TRAINING PROGRAM

ISO/IEC 17025: 2017

Introduction:

It is very important for lab staff to learn how to create the success in their lab. This course is designed to provide theoretical and practical application of quality to your data for auditing for ISO17025. Laboratory quality control and assessment of chemical measurement data makes good professional and business sense. It is designed also to understand how to develop technical, and methods in lab and how to make calibration of instruments according to ISO 17025, how to evaluate the lab results.

Who Should Attend?

The course is of interest for all Laboratory staff, Chemists and technicians, specially who work with quality control and assurance.

Course Objectives:

This course provides guidance for development and implementation of a credible quality assurance program, plus it also provides chemists and chemical researchers, and all scientists and managers the ideal means to ensure accurate and reliable work reference to ISO 17025; 2017.

Course Outline:

- Introduction
- Chemistry Historical and review
- Basic Principal and theory
- Atoms
  - ❖ Atomic Structure
  - ❖ The proton, electron and neutron
  - ❖ Atomic wight (mass)
  - ❖ Relative Atomic wight (mass)
- Introduction to ISO/IEC 17025
- History, terms and definitions
- Analytical Measurement
- Quality control and assessment
- Overview of ISO/IEC 17025:2017 Requirements

Mean structure of ISO/IEC 17025:2017

- Scope
- Normative references
- Terms and definitions
- General requirements
- Structural requirements
- Resource requirements
  - ❖ Personnel
  - ❖ Facilities and environmental conditions
  - ❖ Equipment & Metrological traceability
  - ❖ Externally provided products and services
- Process requirements
  - ❖ Review of requests, tenders and contracts
  - ❖ Selection, verification and validation of methods
  - ❖ Sampling & Handling of test or calibration items
  - ❖ Technical records
  - ❖ Evaluation of measurement uncertainty
  - ❖ Ensuring the validity of results
  - ❖ Reporting of results

- ❖ Complaints & Nonconforming work
- ❖ Control of data and information management

- Management system requirements
  - ❖ Management system documentation
  - ❖ Control of management system documents
  - ❖ Control of records
  - ❖ Actions to address risks and opportunities
  - ❖ Improvement
  - ❖ Corrective actions

Application about ISO 17025 requirements

- Evaluation of analytical data
- Errors in Qualitative and Quantitative Analysis
- Method development and validation
- Reputability, Reducibility and mean of replicate
- Detection Limit
- Uncertainty measurement
- Control Chart
- Application for Data Evaluation
- Practical exercises for Inter-Laboratory Performance test
- Practical exercises for Uncertainty & Control Chart
  - ❖ Calculation for Uncertainty
  - ❖ Used Excel Function for Uncertainty
  - ❖ Drawing Control Chart by Excel

Steps for implementation ISO 17025 accreditation in your Lab

- Gap Analysis Implementation
- Training
- Documentation of QMS & Implementation of it
- Conducting one cycle of QMS Internal Audit
- List of non-conformities
- Provide guidance for initiating corrective action
- Provide guidance for conducting Management Review
- Application & Contract with the accreditation body
- Nomination and commissioning of assessors.
- Technical audit of the application documents.

- On-site laboratory assessment.
- If necessary, proficiency testing.
- Assessment report.
- Inspection of the report in the sectoral committee.
- Accreditation decision.
- Publication.

Internal audits reference to ISO 17025:2017 & ISO 19011

- Principles of auditing
- Types of audits
- Why auditing for management system
- System audits reference to ISO 19011
- Competence person managing audit program
- Roles and responsibilities of person managing the audit program
- Management of Audit Programs
- Audit Planning and Preparation
- Performing the Audit
    - ❖ Conducting open meeting
    - ❖ Establishing audit programme objectives
    - ❖ Determining and evaluating audit programme risks and opportunities
    - ❖ Establishing the audit programme
    - ❖ Implementing audit programme
    - ❖ ISO 17025:2017 Audit Checklist
    - ❖ Conformity & Non-Conformity work
    - ❖ Reviewing and improving audit programme
    - ❖ Generating audit findings
    - ❖ Determining audit conclusions
    - ❖ Conducting closing meeting
    - ❖ Preparing and distributing audit report
    - ❖ Management reviews