APPLY LABORATORY PRACTICE PRINCIPLES

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UNIT DESCRIPTION

This unit of competency provides competencies required by a science laboratory technologist to apply laboratory and management practices. The practices include maintaining laboratory safety, managing laboratory personnel and material resources, preparing laboratory water and managing laboratory waste.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace functions	**PERFORMANCE CRITERIA** These are assessable statements which specify the required level of performance for each of the elements ***(Bold and italicized terms are elaborated in the range)***
1.Maintain laboratory safety	1.1 Laboratory safety rules are applied as per good laboratory practices 1.2 Laboratory risk assessment is carried out as per Occupational Safety and Health (OSH) guidelines 1.3 ***Laboratory hazards*** are handled in line with laboratory safety procedures 1.4 ***Laboratory Injuries*** are handled according to laboratory first aid procedures 1.5 First aid procedures are reviewed as per laboratory safety guidelines
2.Process laboratory water	2.1 Water sources are identified as per laboratory requirement 2.2 ***Water processing*** is carried out in line with organisational laboratory manual 2.3 Laboratory water is stored according to organisational laboratory manual

3.Manage laboratory personnel and material resource	3.1 Principles of laboratory management are applied as per laboratory management procedures 3.2 Laboratory manager qualities are applied based on good laboratory practices 3.3 Laboratory inventories are maintained as per laboratory management procedures 3.4 ***Laboratory equipment maintenance*** is carried out as per manufacturer's instruction
4.Manage laboratory waste	4.1 ***Laboratory wastes*** are segregated according to laboratory procedures 4.2 Laboratory working areas are decontaminated and cleaned as per laboratory procedures 4.3 Laboratory waste is disposed as per laboratory procedures

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	**Range**
1. Laboratory hazards may include but not limited to:	• Chemical • Biological • Physical • Electrical • Fire
2.Laboratory Injuries include but not limited to:	• Cuts • Bleeding • Bites • Burns • Bruises • Fractures

3.Water processing include but not limited to:	• Distillation • Deionization • Filtration • Sedimentation • Reverse osmosis • Adsorption
5.Laboratory equipment maintenance include but not limited to:	• Calibration • Validation • Preventive maintenance
6.Laboratory wastes include but not limited to:	• Organic wastes • Inorganic waste

REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

Required knowledge

The individual needs to demonstrate knowledge of:

- Scientific report writing
- Occupational safety and health
- Basic mathematics
- Microscopy
- Taxonomy
- Animal anatomy and physiology
- Animal pathology

Required skills

The individual needs to demonstrate the following skills:

- Problem solving skills
- Digital literacy
- Communication
- Interpersonal
- First aid

- Photography
- Analytical

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Handled laboratory hazards in line with laboratory safety procedures 1.2 Handled injuries according to laboratory first aid procedures 1.3 Carried out water treatment in line with organisational laboratory manual 1.4 Applied principles of laboratory management as per science laboratory standards 1.5 Maintained laboratory inventories as per science laboratory guidelines
2. Resource implications	The following resources should be provided: 2.1 Appropriately simulated environment where assessment can take place 2.2 Access to relevant work environment 2.3 Resources relevant to the proposed activities or tasks
3 Methods of assessment	Competency in this unit may be assessed through: 3.1 Practical assessment 3.2 Portfolio of evidence 3.3 Oral assessment 3.4 Third party report 3.5 Written tests
4 Context of assessment	Competency may be assessed in a: Workplace or simulated workplace

5	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector and workplace job role is recommended.