



QMS

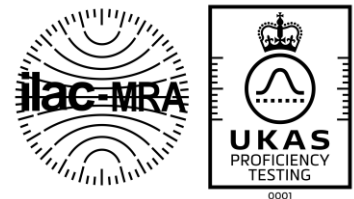
Quality in Microbiology Scheme

Scheme Description

LGC Proficiency Testing

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QMS Scheme Description

Record of issue status and modifications

ISSUE	ISSUE DATE	DETAILS	AUTHORISED BY
20	Sep 2020	Added samples for detection of Listeria in vegetables and cheese. Added sample 45 thermophilic acidophilic bacteria in fruit.	L. Chesters
21	Sep 2020	Added additional samples in herbs and spice matrix	T Noblett
22	July 2021	Reformatted numbering for Salmonella by changing 28 to 06T, 30 to 06H and 31 to 06S. Added additional samples 06CF and 46EG Updated email address and UKAS logo	T.Noblett A Collins
23	Feb 2022	Added combined analyte for sample 27. Added Enterobacteriaceae analyte for sample 41.	C Taylor
24	Sept 2022	Added A and B to sample 46EG to show 2 different samples within the package. Changed the format of state per analyte and separately for any relevant analytes. Added combined osmophilic yeast and osmophilic mould analyte to sample 05 and changed format to state each analyte separately. Sample range updated to 0 – 100 cfu/g for sample 04. Addition of samples 47 (Detection of Listeria species in pooled sample), 48 (Pathogens in Infant formula), 49 (Microscopical Identification) and 50 (Indicator organisms in cheese).	C Taylor
25	Nov 2022	Cronobacter in 10g added to sample 48 and corrected reporting units	A Cheetham
26	Apr 2023	Added E.coli as analyte to sample 41.	M.Bell
27	Sept 2023	Range updated for sample 27. Samples 06 EG,CF and VG updated to vial and matrix. Sample 21 changed to vial and >25g matrix. New analyte added <i>Campylobacter</i> <i>Deept eeci tei so'</i> n cfu/g. Sample 32 changed to vial and 10g matrix. New samples 51, 52, 53, 54 added Added 'oxidizing' <i>E.coli</i> O157 samples to Removed sample 49 Add 'Identification of Salmonella' Add 'Identification of Yeast and Samples 52, 53 and 54 marked as of LGC's flexible scope of UKAS	M.Bell T.Noblett N. Mason
28	Mar 2024	Updated the descriptions of sample 52 and 53	A Collins
29	Apr 2024	Sample 51 'supplied as' updated	M.Bell
30	July 2024	Sample 55 added. Sample 40, 43 and 47 format updated to ready to test.	M.Bell
31	Oct 2024	Matrices removed from samples 21 and 32. Range for sample 47 amended to 0 to 100 cfu/125g. Format change for sample 47 from RTT to vial and matrix.	M.Bell
32	Feb 2025	Added new sample PT-MC-56 (A & B) for Salmonella in Therapeutic foods.	T.Noblett

Notes:

Where this document has been translated, the English version shall remain the definitive version.

Scheme Aims and Organisation

The primary aim of the Quality In Microbiology (QMS) is to enable laboratories performing the microbiological analysis of food and dairy products to monitor their performance and compare it with that of their peers. QMS also aims to provide information to participants on technical issues and methodologies relating to testing of food and dairy products.

The QMS scheme year operates from January to December. Further information about QMS, including test material availability, round despatch dates and reporting deadlines, are available on the current QMS application form.

Test Materials

Details of test materials available in QMS are given in Appendix A. The test parameters are continually reviewed to ensure they meet the needs of current laboratory testing and regulatory requirements.

Test material batches are tested for homogeneity for at least one test parameter where deemed appropriate. Details of homogeneity tests performed and results are given in the QMS Scheme Reports.

Some aspects of the scheme, such as test material production, homogeneity testing and stability assessment, can from time to time be subcontracted. When subcontracting occurs, it is placed with a competent subcontractor and LGC is responsible for this work. The planning of the scheme, the evaluation of performance and the authorisation of the final report will never be subcontracted.

Statistical Analysis

Information on the statistics used in QMS can be found in the General Protocol and in the Scheme Report. Methods for determining assigned values and the values for SDPA used for individual samples are given in Appendix A

Methods

Methods are listed in PORTAL. Please select the most appropriate method from the list. If none of the methods are appropriate, then please description in the Comments Section in PORTAL.

Results and Reports

QMS results are returned through our electronic reporting software, PORTAL, full instructions for which are provided by email.

QMS reports will be available on the website within 10 working days of round closure. Participants will be emailed a link to the report when it is available.

APPENDIX A - Description of abbreviations used

Assigned Value (AV)

The assigned value may be derived in the following ways:

- § From the robust mean (RMean). This is the median of participant results after the removal of test results that are inappropriate for statistical evaluation, e.g. miscalculations, transpositions and other gross errors. Generally, the assigned value will be set using results from all methods, unless the measurement is considered method-dependant, in which case the assigned value will be set by method as illustrated in the report tables.

For some analytes, where there is a recognised reference method for that type of measurement, this may be used as the assigned value for a particular analyte i.e. it would be applied to results obtained by any method.

Traceability: Assigned values which are derived from the participant results, or a sub-set of the results are not traceable to an international measurement standard. The uncertainty of assigned values derived in this way is estimated from the participant results, according to ISO 13528.

- § From a formulation value (Formulation). This denotes the use of an assigned value derived from sample preparation details, where known and exact quantities of analyte have been used to prepare the sample.

Traceability: Assigned values calculated from the formulation of the test sample are traceable, via an unbroken metrological traceability chain, to an international measurement standard. The measurement uncertainty of the assigned value is calculated using the contributions from each calibration in the traceability chain.

- § From a qualitative formulation (Qual Form). This applies to qualitative tests where the assigned value is simply based on the presence/absence of the analyte in the test material.

Traceability: Assigned values calculated from the qualitative formulation of the test sample are traceable to a certified reference standard or a microbiological reference strain.

- § From expert labs (Expert). The assigned laboratory.

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Range

This indicates the concentration range at which the analyte may be present in the test material.

SDPA

The SDPA represents the 'standard deviation' to assess participant performance for the measurement of each analyte. This may be a fixed value (as stated), a percentage (%) of the assigned value or based on the robust standard deviation of the participant measurement results, either across all methods or by method depending on whether the measurement made is method dependent (see assigned value).

Units

This indicates the units used for the assessment of data and in which participants should report their results. For some analytes in some schemes participants may have a choice of which units to report their results, however, the units stipulated in this scheme description are the default units to which any results reported using allowable alternative results will be converted to.

DP

This indicates the number of decimal places to which participants should report their measurement results.

APPENDIX A**Sample PT-MC-03****Supplied as:****Enumeration of Salmonella species**

1 x 10g skimmed milk powder

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Salmonella</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-04**Supplied as:****Detection of Cronobacter species**

1 x 25g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA

Sample PT-MC-05**Supplied as:****Enumeration of osmophilic yeast and mould (ISO 21527-2)**

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of osmophilic yeast	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of osmophilic mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of osmophilic yeast and osmophilic mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

QMS Scheme Description

Sample PT-MC-06

Supplied as:

Detection of Salmonella species

- 06F** – Salmonella in generic food product - 25g oatmeal
- 06D** – Salmonella in dairy/milk product - 25g skimmed milk powder
- 06EG** – Salmonella in egg products - 25g egg powder + 10ml vial
- 06CF** - Salmonella in chicken faeces – 25g dried chicken faeces + 10ml vial
- 06VG** – Salmonella in salads and vegetables - 25g dried mixed vegetables + 10ml vial
- 06CH** – Salmonella in cheese - 25g cheese + 10ml vial
- 06NS** – Salmonella in seeds and nuts - 25g seeds and/or nuts + 10ml vial
- 06TE** – Salmonella in tea – 25g tea + 10ml vial
- 06HB** – Salmonella in herbs – 25g dried herb + 10ml vial
- 06SP** – Salmonella in spices – 25g pepper or spice + 10ml vial

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-07

Supplied as:

Detection of Listeria species

- 07F** – Listeria in food - 25g oatmeal
- 07D** – Listeria in dairy/milk - 25g skimmed milk powder
- 07VG** – Listeria in salads and vegetables - 25g dried mixed vegetables
- 07CH** – Listeria in cheese - 25g cheese + 10ml vial
- 07HB** – Listeria in herbs - 25g herb + 10ml vial

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Listeria</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Listeria monocytogenes</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-08

Supplied as:

Enumeration of Listeria species

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Listeria</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Listeria monocytogenes</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-09**Enumeration of Enterococci****Supplied as:**

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of Enterococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-10**Enumeration of Clostridium species****Supplied as:**

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Clostridium</i> species	ALL	Qual Form	0 to 100,000	NA	Detected/Not detected 10g	NA
Detection of <i>Clostridium perfringens</i>	ALL	Qual Form	0 to 100,000	NA	Detected/Not detected 10g	NA
Enumeration of <i>Clostridium perfringens</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Clostridium</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-11**Spore counts****Supplied as:**

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of mesophilic aerobic spores	ALL	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0
Thermophilic aerobic plate count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of thermophilic aerobic spores	Heated for 10 min @ 80°C Heated for 12 min @ 100°C	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0
Enumeration of highly heat resistant thermophilic aerobic spores	Heated for 30 min @ 100°C	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0

QMS Scheme Description

Sample PT-MC-12

Supplied as:

Detection of Shigella species

1 x 25g oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Shigella</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-13

Supplied as:

Detection of Vibrio species

1 x 25g oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Vibrio</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Vibrio parahaemolyticus</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-14

Supplied as:

Detection of Yersinia species

1 x 25g skimmed milk powder

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Yersinia</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Yersinia enterocolitica</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

QMS Scheme Description

Sample PT-MC-15

Anaerobes

Supplied as:

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total anaerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of anaerobic sulphite-reducing bacteria	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of mesophilic anaerobic spores	ALL	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0
Enumeration of sulphite-reducing <i>Clostridium</i> spores	ALL	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0

Sample PT-MC-16

TVC/indicator organisms

Supplied as:

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of Enterobacteriaceae	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Escherichia coli</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

QMS Scheme Description

Sample PT-MC-17

Supplied as:

Enumeration of Staphylococcus and Bacillus species

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Staphylococcus</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coagulase-positive Staphylococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Bacillus</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Bacillus cereus</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-18

Supplied as:

Low-level indicator organisms

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Escherichia coli</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA
Detection of Enterobacteriaceae	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA
Detection of coliforms	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA
Enumeration of <i>Escherichia coli</i>	ALL	RMean	0 to 1,000	log ₁₀ 0.35	cfu/g	0
Enumeration of Enterobacteriaceae	ALL	RMean	0 to 1,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 1,000	log ₁₀ 0.35	cfu/g	0

QMS Scheme Description

Sample PT-MC-20

Enumeration of thermotolerant coliforms

Supplied as:

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Escherichia coli</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of thermotolerant coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-21

Detection of Campylobacter species

Supplied as:

1 x 10ml vial to represent 10g or 25g sample

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Campylobacter</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Campylobacter</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA

Sample PT-MC-22

Detection of E.coli O157 (non-toxigenic strain)

Supplied as:

1 x 25g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Escherichia coli</i> O157	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-23

Enumeration of yeast and mould (ISO 21527-1)

Supplied as:

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of yeast	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast and mould combined	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Identification of yeast and mould to genus and/or species level	ALL	Formulation	NA	NA	NA	NA

QMS Scheme Description

Sample PT-MC-24

Supplied as:

Enumeration of Lactic acid bacteria

024F – Lactic acid bacteria in food - 10g oatmeal

024D – Lactic acid bacteria in dairy/milk - 10g skimmed milk powder

024HB – Lactic acid bacteria in herb - 10g dried herb + 10ml vial

024SP – Lactic acid bacteria in spice- 10g pepper or spice + 10ml vial

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of lactic acid bacteria	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-25

Supplied as:

Psychrotrophs

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of aerobic psychrotrophs	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-26

Supplied as:

Pseudomonas species

1 x 10g skimmed milk powder or oatmeal

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Pseudomonas</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Detection of <i>Pseudomonas</i> species	ALL	Qual Form	0 to 100,000	NA	Detected/Not detected 10g	NA

Sample PT-MC-27

Supplied as:

Enumeration of probiotic bacteria

1 x 10ml vial to represent 10g sample (once reconstituted in 10ml diluent)

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Bifidobacterium</i> species	ALL	RMean	0 to 10,000,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Lactobacillus</i> species	ALL	RMean	0 to 10,000,000	log ₁₀ 0.35	cfu/g	0
Combined enumeration of <i>Lactobacillus</i> species and <i>Bifidobacterium</i> species	ALL	RMean	0 to 20,000,000	log ₁₀ 0.35	cfu/g	0

QMS Scheme Description

Sample PT-MC-29

Supplied as:

Indicator organisms in tea

1 x 10ml vial plus 10g tea matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coagulase positive Staphylococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast and mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-32

Supplied as:

Enumeration of Campylobacter species

1 x 10ml vial to represent 10g sample (once reconstituted in 10ml diluent)

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of <i>Campylobacter</i> species	ALL	RMean	0 to 100,000	log ₁₀ 0.50	cfu/g	0

Sample PT-MC-33

Supplied as:

Identification Test (non-pathogen)

1 x 10ml vial containing a single organism. The sample may contain biosafety level 1 or 2 organisms, including Staphylococcus, Bacillus and Clostridium, but will not contain the recognised food pathogens such as Salmonella, Listeria, Campylobacter or STEC.

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Identification of unknown organism to family, genus or species level.	ALL	Formulation	NA	NA	NA	NA

Sample PT-MC-34**Supplied as:****Salmonella identification****1 x 10ml vial** containing a single organism

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
<i>Salmonella</i> identification to serogroup or serovar	ALL	Formulation	NA	NA	NA	NA

Sample PT-MC-35**Supplied as:****Paper exercise**

Participants will be provided with a photograph and a scenario in order to count the number of colonies and calculate the number of microorganisms in the original sample.

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Counting of colonies and calculation of number of microorganisms	Visual count only	Formulation	NA	Greater of robust SD or log 0.05	cfu/g	NA

Sample PT-MC-36 (A & B)**Supplied as:****Quantitative Package****36D** – Quantitative in dairy/milk - 2 x 10ml vial plus minimum 20g skimmed milk powder matrix**36HB** – Quantitative in herbs – 2 x 10ml vial plus minimum 20g herb matrix**36SP** – Quantitative in spice – 2 x 10ml vial plus minimum 20g pepper or spice matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of Enterobacteriaceae	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Escherichia coli</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Bacillus cereus</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coagulase-positive Staphylococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Detection of coagulase-positive Staphylococci	ALL	QualForm	0 to 100,000	NA	Detected/Not detected 10g	NA
Enumeration of yeast	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast and mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

QMS Scheme Description

Sample PT-MC-37 (A & B)

Supplied as:

Qualitative Package

37D - 2 x 10ml vial plus minimum 200g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Escherichia coli</i> O157 (non-toxigenic strain)	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Listeria</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Listeria monocytogenes</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25	NA
Identification of <i>Listeria</i> species	ALL	Formulation	NA	NA	NA	NA
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Identification of <i>Salmonella</i> species	ALL	Formulation	NA	NA	NA	NA

Sample PT-MC-38

Supplied as:

Detection of Clostridium species and Staphylococcus species in milk

1 x 10ml vial plus minimum 20g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Clostridium perfringens</i>	ALL	Qual Form	0 to 100	NA	Detected/Not detected 10g	NA
Detection of coagulase positive Staphylococci	ALL	Qual Form	0 to 100	NA	Detected/Not detected 10g	NA

Sample PT-MC-39

Supplied as:

Bacterial count in milk

1 x 10g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/ml	SDPA	Reporting units	DP
Bacterial level by Bactoscan	Bactoscan	RMean	ALL	TBC	Bacteria/ml	NA
Bacterial level by colony count	ALL	RMean	ALL	TBC	cfu/ml	NA

Sample PT-MC-40

Supplied as:

Detection of Salmonella species in pooled sample

375g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/375g	SDPA	Reporting units	DP
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 100	NA	Detected/Not detected 375g	NA

QMS Scheme Description

Sample PT-MC-41

Supplied as:

= b X] W U h c f ` U b X ` g d c] ` U [Y ` c f [U b] g a g `] b ` İ f Y U X m ` a Y U ` Đ
 1 x 10ml vial plus 1 x 10g dried food matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of <i>Escherichia coli</i>	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of Enterobacteriaceae	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coagulase positive Staphylococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of yeast and mould	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

Sample PT-MC-42

Supplied as:

Detection of Cronobacter species at low-level
 1 x 10ml vial plus 1 x 25g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/25g	SDPA	Reporting units	DP
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 50	NA	Detected/Not detected 25g	NA

Sample PT-MC-43

Supplied as:

Detection of Cronobacter species in 375g
 375g skimmed milk powder matrix

Analyte	Method	AV	Range cfu/375g	SDPA	Reporting units	DP
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 50	NA	Detected/Not detected 375g	NA

QMS Scheme Description

Sample PT-MC-44

D U h \ c [Y b g ' - p - U h D Y O X m X

Supplied as:

1 x 10ml vial plus minimum 100g dried processed food e.g. crisps, cakes, biscuits, confectionary, cereal and other snacks.

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>E. coli</i> O157 (non-toxigenic strain)	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Listeria</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Listeria monocytogenes</i>	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Identification of <i>Listeria</i> species	ALL	Formulation	NA	NA	NA	NA
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-45

Thermophilic acidophilic bacteria

Supplied as:

1 x 10ml vial plus 10g fruit matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Enumeration of thermophilic acidophilic bacteria	MF BAT AGAR	RMean	0 to 1,000	log ₁₀ 0.35	cfu/g	0
Detection of guaiacol producing thermophilic acidophilic bacteria	MF BAT AGAR	Qual Form	0 to 1,000	NA	Detected/Not detected 10g	NA

Sample PT-MC-46 (A & B)

Detection of Salmonella Typhimurium and/or Enteritidis in Egg powder

Supplied as:

46EG – Egg products – 2 x 25g egg powder

Analyte	Method	AV	Range cfu/g	SDPA	Reporting Units	DP
Detection of <i>Salmonella</i> Typhimurium	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Salmonella</i> Enteritidis	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA

Sample PT-MC-47

Detection of Listeria species in 125g milk powder

Supplied as:

1 x 10ml vial plus 125g skimmed milk powder

Analyte	Method	AV	Range cfu/125g	SDPA	Reporting Units	DP
Detection of <i>Listeria</i> species	ALL	Qual Form	0 to 100	NA	Detected/Not detected 125g	NA
Detection of <i>Listeria monocytogenes</i>	ALL	Qual Form	0 to 100	NA	Detected/Not detected 125g	NA

QMS Scheme Description

Sample PT-MC-48 (A & B)*

Pathogens in Infant formula

Supplied as:

2 x 10ml vials with minimum 100g infant formula

Analyte	Method	AV	Range cfu/g	SDPA	Reporting Units	DP
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 1,000	NA	Detected/Not detected 25g	NA
Detection of <i>Cronobacter</i> species	ALL	Qual Form	0 to 2,500	NA	Detected/Not detected 10g	NA

* Currently not included in LGC's UKAS Scope of Accreditation

Sample PT-MC-50*

Indicator organisms in cheese

Supplied as:

1 x lyophilised 10ml vial plus 10g dried cheese matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of Enterobacteriaceae	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0
Enumeration of coagulase-positive Staphylococci	ALL	RMean	0 to 100,000	log ₁₀ 0.35	cfu/g	0

* Currently not included in LGC's UKAS Scope of Accreditation

Sample PT-MC-51*

Commercial Sterility testing in milk

Supplied as:

5 x 10ml Lyophilised milk in vials which may or may not contain microorganisms at low levels.

Analyte	Method	AV	Range cfu/vial	SDPA	Reporting Units	DP
Commercial sterility	ALL	Qual Form	<100	N/A	Sterility Pass/Sterility Fail	N/A
Identification of microorganisms	ALL	Formulation	NA	NA	NA	NA

* Currently not included in LGC's UKAS Scope of Accreditation

Sample PT-MC-52‡

Gram-negative panel

Supplied as:

3 x 10ml vials each containing single organism (contents may include pathogens and/or non-pathogens)

Analyte	Method	AV	Range cfu/vial	SDPA	Reporting Units	DP
Confirmation and/or identification of Gram-negative organisms (including <i>Salmonella</i>) to genus and/or species	ALL	Formulation	NA	N/A	NA	N/A

Sample PT-MC-53‡

Gram-positive panel

Supplied as:

3 x 10ml vials each containing single organism (contents may include pathogens and/or non-pathogens)

Analyte	Method	AV	Range cfu/vial	SDPA	Reporting Units	DP
Confirmation and/or identification of Gram-positive organisms (including <i>Listeria</i>) to genus and/or species	ALL	Formulation	NA	N/A	NA	N/A

Sample PT-MC-54‡

Mixed culture for identification

Supplied as:

1 x 10ml vial containing up to 5 different organisms (contents may include pathogens and/or non-pathogens)

Analyte	Method	AV	Range cfu/vial	SDPA	Reporting Units	DP
Identification of organisms to genus and/or species	ALL	Formulation	NA	N/A	NA	N/A

‡Accredited within the boundaries of LGC's flexible scope of UKAS accreditation

QMS Scheme Description

Sample PT-MC-55*

Indicator organisms in nuts

Supplied as:

1 x lyophilised 10ml vial plus 10g nut matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting Units	DP
Total aerobic mesophilic count	ALL	RMean	0 to 100,000	0.35	cfu/g	0
Enumeration of coliforms	ALL	RMean	0 to 100,000	0.35	cfu/g	0
Enumeration of yeast	ALL	RMean	0 to 100,000	0.35	cfu/g	0
Enumeration of mould	ALL	RMean	0 to 100,000	0.35	cfu/g	0
Enumeration of yeast and mould	ALL	RMean	0 to 100,000	0.35	cfu/g	0

Sample PT-MC-56 (A & B)*

Detection of Salmonella species in foods for malnutrition of therapeutic use.

Supplied as:

2 x 25g high lipid and protein peanut paste matrix

Analyte	Method	AV	Range cfu/g	SDPA	Reporting units	DP
Detection of <i>Salmonella</i> species	ALL	Qual Form	0 to 1000	NA	Detected/Not detected 25g	NA

* C u r r e n t l y n o t i n c l u d e d i n L G C ' s U K A S S c o p e o f A c c r e d i t a t i o n