



Drinking Water Proficiency Testing Requirements

Proficiency Testing (PT) samples are used to measure a laboratory's proficiency in performing a particular drinking water approved method for specified parameters/analytes. In accordance with rules 3745-89-03, 3745-89-05 and 3745-89-06 of the Ohio Administrative Code (OAC), "Ohio EPA Laboratory Manual for Chemical Analyses of Public Drinking Water, 2020", "Ohio EPA Laboratory Manual for Microbiological Analyses of Public Drinking Water, 2020" and the US EPA's "Manual for Certification of Laboratories Analyzing Drinking Water (5th ed.)", each certified laboratory must participate and receive acceptable results for a PT study obtained from an approved PT provider. A link to the list of approved PT providers and required PT parameters for Ohio is available under the "Proficiency Testing" tab at <https://epa.ohio.gov/divisions-and-offices/drinking-and-ground-waters/public-water-systems/laboratory-certification>.

PT Schedule

In order to maintain certification for drinking water analysis in Ohio, acceptable PT sample results for the laboratory must be completed on an annual basis. An annual basis is considered January 1st through December 31st of each year. PT results must be submitted to the Ohio EPA's Laboratory Certification Section by the PT provider. The US EPA lab code must be included with the results to your provider. See instructions at the end of this document regarding how to obtain an EPA lab code. If "Acceptable" results are not submitted to the PT providers by December 31st, the laboratory's certification may be suspended for the applicable parameters per rule 3745-89-06 (B) of the OAC. All PT samples must be part of an accredited WS study and provided by an accredited PT provider meeting the "National Environmental Laboratory Accreditation Program (NELAP) requirements. Not all approved PT providers are accredited for every parameter so laboratories must verify the PT provider's accreditation using the link on the Laboratory Certification website for "Approved Proficiency Test Providers". When needed, the Ohio EPA Director may designate other acceptable providers for PT samples. Supplemental PT samples are acceptable for make-up analysis

Reporting Results to PT Provider

Results must be sent to the provider prior to the study close date. Late results submitted to the provider will not be recognized. Most providers make PT evaluations available immediately following the study close date so laboratories can review their own data and order make-up PT samples without waiting three weeks for the final reports to be issued. Review data prior to submission to ensure correct reporting. Results incorrectly reported may not be revised.

When completing the report for review by the PT provider, you must indicate that results be sent directly to DWLabCert@epa.ohio.gov. If there are any questions regarding this, please contact the PT provider to ensure that they have the correct address. Your laboratory's US EPA lab code and Ohio EPA laboratory identification number must also be included. If this information is not included, the results may be inadvertently attributed to the wrong laboratory and credit may not be given for participating in a PT



study. If you do not know or are unsure of your US EPA lab code and/or your Ohio EPA laboratory identification number, please contact us for assistance.

How to Report Correctly

When completing the reporting forms, be sure to include the correct method number(s) associated with sample analysis. It is critical that the proper method number be referenced since PT samples are required for each method for which you are certified. If a PT report is received with a method incorrectly reported the PT will not be recognized and a new PT sample must be analyzed. The correct method number can be found on your laboratory certificate.

Failure to report PT results for every parameter by each method for which you are certified will result in loss of certification for the unreported parameter. Results for one method cannot be substituted for another method. While some methods may use the same technology, every parameter by each certified method must still be reported. For example, if the laboratory is certified for EPA Method 200.7 and EPA Method 200.5, both methods must be reported separately.

The method number reported must include the entire method reference as is written on your certificate. For instance, for nitrate by automated cadmium reduction, you must write the entire method whether it is EPA method 353.2 or SM 4500 NO₃-F. Writing SM 4500 or SM 4500NO₃ is not correct and will not be recognized. If you have any questions concerning correct method reference reporting, please contact us for assistance.

PT results must be reported to the PT provider using the correct units of measure. Convert results to units listed on the PT providers reporting form, before reporting them to the PT provider. Reports revised after the close of the study cannot be accepted.

Prior to submitting results to the PT provider, correct any transcription errors between the laboratory bench sheet and the PT report. Incorrectly submitted results due to transcription errors will not be accepted.

How Must PT Samples Be Handled

PT samples must be handled (i.e., received, analyzed, reported) in the same manner as routine samples by the same staff, facilities, procedures and equipment. To provide traceability of results, complete calibration and analysis records must be maintained in accordance with rule 3745-89-04 of the OAC. Only a certified analyst(s) may analyze PT samples. Analytical results for PT samples must be reported as if they are actual samples. Also, retain a copy of the report sent to the PT provider for evaluation in case problems arise, so that you will have a record of what you sent.

Remember our office cannot accept revised PT reports received from the PT provider, unless there is a reporting error by the PT provider and the PT provider submits documentation to this effect.



PT samples must be handled by each individual laboratory. Individual laboratories are determined by their laboratory identification number and associated certificate(s). The PT sample report must reference the proper laboratory identification numbers (state and US EPA).

It is not acceptable to report one result for any PT sample from two different laboratories. A PT sample or portion of a PT sample must not be sent from one laboratory to another for any analysis. Communication concerning PT samples between laboratories is also not allowed, including intra-company communication. If a company has multiple laboratories certified, it is strongly recommended that PT studies with different timeframes be performed to prevent any sharing of sample results. This equally applies to analysts working at multiple certified laboratories.

What to do for Unacceptable PT Results

Per the “Ohio EPA Laboratory Manual for Chemical Analyses of Public Drinking Water, 2020” and “Ohio EPA Laboratory Manual for Microbiological Analyses of Public Drinking Water, 2020” arrangements must be made to order a make-up PT study for any parameter resulting in an “Unacceptable” evaluation during the initial PT study.

Laboratories with an evaluation of “Unacceptable” for the initial and make-up PT studies for any certified parameter must immediately cease analysis for the parameter, submit a corrective action report and obtain a second make-up PT study for the parameter in question. The corrective action must address why the “Unacceptable” result occurred and how the problem was resolved. The corrective action must be submitted prior to ordering the second make-up PT study. Laboratory must notify the Laboratory Certification Section where samples will be sent for analysis, per the Quality Assurance Plan (QAP). As stated on the certificate, certification will be placed on hold until an “Acceptable” PT evaluation is received from the PT provider.

Presence/Absence (Microbiology)

Microbiology samples, for the water supply study only, are reported as present or absent. This applies whether you are using the membrane filter method or enzyme substrate (MMO-MUG). All ten samples that come with a PT set are to be analyzed using the same method. If the laboratory is certified for multiple methods (i.e., Colilert-24, Colilet-18, Colisure); then a separate set (10 samples) must be analyzed by each method. Results are to be reported for both total coliform and E. coli for each set (10 samples).

If using the membrane filter method, you must take the samples through the verification process to confirm the presence or absence of total coliform and E. coli. Records for these verifications are required to be maintained in the laboratory.

Enumeration (Microbiology)

Laboratories certified for microbiological enumeration methods for total coliform and E. coli (MPN) are required to analyze a PT sample for enumeration and report both total coliform and E. coli results. Separate PT samples are required to be analyzed for each enumeration method (i.e., Colilert-24 (Quanti-Tray), Colilet-18 (Quanti-Tray)).



Laboratories who fail to perform PT evaluations by December 31st will be suspended for missing the parameter until an evaluation of “Acceptable” is received.

Ohio EPA Laboratory Number

Each laboratory must use their assigned Ohio EPA laboratory number on all reported PT results submitted to their PT provider. This number can be found in the bottom left-hand corner of the laboratory certificate.

Contact

If any questions, please contact a member of the Ohio EPA’s Laboratory Certification Section or email DWLabCert@epa.ohio.gov. Contact information can be found under the “Contacts” tab at the following link: <https://epa.ohio.gov/divisions-and-offices/drinking-and-ground-waters/public-water-systems/laboratory-certification>.