD**	+M	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	3	c2

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS including ingredients (excluding whey protein concentrates) (up to 375 g) *(Extension studies, 2018 and 2019)*																													
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP Cronobacter**																						Category	Type
					Enrichment																							
					PCR	Confirmation																						
						Direct streaking																	**subculture CSB**						
						ESIA						**CCI**						**CCI**					**Confirmation final result**	Final result	Agreement		
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E	Fast crono	Final result	Agreement	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agreement					
2019	**5405**	**Milk powder 26% fat**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5406**	**Milk powder 26% fat**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5407**	**Milk powder 14% fat**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5408**	**Milk powder 14% fat**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5410**	**Milk powder 26% fat**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5411**	**Milk powder 26% fat**	④	+	+	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	**5412**	**Milk powder 0.8% fat**	④	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	3	c2
2019	5680	High density milk powder 0.6-0.7% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2
2019	5681	Low density milk powder 0.6-0.7% fat	④	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	3	c2

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) *(Extension study, 2018)*																														
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*																								Category	Type
					Enrichment																									
					PCR	Confirmation																								
						Direct streaking														Subculture CSB					Confir-mation final result	Final result	Agree-ment		
						ESIA					CCI									CCI									
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment									
2018	347	Water before cleaning	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	a
2018	348	Water before cleaning	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	4	a
2018	349	Water before cleaning	①	-	-	st			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	**386**	**Water after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**387**	**Water after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**388**	**Water after cleaning**	①	+	+	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**389**	**Water before cleaning**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	a
2018	**390**	**Water before cleaning**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	a
2018	**391**	**Water before cleaning**	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	**392**	**Water before cleaning**	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	1789	Rinse water	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	1790	Process water	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	1791	Rinse water	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	2166	Process water	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	2167	Process water	①	-	-	st			-	**NA**	st			-	**NA**	-			-	**NA**	-	-	**NA**	4	a
2018	2168	Process water	①	-	-	st			-	**NA**	-			-	**NA**	st			-	**NA**	-	-	**NA**	4	a
2018	**2465**	**Process water (rinse)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**2466**	**Process water (rinse)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**2467**	**Process water (rinse)**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+	+	**PD**	4	a
2018	**2468**	**Process water (rinse)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**2469**	**Process water (rinse)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	**2470**	**Process water (rinse)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	a
2018	345	Waste	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	b
2018	346	Waste	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	b
2018	350	Dusts	①	-	-	-			-	**NA**	+md/-			-	**NA**	-			-	**NA**	-	-	**NA**	4	b
2018	351	Dusts	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	b

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) *(Extension study, 2018)*																												
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*																					Category	Type
					Enrichment																						
					PCR	Confirmation																						
						Direct streaking											Subculture CSB					Confir-mation final result	Final result	Agree-ment				
						ESIA					CCI					CCI												
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment							
2018	352	Dust from vacuum	①	+	+	+M	+	+	+	PA	+1/2	+	+	+	PA	+M	+	+	+	PA	+	+	PA	4	b
2018	1792	Waste	①	-	-/-/-	+md(1)/+d	- (E.vulneris)	-	-	NA	-			-	NA	-			-	NA	-	-	NA	4	b
2018	1793	Dust	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	b
2018	1794	Dust from vacuum	①	+	+	+M	+	+	+	PA	+M	+	+	+	PA	+M	+	+	+	PA	+	+	PA	4	b
2018	2169	Waste	①	-	-	st			-	NA	st			-	NA	st			-	NA	-	-	NA	4	b
2018	2170	Waste	①	-	-	st			-	NA	st			-	NA	st			-	NA	-	-	NA	4	b
2018	2171	Dust from vacuum	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	b
2018	2172	Dust from vacuum	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	b
2018	**3137**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3138**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+p	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3139**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+p	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3140**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+p	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3141**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3142**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+p	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3143**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3144**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3145**	**Dust from vacuum**	①	+	+	+p	+	+	+	PA	+p	+	+	+	PA	+p	+	+	+	PA	+	+	PA	4	b
2018	**3146**	**Dust from vacuum**	①	-	+	+p	+	+	+	PD	+M	+	+	+	PD	+p	+	+	+	PD	+	+	PD	4	b
2018	338	Sponge before cleaning	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	c
2018	339	Sponge before cleaning	①	-	-	-			-	NA	+md/-			-	NA	-			-	NA	-	-	NA	4	c
2018	340	Sponge before cleaning	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	c
2018	341	Sponge before cleaning	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	c
2018	342	Sponge before cleaning	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	c
2018	343	Wipe before cleaning	①	-	-	st			-	NA	st			-	NA	st			-	NA	-	-	NA	4	c
2018	344	Wipe before cleaning	①	-	-	-			-	NA	-			-	NA	-			-	NA	-	-	NA	4	c
2018	**393**	**Wipe after cleaning**	①	-	-	st			-	NA	st			-	NA	st			-	NA	-	-	NA	4	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) *(Extension study, 2018)*																														
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter*																								Category	Type
					Enrichment																									
					PCR	Confirmation																								
						Direct streaking														Subculture CSB						Confir-mation final result	Final result	Agree-ment		
						ESIA						CCI						CCI												
					Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Fast crono	Final result	Agree-ment								
2018	**394**	**Wipe after cleaning**	①	-	-	st			-	**NA**	st			-	**NA**	st			-	**NA**	-	-	**NA**	4	c
2018	**395**	**Wipe before cleaning**	①	+	+	+m	+	+	+	**PA**	+m	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	4	c
2018	**396**	**Wipe before cleaning**	①	+	+	+m	+	+	+	**PA**	+m	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	4	c
2018	**397**	**Wipe before cleaning**	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	c
2018	**398**	**Wipe before cleaning**	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	c
2018	**399**	**Wipe before cleaning**	①	+	+	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**400**	**Wipe before cleaning**	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	1795	Wipe before cleaning	①	-	-	st			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	c
2018	1796	Wipe before cleaning	①	-	-/-/-	-			-	**NA**	+md/-			-	**NA**	+md/-			-	**NA**	-	-	**NA**	4	c
2018	1797	Wipe before cleaning	①	+	+	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	4	c
2018	1798	Wipe before cleaning	①	-	-	-			-	**NA**	-			-	**NA**	-			-	**NA**	-	-	**NA**	4	c
2018	**2159**	**Wipe after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2160**	**Wipe after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2161**	**Wipe after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2162**	**Wipe after cleaning**	①	+	+	+p	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2163**	**Wipe after cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2164**	**Wipe before cleaning**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+	+	**PA**	4	c
2018	**2165**	**Wipe before cleaning**	①	+	+	+M	+	+	+	**PA**	+m/+	+	+	+	**PA**	+M	+	+	+	**PA**	+	+	**PA**	4	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g)
BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																	Category	Type
					Protocol ① or ③ or ④																		
						Confirmation																	
						Direct streaking											Subculture CSB						
						ESIA					CCI						CCI						
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment	Confirmation final result	Final result	Agreement		
2020	**2567**	**Infant formula**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2568**	**Infant formula**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2569**	**Infant formula**	③	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	a
2020	**2570**	**Infant formula**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2571**	**Infant formula**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2572**	**Infant cereals**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2573**	**Infant cereals**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2574**	**Infant cereals**	③	+	+	+d	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2575**	**Infant cereals**	③	+	+	+m	+	+	+	**PA**	+M	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2576**	**Infant cereals**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2577**	**Whole milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2578**	**Skim milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2579**	**Half-skim milk powder**	③	+	+	+p	+	+	+	**PA**	+1/2	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2580**	**Skim milk powder**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	**2581**	**Skim milk powder**	③	+	+	+d	+	+	+	**PA**	+m/+	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	a
2020	2876	Whole milk powder	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2877	Skim milk powder	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2878	Whole milk powder	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2879	Half-skim milk powder	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2880	Whole milk powder	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2881	Infant formula	③	-	-	-			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2882	Infant formula	③	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2883	Infant formula	③	-	-	-			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2884	Infant formula	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2885	Infant formula	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2886	Infant cereals	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2887	Infant cereals	③	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	2888	Infant cereals	③	-	+	+M	+	+	+	**PD**	+m	+	+	+	**PD**	+M	+	+	**PD**	+	+	**PD**	3	a
2020	2889	Infant cereals	③	-	-	-			-	**NA**	-			-	**NA**	-		-	**NA**	-	-	**NA**	3	a
2020	2890	Infant cereals	③	-	-	-			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	3971	Infant formula	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	a
2020	**2562**	**Infant formula with probiotics (Bifidobacterium lactis 3.6x10⁶CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**2563**	**Infant formula with probiotics (Bifidobacterium lactis 5.2x10⁵CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**2564**	**Infant formula with probiotics (Bifidobacterium breve 9.7x10⁶CFU/g)**	③	+	-/-/-	+p	+	+	-	**$ND_{FN(alt)}$**	+p (1)	+	+	-	**$ND_{FN(alt)}$**	+p	+	-	**$ND_{FN(alt)}$**	+	-	**$ND_{FN(alt)}$**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g) BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																										
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																			Category	Type
					Protocol ① or ③ or ④																				
						Confirmation																				
						Direct streaking											Subculture CSB				Confirmation final result	Final result	Agreement		
						ESIA					CCI						CCI								
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment					
2020	**2565**	**Infant formula with probiotics (Bifidobacterium lactis 1.4x10⁴CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**2566**	**Infant formula with probiotics (Lactobacillus reuteri 6.6x10⁴CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3108**	**Infant cereals cocoa (Bifidobacterium lactis 3.0x10⁶CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3109**	**Infant cereals avoine et blé (Bifidobacterium lactis 5.6x10⁶CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3110**	**Infant cereals honey (Bifidobacterium lactis 1.0x10⁷CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3111**	**Infant cereals chestnut biscuit (Bifidobacterium lactis 4.0x10⁵CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3112**	**Infant cereals 5 cereals (Bifidobacterium lactis 3.5x10⁵CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3113**	**Infant cereals biscuit (Bifidobacterium lactis 4.5x10⁵CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3114**	**Infant cereals vanilla (Bifidobacterium lactis 4.5x10⁵CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3115**	**Infant formula with probiotics (Lactobacillus reuteri 4.4x10⁵CFU/g)**	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	**3116**	**Infant formula with probiotics (Bifidobacterium infantis 1.2x10⁶CFU/g)**	③	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	b
2020	**3117**	**Infant formula with probiotics (Lactobacillus reuteri 2.3x10⁶CFU/g)**	③	-	-/-/-	st			-	**NA**	+(6)	+	+	-	**NA$_{FN(alt)}$**	+p	+	-	**NA$_{FN(alt)}$**	+	-	**NA$_{FN(alt)}$**	3	b
2020	**3834**	**Infant formula with probiotics (Bifidobacterium infantis 4.4x10⁵CFU/g)**	③	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	b
2020	**3835**	**Infant formula with probiotics (Lactobacillus reuterii 1.2x10⁶CFU/g)**	③	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g)
BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																	Category	Type
					Protocol ① or ③ or ④																		
						Confirmation																	
						Direct streaking											Subculture CSB						
						ESIA					CCI						CCI						
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment	Confirmation final result	Final result	Agreement		
2020	3894	Infant formula with probiotics (Bifidobacterium 1.2x10⁶CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3895	Infant formula with probiotics (Bifidobacterium infantis 5.2x10⁵CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3896	Infant formula with probiotics (Bifidobacterium infantis 4.1x10⁵CFU/g)	③	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3897	Infant cereals with probiotics (Bifidobacterium lactis 1.2x10⁴CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3898	Infant cereals with probiotics (Bifidobacterium lactis 9.1x10⁶CFU/g)	③	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3972	Infant cereals with probiotics (Bifidobacterium lactis 7.3x10⁵CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3973	Infant cereals with probiotics (Bifidobacterium lactis 5.8x10⁵CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3974	Infant cereals with probiotics (Bifidobacterium lactis 6.2x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3975	Infant cereals with probiotics (Bifidobacterium lactis 4.5x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3976	Infant cereals with probiotics (Bifidobacterium lactis 5.5x10⁵CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3977	Infant formula with probiotics (Bifidobacterium lactis 4.6x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3978	Infant formula with probiotics (Lactobacillus fermentum 2.4x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3979	Infant formula with probiotics (Bifidobacterium infantis 9.1x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3980	Infant formula with probiotics (Lactobacillus reuterii 9.0x10⁵CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	3981	Infant formula with probiotics (Lactobacillus reuterii 3.4x10⁶CFU/g)	③	-	-	-			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	b
2020	**2741**	**Milk powder**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g)
BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																	Category	Type
					Protocol ① or ③ or ④																		
						Confirmation																	
						Direct streaking											Subculture CSB						
						ESIA					CCI						CCI						
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment	Confirmation final result	Final result	Agreement		
2020	**2742**	**Milk powder**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2743**	**Whey**	④	-	+	+(3)	+	+	+	**PD**	+(2)	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**2744**	**Whey**	④	+	+	st			-	**PA$_{FP(alt)}$**	st			-	**PA$_{FP(alt)}$**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2745**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2746**	**Non-fat dry milk**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**2747**	**Non-fat dry milk**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2748**	**Caseinate**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2749**	**Maltodextrin**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**2750**	**Non-fat dry milk**	④	+	+	st			-	**PA$_{FP(alt)}$**	+(1)	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2751**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2752**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2753**	**Whey**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**2754**	**Whey**	④	-	+	+p	+	+	+	**PD**	+M	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**2755**	**Whey**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**2756**	**Starch**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**2757**	**Starch**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**2758**	**Starch**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**2759**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**2760**	**Maltodextrin**	④	+	+	+d	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3098**	**Corn starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3099**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3100**	**Natrium caseinate**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**3101**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3102**	**Non-fat dry milk**	④	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	3	c
2020	**3103**	**Lactose**	④	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	3	c
2020	**3104**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3105**	**Whey**	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	**3106**	**Whey**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3107**	**Maltodextrin**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3836**	**Starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	**3837**	**Starch**	④	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	3	c
2020	3838	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3839	Starch	④	-	-	-			-	**NA**	-			-	**NA**	-		-	**NA**	-	-	**NA**	3	c
2020	3840	Whey	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3841	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3842	Starch	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3843	Lactose	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3844	Whey	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3845	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3846	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3847	Caseinate	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3848	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3849	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3850	Caseinate	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g) BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																										
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦**	**Alternative method: GENE-UP *Cronobacter***																				Category	Type
					Protocol ① or ③ or ④																					
						Confirmation																				
						Direct streaking											**Subculture CSB**									
						ESIA					**CCI**						**CCI**									
Year of analysis	Sample N°	Product	Protocol	Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment	**Confirmation final result**	Final result	Agreement	Category	Type
2020	3851	Whey	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3852	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3899	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3900	Non-fat dry milk	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3901	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3902	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3903	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3904	Whey	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3905	Whey	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3906	Whey	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3907	Milk powder	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3908	Maltodextrin	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3968	Non-fat dry milk	④	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3969	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c
2020	3970	Non-fat dry milk	④	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	3	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																										
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦**	**Alternative method: GENE-UP *Cronobacter***																			Category	Type
					Protocol ① or ③ or ④																					
				Result	PCR Result	Confirmation																	Final result	Agreement		
						Direct streaking											**Subculture CSB**				**Confirmation final result**					
						ESIA					**CCI**						**CCI**									
						Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment						
2020	**4040**	**Process water (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	a
2020	**4041**	**Process water (dairy environment)**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	4	a
2020	**4042**	**Process water (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	a
2020	**4043**	**Process water (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	a
2020	4255	Process water (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	4256	Process water (dairy environment)	①	-	-	st			-	**NA**	-			-	**NA**	-		-	**NA**	-	-	**NA**	4	a
2020	4257	Process water (dairy environment)	①	-	-	-			-	**NA**	st			-	**NA**	-		-	**NA**	-	-	**NA**	4	a
2020	4258	Process water (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	4259	Process water (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4282**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4283**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4284**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4285**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	-		-	**NA**	-	-	**NA**	4	a
2020	**4286**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4292**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4293**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	4381	Process water (dairy environment)	①	-	-	st			-	**NA**	-			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	4382	Process water (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4410**	**Process water (dairy environment)**	①	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	4	a
2020	**4411**	**Process water (dairy environment)**	①	+	-	st			-	**ND**	st			-	**ND**	st		-	**ND**	-	-	**ND**	4	a
2020	**4623**	**Process water (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	a
2020	**4624**	**Process water (dairy environment)**	①	+	-	st			-	**ND**	-			-	**ND**	-		-	**ND**	-	-	**ND**	4	a
2020	**3832**	**Dusts**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	b
2020	**3833**	**Dusts**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	b

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device)
BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)

Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																Category	Type
					Protocol ① or ③ or ④																	
						Confirmation																
						Direct streaking										Subculture CSB						
						ESIA					CCI					CCI						
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment	Confirmation final result	Final result	Agreement		
2020	4260	Dusts (dairy environment)	①	+	-/+/-	+d/+	+	+	-	$ND_{FN(alt)}$	-			-	ND	+m	+	-	$ND_{FN(alt)}$	+	-	$ND_{FN(alt)}$	4	b
2020	4261	Vaccum cleaner filter (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	b
2020	4262	Vaccum cleaner filter (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	b
2020	4263	Vaccum cleaner filter (dairy environment)	①	-	-	st			-	NA	-			-	NA	st		-	NA	-	-	NA	4	b
2020	4264	Vaccum cleaner filter (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	b
2020	**4287**	**Dusts (dairy environment)**	①	-	-/+/+/-/-	-			-	NA	-			-	NA	+1/2	+	-	$NA_{FN(alt)}$	+	-	$NA_{FN(alt)}$	4	b
2020	**4288**	**Vaccum cleaner filter (dairy environment)**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	PA	+	+	PA	4	b
2020	**4289**	**Vaccum cleaner filter (dairy environment)**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	PA	+	+	PA	4	b
2020	**4290**	**Vaccum cleaner filter (dairy environment)**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	PA	+	+	PA	4	b
2020	**4291**	**Vaccum cleaner filter (dairy environment)**	①	+	+	+p	+	+	+	PA	+M	+	+	+	PA	+p	+	+	PA	+	+	PA	4	b
2020	4383	Dusts	①	-	-	st			-	NA	-			-	NA	st		-	NA	-	-	NA	4	b
2020	4617	Dusts (dairy environment)	①	+	+	+M	+	+	+	PA	+M	+	+	+	PA	+M	+	+	PA	+	+	PA	4	b
2020	4618	Dusts (dairy environment)	①	-	-	st			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	4619	Dusts (dairy environment)	①	-	-	st			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	4620	Dusts (dairy environment)	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	4621	Dusts (dairy environment)	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	4622	Dusts (dairy environment)	①	-	-	st			-	NA	-			-	NA	st		-	NA	-	-	NA	4	b
2020	**4675**	**Dusts (dairy environment)**	①	+	+	+m	+	+	+	PA	+m	+	+	+	PA	+M	+	+	PA	+	+	PA	4	b
2020	**4676**	**Dusts (dairy environment)**	①	+	-/-/-	+m	+	+	-	$ND_{FN(alt)}$	+m/+	+	+	-	$ND_{FN(alt)}$	+M	+	-	$ND_{FN(alt)}$	+	-	$ND_{FN(alt)}$	4	b
2020	**4677**	**Dusts (dairy environment)**	①	+	+	+m	+	+	+	PA	+m/+	+	+	+	PA	+M	+	+	PA	+	+	PA	4	b
2020	**4678**	**Dusts (dairy environment)**	①	-	+	+m	+	+	+	PD	+m/+	+	+	+	PD	+p	+	+	PD	+	+	PD	4	b
2020	**4679**	**Dusts (dairy environment)**	①	+	-/-/-	+m	+	+	-	$ND_{FN(alt)}$	+m/+	+	+	-	$ND_{FN(alt)}$	+p	+	-	$ND_{FN(alt)}$	+	-	$ND_{FN(alt)}$	4	b
2020	**4680**	**Dusts (dairy environment)**	①	+	+	+m	+	+	+	PA	+m/+	+	+	+	PA	+M	+	+	PA	+	+	PA	4	b
2020	**4681**	**Dusts (dairy environment)**	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	**4682**	**Dusts (dairy environment)**	①	+	-	-			-	ND	-			-	ND	-		-	ND	-	-	ND	4	b
2020	**4683**	**Dusts (dairy environment)**	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	b
2020	**4684**	**Dusts (dairy environment)**	①	+	-	st			-	ND	-			-	ND	-		-	ND	-	-	ND	4	b
2020	4094	Wipe before cleaning process (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	c
2020	4095	Wipe before cleaning process (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	c
2020	4096	Wipe before cleaning process (dairy environment)	①	-	-	st			-	NA	st			-	NA	st		-	NA	-	-	NA	4	c
2020	4097	Wipe before cleaning process (dairy environment)	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	c
2020	4098	Wipe after cleaning process (dairy environment)	①	-	-	-			-	NA	-			-	NA	-		-	NA	-	-	NA	4	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																												
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦**	**Alternative method: GENE-UP *Cronobacter***																					Category	Type
					Protocol ① or ③ or ④																							
						Confirmation																						
						Direct streaking											**Subculture CSB**											
						ESIA					**CCI**						**CCI**				**Confirmation final result**	Final result	Agreement					
				Result	PCR Result	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E	Fast crono	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment								
2020	4099	Wipe after cleaning process (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	4100	Wipe after cleaning process (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	4101	Wipe after cleaning process (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	**4114**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4115**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4116**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4117**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4118**	**Wipe after cleaning process (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	**4119**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	4375	Sponge (dairy environment)	①	-	-	-			-	**NA**	-			-	**NA**	-		-	**NA**	-	-	**NA**	4	c				
2020	4376	Sponge (dairy environment)	①	-	-	st			-	**NA**	-			-	**NA**	-		-	**NA**	-	-	**NA**	4	c				
2020	4377	Wipe (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	4378	Sponge (dairy environment)	①	-	+	-			-	**$PD_{FP(alt)}$**	-			-	**$PD_{FP(alt)}$**	-		-	**$PD_{FP(alt)}$**	+ (after storage 72h)	+	**PD**	4	c				
2020	4379	Swab (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	4380	Swab (dairy environment)	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				
2020	**4406**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4407**	**Sponge (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4408**	**Wipe after cleaning process (dairy environment)**	①	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	4	c				
2020	**4409**	**Wipe after cleaning process (dairy environment)**	①	-	-	st			-	**NA**	st			-	**NA**	st		-	**NA**	-	-	**NA**	4	c				

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* — Protocol ⑤																	Category	Type
							PCR without PMaxx	Confirmation														Final result	Agreement		
								Direct streaking									subculture CSB				Confirmation final result				
								ESIA					CCI				CCI								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement				
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+	+	+	+	+	+	**PA**	+	+	+	+	**PA**	+	+	+	**PA**	+	+	**PA**	5	a
2023	**1577**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	/	/	-	**NA**	-	-	**NA**	5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0.8% fat)**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24.6% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1581**	**Poudre de lait infantile bio dès 6 mois (23,7% MG)**	**Infant formula (23.7% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	/	/	-	**NA**	-	-	**NA**	5	a
2023	**1582**	**Poudre de lait infantile 0 à 6 mois (23,5% MG)**	**Infant formula (23.5% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	/	/	-	**NA**	-	-	**NA**	5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	2500	Céréales infantiles saveur biscuits	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2501	Céréales infantiles +10 mois vanille	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																	Category	Type
							Protocol ⑤																		
							PCR without PMaxx	Confirmation														Final result	Agreement		
								Direct streaking									**subculture CSB**				**Confirmation final result**				
								ESIA					**CCI**					**CCI**								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement					
2023	2502	Céréales infantiles après 4 mois bioépautre	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2503	Poudre de lait infantile dès 6 mois bio (23,6% MG)	Infant formula (23.6% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2504	Poudre de lait infantile dès 6 mois (23,5% MG)	Infant formula (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2505	Poudre de lait 0-6 mois (24,6% MG)	Infant formula (24.6% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10⁵ UFC/g) (25% MG)**	**Infant formula with probiotics (*B.lactis*: 4.09x10⁵ CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+	-	-	/	/	-	**ND**	-	/	/	-	**ND**	-	/	-	**ND**	-	-	**ND**	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10⁶ UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B.lactis*: 1.36x10⁶ CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10⁴ UFC/g) (26% MG)**	**Infant formula with probiotics (*B.lactis*: 3.36x10⁴ CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10³ UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B.lactis*: 2.45x10³ CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* — Protocol ⑤																	Category	Type
							PCR without PMaxx	Confirmation														Confirmation final result	Final result	Agreement		
								Direct streaking										subculture CSB								
								ESIA					CCI					CCI								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement					
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.09x106 CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa/banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	2009	Poudre de lait infantile 0-6 mois avec probiotiques (*S.thermophilus* : 1,32.10⁶ UFC/g) (28,6% MG)	Infant formula with probiotics (*S.thermophilus* : 1.32x10⁶ CFU/g) (28.6% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B.lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	-	+/+/+	st	/	/	-	**$PD_{FP(ALT)}$**	st	/	/	-	**$PD_{FP(ALT)}$**	st	/	-	**$PD_{FP(ALT)}$**	-	-	**$PD_{FP(ALT)}$**	5	b
2023	2011	Poudre de lait infantile 6-12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,8% MG)	Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.8% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2494	Poudre de lait infantile dès la naissance avec probiotiques (*L.reuteri*: 3,09.10⁶ UFC/g) (27,8% MG)	Infant formula with probiotics (*L.reuteri*: 3.09x10⁶ CFU/g) (27.8%fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																	Category	Type
							Protocol ⑤																		
							PCR without PMaxx	Confirmation														Final result	Agreement		
								Direct streaking									**subculture CSB**				**Confirmation final result**				
								ESIA					**CCI**					**CCI**								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement					
2023	2495	Poudre de lait infantile 0-6 mois avec probiotiques (*B.breve*: 3,50.10⁶ UFC/g) (24,3% MG)	Infant formula with probiotics (*B.breve*: 3.50x10⁶ CFU/g) (24.3% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2496	Poudre de lait infantile système immunitaire dès 6 mois avec probiotiques (*L.reuteri*: 3,36.10⁶ UFC/g) (24,2% MG)	Infant formula with probiotics (*L.reuteri*: 3.36x10⁶ CFU/g) (24.2% fat)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2497	Céréales infantiles avec probiotiques (B.*lactis*: 1,18.10³ UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2498	Céréales infantiles quinoa + 6 mois avec probiotiques (B.*lactis*: 4,41.10⁵ UFC/g)	Infant cereals with probiotics (*B.lactis*: 4.41x10⁵ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2499	Céréales infantiles avec probiotiques (B.*lactis*: 1,36.10⁴ UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.36x10⁴ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thinckened powder**	BPW + α-amylase	⑤	+	+	+md	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1768**	**Poudre infantile proteine de riz avec probiotiques (*B.lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B.lactis*: 2.73x10² CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+	+	+md	+	+	+	**PA**	+md	+	+	+	**PA**	+md	+	+	**PA**	+	+	**PA**	5	c
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	+	+1/2	+	+	+	**PA**	+md	+	+	+	**PA**	+md	+	+	**PA**	+	+	**PA**	5	c
2023	**1771**	**Poudre de riz infantile 6-12 mois (23,3% MG)**	**Infant rice protein (23.3% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* — Protocol ⑤ — PCR without PMaxx Result	Confirmation — Direct streaking — ESIA — Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Direct streaking — CCI — Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	subculture CSB — CCI — Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement	Confirmation final result	Final result	Agreement	Category	Type
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+	-	-	/	/	-	**ND**	-	/	/	-	**ND**	-	/	-	**ND**	-	-	**ND**	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1774**	**Poudre infantile de protéine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**2006**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice powder (25% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thinckened powder**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	2651	Poudre épaississante infantile	Thinckened powder	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2652	Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10^6 UFC/g) (26,5% MG)	Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10^6 CFU/g) (26.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2653	Poudre de riz infantile bio dès 6 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	-	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2654	Poudre de riz infantile 6-12 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2655	Poudre de riz infantile AR 6-12 mois (22,8% MG)	Infant rice powder (22.8% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2656	Poudre de riz infantile 0-36 mois (25% MG)	Infant rice powder (25% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2657	Poudre dessert infantile sans lait nature 6-12 mois	Infant dessert powder without milk	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)																														
							Alternative method: GENE-UP *Cronobacter*																							
							Protocol ⑤																							
Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	PCR without PMaxx	Confirmation																				Category	Type
								Direct streaking									**subculture CSB**				**Confirmation final result**	Final result	Agreement		
								ESIA					**CCI**					**CCI**								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agreement					
2023	2658	Poudre dessert infantile sans lait vanille dès 12 mois	Infant dessert powder without milk	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																	Category	Type
							Protocol ⑤																		
							PCR With PMaxx	Confirmation														Final result	Agree-ment		
								Direct streaking									**Subculture CSB**				**Confirmation final result**				
								ESIA					**CCI**					**CCI**								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment					
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1577**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0.8% fat)**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24.6% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**1581**	**Poudre de lait infantile bio dès 6 mois (23,7% MG)**	**Infant formula (23.7% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	**1582**	**Poudre de lait infantile 0 à 6 mois (23,5% MG)**	**Infant formula (23.5% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	a
2023	2500	Céréales infantiles saveur biscuits	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2501	Céréales infantiles +10 mois vanille	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter*** Protocol ⑤ PCR With PMaxx Result	Confirmation																Final result	Agree-ment	Category	Type
								Direct streaking									**Subculture CSB**					**Confirmation final result**					
								ESIA					**CCI**					**CCI**										
								Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment						
2023	2502	Céréales infantiles après 4 mois bioépautre	Infant cereals	BPW + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2503	Poudre de lait infantile dès 6 mois bio (23,6% MG)	Infant formula (23.6% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2504	Poudre de lait infantile dès 6 mois (23,5% MG)	Infant formula (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	2505	Poudre de lait 0-6 mois (24,6% MG)	Infant formula (24.6% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10⁵ UFC/g) (25% MG)**	**Infant formula with probiotics (*B.lactis*: 4.09x10⁵ CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+	-	-	/	/	-	**ND**	-	/	/	-	**ND**	-	/	-	**ND**	-	-	**ND**	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10⁶ UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B.lactis*: 1.36x10⁶ CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10⁴ UFC/g) (26% MG)**	**Infant formula with probiotics (*B.lactis*: 3.36x10⁴ CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10³ UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B.lactis*: 2.45x10³ CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																				Category	Type
							Protocol ⑤																					
							PCR With PMaxx	Confirmation																	Final result	Agree-ment		
								Direct streaking									**Subculture CSB**				**Confirmation final result**					
								ESIA					**CCI**					**CCI**									
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment						
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.09x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa/banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	b
2023	2009	Poudre de lait infantile 0-6 mois avec probiotiques (*S.thermophilus* : 1,32.10⁶ UFC/g) (28,6% MG)	Infant formula with probiotics (*S.thermophilus* : 1.32x10⁶ CFU/g) (28.6% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B.lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2011	Poudre de lait infantile 6-12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,8% MG)	Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.8% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter*** Protocol ⑤																	Category	Type
							PCR With PMaxx	Confirmation																		
								Direct streaking										**Subculture CSB**				**Confirmation final result**	Final result	Agree-ment		
								ESIA					**CCI**					**CCI**								
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment					
2023	2494	Poudre de lait infantile dès la naissance avec probiotiques (*L.reuteri*: 3,09.10⁶ UFC/g) (27,8% MG)	Infant formula with probiotics (*L.reuteri*: 3.09x10⁶ CFU/g) (27.8%fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2495	Poudre de lait infantile 0-6 mois avec probiotiques (*B.breve*: 3,50.10⁶ UFC/g) (24,3% MG)	Infant formula with probiotics (*B.breve*: 3.50x10⁶ CFU/g) (24.3% fat)	BPW 2X + Tween	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2496	Poudre de lait infantile système immunitaire dès 6 mois avec probiotiques (*L.reuteri*: 3,36.10⁶ UFC/g) (24,2% MG)	Infant formula with probiotics (*L.reuteri*: 3.36x10⁶ CFU/g) (24.2% fat)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2497	Céréales infantiles avec probiotiques (B.*lactis*: 1,18.10³ UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2498	Céréales infantiles quinoa + 6 mois avec probiotiques (B.*lactis*: 4,41.10⁵ UFC/g)	Infant cereals with probiotics (*B.lactis*: 4.41x10⁵ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	2499	Céréales infantiles avec probiotiques (B.*lactis*: 1,36.10⁴ UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.36x10⁴ CFU/g)	BPW 2X + α-amylase	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	b
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thinckened powder**	BPW + α-amylase	⑤	+	+	+md	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1768**	**Poudre infantile protéine de riz avec probiotiques (*B.lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B.lactis*: 2.73x10² CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+	+	+md	+	+	+	**PA**	+md	+	+	+	**PA**	+md	+	+	**PA**	+	+	**PA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																	Category	Type
							Protocol ⑤																		
							PCR With PMaxx	Confirmation																	
								Direct streaking										**Subculture CSB**				**Confirmation final result**	Final result	Agree-ment	
								ESIA					**CCI**					**CCI**							
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment				
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	+	+1/2	+	+	+	**PA**	+md	+	+	+	**PA**	+md	+	+	**PA**	+	+	**PA**	5	c
2023	**1771**	**Poudre de riz infantile 6-12 mois (23,3% MG)**	**Infant rice protein (23.3% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+	-	-	/	/	-	**ND**	-	/	/	-	**ND**	st	/	-	**ND**	-	-	**ND**	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1774**	**Poudre infantile de protéine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	-	+	+p	+	+	+	**PD**	+p	+	+	+	**PD**	+p	+	+	**PD**	+	+	**PD**	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	**2006**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice powder (25% fat)**	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thinckened powder**	BPW	⑤	+	+	+p	+	+	+	**PA**	+p	+	+	+	**PA**	+p	+	+	**PA**	+	+	**PA**	5	c
2023	2651	Poudre épaississante infantile	Thinckened powder	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2652	Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10^6 UFC/g) (26,5% MG)	Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10^6 CFU/g) (26.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2653	Poudre de riz infantile bio dès 6 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	-	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2654	Poudre de riz infantile 6-12 mois (23,3% MG)	Infant rice powder (23.5% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)																															
Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	**Reference method: ISO 22964♦ Result**	**Alternative method: GENE-UP *Cronobacter***																						Category	Type
							Protocol ⑤																								
							PCR With PMaxx	Confirmation																				Final result	Agree-ment		
								Direct streaking													**Subculture CSB**				**Confirmation final result**				
								ESIA					**CCI**					**CCI**												
							Result	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	Fast crono	API ID32E	Final result	Agree-ment	Typical colonies	API ID32E (after purification onto TSA plate)	Final result	Agree-ment								
2023	2655	Poudre de riz infantile AR 6-12 mois (22,8% MG)	Infant rice powder (22.8% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2656	Poudre de riz infantile 0-36 mois (25% MG)	Infant rice powder (25% fat)	BPW + Tween 80	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2657	Poudre dessert infantile sans lait nature 6-12 mois	Infant dessert powder without milk	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c
2023	2658	Poudre dessert infantile sans lait vanille dès 12 mois	Infant dessert powder without milk	BPW	⑤	-	-	st	/	/	-	**NA**	st	/	/	-	**NA**	st	/	-	**NA**	-	-	**NA**	5	c

Confirmatory tests: detailed results. After 72 h storage at 5°C ± 3°C

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g) (*Extension study, 2020*) with BACTVIAB™ PMAxx™ treatment																							
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																Category	Type
					After 72h at 5°C ± 3°C																		
					PCR						Confirmation												
					BPW 72h			Lysate 72h			Direct streaking												
											ESIA		CCI										
				Result	Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Confirmation final result		Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
2020	**2567**	**Infant formula**	③	+	25.12	66.57	+	26.82	68.4	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2568**	**Infant formula**	③	+	28.29	68.42	+	28.57	68.35	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2569**	**Infant formula**	③	-	34.53	68.62	+	35.78	68.93	+	+p	+	+p	+	+		+	+	**PD**	**PD**	3	a
2020	**2570**	**Infant formula**	③	+	31.68	68.58	+	33.2	68.59	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2571**	**Infant formula**	③	+	26.14	68.16	+	26.93	68.11	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2572**	**Infant cereals**	③	+	26.49	68.57	+	27.04	68.26	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2573**	**Infant cereals**	③	+	25.65	67.16	+	25.27	67.83	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2574**	**Infant cereals**	③	+	0	55.3	+	27.12	67.88	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2575**	**Infant cereals**	③	+	26.88	67.31	+	27.34	67.91	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2576**	**Infant cereals**	③	+	25.66	68.23	+	24.87	67.64	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2577**	**Whole milk powder**	③	+	33.06	68.23	+	33.84	67.83	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2578**	**Skim milk powder**	③	+	28.67	67.81	+	31.45	67.73	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2579**	**Half-skim milk powder**	③	+	30.78	68.13	+	31.74	68	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2580**	**Skim milk powder**	③	+	28.57	67.9	+	31.72	67.39	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	a
2020	**2581**	**Skim milk powder**	③	+	0/0/0	0/0/0	-/-/-	35.42	67.83	+	+p	+	+m	+	+		-	+	**$ND_{FN(alt)}$**	**PA**	3	a
2020	2888	Infant cereals	③	-	29.87	67.3	+	30.73	67.68	+	+m	+	+p	+	+		+	+	**PD**	**PD**	3	a
2020	**2562**	**Infant formula with probiotics (Bifidobacterium lactis 3.6x10⁶CFU/g)**	③	+	28.18	69.2	+	27.66	68.74	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**2563**	**Infant formula with probiotics (Bifidobacterium lactis 5.2x10⁵CFU/g)**	③	+	32.34	68.21	+	32.87	68.47	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**2564**	**Infant formula with probiotics (Bifidobacterium breve 9.7x10⁶CFU/g)**	③	+	29.58	68.92	+	0/0/0	0/0/0	-/-/-	+p	+	+p	+	+		+	-	**PA**	**$ND_{FN(alt)}$**	3	b
2020	**2565**	**Infant formula with probiotics (Bifidobacterium lactis 1.4x10⁴CFU/g)**	③	+	30.83	68.78	+	30.99	68.25	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**2566**	**Infant formula with probiotics (Lactobacillus reuteri 6.6x10⁴CFU/g)**	③	+	27.82	68.6	+	28.51	68.43	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**3108**	**Infant cereals cocoa (Bifidobacterium lactis 3.0x10⁶CFU/g)**	③	+	26.62	68.15	+	27.12	67.82	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**3109**	**Infant cereals avoine et blé (Bifidobacterium lactis 5.6x10⁶CFU/g)**	③	+	27.1	68.12	+	25.7	67.46	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**3110**	**Infant cereals honey (Bifidobacterium lactis 1.0x10⁷CFU/g)**	③	+	25.82	68.11	+	25.26	67.39	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b
2020	**3111**	**Infant cereals chestnut biscuit (Bifidobacterium lactis 4.0x10⁵CFU/g)**	③	+	26.41	68.22	+	27.18	68.02	+	+p	+	+p	+	+		+	+	**PA**	**PA**	3	b

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g) (*Extension study, 2020*) with BACTVIAB™ PMAxx™ treatment																							
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																Category	Type
					After 72h at 5°C ± 3°C																		
					PCR						Confirmation					Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
					BPW 72h			Lysate 72h			Direct streaking												
											ESIA		CCI		Confirmation final result								
				Result	Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono									
2020	**3112**	**Infant cereals 5 cereals (Bifidobacterium lactis 3.5x10^{5}CFU/g)**	③	+	33.9	68.43	+	34.01	67.52	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	b
2020	**3113**	**Infant cereals biscuit (Bifidobacterium lactis 4.5x10^{5}CFU/g)**	③	+	27.88	68.57	+	27.5	68.26	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	b
2020	**3114**	**Infant cereals vanilla (Bifidobacterium lactis 4.5x10^{5}CFU/g)**	③	+	30.25	68.77	+	35.61	68.02	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	b
2020	**3115**	**Infant formula with probiotics (Lactobacillus reuteri 4.4x10^{5}CFU/g)**	③	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	b
2020	**3116**	**Infant formula with probiotics (Bifidobacterium infantis 1.2x10^{6}CFU/g)**	③	+	29.41	68.49	+	31.05	68.57	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	b
2020	**3117**	**Infant formula with probiotics (Lactobacillus reuteri 2.3x10^{6}CFU/g)**	③	-	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	st		+(2)	+	+	-	-	**NA$_{FN(alt)}$**	**NA$_{FN(alt)}$**	3	b
2020	**3834**	**Infant formula with probiotics (Bifidobacterium infantis 4.4x10^{5}CFU/g)**	③	+	0	0	-	0	0	-	st		-		-	-	-	**ND**	**ND**	3	b
2020	**3835**	**Infant formula with probiotics (Lactobacillus reuterii 1.2x10^{6}CFU/g)**	③	+	0	0	-	0	0	-	st		-		-	-	-	**ND**	**ND**	3	b
2020	3896	Infant formula with probiotics (Bifidobacterium infantis 4.1x10^{5}CFU/g)	③	-	0	0	-	0	0	-	-		st		-	-	-	**NA**	**NA**	3	b
2020	3975	Infant cereals with probiotics (Bifidobacterium lactis 4.5x10^{6}CFU/g)	③	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	b
2020	**2741**	**Milk powder**	④	+	33.3	68.8	+	29.68	67.62	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2742**	**Milk powder**	④	+	30.07	68.36	+	28.23	67.13	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2743**	**Whey**	④	-	32.08	68.47	+	32.45	67.26	+	st		st		5x- (ESIA/CCI/CSB)	-	-	**PD$_{FP(ALT)}$**	**PD$_{FP(ALT)}$**	3	c
2020	**2744**	**Whey**	④	+	32.56	68.59	+	32.7	67.26	+	st		st		5x- (ESIA/CCI/CSB)	-	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	3	c
2020	**2745**	**Whey**	④	+	32.22	68.23	+	32.77	67.27	+	st		st		+(CSB)	+	+	**PA**	**PA**	3	c
2020	**2746**	**Non-fat dry milk**	④	-	33.45	68.22	+	32.46	67.3	+	+p	+	+p	+	+	+	+	**PD**	**PD**	3	c
2020	**2747**	**Non-fat dry milk**	④	+	31.22	68.43	+	30.08	66.98	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2748**	**Caseinate**	④	+	30.31	68.84	+	28.85	67.12	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2749**	**Maltodextrin**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**2750**	**Non-fat dry milk**	④	+	34.73	68.11	+	32.84	66.92	+	st		st		5x- (ESIA/CCI/CSB)	-	-	**PA$_{FP(alt)}$**	**PA$_{FP(alt)}$**	3	c
2020	**2751**	**Whey**	④	+	32.65	67.9	+	31.69	66.83	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2752**	**Whey**	④	+	30.1	67.71	+	27.53	66.37	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2753**	**Whey**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**2754**	**Whey**	④	-	33.72	67.97	+	34.02	66.65	+	+p	+	+p	+	+	+	+	**PD**	**PD**	3	c
2020	**2755**	**Whey**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**2756**	**Starch**	④	-	32.09	68.59	+	28.74	66.73	+	+p	+	+p	+	+	+	+	**PD**	**PD**	3	c
2020	**2757**	**Starch**	④	-	31.51	68.55	+	30.5	67.5	+	+p	+	+p	+	+	+	+	**PD**	**PD**	3	c

MILK POWDERS, INGREDIENTS, INFANT FORMULA AND INFANT CEREALS WITH OR WITHOUT PROBIOTICS (up to 375 g) (*Extension study, 2020*) with BACTVIAB™ PMAxx™ treatment																							
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																Category	Type
					After 72h at 5°C ± 3°C																		
					PCR						Confirmation					Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
					BPW 72h			Lysate 72h			Direct streaking												
											ESIA		CCI										
				Result	Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Confirmation final result								
2020	**2758**	**Starch**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**2759**	**Maltodextrin**	④	+	29.53	68.66	+	26.63	66.7	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**2760**	**Maltodextrin**	④	+	31.61	68.54	+	30.93	66.69	+	st		st		+(CSB)	+	+	**PA**	**PA**	3	c
2020	**3098**	**Corn starch**	④	+	28.27	68.78	+	29.97	68.25	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3099**	**Maltodextrin**	④	+	27.79	68.41	+	29	67.76	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3100**	**Natrium caseinate**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**3101**	**Whey**	④	+	33.23	68.42	+	33.61	67.63	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3102**	**Non-fat dry milk**	④	-	33.58	68.31	+	33.74	67.62	+	+p	+	+p	+	+	+	+	**PD**	**PD**	3	c
2020	**3103**	**Lactose**	④	+	0	0	-	0	0	-	st		st		-	-	-	**ND**	**ND**	3	c
2020	**3104**	**Whey**	④	+	30.88	68.44	+	31.51	68.07	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3105**	**Whey**	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c
2020	**3106**	**Whey**	④	+	33.79	68.45	+	34.25	67.85	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3107**	**Maltodextrin**	④	+	27.01	68.21	+	27.86	67.73	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3836**	**Starch**	④	+	30.55	68.28	+	29.59	67.68	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	**3837**	**Starch**	④	+	32.6	68.5	+	30.57	67.51	+	+p	+	+p	+	+	+	+	**PA**	**PA**	3	c
2020	3845	Maltodextrin	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c
2020	3846	Whey	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c
2020	3848	Maltodextrin	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c
2020	3850	Caseinate	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c
2020	3851	Whey	④	-	0	0	-	0	0	-	st		st		-	-	-	**NA**	**NA**	3	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) with BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																								
Year of analysis	Sample N°	Product	Protocol	Reference method: ISO 22964♦	Alternative method: GENE-UP *Cronobacter*																	Category	Type
					After 72h at 5°C ± 3°C																		
					PCR						Confirmation												
					BPW 72h			Lysate 72h			Direct streaking												
											ESIA		CCI										
				Result	Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate				
2020	**4040**	**Process water (dairy environment)**	①	+	30.59	68.63	+	28.8	67.62	+	+p	+	+p	+	+	+	+	PA	PA			4	a
2020	**4041**	**Process water (dairy environment)**	①	-	28.84	68.39	+	28.54	67.76	+	+p	+	+p	+	+	+	+	PD	PD			4	a
2020	**4042**	**Process water (dairy environment)**	①	+	27.54	68.39	+	26.72	67.59	+	+p	+	+p	+	+	+	+	PA	PA			4	a
2020	**4043**	**Process water (dairy environment)**	①	+	28.01	68.49	+	27.43	67.85	+	+p	+	+p	+	+	+	+	PA	PA			4	a
2020	**4410**	**Process water (dairy environment)**	①	-	27.58	68.52	+	27.57	67.77	+	+p	+	+p	+	+	+	+	PD	PD			4	a
2020	**4411**	**Process water (dairy environment)**	①	+	0	0	-	0	0	-	st		st		-	-	-	ND	ND			4	a
2020	**4624**	**Process water (dairy environment)**	①	+	0	0	-	0	0	-	st		-		-	-	-	ND	ND			4	a
2020	**3832**	**Dusts**	①	+	32.7	68.56	+	31.73	67.58	+	+p	+	+p	+	+	+	+	PA	PA			4	b
2020	**3833**	**Dusts**	①	+	33.52	67.95	+	33.54	67.64	+	+p	+	+p	+	+	+	+	PA	PA			4	b
2020	4260	Dusts (dairy environment)	①	+	0	67.93	+	0/36,47/0	0/68,07/68,26	-/+/+	+d/+	+	-		+	+	-	PA	$ND_{FN(alt)}$			4	b
2020	**4287**	**Dusts (dairy environment)**	①	-	34.96	68.11	+	35.36	66.7	+	-		-		-	-	-	$PD_{FP(ALT)}$	$PD_{FP(ALT)}$			4	b
2020	**4288**	**Vaccum cleaner filter (dairy environment)**	①	+	34.16	68.11	+	35.1	66.91	+	+p	+	+p	+	+	+	+	PA	PA			4	b
2020	**4289**	**Vaccum cleaner filter (dairy environment)**	①	+	0/0/0	0/0/0	-/-/-	0	67.26	+	+p	+	+p	+	+	-	+	$ND_{FN(alt)}$	PA			4	b
2020	**4290**	**Vaccum cleaner filter (dairy environment)**	①	+	34.59	68.62	+	37.28	65.32	+	+p	+	+p	+	+	+	+	PA	PA			4	b
2020	**4291**	**Vaccum cleaner filter (dairy environment)**	①	+	33.92	68.11	+	35.07	66.13	+	+p	+	+p	+	+	+	+	PA	PA			4	b
2020	4617	Dusts (dairy environment)	①	+	26.03	68.06	+	26.48	67.9	+	+M	+	+m	+	+	+	+	PA	PA			4	b
2020	**4675**	**Dusts (dairy environment)**	①	+	31.2	68.34	+	31.32	68.22	+	+M	+	+m	+	+	+	+	PA	PA			4	b
2020	**4676**	**Dusts (dairy environment)**	①	+	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	+M	+	+m	+	+	-	-	$ND_{FN(alt)}$	$ND_{FN(alt)}$			4	b
2020	**4677**	**Dusts (dairy environment)**	①	+	30.05	68.15	+	30.1	67.86	+	+m	+	+m	+	+	+	+	PA	PA			4	b
2020	**4678**	**Dusts (dairy environment)**	①	-	34.64	68.33	+	33.83	67.94	+	+p	+	+M	+	+	+	+	PD	PD			4	b
2020	**4679**	**Dusts (dairy environment)**	①	+	0/0/0	0/0/0	-/-/-	0/0/0	0/0/0	-/-/-	st		-		+(CSB)	-	-	$ND_{FN(alt)}$	$ND_{FN(alt)}$			4	b
2020	**4680**	**Dusts (dairy environment)**	①	+	30.42	67.97	+	30.31	67.85	+	+M	+	+m	+	+	+	+	PA	PA			4	b
2020	**4682**	**Dusts (dairy environment)**	①	+	0	0	-	0	0	-	-		-		-	-	-	ND	ND			4	b
2020	**4683**	**Dusts (dairy environment)**	①	-	0	0	-	0	0	-	-		-		-	-	-	NA	NA			4	b
2020	**4684**	**Dusts (dairy environment)**	①	+	0	0	-	0	0	-	st		-		-	-	-	ND	ND			4	b
2020	**4114**	**Wipe after cleaning process (dairy environment)**	①	+	29.44	68.42	+	30.38	66.89	+	+p	+	+p	+	+	+	+	PA	PA			4	c
2020	**4115**	**Wipe after cleaning process (dairy environment)**	①	+	26.74	68.31	+	27.02	66.42	+	+p	+	+p	+	+	+	+	PA	PA			4	c
2020	**4116**	**Wipe after cleaning process (dairy environment)**	①	+	26.84	68.42	+	23.86	66.13	+	+p	+	+p	+	+	+	+	PA	PA			4	c
2020	**4117**	**Wipe after cleaning process (dairy environment)**	①	+	31.25	68.76	+	29.39	66.56	+	+p	+	+1/2	+	+	+	+	PA	PA			4	c
2020	**4119**	**Wipe after cleaning process (dairy environment)**	①	+	27.55	68.46	+	26.22	66.27	+	+p	+	+p	+	+	+	+	PA	PA			4	c
2020	4378	Sponge (dairy environment)	①	-	34.29	68.31	+	33.08	67.73	+	+m/+	+	+m/+	+	+	+	+	PD	PD			4	c

PRODUCTION ENVIRONMENTAL SAMPLES (up to 25 g or ml or sampling device) with BACTVIAB™ PMAxx™ treatment (*Extension study, 2020*)																								
Year of analysis	Sample N°	Product	Protocol	**Reference method: ISO 22964♦**	**Alternative method: GENE-UP *Cronobacter***																	Category	Type
				Result	**After 72h at 5°C ± 3°C**																		
					PCR						Confirmation					Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
					BPW 72h			Lysate 72h			**Direct streaking**				**Confirmation final result**						
					Cp	Tm	Result	Cp	Tm	Result	**ESIA**		**CCI**									
											Typical colonies	Fast crono	Typical colonies	Fast crono								
2020	**4406**	**Wipe after cleaning process (dairy environment)**	①	+	28.69	68.94	+	28.29	68.3	+	+p	+	+p	+	+	+	+	**PA**	**PA**	4	c
2020	**4407**	**Sponge (dairy environment)**	①	+	29.76	68.48	+	29.63	67.93	+	+p	+	+p	+	+	+	+	**PA**	**PA**	4	c
2020	**4408**	**Wipe after cleaning process (dairy environment)**	①	+	29.44	68.69	+	27.4	68.06	+	+p	+	+p	+	+	+	+	**PA**	**PA**	4	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMaxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* After 72 h at 5°C ± 3°C																Category	Type
							PCR without Pmaxx						Confirmation											
													Direct streaking				Subculture CSB							
							BPW 72h			Lysate 72h			ESIA		CCI		CCI							
							Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies	Confirmation final result	Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+	21.47	66.55	+	22.15	66.41	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0.8% fat)**	BPW	⑤	+	18.98	65.62	+	19.67	65.99	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24.6% fat)**	BPW + Tween 80	⑤	+	25.13	66.30	+	19.02	65.76	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	19.95	66.52	+	19.10	66.29	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	-	20.59	66.58	+	19.99	66.82	+	+p	+	+p	+	+p	+	+	+	**PD**	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	19.72	66.46	+	18.97	66.73	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	19.88	66.97	+	19.01	66.74	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+	21.75	66.14	+	29.35	66.35	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	19.19	66.44	+	18.94	66.15	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	19.80	66.74	+	20.10	66.42	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+	19.64	66.06	+	21.50	66.19	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	21.42	66.55	+	20.72	66.66	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10⁵ UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B.lactis*: 8.91x10⁵ CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+	19.54	66.26	+	20.29	66.21	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10⁵ UFC/g) (25% MG)**	**Infant formula with probiotics (*B.lactis*: 4.09x10⁵ CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+	0	0	-	0	0	-	-	/	-	/	-	-	-	-	**ND**	**ND**	5	b
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10⁶ UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B.lactis*: 1.36x10⁶ CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+	23.45	66.30	+	24.00	66.44	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10⁴ UFC/g) (26% MG)**	**Infant formula with probiotics (*B.lactis*: 3.36x10⁴ CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+	21.01	66.49	+	21.66	66.48	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMaxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* After 72 h at 5°C ± 3°C																Category	Type
							PCR without Pmaxx						Confirmation						Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
							BPW 72h			Lysate 72h			Direct streaking				Subculture CSB							
													ESIA		CCI		CCI	Confirmation final result						
							Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies							
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10³ UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B.lactis*: 2.45x10³ CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+	30.58	66.44	+	32.76	66.16	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	21.57	66.29	+	21.66	66.28	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+	20.79	66.45	+	21.14	66.37	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.09x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	20.16	66.77	+	20.57	66.25	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+	24.16	66.79	+	26.14	66.67	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa/banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	20.10	66.83	+	19.29	66.53	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B.lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	-	33.99/ 0/ 34.93	66.62/ 66.27/ 65.98	+/-/+	33.18/3 4.04/ 34.90	67.05/ 66.28/ 65.49	+/+/+	st	/	st	/	st	/	-	-	**PD$_{FP(ALT)}$**	**PD$_{FP(ALT)}$**	5	b
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thinckened powder**	BPW + α-amylase	⑤	+	22.93	66.82	+	23.71	66.77	+	+md	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1768**	**Poudre infantile proteine de riz avec probiotiques (*B.lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B.lactis*: 2.73x10² CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+	27.21	66.29	+	27.73	66.19	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+	19.54	66.55	+	20.09	66.15	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	21.45	66.11	+	23.38	66.26	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+	0	0	-	0	0	-	-	/	-	/	-	-	-	-	**ND**	**ND**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITHOUT BACTVIAB™ PMaxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (French name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* After 72 h at 5°C ± 3°C																Category	Type
							PCR without Pmaxx						Confirmation						Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
							BPW 72h			Lysate 72h			Direct streaking				Subculture CSB							
													ESIA		CCI		CCI	Confirmation final result						
							Cp	Tm	Result	Cp	Tm	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies							
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+	27.51	66.62	+	32.26	66.09	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1774**	**Poudre infantile de proteine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	23.02	66.47	+	27.19	66.66	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	-	24.66	66.52	+	27.96	66.44	+	+p	+	+p	+	+p	+	+	+	**PD**	**PD**	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+	21.34	67.11	+	20.81	66.42	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thickened powder**	BPW	⑤	+	22.09	66.99	+	24.61	67.27	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* — After 72 h at 5°C ± 3°C																Category	Type
							PCR with PMaxx						Confirmation						Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													Direct streaking				Subculture CSB	Confirmation final result						
							BPW 72h			Lysate 72h			ESIA		CCI		CCI							
							Cp Cro	Tm Cro	Result	Cp Cro	Tm Cro	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies							
2023	**1576**	**Poudre de lait entier (26% MG)**	**Whole milk powder (26% fat)**	BPW + Tween80	⑤	+	29.10	67.56	+	28.32	67.39	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1578**	**Poudre de lait écrémé (0,8%)**	**Skim milk powder (0.8% fat)**	BPW	⑤	+	25.69	66.34	+	26.47	66.67	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1579**	**Poudre de lait infantile 0-6 mois (24,6% MG)**	**Infant formula (24.6% fat)**	BPW + Tween 80	⑤	+	27.85	67.13	+	30.26	67.19	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1580**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	29.15	67.15	+	31.03	67.55	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1583**	**Céréales infantiles**	**Infant cereals**	BPW + α-amylase	⑤	-	28.60	67.54	+	29.51	67.54	+	+p	+	+p	+	+p	+	+	+	**PD**	**PD**	5	a
2023	**1585**	**Céréales infantiles dès 12 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	29.81	66.89	+	27.95	67.37	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2000**	**Céréales infantiles 5 céréales/miel dès 8 mois**	**Infant cereals**	BPW + α-amylase	⑤	+	25.70	67.73	+	28.13	67.09	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2002**	**Poudre de lait infantile prématuré (25,8% MG)**	**Infant formula (25.8% fat)**	BPW + Tween 80	⑤	+	27.94	66.94	+	32.88	67.10	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2003**	**Poudre de lait infantile 6-12 mois système immunitaire (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	27.00	67.47	+	26.08	66.79	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2004**	**Poudre de lait infantile 6-12 mois (22% MG)**	**Infant formula (22% fat)**	BPW + Tween 80	⑤	+	28.26	67.59	+	27.27	67.19	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**2005**	**Poudre de lait demi-écrémé (14% MG)**	**Half-skim milk powder (14% fat)**	BPW	⑤	+	26.00	67.24	+	27.48	66.88	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	a
2023	**1584**	**Céréales infantiles +6 mois avec probiotiques (*B.lactis*: 1,18.10^3 UFC/g)**	**Infant cereals with probiotics (*B.lactis*: 1.18x10^3 CFU/g)**	BPW 2X + α-amylase	⑤	+	30.69	66.66	+	30.67	67.61	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1777**	**Poudre de lait infantile 6 à 12 mois avec probiotiques (*B.lactis*: 8,91.10^5 UFC/g) (24,5% MG)**	**Infant formula with probiotics (*B.lactis*: 8.91x10^5 CFU/g) (24.5% fat)**	BPW 2X + Tween	⑤	+	25.53	66.75	+	28.03	67.03	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1778**	**Poudre de lait infantile 10-36 mois avec probiotiques (*B.lactis*: 4,09.10^5 UFC/g) (25% MG)**	**Infant formula with probiotics (*B.lactis*: 4.09x10^5 CFU/g) (25% fat)**	BPW 2X + Tween	⑤	+	0	0	-	0	0	-	-	/	-	/	-	-	-	-	**ND**	**ND**	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* — After 72 h at 5°C ± 3°C																Category	Type
							PCR with PMaxx						Confirmation						Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
													Direct streaking				Subculture CSB	Confirmation final result						
							BPW 72h			Lysate 72h			ESIA		CCI		CCI							
							Cp Cro	Tm Cro	Result	Cp Cro	Tm Cro	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies							
2023	**1779**	**Poudre de lait infantile dès 6 mois avec probiotiques (*B.lactis*: 1,36.10⁶ UFC/g) (27,6% MG)**	**Infant formula with probiotics (*B.lactis*: 1.36x10⁶ CFU/g) (27.6% fat)**	BPW 2X + Tween	⑤	+	29.96	67.19	+	30.65	66.79	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1780**	**Poudre de lait infantile de 6 à 12 mois avec probiotiques (*B.lactis*: 3,36.10⁴ UFC/g) (26% MG)**	**Infant formula with probiotics (*B.lactis*: 3.36x10⁴ CFU/g) (26% fat)**	BPW 2X + Tween	⑤	+	27.18	67.14	+	27.70	66.99	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1781**	**Poudre de lait infantile de 0 à 6 mois avec probiotiques (*B.lactis*: 2,45.10³ UFC/g) (28,2% MG)**	**Infant formula with probiotics (*B.lactis*: 2.45x10³ CFU/g) (28.2% fat)**	BPW 2X + Tween	⑤	+	34.13	67.51	+	33.79	67.09	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1997**	**Céréales infantiles avec probiotiques (*B.lactis* : 1,45.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.45x10⁶ CFU/g)**	BPW 2X + α-amylase	⑤	+	25.72	67.58	+	28.06	67.14	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1998**	**Céréales infantiles quinoa + 6 mois avec probiotiques (*B.lactis* : 4,41.10⁵ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 4.41x10⁵ CFU/g)**	BPW 2X + α-amylase	⑤	+	25.78	67.43	+	28.78	66.71	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**1999**	**Céréales infantiles banane avec probiotiques (*B.lactis* : 1,09.10⁶ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.09x106 CFU/g)**	BPW 2X + α-amylase	⑤	+	26.35	67.63	+	30.31	67.09	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**2001**	**Poudre de lait infantile dès 6 mois avec probiotiques (*L.reuteri* : 3,09.10⁶ UFC/g) (24,2% MG)**	**Infant formula with probiotics (*L.reuteri* : 3.09x10⁶ CFU/g) (24.2% fat)**	BPW 2X + Tween	⑤	+	29.53	67.64	+	31.57	67.44	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	**2008**	**Céréales infantiles +6 mois quinoa / banane/prune avec probiotiques (*B.lactis* : 1,18.10³ UFC/g)**	**Infant cereals with probiotics (*B.lactis* : 1.18x10³ CFU/g)**	BPW 2X + α-amylase	⑤	+	25.76	67.19	+	28.62	67.15	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	b
2023	2010	Poudre de lait infantile 0-6 mois avec probiotiques (*B.lactis*:8,91.10⁵ UFC/g) (26% MG)	Infant formula with probiotics (*B.lactis*:8.91x10⁵ CFU/g) (26%fat)	BPW 2X + Tween	⑤	-	0	0	-	29.09/0/0	67.11/0/0	+/-/-	st	/	st	/	st	/	-	-	**NA**	**PD$_{FP(ALT)}$**	5	b
2023	2497	Céréales infantiles avec probiotiques (B.*lactis*: 1,18.10³ UFC/g)	Infant cereals with probiotics (*B.lactis*: 1.18x10³ CFU/g)	BPW 2X + α-amylase	⑤	-																	5	b

MILK POWDERS, INFANT FORMULA AND INFANT CEREALS WITH AND WITHOUT PROBIOTICS, EARLY LIFE NUTRITION (ELN) WITH BACTVIAB™ PMAxx™ treatment (up to 300 g) (*Extension study, 2023*)

Year of analysis	Sample N°	Product (french name)	Product	Reference enrichment broth	Protocol	Reference method: ISO 22964♦ Result	Alternative method: GENE-UP *Cronobacter* After 72 h at 5°C ± 3°C																Category	Type
							PCR with PMaxx						Confirmation						Final result 72h BPW	Final result 72h Lysate	Agreement 72h BPW	Agreement 72h Lysate		
							BPW 72h			Lysate 72h			Direct streaking				Subculture CSB	Confirmation final result						
													ESIA		CCI		CCI							
							Cp Cro	Tm Cro	Result	Cp Cro	Tm Cro	Result	Typical colonies	Fast crono	Typical colonies	Fast crono	Typical colonies							
2023	**1767**	**Poudre épaississante 0-3 mois**	**Thinckened powder**	BPW + α-amylase	⑤	+	28.62	67.58	+	27.64	67.49	+	+md	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1768**	**Poudre infantile proteine de riz avec probiotiques (*B.lactis*: 2,73.10² UFC/g) (21,5% MG)**	**Infant rice protein with probiotics (*B.lactis*: 2.73x10² CFU/g) (21.5% fat)**	BPW 2X + Tween	⑤	+	31.49	67.00	+	32.57	67.50	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1769**	**Poudre infantile sans lactose dès la naissance avec probiotiques (*L.reuteri*: 1,0.10⁶ UFC/g) (25,5% MG)**	**Infant powder without lactose with probiotics (*L.reuteri*: 1.0x10⁶ CFU/g) (25.5% fat)**	BPW 2X + Tween	⑤	+	25.70	67.23	+	28.34	67.45	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1770**	**Poudre de riz infantile 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	26.45	67.06	+	29.15	67.67	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1772**	**Poudre de riz infantile AR 0-6 mois (24,9% MG)**	**Infant rice protein (24.9% fat)**	BPW + Tween 80	⑤	+	0	0	-	0	0	-	-	/	-	/	-	-	-	-	**ND**	**ND**	5	c
2023	**1773**	**Poudre de riz infantile AR 6-12 mois (22,8% MG)**	**Infant rice protein (22.8 % fat)**	BPW + Tween 80	⑤	+	30.89	67.50	+	33.89	67.11	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1774**	**Poudre infantile de proteine de riz végétal 0-36 mois (26% MG)**	**Infant rice protein (26% fat)**	BPW + Tween 80	⑤	+	27.99	67.29	+	31.16	67.16	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**1775**	**Poudre de riz infantile 0-36 mois (25% MG)**	**Infant rice protein (25% fat)**	BPW + Tween 80	⑤	-	29.77	67.54	+	32.82	67.14	+	+p	+	+p	+	+p	+	+	+	**PD**	**PD**	5	c
2023	**1776**	**Poudre de riz infantile, préparation de suite dès 6 mois (23,5% MG)**	**Infant rice protein (23.5% fat)**	BPW + Tween 80	⑤	+	26.76	67.46	+	26.78	66.57	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c
2023	**2007**	**Poudre épaississante dès la naissance**	**Thinckened powder**	BPW	⑤	+	27.96	67.40	+	31.25	67.36	+	+p	+	+p	+	+p	+	+	+	**PA**	**PA**	5	c

Complementary tests: raw data (Extension study, 2020)

Year of analysis	Sample N°	Product (French name)	Product	Artificial contaminations				Protocol	Alternative method: GENE-UP *Cronobacter* with or without BACTVIAB™ PMAxx™ treatment																			Category	Type
									18h at 37°C																				
									PCR **with** BACTVIAB™ PMAxx™ treatment			PCR **without** BACTVIAB™ PMAxx™ treatment			Confirmation												Final result		
															Direct streaking								Subculture CSB				Confir-mation final result			
															ESIA				CCI				CCI							
				Strain	Origin	Injury protocol	Inoculation level CFU/ sample		Cp	Tm	Result	Cp	Tm	Result	Typical colonies	API ID32E	Fast crono	Final result	Typical colonies	API ID32E	Fast crono	Final result	Typical colonies	API ID32E (after purification onto TSA plate)	Final result					
2020	**5333**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	4.0	①	32.69	67.49	+	26.05	65.98	+	+p	+	+	+	+p	+	+	+	+p	+	+	+	+	4	b
2020	**5334**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	4.0	①	33.60	67.06	+	28.37	65.52	+	+p	+	+	+	+M	+	+	+	+p	+	+	+	+	4	b
2020	**5335**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2409	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	4.0	①	33.89	66.96	+	28.31	66.04	+	+M	+	+	+	+M	+	+	+	+M	+	+	+	+	4	b
2020	**5336**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter dublinensis* DSM18707	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	3.0	①	28.47	67.38	+	21.02	66.59	+	+M	+	+	+	+M	+	+	+	+M	+	+	+	+	4	b
2020	**5337**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter dublinensis* DSM18707	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	3.0	①	33.00	66.89	+	32.33	67.43	+	+p	+	+	+	+M	+	+	+	+p	+	+	+	+	4	b
2020	**5338**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter dublinensis* DSM18707	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	3.0	①	34.16	67.4	+	29.30	66.24	+	+p	+	+	+	+M	+	+	+	+p	+	+	+	+	4	b
2020	**5339**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2383	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	0.6	①	30.11	66.88	+	23.59	66.43	+	+1/2	+	+	+	+M	+	+	+	+M	+	+	+	+	4	b
2020	**5340**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2383	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	0.6	①	30.36	67.08	+	0.00	67.36	+	+m	+	+	+	+m/+	+	+	+	+M	+	+	+	+	4	b
2020	**5341**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2383	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	0.6	①	0.00	0.00	-	0.00	0.00	-	st			-	-			-	st		-	-	-	4	b
2020	**5342**	**Poussières (environnement laitier)**	**Dusts (dairy environment)**	*Cronobacter sakazakii* Ad2383	Dairy environment	Seeding lyophilised strain 2 weeks at ambient temperature	0.6	①	31.13	66.85	+	25.41	66.45	+	+M	+	+	+	+M	+	+	+	+M	+	+	+	+	4	b

Appendix 5 - Relative level of detection study: raw data (Initial validation (2018) and extension studies (2018, 2020 and 2023)

Matrix : Infant cereals without probiotics
Strain : *Cronobacter dublinensis* E798

Aerobic mesophilic flora :<10 CFU/g
Sample size: up to 25 g

Initial validation study (2018)
Protocol①

N° sample	Level	Contamination level-(cfu/sample)	Reference method: ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (BPW for 18h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				CP	TM	Result	ESIA	CCI	CCI		
8857	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
8858			st	/	-		0	0	-	st	st	st	-	
8859			st	/	-		0	0	-	-	-	-	-	
8860			st	/	-		0	0	-	st	st	st	-	
8861			st	/	-		0	0	-	st	st	st	-	
8862	Low	1.0	+p	+	+	11/20	0	0	-	st	st	st	-	7/20
8863			+p	+	+		0	0	-	st	st	st	-	
8864			+p	+	+		27.06	66.54	+	+p	+p	+p	+	
8865			+M	+	+		0	0	-	st	st	st	-	
8866			st	/	-		0	0	-	st	st	st	-	
8867			st	/	-		0	0	-	st	st	st	-	
8868			st	/	-		25.77	66.07	+	+p	+p	+p	+	
8869			+p	+	+		25.78	65.87	+	+p	+p	+p	+	
8870			st	/	-		0	0	-	st	st	st	-	
8871			st	/	-		0	0	-	st	st	st	-	
8872			+p	+	+		0	0	-	st	st	st	-	
8873			st	/	-		29.39	66.41	+	+p	+p	+p	+	
8874			+p	+	+		23.62	65.92	+	+p	+p	+p	+	
8875			st	/	-		24.72	66.17	+	+p	+p	+p	+	
8876			st	/	-		0	0	-	st	st	st	-	
8877			+p	+	+		0	0	-	st	st	st	-	
8878			+p	+	+		0	0	-	st	st	st	-	
8879			st	/	-		28.68	65.94	+	+p	+p	+p	+	
8880			+p	+	+		0	0	-	st	st	st	-	
8881			+p	+	+		0	0	-	st	st	st	-	
8882	High	3.1	+p	+	+	5/5	22.32	65.96	+	+p	+p	+p	+	5/5
8883			+p	+	+		22.91	66.08	+	-	+m	+m	+	
8884			+p	+	+		25.78	66.17	+	+p	+p	+p	+	
8885			+p	+	+		23.82	65.82	+	+p	+p	+p	+	
8886			+p	+	+		26.33	66.25	+	+p	+p	+p	+	

Matrix : Infant formula with probiotics
Strain : *Cronobacter sakazakii* Ad2413

Lactic flora : 9.8x10^5 CFU/g
Sample size: up to 25 g

Initial validation study (2018)
Protocol ②

N° sample	Level	Contamination level-(cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (BPW for 18h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				CP	TM	Result	ESIA	CCI	CCI		
9102	0	/	st	-	-	0/5	0	0	-	st	st	st	-	0/5
9103			st	-	-		0	0	-	st	st	st	-	
9104			st	-	-		0	0	-	st	st	st	-	
9105			-	-	-		36.8/0/0	65.54/0/0	+/-/- (same lysate)	st x 5	st x 5	st x 5	-	
							0/37.84	0/65.86	-/+ (two new extractions)					
9106			st	-	-		0	0	-	st	st	st	-	
9430	Low	1.0	+p	+	+	16/20	27.73	65.85	+	+p	+p	+p	+	16/20
9431			+p	+	+		28.32	65.58	+	+p	+p	+p	+	
9432			+p	+	+		31.76	65.33	+	+p	+p	+p	+	
9433			+p	+	+		0	66.55	+	+p	+p	+p	+	
9434			+p	+	+		0	0	-	st	st	st	-	
9435			+p	+	+		31.38	65.42	+	+p	+p	+p	+	
9436			+p	+	+		32.3	65.69	+	+p	+p	+p	+	
9437			+p	+	+		40	65.75	+	+p	+p	+p	+	
9438			+p	+	+		29.84	65.84	+	+p	+p	+p	+	
9439			+p	+	+		29.53	65.56	+	+p	+p	+p	+	
9440			+p	+	+		26.3	65.45	+	+p	+p	+p	+	
9441			+p	+	+		32.39	65.18	+	+p	+p	+p	+	
9442			st	-	-		25.93	65.53	+	+p	+p	+p	+	
9443			+p	+	+		0	0	-	st	st	st	-	
9444			st	-	-		0	0	-	st	st	st	-	
9445			+p	+	+		0	0	-	st	st	st	-	
9446			+p	+	+		27.74	65.66	+	+p	+p	+p	+	
9447			st	-	-		27.94	65.5	+	+p	+p	+p	+	
9448			st	-	-		28.3	65.66	+	+p	+p	+p	+	
9449			+p	+	+		26.98	65.56	+	+p	+p	+p	+	
9097	High	5.4	+p	+	+	5/5	25.41	65.45	+	+p	+p	+p	+	4/5
9098			+p	+	+		0	0	-	st	st	st	-	
9099			+p	+	+		24.08	65.56	+	+p	+p	+p	+	
9100			+p	+	+		27.61	65.73	+	+p	+p	+p	+	
9101			+p	+	+		25.09	65.57	+	+p	+p	+p	+	

Matrix : Maltodextrin
Strain : *Cronobacter turicensis* Ad1445

Aerobic mesophilic flora : <200 CFU/g
Sample size: up to 375 g

Extension study (2018)
Protocol ④

N° sample	Level	Contamination level (cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (Pre-warmed BPW 1/10 for 20h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				CP	TM	Result	ESIA	CCI	CCI		
3349	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
3350			st	/	-		0	0	-	st	st	st	-	
3351			st	/	-		0	0	-	st	st	st	-	
3352			st	/	-		0	0	-	st	st	st	-	
3353			st	/	-		0	0	-	st	st	st	-	
3354	Low	1.1	st	/	-	18/20	0	0	-	st	st	st	-	13/20
3355			+p	+	+		25.22	66.5	+	+p	+p	+p	+	
3356			+p	+	+		0/0/0	0/0/0	-/-/-	+p	+p	+p	-	
3357			st	/	-		22.81	66.6	+	+p	+p	+p	+	
3358			+p	+	+		0/0/0	0/0/0	-/-/-	st	st	+p	-	
3359			+p	+	+		21.95	66.73	+	+p	+p	+p	+	
3360			+p	+	+		0	0	-	st	st	st	-	
3361			+p	+	+		23.98	66.71	+	+p	+p	+p	+	
3362			+p	+	+		22.27	66.77	+	+p	+p	+p	+	
3363			+p	+	+		21.24	66.54	+	+p	+p	+p	+	
3364			+p	+	+		21.6	66.73	+	+p	+p	+p	+	
3365			+p	+	+		0	0	-	st	st	st	-	
3366			+p	+	+		21.06	66.76	+	+p	+p	+p	+	
3367			+p	+	+		30	66.58	+	+p	+p	+p	+	
3368			+p	+	+		21.93	66.69	+	+p	+p	+p	+	
3369			+p	+	+		21.63	66.3	+	+p	+p	+p	+	
3370			+p	+	+		21.35	66.76	+	+p	+p	+p	+	
3371			+p	+	+		0	0	-	st	st	st	-	
3372			+p	+	+		0	0	-	st	st	st	-	
3373			+p	+	+		21.53	66.9	+	+p	+p	+p	+	
3374	High	2.1	+p	+	+	5/5	21	66.61	+	+p	+p	+p	+	3/5
3375			+p	+	+		22.51	66.7	+	+p	+p	+p	+	
3376			+p	+	+		0	0	-	st	st	st	-	
3377			+p	+	+		24.08	66.49	+	+p	+p	+p	+	
3378			+p	+	+		0/0/0	0/0/0	-/-/-	st	st	+p	-	

Matrix : Infant formula with probiotics
Strain : *Cronobacter sakazakii* Ad2412

Lactic flora : 1.9x10^6 CFU/g
Sample size: up to 375 g

Extension study (2018)
Protocol ③

N° sample	Level	Contamination level-(cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (Pre-warmed BPW 1/6 + Novobiocin for 20h at 34-38°C)							Number positive samples/Total
			CSB CCI	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
							CP	TM	Result	ESIA	CCI	CCI		
3439	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
3440			st	/	-		0	0	-	st	st	st	-	
3441			st	/	-		0	0	-	st	st	st	-	
3442			st	/	-		0	0	-	st	st	st	-	
3443			st	/	-		0	0	-	st	st	st	-	
3444	Low	1.5	+p	+	+	16/20	23.72	66.31	+	+p	+p	+p	+	18/20
3445			+p	+	+		25.39	66.02	+	+p	+p	+p	+	
3446			+p	+	+		29.78	66.41	+	+p	+p	+p	+	
3447			+p	+	+		25.26	66.31	+	+p	+p	+p	+	
3448			+p	+	+		31.52	66.3	+	+p	+p	+p	+	
3449			+p	+	+		27.64	66.11	+	+p	+p	+p	+	
3450			+p	+	+		0	0	-	st	st	st	-	
3451			+p	+	+		0	0	-	st	st	st	-	
3452			st	/	-		26.79	66.21	+	+p	+p	+p	+	
3453			+p	+	+		31.45	65.85	+	+p	+p	+p	+	
3454			+p	+	+		25.13	66.08	+	+p	+p	+p	+	
3455			+p	+	+		30.25	66.48	+	+p	+p	+p	+	
3456			st	/	-		28.81	66.2	+	+p	+p	+p	+	
3457			st	/	-		0/32.81*	0/66.9*	i/+*	+p	+p	+p	+	
3458			+p	+	+		31.75	66.41	+	+p	+p	+p	+	
3459			st	/	-		28.11	66.14	+	+p	+p	+p	+	
3460			+p	+	+		29.87	66.24	+	+p	+p	+p	+	
3461			+p	+	+		30.9	65.91	+	+p	+p	+p	+	
3462			+p	+	+		30.91	66.66	+	+p	+p	+p	+	
3463			+p	+	+		35.34	66.58	+	+p	+p	+p	+	
3464	High	3.0	+p	+	+	5/5	27.38	66.12	+	+p	+p	+p	+	5/5
3465			+p	+	+		38.57	66.73	+	+p	+p	+p	+	
3466			+p	+	+		26.09	66.21	+	+p	+p	+p	+	
3467			+p	+	+		28.43	66.17	+	+p	+p	+p	+	
3468			+p	+	+		26.58	66.43	+	+p	+p	+p	+	

Matrix : Process water (rinse)
Strain : *Cronobacter muytjensii* E888

Aerobic mesophilic flora : 1.3x10² CFU/g
Sample size: up to 25 g

Extension study (2018)
Protocol ①

N° sample	Level	Contamination level-(cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (BPW for 18h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				CP	TM	Result	ESIA	CCI	CCI		
3298	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
3299			st	/	-		0	0	-	st	st	st	-	
3300			st	/	-		0	0	-	st	st	st	-	
3301			st	/	-		0	0	-	st	st	st	-	
3302			st	/	-		0	0	-	st	st	st	-	
3303	Low	0.3	st	/	-	6/20	0	0	-	st	st	st	-	5/20
3304			st	/	-		0	0	-	st	st	st	-	
3305			st	/	-		0	0	-	st	st	st	-	
3306			st	/	-		0	0	-	st	st	st	-	
3307			+p	+	+		0	0	-	st	st	st	-	
3308			st	/	-		0	0	-	st	st	st	-	
3309			st	/	-		0	0	-	st	st	st	-	
3310			st	/	-		0	0	-	st	st	st	-	
3311			st	/	-		0	0	-	st	st	st	-	
3312			st	/	-		23.38	66.98	+	+p	+p	+p	+	
3313			st	/	-		23.83	67	+	+p	+p	+p	+	
3314			+p	+	+		23.13	66.78	+	+p	+p	+p	+	
3315			+p	+	+		22.98	66.92	+	+p	+p	+p	+	
3316			+p	+	+		0	0	-	st	st	st	-	
3317			st	/	-		0	0	-	st	st	st	-	
3318			+p	+	+		23.26	66.96	+	+p	+p	+p	+	
3319			st	/	-		0	0	-	st	st	st	-	
3320			st	/	-		0	0	-	st	st	st	-	
3321			+p	+	+		0	0	-	st	st	st	-	
3322			st	/	-		0	0	-	st	st	st	-	
3323	High	1.0	st	/	-	4/5	0	0	-	st	st	st	-	3/5
3324			+p	+	+		0	0	-	st	st	st	-	
3325			+p	+	+		23.97	66.39	+	+p	+p	+p	+	
3326			+p	+	+		23.62	66.27	+	+p	+p	+p	+	
3327			+p	+	+		23.24	66.15	+	+p	+p	+p	+	

Matrix : Maltodextrin Sample size: up 375 g **Extension: BACTVIAB™ PMAxx™ treatment - 2020**

Strain : *Cronobacter turicensis* Ad1445 Aerobic mesophilic flora : <10 CFU/g Protocol ④

N° sample	Level	Contamination level (cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (Pre-warmed BPW 1/10 20h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				Cp Cro	Tm Cro	Result	ESIA	CCI	CCI		
3278	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
3279			st	/	-		0	0	-	st	st	st	-	
3280			st	/	-		0	0	-	st	st	st	-	
3281			st	/	-		0	0	-	st	st	st	-	
3282			st	/	-		0	0	-	st	st	st	-	
3288	Low	1.2	+p	+	+	15/20	28.53	67.88	+	+d	+p	+p	+	14/20
3289			+p	+	+		28.35	67.7	+	+p	+p	+p	+	
3290			st	/	-		0	0	-	st	st	st	-	
3291			+p	+	+		27.88	67.68	+	+p	+p	+p	+	
3292			+p	+	+		0	0	-	st	-	st	-	
3293			st	/	-		27.56	67.6	+	+d	+p	+p	+	
3294			+p	+	+		27.45	67.28	+	+d	+p	+p	+	
3295			+p	+	+		27.96	67.59	+	+p	+p	+p	+	
3296			+p	+	+		32.26	67.81	+	+p	+p	+p	+	
3297			+p	+	+		26.89	67.14	+	+p	+p	+p	+	
3298			+p	+	+		0	0	-	st	st	st	-	
3299			+p	+	+		0	0	-	st	-	st	-	
3300			+p	+	+		26.67	67.11	+	+d	+p	+p	+	
3301			+p	+	+		26.86	67.24	+	+p	+p	+p	+	
3302			+p	+	+		25.99	66.79	+	+p	+p	+p	+	
3303			st	/	-		0	0	-	st	-	st	-	
3304			+p	+	+		27.37	67.6	+	+p	+p	+p	+	
3305			st	/	-		26.87	67.26	+	+d	+p	+p	+	
3306			+p	+	+		0	0	-	st	st	st	-	
3307			st	/	-		26.94	67.23	+	+d	+p	+p	+	
3283	High	5.9	+p	+	+	5/5	27.69	67.52	+	+p	+p	+p	+	5/5
3284			+p	+	+		29.74	68.28	+	+p	+p	+p	+	
3285			+p	+	+		27.86	67.54	+	+p	+p	+p	+	
3286			+p	+	+		25.61	64.32	+	+p	+p	+p	+	
3287			+p	+	+		27.05	67.1	+	+p	+p	+p	+	

Matrix : Infant formula with probiotics
Strain : *C. sakazakii* Ad2412

Aerobic mesophilic flora : 2.0x10^2 CFU/g

Lactic flora : 5.0x10^6 CFU/g

Extension: BACTVIAB™ PMAxx™ treatment - 2020
Protocol ③

N° sample	Level	Contamination level-(cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (Pre-warmed BPW 1/6 + Novobiocin 20h at 34-38°C)							Number positive samples/Total
			CSB CCI	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
							Cp Cro	Tm Cro	Result	ESIA	CCI	CCI		
3088	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
3089			st	/	-		0	0	-	st	st	st	-	
3090			st	/	-		0	0	-	st	-	st	-	
3091			st	/	-		0	0	-	-	-	st	-	
3092			st	/	-		0	0	-	-	-	st	-	
3932	Low	0.8	+p	+	+	15/20	33.6	68.78	+	+p	+p	+p	+	14/20
3933			st	/	-		34.67	68.54	+	+p	+p	+p	+	
3934			st	/	-		0	0	-	st	st	st	-	
3935			st	/	-		0	0	-	st	st	st	-	
3936			+p	+	+		30.48	68.27	+	+p	+p	+p	+	
3937			+p	+	+		28.87	68.4	+	+p	+p	+p	+	
3938			+p	+	+		34.52	67.64	+	+p	+p	+p	+	
3939			+p	+	+		32.98	68.02	+	+p	+p	+p	+	
3940			+p	+	+		34.64	68.74	+	+p	+p	+p	+	
3941			+p	+	+		32.92	67.9	+	+p	+p	+p	+	
3942			st	/	-		32.71	67.31	+	+p	+p	+p	+	
3943			+p	+	+		29.41	67.27	+	+p	+p	+p	+	
3944			+p	+	+		32.72	67.69	+	+p	+p	+p	+	
3945			+p	+	+		30.24	68.24	+	+p	+p	+p	+	
3946			+p	+	+		0	0	-	st	st	st	-	
3947			+p	+	+		0	0	-	st	st	st	-	
3948			+p	+	+		33.84	68.86	+	+p	+p	+p	+	
3949			+p	+	+		0	0	-	st	st	st	-	
3950			+p	+	+		0	0	-	st	st	st	-	
3951			st	/	-		34.11	68.51	+	+p	+p	+p	+	
3093	High	6.5	+p	+	+	5/5	30.23	68.45	+	+p	+p	+p	+	5/5
3094			+p	+	+		31.84	68.66	+	+p	+p	+p	+	
3095			+p	+	+		31.63	69	+	+p	+p	+p	+	
3096			+p	+	+		30.12	68.34	+	+p	+p	+p	+	
3097			+p	+	+		31.03	67.9	+	+p	+p	+p	+	

Matrix : Process water (rinse)
Strain : *Cronobacter muytjensii* E888

Sample size : up to 25 g
Aerobic mesophilic flora : 6.0x10²CFU/g

Extension: BACTVIAB™ PMAxx™ treatment - 2020
Protocol ①

N° sample	Level	Contamination level-(cfu/sample)	Reference method : ISO 22964 ♦			Number positive samples/Total	Alternative method: GENE-UP *Cronobacter* (BPW for 18h at 34-38°C)							Number positive samples/Total
			CSB	Confirmation	Final result		PCR			Direct streaking		CSB	Final result	
			CCI				Cp Cro	Tm Cro	Result	ESIA	CCI	CCI		
4160	0	/	st	/	-	0/5	0	0	-	st	st	st	-	0/5
4161			st	/	-		0	0	-	st	st	st	-	
4162			st	/	-		0	0	-	st	st	st	-	
4163			st	/	-		0	0	-	st	st	st	-	
4164			st	/	-		0	0	-	st	st	st	-	
4175	Low	1.4	+p	+	+	9/20	33.18	68.78	+	+p	+M	+p	+	13/20
4176			+p	+	+		31.04	68.52	+	+p	+M	+p	+	
4177			+p	+	+		0	0	-	st	-	st	-	
4178			+p	+	+		29.71	68.67	+	+p	+M	+p	+	
4179			st	/	-		29.69	68.5	+	+p	+M	+p	+	
4180			st	/	-		30.98	68.57	+	+p	+M	+p	+	
4181			st	/	-		0	0	-	st	st	st	-	
4182			+p	+	+		0	0	-	st	st	st	-	
4183			st	/	-		31.56	68.8	+	+p	+1/2	+p	+	
4184			st	/	-		0	0	-	st	-	st	-	
4185			+p	+	+		31.51	68.43	+	+p	+M	+p	+	
4186			st	/	-		0	0	-	st	st	st	-	
4187			st	/	-		29.65	68.35	+	+p	+M	+p	+	
4188			st	/	-		29.48	67.82	+	+p	+M	+p	+	
4189			st	/	-		30.66	68.44	+	+p	+M	+p	+	
4190			+p	+	+		30.46	68.92	+	+p	+M	+p	+	
4191			st	/	-		0	0	-	st	-	st	-	
4192			+p	+	+		0	0	-	st	-	st	-	
4193			+p	+	+		29.84	68.62	+	+p	+M	+p	+	
4194			st	/	-		30.76	68.47	+	+p	+M	+p	+	
4195	High	4.7	+p	+	+	5/5	29.62	68.35	+	+p	+M	+p	+	5/5
4196			+p	+	+		29.35	68.57	+	+p	+M	+p	+	
4197			+p	+	+		30.45	68.54	+	+p	+M	+p	+	
4198			+p	+	+		30.51	69	+	+p	+M	+p	+	
4199			+p	+	+		29.26	68.91	+	+p	+M	+p	+	

Matrix : Infant cereals with probiotics
Strain : *Cronobacter sakazakii* Ad3273
Lactic flora :1.1x10^4 CFU/g

Extension study (2023)
Protocol ⑤

N° sample	Level	Contamination level- (cfu/sample)	**Referencemethod: ISO 22964 ♦**		Number Positive samples/ Total	**Alternative method: GENE UP *Cronobacter***											Number positive samples/Total	
			CSB			PCR GENE-UP without PMAxx			PCR GENE-UP with PMAxx			Direct streaking		CSB	Final result			
			CCI	Final result		CP Cro	TM (°C) Cro	Result	CP Cro	TM (°C) Cro	Result	ESIA	CCI	CCI	Without PMAxx	With PMAxx	Without PMAxx	With PMAxx
2121	0	/	st	-	0/5	0	0	-	0	0	-	st	st	st	-	-	0/5	0/5
2122			st	-		0	0	-	0	0	-	st	st	st	-	-		
2123			st	-		0	0	-	0	0	-	st	st	st	-	-		
2124			st	-		0	0	-	0	0	-	-	-	-	-	-		
2125			st	-		0	0	-	0	0	-	-	-	-	-	-		
2126	Low	0.6	+p	+	15/20	20.69	66.66	+	27.07	67.42	+	+p	+p	+p	+	+	15/20	16/20
2127			+p	+		20.37	66.38	+	26.24	67.21	+	+p	+p	+p	+	+		
2128			st	-		0/29.92/0	0/67.98/0	-/+/-	26.54	67.05	+	+p	+p	+p	-	+		
2129			+p	+		20.83	66.41	+	26.53	67.49	+	+p	+p	+p	+	+		
2130			st	-		19.84	65.89	+	27.83	67.29	+	+p	+p	+p	+	+		
2131			+p	+		20.53	66.00	+	25.92	67.16	+	+p	+p	+p	+	+		
2132			st	-		30.09	66.46	+	34.32	67.45	+	+p	+p	+p	+	+		
2133			+p	+		21.07	66.36	+	27.68	67.42	+	+p	+p	+p	+	+		
2134			+p	+		20.68	66.48	+	26.48	67.16	+	+p	+p	+p	+	+		
2135			st	-		20.42	66.29	+	25.96	67.07	+	+p	+p	+p	+	+		
2136			+p	+		19.02	65.93	+	26.46	67.33	+	+p	+p	+p	+	+		
2137			+p	+		34.12/0/34.23	66.76/0/67.04	+/-/+	0	0	-	st	st	st	-	-		
2138			+p	+		34.34	66.74	+	0	0	-	+d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	+d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	+d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	-	-		
2139			+p	+		20.17	66.61	+	27.48	67.55	+	+p	+p	+p	+	+		
2140			+p	+		34.07/35.31/0	66.88/66.53/0	+/+/i	0	0	-	st	st	st	-	-		
2141			+p	+		20.38	66.25	+	26.27	67.41	+	+p	+p	+p	+	+		
2142			st	-		0	0	-	0	0		-d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	-d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	-d (fast crono and ID32E - x 5; *Pectobacterium carotovorum*)	-	-		
2143			+p	+		20.27	66.28	+	26.70	67.32	+	+p	+p	+p	+	+		
2144			+p	+		20.14	66.52	+	28.29	67.59	+	+p	+p	+p	+	+		
2145			+p	+		20.04	66.51	+	25.83	66.76	+	+p	+p	+p	+	+		
2146	High	3.9	+p	+	5/5	18.85	66.36	+	26.34	66.79	+	+p	+p	+p	+	+	5/5	5/5
2147			+p	+		18.84	66.42	+	27.02	67.38	+	+p	+p	+p	+	+		
2148			+p	+		19.57	66.29	+	26.70	67.32	+	+p	+p	+p	+	+		
2149			+p	+		18.96	66.39	+	26.79	67.42	+	+p	+p	+p	+	+		
2150			+p	+		19.88	66.45	+	27.10	67.44	+	+p	+p	+p	+	+		

Appendix 6 – Inclusivity and exclusivity study: raw data (Initial validation (2018))

INCLUSIVITY											
n°	Genus	Species	Reference	Origin	Inoculation level CFU/225mL	PCR			Confirmation		
									Direct streaking	Confirmation	
						Cp	Tm	Result	CCI	Api 32ID	Fast crono
1	*Cronobacter*	*dublinensis*	DSM18705	Dairy Product	12	23.39	66.83	+	+	+	+
2	*Cronobacter*	*malonaticus*	DSM18702	Dairy Product	11	23.21	66.39	+	+	+	+
3	*Cronobacter*	*malonaticus*	Ad1708	Dairy Product	59	26.09	66.28	+	+	+	+
4	*Cronobacter*	*muytjensii*	CIP103581	/	18	0	0	-	st	/	/
					8 + milk	36.49	66.19	+	+ (5)	+	+
5	*Cronobacter*	*turicensis*	Ad1445	Infant formula	23	0	0	-	st	/	/
					16 + milk	30.49	66.39	+	+	+	+
6	*Cronobacter*	*turicensis*	E681	Ready to reheat food	44	23.22	66.48	+	+	+	+
7	*Cronobacter*	*sakazakii*	Ad941	Infant formula	39	23.67	66.3	+	+	+	+
8	*Cronobacter*	*sakazakii*	Ad942	Infant formula	51	23.91	66.58	+	+	+	+
9	*Cronobacter*	*sakazakii*	Ad943	Infant formula	30	0	0	-	st	/	/
					30 + milk	35.44	66.37	+	+ (4)	+	+
10	*Cronobacter*	*sakazakii*	Ad944	Infant formula	40	0	0	-	st	/	/
					19 + milk	19.98	65.34	+	+	+	+
11	*Cronobacter*	*sakazakii*	Ad945	Infant formula	37	21.91	66.2	+	+	+	+
12	*Cronobacter*	*sakazakii*	Ad946	Infant formula	54	24.26	66.17	+	+	+	+
13	*Cronobacter*	*sakazakii*	Ad947	Infant formula	30	21.61	66.28	+	+	+	+
14	*Cronobacter*	*sakazakii*	Ad948	Infant formula	24	21.98	66.2	+	+	+	+
15	*Cronobacter*	*sakazakii*	Ad949	Infant formula	41	22.85	65.95	+	+	+	+
16	*Cronobacter*	*sakazakii*	Ad950	Infant formula	27	26.07	66.24	+	+	+	+
17	*Cronobacter*	*sakazakii*	Ad951	Infant formula	20	22.44	66.39	+	+	+	+
18	*Cronobacter*	*sakazakii*	Ad952	Infant formula	30	21.71	66.21	+	+	+	+
19	*Cronobacter*	*sakazakii*	Ad953	Infant formula	43	22.3	66.37	+	+	+	+
20	*Cronobacter*	*sakazakii*	Ad963	Infant formula	23	28.2	66.15	+	+	+	+
21	*Cronobacter*	*sakazakii*	Ad704	Infant formula	21	30.05	66.23	+	+	+	+
22	*Cronobacter*	*sakazakii*	Ad831	Infant formula	41	0	0	-	st	/	/
					18 + milk	18.98	66.59	+	+	+	+
23	*Cronobacter*	*sakazakii*	Ad829	Infant formula	37	22.4	66.11	+	+	+	+
24	*Cronobacter*	*sakazakii*	Ad916	Infant formula	40	28.27	66.27	+	+	+	+

INCLUSIVITY											
n°	Genus	Species	Reference	Origin	Inoculation level CFU/225mL	PCR			Confirmation		
									Direct streaking	Confirmation	
						Cp	Tm	Result	CCI	Api 32ID	Fast crono
25	*Cronobacter*	*sakazakii*	Ad893	Infant formula	22	22.66	66.16	+	+	+	+
26	*Cronobacter*	*sakazakii*	Ad894	Infant formula	12	23.99	67.02	+	+	+	+
27	*Cronobacter*	*sakazakii*	Ad895	Infant formula	14	25	66.39	+	+	+	+
28	*Cronobacter*	*sakazakii*	Ad896	Infant formula	9	0	0	-	st	/	/
					25 + milk	22.94	66.62	+	+	+	+
29	*Cronobacter*	*sakazakii*	Ad897	Infant formula	10	23.01	66.38	+	+	+	+
30	*Cronobacter*	*sakazakii*	Ad898	Infant formula	9	23.93	66.53	+	+	+	+
31	*Cronobacter*	*dublinensis lactaridi*	DSMZ18707 T	Dairy Product	18	24.45	66.56	+	+	+	+
32	*Cronobacter*	*dublinensis lausannensis*	DSMZ 18706 T	Dairy Product	32	23.74	65.83	+	+	+	+
33	*Cronobacter*	*sakazakii*	Ad1418	Infant formula	14	24.51	65.57	+	+	+	+
34	*Cronobacter*	*sakazakii*	Ad1419	Infant formula	13	23.35	66.21	+	+	+	+
35	*Cronobacter*	*sakazakii*	Ad1420	Infant formula	18	22.13	66.09	+	+	+	+
36	*Cronobacter*	*sakazakii*	Ad1421	Infant formula	13	22.31	65.99	+	+	+	+
37	*Cronobacter*	*sakazakii*	Ad1424	Infant formula	11	36.22	66.1	+	st	/	/
					16 + milk	23.26	66.34	+	+	+	+
38	*Cronobacter*	*sakazakii*	Ad1425	Infant formula	28	22.15	65.98	+	+	+	+
39	*Cronobacter*	*sakazakii*	Ad1433	Infant formula	9	22.66	66.06	+	+	+	+
40	*Cronobacter*	*sakazakii*	Ad1434	Infant formula	25	22.76	66.13	+	+	+	+
41	*Cronobacter*	*sakazakii*	Ad1435	Infant formula	5	27.17	66.29	+	+	+	+
42	*Cronobacter*	*sakazakii*	Ad939	Infant formula	10	0	0	-	st	/	/
					18 + milk	36.31	66.25	+	+ (1)	+	+
43	*Cronobacter*	*malonaticus*	E684	Food	26	0	0	-	st	/	/
					26 + milk	0	0	-	st	/	/
					134	23.07	66.74	+	+	+	+
44	*Cronobacter*	*malonaticus*	E752	Baby food	7	24.02	66.33	+	+	+	+
45	*Cronobacter*	*muytjensii*	E888	Milk powder	7	0	0	-	st	/	/
					27 + milk	34.33	65.91	+	+ (10)	+	+

INCLUSIVITY											
n°	Genus	Species	Reference	Origin	Inoculation level CFU/225mL	PCR			Confirmation		
									Direct streaking	Confirmation	
						Cp	Tm	Result	CCI	Api 32ID	Fast crono
46	*Cronobacter*	*muytjensii*	E769	Milk powder	5	0	0	-	st	/	/
					4 + milk	35.11	66.42	+	+ (2)	+	+
					38	0	0	-	st	/	/
					38 + milk	33.96	66.11	+	+ (10)	+	+
47	*Cronobacter*	*dublinensis* subsp *dublinensis*	LMG 23823T	Environment	7	23.13	66.38	+	+	+	+
48	*Cronobacter*	*dublinensis* subsp *lausanensis*	E798	/	5	26.01	66.09	+	+	+	+
49	*Cronobacter*	*universalis*	NCTC 9529T	water	12	0	0	-	st	/	/
					26 + milk	29.21	66.09	+	+	+	+
					71	0	0	-	st	/	/
					71 + milk	20.7	66.38	+	+	+	+
50	*Cronobacter*	*condimenti*	LMG 26250T	Spiced meat	32	0	0	-	st	/	/
					32 + milk	0	0	-	st	/	/
					124	21.61	66.53	+	+	+	+

EXCLUSIVITY								
N°	Genus	Species	Reference	Origin	Inoculation Level CFU/ml	PCR		
						Cp	Tm	Result
1	*Citrobacter*	*braakii*	Ad833	Beef	4.3×10^5	0	0	-
2	*Citrobacter*	*diversus*	Ad100	Pork liver	1.5×10^6	0	0	-
3	*Citrobacter*	*fameri*	Ad116	Environmental sample	3.5×10^5	0	0	-
4	*Citrobacter*	*freundi*	39	Environmental sample	3.7×10^5	0	0	-
5	*Citrobacter*	*koseri*	CIP105177	/	5.0×10^5	0	0	-
6	*Enterobacter*	*aerogenes*	Ad889	Meat flour	7.5×10^5	0	0	-
7	*Enterobacter*	*agglomerans*	A00L065	Dairy product	5.1×10^5	0	0	-
8	*Enterobacter*	*agglomerans*	136	Dairy product	1.8×10^4	0	0	-
9	*Enterobacter*	*amnigenus*	52	Vegetables	2.3×10^5	0	0	-
10	*Enterobacter*	*amnigenus*	129	Raw milk	1.7×10^5	0	0	-
11	*Enterobacter*	*amnigenus*	A00C068	Poultry	4.9×10^5	0	0	-
12	*Enterobacter*	*cloacae*	51	Vegetables	8.9×10^5	0	0	-
13	*Enterobacter*	*cloacae*	10	Dairy product	3.0×10^5	0	0	-
14	*Enterobacter*	*fergusonii*	2876	Environmental sample	1.5×10^6	0	0	-
15	*Enterobacter*	*gergoviae*	CIP76.1	/	5.9×10^5	0	0	-
16	*Enterobacter*	*helveticus*	DSM 18396 T	fruit powder	2.0×10^5	0	0	-
17	*Enterobacter*	*hormaechei*	Ad990	Butter	5.6×10^5	0	0	-
18	*Enterobacter*	*intermedius*	60	Vegetables	1.6×10^5	0	0	-
19	*Enterobacter*	*kobei*	Ad706	Milk powder	3.0×10^5	0	0	-
20	*Escherichia*	*coli*	16	Dairy product	2.4×10^5	0	0	-
21	*Escherichia*	*hermanii*	Ad462	Dairy product	2.4×10^5	0	0	-
22	*Hafnia*	*alvei*	Ad2274	Dairy product	6.5×10^5	0	0	-
23	*Klebsiella*	*pneumoniae*	122	Dairy product	2.9×10^5	0	0	-
24	*Leclercia*	*adecarboxylata*	Ad707	Milk powder	6.8×10^5	0	0	-
25	*Salmonella*	*arizonae* (51:z4,z23)	CIP 5523	/	2.9×10^5	0	0	-
26	*Salmonella*	*diarizonae* SIIIb 65 :c :z	Ad 1298	Dairy environmental sample	3.3×10^5	0	0	-
27	*Salmonella*	Typhimurium	Ad1333	Dairy product	4.9×10^5	0	0	-
28	*Serratia*	*ficaria*	113	Vegetables	7.9×10^5	0	0	-
29	*Serratia*	*fonticola*	Ad1696	Raw milk	1.2×10^4	0	0	-
30	*Yersinia*	*intermedia*	Ad133	Dairy product	8.1×10^5	0	0	-
31	*Escherichia*	*vulneris*	Ad 2853	Dairy industry environment	2.0×10^5	0	0	-

Appendix 7 - Results obtained by the collaborative laboratories and the expert laboratory (Initial validation (2018))

Laboratory **A**
Lactic flora: 8.5 x 10^4 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
A1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A3	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
A5	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
A10	+	-	+	+	26.23	65.75	+	+	+	+	/	+	/	+	**PA**
A15	+	-	+	+	23.43	66.38	+	+	+	+	/	+	/	+	**PA**
A16	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
A19	+	-	+	+	26.54	65.75	+	+	+	+	/	+	/	+	**PA**
A22	+	-	+	+	30.3	65.85	+	+	+	+	/	+	/	+	**PA**
A23	+	-	+	+	26.37	65.54	+	+	+	+	/	+	/	+	**PA**
A2	+	-	+	+	26.27	66.06	+	+	+	+	/	+	/	+	**PA**
A7	+	-	+	+	25.99	65.69	+	+	+	+	/	+	/	+	**PA**
A8	+	-	+	+	24.87	66.03	+	+	+	+	/	+	/	+	**PA**
A9	+	-	+	+	28.74	66.78	+	+	+	+	/	+	/	+	**PA**
A12	+	-	+	+	20.68	66.88	+	+	+	+	/	+	/	+	**PA**
A13	+	-	+	+	21.49	65.94	+	+	+	+	/	+	/	+	**PA**
A17	+	-	+	+	28.82	65.39	+	+	+	+	/	+	/	+	**PA**
A21	+	-	+	+	23.35	65.93	+	+	+	+	/	+	/	+	**PA**

Laboratory **B**
Lactic flora: 4.1 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
B1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B3	+	-	+	+	22.3	66.32	+	+	+	+	/	+	/	+	**PA**
B5	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
B10	+	-	+	+	22.78	64.97	+	+	+	+	/	+	/	+	**PA**
B15	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
B16	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
B19	+	-	+	+	32.48	63.56	+	+	+	+	/	+	/	+	**PA**
B22	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
B23	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
B2	+	-	+	+	22.3	66.32	+	+	+	+	/	+	/	+	**PA**
B7	+	-	+	+	22.72	65.61	+	+	+	+	/	+	/	+	**PA**
B8	+	-	+	+	24.05	66.12	+	+	+	+	/	+	/	+	**PA**
B9	+	-	+	+	22.85	65.89	+	+	+	+	/	+	/	+	**PA**
B12	+	-	+	+	22.57	65.49	+	+	+	+	/	+	/	+	**PA**
B13	+	-	+	+	22.64	65.92	+	+	+	+	/	+	/	+	**PA**
B17	+	-	+	+	23.15	66.07	+	+	+	+	/	+	/	+	**PA**
B21	+	-	+	+	32.3	66.19	+	+	+	+	/	+	/	+	**PA**

Laboratory **C**
Lactic flora: 5.6 x 10^4 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
C1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C24	-	/	/	-	0/35.63	68.76/67.52	+/+	-	/	-	/	-	/	-	**$PD_{FP(alt)}$**
C3	+	-	+	+	33.66	67.62	+	+	+	+	/	+	/	+	**PA**
C5	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C10	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
C15	+	-	+	+	30.86	67.26	+	+	+	+	/	+	/	+	**PA**
C16	+	-	+	+	23.71	67.82	+	+	+	+	/	+	/	+	**PA**
C19	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
C22	+	-	+	+	29.24	67.39	+	+	+	+	/	+	/	+	**PA**
C23	+	-	+	+	23.56	67.46	+	+	+	+	/	+	/	+	**PA**
C2	+	-	+	+	23.02	67.71	+	+	+	+	/	+	/	+	**PA**
C7	+	-	+	+	22.87	67.69	+	+	+	+	/	+	/	+	**PA**
C8	+	-	+	+	23.15	68.11	+	+	+	+	/	+	/	+	**PA**
C9	+	-	+	+	22.18	67.89	+	+	+	+	/	+	/	+	**PA**
C12	+	-	+	+	22.67	67.36	+	+	+	+	/	+	/	+	**PA**
C13	+	-	+	+	21.86	67.47	+	+	+	+	/	+	/	+	**PA**
C17	+	-	+	+	22.54	67.98	+	+	+	+	/	+	/	+	**PA**
C21	+	-	+	+	21.72	67.61	+	+	+	+	/	+	/	+	**PA**

Laboratory **D**
Lactic flora: 4.6 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
D1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D3	+	-	+	+	27.23	66.95	+	+	+	+	+	+	+	+	**PA**
D5	+	-	+	+	26	66.7	+	+	+	+	+	+	+	+	**PA**
D10	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
D15	+	-	+	+	24.71	66.35	+	+	+	+	+	+	+	+	**PA**
D16	+	-	+	+	32.35	66.44	+	+	+	+	+	+	+	+	**PA**
D19	+	-	+	+	23.5	66.4	+	+	+	+	+	+	+	+	**PA**
D22	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
D23	+	-	+	+	22.91	66.38	+	+	+	+	+	+	+	+	**PA**
D2	+	-	+	+	24.27	66.66	+	+	+	+	+	+	+	+	**PA**
D7	+	-	+	+	24.08	66.58	+	+	+	+	+	+	+	+	**PA**
D8	+	-	+	+	25.66	66.65	+	+	+	+	+	+	+	+	**PA**
D9	+	-	+	+	23.87	66.63	+	+	+	+	+	+	+	+	**PA**
D12	+	-	+	+	23.24	66.41	+	+	+	+	+	+	+	+	**PA**
D13	+	-	+	+	23.11	66.55	+	+	+	+	+	+	+	+	**PA**
D17	+	-	+	+	24.02	66.8	+	+	+	+	+	+	+	+	**PA**
D21	+	-	+	+	26.94	66.3	+	+	+	+	+	+	+	+	**PA**

Laboratory **E**
Lactic flora: 8.1 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
E1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E3	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
E5	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
E10	+	-	+	+	20.94	67.11	+	+	+	+	/	/	/	+	**PA**
E15	+	-	+	+	20.94	66.86	+	+	+	+	/	/	/	+	**PA**
E16	+	-	+	+	21.96	67.2	+	+	+	+	/	/	/	+	**PA**
E19	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
E22	+	-	+	+	21.12	66.81	+	+	+	+	/	/	/	+	**PA**
E23	+	-	+	+	20.69	66.83	+	+	+	+	/	/	/	+	**PA**
E2	+	-	+	+	21.89	67.05	+	+	+	+	/	/	/	+	**PA**
E7	+	-	+	+	21.58	67.07	+	+	+	+	/	/	/	+	**PA**
E8	+	-	+	+	21.75	67.21	+	+	+	+	/	/	/	+	**PA**
E9	+	-	+	+	20.61	67.3	+	+	+	+	/	/	/	+	**PA**
E12	+	-	+	+	20.04	66.87	+	+	+	+	/	/	/	+	**PA**
E13	+	-	+	+	20.38	66.64	+	+	+	+	/	/	/	+	**PA**
E17	+	-	+	+	21.55	67.23	+	+	+	+	/	/	/	+	**PA**
E21	+	-	+	+	20.16	66.76	+	+	+	+	/	/	/	+	**PA**

Laboratory **F**
Lactic flora: 6.9 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
F1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
F3	+	-	+	+	26.79	66.13	+	+	+	+	/	+	/	+	**PA**
F5	+	-	+	+	24.35	66.37	+	+	+	+	/	+	/	+	**PA**
F10	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
F15	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
F16	+	-	+	+	23.48	66.4	+	+	+	+	/	+	/	+	**PA**
F19	-	/	/	-	22.74	66.24	+	+	+	+	/	+	/	+	**PD**
F22	+	-	+	+	22.14	66.19	+	+	+	+	/	+	/	+	**PA**
F23	+	-	+	+	22.89	66.45	+	+	+	+	/	+	/	+	**PA**
F2	+	-	+	+	22.9	66.3	+	+	+	+	/	+	/	+	**PA**
F7	+	-	+	+	25.06	66.23	+	+	+	+	/	+	/	+	**PA**
F8	+	-	+	+	24.03	66.22	+	+	+	+	/	+	/	+	**PA**
F9	+	-	+	+	22.74	66.21	+	+	+	+	/	+	/	+	**PA**
F12	+	-	+	+	21.57	65.92	+	+	+	+	/	+	/	+	**PA**
F13	+	-	+	+	21.59	66.31	+	+	+	+	/	+	/	+	**PA**
F17	+	-	+	+	22.83	66.1	+	+	+	+	/	+	/	+	**PA**
F21	+	-	+	+	22.62	66.26	+	+	+	+	/	+	/	+	**PA**

Laboratory **G1**
Lactic flora: 1.5 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
G1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G3	+	-	+	+	24.57	66.62	+	+	+	+	/	+	/	+	**PA**
G5	+	-	+	+	22	66.7	+	+	+	+	/	+	/	+	**PA**
G10	+	-	+	+	21.36	66.35	+	+	+	+	/	+	/	+	**PA**
G15	-	/	/	-	21.7	66.14	+	+	+	+	/	+	/	+	**PD**
G16	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
G19	+	-	+	+	24.6	66.33	+	+	+	+	/	+	/	+	**PA**
G22	+	-	+	+	22.27	66.8	+	+	+	+	/	+	/	+	**PA**
G23	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
G2	+	-	+	+	22.45	66.65	+	+	+	+	/	+	/	+	**PA**
G7	+	-	+	+	20.96	66.45	+	+	+	+	/	+	/	+	**PA**
G8	+	-	+	+	22.88	66.93	+	+	+	+	/	+	/	+	**PA**
G9	+	-	+	+	22	66.81	+	+	+	+	/	+	/	+	**PA**
G12	+	-	+	+	27.91	66.07	+	+	+	+	/	+	/	+	**PA**
G13	+	-	+	+	22.9	66.13	+	+	+	+	/	+	/	+	**PA**
G17	+	-	+	+	22.77	66.57	+	+	+	+	/	+	/	+	**PA**
G21	+	-	+	+	20.56	66.43	+	+	+	+	/	+	/	+	**PA**

Laboratory **G2**
Lactic flora: 2.7 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
G26	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G28	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G31	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G34	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G37	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G40	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G43	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G44	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G27	+	/	+	+	23.01	66.4	+	+	+	+	/	+	/	+	**PA**
G30	-	/	/	-	24.57	66.55	+	+	+	+	/	+	/	+	**PD**
G35	-	/	/	-	21.29	66.59	+	+	+	+	/	+	/	+	**PD**
G38	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
G41	+	/	+	+	29.59	66.46	+	+	+	+	/	+	/	+	**PA**
G42	+	/	+	+	20.57	66.36	+	+	+	+	/	+	/	+	**PA**
G46	+	/	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
G48	+	/	+	+	21.76	66.67	+	+	+	+	/	+	/	+	**PA**
G25	+	/	+	+	22.16	66.48	+	+	+	+	/	+	/	+	**PA**
G29	+	/	+	+	23.31	66.27	+	+	+	+	/	+	/	+	**PA**
G32	+	/	+	+	21.65	66.59	+	+	+	+	/	+	/	+	**PA**
G33	+	/	+	+	22.02	66.73	+	+	+	+	/	+	/	+	**PA**
G36	+	/	+	+	20.63	66.68	+	+	+	+	/	+	/	+	**PA**
G39	+	/	+	+	21	66.36	+	+	+	+	/	+	/	+	**PA**
G45	+	/	+	+	20.63	66.35	+	+	+	+	/	+	/	+	**PA**
G47	+	/	+	+	21.16	66.4	+	+	+	+	/	+	/	+	**PA**

Laboratory **H**
Lactic flora: 5.7 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
H1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H20	- *	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
H3	-	/	/	-	22.58	66.77	+	+	+	+	/	+	/	+	**PD**
H5	-	/	/	-	23.59	66.69	+	+	+	+	/	+	/	+	**PD**
H10	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
H15	+	-	+	+	20.83	66.49	+	+	+	+	/	+	/	+	**PA**
H16	+	-	+	+	22.98	66.67	+	+	+	+	/	+	/	+	**PA**
H19	+	-	+	+	31.48	66.71	+	+	+	+	/	+	/	+	**PA**
H22	+	-	+	+	21.53	66.69	+	+	+	+	/	+	/	+	**PA**
H23	+	-	+	+	22.25	66.52	+	+	+	+	/	+	/	+	**PA**
H2	+	-	+	+	21.77	66.71	+	+	+	+	/	+	/	+	**PA**
H7	+	-	+	+	29.59	66.21	+	+	+	+	/	+	/	+	**PA**
H8	+	-	+	+	24.11	66.65	+	+	+	+	/	+	/	+	**PA**
H9	+	-	+	+	22.5	66.65	+	+	+	+	/	+	/	+	**PA**
H12	+	-	+	+	20.47	66.71	+	+	+	+	/	+	/	+	**PA**
H13	+	-	+	+	21.42	66.57	+	+	+	+	/	+	/	+	**PA**
H17	+	-	+	+	22.53	66.79	+	+	+	+	/	+	/	+	**PA**
H21	+	-	+	+	21.21	66.62	+	+	+	+	/	+	/	+	**PA**

* Due to leakage, only 7.5 mL were analyzed

Laboratory **I**
Lactic flora: 4.9 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
I1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I3	+	-	+	+	25.62	66.14	+	+	+	+	/	+	/	+	**PA**
I5	+	-	+	+	20.55	66.59	+	+	+	+	/	+	/	+	**PA**
I10	+	-	+	+	21.5	66.53	+	+	+	+	/	+	/	+	**PA**
I15	+	-	+	+	22.1	66.44	+	+	+	+	/	+	/	+	**PA**
I16	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
I19	+	-	+	+	22.05	66.68	+	+	+	+	/	+	/	+	**PA**
I22	+	-	+	+	22.03	66.67	+	+	+	+	/	+	/	+	**PA**
I23	+	-	+	+	23.02	66.4	+	+	+	+	/	+	/	+	**PA**
I2	+	-	+	+	20.34	66.54	+	+	+	+	/	+	/	+	**PA**
I7	+	-	+	+	21.78	66.58	+	+	+	+	/	+	/	+	**PA**
I8	+	-	+	+	22.75	67.12	+	+	+	+	/	+	/	+	**PA**
I9	+	-	+	+	22.6	66.59	+	+	+	+	/	+	/	+	**PA**
I12	+	-	+	+	21.78	66.58	+	+	+	+	/	+	/	+	**PA**
I13	+	-	+	+	21.83	66.58	+	+	+	+	/	+	/	+	**PA**
I17	+	-	+	+	22.5	66.88	+	+	+	+	/	+	/	+	**PA**
I21	+	-	+	+	21.26	66.65	+	+	+	+	/	+	/	+	**PA**

Laboratory **J**
Lactic flora: 2.7 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
J1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
J3	+	-	+	+	26.64	66.99	+	+	+	+	/	/	/	+	**PA**
J5	+	-	+	+	23.29	67.25	+	+	+	+	/	/	/	+	**PA**
J10	+	-	+	+	26.29	66.78	+	+	+	+	/	/	/	+	**PA**
J15	+	-	+	+	28.51	66.8	+	+	+	+	/	/	/	+	**PA**
J16	+	-	+	+	26.96	67.12	+	+	+	+	/	/	/	+	**PA**
J19	+	-	+	+	24.71	67.18	+	+	+	+	/	/	/	+	**PA**
J22	+	-	+	+	21.97	67.35	+	+	+	+	/	/	/	+	**PA**
J23	+	-	+	+	30.28	66.85	+	+	+	+	/	/	/	+	**PA**
J2	+	-	+	+	21.96	67.31	+	+	+	+	/	/	/	+	**PA**
J7	+	-	+	+	24.49	66.9	+	+	+	+	/	/	/	+	**PA**
J8	+	-	+	+	23.38	67.51	+	+	+	+	/	/	/	+	**PA**
J9	+	-	+	+	25.02	66.87	+	+	+	+	/	/	/	+	**PA**
J12	+	-	+	+	21.41	67.19	+	+	+	+	/	/	/	+	**PA**
J13	+	-	+	+	21.65	67.35	+	+	+	+	/	/	/	+	**PA**
J17	+	-	+	+	22.89	67.44	+	+	+	+	/	/	/	+	**PA**
J21	+	-	+	+	21.66	67.3	+	+	+	+	/	/	/	+	**PA**

Laboratory **K**
Lactic flora: 5.1 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
K1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
K3	+	-	+	+	23.24	67.14	+	+	+	+	/	/	/	+	**PA**
K5	+	-	+	+	24.02	66.96	+	+	+	+	/	/	/	+	**PA**
K10	+	-	+	+	21.76	65.37	+	+	+	+	/	/	/	+	**PA**
K15	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
K16	+	-	+	+	23.16	67.04	+	+	+	+	/	/	/	+	**PA**
K19	+	-	+	+	21.99	66.91	+	+	+	+	/	/	/	+	**PA**
K22	-	/	/	-	21.44	66.64	+	+	+	+	/	/	/	+	**PD**
K23	+	-	+	+	22.52	66.63	+	+	+	+	/	/	/	+	**PA**
K2	+	-	+	+	23.81	66.98	+	+	+	+	/	/	/	+	**PA**
K7	+	-	+	+	22.71	66.83	+	+	+	+	/	/	/	+	**PA**
K8	+	-	+	+	23.27	66.98	+	+	+	+	/	/	/	+	**PA**
K9	+	-	+	+	22.03	67.17	+	+	+	+	/	/	/	+	**PA**
K12	+	-	+	+	21.4	66.73	+	+	+	+	/	/	/	+	**PA**
K13	+	-	+	+	21.02	67.03	+	+	+	+	/	/	/	+	**PA**
K17	+	-	+	+	22.04	66.99	+	+	+	+	/	/	/	+	**PA**
K21	+	-	+	+	20.75	67.08	+	+	+	+	/	/	/	+	**PA**

Laboratory **L**
Lactic flora: 6.1 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
L1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L3	+	-	+	+	21.85	66.57	+	+	+	+	/	/	/	+	**PA**
L5	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
L10	+	-	+	+	22.14	66.57	+	+	+	+	/	/	/	+	**PA**
L15	+	-	+	+	21.09	66.08	+	+	+	+	/	/	/	+	**PA**
L16	-	/	/	-	22.18	66.37	+	+	+	+	/	/	/	+	**PD**
L19	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
L22	+	-	+	+	20.92	66.06	+	+	+	+	/	/	/	+	**PA**
L23	+	-	+	+	21.99	66.13	+	+	+	+	/	/	/	+	**PA**
L2	+	-	+	+	21.19	66.5	+	+	+	+	/	/	/	+	**PA**
L7	+	-	+	+	21.85	66.39	+	+	+	+	/	/	/	+	**PA**
L8	+	-	+	+	22.94	66.72	+	+	+	+	/	/	/	+	**PA**
L9	+	-	+	+	22.47	66.86	+	+	+	+	/	/	/	+	**PA**
L12	+	-	+	+	21.23	66.54	+	+	+	+	/	/	/	+	**PA**
L13	+	-	+	+	20.98	66.52	+	+	+	+	/	/	/	+	**PA**
L17	+	-	+	+	21.63	66.45	+	+	+	+	/	/	/	+	**PA**
L21	+	-	+	+	20.79	66.19	+	+	+	+	/	/	/	+	**PA**

Laboratory **M**
Lactic flora: 4.5 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
M1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
M3	-	/	/	-	21.81	66.65	+	+	+	+	/	/	/	+	**PD**
M5	+	-	+	+	21.96	66.55	+	+	+	+	/	/	/	+	**PA**
M10	+	-	+	+	21.08	66.32	+	+	+	+	/	/	/	+	**PA**
M15	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
M16	-	/	/	-	20.95	66.43	+	+	+	+	/	/	/	+	**PD**
M19	+	-	+	+	21.24	66.63	+	+	+	+	/	/	/	+	**PA**
M22	+	-	+	+	22.06	66.42	+	+	+	+	/	/	/	+	**PA**
M23	+	-	+	+	20.72	66.4	+	+	+	+	/	/	/	+	**PA**
M2	+	-	+	+	21.58	66.36	+	+	+	+	/	/	/	+	**PA**
M7	+	-	+	+	21.34	66.44	+	+	+	+	/	/	/	+	**PA**
M8	+	-	+	+	21.83	66.67	+	+	+	+	/	/	/	+	**PA**
M9	+	-	+	+	21.54	66.68	+	+	+	+	/	/	/	+	**PA**
M12	+	-	+	+	20.32	66.48	+	+	+	+	/	/	/	+	**PA**
M13	+	-	+	+	19.94	66.57	+	+	+	+	/	/	/	+	**PA**
M17	+	-	+	+	21.58	66.82	+	+	+	+	/	/	/	+	**PA**
M21	+	-	+	+	2074	66.37	+	+	+	+	/	/	/	+	**PA**

Laboratory **N**
Lactic flora: 4.0 x 10^4 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	Biochimical	Reading	FastCrono	Reading	FastCrono		
N1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
N4	-	/	/	-	22.61	67.1	+	+	+	+	/	+	+	+	**PD**
N6	-	/	/	-	23.76	67.09	+	+	+	+	/	+	+	+	**PD**
N11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
N14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
N18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
N20	-	/	/	-	20.57	67.02	+	+	+	+	/	+	+	+	**PD**
N24	-	/	/	-	33.04	66.58	+	-	/	-	/	-	/	-	**$PD_{FP(alt)}$**
N3	+	/	+	+	22.04	67.02	+	+	+	+	/	+	/	+	**PA**
N5	+	/	+	+	19.99	66.63	+	+	+	+	/	+	/	+	**PA**
N10	+	/	+	+	21.08	66.74	+	+	+	+	/	+	/	+	**PA**
N15	+	/	+	+	24.2	66.68	+	+	+	+	/	+	/	+	**PA**
N16	+	/	+	+	31.44	63.78	+	+	+	+	/	+	/	+	**PA**
N19	+	/	+	+	21.53	66.84	+	+	+	+	/	+	/	+	**PA**
N22	-	/	/	-	22.29	66.75	+	+	+	+	/	+	/	+	**PD**
N23	+	/	+	+	21.8	66.84	+	+	+	+	/	+	/	+	**PA**
N2	+	/	+	+	22.52	67.06	+	+	+	+	/	+	/	+	**PA**
N7	+	/	+	+	21.85	66.83	+	+	+	+	/	+	/	+	**PA**
N8	+	/	+	+	21.48	66.68	+	+	+	+	/	+	/	+	**PA**
N9	+	/	+	+	21.64	66.87	+	+	+	+	/	+	/	+	**PA**
N12	+	/	+	+	21.06	66.89	+	+	+	+	/	+	/	+	**PA**
N13	+	/	+	+	21.2	66.81	+	+	+	+	/	+	/	+	**PA**
N17	+	/	+	+	22.67	66.64	+	+	+	+	/	+	/	+	**PA**
N21	+	/	+	+	21.47	66.77	+	+	+	+	/	+	/	+	**PA**

Laboratory **O**
Lactic flora: 4.8 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964				GENE-UP *Cronobacter*											
	CCI			Final result	PCR result			ESIA		CCI		CSB/CCI		Final result	Agreement
	Reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
O1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
O3	+	-	+	+	26.16	67.07	+	+	+	+	/	+	/	+	**PA**
O5	+	-	+	+	22.86	67.13	+	+	+	+	/	+	/	+	**PA**
O10	+	-	+	+	26.73	66.31	+	+	+	+	/	+	/	+	**PA**
O15	+	-	+	+	22.37	66.74	+	+	+	+	/	+	/	+	**PA**
O16	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
O19	+	-	+	+	23.19	66.6	+	+	+	+	/	+	/	+	**PA**
O22	+	-	+	+	24.34	66.46	+	+	+	+	/	+	/	+	**PA**
O23	+	-	+	+	22.74	66.93	+	+	+	+	/	+	/	+	**PA**
O2	+	-	+	+	23.57	67.1	+	+	+	+	/	+	/	+	**PA**
O7	+	-	+	+	24.71	67.07	+	+	+	+	/	+	/	+	**PA**
O8	+	-	+	+	23.19	66.21	+	+	+	+	/	+	/	+	**PA**
O9	+	-	+	+	22.38	66.38	+	+	+	+	/	+	/	+	**PA**
O12	+	-	+	+	21.93	66.29	+	+	+	+	/	+	/	+	**PA**
O13	+	-	+	+	22.04	66.56	+	+	+	+	/	+	/	+	**PA**
O17	+	-	+	+	30.35	66.34	+	+	+	+	/	+	/	+	**PA**
O21	+	-	+	+	22.4	66.59	+	+	+	+	/	+	/	+	**PA**

Laboratory P (ADRIA)
Lactic flora: 6.2 x 10^5 CFU/g

N°Sample	Reference method: ISO 22964♦				GENE-UP *Cronobacter*										
	CCI			Final result	PCR result (2nd extraction)			ESIA		CCI		CSB/CCI		Final result	Agreement
	reading	Oxidase	Biochimical gallery		Cp	Tm	Result	Reading	FastCrono	Reading	FastCrono	Reading	FastCrono		
P1	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P4	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P6	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P11	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P14	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P18	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P20	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P24	-	/	/	-	0	0	-	-	/	-	/	-	/	-	**NA**
P3	+	-	+	+	0	0	-	-	/	-	/	-	/	-	**ND**
P5	+	-	+	+	23.13	66.32	+	+	+	+	/	+	/	+	**PA**
P10	+	-	+	+	26.79	66.03	+	+	+	+	/	+	/	+	**PA**
P15	+	-	+	+	24.13	65.91	+	+	+	+	/	+	/	+	**PA**
P16	+	-	+	+	26.38	66.03	+	+	+	+	/	+	/	+	**PA**
P19	+	-	+	+	24.55	66.12	+	+	+	+	/	+	/	+	**PA**
P22	+	-	+	+	22.67	66.19	+	+	+	+	/	+	/	+	**PA**
P23	+	-	+	+	0	67.04	+	+ (2 col)	+	+ (5 col)	/	+	/	+	**PA**
P2	+	-	+	+	23.99	66.13	+	+	+	+	/	+	/	+	**PA**
P7	+	-	+	+	23.76	66.17	+	+	+	+	/	+	/	+	**PA**
P8	+	-	+	+	25.15	66.44	+	+	+	+	/	+	/	+	**PA**
P9	+	-	+	+	22.97	66.67	+	+	+	+	/	+	/	+	**PA**
P12	+	-	+	+	24.6	66.09	+	+	+	+	/	+	/	+	**PA**
P13	+	-	+	+	22.56	66.13	+	+	+	+	/	+	/	+	**PA**
P17	+	-	+	+	23.61	66.56	+	+	+	+	/	+	/	+	**PA**
P21	+	-	+	+	22.96	66.13	+	+	+	+	/	+	/	+	**PA1**