



# QGS

Quality in Gelatine Scheme

## Scheme Description

### LGC

#### Proficiency Testing

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0001

QGS Scheme Description

Record of issue status and modifications

| ISSUE | ISSUE DATE | DETAILS   | AUTHORISED BY                         |
|-------|------------|---|---------------------------------------|
| 8     | Sept 2013  | Updated with microbiology method codes  | T.Noblett                             |
| 9     | Sept 2014  | Minor standardisation amendments, e.g. logo and email addresses. Inclusion of traceability information in Appendix A. Inclusion of subcontracting information in 'Test Materials' section.                  | N. Mason                              |
| 10    | Sept 2015  | Added mesophilic anaerobic spore count sample (605). Updated Microbiology methods for all samples. Inclusion of sample for physicochemical testing of gelatine (606). Removed Hard Copy Report information. | A.Cheetham<br>K. Baryla<br>A.McCarthy |
| 11    | Sept 2016  | Added Enterobacteriaceae detection analyte to sample 602. Unit and DP updated for viscosity in sample 606. Change of sample weight for 606.   | A.Cheetham<br>K. Baryla               |
| 12    | Sept 2018  | Updated method details to 'ALL' for microbiology samples and amended Methods paragraph.   | L. Chesters                           |
| 13    | Aug 2019   | Removed 'standards' from page one   | A.McCarthy                            |
| 14    | Sep 2020   | Removed fax number, updated UKAS logo and removed hard copy report info   | A.McCarthy                            |

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 Gelatine Scheme (QGS) is to enable laboratories performing the microbiological analysis of gelatine to monitor their performance and compare it with that of their peers. QGS also aims to provide information to participants on technical issues and methodologies relating to the microbiological examination of gelatine.

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

### **Test Materials**

Details of test materials available in QGS 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 QGS 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 QGS 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 PORTAL. Please select the most appropriate method from the list. If none of the methods are appropriate, then please report your method as 'Other' and record a brief description in the Comments Section in PORTAL.

### **Results and Reports**

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

QGS 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 (median) of participant results (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 and indicated 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 (Form). 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 value for the analyte is provided by an 'expert' laboratory.

*Traceability: Assigned values provided by an 'expert' laboratory may be traceable to an international measurement standard, according to the laboratory and the method used. The uncertainty of measurement for an assigned value produced in this way will be provided by the laboratory undertaking the analysis. Details of traceability and the associated uncertainty will be provided in the report for the scheme/round.*

### Range

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

### SDPA

The SDPA represents the 'standard deviation for proficiency assessment' which is used 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).

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**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.

QGS Scheme Description

**Sample PT-GL-601**      **Presence/absence of Salmonella**  
**Supplied as:**      25g gelatine hydrolysate

| Analyte                                | Method | AV        | Range    | SDPA | Units                 | DP |
|--|--------|-----------|----------|------|-----------------------|----|
| Detection of <i>Salmonella</i> species | ALL    | Qual Form | 0 to 500 | NA   | cfu 25g <sup>-1</sup> | NA |

**Sample PT-GL-602**      **Indicator organisms**  
**Supplied as:**      10g gelatine hydrolysate

| Analyte   | Method | AV        | Range      | SDPA                   | Units                 | DP |
|---|--------|-----------|------------|------------------------|-----------------------|----|
| Total aerobic mesophilic count  | ALL    | RMean     | 0 to 1,000 | log <sub>10</sub> 0.35 | cfu g <sup>-1</sup>   | 0  |
| Detection of coliforms<br>Detection of <i>E.coli</i><br>Detection of Enterobacteriaceae | ALL    | Qual Form | 0 to 500   | NA                     | cfu 10g <sup>-1</sup> | NA |

**Sample PT-GL-603**      **Clostridium**  
**Supplied as:**      10g gelatine hydrolysate

| Analyte                                     | Method | AV        | Range      | SDPA                   | Units                 | DP |
|---|--------|-----------|------------|------------------------|-----------------------|----|
| Detection of <i>Clostridium perfringens</i> | ALL    | Qual Form | 0 to 500   | NA                     | cfu 10g <sup>-1</sup> | NA |
| Enumeration of sulphite-reducing bacteria   | ALL    | RMean     | 0 to 1,000 | log <sub>10</sub> 0.35 | cfu g <sup>-1</sup>   | 0  |

**Sample PT-GL-604**      **Staphylococcus aureus**  
**Supplied as:**      10g gelatine hydrolysate

| Analyte                      | Method | AV        | Range    | SDPA | Units                 | DP |
|------------------------------|--------|-----------|----------|------|-----------------------|----|
| Detection of <i>S.aureus</i> | ALL    | Qual Form | 0 to 500 | NA   | cfu 10g <sup>-1</sup> | NA |

**Sample PT-GL-605**      **Anaerobic Mesophilic Spore Count**  
**Supplied as:**      10g gelatine hydrolysate

| Analyte                                    | Method | AV    | Range      | SDPA                   | Units               | DP |
|--|--------|-------|------------|------------------------|---------------------|----|
| Enumeration of mesophilic anaerobic spores | ALL    | RMean | 0 to 1,000 | log <sub>10</sub> 0.50 | cfu g <sup>-1</sup> | NA |

QGS Scheme Description

**Sample PT-GL-606\***      **Physicochemical testing of gelatine**  
**Supplied as:**              60g gelatine

| Analyte              | Method                        | AV    | Range     | SDPA | Units   | DP |
|----------------------|-------------------------------|-------|-----------|------|---------|----|
| Ash                  | Various                       | RMean | 0.1 to 5  | RSD  | g/100g  | 2  |
| Gel strength (Bloom) | Texture analyzer<br>Gelometer | RMean | 50 to 300 | RSD  | g Bloom | 0  |
| Isoelectric point    | Various                       | RMean | 4 to 10   | RSD  | -       | 2  |
| Moisture             | Various                       | RMean | 9 to 15   | RSD  | %       | 2  |
| pH                   | pH meter                      | RMean | 2 to 10   | RSD  | -       | 2  |
| Viscosity            | Various                       | RMean | 15 to 80  | RSD  | mPas    | 2  |

\*Test material currently not included in LGC's UKAS Scope of Accreditation.