



ACCREDITATION UNIT

SAFETY GUIDELINE FOR LABORATORIES PERFORMING CALIBRATION AND MEASUREMENTS

Purpose

This document describes the requirements and regulation of health and safety, which may be applied at Laboratories Performing Calibration and Measurements, to assure the safety of **personnel**, and protect them against chemical and hazardous materials.

Scope

Health and safety requirements are applied to personnel working at laboratories performing calibration and **measurements** activities.

Authorship

This publication has been written by the Technical Committee, and approved by the Accreditation Director.

Official language

The text may be translated into other languages as required. The English language version remains the definitive version.

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1 Introduction

This Guideline aims at setting the main guidelines for safety to be followed by individuals, active in the field of calibration and Measurements.

The purpose of this safety guideline is to protect the life, health and safety of all **personnel** as well as to eliminate the possibility of damage to the property and equipment while carrying out an efficient work schedule.

2 Responsibilities

2.1 The Director

The Director of the Laboratory is responsible for enforcing and regulating all the safety policies and regulations, in addition to ensuring that all laboratories activities are conducted in a manner with the least possible hazard to employees.

2.2 Health and Safety Officer:

2.2.1 The Health and safety Officer (H&SO) has the duty and the authority to stop any action as being inherently unsafe or immediately dangerous.

2.2.2 The H&SO is responsible to provide instructions and continuous training in the field of their assigned tasks and laboratory operations. Written safety instructions are hanged in each Analytical Section in a way accessible to each person.

2.2.3 The H&SO is responsible to ensure the availability of necessary safety equipment in the laboratory. In addition to audit laboratory activities, and verify records that they comply with safety requirements.

2.3 Section Heads

Head of Sections are responsible for identification of hazards and assessment of the risk associated with operations, in addition to selection of the proper laboratory safety practices, and engineering controls necessary to minimize personnel injury.

2.4 Individual **Personnel**

2.4.1 **Personnel who work in a laboratory must receive training to become informed about potential hazards in the lab, this training shall cover the environmental health and safety standards and documents, hazards in laboratories, personal protective equipment, safety signs and emergency situation.**

Personnel are responsible and given the power to stop a work and to stop someone else work if unsafe practice is foreseen.

2.4.2 **Personnel** are responsible to apply safety instructions and policies.

2.4.3 Each **person** at the Laboratory is responsible to comply with all health and safety requirements relevant to the activities they perform mentioned in Safety Requirements Section. Also to report unsafe conditions and all accidents resulting in injury.

2.5 Maintenance Engineer

The Laboratory Maintenance Engineer / Department is responsible to maintain the different types of extinguishers and should supervise the extinguishers recharge twice a year. In addition to that he should maintain and inspect the eyewashes, safety showers, and ventilation systems including fume hoods on regular basis. He is responsible for electrical connections and to ensure that equipment's electrical requirements as specified by the manufacturer are met and ensures the electrical safety.

2.6 Training Coordinator

The Training Coordinator (TC) in consultation with Health and Safety Officer is responsible for ensuring that all laboratory personnel receive training and understand the requirements of this training program. The TC is responsible for maintaining training records for all **personnel**.

2.7 Quality Assurance Officer

The Quality Assurance Officer (QAO) is responsible to keep records of safety requirements, to ensure adherence to requirements by conducting internal audits.

3 Guidelines

Safety Requirements:

- 3.1 **Personnel** working in the calibration and measurements in the field of Non – Radiological materials (chemical and biological), shall comply with the requirements mentioned in the "Safety Policy in Chemical and biological laboratories"
- 3.2 **Personnel** working in the calibration and measurements in the field of Food shall comply with the requirements mentioned in the "Safety **Policy** in Food laboratories".
- 3.3 **Personnel** working in the calibration and measurements in the field of Environmental, Radioactive Material, Microbiology **and** Water testing, shall comply with the requirements mentioned in the "Safety Policy for Laboratories Performing Environmental **and** Water Testing".
- 3.4 In general, each laboratory shall take the necessary actions to prevent or minimize the dangers from:

- Fire.
- Hazardous materials (e.g. mercury, radioactive material, pressurized equipment, etc).
- Noise and vibration.
- Smoke.
- Heat.
- Intrusion.
- Flooding.
- Power loss.
- Earthquake
- Chemical Spills or Release
- Environment out-of-tolerance

The necessary actions may include:

- Alarm systems.
- Security systems.
- Protection systems.
- Signs.
- Emergency evacuation plan.

- Space for flammable storage
- Space for refuse containers
- Space for hazardous materials storage
- Gas cylinder secure storage and gas distribution
- Safety signs-interior and exterior.
- Safe storage for oily rags
- Safe storage for smoking materials
- First-aid stations
- Storage for spill materials and equipment.
- Training courses for new employee in health and safety issues.

4 References

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