Laboratory Testing and Management

INTRODUCTION

- Laboratory Testing and Management training seminar focuses on the core issues that need to be addressed to implement an effective Testing Laboratory Management System. In today's globalized and highly competitive market of testing services, only laboratories with a solid infrastructure and competent management can survive. Health and Safety of the general public, process optimization in the industrial sector, environmental monitoring, and forensic and outbreak investigations are based on laboratory test results. Therefore, it is of critical importance that laboratories operate under those conditions that will guarantee accurate results that are of real value to their customers.
- Issues relating to business planning, quality assurance, personnel training, on-going competence, method selection and fitness-for-purpose, method validation, subcontracting, project management, non-conformities, QC failure investigation, will be dealt with in detail.

This training seminar will highlight:

- Testing lab organizational structure
- The positioning of the lab in the market
- Method selection and fitness-for-purpose
- Quality assurance and participation in Proficiency Testing (PT) schemes
- Laboratory accreditation

OBJECTIVES

At the end of this training seminar, you will learn to:

- Understand the basic principles of laboratory operation
- Develop the skills for testing, method selection, and validation
- Plan and implement long-term testing projects
- Apply root-cause analysis to solve problems
- Design and implement internal audits and understand the concept of corrective/preventive actions

ORGANISATIONAL IMPACT

This training seminar will enable participants to reposition their labs' competitiveness in the market, as follows:

- Understand the market structure and find niche markets remaining unexploited
- Apply effective lab management techniques to differentiate themselves from competition
- Develop the skills for understanding and satisfying the real customer needs
- Perfect their skills in responding to varying market requirements in a timely and effective manner
- Improve their knowledge of quality assurance and uncertainty of measurements and test results
- Improve their skills in carrying out effective internal audits and assuring on-going competence of lab personnel

PERSONAL IMPACT

This training seminar will enhance participants skills as follows:

- Improve participants resource management and analytical skills
- Help them to develop critical thinking in solving and overcoming analytical problems
- Provide valuable training in effectively conducting internal audits
- Apply useful criteria for the selection of instrument and supplies
- Improve skills in handling customer complaints
- Learn how to maintain and safeguard the quality of test results at all times

WHO SHOULD ATTEND?

- Testing laboratories managers
- Analytical Chemists and microbiologists
- Laboratory technicians
- Internal auditors
- External auditors / Regulatory authorities
- Quality assurance consultants

Course Outline

Introduction to the Contemporary Testing Laboratory

- The analytical services sector
- Types and categories of testing labs – legal status
- Operating environment of testing labs
- Independent private labs
- Governmental/Public /Notified labs
- Labs operating within an organization

- Independence and Impartiality of testing labs
- Corporate Social Responsibility

Organizational Structure of a Testing Lab

- Job functions
- Job descriptions
- Responsibilities and overlapping
- Premises and working environment
- Environmental conditions monitoring
- Flow of work

The Challenge of Facing the Rapidly-Changing Market

- Certification
- Accreditation according to ISO 17025
- Business plan
- Networking/Strategic alliances
- Subcontractors
- Flexible specialization
- Multitasking

Laboratory Operations & Concepts

- Traceability and audit trail
- Optimizing method selection & validation
- Regulatory changes relating to environment, health & safety
- Assuring on-going fitness-for-purpose of methods and instrumentation
- Commissioning protocol for new equipment
- Calibration/Verification
- Supplier evaluation
- Customer satisfaction

Quality Assurance – Compulsory or Optional?

- Is it a must?
- What is it? How is it accomplished?
- Internal audits
- External Quality Assurance (EQA) / Internal Quality Control (IQC)
- Uncertainty of test results
- Non-conformities (root-cause analysis, corrective/preventive actions)
- On-going personnel competence
- Looking into the future