



MODULE 6B

PROFICIENCY TESTING (PT) AND ROUND ROBIN PROGRAMS FOR INDUSTRIAL HYGIENE LABORATORIES

6B.1 PARTICIPATION

Participation in proficiency testing programs and round robins is required by AIHA-LAP, LLC. Those Fields of Testing (FoT)/Method(s) for which accreditation is sought can be found in Appendix A IHLAP Scope/PT Table which is maintained on the AIHA-LAP, LLC website: www.aihaaccreditedlabs.org. The purpose of the proficiency testing requirements is to ensure that accredited laboratories, and those seeking accreditation, meet established performance criteria for the analysis of industrial hygiene samples.

Laboratories seeking accreditation in the IHLAP shall adhere to all proficiency testing requirements as outlined in this module and Module 6A.

6B.2 USE OF A SINGLE AIHA PAT PROGRAMS, LLC CATEGORY FOR MULTIPLE FOTS

6B.2.1 When a single AIHA PAT Programs, LLC category (e.g. Metals, Organics or Silica) can be used to demonstrate proficiency for multiple FoTs, and the lab seeks accreditation for these FoTs, the laboratory may elect to tie all methods in each FoT to the Proficiency Testing.

6B.2.1.1 The laboratory may not elect to tie more than two (2) FoTs to any single AIHA PAT Programs, LLC category. For example, although Silica may potentially be used to demonstrate competency for XRD, UV/VIS and IR, no laboratory could choose to link all three FoTs to the silica proficiency testing category.

6B.2.1.2 When two (2) FoTs are tied to a single AIHA PAT Programs, LLC category, the laboratory must alternate analysis of PT samples between the two technology types.

6B.2.1.3 If an accredited laboratory fails to maintain proficiency in an AIHA PAT Programs, LLC category (see Policy 6B.4) to which they have elected to tie two (2) FoTs, the accreditation shall be suspended for both FoTs regardless of which technology led to the non-proficient status.

6B.2.2 When a single AIHA PT Programs, LLC category can be used to demonstrate proficiency for multiple FoTs, and the lab seeks accreditation for these FoTs, the lab may elect to use the AIHA PAT Programs, LLC to demonstrate proficiency for only one FoT, and elect to demonstrate competency for the other(s) by choosing an option from Section 6B.3.

6B.2.3 When a single AIHA PAT Programs, LLC category can be used to demonstrate proficiency for multiple FoTs, and the lab seeks accreditation for only one of these FoTs, the laboratory must tie that FoT to the required PAT as required by Appendix A - IHLAP Scope/PT Table.

6B.2.4 A laboratory seeking accreditation for a FoT for which an AIHA PAT Programs, LLC category exists must participate in that PAT program to demonstrate proficiency. In addition, a



laboratory wishing to accredit multiple methods within the FoT may choose to use a demonstration of competency option from Section 6B.3 for some or all methods for analytes not included in the AIHA PAT Programs, LLC program.

6B.3 DEMONSTRATION OF COMPETENCY

For FoTs not covered by AIHA PAT Programs, LLC samples, the laboratory shall demonstrate competency for a minimum of one (1) method per FoT through the implementation of one (1) of the following three (3) alternatives.

6B.3.1 Annually, the laboratory shall register and participate in a proficiency testing program. Proficiency testing samples shall be distributed, analyzed, and results reported at least two (2) times per year. For those programs not meeting the 2-round annual minimum, the laboratory shall augment their participation with a QA program as specified in Section 6B.3.3 of this module. Laboratories shall evaluate their results and take action in the event of an unacceptable result

6B.3.2 The laboratory shall participate in a round robin program designed to allow for the accreditation of laboratories that share the same key analyte(s) of interest (e.g., formaldehyde and isocyanates) and meeting the requirements of Policy 6A.3.2. An independent vendor or one (1) of the participating laboratories shall generate and distribute the round robin samples to other participating laboratories. A laboratory with multiple facilities may participate as individual entities with the stipulation that samples are analyzed and reported as separate participants. Acceptance criteria shall be determined. Actions to be taken in the event of an unacceptable result shall be described in the laboratory's management system documentation.

6B.3.3. The laboratory shall implement a comprehensive internal QC program for at least one method in the FoT. A minimum of twenty (20) QC data points shall be obtained initially to determine upper and lower control limits at three (3) standard deviations. At least twice annually, the laboratory shall prepare a minimum of four independently prepared blind spikes at varying levels with the resulting data treated as it would be in a round robin program. The spiking procedures, to include frequency, responsibility for implementation, statistical treatment of resultant data, acceptance criteria, and actions to be taken in the event of an unacceptable result, shall be fully described in the laboratory's management system documentation.

6B.4 PROFICIENCY CRITERIA FOR AIHA PAT PROGRAMS, LLC PROGRAMS

AIHA PAT Programs utilized to support the IHLAP are as follows: IHPAT, BAPAT, and BePAT. Proficiency criteria for these programs are detailed below. Laboratories that become non-proficient for any FoT/Method shall adhere to the procedures outlined in Module 3, Section 3.8.2.

6B.4.1 Outliers

An unreported result is classified as an outlier unless AIHA-LAP, LLC has pre-approved nonparticipation. In the event a laboratory submits results and the results are lost in transit (i.e., no official AIHA PAT Programs, LLC record of results submittal), then a written request may be submitted to the AIHA-LAP, LLC for exemption from penalty for nonparticipation provided the laboratory is able to document that results were submitted on time. AIHA-LAP, LLC shall review the exemption request and make a determination as appropriate.

6B.4.1.1 For IHPAT, a result that is outside the statistical control limits as determined for a proficiency testing round is classified as an outlier.



6B.4.1.2 For BePAT, a result that is greater than $\pm 25\%$ of the expected value is classified as an outlier.

6B.4.2 IHPAT Proficiency

The IHPAT consists of four (4) rounds annually. The laboratory shall receive a pass/fail score for each analyte class (e.g., organics, metals, asbestos, silica), as applicable, for each PAT round. The laboratory shall receive a passing score if not more than twenty-five (25) percent of the reported results are outliers (see Section 6B.4.1.1). For example, a laboratory participating in IHPAT (Metals) reports 12 results for each PAT round. To pass the metals analyte class in each round, the laboratory shall have acceptable results for 9 of the 12 reported results. A laboratory is rated proficient for the associated FoT/Method (see Appendix A - *IHLAP Scope/PT Table*) if the laboratory has a passing score for the applicable PAT analyte class in two (2) of the last three (3) consecutive PAT rounds. A laboratory is rated non-proficient for the applicable FoT/Method if the laboratory has failing scores for the associated PAT analyte class in two (2) of the last three (3) consecutive PAT rounds.

6B.4.3 BAPAT Proficiency

The BAPAT consists of four (4) rounds annually. A bulk asbestos laboratory shall be considered to have “passed” or “failed” an individual BAPAT test round in accordance with evaluation criteria based on the penalty point total incurred by the laboratory for that test round. A laboratory shall be rated proficient for bulk asbestos if the laboratory has passing scores for two (2) of the last three (3) consecutive PAT rounds. A laboratory is rated non-proficient for bulk asbestos if the laboratory has failing scores in two (2) of the last three (3) consecutive PAT rounds.

6B.4.4 BePAT Proficiency

The BePAT consists of three (3) rounds annually. The laboratory shall receive a pass/fail score for each BePAT round. The laboratory shall receive a passing score if three (3) of four (4) reported results are acceptable or not more than twenty-five (25) percent of reported results are outliers (see Section 6B.4.1.2). A laboratory shall be rated proficient for Beryllium if the laboratory has passing scores for two (2) of the last three (3) consecutive PAT rounds. A laboratory is rated non-proficient for Beryllium if the laboratory has failing scores in two (2) of the last three (3) consecutive PAT rounds.

6B.4.5 AIHA PAT Programs, LLC Reporting Frequency

AIHA PAT Programs LLC reports results of the IHPAT program to AIHA-LAP, LLC after each round has closed.

6B.5 PROFICIENCY CRITERIA FOR OTHER PROGRAMS

Proficiency criteria for other approved proficiency programs (see Module 6A, Section 6A.3) supporting the IHLAP, where available, are outlined below. For the other approved proficiency programs where criteria are not specified, participation in the PAT program and compliance with Section 6B.3.3 is all that is required to achieve/maintain accreditation for the applicable FoT/Method(s).

6B.5.1 Compressed/Breathing Air Round Robin

Proficiency criteria for the Compressed/Breathing Air Round Robin Program are established and documented in Appendix E - *Protocol for Compressed Air Proficiency Testing (CAPT) Program* maintained on the AIHA-LAP, LLC web site (www.aihaaccreditedlabs.org).



6B.5.2 Pharmaceutical Round Robin Program

Proficiency criteria for the Pharmaceutical Round Robin Program are established and documented in Appendix F - *Protocol for Pharmaceutical Round Robin Proficiency Testing Program* maintained on the AIHA-LAP, LLC web site (www.aihaaccreditedlabs.org).