

General Instructions for Participants

Laboratory Proficiency Program

2025-2026

Enrollment:

1. Enrollment requires a participant's email as all LPP communications will use email.
2. Enrollment dates are posted on the AOCS website on each series page.
3. Fees for series subscription (member and non-member) are noted on the series specific page on the AOCS store.
4. Enrollment is done by purchasing a series subscription from the AOCS webstore online.
5. Re-enrollment starts with a renewal Proforma invoice automatically sent in March for the next program year. Please do not renew through the AOCS Store.
6. Enrollment may start throughout the year. Enrollment and payment must be received before the end of the enrollment period for that quarter.

Quarters	Q1	Q2	Q3	Q4
Enrollment Deadline	20-May	20-Aug	20-Nov	20-Feb
Quarterly Shipping Date	15-Jun	15-Sep	15-Dec	15-Mar
Sample Received by/Ticket open	1-Jul	1-Oct	1-Jan	1-Apr
Results due/Ticket close	1-Aug	1-Nov	1-Feb	1-May
Report issued by	1-Sep	1-Dec	1-Mar	1-Jun
Report appeal close	1-Oct	1-Jan	1-Apr	1-Jul

Customer Confidentiality

1. Enrolled participants will receive an email before July 1 to announce the start of the new program year. LPP accounts are now based on the participant's email address. A password will be assigned for each new enrollment. Participants can then change their password as desired. The LPP Dashboard will contain the participants' analyst numbers.
2. Sign in to the LPP Dashboard (<https://labpt.aocs.org>) to manage individual participation, find program instructions, report results and review results. After initial enrollment, participants can sign in using either their email address associated with the LPP account or an analyst number from the current or previous year.
3. AOCS will keep all analyst information and results confidential.
4. Participant information will not be disclosed without the prior knowledge and written consent of the analyst. If disclosure of confidential information is required by law or permitted under contractual agreements, the analyst concerned will be informed of the released information, unless such notification is prohibited by law.
5. Participant data may be shared with third-party service providers, such as software

platforms used for data processing and analysis, solely for the purpose of program administration. These providers are contractually obligated to maintain data confidentiality and security.

Receiving Samples

1. Sample ship dates and result due dates are listed on the series protocol found on the PT Dashboard under LPP Resources and also under RELATED DOCUMENTS on the data entry page.
2. If samples are not received within 2 weeks of the ship date, then notify AOCS.
3. Damaged samples should be reported within 2 weeks of the ship date. Failure to do so may result in a missed sample.
4. To minimize delays, seizure, clearance, and third-party intervention, please include all necessary government paperwork (i.e., Import Permits, etc.) with your order to AOCS. Any additional charges incurred from these requirements will be borne by the recipient. This may include health certificates, phytosanitary certificates or any additional customs paperwork. It is the responsibility of the participant to inform AOCS of any additional paperwork that may be required.

Samples Analysis

1. Methods used for sample analysis should be chosen according to the series specific protocol available on the data entry page. Methods are suggested and not required; however, it is expected that comparable methodology will be used. Methods used must be entered when requested on the data entry page.
2. Proficiency test items shall be treated in the same manner as routinely tested samples.

Participant Integrity Agreement

1. For analysts desiring to participate in the Approved Chemists' program, it is a participant's implied assertion that the name appearing on the Laboratory Proficiency Program invoice is the only analyst who performs the analysis for all of the samples.
2. It is understood that labs that do not wish to apply for approved chemist status may provide opportunities for multiple analysts to test samples and report results during the year-long testing period.
3. Participants should not share test results with other participants. Any evidence of collusion or falsification of results will result in the unavailability to receive program awards or be granted Approved Chemist status.

Entering Results

1. Sample test results are submitted online at <https://labpt.aocs.org>. The link is also accessible from the AOCS homepage by clicking "Attain Lab Services" and then "LPP analyst login enter data/read reports".
2. Data entry access requires the analyst email address and password provided at enrollment.

3. Data entry pages will open automatically one month before the results due date, as indicated on the series protocol sheet.
4. Participants must read all instructions found on the data entry page, protocols, and general instructions.
5. Participants then report results per page instructions. Pay special attention to:
 - a. Decimal rounding as indicated on the data entry page.
 - b. Lower than limit of quantitation (LOQ) results. Choose “<” for lower than LOQ results. Note that data reported as < LOQ are not included in the report statistics calculation.
 - c. Testing method used (when required)
6. Testing results must be received at AOCS by the due dates.
7. Data entry pages close automatically on the first of the month that results are due.
8. Late results will not be accepted after data entry pages close. They will not be added to the database and will be treated as missing data. There will be limited exceptions to this rule, including late arrival of samples.
9. Results will not be accepted after reports have been published unless the analyst receives a favorable appeal result. See the Report Appeal Process section below.

Participant Data Entry Review

1. You can access and modify your results at any time before submission or until the data entry period closes. Clicking “**Save Data**” allows you to save your progress and continue making changes as long as the data entry pages remain open. Once you click “**Save and Confirm Data**,” your submission is finalized, and no further edits can be made, even if the data entry period is still open.
2. Accurate results reporting is critical. The Laboratory Proficiency Program assesses both the correctness of your analysis and the accuracy of your data entry. Please note that incorrectly reported results or typographical errors are **not** considered valid grounds for appeal. If you are unsure how to enter your results, contact Technical@aoacs.org for assistance.

Reports

1. Laboratory Proficiency Program reports are available within four weeks of the results due date.
2. Series require at least 8 qualifying data entry points and a non-zero target s.d. to generate z-scores and kernel density graphs. When the target s.d. is 0, the data distribution is not fit for evaluation by ISO 13528 Algorithm A. In such a case, parameters like Standard error, Rel. target s.d., R, Rel. R, and Range of tolerance can be disregarded.
3. When necessary, obvious errors—such as incorrect units, decimal point mistakes, and data points clearly belonging to a different proficiency test item—will be marked as disqualified, and the associated participant will be notified.
4. The reports will identify the following:
 - a. **Series information** includes series name, sample number and test material.
 - b. **The Consensus Value (Assigned Value)** reflects the central tendency of the data,

comparable to the mean, and is determined using Algorithm A as outlined in ISO 13528:2015(E).

- c. **No. of analysts that submitted results:** This indicates the number of enrolled participants that submitted results.
- d. **Statistical Method** follows ISO 13528:2015 (E).
- e. **Assigned Value (Consensus Value)** reflects the central tendency of the data, comparable to the mean, and is determined
- f. **Standard error:** the standard error equals the standard deviation divided by the square root of the sample size.
- g. **Target s.d.(Standard Deviation)** reflects the spread of the data, similar to a standard deviation. It is calculated using Algorithm A, as described in ISO 13528:2015(E).
- h. **Rel. Target s.d.** refers to the relative standard deviation and is calculated by dividing the Target s.d. by the Consensus Value.
- i. **R, Limit of Reproducibility** describes the maximum expected difference between two independent test results obtained under reproducibility conditions.
- j. **Rel. R, Relative Limit of Reproducibility:** Calculated as the limit of reproducibility (R) divided by the consensus value.
- k. **Range of Tolerance, Lower Limit:** Defined as two standard deviations below the assigned value.
- l. **Range of Tolerance, upper Limit:** Defined as two standard deviations above the assigned value.
- m. **Range of tolerance ($|z| \leq 2$)** is the range between the lower limit of tolerance and the upper limit of tolerance.
- n. **Raw Data** includes reported data listed according to participant analyst number only.
- o. **Summary of z-scores:** Z-scores are calculated by dividing the difference between the reported value and the consensus value by the target standard deviation. Note: Z-scores are not calculated for series with fewer than 8 participants.
Interpretation of z-scores:
 $|z| \leq 2.0$ — Satisfactory
 $2.0 < |z| \leq 3.0$ — Warning signal
 $|z| > 3.0$ — Action signal
- p. **Chart of z scores** uses a triangle bar plot to display z-scores by analyst number. Values with $2.0 < |z| \leq 3.0$ are highlighted in yellow, and values with $|z| > 3.0$ are highlighted in red.
- q. **Kernel Density Plots** provide a smooth curve describing the general shape of the distribution of the data set.
- r. **Combined Score** is provided at the end of each program year in the proficiency report. It reflects the weighted average of the root mean square (RMS) values of the z-scores for all accounted constituents.
- s. **Missing Cons:** The number of required constituent values that were not reported for

the year. Paired constituents with an assigned weight are counted as a single constituent. Constituents without an assigned weight are excluded from this calculation and do not contribute to the Missing Cons total.

- t. **Ranking Report:** The Ranking Report follows the Proficiency Report and ranks participants based on their Combined Scores, from lowest to highest. A lower Combined Score indicates that the participant's reported values were closer to the consensus values throughout the program year. Participants with missing samples or missing required constituents are excluded from the Ranking Report.

Posting Report

1. Reports are posted on the AOCS LPP website (<https://labpt.aocs.org>). Participant access to reports is limited to their enrolled series as indicated on their LPP Dashboard.

Report Appeal Process

1. Any appeal must be received before the appeal close date as shown on the LPP Program Timeline (available from your PT dashboard). After the appeal window closes, no appeals will be considered.
2. Appeal requests should include:
 - a. Analyst number
 - b. Series number
 - c. Appeal description
 - d. Email address of the analyst for the account.
3. All appeals will be entered on the participant dashboard in the reports area. AOCS will forward appeal requests to the LPP Manager and/or an LPP chairperson. All appeals will be considered on an individual basis.

Awards

1. To qualify for Laboratory Proficiency Program awards, participants must submit results for all required tests on all samples. Optional results do not count towards awards. Award winners must be enrolled for a minimum of one year by the end of the program year in June. Certificates will be awarded to the top 10% of the total series participants having the lowest combined score and no blunders or missing data for the entire series. There will be a maximum of six award winners per series. Series with less than 8 participants are not eligible for awards.

Approved Chemist Requirements

1. To qualify for Approved Chemist status, participants must submit results for all required tests on all samples. Optional results are not considered for Approved Chemist status. Approved Chemists must be enrolled for a minimum of one year by the end of the program year in June. Laboratory Proficiency Program participants must submit an application and

payment to be considered for Approved Chemist Status. Approved Chemist status is granted only in the series of participation and only if all of the requirements are met. Series with less than 8 participants are not eligible for Approved Chemist applications.

Please note: All AOCS test methods refer to the 8th Edition of the Official Methods and Recommended Practices of the AOCS