



MODULE 9 TERMS AND ACRONYMS

TERM AND/OR ACRONYM	DEFINITION
AAB	Analytical Accreditation Board
ACS	American Chemical Society
ASHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
APHA	American Public Health Association
API	American Proficiency Institute
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASM	American Society for Microbiology
ASV	Anodic Stripping Voltammetry
AWWA	American Water Works Association
Acceptance Limits	Established mathematical data quality limits for analytical method performance.
Accreditation	A formal recognition that a facility meets AIHA-LAP, LLC Policy Requirements to carry out specific tasks or specific types of tests. See also " <i>Certification</i> ."
Accredited Laboratory	A testing laboratory that has been evaluated and granted accreditation covering a specified measurement or task, usually for a specific property or analyte, and for a specified period of time.
Accuracy	The degree of agreement between an observed value and an accepted reference value. Accuracy includes a combination of precision and bias. See " <i>Precision</i> " and " <i>Bias</i> ."
Aliquot	See " <i>Subsample</i> ".
Analysis	The qualitative or quantitative determination of a property or analyte in a substance or material.
Analytical Run	For chemical analyses, an analytical run consists of all samples processed continuously using an item of instrumentation or equipment. Such samples are analyzed applying the same set of standard calibration data.
Analytical Sensitivity	The lowest concentration that can be detected by the method, based upon the amount or portion of sample analyzed (e.g., for methods involving a count = 1 raw count per amount or portion of sample analyzed, calculated and expressed in the final reporting units).
Approved Signatory	Person who is recognized by a laboratory as competent and authorized by laboratory management to sign test reports.
Assessor	A person who conducts technical systems audits. The terms site visitor, auditor and assessor are often used interchangeably. See " <i>Technical Systems Audit</i> ".
BAPAT	Bulk Asbestos Proficiency Analytical Testing
BSC	Biological Safety Cabinet



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BSL	Biological Safety Level
Batch	A group of samples that are processed in one operation: considered to be a uniform, discrete unit.
Bias	A systematic error manifested as a consistent positive or negative deviation from the known true value.
Blind Sample	A sample submitted for analysis with a composition and identity known to the submitter, but unknown to the analyst, and used to evaluate proficiency in the execution of the measurement process.
CCB	Continuing Calibration Blank
CCV	See " <i>Continuing Calibration Verification (CCV)</i> "
CDC	Centers for Disease Control
CFR	Code of Federal Regulations
CMMEF	Compendium of Methods for the Microbiological Examination of Foods
CLP	Contact Laboratory Program
CRC	Certified Reference Culture
Calibration	A set of operations used: (1) to determine the value of a reference standard or reference material to a stated uncertainty; or, (2) to determine the accuracy of the reading of a test device to a stated uncertainty.
Calibration Curve	A graphical relationship between the known values for a series of calibration standards and instrument responses. The levels of the calibration standards should bracket the range of measurements.
Certification	Procedure by which a third party gives written assurance that the competence of a person, organization, or other entity to perform a function or service conforms to specified requirements. See " <i>Accreditation.</i> "
Certified Reference Material (CRM)	A reference material that has one or more of its property values established by a technically valid procedure, and is accompanied by or traceable to a certificate or other documentation issued by a certifying body. See " <i>Reference Material.</i> "
Chain of Custody	Definitive evidence (a record) of the persons who had possession or custody of the sample(s) for all periods of time, as it moved from the point of collection to the final analytical result.
Check Sample	An uncontaminated sample matrix spiked with a known amount of analyte, usually from the same source as the calibration standard. It is generally used to establish the stability of the analytical system, but also may be used to assess the performance of all or a portion of the measurement system. See also " <i>Quality Control.</i> "
Communications	Transmission of information by any means including verbal,



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	mail, and electronic.
Continuing Calibration Verification (CCV)	A standard solution (or set of solutions) analyzed periodically to verify freedom of excessive instrumental drift.
Control Chart	A graph of some measurement plotted over time or sequence of sampling, together with control limit(s) and, usually, a central line and warning limit(s).
Corrective Action (CA)	All activities taken, whether unsuccessful or not, to eliminate the cause(s) of an existing nonconformity or deficiency in order to prevent recurrence. See " <i>Deficiency</i> " and " <i>Technical Systems Audit</i> ."
Customer	Any person or organization that engages the services of a laboratory.
DCP	Direct Current Plasma
Deficiency	A failure to comply with a requirement of the AIHA-LAP, LLC accreditation program(s) or a laboratory's own stated management system requirements.
Determination	An analysis with a qualitative result.
Deviation	A departure from written procedures, test methods, contracts or any other standard operating procedure that is part of the laboratory quality assurance system.
Duplicate Analyses or Measurements	The analyses or measurements of the variable of interest performed identically on two subsamples of the same sample. The results from duplicate analyses are used to evaluate analytical or measurement precision but not the precision of sampling, preservation or storage internal to the laboratory.
Duplicate Samples	Two samples taken from and representative of the same population and carried through all steps of the sampling and analytical procedures in an identical manner. Duplicate samples are used to assess variance of the total method including sampling and analysis.
Dust Wipes	A sample collected by wiping a representative surface of known area with an acceptable wipe material. The analysis of multiple wipes as a single sample (composite wipe sample) is not covered under AIHA-LAP, LLC's Environmental Lead Laboratory Accreditation Program (ELLAP).
EPA	Environmental Protection Agency
Environmental Lead Laboratory Accreditation Program (ELLAP)	This AIHA-LAP, LLC program complies with the requirements of the EPA National Lead Laboratory Accreditation Program (NLLAP) Laboratory Quality System Requirements (LQSR) and also conforms to the ISO/IEC 17025 Standard and ISO/IEC 17011 requirements.
Environmental Lead Proficiency Analytical Testing (ELPAT)	Required quarterly lead proficiency testing samples of various matrices analyzed by accredited and participating laboratories as a way to determine laboratory testing proficiency of the ELLAP. Results are evaluated by AIHA-PAT, LLC and are used to determine laboratory proficiency.



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<i>Environmental Microbiology</i>	The area of microbiology that focuses on the biology, physiology, ecology and sampling and analysis of microorganisms inhabiting or affecting air, water, soil and other natural or man-made substances and/or systems in a variety of work environments, and that may contribute to adverse health effects.
<i>Environmental Microbiology Laboratory Accreditation Program (EMLAP)</i>	This AIHA-LAP, LLC program is intended for the accreditation of environmental microbiology laboratories.
<i>Environmental Microbiology Proficiency Analytical Testing (EMPAT)</i>	Required environmental microbiology samples analyzed by all accredited laboratories participating in the EMLAP. Results are evaluated and used to determine laboratory proficiency.
<i>Equipment</i>	All physical items (including software and instruments) in the facility used in the performance of analytical testing.
<i>Equipment Log</i>	A chronological record of preventive and emergency maintenance performed on any equipment. The logs include a record of calls, service technician summaries, records of calibration by the manufacturer, routine user maintenance, and other information as required by these policies.
<i>FAAS</i>	Flame Atomic Absorption Spectroscopy
<i>FoT</i>	Field of Testing
<i>Facility</i>	A fixed site, mobile or field operation established for the purpose of performing laboratory testing and/or sampling.
<i>Field Blank</i>	An analyte-free matrix carried to the sampling site, exposed to the sampling conditions (e.g., bottle caps removed), returned to the laboratory, treated as a sample, and carried through all steps of the analysis. For example, a clean culture media plate, sorbent tube, or a clean filter could be used as a field blank. The field blank, which should be treated just like the sample, evaluates possible effects attributable to shipping and field handling procedures.
<i>Field Operations Laboratory</i>	A field operations laboratory is one that uses portable testing technologies and performs ex-situ analytical testing onsite, near the sampling location under evaluation. The field operations laboratory shall ensure that the environmental conditions onsite do not invalidate the results or adversely affect the required quality of any measurement.
<i>Fixed Site Laboratory</i>	A fixed site laboratory is one that performs analytical testing from a fixed site location associated with improved real estate.
<i>Food Laboratory Accreditation Program (FoodLAP)</i>	This AIHA-LAP, LLC program is intended for the accreditation of food testing laboratories.
<i>GC</i>	Gas Chromatography
<i>GC/MS</i>	Gas Chromatography/Mass Spectroscopy
<i>GFAA</i>	Graphite Furnace Atomic Absorption Spectroscopy



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HPLC	High Performance Liquid Chromatography
HUD	Housing and Urban Development
IC	Ion Chromatography
ICB	Initial Calibration Blank
ICP-AES	Inductively Coupled Plasma – Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma – Mass Spectroscopy
ICS	Interference Check Standard
ICV	See “ <i>Initial Calibration Verification (ICV)</i> ”
IEC	International Electrotechnical Commission
IR	Infra-Red
ISE	Ion Selective Electrode
ISO	International Organization for Standardization
<i>Independently Prepared Calibration Standard</i>	A standard prepared from a reference material other than that used for calibration. When using neat materials this may be a standard prepared from the same starting material but using a different dilution technique.
<i>Industrial Hygiene Laboratory Accreditation Program (IHLAP)</i>	This AIHA-LAP, LLC program is intended for accreditation of industrial hygiene laboratories. This program conforms to the ISO/IEC 17025 Standard and ISO/IEC 17011 requirements.
<i>Industrial Hygiene Proficiency Analytical Testing (IHPAT)</i>	Required quarterly industrial hygiene samples of various analytes and matrices analyzed by all accredited and participating laboratories of the IHLAP. Results are evaluated by AIHA and are used to determine laboratory proficiency.
<i>Initial Calibration Verification (ICV)</i>	A standard solution (or set of solutions) used to verify calibration standard levels. The ICV shall be prepared independently from the calibration standards (from a stock solution having a different manufacturer or different manufacturer’s lot identification or as an independent preparation from a neat material).
<i>Instrument</i>	A device used for observation or measurement or chemical analysis that yields test results.
<i>Instrument Drift</i>	The existing difference in instrument response compared to the initial calibration and a reference value after a period of operation of an instrument.
<i>Internal Quality Control</i>	Routine activities and checks, such as periodic calibrations, duplicate analyses and matrix spikes that are included in routine internal procedures to control the accuracy and precision of measurements.
LC	Liquid Chromatography
LIMS	Laboratory Information Management System
LQSR	Laboratory Quality System Requirement
Laboratory	An entity that tests, either at a fixed site, mobile facility or field operations facility.
<i>Laboratory Control Sample (LCS)/Method Spike Sample</i>	A matrix-based reference material with an established concentration obtained from a source independent of the



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	instrument calibration and traceable to NIST or other similar reference materials. The LCS is carried through the entire procedure from sample preparation through analysis as if it were a field sample. The purpose of the LCS is to evaluate bias of the method.
Laboratory Control Sample Duplicate (LCSD)/Method Spike Sample Duplicate	A duplicate of the LCS.
Laboratory Accreditation Programs (AIHA-LAP), LLC	General term referring to any AIHA-LAP, LLC program or programs established to maintain standards of performance for laboratories analyzing samples and evaluating exposures to hazardous agents.
Lot	A set of samples submitted together for laboratory analysis that can be treated as one or more batches. Lot may also refer to a batch of chemicals or sampling media manufactured at the same time.
Management System	The quality, administrative and technical systems that govern the operations of a laboratory.
Matrix	The component or substrate (e.g., soil, air or charcoal tube) that contains the analyte of interest.
Matrix Spike	An aliquot of sample, or sample media, spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis.
Method	An orderly arrangement of steps to accomplish sample analysis.
Method Blank	An unexposed sampling media or reagent(s), not taken to the field or shipped, but carried through the complete sample preparation and analytical procedure. The blank is used to assess possible background contamination from the analytical process. This blank may also be referred to as a laboratory blank.
Method Detection Limit (MDL)	The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero.
Method Performance	A general term used to document the characteristics of a method. These characteristics usually include method detection limits, linearity, precision, accuracy and bias and uncertainty of measurement. See " <u>Acceptance Limits.</u> "
Mobile Laboratory	A mobile laboratory is a transportable, self-contained laboratory that can perform analytical testing under controlled environmental conditions.
NACLA	National Cooperation for Laboratory Accreditation
ND	Not Detected
NIH	National Institute for Health



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NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NSF	National Sanitation Foundation
NVLAP	National Voluntary Laboratory Accreditation Program
National Lead Laboratory Accreditation Program (NLLAP) Requirements	Requirements of the EPA National Lead Laboratory Accreditation Program for accreditation of lead analysis in paint, soil and dust matrices by an EPA-recognized laboratory accreditation organization.
Nonconformity	Noncompliance with any quality assurance policy, procedure, or specification. Nonconforming work results from an analysis event in which the QC results are not within acceptance limits and/or method specifications are not met.
Non-Standard Method	Method not meeting the definition of "Standard Method" contained in this module.
OSHA	Occupational Safety and Health Administration
PM	Preventive Maintenance or Passive Monitor
PSV	Portable Stripping Voltammetry
PT	See " <i>Proficiency Testing</i> "
Policy	An organization's written statement of commitment to implement a management program element.
Precision	The degree to which a set of observations or measurements of the same property, usually obtained under similar conditions, conform to themselves. Precision is often expressed as standard deviation, variance or range, in either absolute or relative terms.
Preventive Action	A planned activity to identify, recognize and control potential sources of nonconformities and to introduce needed improvements.
Procedure	A written set of instructions that describe how to implement a policy requirement, or how to carry out a specific task.
Proficiency Testing (PT)	Refers to any proficiency testing program(s), such as the programs established under the Analytical Quality Programs.
Program	A structured plan consisting of requirements under which action may be taken to reach the goal (accreditation).
QSP(s)	Quality System Procedure(s)
Qualified Individual (for data review)	A qualified individual shall be defined as an individual that, minimally, has the education, experience and technical understanding of the work being reviewed.
Quality	The suitability of a product or service for use, as perceived by the user.
Quality Assurance (QA)	An integrated system of activities involving planning, quality control, quality assessment, reporting and quality improvement to ensure a product or service meets defined standards of quality within a stated level of confidence.
Quality Assurance Program	See " <i>Quality Assurance.</i> "



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Quality Control (QC)	Technical activities whose purpose is to measure and control the quality of a product or service so that it meets the needs of users. The aim is to provide quality that is satisfactory, adequate, dependable and economical.
Quality Manager (QM)	The Quality Manager is responsible for implementation of the Quality Management System with direct access to the highest levels of management. The Quality Manager is responsible for planning and organizing audits.
Raw Count	Actual count without extrapolation or calculation.
RC	Reference Culture
Reference Material	A material of sufficiently homogenous composition that has a physical (e.g., viscosity, particle size) or chemical (e.g., pH, constituent concentration) measured property determined to a stated uncertainty.
Reference Standard	An object that has a measured physical property (e.g., mass, length) determined to a stated uncertainty. Reference standards shall be NIST traceable or equivalent.
Relative Percent Difference (RPD)	A term defined as $RPD = ((R_1 - R_2)/R) \times 100$ where $R_1 - R_2$ represents the absolute difference of two (2) values and R represents the average of the two (2) values.
Relevant Degree	A program of collegiate study that is appropriate to the applicable accreditation program.
Reporting Limit	The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty. This value is based on the low standard used for instrument calibration. For environmental lead analyses, the reporting limit must be at least twice the MDL.
Reproducibility	The extent to which a method, test or experiment yields the same or similar results when performed on subsamples of the same sample by different analysts or laboratories.
Requirement	An essential criterion necessary for accreditation.
Revocation	The formal, permanent removal of a laboratory's accreditation for noncompliance with AIHA-LAP, LLC accreditation requirements.
Run	A set of consecutive measurements performed on different samples.
SA	Site Assessor
SI	International System of Units
Sample Log	A document where minimally sample and batch identification, date received, customer identification are noted when samples arrive at the laboratory. The log is part of the sample tracking system. See "Sample Tracking."
Sample Tracking	A documentation system of following a sample from receipt at the laboratory, through sample processing and analysis, to final



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	reporting. The system includes unique numbering, or bar coding labels, and the use of a Sample Log.
Site Assessment	An onsite evaluation of a laboratory for the purpose of conducting a technical systems audit. The audit assesses compliance with AIHA-LAP, LLC accreditation requirements and technical competence to perform the testing for which the lab is seeking accreditation.
Standard	A substance or material with properties believed to be known with sufficient accuracy to permit its use to evaluate the same property of another. In chemical measurements, it often describes a solution or substance commonly prepared by the analyst to establish a calibration curve or the analytical response function of an instrument.
Standard Method	Procedures recommended by national or international agencies, such as the Environmental Protection Agency (EPA), the National Institute for Occupational Safety and Health (NIOSH), ASTM International, AOAC International, the American Public Health Association (APHA), the Occupational Safety and Health Administration (OSHA).
Standard Operating Procedure (SOP)	A written document that details the procedures of an operation; an analysis or action whose techniques and procedures are thoroughly prescribed, and which are accepted as the procedure for performing certain routine or repetitive tasks.
Standard Reference Material[®] (SRM[®])	A certified reference material produced by the U.S. National Institute of Standards and Technology (NIST) and characterized for absolute content independent of analytical method. It is accompanied by a certificate that reports the results of the characterization and the intended use of the material.
Standardization	The process of establishing the quantitative relationship between a known mass of target material and the measurement system (example, instrument response). See " <i>Calibration</i> " and " <i>Calibration Curve</i> ." The term may also refer to activities that establish provisions for common and repeated use of accreditation policies to achieve an optimum level of conformity.
Stock Solution	A concentrated solution of analyte(s) or reagent(s) prepared and verified by prescribed procedure(s), and used for preparing calibration standards.
Subsample	A representative portion of a sample; a subsample may be taken from any location or a field sample; in analytical chemistry, an "aliquot."
Suggestion	Suggested activity or advice for improving laboratory performance often made during a site assessment. A suggestion is not a requirement.
Suspension	A temporary removal of the accredited status of a laboratory when it is found to be out of compliance with specific program



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	requirements.
TAP	Technical Advisory Panel
TSCA	Toxic Substance Control Act
Technical Manager	The individual designated as the primary technical management for AIHA-LAP, LLC accreditation purposes. Refer to 2A.5.2.1.1.
Technical Systems Audit	A thorough, systematic, onsite, qualitative evaluation of facilities, equipment, personnel, training, procedures, record keeping, data validation, data management and reporting aspects of a total management system.
Test	A technical operation that consists of determining one or more elements in a sample according to a specified procedure.
Test Method	Specified technical procedure for performing a test. See "Standard Operating Procedure".
Traceability	The process of documenting the value of a reference material or standard as related to NIST standards or equivalent through an unbroken chain of comparisons with stated uncertainties.
USDA	United States Department of Agriculture
USP	United States Pharmacopeia
UV-VIS	Ultra Violet-Visible
Uncertainty of Measurement	Result of the evaluation aimed at characterizing the range within which the true value of a test result is estimated to lie, generally within a given likelihood.
Verification	Confirmation by examination and provision of evidence that specified requirements have been met.
WASP	Workplace Analysis Scheme for Proficiency (British)
WHO	World Health Organization
WPCF	Water Pollution Control Federation
XRD	X-Ray Diffraction
XRF	X-Ray Fluorescence