



LBMA

LBMA PROFICIENCY TESTING SCHEME

FOR GOLD & SILVER ASSAYERS
TERMS AND CONDITIONS

3 September 2021

Introduction

Since 2012, LBMA has organised an annual proficiency testing scheme which allows participating laboratories to compare, on a confidential basis, the accuracy of their assaying of fine gold alloys relative to other laboratories. The fineness of the gold sample to be used for the 2022 exercise will be approximately 995 and the fineness of the silver sample will be 999. As all laboratories will be aware, accreditation organisations such as ISO expect laboratories to participate in relevant proficiency testing schemes if these are available.

This document describes the parameters of the scheme.

1. Participation

Laboratories belonging to the following may participate.

1. Good Delivery Gold Refiners
2. Good Delivery Silver Refiners
3. LBMA Supervisors
4. Invited assay offices
5. Invited Government agencies Participation is entirely voluntary.

2. Frequency

Once per year. Each year a different fineness is chosen for the scheme.

3. Assay Method

Although the scheme was originally designed as a comparison of labs using fire assay, indirect determination of the fineness, e.g. by ICP-OES, can be used as an alternative.

4. Samples to be Assayed

The exercise will use specially prepared samples which have been produced and crosschecked for homogeneity by LBMA referees.

Gold:

- Form: Approximately 38mm length of 2.5mm diameter wire weighing approximately 3.5g.
- Fineness (for 2022): Approximately 995.
- Impurities: Varying amounts of elements found in alloys of this type.

Silver:

- Form: Circular shape approximately with a diameter of 25mm and a width of 3mm weighing approximately 15g.
- Fineness (for 2022): Approximately 999.
- Impurities: Varying amounts of elements found in alloys of this type.

LBMA will send the samples to participating laboratories using FedEx or a secure carrier on request, or for jurisdictions where FedEx is not deemed reliable. LBMA will send samples to the address indicated on the registration form.

5. Role of FAPAS - the Scheme Facilitator

As in previous years, the scheme will be facilitated by FAPAS (Food Analysis Proficiency Assessment Scheme) which is a part of FERA (the Food and Environmental Research Agency in the UK). FAPAS has very extensive experience of proficiency testing in foodstuffs with a large international client base.

LBMA will disclose to FAPAS the relevant contact details of the person identified on the registration form as the technical contact for the scheme.

LBMA will provide FAPAS with a list of participants which they will add to their database. LBMA will then send the samples direct to participants who will confirm to FAPAS that they have received the samples. FAPAS will email labs with user login details and confirm the deadline date for result submission. For the 2022 scheme the deadline for submission of the results to FAPAS will be 20 January 2022. The lab's results must be inserted directly into the FAPAS website by each participant. FAPAS will then undertake statistical analysis as required and produce a report as agreed by LBMA. The report will be made available for download by participants directly from the FAPAS website by 4 March 2022.

6. Assaying and Data to be Reported

Each laboratory should carry out and report the results of at least four trials and preferably the maximum of six trials. The last day on which results can be submitted is Thursday 20 January, 2022. Laboratories which prefer to use a method of assaying other than fire assay, such as ICP, with the assay being determined by difference, may participate as long as they indicate the method used and provide details of the individual elemental determinations in addition to the fineness derived by difference. The final report will identify any results which were produced by methods other than fire assay.

The data to be reported by each laboratory to FAPAS (see Section 7 below) will include:

- The assay fineness from each of the trials (a maximum of 6 and a minimum of 4)
- For laboratories using spectrographic analysis, determinations of the elements detected in amounts above 5 mg/kg.

LBMA will produce a standard template for the results with instructions for submitting them to FAPAS.

7. Report

The report will include:

- graphs showing for each participant (a) the mean (as a deviation from the overall mean) and (b) Z-score
- a table showing the mean, Z-score and standard deviation for each participant
- the reported individual elemental analyses for those laboratories using spectrographic analysis.



The graphs and tables of results will identify the participants only by code number.

As long as this does not compromise confidentiality, the results for accredited Good Delivery Gold refiners will be shown separately from those of other participants, so as to maintain comparability with previous exercises (which were limited to this group).

The report will include a list of the participating laboratories (without their identifying codes).

The report will be available for download only by participating laboratories and LBMA.

8. Timetable

The samples will be dispatched by LBMA on or shortly after week commencing 6th December 2021. Participants will need to have completed the tests and inserted their results directly into the FAPAS website by 20 January 2022, in order to allow FAPAS to produce the final report by early March.

9. Confidentiality

The assay results will be sent by participating laboratories to FAPAS which will keep the results confidential and not reveal the identities of the laboratories' data (including to the LBMA). FAPAS will inform each participant of its code number in the report.

10. Participation Cost

The annual fee for each participant will be £485, (gold) £380 (silver) or £850 (gold & silver) +VAT where applicable. This will cover all costs involved, including the cost of the sample and the charge levied by FAPAS. For LBMA members and Good Delivery refiners, the fee will be invoiced by LBMA around the same time as the invoicing of the annual subscription invoices in December/January 2021/2022.

Further Contact Details:

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