

# Basic instructions for participants in a proficiency testing scheme



## Introduction

This leaflet is intended as a comprehensive checklist outlining the key steps to consider when participating in a proficiency testing (PT) scheme. Selection of an appropriate PT scheme must be ensured [1]. It provides essential tips to help participants avoid common mistakes and achieve successful outcomes. The main stages of PT participation are covered, from receipt of PT items through to the review of received evaluations [1-3]. Documentation of outcomes for many of the topics addressed below is recommended, particularly for accreditation purposes.

## 1. Prior to PT participation

- ☐ Verify that the PT provider has up-to-date billing, shipping and technical contact information for the laboratory.
- ☐ Ensure that the laboratory has documented procedures in place or, if necessary, prepare procedures for: reviewing PT results upon receipt; taking corrective actions when assessments indicate poor performance; conducting periodic reviews of PT results over time; storing PT reports.

## 2. Receipt of PT items

- ☐ Open the package of PT items immediately upon receipt to check their condition. Contact the PT provider and request a replacement if any PT items are missing, broken, leaking or otherwise compromised.
- ☐ Study the PT provider's instructions carefully to ensure they are clear and understandable (e.g. handling, storage, pre-treatment, preparation, reporting of results).
- ☐ Register, identify, and mark the PT items according to normal procedures in the laboratory.
- ☐ Store the PT items in accordance with any instructions provided.

## 3. Measurements

- ☐ Read the instructions supplied by the PT provider carefully before starting the measurements.
- ☐ Carry out the measurements under conditions as close as possible to routine testing, unless otherwise instructed by the PT provider.
- ☐ Ensure that the analysis is carried out to meet any measurement deadline requirements.



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## 4. Reporting results

- ☐ Allow sufficient time for reporting the results to the PT provider.
- ☐ Report all the information required by the PT provider.
- ☐ Ensure that the results are reported in the requested format (e.g. units, number of significant figures, decimal places).
- ☐ Ensure that the results you are going to submit are those that you intend, correcting for any identified transcription errors (e.g. mix-up of samples or analytes).
- ☐ Confirm that the submission process of the results to the PT provider has been completed.

## 5. Reviewing PT reports

- ☐ Read the PT report as soon as possible and check that your results and other information are correctly represented; report any errors immediately to the PT provider.
- ☐ Take notice of any comments on the specific PT round, evaluation of performance, and other matters relevant to the results of the PT round which provide valuable context to your individual results.
- ☐ Review your assessed performance carefully in accordance with your laboratory procedures.
- ☐ Store the PT report according to internal procedures.

## 6. Follow-up on participation in a PT scheme

- ☐ Investigate any poor performance in accordance with your laboratory quality system [4].
- ☐ Evaluate the impact of poor performance (e.g. risk that poor quality data may have been reported to customers).
- ☐ Implement any corrective actions as relevant, and if possible, make use of any surplus PT items [5] to assess effectiveness.
- ☐ Monitor any trends in performance over time, concentration levels, etc.

## More information and further reading

- [1] B. Brookman and I. Mann (eds.) Eurachem Guide: Selection, Use and Interpretation of Proficiency Testing (PT) Schemes (EN, 3rd ed. 2021).
- [2] Eurachem leaflet "Selecting the right proficiency testing scheme for my laboratory" (EN, Ed.2, 2022).
- [3] Eurachem leaflet "Proficiency testing - How much, and how often?" (EN, Ed.2, 2022).
- [4] Eurachem leaflet "How to investigate poor performance in proficiency testing" (EN, Ed.2, 2022).
- [5] Eurachem leaflet "Use of surplus proficiency test items" (EN, Ed.2, 2022).

All documents are available from [www.eurachem.org](http://www.eurachem.org).

Information about PT providers and PT schemes can be obtained from your national accreditation body, from the EPTIS website ([www.eptis.org](http://www.eptis.org)) or from other national or international organizations.