



المركز العالمي للتدريب والتطوير
International Centre For Training & Development



LAB006

Modern Laboratory Safety & Health



Course Introduction:

Safety in the laboratory is an individual and personal responsibility, as well as a management's duty. Staff training should be directed towards making safety considerations an attitude of mind and an integral part of all work procedures. No document can ensure safe practice within the workplace.

The idea of this training is to give an introduction to working in a laboratory. It is hoped that people become aware of their role and function in a laboratory environment. Whatever the function of the laboratory, its most important asset is the staff and how those staff perform. This course presents people with the basics to become an integral part of the laboratory and assist the facility to generate data that are of high quality and scientifically reliable.

After the training, participants will learn the best practices to minimize personal injury, health impairment, property loss, fines, and liability in your laboratory. This course will give you an overview of the practical and latest regulatory measures for the prevention of accidents, incidents, or exposures that may cause health impairment, injury, fire, or interference with laboratory operations.

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- ✓ Learn to identify and resolve the most common laboratory hazards and compliance problems
 - ✓ Learn about specific chemical groups, chemical hazards, and safety precautions
 - ✓ Gain experience in implementing and maintaining laboratory safety programs
 - ✓ Develop chemical hygiene and laboratory safety training programs
 - ✓ Exercise total quality management in producing reliable, consistent and independent results and on-time to their customers
 - ✓ Increase the awareness of the occupational health and safety in the laboratory environment, and exercising total professionalism in scientific and management areas
 - ✓ Identify the most effective and efficient practice in planning, organizing, prioritizing and executing the business requirements
- Develop effective communication and interpersonal skills among lab personnel

Who Should Attend?

- Laboratory/pilot plant employees with responsibility for or interest in related safety and health issues (e.g., managers, supervisors, scientists or technical assistants)

- This course is particularly valuable for full- or part-time Chemical Hygiene Officers (CHOs), Safety/Health/Industrial Hygiene Professionals or Coordinators, Hazard Assessment or Audit Team Leaders, Trainers and those who are accountable for similar lab safety and health activities
- Laboratory managers, analytical chemists, medical scientists, laboratory supervisors, research and development scientists, microbiologists, food technologists and quality assurance/control managers

Course Outline:

Day 1:

Introduction

- Safety in the Laboratory
- Definition and Terms
 - Teaching Laboratory
 - Research Laboratory
 - Supervisor
 - Laboratory Worker / User
 - Unattended Procedures / Equipment
 - Hazardous Agent
- Administrative Responsibilities
 - Responsibilities of Supervisors
 - Responsibilities of Lab Workers

The Latest Codes, Standards and Practices for Laboratory Safety & Health

Day 2:

Basic Safety Procedures

- Important aspects of chemical hygiene and safety
- Hazard identification and control measures
- Effective storage, labeling, safe handling and control of hazardous chemicals

Process Planning

- Standard Operating Procedures
- Special Procedures
- Hazardous Materials Inventory
- Shipping Laboratory Materials

Emergency Planning

- Evacuation Procedures
- Alarm System Activation
- Fire Emergencies
- Spill/Release Containment and Cleanup Methods

- Incident reporting
- Safety Equipment and Supplies

Day 3:

General Laboratory Equipment

- Safety Equipment
 - Biosafety Cabinets
 - Fire Aid Kits
 - Flammable Safety Cabinets
 - Eyewash Fountains
 - Fire Extinguisher
 - Laboratory Hoods
 - Laboratory Refrigerators / Freezers
 - Safety Showers
- Personal Protective Equipment
 - Body Protection
 - Eye and Face Protection
 - Hand Protection / Gloves
 - Hearing Protection
 - Respiratory Protection
 - Head Protection
 - Safety Goggles / Glasses

General Laboratory Safety Practices

- Operating a motor for forward and reverse operation
- Proper Labeling for Chemical, Biological and Radiological Materials
- Safe Storage of Chemical, Biological and Radiological Materials
- Safe Use of Chemical, Biological and Radiological Materials
- Safety Surveys

Safety Practices for Specific Hazards

- Bio hazardous Materials
- Compressed and Liquefied Gases
- Corrosives
- Explosives
- Flammables and Combustibles
- Lasers
- Mercury
- Physical Hazards
- Radiological Materials and Devices
- Toxics

- Water Reactive

Day 4:

Occupational Health and Safety Audit

Total Quality Management and Safety

Working Under Pressure and Stress

Storage and Disposal of Chemicals Materials/Compounds

Day 5:

Types of Reports

- Technical Report
- Scientific Report

Report Writing Strategies

- Enhancing Report

Handling Customer Complaints

- Test Method Writing & Customer Complaint Response

EXERCISES

- Writing a Complete Technical Report
- Write one page Scientific Report

Course Fees:

To be advised as per course location. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Requirement:

"**Hand's on practical sessions, equipment and software** will be applied during the course if required and as per the client's request".

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

