aining Title

LABORATORY MANAGEMENT SYSTEM

Training Duration

5 days

Training Date

REF LM019	Laboratory Management System	5	28 Oct - 01 Nov 2024	$6,500	London, UK

In any of the 4 or 5 star hotels. The exact venue will be informed once finalized.

Training Fees

- **$6,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

Language: English

TRAINING DESCRIPTION

The quality management of the laboratory according to an international standard is very important to enhance the laboratory system and laboratory environment. Laboratories use ISO 17025 to implement a quality system aimed at improving their ability to consistently produce valid results. A careful analysis of tasks and working with safety conditions will lead to redesign of the working environment that will enhance worker performance. The course provides advance knowledge and standard operation, calibration and troubleshooting of gas chromatography according to the ISO 17025 guideline.

TRAINING OBJECTIVES

1. **Understand the laboratory quality requirements and appreciate the need for a quality system according to the International Standards Organization ISO 17025.**
2. **Understand the significance of calibration methods and traceability.**
3. **Identify the factors which have to be considered when choosing a GC method.**
4. **Understand how to validate analytical methods of gas chromatography.**
5. **Recognize the characteristics of a laboratory environment which can affect the performance of gas chromatography and hence influence the validity of measurements.**
6. **Use the standard methods for the gas chromatography operation, calculation and analyses report.**

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

7. **Use a standard method for gas chromatography troubleshooting.**
8. **Use a standard safety work in the laboratory.**

WHO SHOULD ATTEND

The course is designed for people who implement, maintain and review laboratory quality systems. It is suitable for all laboratory staff including managers, quality assurance officers, lab technicians, chemists, chemical engineers and instrument engineers.

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. The delegates will also be encouraged to raise their own questions and to share in the development of the right answers using their own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course. Booklet, Power-Point presentations, Handouts, Videos, User group discussions and practices on case study

- **30% Lectures**
- **30% Workshops and work presentation**
- **20% Group Work& Practical Exercises**
- **20% Videos& General Discussions**

DAILY OUTLINE

DAY 1

- **LABORATORY QUALITY MANAGEMENT MANUAL ISO 17025**
  Management Requirements
  Technical Requirements
- **VALIDATION OF ANALYTICAL METHODS AND PROCEDURES**
- **SAMPLING**
  Sampling Plan
  Quality of Sample
  Adequacy of Samples for Analysis Requested

DAY 2

- **QUALITY IN THE ANALYTICAL CHEMISTRY LABORATORY**
  Introduction to Quality Assurance
  Selecting of the Method
  Selecting Equipment and Consumables
  Making Measurements and Reporting
  Quality Systems in Chemical Laboratories

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

DAY 3

- **GAS CHROMATOGRAPHY TECHNIQUES AND OPERATION**
  Carrier Gas Selection
  Regulator Selection
  Sample Introduction Components
  Selection of the Column
  Selection of the Detectors
- **GAS CHROMATOGRAPHY THEORY PARAMETERS**
  Theoretical Plate
  Retention Time
  Average Linear Rate
  Partition Ratio
  Capacity Factor
  Selectivity Factor
  Column Efficiency
  Column Resolution
- **GC STANDARD ANALYSIS PROCEDURE AND REPORT ISO/IEC 17025**

DAY 4

- **QUANTITATIVE METHOD**
  Calibration Using External and Internal Standards
  Instrumental Graph-Interpolated Method
  Product-Moment Correlation Coefficient
  Determination of Analyte Concentration
  Standard Addition-Extrapolated Method
  Detection Limit
  Confidence Limit
  Outliers Test
  Experimental Design and Optimization
- **STANDARD METHODS FOR TROUBLESHOOTING**
  Band Broadening
  Baseline Deviation
  Peak Shape Problems
  Split Peaks
  Negative Peaks
  Retention Changes
  Peak Size Problems

DAY 5

- **SAFE WORK PRACTICES AND PROCEDURES**
- **DISCUSSION AND EXERCISE**

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

NOTE:

Pre & Post Tests will be conducted

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.

.....

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com